

THE CHEMICAL SOCIETY

ANNIVERSARY MEETING

The Hundred and Sixth Annual General Meeting of The Chemical Society will be held in Burlington House, Piccadilly, London, W.1, on Thursday, March 20th, 1947.

The programme of events will be as follows :

- 12 noon. Business Meeting to receive the Report of Council for 1946, to receive the Report of the Scrutators on the ballot for vacancies on Council, etc.
- 12.45 for }
1 p.m. } Anniversary Luncheon at the Dorchester Hotel.
- Applications for tickets, price £1 1s., should be made to the General Secretary. Accommodation is strictly limited ; applications will be dealt with in order of receipt.
- 3 p.m. Presidential Address by Professor C. N. Hinshelwood, Sc.D., F.R.S.
- Full particulars are being circulated to Fellows.

SCIENTIFIC MEETINGS DURING MARCH, 1947

LONDON.

Thursday, March 6th, 1947, at 7.30 p.m.

The following papers will be read and discussed :

- “ Contributions to the chemistry of phenanthridine. Part I. The quaternisation of 9-(3'-pyridyl)phenanthridines and the preparation of some derivatives of potential biological interest.” By V. Petrow* and W. R. Wragg.
- “ The reaction between acetone and ammonia ; the formation of pyrimidine compounds analogous to the aldoxanes of Späth.” By R. B. Bradbury, N. C. Hancox, and H. H. Hatt.*

ABERDEEN.

Thursday, March 20th, 1947, at 7.30 p.m.

Lecture, **Recent Developments in the Chemistry of Starch and Glycogen**, by Professor E. L. Hirst, M.A., D.Sc., F.R.S.

Joint meeting with the local section of the Royal Institute of Chemistry to be held in the Chemistry Department, Marischal College.

EDINBURGH.

Thursday, March 13th, 1947, at 7.30 p.m.

Lecture, **The Composition and Structure of Proteins**, by Professor A. C. Chibnall, M.A., Sc.D., F.R.S.

Joint meeting with the local sections of the Royal Institute of Chemistry and the Society of Chemical Industry to be held in the North British Station Hotel.

* To read paper.

GLASGOW.

Friday, March 14th, 1947, at 7.15 p.m.

Lecture, **The Composition and Structure of Proteins**, by Professor A. C. Chibnall, M.A., Sc.D., F.R.S.

To be held in the Chemistry Lecture Theatre of the University.

LIVERPOOL.

Wednesday, March 12th, 1947, at 7 p.m.

Demonstration of Scientific Apparatus.

Joint meeting with the local sections of the Royal Institute of Chemistry, the Society of Chemical Industry and the British Association of Chemists, to be held at Liverpool University.

MANCHESTER.

Thursday, March 13th, 1947, at 7 p.m.

The following are those of the four papers to be read :

“ Polymerisation of *isobutene* in the gas phase.” By A. G. Evans and G. W. Meadows.

“ The mechanism of the oxidation of glucose by periodate.” By G. Hughes and T. P. Nevell.

“ The effect of resonance on bond length.” By E. Warhurst.

Joint meeting with the local section of the Royal Institute of Chemistry to be held in the Chemistry Department of the University.

NEWCASTLE AND DURHAM.

Friday, March 14th, 1947, at 5 p.m.

Bedson Club Lecture, **Some Pages from the Chemistry of Aluminium**, by Dr. H. Bassett, F.R.I.C.

To be held at King's College, Newcastle-on-Tyne, and all Fellows are invited.

NOTTINGHAM.

Tuesday, March 18th, 1947, at 7 p.m.

Tilden Lecture, **The Application of Surface Chemistry to Colloidal Problems**, by Dr. A. E. Alexander, B.Sc.

To be held in Large Chemistry Theatre of University College.

SOUTH WALES.

Friday, March 7th, 1947, at 6 p.m.

Lecture, **The Making of Missing Chemical Elements**, by Professor F. A. Paneth, Ph.D.

Joint meeting with the University College of Swansea Chemical Society to be held at University College, Swansea.

PROCEEDINGS

OF THE

CHEMICAL SOCIETY

Minutes of a SCIENTIFIC MEETING

held at Burlington House, Piccadilly, W. 1, on Thursday, January 9th, 1947,
at 7.30 p.m.

The President, PROFESSOR C. N. HINSHELWOOD, Sc.D., F.R.S., was in the Chair.

MINUTES.

The Minutes of the Scientific Meetings held at the Royal Institution on December 18th, 1946, and at the University of Edinburgh on December 19th, 1946, were read, and were confirmed and signed.

SCIENTIFIC COMMUNICATIONS.

The following papers were read and discussed :

“ Toxic fluorophosphonates and related compounds.” By B. C. Saunders.

“ Some aspects of the oxidation and the dimerisation of propenylphenols.” By N. J. Cartwright and R. D. Haworth.

OFFICIAL ANNOUNCEMENTS

DEATHS.

The Council regret to announce the deaths of the following Fellows :

	Elected.	Died.
George Baborovsky (Czechoslovakia)	May 15th, 1922.	Oct. 10th, 1946.
Percy Barrs (W. 8)	Dec. 5th, 1918.	Sept. 15th, 1946.
John Reader Hosking (Slough)	Dec. 6th, 1923.	Oct. 14th, 1946.
Robert Selby Morrell (Wolverhampton) ...	May 16th, 1895.	Dec. 10th, 1946.
Frederick Maurice Rowe (Leeds)	Dec. 5th, 1918.	Dec. 8th, 1946.

CONGRATULATIONS.

The PRESIDENT has conveyed the congratulations of Council to the following Fellows whose names appear in the New Year Honours List :

Knight Bachelor.

Professor W. N. Haworth.

Dr. E. W. Smith.

C.B.E.

Professor T. Wallace.

CENTENARY CELEBRATIONS.

The Programme of the Centenary Celebrations on July 14th—17th, 1947 and Forms of Registration have been posted to all Fellows.

FELLOWS PAYING THE REDUCED SUBSCRIPTION.

At their meeting on January 9th, 1947, the Council resolved :

“ That from the 1st January, 1947, those who had served in H.M. Forces can be Fellows paying the reduced subscription, or participate in the Joint Junior Subscription scheme until they had obtained their first University degree, provided that a certificate from the teacher in their College or University is forwarded with their application, certifying that they are attending an appropriate course, and that such reduced subscriptions cannot be paid for more than three years.

“ The same regulation should apply to Joint Student facilities.”

HONORARY FELLOWS.

The following have been nominated by the Council as Honorary Fellows of the Society :

Professor Tadeus Reichstein.

Professor John H. Northrop.

Fellows wishing to lodge objections to the election of these should communicate with the Honorary Secretaries within ten days of the date of publication of the *Journal* for January, 1947.

ELECTION OF NEW FELLOWS.

The following 87 Candidates were elected Fellows of the Society on January 9th, 1947 :

Roxburgh Richmond Aitken.	Joseph Lionel Levy.
Gerhard Horst Alt.	Edward Charles Liddon.
John Rex Arthur.	Hanna Loebel.
Brian Bannister.	Ailsa Macvey Lowen.
Laurence Robert Bishop.	Reginald Humfrey Marchant.
Thomas Charteris Black.	George Victor Robert Mattock.
Alexander Edward Bond.	Gauri Shankar Misra.
Derek Samuel Brackman.	Arthur Molinari.
Hans Brüll.	Ernest Austin Monro.
Kenneth Henry Bryant.	Thomas Meirion Morgan.
Leonard Herbert Bussell.	John Arthur Moss.
Albert James Cameron.	Arthur Reginald Murnaghan.
Ram Narayan Chakravarti.	Frank Albert Paine.
Arthur Henry Clarke.	Richard Eric Parker.
Sidney John Harbron Cooke.	Allan Rycroft Parkinson.
Wilfred Cooper.	Brian David Pate.
Michael Allan Crook.	Daniel August Prins.
Vaclav Cupr.	Maurice Frank Ring.
David Yarrow Curtin.	Alexander Crawford Ritchie.
Ronald George Curtis.	Gordon John Roberts.
Eric Davies.	Roy Charles Rogers.
Peter Bernard David de la Mare.	Allan Rutherford.
John Drake.	Muchi Santhappa.
Heinz Duewell.	Edward Cecil Sayers.
Elsie Margaret Eldridge.	Robert Simon Schilling.
Roy Gordon Henry Elliott.	Gordon Owen Shipton.
Herman Isaac Enos.	Joseph Henry Skellon.
Rudolf Lionel Ernst.	Peter William Soanes.
Cecil John Francis.	Philip Calvert Spensley.
John Raymond Fricker.	Colin John Smeed Standen.
Colin Herbert Frohnsdorff.	René Adrien Stevens.
Robert Paul Gentles.	Ernst Stirnemann.
Harry Ephraim Glynn.	Roy Eric Hugh Swayne.
Fred Cameron Grimes.	Geoffrey Thomas Tibbs.
Herman Rudolph Hamburg.	Frederick Clifford Tompkins.
Thomas Charles Hall.	Alan Tulip.
Bartholomew Patrick Hickey.	Hilton James Vipond.
Alexander Hill.	Peter Ridgway Watt.
William Hill.	Donald Robert Whitaker.
Eric Wharton Hood.	Doreen Margaret Williams.
Ellis Hough.	John Bryan Willis.
George Marshall Howard.	Frederick Wrench.
Enid Marian Hulsken.	Peter Arthur Harris Wyatt.
Josef Jakobovits.	

MEETING OF COUNCIL.

A meeting of Council was held on Thursday, January 9th, 1947.

The Report of the Publication Committee (January 9th) was adopted and the recommendation for a new cover for the *Journal* for 1947 was approved.

The action of the Royal Institute of Chemistry in printing and making available free of charge to Fellows of the Chemical Society copies of Dr. Dyson's lecture "A New Notation for Organic Chemistry" was warmly approved, and Council agreed that a letter of appreciation and thanks should be sent to the Institute.

It was reported that the Official Meeting in Edinburgh on December 19th had been very successful, and it was agreed to convey the thanks of the Society to Sir John Fraser, Vice-Chancellor and Principal of the University, to the Local Representative, and to the local organisers for the arrangements made and the hospitality which the Society received on this occasion.

Consideration was given to the question of extending beyond the present age limit the payment of the reduced annual subscription by Fellows who had been in H.M. Forces, and the resolution, quoted above, was passed.

It was noted with pleasure that Professor T. S. Patterson had made a donation to the Society's funds and that Mr. H. H. Hughes had made a gift of the Society's publications.

The list of vacancies on Council for 1947—1948 was notified.

Nominations for Honorary Fellows were considered.

Eighty-seven Candidates for Fellowship were elected Fellows of the Society.

Certain formal and financial items were transacted.

MEETINGS OUTSIDE LONDON**ABERDEEN.**

"Mechanism of Elimination and Substitution Reactions," by Dr. F. W. Peaker.

A joint meeting with the local sections of the Royal Institute of Chemistry and the Society of Chemical Industry was held in the Chemistry Department, Marischal College, on December 17th, 1946.

Dr. Peaker outlined the recent work done to elucidate the mechanism of elimination and substitution reactions which do not involve free radicals. This indicates that substitution reactions fall into two categories. Depending on the groups present and on the reaction conditions they proceed (a) as bimolecular reactions, or (b) as unimolecular reactions.

The modern interpretations of the Walden Inversion and the Hofmann Degradation were also described.

LIST OF APPLICATIONS FOR FELLOWSHIP

(Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries before February 28th, 1947. Such objections will be treated as confidential. The forms are displayed in the Library.)

Abel, Emil, Dr.Phil. (Vienna), Dr.R.Nat. (Göttingen), Ing. (Technische Hochschule, Vienna). British. 63, Hamilton Terrace, N.W. 8. Head of the research department of Ever Ready Co. (Great Britain), Ltd., N. 7. *Signed by* : Robert Robinson, F. G. Donnan, M. Polanyi.

***Alderson, Robert Anthony**, B.Sc. (Lond.). British. 31, South View Road, East Bierley, Bradford. Laboratory Research Chemist at Yorkshire Tar Distillers, Ltd., Stairfoot, nr. Barnsley. *Signed by* : G. Skirrow, D. W. Riley, R. M. Barrer.

Barnes, Desmond Arthur Sidney, B.Sc. (Lond.). British. Yew Tree House Farm, Higher Road, Halewood, Liverpool. Chemist. *Signed by* : G. W. Groves, John Southwood, J. G. Cockburn.

Bedwell, Margaret Ellen, B.Sc. and Ph.D. (Lond.). British. 23, Avondale Road, Chesterfield. Civil Service. *Signed by* : E. E. Turner, D. M. Hall, B. R. Jacobs.

- Behrens, Ethel.** British. 60, Park Lane, W. 1. *Signed by* : Lord Melchett, Eric K. Rideal, Kathleen Lonsdale.
- Bell, Basil Lawn,** B.Sc.Hons. (Lond.), A.R.I.C. British. 4, Sunny Hill, Bruton. Senior Chemistry Master, Sexey's School, Bruton. *Signed by* : C. E. H. Bawn, T. H. Bevan, W. Baker.
- ***Bond, Geoffrey Colin.** British. Barclay's Bank House, King's Heath, Birmingham, 14. Student, Birmingham University. *Signed by* : L. L. Bircumshaw, S. R. Carter, W. N. Haworth.
- ***Braddock, Dennis Joseph Patrick,** B.Sc. (Lond.). British. 86, York Mansions, Prince of Wales Drive, Battersea, S.W. 11. Research Chemist. *Signed by* : Thomas L. Coombs, G. H. J. Neville, Hugh W. Davidson.
- ***Bruce, Charles Richard,** B.Sc.Hons. (Lond.). British. c/o 72, Lockhurst Lane, Foleshill, Coventry. Research Chemist to British Nylon Spinners, Ltd. *Signed by* : D. A. J. Noble, D. Bramley, T. B. Price.
- Bruun, Anna (Mrs.),** B.L.Sc. (Columbia Univ.). American. Cavendish Research Laboratories, 11, Cavendish Place, W. 1. Librarian. *Signed by* : H. G. Emblem, M. Todd, D. Greensmith.
- ***Burnett, James Donald,** B.Sc.Hons. (Aberd.). British. 1, Diamond Street, Aberdeen. Research Student. *Signed by* : R. B. Strathdee, H. W. Melville, Robert B. Whyte.
- ***Cass, Raymond Charles.** British. 38, Rothesay Avenue, Chelmsford. Student, Bristol University. *Signed by* : C. E. H. Bawn, W. Baker, T. Malkin.
- Clayton, John Charles,** B.Sc.Hons. (L'pool). British. c/o Glaxo Laboratories, Ltd., Greenford. Research Chemist. *Signed by* : B. Arthur Hems, E. T. Borrows, J. Ritchie Chalmers.
- Craggs, Harold Cleveland,** B.Sc.Hons. and Ph.D. (Lond.). British. 20, Pinewood Road, Eaglescliffe. Research Chemist, I.C.I., Ltd., Billingham. *Signed by* : Gordon Nonhebel, G. R. Nellist, A. J. Prince.
- Davison, William Henry Thomas,** B.A. (Cantab.). British. 78, Redlands Road, Solihull. Research Chemist. *Signed by* : Fredk. A. Jones, C. E. Kendall, E. M. Joiner.
- ***Dawes, Edwin Alfred,** B.Sc.Hons. (Leeds). British. 33, Westbourne Grove, Hook, Goole. Research in Biochemistry, School of Medicine, Leeds, 2. *Signed by* : J. W. Baker, David A. Hall, B. A. Kilby.
- Dawson, William,** B.Sc. (Lond.), A.R.I.C. British. 30, Le Gendre Street, Tonge Moor, Bolton. Training to be a teacher. *Signed by* : D. Entwistle, A. Tophal, A. Holt.
- ***Dean, Alan Cyril.** British. Connaught Hall, Swaythling, Southampton. Student, University College, Southampton. *Signed by* : Ishbel G. M. Campbell, A. R. Burkin, S. H. Harper.
- Dean, Raymond Ernest,** B.Sc.Hons. (Lond.), A.R.I.C. British. 14, Silverhill Road, Bradford Moor, Bradford. Research Chemist. *Signed by* : H. H. Hodgson, Edward R. Ward, D. P. Dodgson.
- Donnison, George Hall,** B.Sc.Hons. (Dunelm). British. 17, Hesleyside Road, South Wellfield, Whitley Bay. Research Chemist. *Signed by* : G. A. Swan, K. H. Jack, P. L. Belshaw.
- Duff, Robert Bruce,** B.Sc.Hons. and Ph.D. (Edin.). British. 143, Longstone Road, Edinburgh, 11. Research Fellow, University of Birmingham. *Signed by* : E. G. V. Percival, Neil Campbell, Christina C. Miller.
- Eaton, Robert Charles,** M.P.S. British. 73, Wilbert Lane, Beverley. Manager of the Beverley Branch of A. L. Spinks, Chemists and Druggists. *Signed by* : J. B. Stocks, H. Bellamy, M. Taylor.
- Ewing, Alexander Espie.** British. 9, Willowbank Street, Glasgow, C. 3. Textile Chemist. *Signed by* : Ezra Golombok, John McLean, Henry G. A. Anderson, I. Vance Hopper.
- ***Farmer, Thomas Henry,** B.Sc. (Lond.), A.R.C.S. British. 156, Walpole Road, Tottenham, N. 7. Research Student. *Signed by* : J. A. Elvidge, J. H. Chapman, I. K. M. Robson.
- Flemons, Garner Frecker,** F.R.I.C., F.C.I.C. British. 2, Meadowsweet Avenue, Filton. Student, Bristol University. *Signed by* : G. Tyndale Young, T. Malkin, W. Baker.
- Friedenstein, Johanna,** B.Sc. (Lond.). Austrian. 7, Emperors Gate, S.W. 7. Chemist at British Oxygen Company. *Signed by* : J. W. Coates, I. Greenfield, H. M. B. Buckell.
- Gascoigne, John Alan,** B.Sc. (Lond.). British. 41, Tetley Road, Hall Green, Birmingham, 11. Research Chemist. *Signed by* : J. Cooper Duff, Garfield Thomas, W. F. A. Thorpe.
- Gayler, Margaret,** B.Sc. (Lond.). British. 131a, Camberwell New Road, S.E. 5. Research Chemist. *Signed by* : F. G. Sayer, O. Stephenson, Charles Simons.
- Goodman, Geoffrey Willoughby.** British. 23, Nork Way, Banstead. Analytical Chemist. *Signed by* : J. C. J. Graham, J. G. Maltby, G. Minkoff.
- Gosling, Harold Arthur.** British. 19, Orchard Drive, Grays. Food Inspector, Smoke Inspector and Deputy Chief Sanitary Inspector to the Thurrock Urban District Council. *Signed by* : J. F. J. Dippy, C. G. Smith, J. Ratcliffe.
- Govindachari, Tuticorin Raghavachari,** M.Sc. and Ph.D. (Madras). British. 1008, W. Soughton Urbana, Illinois. Research Fellow, University of Illinois. *Signed by* : A. L. Bacharach, R. Leslie Collet, H. J. T. Ellingham.
- Hallett, Leslie Horton Williams,** B.A. (Cantab.), A.R.I.C. British. 3, New Brighton Road, Northop Hall Village, nr. Mold. Lecturer in Chemistry, Liverpool Technical College. *Signed by* : R. R. Butler, A. E. Findley, L. J. Burrage.
- ***Hargreaves, Kenneth Gibson,** B.Sc.Hons. (Leeds), Leblanc Medallist. British. 15, Ashlea Drive, Giffnock. Research Chemist in Pigment Factory. *Signed by* : Frederick M. Rowe, J. W. Baker, H. Burton.

- Hooper, Patrick Joseph**, B.Sc.Hons. and M.Sc. (N.U.I.), A.R.I.C. British. c/o Deodor-X Company of England, Limited, Ellesmere Port, Wirral. Factory Manager. *Signed by* : J. G. Cockburn, J. Southwood, G. W. Grove.
- Hudson, Robert Francis**, B.Sc.Hons. and Ph.D. (Lond.), D.I.C., A.R.C.S., A.R.I.C. British. Chemistry Department, Queen Mary College, Mile End Road, E. 1. University Lecturer. *Signed by* : B. Atkinson, J. A. Kitchener, A. A. Eldridge.
- Jackson, Clive**, A.R.I.C. British. 4, Victoria Street, Fleetwood. Laboratory Assistant. *Signed by* : Ernest Taylor, Walter L. Roberts, George Campbell.
- ***James, John William**. British. 57, Parkstone Avenue, Parkstone. Student, University College, Southampton. *Signed by* : N. K. Adam, S. H. Harper, Arthur M. James.
- Jenkins, Andrew**, A.R.I.C. British. 870, Manchester Road, Whitefield, Manchester. Industrial Chemist. *Signed by* : Henry G. A. Anderson, John A. Cranston, A. B. Crawford.
- Jones, Edwin Charles**, B.Sc. and Ph.D. (L'pool), A.R.I.C. British. The Withens, Napoleon Avenue, North Farnborough. Research Chemist, Harris Lebos, E. 15. *Signed by* : G. A. Earwicker, A. E. Lain, V. P. Gellay.
- Kay, William Duncan**, M.P.S. British. 75, Ovington Grove, Fenham, Newcastle-on-Tyne. Medical Research Representative, Boots Pure Drug Co., Ltd., Nottingham. *Signed by* : E. A. Burfoot, A. Macpherson, H. W. Pratt.
- ***Kyriakides, Costakis Demetre**. British. 4, West Castle Road, Edinburgh, 10. Student. *Signed by* : T. R. Bolam, Duncan Taylor, E. G. V. Percival.
- ***Lee, David John Austin**, B.Sc.Hons. (Lond.). British. 8, Inglis Road, Colchester. Assistant Chemist, BX Plastics, Ltd., Manningtree. *Signed by* : P. S. Adamson, P. G. T. Hand, E. P. J. Alexander.
- ***Long, Alan Gibson**. British. 14, Woodland Rise, Greenford. Technical Assistant. *Signed by* : E. T. Borrows, John Attenburrow, B. Arthur Hems.
- Lowrison, George Charles**, B.Sc. (Lond.). British. 1, Elmstead Lane, Chislehurst. Assistant Works Manager, Thomas Tyrer & Co., Ltd., E. 18. *Signed by* : A. B. Hart, M. B. Donald, F. E. Wilson.
- ***McDonald, Thomas Robert Riddle**. British. 23, Balcarres Street, Edinburgh, 10. Student, Edinburgh University. *Signed by* : T. R. Bolam, E. G. V. Percival, F. N. Woodward.
- Mann, Thomas Barton**. British. Biological Research Laboratory, Weatherstones, Neston, Wirral. Director of Poultry Husbandry for J. Bibby & Sons, Ltd. *Signed by* : R. A. Morton, T. W. Goodwin, Albert Green.
- ***Marks, Angus**. British. Milestone House, Eastriggs. Student, Edinburgh University. *Signed by* : E. G. V. Percival, Christina C. Miller, Neil Campbell.
- Middlebrook, William Robert**, F.R.I.C. British. Flat 5, 24, Shire Oak Road, Headingley, Leeds, 6. Textile Research Biochemist. *Signed by* : S. Blackburn, R. Consden, Henry Phillips.
- ***Milne, James George**, B.Sc.Hons. (Glas.). British. c/o Sims, Sai Wen, Cadbury Road, Sunbury-on-Thames. Chemist with the Anglo-Iranian Oil Co., Ltd. *Signed by* : J. W. Cook, T. S. Stevens, S. Horwood Tucker.
- Munro, Neil**, B.Sc. (Glas.), Ph.D. (Lond.). British. 24, Allandale Crescent, Potters Bar. Development Chemist. *Signed by* : J. Kenyon, Nathan C. Hindley, F. Bergel.
- ***Nutten, Albert John**. British. Avondale, 91, Hilton Street, Aberdeen. Student. *Signed by* : J. M. C. Thompson, F. D. S. Butement, H. W. Melville.
- Pollak, Felix**. Czechoslovak. 23, Matheson Road, W. Kensington, W. 14. Student, London University. *Signed by* : W. Davey, S. C. Bevan, L. P. McHatton.
- ***Poppelsdorff, Fedor**. British. 23d, The Barons, St. Margarets, E. Twickenham. Laboratory Technician. *Signed by* : E. J. Chappel, E. R. Herz, K. J. Verrill.
- Pryor, James Harvey**, B.Sc.Hons. (Lond.), A.R.I.C. British. 109, Spring Grove Road, Hounslow. Schoolmaster. *Signed by* : D. J. G. Ives, R. W. Pittman, W. Rigby.
- Ranby, Peter Whitten**, M.Sc. (Lond.), A.R.I.C. British. 35, Oldborough Road, North Wembley. Research Chemist. *Signed by* : E. de Barry Barnett, R. C. Chirnside, G. G. S. Dutton.
- ***Raine, Dennis Noel**. British. 73, Osborne Avenue, Jesmond, Newcastle-upon-Tyne, 2. Student. *Signed by* : G. R. Clemo, Richard Raper, H. L. Riley.
- Ross, Albert Edward**, B.Sc. (Lond.), A.R.I.C. British. 26, Fairmile Avenue, Streatham, S.W. 16. Analytical Chemist. *Signed by* : C. H. R. Gentry, G. C. Hutton, P. E. Lovering.
- ***Russell, Richard Desmond**, B.Sc.Hons. (Bristol), A.R.I.C. British. North Hill Farm, East Dundry, nr. Bristol. Soil Chemist in the N.A.A.S. *Signed by* : A. M. King, T. H. Bevan, C. E. H. Bawn.
- Ryan, Daniel Joseph**, M.Sc. and Ph.D. (N.U.I.). Irish. c/o Cement, Ltd., Castlemungret, Co. Limerick. Chief Chemist. *Signed by* : T. S. Wheeler, Vincent C. Barry, A. G. G. Leonard.
- Sanderson, Edward George**, M.P.S. British. 84, Friarn Street, Bridgwater. Research Chemist, British Cellophane, Ltd., Bridgwater. *Signed by* : K. S. Browne, C. R. Oswin, H. G. Oswin.
- ***Smith, Isidore Ivor**, B.Sc. (Lond.). British. 8, Havelock Rise, Luton. Student. *Signed by* : V. Petrow, C. M. French, B. E. Cross.
- ***Stacey, Patrick**. British. 9, The Green, Ruddington. Assistant Analyst, Boots Pure Drug Co., Ltd., Nottingham. *Signed by* : W. Wilson, R. W. Hale, R. Banks.
- Subbarao, Nandury Venkata**, B.Sc.Hons.Tech., M.Sc.Hons. and D.Sc. (Andhra), A.R.I.C. Indian Agricultural Chemistry Department, Imperial College, S.W. 7. Government of India Research Scholar. *Signed by* : A. G. Pollard, A. A. Eldridge, H. V. A. Briscoe.

- *Sweeny, Wilfred**, B.Sc.Hons. (Glas.). British. 1, White Street, Glasgow, W. 1. Research Student. *Signed by* : George Edwards, Alex. C. Maclean, F. S. Spring.
- Sykes, Philip Howard**, M.Sc. (N.Z.), Ph.D. (Lond.). British. 21, Maldon Road, Wallington. Chemist, British Oxygen Company. *Signed by* : M. P. Applebey, A. J. Prince, H. N. Wilson.
- *Teegan, John Pentony**, M.Sc. (N.U.I.). Irish. 72, Summerhill, St. Luke's, Cork. Senior Demonstrator, University College, Cork. *Signed by* : Joseph Reilly, John C. Aherne, William Devlin.
- Thomas, Leslie Ford**, B.Sc. (Birm.). British. Department of Chemistry, The University, Edgbaston, Birmingham, 15. Assistant Lecturer. *Signed by* : L. L. Bircumshaw, M. Stacey, J. Sheridan.
- Tomlinson, John Derek**, M.Sc. (Leeds). British. Rosdene, Leaden Roding, nr. Dunmow. Works Chemist, C. W. Martin & Sons, Ltd., S.E. 1. *Signed by* : J. L. Stoves, E. Race, Arnold T. Peters.
- *Trueman, Gordon**, B.Sc. (Dunelm). British. 7, Elmwood Grove, Whitley Bay. Student. *Signed by* : R. Iley, R. Bell, H. Marsh.
- *Tucker, Douglas Raymond**. British. 161, Gladesmore Road, Tottenham, N. 15. Laboratory Assistant. *Signed by* : Henry Brunner, D. V. Arnold, George R. Cornish.
- Turner, Henry Dicken**, B.Sc.Hons. (Sheffield), A.R.I.C. British. 787, Abbeydale Road, Sheffield, 7. Research Student. *Signed by* : P. R. Carter, A. R. Pinder, B. P. Moore.
- Turton, Gordon Cecil**, Ph.C. British. 3, Police Houses, Elm Road, Shoburyness. Biochemist. *Signed by* : F. W. Anderson, E. F. D. Winter, W. B. Emery.
- Vouk, Velimir**, Dip.chem.eng. (Zagreb). Yugoslav. London School of Hygiene and Tropical Medicine, Keppel Street, W.C. 1. Research Student. *Signed by* : A. Bracken, E. N. Morgan, C. Ewart Stickings.
- *Wainwright, Stanley Dunstan**. British. 12, Bromley Road, Birkby, Huddersfield. Student, Cambridge University. *Signed by* : B. Lythgoe, D. J. Bell, Fredk. S. Dainton.
- Werner, Alfred Emil Anthony**, M.A., M.Sc. (Dublin), D.Phil. (Freiburg e Breisgau), A.R.I.C. British. 36, Gilford Road, Sandymount, Dublin. Reader in Organic Chemistry, Dublin University. *Signed by* : T. S. Wheeler, T. N. Richardson, J. W. Parkes.
- Wescott, Cecil Ernest Arnaud**, B.Sc. (Lond.), A.R.I.C. British. 72, Dartmouth Road, Hendon, N.W. 4. Chemist, J. Lyons & Co., Ltd. *Signed by* : A. E. Bradford, H. S. Rooke, D. G. Pirie.
- Whetstone, John**, B.Sc.Hons. and Ph.D. (Birm.), A.R.I.C. British. Woodwynd, Headrigg Road, West Kilbride. Research Chemist with I.C.I., Ltd., Explosives Division. *Signed by* : Andrew McLean, Stanley Fordham, F. Douglas Miles.
- *Whiting, Mark Crosby**, B.Sc.Hons. (Lond.). British. 137, Rosendale Road, West Dulwich, S.E. 21. Postgraduate Student. *Signed by* : E. R. H. Jones, R. A. Raphael, J. A. Elvidge.
- Wild, Ronald**, B.Sc. (Lond.). British. Yew Tree House, Higher Road, Halewood, Liverpool. Works Chemist. *Signed by* : J. G. Cockburn, G. W. Groves, J. Southwood.
- Wirth, Max Marin**, Dipl.chem.eng. (Federal Institute of Technology, Zurich). British. Old Bowry House, Wraysbury. Chemical Engineer, L. Light & Co., Ltd., Wraysbury. *Signed by* : H. de Laszlo, L. Ruzicka, V. Prelog.
- Woods, Gilbert Frederick**, B.Sc. (Lond.), A.R.C.S., A.R.I.C. British. 16, Shottfield Avenue, East Shean, S.W. 14. Post-graduate Research at Imperial College, S.W. 7. *Signed by* : F. A. Robins, E. R. H. Jones, L. C. Cross.

UNDER SPECIAL PROVISION APPERTAINING TO CANDIDATES RESIDENT ABROAD

- Adams, Clyde Stewart**, B.Sc. (Denison Univ.), M.Sc. and Ph.D. (Ohio State Univ.). American. Chemistry Department, Antioch College, Yellow Springs, Ohio. Professor of Chemistry, Chairman of the Department at Antioch College and Research Consultant on industrial chemical problems. *Signed by* : Foster Dee Snell, Ralph L. Evans.
- Allen, Milton Joel**, S.B. (Chicago). American. Department of Chemistry, Oklahoma A. and M. College, Stillwater, Oklahoma. Research Fellow. *Signed by* : Martin Seidman.
- Barry, Richard H. Barry**, M.S. and Ph.D. (Maryland). American. The Maltbie Chemical Co., 240—250, High Street, Newark, N.J. Director of Research. *Signed by* : B. Puetzer.
- Britton, Edgar Clay**, A.B. and Ph.D. (Michigan). American. The Dow Chemical Co., Midland, Michigan. Director of Organic Research Laboratory. *Signed by* : Ralph L. Evans, Foster Dee Snell.
- Brown, Delbert Francis**, A.B. (Olivet), M.S. (Lafayette). American. Standard Oil Development Co., Elizabeth, B, New Jersey, P.O. Box 243. Librarian. *Signed by* : Foster Dee Snell, Ralph L. Evans.
- Foldi, Zoltan**, Dr. Ing. Hungarian. Abranyi Emil-u, 10, Budapest II. Research Chemist. *Signed by* : L. Ruzicka, V. Prelog.
- Gupta, Pabitra Nath Das**, B.Sc.Hons. and M.Sc. (Calcutta). Indian. Modi Industries, Modinagar U.P., India. Research Technologist. *Signed by* : S. S. Bhatnagar.
- Hessell, Frederick A.**, D.es.S. (Strasbourg). American. 4, Cherry Street, Montclair, New Jersey. President, Montclair Research Corporation. *Signed by* : Ralph L. Evans, Foster Dee Snell.
- Jatti, Virabasappa Virupaxappa**, M.Sc. (Bombay). Indian. Lingaraj College, Belgaum, India. Professor of Chemistry, Lingaraj College. *Signed by* : R. D. Desai.
- Langseth, Alex**, Dr. phil. (Copenhagen). Dane. Ostervoldgade 5, Copenhagen K. Professor of Chemistry, University of Copenhagen. *Signed by* : G. Østrup.

- Lora, Manuel**, Dr.en.Sc. and Dr.Pharm. (Madrid). Spanish. Facultad Ciencias, Cindad Universitari a Madrid. Professor of Chemistry. *Signed by* : B. C. Saunders.
- Moubasher, Radwan Moursi**, Dip.ing.Chim. (Lyon), Ph.D. (Cairo). Egyptian. 3, Mahmoud Imam Street, Abbassia, Cairo. Lecturer in Chemistry, Fouad 1st University, Cairo. *Signed by* : F. G. Baddar, A. Riad Tourky.
- Pascual, José**, Dr.en.Sc. and Dr.Pharm. (Barcelona). Spanish. The University, Barcelona. Professor of Organic Chemistry. *Signed by* : B. C. Saunders.
- Smith, Ernest Albert**, M.A. (McMaster Univ.). Canadian. Mining Building, University of Toronto, Toronto. Professor of Industrial Chemistry. *Signed by* : R. R. McLaughlin, C. M. Jephcott.
- Underwood, Jude Erwin**, M.A. (Wabash). American. Diamond Alkali Co., Painesville, Ohio. Director of Research. *Signed by* : Foster Dee Snell, Ralph L. Evans.
- Wallace, William Stewart**, M.A. (Oxon). British. University of Toronto. Librarian. *Signed by* : R. R. McLaughlin, C. M. Jephcott.
- Weiner, Nathan**, A.M. and Ph.D. (Harvard). American. 84—40, 101st Street, Richmond Hill 18. New York. Assistant Director of Research, Endo Products Inc. *Signed by* : Albert Parsons Sachs.

* Reduced annual subscription.

PAPERS RECEIVED

List of papers received between December 17th, 1946, and January 20th, 1947. (This list does not include the titles of papers which have been read at a Scientific Meeting or which have appeared in the *Journal*.)

- “A re-examination of the reported *m*-nitration of phenols and phenolic ethers.” By C. A. BUNTON, G. J. MINKOFF, and R. I. REED.
- “The chloromethylation of naphthalene and of tetralin.” By G. M. BADGER, J. W. COOK, and G. W. CROSBIE.
- “Some trinuclear cyanine dyes. Part I. The synthesis of *neocyanines*.” By F. M. HAMER, R. J. RATHBONE, and B. S. WINTON.
- “The Galacto-mannan of the Lucerne seed.” By E. L. HIRST, J. K. N. JONES, and WINIFRED O. WALDER.
- “Preparation and properties of allyl phosphines, arsines, and stannanes.” By W. J. JONES, W. C. DAVIES, S. T. BOWDEN, C. EDWARDS, V. E. DAVIS, and L. H. THOMAS.
- “New organic sulphur vesicants. Part I. 2 : 2'-Di-(β -chloroethylthio)diethyl ether.” By F. N. WOODWARD.
- “New organic sulphur vesicants. Part II. Analogues of 2 : 2'-dichlorodiethyl sulphide and 2 : 2'-di-(β -chloroethylthio)diethyl ether.” By A. H. WILLIAMS and F. N. WOODWARD.
- “New organic sulphur vesicants. Part III. Homologues of 2 : 2'-di-(β -chloroethylthio)diethyl ether.” By R. BROWN and F. N. WOODWARD.
- “New organic sulphur vesicants. Part IV. 1 : 2-Di-(β -chloroethylthio)ethane and its analogues.” By E. J. GASSON, H. MCCOMBIE, A. H. WILLIAMS, and F. N. WOODWARD.
- “New organic sulphur vesicants. Part V. 2-Chloroethyl-2-chloro*isopropyl*sulphide.” By A. HAMILTON, (the late) R. C. G. MOGGRIDGE, and F. N. WOODWARD.
- “Bromination of dimethoxystilbenes.” By F. BERGMANN and H. JAPHÉ.
- “Benzylamine analogues of chemotherapeutic diamidines.” By A. ALBERT, J. A. MILLS, and R. ROYER.
- “The crystal structure of ammonium nitrate III, and atomic scattering factors in ionic crystals.” By T. H. GOODWIN and J. WHETSTONE.
- “The separation of *d*-fructose from other natural sugars as its 2 : 3-4 : 5-diacetone and 1 : 2-monoacetone derivatives : Observations on the behaviour of acetone derivatives of monosaccharides towards cold decinormal sulphuric acid.” By D. J. BELL.
- “Lanosterol. Part IV. Hydrocarbons formed by the action of dehydrating agents.” By C. DORÉE, J. F. MCGHIE, and F. KURZER.
- “The periodic system of the chemical elements in three dimensions. (The five-five system).” By A. G. OPPEGAARD.
- “The Arbusov rearrangement.” By A. H. FORD-MOORE and J. HOWARTH WILLIAMS.

- “The reaction of sulphur and sulphur compounds with olefinic substances. Part I. The reaction of sulphur with mono-olefins and with $\Delta^{1:5}$ -diolefins.” By E. H. FARMER and F. W. SHIPLEY.
- “The reaction of sulphur and sulphur compounds with olefinic substances. Part II. The mechanisms of hydrogen sulphide reaction with mono-olefins, di-isoprenes, and rubber.” By R. F. NAYLOR.
- “The reaction of sulphur and sulphur compounds with olefinic substances. Part III. The reaction of sulphur with squalene.” By G. F. BLOOMFIELD.
- “Magnetic studies on polymerisation.” By (Miss) M. E. BEDWELL.
- “Synthetic antimalarials. Part XXI. 4-Arylamino-6-aminoalkylaminopyrimidines. Further variations.” By F. R. BASFORD, F. H. S. CURD, E. HOGGARTH, and F. L. ROSE.
- “Contributions to the chemistry of phenanthridine. Part I. The quaternisation of 9-(3'-pyridyl)phenanthridines and the preparation of some derivatives of potential biological interest.” By V. PETROW and W. R. WRAGG.
- “The absorption spectra of 2 : 4-dinitrophenylsemicarbazones.” By A. E. GILLAM and D. G. MOSS.
- “ α -(6-Methoxy-1-tetraallydene)crotonic acid.” By W. C. J. ROSS.
- “Note on the preparation and bacteriostatic action of some aminochalkones and related compounds.” By D. H. MARRIAN, P. B. RUSSELL, and A. R. TODD.
- “The structure of anhydrotetronic acid.” By D. H. MARRIAN, P. B. RUSSELL, A. R. TODD, and W. S. WARING.
- “The naphthidine transformation involving β -positions only.” By H. H. HODGSON, J. HABESHAW, and P. B. R. MURTI.
- “The replacement of the diazonium by the nitro-group. Part III. Decompositions by cupro-cupric sulphite.” By H. H. HODGSON, A. P. MAHADWAN, and E. R. WARD.
- “The reaction between acetone and ammonia; the formation of pyrimidine compounds analogous to the aldoxanes of Späth.” By R. B. BRADBURY, N. C. HANCOX, and H. H. HATT.
- “The structure of glycogen. Ratio of non-terminal to terminal glucose residues.” By T. G. HALSALL, E. L. HIRST, and J. K. N. JONES.
- “The conversion of sucrose into thiazole derivatives. Part II. 2 : 4-Dimethylthiazole derivatives and 2 : 4 : 5-trimethylthiazole.” By HILDA GREGORY and L. F. WIGGINS.
- “Anhydrides of polyhydric alcohols. Part VII. 1 : 4-3 : 6-Dianhydro *d*- and *l*-iditol.” By L. F. WIGGINS.
- “Anhydrides of polyhydric alcohols. Part VIII. Some alkenyl ethers of 1 : 4-3 : 6-dianhydro mannitol and 1 : 4-3 : 6-dianhydro sorbitol.” By HILDA GREGORY and L. F. WIGGINS.
- “Rearrangement and substitution in anionotropic systems. Part I. Test of bimolecular isomerisation in α -phenylallyl esters.” By A. G. CATCHPOLE and E. D. HUGHES.
- “Rearrangement and substitution in anionotropic systems. Part II. Test for bimolecular rearrangement and confirmation of the ionic mechanism of rearrangement from product compositions in substitutions of α - and γ -methylallyl halides.” By A. G. CATCHPOLE and E. D. HUGHES.
- “Rearrangement and substitution in anionotropic systems. Part III. Mechanism of, and equilibrium in, anionotropic change.” By A. G. CATCHPOLE, E. D. HUGHES, and C. K. INGOLD.
- “Naphthyridines. Part V. The preparation of 1 : 8-naphthyridines from 2 : 6-diaminopyridine.” By V. PETROW, E. L. REWALD, and B. STURGEON.
- “The reaction of sulphur and sulphur compounds with olefinic substances. Part IV. The thermal decomposition of organic polysulphides and its contribution to the sulphur-olefin reaction.” By G. F. BLOOMFIELD.
- “Miscellaneous thiazoles.” By E. B. KNOTT.
- “Derivatives of 6-methoxyquinaldine with basic substituents in the 4-position.” By J. WALKER.

- “Researches on acetylenic compounds. Part XI. The Mannich reaction with mono-substituted acetylenic compounds.” By E. R. H. JONES, I. MARSZAK, and (in part) H. BADER.
- “Researches on acetylenic compounds. Part XII. The preparation of conjugated diacetylenic glycols by the oxidative coupling of various types of ethynylcarbinols.” By K. BOWDEN, SIR IAN HEILBRON, E. R. H. JONES, and K. H. SARGENT.
- “Researches on acetylenic compounds. Part XIII. The reaction between epichlorohydrin and sodium acetylide. A novel route to the ethynylethylenic alcohol, pent-2-en-4-yn-1-ol.” By L. J. HAYNES, SIR IAN HEILBRON, E. R. H. JONES, and F. SONDHEIMER.
- “Researches on acetylenic compounds. Part XIV. A study of the reactions of the readily available ethynylethylenic alcohol, pent-2-en-4-yn-1-ol.” By Sir IAN HEILBRON, E. R. H. JONES, and F. SONDHEIMER.
- “Homovanillin.” By A. A. L. CHALLIS and G. R. CLEMO.

LOCAL REPRESENTATIVES OF THE CHEMICAL SOCIETY

- Aberdeen.* J. M. C. Thompson, M.A., D.Phil., A.R.I.C., Chemistry Department, Marischal College, The University, Aberdeen.
- Australia.* T. Iredale, D.Sc., F.R.I.C., The University, Sydney, Australia.
- Birmingham.* L. L. Bircumshaw, M.A., D.Sc., Department of Chemistry, The University, Edgbaston, Birmingham, 15.
- Bristol.* C. E. H. Bawn, Ph.D., Chemistry Department, The University, Woodland Road, Bristol.
- Cambridge.* B. Lythgoe, Ph.D., Organic Chemistry Department, The University, Cambridge.
- Canada.* Professor W. D. McFarlane, M.A., Ph.D., Macdonald College, St. Anne de Bellevue, Quebec, Canada.
- Edinburgh.* E. G. V. Percival, D.Sc., Ph.D., F.R.I.C., Chemistry Department, King's Buildings, West Mains Road, Edinburgh.
- Eire.* Professor T. S. Wheeler, D.Sc., Ph.D., F.R.I.C., Chemical Department, University College, Upper Merrion Street, Dublin.
- Exeter.* S. J. Gregg, Ph.D., A.R.C.S., A.R.I.C., Department of Chemistry, Washington Singer Laboratories, Prince of Wales' Road, Exeter.
- Glasgow.* J. D. Loudon, Ph.D., D.Sc., A.R.I.C., Chemistry Department, The University, Glasgow, W. 2.
- India.* Sir Shanti S. Bhatnagar, O.B.E., D.Sc., F.R.S., The University, Lahore, Punjab, India.
- Leeds.* F. R. Goss, D.Sc., Ph.D., F.R.I.C., The University, Leeds, 2.
- Liverpool.* W. B. Whalley, B.Sc., Ph.D., Organic Chemistry Department, The University, Liverpool.
- „ L. A. Haddock, M.Sc., F.R.I.C., I.C.I., Ltd. (General Chemicals Division), Research Department, Widnes Laboratory, Widnes.
- Manchester.* A. E. Gillam, D.Sc., F.R.I.C., Chemistry Department, The University, Manchester.
- „ J. C. Withers, Ph.D., A.R.I.C., Shirley Institute, Didsbury, Manchester.
- Newcastle and Durham.* P. L. Robinson, D.Sc., F.R.I.C., Chemistry Department, King's College, Newcastle-on-Tyne.
- New Zealand.* Professor F. G. Soper, D.Sc., Ph.D., F.R.I.C., University of Otago, Dunedin, New Zealand.
- Northern Ireland.* H. Graham, D.Sc., A.R.I.C., 26, Malone Hill Park, Belfast.
- North Wales.* W. Rogie Angus, M.A., D.Sc., Ph.D., F.R.I.C., Department of Chemistry, University College of North Wales, Bangor.
- Nottingham.* D. O. Jordan, Ph.D., M.Sc., A.R.I.C., University College, University Park, Nottingham.
- Oxford.* F. E. King, M.A., Ph.D., D.Phil., Dyson Perrins Laboratory, South Parks Road, Oxford.
- St. Andrews and Dundee.* J. D. M. Ross, M.B.E., M.A., D.Sc., Chemistry Department, University College, Dundee.
- Sheffield.* A. H. Lamberton, B.Sc., Ph.D., Chemistry Department, The University, Sheffield, 10.
- South Africa.* Professor W. Pugh, Ph.D., B.Sc., F.R.I.C., Chemistry Department, University of Cape Town, Rondebosch, S. Africa.
- Southampton.* K. R. Webb, B.Sc., Ph.D., University College, Southampton.
- South Wales.* Professor J. E. Coates, O.B.E., D.Sc., F.R.I.C., University College, Singleton Park, Swansea.

February, 1947

THE CHEMICAL SOCIETY

SCIENTIFIC MEETINGS DURING APRIL AND MAY, 1947

LONDON.

Thursday, April 17th, 1947, at 7.30 p.m.

Discussion, **Electrolytic Solutions**, arranged by Professor C. W. Davies, D.Sc., F.R.I.C.

The following contributions will be made :

General Introduction by Dr. G. S. Hartley.

" Association of Ions in Salt Solutions." By Professor C. W. Davies, D.Sc., F.R.I.C.

" The Interaction between Ions and Solvent." By Professor W. F. K. Wynne-Jones, D.Sc.

Thursday, May 1st, 1947, at 7.30 p.m.

The following papers will be read and discussed :

" Nitration of olefins." By C. W. Scaife.

" Reactions of the nitro-paraffins." By A. Lambert.

" Addition reactions of nitro-olefines." By R. L. Heath.

" Formation and reduction of 2- and 3-nitro-alkyl cyanides." By G. D. Buckley.

Thursday, May 15th, 1947, at 7.30 p.m.

Ernst Julius Cohen Memorial Lecture, by Professor F. G. Donnan, C.B.E., D.Sc., F.R.S.

BIRMINGHAM.

Monday, May 5th, 1947.

Lecture, **Careers in Chemistry**, by M. C. Paine, Esq.

To be held in the Chemical Lecture Theatre of the University.

EXETER.

Friday, May 2nd, 1947, at 4.30 p.m.

Lecture, **Advances in Immunochemistry**, by Professor M. Stacey, D.Sc., Ph.D., F.R.I.C.

To be held in the Washington Singer Laboratories.

MANCHESTER.

Friday, May 16th, 1947, at 6 p.m.

Lecture, **A New Notation for Organic Chemistry**, by Dr. G. M. Dyson, M.A., Ph.D., F.R.I.C.

Joint meeting with the local sections of the Society of Chemical Industry and the Royal Institute of Chemistry.

NEWCASTLE AND DURHAM.

Friday, April 25th, 1947, at 5 p.m.

Meeting for the reading of original papers.

To be held in the Chemistry Lecture Theatre of King's College, Newcastle-upon-Tyne.

Friday, May 9th, 1947, at 5 p.m.

Bedson Club Lecture, by Professor E. L. Hirst, M.A., D.Sc., F.R.S.

To be held at King's College, Newcastle-on-Tyne, and all Fellows are invited.

SHEFFIELD.

Thursday, May 15th, 1947, at 5.30 p.m.

Lecture, **Some Relationships between the Structure and Properties of Natural and Synthetic Fibres**, by Professor J. B. Speakman, D.Sc., F.R.I.C.

Joint Meeting with the University Chemical Society to be held in the Chemistry Lecture Theatre of the University.

PROCEEDINGS
OF THE
CHEMICAL SOCIETY

**Minutes of a
SCIENTIFIC MEETING**

held at Burlington House, Piccadilly, W. 1, on Thursday, February 6th, 1947, at 7.30 p.m.

PROFESSOR J. W. COOK, Vice-President, was in the Chair and welcomed the visitors present.

MINUTES.

The Minutes of the Scientific Meeting held on January 9th, 1947, were read and were confirmed and signed.

FORMAL ADMISSION OF FELLOWS.

The following were admitted Fellows of the Society :

V. P. Gellay, G. W. G. Jackman, G. A. Rose, J. P. Gordon, J. Drake, B. P. Gyani, P. B. D. de la Mare, J. B. Willis, T. R. Maynard, B. S. Gorrings, R. E. Parker, D. M. Williams, P. Mamalis, R. R. Coupe, A. R. Parkinson, V. Askam, W. Roberts, J. T. Davies, G. A. Collie, E. W. Hood, T. K. Sharp, A. M. Lowen, K. Ebbutt, W. R. Bett, R. Black, H. G. Cameron, D. D. Pate, J. E. Whitney, E. Whalley, D. E. Kidder, B. P. Brand, C. H. Frohnsdorff.

TILDEN LECTURE.

After a brief introduction, in which he referred to the terms of the Tilden Lecture bequest, the Chairman called upon Dr. A. E. Alexander to deliver his Tilden Lecture, entitled "The Application of Surface Chemistry to Colloidal Problems".

At the conclusion of the Lecture, the vote of thanks to Dr. Alexander, proposed by Professor E. K. Rideal, was carried with acclamation.

**Minutes of a
SCIENTIFIC MEETING**

**held in the Chemistry Department, The University, Woodland Road, Bristol, on
Thursday, February 13th, 1947, at 2.15 p.m.**

DR. J. L. SIMONSEN, F.R.S., Honorary Secretary, was in the Chair.

The CHAIRMAN conveyed the apologies for absence of the President due to indisposition.

The VICE-CHANCELLOR OF THE UNIVERSITY OF BRISTOL, Sir John Morris, C.B.E., welcomed Fellows present and expressed his pleasure in receiving the Society for an official meeting at Bristol.

FORMAL ADMISSION OF FELLOWS.

The following were admitted Fellows of the Society :

T. H. Bevan, F. I. G. Small, D. C. Williams, D. T. C. Gillespie, E. Katscher, F. W. Shipley, C. F. H. Tipper, S. T. Walter, P. G. Jones, W. D. Ollis, G. E. Cunningham, C. F. Mills.

DISCUSSION, "PROTEIN CHEMISTRY".

The CHAIRMAN then called on Professor J. D. Bernal to open the Discussion entitled "Protein Chemistry", and Dr. G. H. Tristram, Dr. R. A. Kekwick, and Dr. J. A. V. Butler contributed. A general discussion followed.

Tea, at which Fellows were the guests of the University, was taken at 4 p.m.

At the conclusion of the Discussion, PROFESSOR WILSON BAKER, who had taken the Chair, expressed the Society's thanks and appreciation to the Vice-Chancellor of the University for acting as host, to the contributors to the Discussion, and to the Local Representative for arranging the meeting.

**Minutes of a
SCIENTIFIC MEETING**

**held at Burlington House, Piccadilly, London, W. 1, on Thursday, February 20th, 1947,
at 7.30 p.m.**

PROFESSOR S. SUGDEN, D.Sc., F.R.S., Vice-President, who was in the Chair, conveyed the apologies of the President, Professor C. N. Hinshelwood, Sc.D., F.R.S., for absence owing to illness. The meeting expressed its best wishes for the speedy recovery of the President.

MINUTES.

(a) The Minutes of the Scientific Meeting held on February 6th, 1947, were read, and confirmed and signed.

(b) The Minutes of the Scientific Meeting held on February 13th, 1947, at the University of Bristol, were read, and confirmed and signed.

FORMAL ADMISSION OF FELLOWS.

The following were admitted Fellows of the Society :

J. R. Penney, H. Warson, J. M. Briscoe, J. A. Moss, A. Rutherford, D. A. Everest, R. Elliott, G. Alt, L. P. Mould, B. Selton, C. J. Janz.

SCIENTIFIC COMMUNICATIONS.

The following papers were read and discussed :

"The reduction of oxides by hydrogen and carbon monoxide." By W. E. Garner.

"The photochemical polymerisation of vinyl acetate vapour", and "Radical sensitised polymerisation of vinyl acetate vapour." By H. W. Melville and R. F. Tuckett.

A CENTURY OF CHEMISTRY

SPECIAL COMMEMORATIVE MEETING WITH THE ROYAL SOCIETY OF ARTS.

A special meeting arranged jointly by the Society and the Royal Society of Arts was held on Wednesday, February 19th, at 5 p.m. at the House of the Royal Society of Arts in John Adam Street, London, W.C.2.

The meeting was specially arranged as part of the Centenary Celebrations to commemorate the foundation of the Society, which took place at a meeting held at the House of the Royal Society of Arts on February 23rd, 1841. SIR THOMAS HOLLAND, K.C.S.I., K.C.I.E., D.L., D.Sc., F.R.S., senior past Chairman of Council of the Royal Society of Arts, presided. He referred to the first meeting of the Chemical Society and to the early and subsequent links between the two societies. He then invited Sir Harold Hartley, K.C.V.O., C.B.E., M.C., M.A., F.R.S., to deliver his lecture entitled "A Century of Chemistry".

SIR HAROLD HARTLEY, after briefly outlining the state of chemistry in 1841 and referring to the contributions made before 1841 by Lavoisier, Priestley, Dalton, and Berzelius, went on to describe the development of chemistry by Liebig, Kolbe, Hofmann, Kekulé, Laurent, Gerhardt, Mendeleef, and others. The contributions to physical chemistry by Ostwald, van't Hoff, Arrhenius, Thomson, Becquerel, Madame Curie, Rayleigh, and Ramsay, and others were also described. The main lines of the development of chemistry since the beginning of the present century to the present day were then reviewed. In a concluding section, SIR HAROLD referred to the highly important and significant part played by the application of chemistry to industry, and he indicated what he considered might be the problems which chemists should seek to solve in the future.

DR. R. P. LINSTED, Vice-President of the Chemical Society, in proposing the vote of thanks to the lecturer, read a telegram from the President, Professor C. N. Hinshelwood, sending his good wishes for the success of the meeting and regretting that owing to illness he was unable to be present. DR. LINSTED drew attention to the Society's Obligation Book, the first Minute Book and the Jubilee Album, which were on exhibition at the meeting. He also thanked the Royal Society of Arts for their co-operation in arranging the meeting. In referring to Sir Harold Hartley's lecture, he described it as a masterly historic address for a great occasion. The vote of thanks was carried with great enthusiasm.

OFFICIAL ANNOUNCEMENTS

DEATHS.

The Council regret to announce the deaths of the following Fellows :

	Elected.	Died.
Thomas Hadfield (Blackburn)	Feb. 20th, 1941.	Nov. 6th, 1946.
David Hooper (Beckenham)	March 1st, 1883.	Jan. 31st, 1947.
Gerald Gratton Quinn (Paignton)	Dec. 6th, 1894.	Nov. 20th, 1946.
Sidney Herbert Woolhouse (N. 14)	June 17th, 1903.	March 18th, 1946.

NOMINATIONS FOR VACANT PLACES ON THE COUNCIL.

The following is the list of nominations for vacant places on the Council which are due to be filled at the Annual General Meeting on March 20th, 1947.

Vice-Presidents, who have not filled the Office of President. (*One vacancy.*)

JOSEPH KENYON.
HARRY W. MELVILLE.

Ordinary Members of Council.

Constituency I (South-East England). (*Three vacancies.*)

FRANCES M. HAMER.
FREDERICK E. KING.
HENRY N. RYDON.
JOHN W. SMITH.

Constituency IV (North-East England). (*Two vacancies.*)

GEORGE M. DYSON.
FRANK R. GOSS.
DENIS O. JORDAN.

ACCOMMODATION—CENTENARY CELEBRATIONS AND INTERNATIONAL CONGRESS.

Very great difficulty is being experienced in securing accommodation in London for those attending the Centenary Celebrations (July 15th—17th) and the XIth International Congress of Pure and Applied Chemistry (July 17th—25th). The Honorary Organiser

of the Congress, who is arranging accommodation for both events, may only be able to make reservations for Official Delegates to the Celebrations and Congress, and Fellows of the Society are therefore strongly urged to make their own arrangements without delay.

It is much hoped that Fellows of the Society resident in or near London who can offer rooms to friends from the provinces will do so by mutual arrangement. In addition, Fellows who find themselves able to put up visitors for any period during July are requested to notify the Honorary Organiser, XIth International Congress of Pure and Applied Chemistry, 56, Victoria Street, S.W.1, giving details of the accommodation available.

The fullest co-operation from all Fellows in the London area is required if all Fellows outside London are to have an opportunity to attend the Celebrations and Congress.

GENERAL SECRETARY.

Mr. L. R. Batten, O.B.E., B.Sc., LL.B., Barrister-at-Law, has been appointed by the Council of the Chemical Society to be General Secretary in succession to Dr. D. C. Martin, B.Sc., F.R.I.C., who has been appointed Assistant Secretary to the Royal Society. Mr. Batten hopes to assume his duties at the Chemical Society on 1st March, 1947.

PRESENTATION TO MR. S. E. CARR, F.C.I.S.

At an informal meeting held on February 6th, the PRESIDENT handed to MR. CARR, formerly General Secretary of the Society, the volume of signatures of Fellows who had contributed to the presentation made to Mr. Carr at the Annual General Meeting of the Society held in Birmingham in April 1946.

Mr. CARR, writing to express his thanks, has said, "I ask all those who have contributed to the Presentation to accept my profound thanks for their generosity which has given me great happiness".

QUARTERLY REVIEWS.

The following is the table of contents of the first issue of *Quarterly Reviews* :

- "Fluorescence and Fluorescence Quenching." By E. J. Bowen.
- "Colour and Constitution." By A. Maccoll.
- "Amorphous Carbon and Graphite." By H. L. Riley.
- "Force Constants." By J. W. Linnett.
- "Oceanic Salt Deposits." By F. C. Phillips.

ELECTION OF NEW FELLOWS.

The following 115 candidates were elected Fellows of the Chemical Society on February 6th, 1947 :

Thomas Kennedy Anderson.	Armand-Marie Castille.
John Andrews.	Anthony David Caunt.
William Guy Armstrong.	Herbert Walter Chatfield.
Robert Wirenfeldt Asmussen.	Matthew Francis Stephen Choate.
Harold Firth Bamford.	Nathan Cohen.
Geoffrey Michael Beisman.	Richard Norton Coleman.
Edmund John Huskisson Birch.	Sam Collett.
Trevor George Bonner.	Alma Monica Cooke.
Kenneth Bowden.	Arthur Thomas Cooper.
Thomas John Bowen.	George William Crosbie.
Donald Charleton Bradley.	John Burton Davis.
Graham John Brealey.	Royston Walter Mastin D'Eye.
Geoffrey William Desmond Briggs.	Thomas Cochrane Downie.
James McKenzie Briscoe.	Edward James Dyett.
Peter Brown.	Lawrence John Edwards.
Alfred John Urbane Bull.	Rev. Bertin Leo Emling.
Donald Frank Harrington Button.	Arthur Owen Evans.
Charles Vernon Caine.	David Anthony Everest.
John Alexander Calderwood.	John Archibald Douglas Ewart.
Ronald James Callow.	Hussein Ahmad Fahim.

Geoffrey Gauldstone.
 Joseph Gibson.
 Edwin Percy Godden.
 Charles Victor Green.
 Allan Marshall Greenhow.
 Philipp Gross.
 John Ieuan Harris.
 Thomas Henshall.
 Roy Hordley.
 John Barclay Hough.
 Sydney Hudson.
 Douglas William James.
 Kai Arne Jensen.
 Kenneth Arthur Reeves Julian.
 Albert Arthur Kendall.
 Kenneth Geoffrey Langley.
 Alan James Lambie.
 Edward Leete.
 Albert Edward Victor Lilly.
 Francis Crawford Lloyd.
 Malcolm McFarlane Love.
 William McCleary.
 James Macdonald.
 James McKeown.
 Tom Bruce McLaren.
 Lawrence Siegfried Malowan.
 Ronald Stewart Martin.
 Erik Miller.
 William Arthur Mitchell.
 Michael Fletcher Moore.
 Cyril Alfred Morgan.
 John Campbell Moseley.
 Aiyagari Lakshmi Narasimhamurti.
 John Anthony de Norman.
 Donald Sterling Noyce.
 Ernest Thomas Osborne.
 Thomas David Parkhill.
 John Ronald Penney.

John Bela Polya.
 Gerald Seaton Pope.
 Herbert John Eric Poupard.
 Charles Percy Pringle.
 Miroslav Protiva.
 Desmond Ramsey Rexworthy.
 Douglas Eric Arthur Rivett.
 Horace George Rolfe.
 Johannes Jurrien Rook.
 Peter Reginald Rowland.
 Stefan Udo Ruff.
 Rowland Whincup Saville.
 Jeffrey Sinclair Lewis Scaife.
 Ronald Ian Silsby.
 Gerald Alfred Silverstone.
 Basil Garnet Skinner.
 Frank Walter Smith.
 John Charles Somogyi.
 John Maurice Stanton.
 Einar August Stenhagen.
 William John Stringer.
 Mohammed Uass Siddeck Sultanbawa.
 John Eric Langley Swallow.
 Raymond Vaughan Swann.
 Christopher John Timmons.
 Wyndham Cecil James Trusselle.
 Karl Heinrich Walter Turck.
 Raymond Wallace Goulter Turner.
 Brian Campbell Vickery.
 Alan David Walker.
 Ronald David Watson.
 William Kenneth Wilde.
 Raymond Kirkhouse Williams.
 John Bryan Spencer Wilson.
 Walter Frederick Wilkinson.
 William Sydney Durham Wise.
 Sydney Edward Wright.

MEETING OF COUNCIL.

A meeting of Council was held on Thursday, February 6th, 1947.

The Annual Report for 1946 of the Publication Committee and the report of the Committee's meeting (January 9th) were adopted.

The Annual Report for 1946 of the Joint Library Committee and the report of the Committee's meeting (January 29th) were approved.

A gift from Mr. Charles Gilling of the Society's publications was noted with pleasure.

The appointment of Mr. L. R. Batten as General Secretary was approved.

Further consideration was given to the question of accommodation for the Society, particularly for its administrative staff.

It was decided to invite Dr. D. W. G. Style and Dr. V. Gold to act as scrutators at the forthcoming ballot for the election of Members of Council, 1947—1948.

It was decided to appoint a Local Representative for the Hull Area, and Professor Brynmor Jones has accepted the invitation to become the first Local Representative.

The Report of Council for 1946 was considered and approved for submission to Fellows at the Annual General Meeting on March 20th, 1947.

The report of the fifth Meeting of the Centenary Executive Committee (January 9th) was adopted. It was reported that the Prime Minister had been approached, and it was hoped that he would be able to accept the invitation to be chief guest at the Centenary Dinner.

115 Candidates for Fellowship were elected Fellows of the Society.

Certain formal and financial items were transacted.

MEETINGS OUTSIDE LONDON

ABERDEEN.

"Recent Advances in the Metabolism of Proteins and Amino-acids", by Dr. D. P. Cuthbertson.

A meeting was held at Marischal College, Aberdeen, on January 24th, 1947. Dr. Cuthbertson dealt with the digestion of proteins and the mode of absorption of the resulting amino-acids by the animal body. The effects of varying the protein content of diet were discussed. The amino-acid composition of many sources of protein were compared, and the amino-acids classified as essential or non-essential constituents of diet. Much recent work on the fate of amino-acids in the animal body was made possible by the use of "marked" isotopic carbon.

LIVERPOOL.

"Metabolic Cycles", by Professor H. A. Krebs, M.A., M.D.

A Joint Meeting with the local sections of the Royal Institute of Chemistry, the Society of Chemical Industry, the British Association of Chemists and the University Chemical Society, was held on January 23rd, 1947, at Liverpool University, Professor R. A. Morton being in the Chair.

Professor Krebs expounded his subject in a very interesting and provocative manner, by a judicious blending of the proved scientific fact and philosophical speculation, with particular reference to the "ornithine cycle"—one of his own most notable contributions to this field.

A vote of thanks, carried with acclamation, was proposed by Dr. R. J. S. Beer, and seconded by Dr. R. T. Williams.

NOTTINGHAM.

"Some Aspects of the Chemistry of Paludrine", by Dr. F. L. Rose.

A joint meeting with the University College Chemical Society was held at University College, Nottingham, on November 21st, 1946. Professor J. M. Gulland, F.R.S., was in the Chair.

Dr. Rose pointed out that it was not yet possible to predict with accuracy the biological properties of a drug possessing a new type of structure, and research in the field of chemotherapy must depend on working hypotheses based on the biological effects produced by known compounds. Dr. Rose described how the application of this method led to the preparation of the antimalarial drug Paludrine, and put forward a tentative suggestion as to the mode of action of this drug.

Dr. J. C. Roberts thanked Dr. Rose for his interesting lecture.

"Recent Advances in the Chemistry of the Enzyme", by Dr. J. A. V. Butler.

A joint meeting with the University College Chemical Society was held at University College, Nottingham, on January 23rd, 1947, Dr. D. O. Jordan was in the Chair.

Dr. Butler described how in recent years many enzymes have been prepared in the crystalline state, and discussed the relationship between enzymes and proteins. Recent work employing crystalline enzymes and pure protein preparations appears to be a promising, though laborious, method of attacking the problem of protein structure. Dr. Butler was thanked for his stimulating lecture by Mr. K. Selby, the President of the College Chemical Society.

SOUTH WALES.

"The Absorption of Light", by Mr. E. J. Bowen, M.A., F.R.S.

A meeting was held jointly with the University College of Swansea Chemical Society on January 31st, 1947, in the Chemistry Lecture Theatre, University College, Swansea. The Chair was taken by Professor J. E. Coates, the Local Representative. Mr. Bowen

discussed energy quantisation on the basis of wave-mechanics, and showed how the wave-mechanical orbitals of atoms and molecules could be graphically represented, the quantum number being identified as nodes in the orbital diagrams. He discussed the types of bonding from the wave-mechanical aspect and the essential characteristics of light absorption by atoms and molecules, and illustrated the theory by reference to conjugated double bond molecules from butadiene to carotene, to the ring systems from benzene to pentacene, to *p*-nitrophenol and other indicators, and to dyes and other organic compounds such as aldehydes and ketones. He brought out in a striking way that many aspects of light absorption of chemical interest could readily be presented without much mathematics by means of graphical representations such as orbital diagrams and potential energy curves.

After a brief discussion in which Dr. N. H. Hartshorne inquired about pleochroism, a vote of thanks to the lecturer was proposed by Mr. R. H. Davies, seconded by Mr. J. J. Austin, and carried with enthusiasm.

“ Structural Inorganic Chemistry ”, by Professor W. Wardlaw, D.Sc., F.R.I.C.

A meeting was held jointly with the Cardiff and District Section of the Royal Institute of Chemistry and the South Wales Section of the Society of Chemical Industry on February 9th, 1947, at University College, Cardiff. The Chair was taken by Mr. P. V. Lloyd. Professor Wardlaw stressed the profound effect of new methods, such as *X*-ray analysis, on the concepts of inorganic chemistry. Reviewing the simple lattices of sodium chloride and caesium chloride and the less simple lattice of ferrous sulphide, he discussed the problem of the iron defect or sulphur excess, relative to the formula FeS, shown by magnetic iron sulphide (pyrrhotite) and explained how, by correlating density and composition, it had been established that some Fe positions in the lattice were vacant, a result of some interest in relation to the “ Law of Constant Composition ”.

Among other topics the lecturer indicated that the apparently analogous CaCO₃, CaSiO₃, CaTiO₃, are now known to have distinctly different structures, and showed how magnetic properties had helped in elucidating the structure of iron carbonyl and related compounds; he further dealt with phosphorus pentachloride, and called attention to recent studies of the Si-O, P-O, S-O, Cl-O linkages in silicates, phosphates, etc., which had yielded unexpected results, so that much uncertainty now exists as to the structural formulæ of these compounds.

A vote of thanks to the lecturer was proposed by Mr. S. J. H. O. Chard, seconded by Mr. H. F. Adams and carried with enthusiasm.

LIST OF APPLICATIONS FOR FELLOWSHIP

(Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries before April 30th, 1947. Such objections will be treated as confidential. The forms of application are displayed in the Library.)

- Agar, Anthony Francis**, B.A. (Oxon). British. Ash Mount, Heyes Lane, Alderley Edge, Manchester. Student. *Signed by* : F. E. King, Harry Irving, F. M. Brewer.
- Akers, Sir Wallace Alan**, C.B.E., B.A. (Oxon). British. 60, Knightsbridge, S.W. 1. Director of Research, Imperial Chemical Industries. *Signed by* : F. A. Freeth, Cecil J. T. Cronshaw, Alexander Fleck.
- *Ames, Thomas Rawlinson**. British. Dalton Hall, Victoria Park, Manchester, 14. Student, Manchester University. *Signed by* : A. E. Gillam, Fred Brown, Colin Campbell.
- Aston, Richard Samuel**, A.R.I.C. British. 36, Welsh Road, Queensferry, nr. Chester. Chief Chemist, Messrs. Courtaulds, Ltd., Flint. *Signed by* : G. A. Edwards, W. R. Stanton, J. Cooper Duff.
- *Ball, Michael Gilbert**. British. 20, Hill Top Crest, Higher Street Budeaux, Plymouth. Student, Oxford University. *Signed by* : Ronald P. Bell, S. G. P. Plant, John G. Burgan.
- *Barclay, William**, B.Sc. (Glas.). British. 4, Glenriddet Avenue, Kilbirnie. Research Assistant, I.C.I. Explosives. *Signed by* : Andrew McLean, F. D. Miles, J. Taylor.
- Barlow, Richard Bawden**, B.A. (Oxon). British. Exeter College, Oxford. Research Student. *Signed by* : F. E. King, J. H. Wolfenden, H. Raymond Ing.
- *Barton, Stanley**. British. 31, Margaret Avenue, Hales Owen. Student, Birmingham University. *Signed by* : L. L. Bircumshaw, F. W. Pinkard, J. E. B. Randles.
- *Bernfeld, Georg Josef**, M.Sc. (N.U.I.). Austrian. 95, Lower Beechwood Avenue, Ranelagh, Dublin. Teaching and Research. *Signed by* : T. S. Wheeler, A. G. G. Leonard, Vincent C. Barry.

- Bing, Heinz**, B.Sc. (Lond.), A.R.C.S. German. 218, Adelaide Road, N.W. 3. Research Chemist. *Signed by* : C. W. Picard, H. V. A. Briscoe, W. M. Wolf.
- ***Birley, Arthur William**. British. 386, Ifley Road, Oxford. Student, Oxford University. *Signed by* : F. E. King, J. C. Smith, E. J. Bowen.
- Blackmur, Thomas Alfred**, B.Sc. (Lond.), A.R.I.C. British. 212, O'Wood Avenue, Holytown. Chief Chemist to Altones, Ltd., Glasgow. *Signed by* : F. Rumford, S. A. J. Murray, G. Edwards.
- ***Bower, John Dell**, B.Sc. (Lond.). British. 12, Knox Road, Havant. Student. *Signed by* : C. M. Bere, J. A. Stock, C. G. Lyons.
- Branch, Leslie Ernest Thomas**, B.Sc. (Lond.), F.R.I.C. British. Tinkers Revel, Pinner Hill. Executive Chemist. *Signed by* : D. S. Payne, E. B. Knott, H. Baines.
- Brazier, Sidney Albert**, M.Sc. (Birm.), F.R.I.C. British. 24, Carrwood Road, Wilmslow. Technical Manager, Dunlop Rubber Co., Ltd., Manchester. *Signed by* : R. Fraser Thomson, H. M. Bunbury, W. J. S. Naunton, E. H. Rodd, P. Chorley.
- Brooks, James Douglas**, B.Sc.Hons. (Lond.). British. 50, Stratford Road, West Bridgeford, Nottingham. Research Chemist. *Signed by* : J. C. Drummond, W. Frank Short, W. Wilson.
- ***Brooksbank, Benjamin Walter Lamplugh**, B.Sc.Hons. (Lond.). British. c/o Physiology Department, Guy's Hospital Medical School, S.E. 1. Research Student. *Signed by* : G. Haslewood, N. G. Bisset, F. H. Brain.
- ***Brown, Michael George**. British. 4, Litchfield Avenue, Morden. Student, Oxford University. *Signed by* : K. W. Sykes, J. W. Linnett, J. A. Barltrop.
- ***Buchanan, John Grant**. Exhibitioner of Christ's College, Cambridge. British. Mora, Grahamsdyke Road, Bo'ness. Student, Cambridge University. *Signed by* : A. W. Johnson, A. R. Todd, Denis H. Marrian.
- ***Butler, Edward Joseph**. British. Little Rissington, nr. Bourton on the Water, Cheltenham. Student, Oxford University. *Signed by* : F. E. King, Harry Irving, J. R. P. O'Brien.
- ***Calder, Gordon Archibald Russell**, B.Sc. (Glas.), A.R.I.C. British. c/o Mrs. Brown, 107, Musters Road West Bridgeford, Nottingham. Works Chemist. *Signed by* : W. Howieson, Harold Fore, W. Wilson.
- Campbell, Malcolm Colin**, A.C.G.F.C., A.R.I.C. British. 72, Riverbank, Laleham Road, Staines. Food Production Chemist. *Signed by* : Theodore Rendle, L. E. Campbell, C. L. Hinton.
- Casado, Francisco Lopez**, Licenciado en Ciencias Químicas (Universidad de Santiago de Compostela), Doctor en Ciencias Químicas (Universidad de Madrid). Spanish. Dr. Teijeiro, 3-2º, Santiago de Compostela, Galicia. Profesor Auxiliar de Química Inorgánica, Facultad de Ciencias Químicas, Universidad de Santiago. *Signed by* : R. Whytlaw Gray, Frederick Challenger, J. Colvin.
- Casbolt, Jack Alfred**, Ph.C. British. College of the Pharmaceutical Society, 17, Bloomsbury Square, W.C. 1. Demonstrator. *Signed by* : W. H. Linnell, W. J. Arrol, T. E. Wallis.
- Catrasvas, George Nicolas**, D.Ch.Hons. (Athens). Greek. c/o Leather Industries Department, The University, Leeds, 2. Research Student. *Signed by* : K. S. Kirby, F. R. Goss, W. A. Wightman.
- Chambers, Geoffrey Prytherch Campbell**. British. 163, Wallasey Road, Wallasey. Student. *Signed by* : A. McGookin, A. Robertson, W. B. Whalley.
- ***Chapman, Rex**. British. 16, Tresco Avenue, Stretford, Manchester. Student. *Signed by* : A. E. Gillam, F. Fairbrother, E. L. Hirst.
- Clark-Lowes, Daniel Nicholas**, M.A. (Oxon). British. 6a, The Schools, Shrewsbury. Schoolmaster. *Signed by* : Ronald P. Bell, A. G. Ogston, J. E. Prue.
- Clifford, Ivor Lawrence**, B.Sc. (Manc.), A.R.I.C. British. Imperial Chemical Industries, Ltd., Alkali Division, Northwich. Research Chemist. *Signed by* : G. D. Buckley, J. Ferguson, L. M. Clark.
- ***Coe, John Seward**, B.Sc. (Lond.). British. 49, Leith Road, Wood Green, N. 22. Industrial Chemist. *Signed by* : N. E. Williams, Bernard Bann, I. Greenfield.
- ***Cooper, Hamish Rae**, B.Sc.Hons. (Aberd.), A.R.I.C. British. 160, Mid Stocket Road, Aberdeen. Chemical Research, Aberdeen University. *Signed by* : J. M. C. Thompson, H. W. Melville, James C. Robb, Robert B. Whyte.
- ***Cowan, Pauline May**. British. 17, Inverleith Place, Edinburgh, 4. Student, Oxford University. *Signed by* : F. E. King, M. L. Tomlinson, D. M. Hodgkin.
- ***Cranley, Martin Joseph**, M.Sc. (N.U.I.), A.R.I.C. British. Davy-Faraday Research Laboratory, Royal Institution, Albemarle Street, W. 1. Research Student. *Signed by* : Eric K. Rideal, Paley Johnson, Robert Robertson.
- Creeth, James Michael**, B.Sc.Hons. (Lond.). British. University College, Nottingham. Research Assistant. *Signed by* : J. Masson Gulland, John C. Roberts, D. O. Jordan.
- ***Croshaw, Betty**, B.Sc. (Lond.). British. White House, Vale Road, Colnick, Netherfield, Nottingham. Assistant Bacteriologist, Boots Pure Drug Co., Ltd., Nottingham. *Signed by* : G. Sykes, S. K. Hutchinson, Lois Dickinson.
- ***Daglish, Anthony Fenwick**, B.A. (Cantab.). British. Foulbridge Cottage, Beamish Park, Beamish. Post-graduate Research Student. *Signed by* : G. R. Clemo, G. A. Swan, R. Raper.
- Danby, Peter**, B.Sc.Hons. (Leeds). British. Leather Industries Department, The University, Leeds. Lecturer. *Signed by* : K. S. Kirby, F. R. Goss, W. A. Wightman.
- Davies, Alwyn George**, B.Sc.Hons. (Lond.). British. The Rectory, Little Cressingham, Thetford. Chemistry Research, University College, London. *Signed by* : C. K. Ingold, Henry Terrey, L. F. Gilbert.
- Davies, Caleb Thomas**. British. University College, Leicester. Student. *Signed by* : L. Hunter, J. S. Whitehurst, I. I. Carasso.

- Davies, Duncan Sheppey**, B.Sc., M.A., D.Phil. (Oxon). British. 13, Hilton Crescent, Prestwich. Research Chemist. *Signed by* : W. A. Cowdrey, A. F. Wells, P. G. Carter.
- Davies, Trevor William**, B.Sc.Hons. (Lond.), A.R.C.S. British. 50, London Road, Kingston. Research Chemist. *Signed by* : Louis A. Jordan, A. C. C. Newman, S. H. Bell.
- Davis, Walter Dennis**, B.Sc. (Lond.), A.R.C.S. British. 19, St. Clements Road, Newtown, Parkstone. Research Assistant. *Signed by* : L. A. Moignard, F. J. Dent, W. F. Thorne.
- *Dawson, Joseph Henry**. British. 51, Halton Road, Skerton, Lancaster. Control of Analytical and Testing Laboratory. *Signed by* : R. D. Williams, G. W. Holton, R. A. Cowin.
- *Deegan, Thomas**. British. 26, Canon Road, Arnfield, Liverpool, 6. Student, Oxford University. *Signed by* : F. E. King, S. G. P. Plant, B. Lambert.
- Dent, James Harry**, B.Sc.Hons. (Lond.), F.R.I.C. British. Quintus, Stanhope Road, Bowdon. Chemist. *Signed by* : G. Spencer, R. Isherwood, J. Lockett.
- Donovan, Barry Joseph**, A.R.I.C. British. 35, Gorsehill Road, Wallasey. Research Chemist *Signed by* : J. Pearson, M. A. Birch, E. G. E. Hawkins.
- *Donne, David Lucas**, B.A. (Oxon). British. 7, St. James Mansions, West End Lane, Hampstead, N.W. 6. Chemical Research. *Signed by* : J. C. Smith, B. V. de G. Walden, T. F. West.
- Dunstan, Eric James**, M.Sc. (Birm.), M.I.Chem.E., F.Inst.P. British. The Elms, Ellesmere Road, Ellesmere Park, Eccles, Manchester. Director and General Manager of Manchester Oil Refinery, Ltd. *Signed by* : G. H. Harris, H. K. Whalley, Harold Moore.
- *Dunstan, Sonia**, M.Sc. (Manc.). British. The Elms, Ellesmere Park, Eccles, Manchester. Assistant Lecturer. *Signed by* : A. E. Gillam, J. K. N. Jones, E. L. Hirst.
- *Edgar, Albert John Buchanan**. British. 96, Herongate Road, E. 12. Student, London University. *Signed by* : D. H. Hey, E. H. Rodd, S. H. Harper.
- *Elphick, Alan Edwin**. British. 3, Leighton Road, Knowle, Bristol, 4. Student, Oxford University. *Signed by* : F. E. King, Harry Irving, G. D. Parkes.
- Erdtman, Holger Gustaf Henrik**, Fil.Dr. (Stockholm). Swedish. Royal Institute of Technology, Stockholm. Professor of Organic Chemistry. *Signed by* : Robert Robinson, J. C. Smith, F. E. King.
- Fowler, Harold William**, B.Pharm. (Lond.), Ph.C., M.P.S. British. 75, Turnbull Drive, Braunstone, Leicester. Research Chemist, Messrs. A. de St. Dalmas & Co., Ltd., Leicester. *Signed by* : S. W. Atherley, C. Whitworth, P. H. Freestone.
- Gaunt, John Arnold**, B.Sc.Hons. (Leeds). British. 292, Hillington Road, Glasgow, S.W. 2. Research Chemist, Messrs. James Anderson & Co. (Colours), Ltd., Glasgow. *Signed by* : D. M. Stead, Arnold T. Peters, E. Race.
- Gething, Harry Howard**, B.Sc.Hons. (Lond.), A.R.I.C. British. 5, Greenhill Road, Grantham. Analytical Chemist. *Signed by* : A. D. Powell, W. F. Elvidge, E. Kennedy.
- Gladstone, James Edward**, B.Sc.Hons. (Dunelm), A.R.I.C. British. 473, Lobley Hill Road, Gateshead, 11. Leather Chemist. Student, Leeds University. *Signed by* : K. S. Kirby, F. R. Goss, W. A. Wightman.
- *Gorton, Edward Hugh**. British. The Corner, Summerville Gardens, Latchford W., Warrington. Student, Durham University. *Signed by* : W. W. Marshall, R. Bell, Geo. A. Nicholson, R. Iley, H. Marsh.
- *Goddard, Daniel Richard**, B.Sc. (Lond.). British. 16, Esmond Road, Bedford Park, W. 4. Temporary Assistant Lecturer, University College, London. *Signed by* : Dorothy M. Usher, A. D. E. Pullin, D. J. Millen.
- Gray, George William**, B.Sc.Hons. (Glas.). British. 50, Glasgow Road, Denny. Assistant Lecturer in Chemistry, University College, Hull. *Signed by* : Brynmor Jones, Wilfred B. Orr, J. W. Baker.
- *Griffin, Gerald Joseph Louis**, B.Sc. (Lond.). British. c/o Mrs. W. Primmer, 210, Barnsole Road, Gillingham. Lecturer in Chemistry. *Signed by* : S. C. Bevan, W. Davey, L. P. McHatton.
- Gripenberg, Jarl Mauritz Leonard**, Dipl.Eng. and Dr.Techn. (Helsingfors). Finnish. 13, Emperors' Gate, S.W. 7. Research Student, London University. *Signed by* : C. K. Ingold, Henry Terry, C. A. Bunton.
- *Haddon, Gordon Frederick**. British. 166, Midland Road, Wellingborough. Assistant Research Chemist. *Signed by* : G. Malcolm Dyson, F. F. Stephens, H. A. Walker.
- *Haley, Colin Andrew Charles**. British. Queens' College, Cambridge. Student, Cambridge University. *Signed by* : Peter Sykes, J. C. Bevington, E. A. Moelwyn Hughes.
- *Hall, Geoffrey Ronald**. British. Eskham, Devonshire Road, Douglas, Isle of Man. Student, Manchester University. *Signed by* : A. E. Gillam, F. Fairbrother, M. Polanyi.
- Hall, George Frederick**, M.B.E., B.Sc.Hons. (Lond.), F.R.I.C. British. 26, Hereford Road, Woodthorpe, Nottingham. Analytical Chemist. *Signed by* : A. D. Powell, W. F. Elvidge, E. Kennedy.
- Hallas, Charles Arthur**, B.Sc., F.R.I.C. British. 1, Alexandra Grove, North Finchley, N. 12. Chemist at Research Association. *Signed by* : C. L. Hinton, D. W. Groves, H. G. Harvey.
- Harris, Frederick Reginald**, B.Sc. (Lond.), Ph.D. (Sheffield), F.R.I.C. British. 41, Princes Road, Brighton, 7. Lecturer in Inorganic Chemistry, Brighton Technical College. *Signed by* : T. J. Morrison, J. M. C. Thompson, A. Cooksey.
- Hay, John**. British. Wartime Diploma in Applied Chemistry, Heroit Watt College, Edinburgh. British. 22, Southville Close, West Ewell, Surrey. Works Chemist. *Signed by* : Hugh B. Nisbet, A. Mackie, James Sandilands.
- Hayman, Harold**. British. c/o I.C.I. (India), Ltd., 18, Shand Road, Calcutta. Technical Representative, Alflec Water Treatment Service, I.C.I. (India), Ltd. *Signed by* : A. G. D. Emerson, S. Stevens, W. J. Cook.

- Heath, Harold**, B.Sc.Hons. (Lond.), A.R.I.C. British. 12, Wilson House, Albion Avenue, Clapham, S.W. 8. Analytical Chemist. *Signed by* : C. T. Bennett, L. J. Waller, R. E. Mitchell.
- ***Heath, Stanley Victor**, British. 57, Renny Road, Fratton, Portsmouth. Student and Assistant Works Chemist. *Signed by* : C. G. Lyons, J. M. Wilson, C. M. Bere.
- Hodgson, John Francis**, B.Sc.Hons. (Lond.), A.R.I.C. British. La Bicoque, Hallowes Rise, Dronfield. Senior Organic Research Chemist, B.S.A., Group Research Centre, Sheffield. *Signed by* : R. D. Haworth, Arthur W. Chapman, G. Murfitt.
- ***Holliday, Peter**, B.A. (Oxon). British. 15, Forge Hill, Knottingley. Research Chemist, British Nylon Spinners, Ltd., Coventry. *Signed by* : Ronald P. Bell, E. J. Bowen, P. R. Lewis.
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PAPERS RECEIVED

List of papers received between January 21st, 1947, and February 7th, 1947. (This list does not include the titles of papers which have been read at a Scientific Meeting or which have appeared in the *Journal*.)

- "The structure of molecular compounds. Part IV. Clathrate compounds." By H. M. POWELL.
- "Thermal decomposition of explosives in the solid phase. The thermal decomposition *in vacuo* of certain mono- and di-nitrobenzenediazo-oxides, with a note on the kinetics of thermal breakdown of 2-nitrobenzene-4-diazo-1-oxide." By J. VAUGHAN and L. PHILLIPS.
- "Derivatives of indene and of butyric acid." By J. S. H. DAVIES and D. S. MORRIS.
- "Studies in the terpenes. Part I. A synthesis of *dl*-2 : 2 : 3-trimethylcyclohexane-1-carboxylic acid." By R. N. CHAKRAVARTI.
- "Studies in theazole series. Part I. A novel route to 5-aminothiazoles." By A. H. COOK, (SIR) IAN HEILBRON, and A. L. LEVY.
- "Studies in theazole series. Part II. The interaction of α -amino-nitriles and carbon disulphide." By A. H. COOK, (SIR) IAN HEILBRON, and A. L. LEVY.
- "Syntheses of some amino-acids including methionine." By J. R. CATCH, A. H. COOK, A. R. GRAHAM, and (SIR) IAN HEILBRON.
- "Some organic derivatives of hexachlorodisiloxane." By H. J. EMELÉUS and D. S. PAYNE.
- "Alkyl, aryl, and alkoxy-derivatives of silicon tetrachloride and silicochloroform." By H. J. EMELÉUS and S. R. ROBINSON.
- "Aliphatic nitro-compounds. Part I. Preparation of nitro-olefins by dehydration of 2-nitro-alcohols." By G. D. BUCKLEY and C. W. SCAIFE.
- "Aliphatic nitro-compounds. Part II. Conjugated nitro-dienes." By G. D. BUCKLEY and (MRS.) J. L. CHARLISH.
- "Aliphatic nitro-compounds. Part III. Preparation of alkyl 2-nitro-alkyl ethers." By A. LAMBERT, C. W. SCAIFE, and A. E. WILDER-SMITH.
- "Aliphatic nitro-compounds. Part IV. Addition of thiols to α -nitro-olefins." By R. L. HEATH and A. LAMBERT.
- "Aliphatic nitro-compounds. Part V. Preparation of 2-nitro-alkanesulphonic acids by interaction of α -nitro-olefins and sodium hydrogen sulphite." By R. L. HEATH and H. A. PIGGOTT.
- "Aliphatic nitro-compounds. Part VI. Reaction of α -nitro-olefins with hydrochloric acid." By R. L. HEATH and J. D. ROSE.
- "Aliphatic nitro-compounds. Part VII. Preparation of 2-nitro-alkylamines." By R. L. HEATH and J. D. ROSE.

- “Aliphatic nitro-compounds. Part VIII. Addition of primary and secondary nitro-paraffins to α -nitro-olefins to give 1:3-dinitro-paraffins.” By A. LAMBERT and H. A. PIGGOTT.
- “Aliphatic nitro-compounds. Part IX. Reaction of nitro-paraffins with ethylmagnesium bromide.” By G. D. BUCKLEY.
- “Aliphatic nitro-compounds. Part X. Action of Grignard reagents on the α -nitro-olefins.” By G. D. BUCKLEY.
- “Aliphatic nitro-compounds. Part XI. Preparation of nitro-paraffins by 1:4-addition of organometallic halides to α -nitro-olefins.” By G. D. BUCKLEY and E. ELLERY.
- “Aliphatic nitro-compounds. Part XII. Preparation and reduction of 2-nitro-alkyl cyanides.” By G. D. BUCKLEY, R. L. HEATH, and J. D. ROSE.
- “Aliphatic nitro-compounds. Part XIII. Preparation of 3-nitro-1-aryl-alkyl cyanides by interaction of arylacetoneitriles and α -nitro-olefins.” By G. D. BUCKLEY, F. G. HUNT, and A. LOWE.
- “Aliphatic nitro-compounds. Part XIV. Preparation of 3-nitro-alkyl cyanides by reaction of nitro-paraffins with unsaturated nitriles.” By G. D. BUCKLEY, T. J. ELLIOTT, F. G. HUNT, and A. LOWE.
- “Aliphatic nitro-compounds. Part XV. Heterocyclic bases by reduction of 3-nitro-alkyl cyanides.” By G. D. BUCKLEY and T. J. ELLIOTT.
- “Aliphatic nitro-compounds. Part XVI. Condensation of dialkyl-hydroxymethylamines with nitro-paraffins.” By A. LAMBERT and J. D. ROSE.
- “Aliphatic nitro-compounds. Part XVII. Reaction of nitro-paraffins with unsaturated sulphones.” By G. D. BUCKLEY, (MRS.) J. L. CHARLISH, and J. D. ROSE.
- “Aliphatic nitro-compounds. Part XVIII. Interaction of ketones and nitro-paraffins.” By A. LAMBERT and A. LOWE.
- “The preparation and properties of triarylstibines.” By J. I. HARRIS, S. T. BOWDEN, and W. J. JONES.
- “Synthetic antimalarials. Part XXII. Some quinolylamino-substituted pyrimidine derivatives.” By F. H. S. CURD, W. GRAHAM, (MISS) D. N. RICHARDSON, and F. L. ROSE.
- “Attempts to find new antimalarials. Part XXVII. Further derivatives of *p*-phenanthroline.” By B. DOUGLAS, R. G. JACOMB, and W. O. KERMAK.
- “Compounds related to 2:3-dimethylpyridine.” By A. MUSTAFA and (in part) M. K. HILMY.
- “Strychnine and brucine. Part XLVII.” By (SIR) ROBERT ROBINSON.
- “Strychnine and brucine. Part XLVIII. Oxodihydroneostrychnine and analogous bases.” By R. N. CHAKRAVARTI, K. H. PAUSACKER, and (SIR) ROBERT ROBINSON.
- “Strychnine and brucine. Part XLIX. Degradation of the strychnineacetic acid prepared from *pseudostrychnine*.” By K. H. PAUSACKER and (SIR) ROBERT ROBINSON.
- “The synthesis of γ -(*p*-hydroxyphenyl)- α -aminobutyric acid—a homologue of tyrosine.” By W. C. EVANS and N. WALKER.
- “Some 1:1'- and 2:2'-dinaphthyl derivatives and a new synthesis of 3:3'-dinitro-1:1'-dinaphthyl.” By H. H. HODGSON and J. HABESHAW.
- “Reactions of benzthiazole derivatives. Part V. Observations on the formation of benzthiazole-1-acetone.” By M. A. THOROLD ROGERS and W. A. SEXTON.
- “The formation of hydroxythionaphthens by the interaction of benzenesulphonylbenz-isothiazolone and substances containing a reactive methylene group.” By A. W. H. BARTON and (the late) E. W. MCCLELLAND.
- “The polysaccharides of carrageen. Part II. The *Gigartina Stella* polysaccharide.” By E. T. DEWAR and E. G. V. PERCIVAL.
- “Hydrated oxalates of some rare-earth elements.” By A. W. WYLIE.
- “The application of infra-red analysis to the study of the reaction of certain olefins with hydrogen sulphide.” By N. SHEPPARD and G. B. B. M. SUTHERLAND.
- “The solubility at high temperature of pure sucrose in water.” By M. TAYLOR.

March, 1947.

THE CHEMICAL SOCIETY

SCIENTIFIC MEETINGS DURING MAY, 1947

LONDON.

Thursday, May 1st, 1947, at 7.30 p.m.

The following papers will be read and discussed :

“ Nitration of olefines.” By C. W. Scaife.

“ Reactions of the nitro-paraffins.” By A. Lambert.

“ Addition reactions of nitro-olefines.” By R. L. Heath.

“ Formation and reduction of 2- and 3-nitro-alkyl cyanides.” By G. D. Buckley.

Postponed Lecture.

It is regretted that it has been found necessary to postpone the **Ernst Julius Cohen Memorial Lecture**, by Professor F. G. Donnan, previously announced for May 15th, 1947. No meeting will be held on May 15th.

BIRMINGHAM.

Monday, May 5th, 1947, at 4.30 p.m.

Lecture, **Careers in Chemistry**, by M. C. Paine, Esq.

To be held in the Chemical Lecture Theatre of the University.

EXETER.

Friday, May 2nd, 1947, at 4.30 p.m.

Lecture, **Advances in Immunochemistry**, by Professor M. Stacey, D.Sc., Ph.D., F.R.I.C.

To be held in the Washington Singer Laboratories.

MANCHESTER.

Friday, May 16th, 1947, at 6 p.m.

Lecture, **A New Notation for Organic Chemistry**, by Dr. G. M. Dyson, M.A., Ph.D., F.R.I.C.

Joint Meeting with the local sections of the Society of Chemical Industry and the Royal Institute of Chemistry.

NEWCASTLE and DURHAM.

Friday, May 9th, 1947, at 5 p.m.

Bedson Club Lecture, **The Chemistry of Some Plant Gums and Mucilages**, by Professor E. L. Hirst, M.A., D.Sc., F.R.S.

To be held at King's College, Newcastle-on-Tyne. All Fellows of the Society are invited.

SHEFFIELD.

Thursday, May 15th, 1947, at 5.30 p.m.

Lecture, **Some Relationships Between the Structure and Properties of Natural and Synthetic Fibres**, by Professor J. B. Speakman, D.Sc., F.R.I.C.

Joint Meeting with the University Chemical Society to be held in the Chemistry Lecture Theatre of the University.

ADJOURNED ANNUAL GENERAL MEETING

The Annual General Meeting which was adjourned on March 20th, will be held at Burlington House on Thursday, June 5th, at 7.15 p.m., when the audited Accounts for the year ending 31st December, 1946, will be presented for adoption and auditors appointed for 1947. This business meeting which is open to Fellows of the Society only, will precede the Scientific Meeting arranged for 7.30 p.m. on that day.

PROCEEDINGS

OF THE

CHEMICAL SOCIETY

Minutes of a SCIENTIFIC MEETING

held at Burlington House, Piccadilly, W. 1, on Thursday, March 6th, 1947, at 7.30 p.m.

Dr. R. P. LINSTED, C.B.E., F.R.S., Vice-President, was in the Chair.

MINUTES.

The Minutes of the Scientific Meeting, held on Thursday, February 20th, 1947, were read, and were confirmed and signed.

FORMAL ADMISSION OF FELLOWS.

The following were admitted Fellows of the Chemical Society: A. O. Evans, C. W. Munday, E. Margaret Aldridge.

SCIENTIFIC COMMUNICATIONS.

The following papers were read and discussed:

“Contributions to the Chemistry of Phenanthridine. Part I. The Quaternisation of 9-(3'-Pyridyl)phenanthridines and the Preparation of Some Derivatives of Potential Biological Interest.” By V. Petrow and W. R. Wragg.

“The Reaction between Acetone and Ammonia: The Formation of Pyrimidine Compounds Analogous to the Aldoxanes of Späth.” By R. B. Bradbury, N. C. Hancox, and H. H. Hatt.

OFFICIAL ANNOUNCEMENTS

DEATHS.

The Council regret to announce the deaths of the following Fellows:

	Elected.	Died.
George Thomas Byrne (Hong Kong) ...	Dec. 4th, 1924.	During internment at Hong Kong.
Albert Henry Clark (Chicago)	May 2nd, 1918.	Jan. 20th, 1947.
Bevan Lean (Winscombe)	Dec. 6th, 1894.	Feb. 3rd, 1947.

CONGRATULATIONS.

Congratulations have been conveyed to the following Fellows who have completed sixty years of Fellowship:

	Elected.
Harold Govett Colman (New Malden)	March 17th, 1887.
Leonard Dobbin (Blackshields)	March 3rd, 1887.
George McGowan (Buckland St. Mary)	March 3rd, 1887.
Leonard Owen Simmons (S.E. 1)	April 24th, 1887.

and to the following who have completed fifty years of Fellowship:

	Elected.
Edward George Justinian Hartley (Abingdon)	March 4th, 1897.
David Smiles Jerdan (Toronto)	“ ”
Charles Henry Parker (Wolverhampton)	“ ”
John Stewart Remington (Harpenden)	“ ”
Harry Thompson (Hull)	“ ”
Andrew Turnbull (Hordby, Hants.)	“ ”

HONORARY FELLOWS.

The following have been elected Honorary Fellows of the Society by the Council :

Professor John H. Northrop
Professor Tadeus Reichstein.

RESEARCH FUND.

A meeting of the Research Fund Committee will be held in June next.

Applications for Grants, to be made on forms obtainable from the General Secretary, must be received on or before May 24th, 1947. Applications from Fellows will receive prior consideration.

Attention is drawn to the fact that the income arising from the Donation of the Worshipful Company of Goldsmiths is principally devoted to the encouragement of research in Inorganic and Metallurgical Chemistry and that the income from the Perkin Memorial Fund is to be applied to investigations relating to problems connected with the Coal Tar and Allied Industries.

ELECTION OF NEW FELLOWS.

The following 94 Candidates were elected Fellows of the Society on March 6th, 1947 :

Emil Abel.	Alex Langseth.
Clyde Stewart Adams.	David John Austin Lee.
Robert Anthony Alderson.	Alan Gibson Long.
Milton Joel Allen.	Manuel Lora.
Richard H. Barry.	George Charles Lowrison.
Margaret Ellen Bedwell.	Thomas Robert Riddle McDonald.
Ethel Behrens.	Thomas Barton Mann.
Basil Lawn Bell.	Angus Marks.
Geoffrey Colin Bond.	William Robert Middlebrook.
Dennis Joseph Patrick Braddock.	James George Milne.
Edgar Clay Britton.	Radwan Moursi Moubasher.
Charles Richard Bruce.	Neil Munro.
James Donald Burnett.	Albert John Nutten.
Raymond Charles Cass.	José Pascual.
John Charles Clayton.	Felix Pollak.
Harold Cleveland Craggs.	Fedor Poppelsdorff.
William Henry Thomas Davison.	James Harvey Pryor.
Edwin Alfred Dawes.	Peter Whitten Ranby.
William Dawson.	Dennis Noel Raine.
Alan Cyril Dean.	Albert Edward Ross.
Raymond Ernest Dean.	Richard Desmond Russell.
George Hall Donnison.	Daniel Joseph Ryan.
Robert Bruce Duff.	Edward George Sanderson.
Robert Charles Eaton.	Ernest Albert Smith.
Alexander Espie Ewing.	Isidore Ivor Smith.
Thomas Henry Farmer.	Patrick Stacey.
Garner Frecker Flemons.	Nandury Venkata Subbarao.
Zoltan Foldi.	Wilfred Sweeny.
Johanna Friedenstein.	Philip Howard Sykes.
John Alan Gascoigne.	John Pentony Teegan.
Margaret Gayler.	Leslie Ford Thomas.
Geoffrey Willoughby Goodman.	John Derek Tomlinson.
Harold Arthur Gosling.	Gordon Trueman.
Tuticorin Raghavachari Govindachari.	Douglas Raymond Tucker.
Pabitra Nath Das Gupta.	Henry Dicken Turner.
Leslie Horton Williams Hallett.	Gordon Cecil Turton.
Kenneth Gibson Hargreaves.	Jude Erwin Underwood.
Frederick A. Hessell.	Velimir Vouk.
Patrick Joseph Hooper.	Stanley Dunstan Wainwright.
Robert Francis Hudson.	Nathan Weiner.
Clive Jackson.	Alfred Emil Anthony Werner.
John William James.	Cecil Ernest Arnaud Wescott.
Virabasappa Virupaxappa Jatti.	John Whetstone.
Andrew Jenkins.	Mark Crosby Whiting.
Edwin Charles Jones.	Ronald Wild.
William Duncan Kay.	Max Marin Wirth.
Costakis Demetre Kyriakides.	Gilbert Frederick Woods.

MEETING OF COUNCIL.

A meeting of Council was held on Thursday, March 6th, 1947.

The Report of the Publication Committee (February 6th, 1947) was adopted.

It was reported that the official meeting in Bristol on February 13th had been most successful, and the thanks of the Society had been conveyed to Sir John Morris, C.B.E., Vice-Chancellor of the University of Bristol and to the Local Representative for the arrangements made and the hospitality which the Society received.

It was also reported that the Royal Society of Arts had been thanked for the hospitality extended to the Society on the occasion of the joint meeting on February 19th, 1947.

It was noted with pleasure that Messrs. H. Mann and N. H. Rowe had made gifts of the Society's publications.

Ninety-four Candidates for Fellowship were elected Fellows of the Society.

Certain formal and financial items were transacted.

BRITISH STANDARDS INSTITUTION.

The following draft of a British Standard specification has been received for technical comment :

CH(CHE) 9113, Third draft British Standard for Sodium Stannate.

This has been placed in the Library and Fellows wishing to make technical comments are requested to do so before May 28th, 1947, to the British Standards Institution, 28, Victoria Street, London, S.W. 1.

MEETINGS OUTSIDE LONDON**ABERDEEN.**

"Grinding and Size Reduction: Some Problems Met in the Fertiliser Industry," by Mr. R. H. Calvert.

A meeting was held at Marischal College, Aberdeen, on February 28th, 1947. Mr. Calvert confined himself almost entirely to a description of the plant used for the size reduction of phosphate rock. The process was followed through the stages of crushing, separation by means of screens and/or air blast, and finally grinding. Air separation and roll grinding may be combined with advantage. The different types of crushers, separators, and grinding mills were illustrated by many slides.

"The Composition and Structure of Proteins," by Professor A. C. Chibnall, M.A., Sc.D., F.R.S.

A meeting was held at Marischal College, Aberdeen, on March 11th, 1947. Professor Chibnall indicated that newer methods for estimating the amino-acid composition of proteins give sufficiently accurate and concordant values to permit of calculation of the ratios in which the various amino acids occur in the protein molecule.

Examination of insulin by this method, by *X*-ray crystallography and with the ultra centrifuge all indicate that insulin is built of units of M.W. *ca.* 12,000. By tagging of the end amino groups it has been shown that these units contain four polypeptide chains. Work is proceeding to break the -S-S- cross linkings of the chains by oxidative or reductive methods.

BIRMINGHAM.

"Surface Chemistry and Colloids," by Dr. A. E. Alexander, B.Sc.

A joint meeting with the University Chemical Society was held in the Chemical Lecture Theatre of the University, Edgbaston, Birmingham, on February 21st, 1947. The Chairman, Dr. L. L. Bircumshaw, welcomed the Lecturer and gave a brief account of the early development of surface chemistry. Dr. Alexander outlined the principal experimental techniques now in use, paying particular attention to adsorbed insoluble films at air/water

and oil/water interfaces. Examples were given illustrating their relevance to certain aspects of colloids such as proteins, protein monolayers, foams and emulsions stabilised by soaps and proteins, the mechanical properties of proteins and finally a few biological applications. A vote of thanks to the Lecturer, carried with acclamation, was proposed by Dr. S. R. Carter and seconded by Dr. R. W. Kent.

EDINBURGH.

“Fluorescence,” by Dr. N. Campbell.

A joint meeting with the local sections of the Royal Institute of Chemistry and Society of Chemical Industry was held in the North British Station Hotel, Edinburgh, on February 20th, 1947, with Dr. Percival in the Chair. By means of experiments, demonstrations, and slides Dr. Campbell gave a stimulating account of fluorescence and its applications. A lively discussion followed, and a hearty vote of thanks proposed by Mr. R. G. Thin was carried with enthusiasm.

“The Composition and Structure of Proteins,” by Professor A. C. Chibnall, M.A., Sc.D., F.R.S.

A joint meeting with the local sections of the Royal Institute of Chemistry and the Society of Chemical Industry was held in the North British Station Hotel, Edinburgh, on March 13th, 1947, with Professor G. F. Marrian in the Chair. Professor Chibnall gave an account of the great advances which have been made recently in the analysis of protein hydrolysates and the bearing of the results on attempts to elucidate the structure of proteins such as insulin, edostin, and some hæmoglobins. A discussion followed. Dr. Ames proposed the vote of thanks to the Lecturer which was accorded with enthusiasm.

EXETER.

“Some Reactions of Free Radicals,” by Dr. W. A. Waters, M.A., F.R.I.C.

A meeting was held at the Washington Singer Laboratories, University College, Exeter, on February 21st, 1947, with Professor H. T. S. Britton in the Chair.

Dr. Waters delivered the substance of his Tilden Lecture which was much appreciated by the audience. He traced the rapid development of this subject over the last few years, outlining the various experimental methods which are now available, and showed its bearing on such subjects as polymerisation, and catalytic oxidation of oils.

GLASGOW.

“The Composition and Structure of Proteins,” by Professor A. C. Chibnall, M.A., Sc.D., F.R.S.

A joint meeting with the local sections of the Royal Institute of Chemistry and the Society of Chemical Industry, was held in the University, Glasgow, on March 14th, 1947.

Beginning with an account of modern chemical methods which combine to give reliability and near-completeness in analyses of the amino-acid content of proteins, Professor Chibnall proceeded to discuss the actual results and, in the case of insulin, to outline the further evidence which points to a molecular structure still incompletely detailed, but not beyond the scope of ultimate synthesis. After an interesting discussion, Dr. S. H. Tucker proposed a vote of thanks which was accorded with enthusiasm.

Meeting for the reading of original papers.

The Annual General Meeting of local Fellows was held in the Royal Technical College, Glasgow, on March 21st, 1947, and was followed by a meeting for the reading of original papers. The following papers were read and discussed :

“Synthetic Experiments in the Pyrazine Series,” by R. A. Baxter, G. T. Newbold, and F. S. Spring.

"The Crystal Structure of Ammonium Nitrate III," by T. H. Goodwin and J. Whetstone.

"Molecular Rearrangements and Displacements of Arylamine Residues in Arylamino-ketones," by R. M. Cowper and T. S. Stevens.

LEEDS.

"The Chemistry of Penicillin," by Professor Wilson Baker, M.A., D.Sc., F.R.S.

A joint meeting with the Leeds University Chemical Society was held on February 25th, 1947, in the Chemistry Department, University of Leeds, with Dr. J. W. Baker in the Chair.

Professor Baker described in detail the researches carried out in this country and in the United States leading to the elucidation of the structure of penicillin and discussed possibilities regarding its synthesis and the modification of the molecule. At the conclusion of the lecture Professor F. Challenger proposed and Mr. J. Gaunt seconded a vote of thanks which was carried with acclamation. The lecture was preceded by films entitled "Nose has it," "Bakelite," and "Penicillin."

LIVERPOOL.

"Recent Advances in the Chemistry of Starch and Glycogen," by Professor E. L. Hirst, M.A., D.Sc., F.R.S.

A joint meeting with the Royal Institute of Chemistry, the Society of Chemical Industry, the British Association of Chemists, and the Liverpool University Chemical Society, was held at Liverpool University on Thursday, February 20th, 1947. Professor A. Robertson, F.R.S., who was in the Chair, welcomed a party of students from Manchester University.

Professor Hirst read a most stimulating paper and a vigorous discussion followed. The vote of thanks proposed by Dr. A. McGookin was carried with acclamation.

MANCHESTER.

Meeting for the reading of original papers.

A joint meeting with the local section of the Royal Institute of Chemistry was held on March 13th, 1947, in the Chemistry Lecture Theatre, Manchester University, and the following papers were read and discussed:

"The Polymerisation of *iso*Butene in the Gas Phase," by A. G. Evans and G. W. Meadows.

"The Mechanism of the Oxidation of Glucose by Periodate," by G. Hughes and T. P. Nevell.

"The Effect of Resonance on Bond Length," by E. Warhurst.

"The Variation of Boundary Tensions with Time," by A. F. H. Ward and L. Tordai.

SHEFFIELD.

"Homolytic Reactions," by Professor D. H. Hey, D.Sc., Ph.D., F.R.I.C.

A joint meeting with the University Chemical Society was held in the Chemistry Lecture Theatre of the University on February 27th, 1947, with Professor R. D. Haworth, D.Sc., Ph.D., F.R.S., in the Chair. Proceeding from the classification of organic reactions into Heterolytic and Homolytic processes, Professor Hey showed that the latter class involved free radicals, such as occurred in many pyrogenic and photochemical reactions, in the electrolysis of organic compounds, and in many chain reactions. Compounds such as the alkali diazotates, the nitrosoacylarylamines, the arylazotriphenylmethanes, and the di-acyl peroxides, decomposed in solution, according to a true unimolecular process, to give highly active free radicals of short life; their reactions showed typical characteristics which clearly differentiated them from nucleophilic and electrophilic

reagents. As examples Professor Hey discussed the abnormal addition of hydrogen bromide to ethylenic compounds (Peroxide Effect), the processes of atomic chlorination and of addition polymerisation, and the use of Grignard reagents in the presence of cobaltous chloride. It was noteworthy that many compounds hitherto regarded as inert have been found to be reactive if the experimental conditions favoured a homolytic process.

After a lively discussion, a vote of thanks, proposed by Dr. A. H. Lamberton, and seconded by Mr. A. R. Pinder, was carried with enthusiasm.

SOUTHAMPTON.

"The Chemistry of Vitamin A," by Professor Sir Ian Heilbron, D.S.O., D.Sc., F.R.S.

A joint meeting with the University College of Southampton Chemical Society was held in the Physics Lecture Theatre, University College, Southampton, on February 28th, 1947, Dr. K. R. Webb, Local Representative, being in the Chair.

Professor Heilbron outlined in a clear and fascinating manner various methods by which substances related to Vitamin A, and having Vitamin A activity, have been built up and gave a valuable critical survey of these methods. A vigorous discussion followed the lecture, and a vote of thanks, proposed by Professor N. K. Adam, was carried with enthusiasm by the large audience.

LIST OF APPLICATIONS FOR FELLOWSHIP

(Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries within ten days of the date of publication of the "Journal" for March, 1947. Such objections will be treated as confidential. The forms of application are displayed in the Library.)

- Arden, Thomas Victor**, B.Sc. (Lond.), A.R.I.C. British. 41, Manor Road, Teddington. Scientific Officer, Chemical Research Laboratory, D.S.I.R. *Signed by* : R. P. Linstead, F. H. Burstall, D. V. N. Hardy.
- Bailey, Alfred Egbert William**, B.Sc. (Lond.), Ph.D. (Birm.). British. 6, Ollerton Road, South Yardley, Birmingham, 26. Research Chemist, Dunlop Rubber Co., Fort Dunlop. *Signed by* : F. A. Jones, C. E. Kendall, R. Montgomery.
- *Bamford, William Randall**. British. Crewe Hall, 88, Clarkehouse Road, Sheffield, 10. Student, Sheffield University. *Signed by* : Alex. H. Lamberton, Basil Skinner, R. D. Haworth.
- Bartley, William George**, B.Sc.Hons. (Lond.). British. 85, Becklow Gardens, Becklow Road, Shepherds Bush, W. 12. Research Student. *Signed by* : D. J. G. Ives, W. Rigby, Wm. Wardlaw, R. W. Pittman.
- Bick, Ian Ralph Connelly**, B.A. and M.Sc. (Queensland). British. 211, Mill Road, Cambridge. Research Student, Cambridge University. *Signed by* : I. D. Morton, A. R. Todd, F. B. Kipping.
- *Blakeway, John Murray**. British. University Union, Manchester. Student. *Signed by* : G. N. Burkhardt, A. E. Gillam, E. L. Hirst.
- Bolland, John Lawson**, B.Sc. and Ph.D. (Edin.). British. 151, Handside Lane, Welwyn Garden City. Research Chemist. *Signed by* : Geoffrey Gee, L. Bateman, A. L. Morris.
- Bourne, John**, B.Sc.Hons. (Birm.), A.R.I.C. British. 76, Bodley Road, New Malden. Lecturer in Chemistry at Kingston Technical College, Kingston-on-Thames. *Signed by* : W. F. Bennett, H. Stevenson, G. L. Holbrow.
- Carrette, Gerald Victor**, B.Sc.Hons. (Lond.), A.R.I.C. British. 65, Devonshire Avenue, Roundhay, Leeds, 8. Chief Chemist. *Signed by* : F. R. Goss, H. J. Hodsmen, J. E. Garside.
- *Chandler, James Frederick**, B.Sc. (Lond.). British. 97, Hampton Road, Hampton Hill, Hampton. Organic Chemist. *Signed by* : H. de Lazlo, F. E. Dean, A. A. Goldberg.
- Cooper, Frank Calton**, B.Pharm. (Lond.), Ph.C. British. 129, Tolworth Rise, Surbiton. Research Assistant to British Pharmacopœia Commission. *Signed by* : J. Kenyon, Maurice H. Pearson, A. Houston.
- Cornforth, John Warcup**, M.Sc. (Sydney), D.Phil. (Oxon.). British. 6, Oakhill Park, N.W. 3. Research Chemist. *Signed by* : Robert Robinson, Harold King, James Walker.
- *Cowan, Colin Brock**. British. 22a, Bannerman Avenue, Prestwich, Manchester. Student, St. Andrews University. *Signed by* : John Read, John Dewar, H. T. Openshaw.
- *Cox, John Desmond**, A.R.C.S. British. 105, Somerset Avenue, Hook. Research Chemist, Royal College of Science. *Signed by* : D. H. R. Barton, K. E. Howlett, B. E. Conway.
- Cymerman, John**, B.Sc. and Ph.D. (Lond.), A.R.C.S., D.I.C. British. 51, Bedale Road, Sherwood, Nottingham. Research Chemist. *Signed by* : W. Wilson, A. Johnson, D. A. Peak, C. T. Brodrick.

- ***Donaldson, Margaret Lorimer**, B.Sc. (St. Andrews). British. Redwells, Anstruther. Student.
Signed by : John Read, John Dewar, H. T. Openshaw.
- Drabble, Frank**, B.Sc.Hons. and M.Sc. (L'pool), A.R.I.C. British. The Bungalow, Hildersley Farm, Ross-on-Wye. Science Teacher. *Signed by* : D. A. S. Barnes, A. Campbell, G. W. Groves.
- ***Eccleston, Kevin**. British. 59, Cholmondeley Road, Salford, 6. Student, Manchester University.
Signed by : A. E. Gillam, F. Fairbrother, E. L. Hirst.
- Edwards, Claude Raymond**, B.Sc.Hons. (Wales), A.R.I.C. British. 36, Princes Street, Roath, Cardiff. Chemist, Chemical Inspection Department, Ministry of Supply. *Signed by* : G. Davies, N. G. Perkins, W. Gillison.
- Evans, Norman**, A.R.I.C. British. 35, Brynland Avenue, Bishopston, Bristol, 7. Industrial Chemist.
Signed by : Arthur Marsden, H. J. Willavoys, W. P. Thistlethwaite.
- Eustice, Eva Doris**. British. 330, Hill Lane, Southampton. Chemist. *Signed by* : F. M. Hamer, H. Lambourne, D. Ridge.
- ***Fendley, John Atton**. British. 1, Boscombe Road, Dunstable. Student, Oxford University. *Signed by* : F. E. King, D. Ll. Hammick, J. C. Smith.
- ***Foster, John Leslie**. British. 489, Richmond Road, Sheffield, 9. Student, Sheffield University.
Signed by : R. D. Haworth, P. R. Carter, A. R. Pinder.
- ***Fowles, Gerald Wilfred Albert**. British. 28, 2nd Avenue, Highfields, Dursley. Student, Bristol University. *Signed by* : C. E. H. Bawn, T. Malkin, W. Baker.
- ***Freestone, Dennis Alfred**. British. 2, Station Cottages, Rossington, nr. Doncaster. Student, Sheffield University. *Signed by* : R. D. Haworth, A. R. Pinder, P. R. Carter.
- Gage, John Charles**, B.Sc.Hons. (Lond.). British. 24, North Park Road, Bramhall. Research Chemist, Imperial Chemical Industries, Ltd. (Dyestuffs Division), Hexagon House, Blackley, Manchester.
Signed by : F. L. Rose, F. H. S. Curd, E. Hoggarth.
- ***Gordon, Morris**, B.Sc.Tech.Hons. (Manc.), A.M.C.T. British. 55, Bellott Street, Manchester, 8. Research Chemist. *Signed by* : G. A. Barber, J. A. Eggleston, R. C. Voss.
- ***Gould, Matthew**. British. Kyngsdale, The Ridgeway, Stanmore. Undergraduate. *Signed by* : E. de Barry Barnett, F. Holmes, Guy G. S. Dutton.
- ***Grice, John Owen**. British. Dunoon, The Close, Beaconsfield. Student, Oxford University. *Signed by* : H. R. Bentley, J. H. Wolfenden, F. E. King.
- Haddock, Louis**, B.Sc. (Lond.), F.R.I.C. British. 187, Barnfield Avenue, Kingston-on-Thames. Chemist. *Signed by* : J. R. I. Hepburn, H. B. Cameron, J. E. Garside.
- Hallybone, George Edward**, M.A. (Oxon.). British. The Orchard, Old Marston, Oxford. Student.
Signed by : Richard Barrow, C. A. Coulson, Ronald P. Bell.
- ***Hancock, Ronald Arthur**, B.A. and B.Sc. (Oxon.), B.Sc. (Lond.). British. Oriel College, Oxford. Research Chemist. *Signed by* : J. C. Smith, Harry Irving, G. B. Pickering.
- ***Hawes, Bernard William Varney**. British. The Platanes, Champion Hill, S.E. 5. Student, London University. *Signed by* : D. H. Hey, S. H. Harper, J. C. D. Brand.
- ***Hawkes, Winifred June**, B.Sc.Hons. (Lond.). British. 19, Clapton Way, Clapton, E. 5. Research Student, London University. *Signed by* : D. H. Hey, M. Elliott, John M. Osbond.
- Hebden, Harold**. British. 1, Harcourt Street, Burnley. Laboratory Steward, Burnley Municipal College. *Signed by* : A. A. Dallman, Frank Dearnley, John Graymore.
- ***Hill, Sydney**, B.Sc.Hons. (L'pool). British. 137, Lawrence Road, Wavertree, Liverpool, 15. Research Student. *Signed by* : John P. Riley, A. Hickling, M. L. Meara.
- ***Hoare, Michael Frederick**. British. The Queen's College, Oxford. Student, Oxford University.
Signed by : F. E. King, J. W. Linnett, L. A. K. Staveley.
- ***Hodgkinson, George Tennant**. British. Jesus College, Oxford. Student, Oxford University. *Signed by* : Richard Barrow, J. C. Smith, J. W. Linnett.
- Howden-Simpson, Stanley George**. British. 2, Seymer Road, Romford. Chemical Engineer. *Signed by* : F. L. Allen, Lawrence S. Bull, Edgar Neumann.
- ***Howland, Stanley Ralph**. British. 51, Carleton Road, Holloway, N. 7. Student under B.D.H. training scheme. *Signed by* : Oliver Stephenson, W. A. Smeaton, Raymond W. G. Turner.
- Isaac, Frederick Otho**. British. 29, Foston Avenue, Burton-on-Trent. Chief Inspector of Clothing, Central Ordnance Depot, Branston, Burton-on-Trent. *Signed by* : F. H. Choppin, P. A. Cartwright, Leonard R. Hayward.
- ***Jackson, Stanley**, B.A. (Oxon.). British. Trinity College, Oxford. Research Student. *Signed by* : R. L. Denyer, J. C. Smith, G. B. Pickering.
- ***James, John Aylward**, B.A. (Oxon.). British. 274, Main Road, New Duston, Northampton. Research Student. *Signed by* : Richard Barrow, E. J. Bowen, J. C. Smith.
- ***Jeffreys, Roy Arthur**, B.Sc.Hons. (Lond.). British. 68, Burnley Road, Dollis Hill, N.W. 10. Research Chemist. *Signed by* : G. W. Wendon, M. Bernstein, R. H. Marchant.
- Jenkins, Frederick Peter**, B.Sc. (Lond.), A.R.I.C. British. Ael-y-Bryn, Tyvern Road, Whitchurch, Cardiff. Research Chemist. *Signed by* : H. B. Watson, J. Ormston, H. L. Peerman.
- Kane, Philip Owen**, B.Sc. (Lond.), A.R.C.S. British. 291, Elm Grove, Brighton, 7. Research Chemist.
Signed by : Julius N. Ashley, Hugh Campbell, David W. Mathieson.
- Kearns, John**, B.Sc. (N.U.I.), A.R.C.Sc.I. British. 6, Sandymount Castle Road, Dublin. State Chemist, State Laboratory, Upper Merrion Street, Dublin. *Signed by* : A. G. G. Leonard, T. S. Wheeler, Wesley Cocker.

- ***Kerridge, Raymond.** British. 16, Myrtle Terrace, Sowerby Bridge. Student, Sheffield University. *Signed by* : R. D. Haworth, P. R. Carter, A. R. Pinder.
- Lal, Hira,** B.Sc.Hons. and M.Sc.Tech. (Punjab). Indian. Department of Inorganic and Physical Chemistry, King's College, Newcastle-upon-Tyne. Post-Graduate Research Student. *Signed by* : H. L. Riley, T. D. Smith, J. Gibson.
- Lea, Colin Henry,** D.Sc. (L'pool), Ph.D. (Cantab.), F.R.I.C. British. 140, Thornton Road, Cambridge. Principal Scientific Officer, D.S.I.R. *Signed by* : S. M. Partridge, Ivan M. Sharman, D. J. Bell.
- Lindsey, Alan Sidney.** British. 15, Bournemouth Road, Merton Park, S.W. 19. Analytical Chemist. *Signed by* : D. J. G. Ives, R. E. Bowman, R. W. Pittman.
- ***Lott, Anthony Douglas.** British. 37, Southdown Road, W. Wimbledon, S.W. 20. Student, Royal College of Science. *Signed by* : J. F. Herringshaw, L. S. Theobald, E. R. H. Jones.
- MacDonald, Stewart Ferguson,** M.A. (Toronto), Dr.Rer.Nat. (Munich). Canadian. 72, Alexandra Boulevard, Toronto. Assistant Professor, Banting and Best, Department of Medical Research, University of Toronto. *Signed by* : E. R. H. Jones, J. A. Elvidge, A. R. Graham.
- ***Major, Donald.** British. North Wheatley, Retford. Undergraduate. *Signed by* : R. D. Haworth, Alex H. Lamberton, A. R. Pinder.
- ***Mitchell, Brian Walter.** British. 100, Salisbury Road, Welwyn Garden City. Assistant Research Chemist, Herts. Pharmaceuticals. *Signed by* : S. C. Mitchell, H. J. Lowenthal, H. J. Spriggs.
- Murch, William Owen,** M.Sc. (Lond.), A.R.I.C. British. South Metropolitan Gas Company, Bridgefoot, Vauxhall, S.W. 1. Chemist. *Signed by* : C. S. Bryant, G. H. Watson, J. G. Mitchell.
- ***Murray, Alexander John Robertson.** B.Sc. (Aberd.). British. 12, Norfolk Road, Aberdeen. Research Student, Aberdeen University. *Signed by* : H. W. Melville, J. M. C. Thompson, R. B. Strathdee.
- ***Nambissan, Isvaran,** B.Sc.Hons. (Madras). Indian. 20, Addiscombe Grove, East Croydon. Research Student, London University. *Signed by* : D. H. Hey, L. Hunter, E. R. H. Jones.
- Nicol, Donald Laurence,** B.Sc. (Lond.), A.R.I.C. British. 123, Underhill Road, Dulwich, S.E. 22. Assistant Chemist, Imperial Chemical Industries (Paints Division). *Signed by* : George R. Cornish, Henry Brunner, D. V. Arnold.
- ***Owen, Cyril Henry.** British. Crewe Hall, 88, Clarkehouse Road, Sheffield, 10. Student, Sheffield University. *Signed by* : Alex H. Lamberton, Basil Skinner, R. D. Haworth.
- ***Palin, Jeanne Margaret,** B.Sc.Hons. (Lond.). British. 15, Burcote Road, S.W. 18. Research Chemist, British Coal Utilization Research Association. *Signed by* : J. Kenyon, Paul F. Holt, J. W. Smith.
- Panda, Jamna Ballabh,** M.Sc. (Lucknow). Indian. 20, Addiscombe Grove, East Croydon. Research Student. *Signed by* : W. Gerrard, M. Santhappa, D. H. Richardson.
- Parker, Harry Lionel.** British. 113, Taylor Street, Wilmorton, Derby. Shift Chemist (Process Control), Plastics Department, British Celanese Ltd., Spondon. *Signed by* : Edward R. Ward, F. Heyworth, D. P. Dodgson.
- Pritchard, Eric Hugh,** B.Sc.Hons. and M.Sc. (Wales), A.R.I.C. British. c/o 33, Westbury Lane, Sea Mills, Bristol, 9. Research Chemist. *Signed by* : Michael Bernstein, W. J. Carter, M. W. Travers.
- ***Rees, William Ronald,** B.Sc. (Wales). British. 32, Alexandra Road, Aberystwyth. Demonstrator, Department of Agricultural Chemistry, University College of Wales, Aberystwyth. *Signed by* : C. W. Davies, Kurt Heller, J. B. Bowen.
- Robinson, Donald Barker Wellington,** B.Sc. (Mount Allison), Ph.D. (McGill). Canadian. Dyson Perrins Laboratory, South Parks Road, Oxford. Research Student. *Signed by* : F. E. King, R. Robinson, Kenneth H. Pausacker.
- Samuel, Dora Louise,** B.Sc. (Lond.), A.R.I.C. British. 16, Preston Avenue, Highams Park, E. 4. Technical Librarian, Borax Consolidated Ltd. *Signed by* : A. J. Somers, Kathleen W. Small, C. M. French.
- Sebba, Felix,** M.Sc. and Ph.D. (Cape Town), D.I.C., F.R.I.C. British. Department of Chemistry, University of Cape Town, Cape Town, South Africa. Chemistry Lecturer. *Signed by* : W. Pugh, A. Herbert Spong, Max Lamchen.
- Sengupta, Samares Ranjan,** M.B. and D.P.H. (Calcutta). Indian. Rowett Research Institute, Bucksburn. Research Worker, Rowett Research Institute. *Signed by* : W. Godden, Geo. L. Buchanan, F. D. S. Butemer, J. M. C. Thompson.
- Shipley, Linden Ewart.** British. c/o Messrs. Doulton & Co., Ltd., Lambeth, S.E. 1. Works Chemist. *Signed by* : A. T. Green, F. H. Clews, H. V. Thompson.
- Stalley, John Charles,** B.Sc.Hons. (Lond.), A.R.C.S. British. 10, Marquess Road, N. 1. Research Chemist. *Signed by* : R. W. Jukes, I. L. Finar, H. Holness.
- ***Thomas, David Gilbert.** British. Oriol College, Oxford. Student. *Signed by* : F. E. King, H. C. Longuet-Higgins, D. Ll. Hammick.
- ***Thomas, Norman Leslie.** British. 10, Valentines Road, Ilford. Research Chemist, Howard and Sons, Ltd., Ilford. *Signed by* : C. G. Smith, J. D. Kendall, J. Ratcliffe.
- ***Thompson, Raymond.** British. 45, Greatbatch Avenue, Penkull, Stoke-on-Trent. Student, University College, Nottingham. *Signed by* : W. M. Robertson, Ronald H. Smith, Geoffrey T. Tibbs.
- Webster, William,** B.Sc. and Ph.D. (Edin.). British. 9, West Street, Epsom. Research Chemist, Distillers Company Ltd., Epsom. *Signed by* : Denis C. Quin, F. A. Robinson, R. H. Hall.
- ***Weimer, Dennis Edward.** British. 27, Cumberland Park, Acton, W. 3. Metallurgical Chemist. *Signed by* : S. C. Bevan, L. P. McHatton, W. Davey.

- Whittaker, Norman**, M.Sc. (Manc.), Ph.D. (Cantab.). British. Wellcome Chemical Research Laboratories, Langley Court, Beckenham. Research Chemist. *Signed by* : S. Wilkinson, A. G. Caldwell, L. P. Walls.
- ***Whittaker, Roy**. British. 1, Shaw Street, Greenfield, Oldham. Student, Cambridge University. *Signed by* : B. Lythgoe, F. B. Kipping, W. G. Palmer.
- Wilcox, Merlyn Herbert**, B.Sc.Hons. (Wales). British. 44, Lodge Lane, Spondon, Derby. Research Chemist. *Signed by* : Thomas H. Stothard, W. P. Dore, W. Hunter.
- Williams, Garth**, B.Pharm. (Lond.), Ph.C. British. 14, The Crescent, East Acton, W. 3. Demonstrator in Pharmaceutics, College of the Pharmaceutical Society. *Signed by* : W. F. Wilkinson, W. J. Arrol, Vernon Askam.
- ***Williams, Griffith Oswald Richard**, B.Sc.Hons. (Wales). British. Twyn-y-Derw, Lr. Cwmtwrch, Swansea. Research Student. *Signed by* : C. W. Davies, Kurt Heller, J. B. Bowen.
- Williams, Philip Leonard**, B.A. (Oxon.). British. 63, Church Lane, Melksham. Chemist, The Avon India Rubber Co., Ltd. *Signed by* : Eric R. Gardner, D. Ll. Hammick, S. F. Mason.
- ***Wilson, Leslie**. British. 84, Bushey Wood Road, Totley Rise, Sheffield. Student, Sheffield University. *Signed by* : Alex. H. Lamberton, Basil Skinner, R. D. Haworth.
- Young, John Thomas**, B.Sc.Hons. (Lond.), A.R.I.C., Ph.C. British. 2, Pine Close, Gt. Cambridge Road, Cheshunt. Research Chemist, Organic Chemical Laboratories, Allen and Hanburys Ltd., Ware. *Signed by* : Norman R. Campbell, John H. Hunt, Cyril C. Wood.

UNDER SPECIAL PROVISION APPERTAINING TO CANDIDATES RESIDENT ABROAD.

- Balenovic, Kresimir**, Ph.D. (Zagreb). Croate. Zvijezda 7, Zagreb, Yugoslavia. Lecturer in Organic Chemistry, University of Zagreb. *Signed by* : Stanko Miholic.
- Hassler, John William**. American. 427, Fifth Street, Hillcrest, Tyrone, Pennsylvania. Director of Research, West Virginia Pulp and Paper Co., Tyrone. *Signed by* : F. C. Whitmore.
- ***Haylock, Owen Fillbridge**, B.Sc. (N.Z.). British. 47, Coronation Street, Christchurch. Student. *Signed by* : J. Packer, R. J. McIlroy.
- Holdsworth, Frank Clifford Halsey**. British. 3, Glenarm Road, Glen Iris, Victoria. Research Chemist, G. W. Pennell, Soap and Tallow Manufacturers and Exporters, Braybrook, Victoria. *Signed by* : W. Russell Grimwade.
- Jones, David Wyndham**. British. 16, Jasmine Mansions, Leslie Street, Vereeniging, Transvaal. Acting Chief Chemist, Klipworks Laboratory, Union Steel Corporation (S.A.), Ltd. *Signed by* : J. Hy. Lane.
- Mehratra, Ram Charan**, M.Sc. (Allahabad). Indian. Chemistry Department, Allahabad University, Allahabad. Lecturer. *Signed by* : T. R. Seshadri.
- Polak, Ernest Henry**, B.A. (New York), M.S. (Iowa State). American. c/o Polak's Frutal Works Inc., 36—14, 35th Street, Long Island City 1, New York. Chemist. *Signed by* : J. A. Aeschlimann, Max Hoffer.
- Rosenkranz, Jorge**, D.Sc.Tech. (E.T.H. Zurich). Hungarian. c/o Syntex S.A., Apartado 2679, Mexico, D.F. Technical and Research Director. *Signed by* : Francisco Giral.
- Rovira, Ramon**. Spanish. 67, Ausias March, Barcelona. Technical Director, S.A. Rovira, Bachs y Macia, Manufacturers of Aniline Dyestuffs. *Signed by* : Ralph C. Storey.

* Reduced Annual Subscription.

PAPERS RECEIVED

List of papers received between February 8th, 1947, and March 14th, 1947. (This list does not include the titles of papers which have been read at a Scientific Meeting or which have appeared in the *Journal*.)

- “The reaction of $\alpha\beta$ -ethynyl ketones with active methyl and methylene compounds.” By A. W. JOHNSON.
- “The Friedel-Crafts reaction with 1-acyl-2:3-dimethylindoles.” By W. J. GANDION, W. H. HOOK, and S. G. P. PLANT.
- “The stereochemistry of organic derivatives of phosphorus. Part II. The synthesis of 2:2-disubstituted 1:2:3:4-tetrahydroisospholinium salts and the optical resolution of 2-phenyl-2-*p*-hydroxyphenyl-1:2:3:4-tetrahydroisospholinium bromide.” By F. G. HOLLIMAN and F. G. MANN.
- “The action of hydrogen peroxide on symmetrical triketones.” By C. H. HASSALL.
- “Some catalysed gas-phase reactions of aromatic hydrocarbons. Part II. The inter-action of benzene and ethylene.” By D. L. HAMMICK and M. ROBERTS.

- "The modes of addition to conjugated unsaturated systems. Part IX. A discussion of mechanism and equilibrium with a note on the three-carbon prototropy." By P. B. D. DE LA MARE, E. D. HUGHES, and C. K. INGOLD.
- "Rottlerin. Part VII. The synthesis of tetrahydrorottlerin and of tetrahydroallo-rottlerin and the reversibility of the rottlerone change." By T. BACKHOUSE, A. MCGOOKIN, J. MATCHET, A. ROBERTSON, and E. TITTENSOR.
- "The crystal structure of CsCuCl_3 and the crystal chemistry of complex halides ABX_3 ." By A. F. WELLS.
- "Cinnolines. Part XIV. *N*-oxides of 4-aryl-cinnolines. Conversion of 4-substituted cinnolines into indoles." By C. M. ATKINSON and J. C. E. SIMPSON.
- "Cinnolines. Part XV. The alkaline decomposition of some quaternary salts of 4-substituted cinnolines." By J. C. E. SIMPSON.
- "Reduction by dissolving metals." Part V. By A. J. BIRCH.
- "The structure of starch. The ratio of non-terminal to terminal groups." By F. BROWN, T. G. HALSALL, E. L. HIRST, and J. K. N. JONES.
- "The synthesis of β -6-methoxyquinolyl(4)-ethylamine, β -6-methoxyquinolyl(4)-propionamide, and β -6-methoxyquinolyl(4)-ethylguanidine." By J. WALKER.
- "Carbohydrate sulphuric esters. Part IV. Production of a derivative of 5:6-anhydroglucose by the hydrolysis of an ethereal sulphate." By R. B. DUFF and E. G. V. PERCIVAL.
- "A study of the properties of fluorine-substituted 5-aminoacridines and related compounds. Part II. 5-Amino-2- and -4-trifluoromethylacridines." By J. H. WILKINSON and I. L. FINAR.
- "The crystal structure of anhydrous cupric chloride and the stereochemistry of the cupric atom." By A. F. WELLS.
- "Furano-compounds. Part VI. A synthesis of karanjic acid." By R. T. FOSTER and A. ROBERTSON.
- "The synthesis of 6-cyclohexyl-2-methyl-*n*-heptane." By D. H. HEY and D. S. MORRIS.
- "Acyl derivatives of *p*-aminobenzenesulphonylguanidine." By P. R. CARTER, D. H. HEY, and D. S. MORRIS.
- "The action of chlorine on aqueous solutions of ammonium sulphinates." By P. R. CARTER and D. H. HEY.
- "The system ammonia-sulphur dioxide-water at 25° C." By L. M. HILL.
- "Some metoxazine derivatives of thionaphthen." By (the late) E. W. MCCLELLAND and D. W. STAMMERS.
- "The formation of thionaphthens from derivatives of phenylthioacetic acid." By (the late) E. W. MCCLELLAND, M. J. ROSE, and D. W. STAMMERS.
- "Bond energies in peroxides, and the energy evolved in the reaction $\text{H} + \text{O}_2 = \text{HO}_2$." By A. D. WALSH.
- "Degradation of α -amino-acids to the corresponding aldehydes and ketones containing one less carbon atom by the action of carbonyl compounds: scope, mechanism, and biochemical aspect of the reaction." By A. SCHÖNBERG, R. MOUBASHER, and (Miss) A. MOSTAFA (Mrs. SAID).
- "The oxidation products of phenols. Part I. The structure of purpurogallin." By J. A. BARLTROP and J. S. NICHOLSON.
- "Preparation of water-soluble derivatives of 2-methylnaphthalene." By D. O. HOLLAND and F. A. ROBINSON.
- "The conversion of sucrose into furan compounds. Part IV. Some aminotetrahydrofuran derivatives." By F. H. NEWTH and L. F. WIGGINS.
- "The structure of egg-plum gum. Part II. The hydrolysis products obtained from the methylated degraded gum." By E. L. HIRST and J. K. N. JONES.
- "Bacteriostasis in the amino-acid series. Part I. Derivatives of alanine." By D. F. ELLIOTT, A. T. FULLER, and C. R. HARINGTON.
- " α -Methylene reactivity in olefinic systems. Part III. The Prins reaction with ethylene and α -methylstyrene." By J. W. BAKER.

- "X-Ray investigation of some oxidation products of β -carotene." By R. F. HUNTER, T. R. LOMER, V. VAND, and N. E. WILLIAMS.
- " β -Cycloylpropionitriles. Part III. Reduction to 2-cyclyl- Δ^2 -pyrrolines and 2-cyclyl-pyrrolidines." By E. B. KNOTT.
- "Synthetic oestrogens of the triphenylethylene series." By P. R. CARTER and D. H. HEY.
- "Studies in the series of 4-substituted quinolines." By J. W. CORNFORTH and (MRS.) R. H. CORNFORTH.
- "Synthetic studies in the steroid series. Part I. Use of methyl γ -bromocrotonate in the synthesis of fused-ring hydroaromatic ketones." By J. W. COOK and R. PHILIP.
- "Azulenes. Part II. Exploration of new synthetic routes." By J. W. COOK, R. PHILIP, and A. R. SOMERVILLE.
- "The isolation and some properties of dehydro-*l*-ascorbic acid." By J. KENYON and M. MUNRO.
- "Attempts to find new antimalarials. Part XXVII. The synthesis of derivatives of various benzacridines and pyridoacridines." By J. DOBSON, W. C. HUTCHISON, and W. O. KERMACK.
- "The chemistry of plutonium." By B. G. HARVEY, H. G. HEAL, A. G. MADDOCK, and (MISS) E. L. ROWLEY.
- "Contributions to the chemistry of synthetic antimalarials. Part V. Attempted synthesis of α -dialkylaminomethyl-6-methoxy-8-quinolyl carbinols." By A. MCCOUBREY and W. WEBSTER.
- "A resolution of mepacrine." By B. R. BROWN and D. L. HAMMICK.
- "Synthesis of a zeolitic mineral with chabazite-like sorptive properties." By R. M. BARRER.
- "Sorptive and molecular sieve properties of a new zeolitic mineral." By R. M. BARRER and D. W. RILEY.
- "The chemistry of the 'insoluble red' woods. Part II. A new synthesis of 4-hydroxycoumarins." By J. BOYD and A. ROBERTSON.
- "The kinetics of aromatic halogen substitution. Part IV. The 1-halogeno-naphthalenes and related compounds." By P. B. D. DE LA MARE and P. W. ROBERTSON.
- "The application of Pfitzinger reactions to the synthesis of quinoline derivatives. A novel route to γ -carbostyriles." By Ng. Ph. BUU-HOÏ and RENE ROYER.
- "The preparation of some *N*-substituted derivatives of *p*-toluenesulphonamide." By A. D. KEMP and H. STEPHEN.
- "Note on some derivatives of *p*-aminobenzoic acid." By A. T. FULLER, C. R. HARRINGTON, (MISS) R. P. RIVERS, and (MISS) J. M. L. STEPHEN.
- "Oxidation of carcinogenic hydrocarbons by osmium tetroxide." By J. W. COOK and (MISS) R. SCHOENTAL.
- "Potential trypanocides of the *N*-heterocyclic series. Part I. Phenanthridinium salts." By A. G. CALDWELL and L. P. WALLS.

LOCAL REPRESENTATIVES OF THE CHEMICAL SOCIETY

- Aberdeen.* J. M. C. Thompson, M.A., D.Phil., A.R.I.C., Chemistry Department, Marischal College, The University, Aberdeen.
- Australia.* T. Iredale, D.Sc., F.R.I.C., The University, Sydney, Australia.
- Birmingham.* L. L. Bircumshaw, M.A., D.Sc., Department of Chemistry, The University, Edgbaston, Birmingham, 15.
- Bristol.* C. E. H. Bawn, Ph.D., Chemistry Department, The University, Woodland Road, Bristol.
- Cambridge.* B. Lythgoe, Ph.D., Organic Chemistry Department, The University, Cambridge.
- Canada.* Professor W. D. McFarlane, M.A., Ph.D., Macdonald College, St. Anne de Bellevue, Quebec, Canada.
- Edinburgh.* E. G. V. Percival, D.Sc., Ph.D., F.R.I.C., Chemistry Department, King's Buildings, West Mains Road, Edinburgh.
- Eire.* Professor T. S. Wheeler, D.Sc., Ph.D., F.R.I.C., Chemical Department, University College, Upper Merrion Street, Dublin.
- Exeter.* S. J. Gregg, Ph.D., A.R.C.S., A.R.I.C., Department of Chemistry, Washington Singer Laboratories, Prince of Wales' Road, Exeter.
- Glasgow.* J. D. Loudon, Ph.D., D.Sc., A.R.I.C., Chemistry Department, The University, Glasgow, W. 2.
- India.* Sir Shanti S. Bhatnagar, O.B.E., D.Sc., F.R.S., The University, Lahore, Punjab, India.
- Leeds.* F. R. Goss, D.Sc., Ph.D., F.R.I.C., The University, Leeds, 2.
- Liverpool.* W. B. Whalley, B.Sc., Ph.D., Organic Chemistry Department, The University, Liverpool.
- „ L. A. Haddock, M.Sc., F.R.I.C., I.C.I., Ltd. (General Chemicals Division), Research Department, Widnes Laboratory, Widnes.
- Manchester.* A. E. Gillam, D.Sc., F.R.I.C., Chemistry Department, The University, Manchester.
- „ J. C. Withers, Ph.D., A.R.I.C., Shirley Institute, Didsbury, Manchester.
- Newcastle and Durham.* P. L. Robinson, D.Sc., F.R.I.C., Chemistry Department, King's College, Newcastle-on-Tyne.
- New Zealand.* Professor F. G. Soper, D.Sc., Ph.D., F.R.I.C., University of Otago, Dunedin, New Zealand.
- Northern Ireland.* H. Graham, D.Sc., A.R.I.C., 26, Malone Hill Park, Belfast.
- North Wales.* W. Rogie Angus, M.A., D.Sc., Ph.D., F.R.I.C., Department of Chemistry, University College of North Wales, Bangor.
- Nottingham.* D. O. Jordan, Ph.D., M.Sc., A.R.I.C., University College, University Park, Nottingham.
- Oxford.* F. E. King, M.A., Ph.D., D.Phil., Dyson Perrins Laboratory, South Parks Road, Oxford.
- St. Andrews and Dundee.* J. D. M. Ross, M.B.E., M.A., D.Sc., Chemistry Department, University College, Dundee.
- Sheffield.* A. H. Lamberton, B.Sc., Ph.D., Chemistry Department, The University, Sheffield, 10.
- South Africa.* Professor W. Pugh, Ph.D., B.Sc., F.R.I.C., Chemistry Department, University of Cape Town, Rondebosch, S. Africa.
- Southampton.* K. R. Webb, B.Sc., Ph.D., University College, Southampton.
- South Wales.* Professor J. E. Coates, O.B.E., D.Sc., F.R.I.C., University College, Singleton Park, Swansea.

April, 1947

THE CHEMICAL SOCIETY

SCIENTIFIC MEETINGS DURING JUNE, 1947

LONDON.

Thursday, June 5th, 1947, at 7.30 p.m.

“Substitution-reactions of triphenylethylene and related compounds; a contribution to the problem of synthetic analogues of progesterone.” By R. Royer and Ng. Ph. Buu-Hoi.

“Some trinuclear cyanine dyes. Part I. The synthesis of neocyanines.” By (Miss) F. M. Hamer, R. J. Rathbone, and (Miss) B. S. Winton.

ADJOURNED ANNUAL GENERAL MEETING

The Scientific Meeting on June 5th will be preceded by the adjourned 106th Annual Meeting at 7.15 p.m., notice of which has already been circulated.

PROCEEDINGS
OF THE
CHEMICAL SOCIETY

**Minutes of a
SCIENTIFIC MEETING**

held at Burlington House, Piccadilly, W. 1, on Thursday, April 17th, 1947, at 7.30 p.m.

The President, PROFESSOR C. N. HINSELWOOD, M.A., Sc.D., F.R.S., was in the Chair.

MINUTES.

The Minutes of the Scientific Meeting held on Thursday, March 6th, 1947, were read and were confirmed and signed.

FORMAL ADMISSION OF FELLOWS.

The following were admitted Fellows of the Chemical Society :

O. Martin Lee, T. Barton Mann, A. A. Kendall, J. G. Waller, E. J. H. Birch, F. Pollak, A. Whynes, N. V. Subbarao, R. Parsons, J. C. James, G. J. Hills, D. C. Bradley, Ethel Behrens.

DISCUSSION.

The PRESIDENT called on Dr. G. S. Hartley to open the Discussion entitled " Electrolytic Solutions," arranged by Professor C. W. Davies, to which the following contributed :

Professor C. W. Davies.
Professor W. F. K. Wynne-Jones.
Professor J. E. Coates.
Dr. J. A. V. Butler.
Dr. D. D. Eley.
Dr. D. J. G. Ives.

A general discussion followed.

OFFICIAL ANNOUNCEMENTS

DEATHS.

The Council regret to announce the deaths of the following Fellows :

	Elected.	Died.
Arthur Croft Hill (S.W. 7)	Dec. 3rd, 1896.	March 11th, 1947.
Matthew Verden Hunter (Edinburgh) ...	Nov. 17th, 1938.	March 15th, 1947.
Edgar James Millard (Enfield)	Feb. 19th, 1891.	March 17th, 1943.
Alexander Scott (N.W. 8)	Dec. 18th, 1879.	March 10th, 1947.
Samuel Matthew Walford (Macclesfield)...	March 4th, 1897.	March 12th, 1947.

CONGRATULATIONS.

The Congratulations of Council have been conveyed to the following Fellows who were elected Fellows of the Royal Society on March 22nd, 1947 :

George Macdonald Bennett.	Hans Adolf Krebs.
Meredith Gwynne Evans.	Frederick George Mann.
Dorothy Mary Hodgkin.	Fritz Paneth.

CENTENARY CELEBRATIONS.

The programme of the Society's Centenary celebrations which are to be held from July 14th to July 17th is given in full below. Forms of application for tickets for the various events have been forwarded to all Fellows who have registered for the celebrations.

MONDAY, JULY 14TH, 1947.

11.00 a.m. **OPENING OF THE CENTENARY EXHIBITION**
by
The President of the Society,
Professor C. N. Hinshelwood, M.A., Sc.D., F.R.S.,
at the Science Museum, South Kensington, S.W.7.

Admission to Opening by Ticket only.

The Exhibition will be reserved for Fellows and Members of the XIth International Congress until July 19th. From July 20th to September 30th it will be open to the Public.

TUESDAY, July 15TH, 1947.

9.45 a.m. Reception of Delegates and distinguished visitors by the President and Council at the Central Hall, Westminster, London, S.W.1.

11.00 a.m. **OPENING CEREMONY OF THE CELEBRATIONS**
Address of Welcome by the President.
Presentation of Addresses by distinguished visitors.

1.00 p.m. **LUNCHEON**
in honour of
The Overseas Delegates to the Centenary Celebrations
by
His Majesty's Government.

1.00 p.m. Luncheon to Ladies accompanying Overseas Delegates
arranged by the Ladies Committee,
at the Rembrandt Hotel, South Kensington, S.W.7.

1.00 p.m. Buffet Luncheon at Central Hall, Westminster, for the general Fellowship.

3.30 p.m. **CENTENARY ADDRESS**
by
The President of the Society, in the Central Hall, Westminster.

7.30 p.m. Centenary Dinner at the Dorchester Hotel, Park Lane, W.1.

or

8.00 p.m. Reception, Supper and Dance at Grosvenor House, Park Lane, W.1.

WEDNESDAY, JULY 16TH, 1947.

9.00 a.m. (a) VISITS :

Visits to the following places of scientific interest in the London area :
The British Drug Houses, Ltd., City Road, N.1.
Distillers' Company Limited, Epsom (Research and Development Department).
Kodak Limited, Harrow (Research Laboratories).
Wellcome Chemical and Pharmacological Research Laboratories, Beckenham.

9.30 a.m. Ladies Tour to Arundel, returning at approximately 5.30 p.m.

11.00 a.m. (b) LECTURES :

(1) "Chemical Personalities a Century Ago,"

by

Professor J. Read, M.A., Sc.D., Ph.D., F.R.S.,

at

The Institution of Civil Engineers, Great George Street, S.W.1.

(2) "The work of the Royal Institution in Physical Chemistry
in Great Britain,"

by

Professor E. K. Rideal, M.B.E., M.A., D.Sc., Ph.D., F.R.S.

at

The Royal Institution, Albemarle Street, W.1.

3.00 p.m.

THE FARADAY LECTURE

by

Sir Robert Robinson, M.A., D.Sc., LL.D., P.R.S.,

followed by

Presentation of Faraday Medal to the Lecturer

in

The Central Hall, Westminster.

6.00 p.m.

DINNER

by invitation of

The University of London.

8.30 p.m.

RECEPTION

by

Imperial Chemical Industries, Ltd.

at

The Connaught Rooms, Great Queen Street, W.C.2.

THURSDAY, JULY 17TH, 1947.

9.00 a.m. VISITS :

Visits to the following places of scientific interest :

Chemical Research Laboratory (Department of Scientific and Industrial
Research), Teddington.

Fuel Research Station (Department of Scientific and Industrial Research),
East Greenwich.

Distillers' Company, Limited, Epsom (Research and Development
Department).

Wellcome Chemical and Pharmacological Research Laboratories,
Beckenham.

4.00 p.m.

GARDEN PARTY

to

Fellows of the Chemical Society and members of the Eleventh
International Congress of Pure and Applied Chemistry

by

His Majesty's Government

at

Hampton Court Palace.

6.00 p.m.

SHERRY PARTY

by

The Royal Institution, Albemarle Street, W.1.,

to

distinguished visitors from overseas.

8.30 p.m.

RECEPTION
by
The Royal Society
to
Fellows of the Chemical Society and Foreign Delegates to Eleventh
International Congress of Pure and Applied Chemistry
in
The Apartments of the Royal Society,
Burlington House, W.1.

CENTENARY CELEBRATIONS—ACCOMMODATION AT UNIVERSITY HOSTELS.

A very limited amount of accommodation has been made available at London University Hostels for Fellows from Great Britain attending the Centenary Celebrations and the XIth International Congress of Pure and Applied Chemistry. Fellows who wish to make use of this should apply to the Honorary Organiser, XIth International Congress of Pure and Applied Chemistry, 56, Victoria Street, S.W.1, stating their requirements. Meals, except breakfast, will not be available in the hostels.

Fellows who are able to make private arrangements for accommodation are again urged to do so.

MEETINGS OUTSIDE LONDON

ABERDEEN.

“Recent Developments in the Chemistry of Starch and Glycogen,” by Professor E. L. Hirst, D.Sc., F.R.S.

A joint meeting with the local sections of the Royal Institute of Chemistry and the Society of Chemical Industry was held in the Chemistry Department, Marischal College, Aberdeen, on March 20th, 1947.

Professor Hirst outlined earlier work on the structure of starch, much of which did not appreciate that starch was a mixture of amylose and amylopectin. Later work, particularly graded hydrolysis of methylated starch and enzymatic hydrolysis by β -amylose, indicates a laminated structure for amylopectin and a long unbranched chain structure for amylose. The constitution of glycogen has been determined in a similar way. Recently, synthetic substances similar to amylose, amylopectin, and glycogen have been obtained by the action of phosphorylases on glucose-1-phosphate.

SOUTH WALES.

“Gammexane, some properties of this new insecticide,” by Dr. L. J. Burrage.

A meeting was held jointly with the Cardiff and District Section of the Royal Institute of Chemistry and the South Wales Section of the Society of Chemical Industry on March 19th, 1947, at the Technical College, Newport, with Mr. W. D. Williams in the Chair.

Dr. Burrage compared the properties of gammexane and its α -, β -, and δ -isomers and discussed some of the structural problems involved. The peculiarly high insecticidal properties of the γ -compound were shown to be only one of many interesting aspects of the chemistry of these substances which emerged in the course of the researches described.

After a good discussion a vote of thanks to the lecturer was proposed by Mr. Ront, seconded by Mr. Cooper and carried with enthusiasm.

LIST OF APPLICATIONS FOR FELLOWSHIP

(*Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries within 10 days of the date of publication of the "Journal" for April, 1947. Such objections will be treated as confidential. The forms of application are displayed in the Library.*)

- Abouzeid, Yehya Mahmoud**, M.Pharm. (Cairo). Egyptian. c/o The College of the Pharmaceutical Society, 17, Bloomsbury Square, W.C. 1. Research Student. *Signed by* : Wilfred H. Linnell, W. J. Arrol, L. K. Sharp.
- ***Ahlers, Norman Herbert Edgar**, B.Sc. (Lond.). British. 8, Northfields Parade, Station Road, Hayes. Spectroscopist. *Signed by* : G. B. B. M. Sutherland, A. C. C. Newman, D. A. Sutton.
- Archer, Harold**, A.R.I.C. British. 13, Beverley Avenue, Davyhulme, Manchester. Research Chemist in Paint and Varnish Laboratory. *Signed by* : H. Adams, James J. Cowperthwaite, J. W. Batty.
- ***Andrews, David Arthur**. British. 74, Belmont Road, Harrow Weald. Student at the Sir John Cass Technical Institute. *Signed by* : E. de Barry Barnett, David W. Wilson, F. Holmes.
- Baddiley, James**. British. 6, Willow Bank, Manchester, 14, Director, Imperial Chemical Industries Ltd., Dyestuffs Division. *Signed by* : E. H. Rodd, H. Hepworth, P. Chorley.
- Baxter, J. P.**, B.Sc.Hons. and Ph.D. (Birm.), A.M.I.Chem.E. British. 338, Upton Lane, Widnes. Research Director, Imperial Chemical Industries (General Chemicals) Ltd. *Signed by* : L. J. Burrage, L. A. Haddock, A. G. Jones.
- Beall, Desmond**, B.A. (British Columbia), Ph.D. (Toronto). Canadian. 522, Lansdowne Avenue, Westmount, Montreal, 6. Assistant Professor, Research Institute of Endocrinology, McGill University, Montreal. *Signed by* : E. J. King, Harold King, R. K. Callow, J. Walker.
- ***Bladon, Peter**, A.R.C.S. British. 36, Meadowside, Moreton, Wallasey. Research Student, Imperial College, London. *Signed by* : L. N. Owen, R. M. Evans, E. A. Braude.
- Bruce, William Gillespie Gilbert**, Ph.C., M.P.S. British. Auchengower, Cove. Chemistry Student. *Signed by* : Henry G. A. Anderson, A. B. Crawford, G. T. Newbold.
- Buckingham, Reginald**, B.Sc. and Ph.D. (Bristol). British. 22, Sefton Avenue, Mill Hill, N.W. 7. Senior Assistant, Chemistry Department, The Polytechnic, Regent Street, W. 1. *Signed by* : H. Lambourne, D. Ridge, M. Todd.
- Burns, William**. British. 50, Riddnie Knowes, Glasgow, E. 1. Industrial Research Chemist, Ed. MacBean & Co., Wellington Mills, Glasgow, C. 4. *Signed by* : John R. Campbell, Henry G. A. Anderson, John A. Cranston.
- Butt, Wilfrid Roger**, B.Sc. (Lond.), A.R.I.C. British. 18, Rochester Avenue, Rochester. Biochemist, Endocrine Unit, London Hospital, E. 1. *Signed by* : Colin J. O. R. Morris, A. A. Henly, R. J. Boscott.
- Byford, William Willett**, B.Sc. (Lond.). British. 7, Longcroft Lane, Welwyn Garden City. Teacher, L.C.C. Service. *Signed by* : D. J. G. Ives, George W. Ferguson, R. W. Pittman.
- Cairns, Bridget**, B.Sc.Hons. (Edin.). British. c/o Wallace, 22, East Preston Street, Edinburgh. Research Chemist. *Signed by* : W. O. Kermack, John E. McKail, Bryce Douglas.
- Chatterjea, Jnanendra Nath**, M.Sc. (Patna). Indian. Dyson Perrins Laboratory, South Parks Road, Oxford. Research Student. *Signed by* : Kenneth H. Pausacker, A. D. Kemp, R. N. Chakravarti.
- Christie, Hamish**, B.Sc.Hons. (Glas.), A.R.I.C. British. Dunshee, Taynuilt. Factory Process Superintendent. *Signed by* : D. Routledge, H. T. Lester, S. Horwood Tucker, C. Buchanan.
- Cuthill, James Caithness**, B.Sc.Hons. (Aberd.). British. c/o McMurray, 36, Sidney Street, Saltcoats. Research Chemist. *Signed by* : Andrew McLean, F. D. Miles, James Taylor.
- Dickinson, Florence, Mrs.**, B.Sc.Hons. and M.Sc. (L'pool). British. The Lawns, Lawton Road, Rainhill, nr. Liverpool. Research Chemist, Imperial Chemical Industries (General Chemicals) Ltd., Widnes. *Signed by* : L. A. Haddock, L. J. Burrage, Aneurin Williams.
- Druett, Henry Arthur**, B.Sc. (Lond.), A.Inst.P. British. 247, Essex Square, Salisbury. Senior Scientific Officer, Microbiological Research Department, Ministry of Supply. *Signed by* : H. J. Evans, H. J. Dothie, J. W. Roe.
- Dunning, John Stanley**, B.Sc.Hons. (Lond.), A.R.C.S., A.R.I.C. British. 19, Kimbolton Avenue, Lenton Sands, Nottingham. Development Chemist. *Signed by* : H. Barnes, C. W. Pritchett, R. Falconer.
- Ehrensward, Gösta Carl Henrik**, Ph.D. (Stockholm). Swede. Weuner-Gren Institute for Biological Research, Department of Physiological Chemistry, University of Stockholm, Norrtullsgatan 16, Stockholm. Head of Department for Physiological Chemistry, adviser to Department of Technical Chemistry. *Signed by* : G. A. R. Kon, Alexander Haddow, Edna M. F. Roe.
- Elsner, Benjamin B.**, Dr.Techn.Sc. and Ing.Chem. (Brno). British. 67a, St. Giles, Oxford. Demonstrator, Dyson Perrins Laboratory, Oxford. *Signed by* : F. E. King, G. M. Robinson, J. C. Smith.
- Fill, Matzas Alfonso**, A.R.I.C. British. 463, Norwood Road, West Norwood, S.E. 27. Analytical Chemist, Fullers Ltd., Hammersmith, W. 6. *Signed by* : Kenneth B. Belcher, John T. Stock, R. Leslie Collett.
- Fincham, Christopher Joseph Barry**. British. 14, Glastonbury Road, Hove 3. Student, Brighton Technical College. *Signed by* : T. J. Morrison, G. E. Watts, T. J. Kirkland.

- Fisher, Charles Douglas.** British. Keble College, Oxford. Undergraduate. *Signed by* : F. E. King, L. E. Sutton, L. A. K. Staveley.
- ***Galvin, Gerald David,** B.Sc.Hons. (Sheffield). British. c/o 19, Perrymead Street, Fulham, S.W. 6. Research Chemist. *Signed by* : E. W. Hood, T. A. G. Silk, W. Hughes.
- Gollop, Harry,** B.Sc. (Wales), F.R.I.C., A.M.I.Chem.E. British. Cumberland Lodge, Balmoral Road, Parkstone. Superintendent, Admiralty Material Laboratory, Holton Heath, nr. Poole. *Signed by* : T. C. J. Ovenston, C. A. Parker, A. C. Hill.
- Gray, William John,** M.P.S. British. Bath House, 30, Trinity Crescent, Edinburgh, 5. Partner, Duncan, Flockhart & Co., Manufacturing Chemists, Edinburgh, 8. *Signed by* : T. S. Brechin, David Ritchie, W. A. Beattie.
- Griffin, John William,** B.Sc.Hons. (Glas.). British. 20, Montague Road, Richmond. Research Chemist. *Signed by* : D. H. Hey, M. Elliott, H. W. B. Reed.
- Guggenheim, Edward Armand,** M.A., Sc.D. (Cantab.), F.R.S. British. Selborne, Peppard Road, Caversham. Professor of Chemistry, Reading University. *Signed by* : C. W. Davies, W. F. K. Wynne-Jones, C. N. Hinshelwood.
- Hewitt, Alfred Donald,** B.Sc. (Lond.). British. Rosebarn, Chandlers Cross, Richmansworth. Works Chemist, The Autotype Co., Ltd., Brownlow Road, W. 13. *Signed by* : C. B. Bolland, T. P. Dee, R. J. Sudlow.
- Hirschberg, Leon,** Engineer in Agricultural Chemistry (Ghent). Polish. 52, Genesta Road, Westcliff-on-Sea. Analytical Chemist. *Signed by* : H. L. Haigh, N. Goldenburg, G. H. Green.
- Hughes, Stanley Reginald Charles.** B.Sc.Hons. (L'pool), A.R.I.C. British. Chemistry Department, Chelsea Polytechnic, S.W. 3. Lecturer in Chemistry. *Signed by* : H. K. Dean, J. W. Spence, M. Vahrman.
- Lakin, William Kenneth Houghton.** British. 26, Park Road, Hull. Student, University College, Hull. *Signed by* : Wilfred B. Orr, L. Hunter, Brynmor Jones.
- ***Lawrence, Kenneth Robert.** British. 47, Melbourne Road, Walthamstow, E. 7. Laboratory Assistant, De la Rue Plastics. *Signed by* : H. Holness, R. W. Jukes, P. A. Lincoln.
- ***Humphrey, Ronald Bryan.** British. 89, Milton Street, Maidstone. Student. *Signed by* : Brynmor Jones, Wilfred B. Orr, J. L. Simonsen.
- ***Latham, Kenneth Geoffrey,** B.Sc. (Lond.), A.R.I.C. British. 94, Connaught Avenue, Chingford, E. 4. Student. *Signed by* : M. P. Garwood, F. A. J. Moss, J. H. Shelton.
- Long, Charles Alexander,** A.R.I.C., M.P.S. British. 27, Byron Mansions, Upminster. Pharmaceutical Research Chemist, May and Baker, Ltd. *Signed by* : H. J. Barber, J. H. Wilkinson, W. R. Wragg.
- ***Longworth, Ruskin.** British. 31, Aylands Road, Enfield. Laboratory Assistant. *Signed by* : G. Mattock, B. D. Pate, H. Holness.
- ***MacWilliam, Iain Coutts,** B.Sc. (Edin.). British. 10, Craighall Crescent, Edinburgh, 6. Chemist, Chemical Research Laboratory, Teddington. *Signed by* : F. H. Burstall, R. P. Linstead, G. R. Davies.
- ***Maddison, John Langton.** British. Glencathra, St. John's Chapel (via Bishop Auckland). Medical Student. *Signed by* : W. S. Patterson, J. H. Wilkinson, E. J. Gunn.
- Mahadevan, Arumugamangalam Padmanagwaiyer,** M.A. (Madras), B.Sc.Tech. (Bombay), A.R.I.C. Indian. 53, Queen's Gate, S.W. 7. Research Student, Organic Chemistry Department, Royal College of Science, London. *Signed by* : A. L. Levy, J. A. Elvidge, A. H. Cook.
- Marshall, Charles Roy,** B.Sc.Hons. and Ph.D. (Birm.), A.R.I.C. British. c/o Messrs. Seager, Evans & Co., Ltd., 14, Deptford Bridge, S.E. 8. Chief Chemist. *Signed by* : R. H. Hopkins, Stanley Peat, M. Stacey.
- ***Nicholson, John Stuart,** B.A. (Oxon). British. Uplands, Firs Lane, Appleton, Warrington. Research Student. *Signed by* : F. E. King, J. A. Barltrop, S. G. P. Plant.
- Parsons, Nigel Montgomerie,** M.A. (Oxon), A.R.I.C. British. 33, Campden House Chambers, W. 8. Biochemist, Whitbread & Co., Ltd., E.C. 1. *Signed by* : B. Meredith Brown, E. Barton Wright, F. B. Marmoy.
- ***Pattison, Johnson.** British. 8, Milburn Terrace, Shiney Row, Philadelphia, Co. Durham. Student. *Signed by* : Brynmor Jones, Wilfred B. Orr, J. L. Simonsen.
- ***Perkins, Frank Trevor,** B.Sc. (Manc.). British. Chemistry Department, The University, Manchester, 13. Research Student. *Signed by* : A. E. Gillam, E. L. Hirst, G. N. Burkhardt.
- Pickup, Richard,** B.Sc.Hons. (Manc.), F.R.I.C. British. Imperial Institute, South Kensington, S.W. 7. Senior Assistant, Mineral Resources Department, Imperial Institute. *Signed by* : W. H. Bennett, R. W. Pearman, D. J. Cosgrove.
- ***Raman, Ramaswami Iyer Ananta,** B.Sc. (Madras). Indian. c/o Indian Students' Union, 112, Gower Street, W.C. 1. Research Student, University College, Gower Street, W.C. 1. *Signed by* : E. S. Halberstadt, Henry Terrey, B. P. Gyani.
- Robinson, Henry Walter,** B.Sc.Hons. (Lond.), A.R.I.C. British. 2, Cresthill Avenue, Grays. Industrial Chemist. *Signed by* : H. J. T. Ellingham, Alex. Findlay, R. Leslie Collett.
- Said, Fathy El,** M.Pharm. (Cairo). Egyptian. c/o The Pharmaceutical Society College, 17, Bloomsbury Square, W.C. 1. Research Student. *Signed by* : Wilfred H. Linnell, W. J. Arrol, L. K. Sharp.
- Sandrock, John Dennis,** B.Sc. (Lond.). British. 66, Broadclyst Gardens, Thorpe Bay. Research Student. *Signed by* : C. M. French, B. E. Cross, H. D. K. Drew.
- Semmens, Cecil Samuel.** British. 10, Fairfield Avenue, Datchet. Technical Assistant, King's College, W.C. 2. *Signed by* : George T. Gurr, J. W. Spence, T. D. Whittet.

- Sherrington, Leonard George**, M.Sc. (Lond.), A.R.C.S., D.I.C. British. 184, Church Hill Road, East Barnet. Control of Research and Development Group, Material Research Laboratory, Philips Lamps Ltd., Surrey. *Signed by* : C. H. R. Gentry, P. E. Lovering, M. G. Charlton.
- Teesdale, James Wilson**, M.P.S. British. 18, Riversdale Crescent, Murrayfield, Edinburgh, 12. Chemist and Works Supervisor, T. & H. Smith Ltd., Edinburgh. *Signed by* : Henry E. Watt, Donald C. Wilson, James W. Laing.
- ***Watts, Clifford Reginald**, B.Sc.Hons. (Lond.). British. c/o 72, Lockhurst Lane, Coventry. Research Chemist. *Signed by* : A. R. Munden, D. Entwistle, R. M. Lodge.
- Way, Arthur Chandler**, B.Sc. (Lond.), A.R.I.C. British. 13, Udney Park Road, Teddington. Research Chemist. *Signed by* : G. E. Edwards, John Farquharson, R. Neil Cunningham.
- ***White, James Charles David**, B.Sc.Hons. (Glas.). British. 142, Alderman Road, Knightswood, Glasgow, W. 3. Research Assistant, The Hannah Dairy Research Institute, Ayr. *Signed by* : J. W. Cook, Andrew Kent, T. S. Stevens.
- Williams, Frederick Hugh**, Ph.C., M.P.S. British. 9, Gwilym Street, Cwmda, Swansea. Pharmacist, St. James' Hospital, S.W. 12. *Signed by* : Vernon Askam, L. K. Sharp, W. F. Wilkinson.
- ***Williamson, Alfred Gee**, A.R.I.C. British. 62, Old Road, Hyde. Chemist, Lankro Chemicals Ltd., Eccles, Manchester. *Signed by* : Kenneth Tomlinson, E. Marshall Meade, Arthur Wolff.

UNDER SPECIAL PROVISION APPERTAINING TO CANDIDATES RESIDENT ABROAD.

- ***Bhasin, Rattan L.**, B.Sc.Hons. and B.A.Econ. (Punjab). Indian. 6, The Palms, Church Road, Lahore, Punjab. Student. *Signed by* : N. S. Kapur, B. K. Singh.
- ***Brown, Nigel Philip Hunter**, B.Sc. (N.Z.). British. 21, Winchester Street, Christchurch, N.W. 1., New Zealand. Student. *Signed by* : J. Packer.
- Castle, Raymond N.**, B.S. (Idaho), M.A. and Ph.D. (Colorado). American. Department of Chemistry, University of New Mexico, Albuquerque, New Mexico. Assistant Professor. *Signed by* : J. L. Riebsomer.
- ***Jensen, Ole Svensmark**. Danish. Vendersgade 23/4, Copenhagen K. Student. *Signed by* : K. A. Jensen.
- Sorm, František**, Dr.Techn. and Dipl.Ing. (Prague). Czechoslovak. The Technical University, Sadová. Prague XIX. Professor of Organic Technology in the Technical University, Prague. *Signed by* : E. Janousek, B. Jelinek.
- Jones, Spencer Ainsworth**. American. 12, East 41st Street, New York 17, N.Y. Consulting Engineer, The Schuyler Hopper Company. *Signed by* : Foster Dee Snell, Ralph L. Evans.
- Viktorin, Otakar**, D.Sc. (Brno). Czechoslovak. Titova 7, Brno. Lecturer in Physical Chemistry, Institute of Theoretical and Physical Chemistry, Technical College, Brno. *Signed by* : J. Heyrovsky.

* Reduced annual subscription.

PAPERS RECEIVED

List of papers received between March 15th, 1947, and April 11th, 1947. (This list does not include the titles of papers which have been read at a Scientific Meeting or which have appeared in the *Journal*.)

- “Alginic acid acetates.” By A. WASSERMANN.
- “The synthesis of derivatives of 4- and 5-azaindole.” By G. R. Clemon and G. A. Swan.
- “Constituents of ‘Cortex Piscidiæ Erythrinæ.’ Part I. The structure of piscidic acid.” By W. BRIDGE, F. COLEMAN, and A. ROBERTSON.
- “Studies in the azole series. Part III. The interaction of aminoacetonitrile and carbon disulphide.” By A. H. COOK, (Sir) IAN HEILBRON, and A. L. LEVY.
- “Preparation of certain nuclear-substituted 2-aminophenolsulphonic acids.” By W. F. BEECH.
- “A reaction of certain diazosulphonates derived from β -naphthol-1-sulphonic acid. Part XXII. Derivatives of 2'-chloro-5'-nitrobenzene-2-naphthol-1-diazosulphonate.” By (the late) F. M. Rowe, A. T. Peters, and Y. I. Rangwala.
- “Halogenation of *m*-5- and *m*-2-xylenols. Mixed chloro-bromo-derivatives.” By S. W. GLEED and A. T. PETERS.
- “A note on the infra-red spectrum of vulcanised rubber and the chemical reaction between rubber and sulphur.” By N. Sheppard and G. B. B. M. Sutherland.
- “Activity coefficients of zinc iodide.” By J. R. PARTINGTON and F. G. TORTO.

- "Azlactones and phenylacetic acids derived from the 2-nitro-derivatives of vanillin, *iso*-vanillin, and veratraldehyde." By S. F. MACDONALD.
- "Alumina catalysts for vapour-phase organic dehydrations, deaminations, etc." By G. FEACHEM and H. T. S. SWALLOW.
- "Halogenated ketones. Part I. The bromination of acetone and methyl ethyl ketone." By J. R. CATCH, D. F. ELLIOT, and E. R. H. JONES.
- "Halogenated ketones. Part II. The bromination of methyl propyl and methyl *iso*-propyl ketones." By J. R. CATCH, E. R. H. JONES, and W. WILSON.
- "Halogenated ketones. Part III. The preparation of bromomethyl ketones by the diazomethane reaction." By J. R. CATCH, D. F. ELLIOT, and E. R. H. JONES.
- "Halogenated ketones. Part IV. The application of the Friedel-Crafts reaction to the preparation of halogenated aliphatic ketones." By J. R. CATCH, D. F. ELLIOT, and E. R. H. JONES.
- "Lipoid-soluble alloxazine derivatives." By W. C. J. ROSS.
- "Studies on some metal electrodes. Part I. The behaviour of the copper electrode in solutions of varying pH and initially free from copper ions in air." By A. RIAD TOURKY and S. E. S. EL WAKKAD.
- "Studies on some metal electrodes. Part II. The behaviours of the copper electrode in solutions of varying pH and initially free from copper ions out of contact with air." By A. RIAD TOURKY and S. E. S. EL WAKKAD.
- "Studies on some metal electrodes. Part III. The evaluation of standard electrode potential of copper." By A. RIAD TOURKY and S. E. S. EL WAKKAD.
- "Studies on some metal electrodes. Part IV. The behaviour of the copper electrode in dilute copper sulphate solutions." By A. RIAD TOURKY and S. E. S. EL WAKKAD.
- "Studies on some metal electrodes. Part V. Does the antimony electrode behave simply as a metal-metal oxide electrode in air?" By A. RIAD TOURKY and A. A. MUSSA.
- "Studies on some metal electrodes. Part VI. The behaviour of the antimony electrode out of contact with air." By A. RIAD TOURKY and A. A. MUSSA.
- "Studies on some metal electrodes. Part VII. The amphoteric properties of antimony tri- and pent-oxide." By A. RIAD TOURKY and A. A. MUSSA.
- "The basicities of the 12-heteropoly-acids." By A. RIAD TOURKY, H. K. EL SHAMY, and (in part) I. M. ISSA.
- "The oxidation-reduction potential of hexa- and penta-valent molybdenum ions." By A. RIAD TOURKY and H. K. EL SHAMY.
- "Attempts to determine the second and third dissociation constants of silicomolybdic acid in mixed solvents and in cells without liquid junction." By A. RIAD TOURKY, H. K. EL SHAMY, and I. M. ISSA.
- "The electrolytic reduction of acid tungstate solutions and the oxidation-reduction potential of hexa- and penta-valent tungsten ions." By A. RIAD TOURKY and H. K. EL SHAMY.
- "The rapid preparation of a solution of sodium hydrosulphide." By H. H. HODGSON and E. R. WARD.
- "4-Stilbenylmethylamine and *N*-dimethyl-4-stilbenylmethylamine." By G. A. R. KON.
- "Reactions of α -cyanoprene (1-cyanobuta-1:3-diene). Part I. Addition of nitro-paraffins." By (MRS.) J. L. CHARLISH, W. H. DAVIES, and J. D. ROSE.
- "Reactions of α -cyanoprene (1-cyanobuta-1:3-diene). Part II. Addition of reactive methylene compounds." By (MRS.) J. L. CHARLISH, W. H. DAVIES, and J. D. ROSE.
- "The spontaneous low-temperature polymerisation of acetaldehyde." By H. A. RIGBY, C. J. DANBY, and C. N. HINSHELWOOD.
- "Anhydrides of polyhydric alcohols. Part VIII. Derivatives of 1:4-anhydrosorbitol from 1:4-3:6-dianhydrosorbitol." By R. MONTGOMERY and L. F. WIGGINS.
- "Anhydrides of polyhydric alcohols. Part IX. The conversion of glucamine into 1:4-anhydrosorbitol. The constitution of monobenzylidene 1:4-anhydrosorbitol." By V. G. BASHFORD and L. F. WIGGINS.

- “Amidines. Part VIII. Preparation of amidines from cyanides, ammonia or an amine and an ammonium or substituted ammonium salt.” By P. OXLEY, M. W. PARTRIDGE, and W. F. SHORT.
- “The preparation of some *p*-alkylsulphonylbenzylammonium chlorides.” By J. CYMERMAN, A. KOEBNER, and W. F. SHORT.
- “Acid-base catalysis in non-aqueous solvents. Part XI. The halogenation of acetone by various *N*-halogen compounds in chlorobenzene solution at 50°.” By R. P. BELL and A. D. S. TANTRAM.
- “Attempts to find new chemotherapeutic amidines. Part IX. Derivatives of $\alpha\alpha$ -diphenylethylene and naphthalene.” By J. N. ASHLEY, J. F. GROVE, and T. HENSHALL.

PROCEEDINGS

OF THE

CHEMICAL SOCIETY

Minutes of a SCIENTIFIC MEETING

held at Burlington House, Piccadilly, W. 1, on Thursday, May 1st, 1947, at 7.30 p.m.

SIR IAN HEILBRON, D.S.O., D.Sc., LL.D., F.R.S., Vice-President, was in the Chair.

MINUTES.

The Minutes of the meeting held on Thursday, April 17th, 1947, were read, and were confirmed and signed.

FORMAL ADMISSION OF FELLOWS.

The following were admitted Fellows of the Society : George W. Tunnah, Raymond V. Swann, John A. Gascoigne, D. J. Millen, Max M. Wirth, M. C. Whiting, and E. A. Monro.

SCIENTIFIC COMMUNICATIONS.

The following papers were read and discussed :

- "Nitration of olefins." By C. W. Scaife.
- "Reactions of the nitro-paraffins." By A. Lambert.
- "Addition reactions of nitro-olefins." By R. L. Heath.
- "Formation and reduction of 2- and 3-nitro-alkyl cyanides." By G. D. Buckley.

OFFICIAL ANNOUNCEMENTS

CONGRATULATIONS.

The Congratulations of Council have been conveyed to the following Fellows who completed fifty years of Fellowship on May 6th, 1947 :

Henry Norris Davidge (W. 1).	Thomas Tickle (Exeter).
George Fowlie Merson (Edinburgh).	John Welsh (Chester).
Sir Robert Howson Pickard (Headley).	

ELECTION OF NEW FELLOWS. .

The following 163 Candidates were elected Fellows of the Society on May 1st, 1947 :

Anthony Francis Agar.	Leslie Ernest Thomas Branch.
Sir Wallace Alan Akers.	Sidney Albert Brazier.
Thomas Rawlinson Ames.	James Douglas Brooks.
Richard Samuel Aston.	Benjamin Walter Lamplugh Brooksbank.
Michael Gilbert Ball.	Delbert Francis Brown.
William Barclay.	Michael George Brown.
Richard Bawden Barlow.	John Grant Buchanan.
Stanley Barton.	Edward Joseph Butler.
Tomas Batuecas.	Gordon Archibald Russell Calder.
Georg Josef Bernfeld.	Malcolm Colin Campbell.
Heinz Bing.	Francisco Lopez Casado.
Arthur William Birley.	Jack Alfred Casbolt.
Thomas Alfred Blackmur.	George Nicolas Catravas.
John Dell Bower.	Geoffrey Prytherch Campbell Chambers.

Rex Chapman.
 Daniel Nicholas Clark-Lowes.
 Ivor Lawrance Clifford.
 John Seward Coe.
 Hamish Rae Cooper.
 Pauline May Cowan.
 Eugene Casper Coyner.
 Martin Joseph Cranley.
 James Michael Creeth.
 Betty Croshaw.
 Anthony Fenwick Daglish.
 Peter Danby.
 Alwyn George Davies.
 Caleb Thomas Davies.
 Duncan Sheppey Davies.
 Trevor William Davies.
 Walter Dennis Davis.
 Joseph Henry Dawson.
 Thomas Deegan.
 James Harry Dent.
 Barry Joseph Donovan.
 David Lucas Donne.
 Eric James Dunstan.
 Sonia Dunstan.
 Albert John Buchanan Edgar.
 Alan Edwin Elphick.
 Bruno Giuliano Engel.
 Holger Gustaf Henrik Erdtman.
 Harold William Fowler.
 John Arnold Gaunt.
 Ragnar Fritiof Gedell.
 Harry Howard Gething.
 James Edward Gladstone.
 Edward Hugh Gorton.
 Daniel Richard Goddard.
 George William Gray.
 Gerald Joseph Louis Griffin.
 Jarl Mauritz Leonard Gripenberg.
 Henry Monroe Grotta.
 Gordon Frederick Haddon.
 Colin Andrew Charles Haley.
 Geoffrey Ronald Hall.
 George Frederick Hall.
 Charles Arthur Hallas.
 Frederick Reginald Harris.
 John Hay.
 Harold Hayman.
 Harold Heath.
 Stanley Victor Heath.
 John Francis Hodgson.
 Peter Holliday.
 Leonard Holman.
 Wilfred Herbert Hook.
 Sydney Horrobin.
 Antony Stephen Howship.
 Alexander Lodewyk Hulsenbeek.
 Robert Edward Ingall.
 Samuel Sholen Israelstam.
 Albert Christen Boe Jacobsen.
 Ivor Lloyd Jenkins.
 Robert George Stanley Johns.
 Geoffrey Hugh Jones.
 Kenneth Hall Jones.
 Johan Kastelein.
 Ramprasad Kaushal.
 Solomon Elijah Kay.
 Moss Keen.
 Alan Roy King.

Roger Kenneth Laird.
 Peter Hotson Le Mare.
 Laurence John Lermitt.
 James Loudon Lowe.
 Kenneth Forbes Macbean.
 John Cunningham Maccallum.
 Gerald William Mack.
 Donald Robert Mackey.
 Ian James Lachlan Macpherson.
 Benoy Lal Majumder.
 Ian Sissons Mason.
 Ronald George Mason.
 Harry Dennis Richard Matthews.
 Graham Walter Meacock.
 Grant Lewis Miles.
 George Herbert Moore.
 Erich Mosettig.
 Walter George Richard Norris.
 Doreen Margaret Nutbourne.
 Keith Owen.
 Peter Oxley.
 John Pearson.
 Courtenay Stanley Goss Phillips.
 John Williams Cole Phillips.
 Richard Pomfret.
 Maurice Read Porter.
 Charles Gordon Thomas Prince.
 John Howard Purnell.
 Ronald Joseph Rallings.
 Chathaporam Sessaier Ramakrishnan.
 Desmond Myles Connor Reilly.
 John Derek Richardson.
 Ronald Desmond Riegelhuth.
 Alan Rimmer.
 Chunkeng Rinthakul.
 Harold James Rodda.
 Elisabeth Shirley Sampson.
 Norman Harry Seager.
 Arkalgud Seetharamiah.
 Albert Shulman.
 Eric Manvers Shooter.
 Albert Arthur Smales.
 Donald Charles Cottom Smith.
 Geoffrey Howard Smith.
 Robert David Smith.
 Max Smuckler.
 Franz Sondheimer.
 William Hay Stafford.
 James Stark.
 Harry Louis Steinberg.
 Kenneth Duncan Stewart.
 Christopher Bray Tabb.
 Herbert James Reginald Thorne.
 Noel Thorne.
 Percy Toothill.
 John Tordai.
 Robert Arnold Turner.
 Haaye Veldstra.
 Arthur Walker.
 James Fairweather Walker.
 Cecil Henry Waxman.
 John Greville White.
 Alfred Eric Wiles.
 Victor James Wilkinson.
 Robert Joseph Paton Williams.
 Peter Hedley Wright.
 Rev. Lourdu Marianna Yeddanapalli, S.J.

MEETING OF COUNCIL.

A meeting of Council was held on Thursday, May 1st, 1947.

Reports from the Publication Committee (May 1st, 1947) and the Joint Library Committee were received.

The Council had under consideration the programme for the Session 1947—1948 and the question of appointing Hugo Müller, Pedler and Tilden Lecturers received attention.

The thanks of Council have been conveyed to Messrs. E. T. H. Bucknell, H. H. Hughes, R. S. Hughes, and G. S. Ward for gifts of the Society's publications.

It was noted with pleasure that the Anglo-Iranian Oil Company had entered into a Deed of Covenant for the gift of £50 per annum to the Society to be used for current general purposes.

The Report of the Finance and General Purposes Committee (April 17th, 1947) and the filling of vacancies on the Publication Committee and Finance and General Purposes Committee was considered.

The Council received with pleasure a letter of congratulation on the attainment of the Society's Centenary from the President of the Society of Antiquaries.

An invitation to the Society to be represented at the XVIII Session of the International Geological Congress, to be held in London in 1948, was received.

It was agreed to support the application of the Society of Dyers and Colourists for a Royal Charter.

Approval was given to a proposal by the Chemical Council that the Society of Public Analysts should participate in the joint membership scheme.

Certain formal and financial items were transacted.

BRITISH STANDARDS INSTITUTION.

The following drafts of British Standards specifications have been received for technical comment :

CH(FCC) 9402 Draft Revised B.S. 573 Dibutyl Phthalate.

CH(FCC) 9401 Draft Revised B.S. 508 Normal Butyl Alcohol.

CH(FCC) 9403 Draft Revised B.S. 574 Diethyl Phthalate.

CH(FCC) 9404 Draft Revised B.S. 575 Carbon Tetrachloride.

These have been placed in the Library and Fellows wishing to make technical comments are requested to do so before July 23rd, 1947, to the British Standards Institution, 28, Victoria Street, London, S.W. 1.

MEETINGS OUTSIDE LONDON**SHEFFIELD.**

"Bond Lengths in Aromatic Hydrocarbons," by Professor J. Monteath Robertson, M.A., D.Sc., F.R.S.

A joint meeting with the University Chemical Society was held in the Chemistry Lecture Theatre of the University on May 1st, 1947, with Professor R. D. Haworth, D.Sc., Ph.D., F.R.S., in the Chair.

After an introductory sketch of the methods which may be used to determine bond lengths, and the correlation of such measurements with the character of the bond, Professor Robertson proceeded to give detailed descriptions of the structures of pyrene, 1 : 2 : 5 : 6-dibenzanthracene, and coronene as determined by X-ray diffraction. Attention was drawn to the extent of the agreement between the experimentally determined bond lengths and the values calculated from the contributions of the various Kekulé structures.

Following a discussion, a vote of thanks proposed by Mr. W. Moser and seconded by Mr. S. E. Miles was accorded heartily by the meeting.

"The Study of Antibiotics," by Sir Howard Florey, F.R.S.

A joint meeting with the University Chemical Society was held in the General Lecture Theatre of the University on May 8th, 1947, with Professor R. D. Haworth, D.Sc., Ph.D., F.R.S., in the Chair.

Sir Howard Florey reviewed the progress which had been made since the pioneer observation of Pasteur that one living organism could inhibit the growth of another, and drew attention to the great advances made in recent years through the co-operation of the chemist, and of the chemical engineer, with the biologist. A sketch was given of the methods of testing for antibiotic activity, of isolation of the active substance, and of evaluation of the usefulness of individual antibiotics in medicine.

A vote of thanks proposed by Professor E. J. Wayne and seconded by Dr. P. R. Carter was accorded heartily by the meeting.

LIST OF APPLICATIONS FOR FELLOWSHIP

(Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries within 10 days of the publication of the Journal for May, 1947. Such objections will be treated as confidential. The forms of application are displayed in the Library.)

- ***Allen, Peter William**, B.A. (Oxon). British. Crossways, Oakfield Road, Ashstead. Research Student. *Signed by* : F. E. King, E. J. Bowen, R. G. Wall.
- ***Baggott, Eric Raymond**. British. 7, Crane Road, Bradley, Bilston. Assistant Analytical Chemist. *Signed by* : P. Arnall, J. Cooper Duff, P. D. Ritchie.
- Beale, Robert Nigel**, B.Sc. (Lond.). British. 65, Highlands Court, Gipsy Hill, S.E.19. Cancer Research Physical Chemist. *Signed by* : E. M. F. Roe, W. C. J. Ross, D. M. Brown.
- Beeston, Alan Wilmot**, B.Sc.Hons., M.Sc., and Ph.D. (L'pool), F.R.I.C. British. "Seton," Formby. Technical Assistant and Consultant to Messrs. W. J. Thompson & Co., Chartered Patent Agents. *Signed by* : F. B. Kipping, G. B. M. Sutherland, L. E. Jones, F. Wild.
- Bettridge, Alan Ronald Arthur**, B.Sc.Hons. (Lond.), A.R.I.C. 25, Wye Cliff Road, Handsworth, Birmingham 20. Chief Chemist to Tufnol, Ltd., Manufacturers of laminated plastics. *Signed by* : J. Cooper Duff, W. Blakey, J. Hofton.
- Bevan, Cecil Wilfred Luscombe**, B.Sc.Hons. (Wales). British. 23(F), Belsize Park Gardens, N.W.3. Research Student at University College, London. *Signed by* : E. D. Hughes, G. J. Janz, A. D. E. Pullin.
- ***Boyd, James Wennington**. British, 11, Nelson Street, Hendon, Sunderland. Student, Sunderland Technical College. *Signed by* : W. S. Patterson, J. H. Wilkinson, J. O. Harris.
- Bray, Geoffrey Trelawney**, F.R.I.C. British. Imperial Institute, S.W. 7. Vice-Principal (Intelligence Section) Plant and Animal Products Department. *Signed by* : N. S. Corney, J. L. Simonsen, R. W. Pearman.
- ***Bridgwater, Roden John**. British. 4, Cannon Street, Sherwood, Nottingham. Student, University College, Nottingham. *Signed by* : D. O. Jordan, J. Masson Gulland, J. C. Roberts.
- Chatterjee, Ahindra Kumar**, B.Sc. (Calcutta). Indian. c/o Snell and Prideaux, Ltd., Exeter Passage, Holloway Head, Birmingham 1. Electro-deposition Chemist. *Signed by* : L. L. Bircumshaw, S. Peat, F. H. Newth.
- Cockerham, Robert George**, B.Sc.Hons. (Leeds), A.R.I.C. British. Rosedene, Clifford Road, Boston Spa. Research Student. *Signed by* : F. R. Goss, W. A. Wightman, F. Challenger.
- Davey, Walter Cecil**, M.Sc. (Birm.), Ph.D. (Lond.), F.R.I.C. British. 38, Mayfield Road, Wylde Green, Sutton Coldfield, nr. Birmingham. Chief Chemist, Dunlop Rubber Co., Ltd. *Signed by* : F. A. Jones, E. M. Joiner, C. E. Kendall.
- ***Edwards, Thomas George Edward**. British. 93, Russell Avenue, Wood Green, N. 22. Chemist, British Drug Houses, N. 1. *Signed by* : P. G. Marshall, H. L. Peerman, A. P. Wade.
- Evans, Charles Charlton**, B.Sc. (Lond.). British. 21, Kinnaird Avenue, W. 4. Research Student, University College, London. *Signed by* : S. Sugden, C. A. Burton, G. J. Janz.
- Frost, Roydon Leonard**. British. 15, Oakwood Road, West Wimbledon, S.W. 20. Assistant Works Manager, Thos. Parsons and Sons, Ltd., Mitcham. *Signed by* : N. R. Fisk, G. H. J. Neville, L. R. Hickson.
- Geoghegan, John Michael**, F.R.S.E. British. 3, St. Colme Street, Edinburgh. Chartered Accountant. *Signed by* : D. C. Wilson, J. H. Ramsay, H. E. Watt.
- ***Gibson, James William**. British. 224, Westbourne Avenue, Hull. Junior Chemist. *Signed by* : G. R. Jenkinson, A. P. Backshell, E. E. Connelly.
- Glascock, Raymond Frederick**, B.Sc. (Lond.). British. 4, Norland Square, W. 11. Research Student, London University. *Signed by* : W. H. Linnell, L. K. Sharp, W. J. Arrol.
- Goode, Reginald**, M.P.S. British. 2, Bellfield Avenue, Harrow Weald. Pharmacist-Optician. *Signed by* : J. Ross-Mansell, D. McRae Honeyman, J. Graymore.

- Gordon, Manfred**, M.Sc. (Lond.). British. 68, Hagley Road, Halesowen, nr. Birmingham. Research Chemist. *Signed by* : C. E. Kendall, E. M. Joiner, W. H. T. Davison.
- Griffin, Francis James**. British. 29, Bushey Park Gardens, Teddington. General Secretary, Society of Chemical Industry. *Signed by* : L. H. Lampitt, F. P. Dunn, Julian M. Leonard.
- ***Harvey, William Edward**, M.Sc. (N.Z.). British. 14, Halifax Avenue, Epsom, Auckland, S.E. 3. Lecturer in Chemistry, Auckland University College. *Signed by* : L. H. Briggs, R. A. Robinson, F. P. Worley.
- Heathcote, John Godfrey**, B.Sc.Hons. (Manc.), A.R.I.C. British. c/o Cereals Research Station, Old London Road, St. Albans. Biochemist. *Signed by* : D. H. Hey, R. E. Parker, P. C. Crofts.
- Herington, Ernest Frederick George**, B.Sc.Hons. and Ph.D. (Lond.), A.R.C.S., D.I.C., A.R.I.C. British. "Whitestones," Adecroft Way, East Molesey. Principal Scientific Officer, D.S.I.R. engaged in Physical-Chemical Research at the Chemical Research Laboratory. *Signed by* : R. P. Linstead, E. A. Coulson, J. Idris Jones.
- Herz, Minna Doris**, B.Sc.Hons. (Lond.). British. c/o Leonard Hill, Ltd., Information Service, 17, Stratford Place, W.1. Information Officer. *Signed by* : J. N. Ashley, H. Campbell, D. W. Mathieson.
- ***Jackson, Barry Sidney**. British. "Little Croft," Frog Lane, Lichfield. Student. *Signed by* : D. O. Jordan, B. D. Shaw, J. C. Roberts.
- Jackson, Edgar William**, M.Sc. (Lond.), A.R.I.C. British. 5, Kent Drive, Teddington. Research Chemist at Admiralty Research Laboratory, Teddington. *Signed by* : J. Idris Jones, F. H. Burstall, W. H. J. Vernon.
- Jilek, Jiri**, R.Nat.Dr. (Charles University, Prague), Czechoslovakian. Luzická 39, Praha XII, Czechoslovakia. Research Chemist in the Research and Control Institute of the United Pharmaceutical Works. *Signed by* : J. Heyrovsky, G. Fragner, M. Protiva.
- ***Jonason, Michael**. British. The Mill House, Stanwell Moor, near Staines. Student, Oxford University. *Signed by* : F. E. King, K. B. Everard, J. H. Wolfenden.
- Kerr, Albert Edison**, B.Sc.Hons. (Lond.), A.R.I.C. British. 27, Warwick Road, Earl's Court, S.W. 5. Assistant Government Chemist, Colonial Chemical Service, Trinidad, B.W.I. *Signed by* : R. G. Minor, W. Sabel, D. H. Burton.
- Kerr Muir, Ronald John**, M.A. and B.Sc. (Oxon). British. Lustre Fibres, Ltd., 350, Fifth Avenue, New York. Technical Representative, Messrs. Courtaulds, Ltd., New York. *Signed by* : J. H. Givens, D. Entwistle, R. M. Lodge.
- Koebner, Adolf**, B.Sc. (Edin.), D.Phil. (Oxon). British. c/o Lankro Chemical Co., Bentcliffe Works, Salters Lane, Eccles. Research Chemist. *Signed by* : A. Wolff, K. Tomlinson, E. Marshall Meade.
- ***Lampitt, John Leslie**. British. Thornlea, Mount Park, Harrow. Student, Oriel College, Oxford. *Signed by* : L. H. Lampitt, E. B. Hughes, F. R. Jones.
- Major, Kenneth Henry Benjamin**. British. 68, Ollerton Road, New Southgate, N.11. Assistant Works Chemist, Hornsey Gas Company, N. 8. *Signed by* : R. W. Jukes, C. K. Colwell, P. A. Lincoln.
- ***Manson, William**, B.Sc. (Glas.). British. 1, Kingscourt Avenue, Glasgow, S. 4. Assistant Demonstrator, Chemistry Dept., Royal Technical College, Glasgow. *Signed by* : E. Golombok, F. S. Spring, G. T. Newbold.
- ***Millard, John Franklin**, B.A. (Cantab.). British. 107, Hollin Hall Street, Oldham. Research Chemist. *Signed by* : A. J. B. Robertson, W. G. Palmer, C. Binns.
- Morley-Smith, Christopher Thomas**, B.Sc. (Lond.), F.R.I.C. British. "Green Shutters," Burnt House Lane, Whickham. Chief Chemist, The Newcastle-upon-Tyne Zinc Oxide Co., Ltd. *Signed by* : P. L. Robinson, G. R. Clemo, R. Raper.
- Mulvey, Joseph Enda**, M.Sc. (N.U.I.). Irish. "Tortree House," Mary Street, Waterford. Research Chemist (Food Industry). *Signed by* : T. G. Brady, P. T. Moore, T. S. Wheeler.
- Nowlam, Noel Vincent**, M.Sc. (N.U.I.), A.R.I.C. Irish. 50, Wellington Road, Ballsbridge, Dublin. Research Student. *Signed by* : T. S. Wheeler, A. G. G. Leonard, V. C. Barry.
- ***Oliver, John Douglas**. British. 54, North View, Westbury Park, Bristol 6. Student at Bristol University. *Signed by* : C. E. H. Bawn, W. Baker, T. Malkin.
- ***Perry, Michael John**. British. 12, Brook Road, Montpelier, Bristol 6. Student, Bristol University. *Signed by* : C. E. H. Bawn, T. Malkin, W. Baker.
- ***Phillips, Ian Rae**. British. 41, Castle Oval; Kendal. Student, Pembroke College, Oxford. *Signed by* : F. E. King, J. R. P. O'Brien, H. Irving.
- ***Powell, Eric Gwynne**. British. "Greystoke," Badminton Grove, Ebbw Vale. Student, Bristol University. *Signed by* : C. E. H. Bawn, T. Malkin, W. Baker.
- Rackham, Reginald Frank**, B.Sc. (Lond.). British. 1, Beechcroft Road, Bushey. Assistant Chemist, The Counties Public Health Laboratories, 66, Victoria Street, S.W. 1. *Signed by* : R. C. Hoather, G. Miles, A. H. Fuller.
- Rennie, Peter John**, B.Sc. (Lond.), A.R.C.S. British. c/o School of Forestry, Oxford. Technical Secretary, Emergency Economic Committee for Europe. *Signed by* : A. G. Pollard, H. V. A. Briscoe, A. A. Eldridge.
- ***Royal, Joseph Henry Lindsey**. British. 11, Parliament Street, Chippenham. Student. *Signed by* : D. H. Hey, E. R. H. Jones, L. N. Owen.
- ***Smith, Benjamin Thomas**. British. 1, Barr Hill Avenue, Pendleton, Salford 6. Student, Manchester University. *Signed by* : E. L. Hirst, A. E. Gillam, M. Polanyi.

- ***Stewart, Vera Pearl**, M.Sc.(Q.U.B.), A.R.I.C. British. Carsonstown, Saintfield, Co. Down. Assistant Lecturer, Chemistry Dept., Queens University, Belfast. *Signed by* : A. R. Ubbelohde, H. Graham, R. C. Pink, Tom C. Shaw.
- Sykes, Peter Willerton**, B.A.Hons.(Oxon). British. 26, Goodwood Avenue, Hutton, Brentwood. Research Chemist. *Signed by* : D. L. Chapman, L. M. Miall, H. Raistrick.
- ***Valentine, Leslie Mackenzie**, B.Sc.(Aberd.). British. 1, Jackson Street, Inverurie. Research Student. *Signed by* : J. D. Burnett, Geo. L. Buchanan, R. H. Thomson.
- Wahl, Henri**, D.és.S. French. 14, Bis Boulevard Cotte, Enghien, S et O, France. Chef de Travaux au Conservatoire des Arts et Metiers. *Signed by* : C. N. Hinshelwood, W. Wardlaw, J. L. Simonsen.
- Zenitman, Henryk**, Dipl.Ing.(Technical University, Warsaw). Polish. 21, Ardrossan Road, Saltcoats. Research Chemist, I.C.I. Explosives, Stevenston. *Signed by* : A. McLean, J. Taylor, F. D. Miles.

UNDER SPECIAL PROVISION APPERTAINING TO CANDIDATES RESIDENT ABROAD.

- Fodor, Gabor**, Ph.D. (Szeged). Hungarian. Institute of Organic Chemistry, University of Szeged, Dóm-tér, Hungary. Associate Professor of Organic Chemistry. *Signed by* : G. R. Clemo, R. Raper.
- Gupta, Jagram**, M.Sc. and LL.B. (Agra). Indian. Agra College, Agra, U.P., India. Lecturer in Chemistry. *Signed by* : S. S. Deshapande.
- Kaye, Irving Allan**, B.A. and M.Sc. (New York), Ph.D. (Michigan). American. 455, Ocean Avenue, Brooklyn 26, New York. Chemistry Instructor, Brooklyn College, New York. *Signed by* : N. Weiner.
- Lloyd, Stewart Joseph**, A.B. (Toronto), M.A. (McGill), Ph.D. (Chicago). American. University P.O., Alabama, Professor of Chemistry. *Signed by* : F. D. Snell, R. L. Evans.
- Miro, Antonio Rius y**. Spaniard. Ibiza 5, Madrid, Spain. Professor of Industrial Chemistry, Madrid University. *Signed by* : M. Lora, J. Pascual.
- Notevarp, Olav**, Graduate of the Technical University of Norway, Division of Chemistry. Norwegian. Statens Fiskeriforsokstasjon, Postbox 494, Bergen. Director of the Norwegian Fisheries Research Station. *Signed by* : Torbjorn Gaarder.
- Perti, Onkar Nath**, M.Sc. and D.Phil. (Allahabad). Indian. Department of Chemistry, Saugor University, Saugor, C.P. Senior Lecturer in Chemistry. *Signed by* : B. K. Singh.
- ***Taylor, William Irving**, M.Sc. (N.Z.). British. Pakuranga Road, Panmure, Auckland, S.E. 6. Duffus Lubecki Research Scholar, Auckland University College. *Signed by* : L. H. Briggs.
- Toole, Francis James**, M.Sc. and Ph.D. (McGill). Canadian. 824, George Street, Fredericton, New Brunswick. Professor of Chemistry (Head of Department), Dean of Arts and Science, University of New Brunswick, Fredericton. *Signed by* : W. Wardlaw, F. P. Dunn.
- Szpilfogel, Stefan Antoni**, Dr.ing.chem. (Zurich). Polish. Heinsiuslaan 4, Amersfoort. Chemist at Polak's Frutal Works, N.V., Amersfoort. *Signed by* : V. Prelog.

* Reduced annual subscription.

PAPERS RECEIVED

List of papers received between April 12th, 1947, and May 5th, 1947. (This list does not include the titles of papers which have been read at a Scientific Meeting or which have appeared in the *Journal*.)

- "A synthesis of leptospermone." By L. H. BRIGGS, C. H. HASSALL, and W. I. TAYLOR.
- "A reaction of certain diazo-sulphonates derived from β -naphthol-1-sulphonic acid. Part XXIII. Phthalazine derivatives from 4'-nitro-2' : 5'-dimethoxybenzene-2-naphthol-1-diazosulphonate." By (the late) F. M. ROWE, R. L. DESAI, and A. T. PETERS.
- "Halogenation of *m*-5- and *m*-2-xyleneols. Preparation and structure of certain polyhalogeno-*m*-5- and -*m*-2-xyleneols." By C. H. R. ELSTON and A. T. PETERS.
- "Reactions of unsaturated compounds. Part V. The action of organic peracids on β -diisobutylene." By A. BYERS and W. J. HICKINBOTTOM.
- "The preparation of symmetrical dinitrodiphenyls by the Ullmann reaction." By W. DAVEY and R. W. LATTER.
- "The mechanisms of contact catalytic reactions." By J. G. M. BREMNER.
- "Curare alkaloids. Part VII. Constitution of *d*-tubocurarine chloride." By H. KING.
- "A study of the properties of fluorine-substituted 5-aminoacridines and related compounds. Part III. Some 5-amino-1 : 2 : 2' : 3'-pyridoacridines." By J. H. WILKINSON and I. L. FINAR.

- "A note on the preparation of *o*-nitroacetophenone." By K. SCHOFIELD and T. SWAIN.
- "The chemistry of simple heterocyclic systems. Part I. Reactions of 6- and 7-nitro-4-hydroxyquinazoline and their derivatives." By J. S. MORLEY and J. C. E. SIMPSON.
- "Derivatives of arsacridine." Part I. By C. L. HEWETT, L. J. LERMIT, H. T. OPENSHAW, A. R. TODD, A. H. WILLIAMS, and F. N. WOODWARD.
- "Derivatives of arsacridine. Part II." By R. E. DAVIES, H. T. OPENSHAW, F. S. SPRING, R. H. STANLEY, and A. R. TODD.
- "4- β -Chloroethylthiophenyldichloroarsine." By H. T. OPENSHAW and A. R. TODD.
- "Interaction between non-bonded atoms and the structure of *cis*-decalin." By D. H. R. BARTON.
- "Esters of 1-hydroxy-2-naphthoic acid and naphthol-blue dyes thereof." By M. PIANKA and H. C. BARANY.
- "An X-ray study of glaserite." By G. L. MILES.
- "A new synthesis of *dl*-threonine." By J. ATTENBURROW, D. F. ELLIOTT, and G. F. PENNY.
- "Factors influencing the strengths of bonds." By A. D. WALSH.
- "The structure of certain polysulphides and sulphonylsulphides (polythionates). Part I. A preliminary X-ray survey." By I. M. DAWSON, A. McL. MATHIESON, and J. MONTEATH ROBERTSON.
- "The mechanism of oxidation of mono-ethenoid fatty acids and esters. The course of thermal catalytic oxidation of methyl oleate." By J. H. SKELLON.
- "The decomposition reactions of the aromatic diazo-compounds in aqueous solution explained on simple electronic theory, and without recourse to the current free-radical hypothesis." By H. H. HODGSON.
- "Cinnolines. Part XVI. 4-Hydroxy-3-methylcinnolines." By J. R. KENEFORD and J. C. E. SIMPSON.
- "Cinnolines. Part XVII. A simple method for the preparation of 4-aminocinnolines." By J. R. KENEFORD, K. SCHOFIELD, and J. C. E. SIMPSON.
- "Excited states of benzene. Part I. Introductory consideration of some spectral properties of vibrations accompanying electronic transitions of benzene and deuterated benzenes." By FRANCESCA M. GARFORTH, C. K. INGOLD, and H. G. POOLE.
- "Excited states of benzene. Part II. Analysis of the first ultra-violet band system of the absorption spectrum of benzene." By FRANCESCA M. GARFORTH and C. K. INGOLD.
- "Excited states of benzene. Part III. Analysis of the first ultra-violet band system of the fluorescence spectrum of benzene." By FRANCESCA M. GARFORTH and C. K. INGOLD.
- "Excited states of benzene. Part IV. Analysis of the first ultra-violet band system of the absorption spectrum of hexadeuterobenzene." By FRANCESCA M. GARFORTH and C. K. INGOLD.
- "Excited states of benzene. Part V. Analysis of the first ultra-violet band system of the fluorescence spectrum of hexadeuterobenzene." By FRANCESCA M. GARFORTH and C. K. INGOLD.
- "Excited states of benzene. Part VI. Description and analysis of the first ultra-violet band system of the absorption spectrum of 1:3:5-trideuterobenzene." By FRANCESCA M. GARFORTH, C. K. INGOLD, and H. G. POOLE.
- "Excited states of benzene. Part VII. Description and analysis of the first ultra-violet band system of the fluorescence spectrum of 1:3:9-trideuterobenzene." By A. P. BEST, C. K. INGOLD, and C. L. WILSON.
- "Excited states of benzene. Part VIII. Description and analysis of the first ultra-violet band system of the absorption spectrum of 1:4-dideuterobenzene." By FRANCESCA M. GARFORTH, C. K. INGOLD, and H. G. POOLE.
- "Excited states of benzene. Part IX. Description and analysis of the first ultra-violet band system of the absorption spectrum of 1:2:4:5-tetradideuterobenzene." By FRANCESCA M. GARFORTH, C. K. INGOLD, and H. G. POOLE.
- "Excited states of benzene. Part X. Analysis of the first ultra-violet band system of the absorption spectrum of monodeuterobenzene." By FRANCESCA M. GARFORTH and C. K. INGOLD.

- “Excited states of benzene. Part XI. Comparisons between the first ultra-violet absorption and fluorescence band systems of isotopically isomeric benzenes, and further determinations of the vibration frequencies of the upper electronic state.” By FRANCESCA M. GARFORTH, C. K. INGOLD, and H. G. POOLE.
- “Excited states of benzene. Part XII. The effect of an electronic excitation on the geometry, elastic properties and zero-point energy of the benzene molecule, and the effect of isotopic substitution on the electronic transition energy.” By FRANCESCA M. GARFORTH, C. K. INGOLD, and H. G. POOLE.
- “The action of hydrogen chloride on isoprene.” By A. J. ULTÉE.
- “A contribution to the chemistry of the inner complex salts of dimethylglyoxime.” By F. FEIGL and H. A. SUTER.
- “The interaction of tetra-arylglycols and pyridinium salts.” By A. SCHÖNBERG and A. MUSTAFA.
- “Synthesis of alloxazine from 2-aminoquinoxaline-3-carboxamide.” By A. H. GOWENLOCK, G. T. NEWBOLD, and F. S. SPRING.
- “The oxidation of 2-hydroxyquinoxaline and its derivatives with hydrogen peroxide.” By G. T. NEWBOLD and F. S. SPRING.
- “Application of the Hofmann reaction to the synthesis of heterocyclic compounds. Part V. The synthesis of 9-*d*-mannopyranosidoxanthine and of 9-*d*-ribopyranosidoxanthine.” By R. A. BAXTER, A. C. MCLEAN, and F. S. SPRING.
- “The condensation of isatin and of 1-methylisatin with barbituric acid.” By F. E. KING, T. J. KING, and G. B. THOMPSON.
- “The associating effect of the hydrogen atom. Part XIII. The N-H-O bond. Esters of carbamic acid.” By (MRS.) M. BARKER, L. HUNTER, and N. G. REYNOLDS.
- “Synthesis of hexoestrol and of some derivatives of $\gamma\delta$ -diphenylhexane.” By G. FODOR and J. WEIN.

PROCEEDINGS
OF THE
CHEMICAL SOCIETY

Minutes of a
SCIENTIFIC MEETING

held at Burlington House, Piccadilly, W. 1, on Thursday, June 5th, 1947, at 7.30 p.m.

THE PRESIDENT, Professor C. N. Hinshelwood, M.A., Sc.D., F.R.S., was in the Chair.

MINUTES.

The Minutes of the Scientific Meeting held on Thursday, May 1st, 1947, were read and were confirmed and signed.

SIR FREDERICK GOWLAND HOPKINS.

The Meeting stood whilst the President read the following resolution :

“ The Council has received with profound regret the news of the death of Sir Frederick Gowland Hopkins, a distinguished Honorary Fellow of the Society.

Sir Frederick was first elected a Fellow of the Society in 1906 and from 1921 to 1924 served as a Vice-President. In 1933 he was elected an Honorary Fellow of the Society in recognition of his outstanding contribution to the advancement of scientific knowledge as the father of Biochemistry.

The Council wishes to express their deepest sympathy with Lady Gowland Hopkins and family in their bereavement.”

FORMAL ADMISSION OF FELLOWS.

The following were admitted Fellows of the Society :

Jarl M. Gripenberg, A. Nechvatal, Martin J. Cranley, A. J. B. Edgar, A. G. Long, A. S. Howship, H. N. B. Palmer, M. U. S. Sultanbawa, R. D. Riegelhuth, E. L. P. Mercy, A. McCoubrey, Ng. Ph. Buu-Hoï.

SCIENTIFIC COMMUNICATIONS.

The following papers were read and discussed :

“ Substitution-reactions of Triphenylethylene and Related Compounds: a contribution to the problem of Synthetic Analogues of Progesterone.” By R. Royer and Ng. Ph. Buu-Hoï.

“ Some Trinuclear Cyanine Dyes. Part I. The Synthesis of Neocyanines.” By (Miss) F. M. Hamer, R. J. Rathbone, and (Miss) B. S. Winton.

OFFICIAL ANNOUNCEMENTS

DEATHS.

The Council regret to announce the deaths of the following Fellows :

	Elected.	Died.
Francis Edwin Needs (Bristol)	May 5th, 1910.	Oct. 21st, 1946.
Percy Parrish (S.E. 3)	Dec. 18th, 1941.	May 30th, 1946.

CONGRATULATIONS.

Congratulations have been conveyed to the following Fellows who have completed 50 years of Fellowship :

	Elected.
Frederick Roscoe Grundey (Douglas, Isle of Man).....	June 17th, 1897.
Harold Wallis Harman (S.E.1)	June 17th, 1897.
John Edwin Mackenzie (Edinburgh)	June 17th, 1897.
James Porter Shenton (Manchester)	June 17th, 1897.

ENDOWED LECTURES FOR THE SESSION 1947—1948.

Invitations to deliver Endowed Lectures during the 1947—1948 Session have been accepted as follows :

<i>Hugo Müller Lecture.</i>	Professor E. L. Hirst, M.A., Ph.D., D.Sc., F.R.S.
<i>Peñler Lecture.</i>	Sir Ian Heilbron, D.S.O., D.Sc., LL.D., F.R.S.
<i>Tilden Lectures.</i>	Professor E. G. Cox, D.Sc. ; E. R. H. Jones, D.Sc., F.R.I.C.

COMMITTEES, 1947—1948.

The Council have conveyed their thanks to the retiring members of Committees for the services they have rendered to the Society.

The following have been appointed for 1947—1948 :

Finance and General Purposes Committee.

Sir Wallace Akers, H. J. Channon, J. W. Cook, C. J. T. Cronshaw, Sir Ian Heilbron, R. P. Linstead, W. H. Mills, F. Roffey, D. T. A. Townend, together with the Officers, the Chairman of the Publication Committee and the representative of the Joint Library Committee on the Council of the Chemical Society. The President as Chairman, Treasurer as Vice-Chairman, and the General Secretary as Secretary.

Publication Committee.

C. N. Hinshelwood, as Chairman, N. K. Adam, M. P. Applebey, W. Baker, G. M. Bennett, E. G. Cox, H. J. Emeléus, M. G. Evans, C. S. Gibson, D. L. Hammick, C. K. Ingold, D. J. G. Ives, E. R. H. Jones, F. E. King, G. A. R. Kon, R. P. Linstead, H. W. Melville, R. G. W. Norrish, S. G. P. Plant, M. Polanyi, H. Raistrick, E. K. Rideal, F. L. Rose, B. C. Saunders, D. W. G. Style, S. Sugden, H. W. Thompson, A. R. Todd, F. G. Young, together with the Officers, and the Editor as Secretary.

Research Fund Committee.

N. K. Adam, A. J. Allmand, J. E. Coates, M. G. Evans, J. M. Gulland, R. D. Haworth, C. K. Ingold, J. Read, A. R. Todd, together with the Officers. The President as Chairman, and the General Secretary as Secretary.

RESEARCH FUND GRANTS.

The following Research Fund grants have been awarded.

	£	s.	d.
<i>Cambridge, Physical Chemical Laboratory.</i>			
A. D. Walsh, " Spectroscopic investigations in the vacuum ultra violet "	30	0	0
<i>Leeds, Biochemical Laboratory, School of Medicine.</i>			
B. A. Kilby, " Synthesis of tryptophane and related compounds incorporating radioactive atoms "	15	0	0
<i>London, Imperial College.</i>			
J.O'M. Bockris, " The effect of the solvent on oxygen over-potential "	25	0	0
<i>London, Queen Mary College.</i>			
N. Lindop, " An investigation of the specific heats of a number of refractory elements "	15	0	0

ELECTION OF NEW FELLOWS.

The following 93 candidates were elected Fellows of the Society on June 5th, 1947 :

Thomas Victor Arden.	Roy Arthur Jeffreys.
Alfred Egbert William Bailey.	Frederick Peter Jenkins.
Kresimir Balenovic.	David Syndham Jones.
William Randall Bamford.	Philip Owen Kane.
William George Bartley.	John Kearns.
Ian Ralph Connelly Bick.	Raymond Kerridge.
John Murray Blakeway.	Hira Lal.
John Lawson Bolland.	Colin Henry Lea.
John Bourne.	Alan Sidney Lindsey.
Gerald Victor Carrette.	Anthony Douglas Lott.
James Frederick Chandler.	Stewart Ferguson MacDonald.
Frank Calton Cooper.	Donald Major.
John Warcup Cornforth.	Ram Charan Mehrotra.
Colin Brock Cowan.	Brian Walter Mitchell.
John Desmond Cox.	William Owen Murch.
John Cymerman.	Alexander John Robertson Murray.
Margaret Lorimer Donaldson.	Isvaran Nambissan.
Frank Drabble.	Donald Laurence Nicol.
Kevin Eccleston.	Cyril Henry Owen.
Claude Raymond Edwards.	Jeanne Margaret Palin.
Norman Evans.	Jamna Ballabh Pande.
Eva Doris Eustice.	Harry Lionel Parker.
John Atton Fendley.	Ernest Henry Polak.
John Leslie Foster.	Erick Hugh Pritchard.
Gerald Wilfred Albert Fowles.	William Ronald Rees.
Dennis Alfred Freestone.	Donald Baker Wellington Robinson.
John Charles Gage.	Jorge Rosenkranz.
Morris Gordon.	Ramon Rovira.
Matthew Gould.	Dora Louise Samuel.
John Owen Grice.	Felix Sebba.
Louis Haddock.	Samares Ranjan Sengupta.
George Edward Hallybone.	Linden Ewart Shipley.
Ronald Arthur Hancock.	John Charles Stalley.
John William Hassler.	David Gilbert Thomas.
Bernard William Varney Hawes.	Norman Leslie Thomas.
Winifred June Hawkes.	Raymond Thompson.
Owen Fillbridge Haylock.	William Webster.
Harold Hebden.	Dennis Edward Weimer.
Sydney Hill.	Norman Whittaker.
Michael Frederick Hoare.	Roy Whittaker.
George Tennant Hodgkinson.	Merlyn Herbert Wilcox.
Frank Clifford Halsey Holdsworth.	Garth Williams.
Stanley George Howden-Simpson.	Griffith Oswald Richard Williams.
Stanley Ralph Howland.	Philip Leonard Williams.
Frederick Otho Isaac.	Leslie Wilson.
Stanley Jackson.	John Thomas Young.
John Aylward James.	

MEETING OF COUNCIL.

A meeting of Council was held on Thursday, June 5th, 1947.

Reports of the meeting of the Publication Committee held on June 5th, 1947, and of the Centenary Executive Committee held on May 1st, 1947, were adopted.

The thanks of Council were conveyed to Mr. A. J. Faulks and Miss P. Turner Jones for gifts of the Society's publications.

Council was advised that the Chemical Council had agreed to grant the sum of £900 8s. 6d. to balance the maintenance costs of the Library of the Society in respect of the financial year ending December 31st, 1946. Details of the Chemical Council's proposals for the division of Library maintenance costs payable in 1947 were also received.

A report from the Joint Library Committee which met on May 28th, 1947, was received.

The Council discussed in some detail the financial position of the Society in the face of the very greatly increased costs of the printing, publication, and administrative services

and some proposals as to the manner in which these increased costs should be met were adopted. These proposals have been submitted to the Chemical Council for consideration and details of the proposals will be published in due course.

The Council were advised that no notice of resignation having been given by any constituent body within the specified period the existing agreement for the continuation of the Chemical Council, which was due to expire on June 30th, 1947, will be continued automatically for a further period of three years.

Certain formal and financial items of business were also transacted.

BRITISH STANDARDS INSTITUTION.

The following draft British Standards specifications have been received for technical comment :

- (i) BS572 : 1934. Interchangeable conical ground glass joints third draft revision.
- (ii) CJ(CHE) 758. Third draft specification for stannous sulphate (used for electro-litic tinplating).

The above specifications have been placed in the Library and Fellows wishing to make technical comments are requested to do so before August 19th, 1947, in the case of (i) and September 17th, 1947, in the case of (ii), to the British Standards Institution, 28, Victoria Street, London, S.W.1.

SUPPLY OF LABORATORY CHEMICALS.

Cases of difficulty in obtaining supplies of laboratory chemicals have been brought to the notice of the Chemical Council, who have discussed the question with officials of the Board of Trade. Some of the delays are admittedly due to transport difficulties and shortage of containers, aggravated by the fact that users often do not return bottles, etc., promptly. The Chemical Council has been assured that the Board of Trade will be ready to take up any questions of genuine shortage which are reported to them with full particulars. Communications should be addressed to :

R.M.2T, Board of Trade,
Raw Materials Dept.,
Horseferry House,
Horseferry Road,
London, S.W.1.

MEETINGS OUTSIDE LONDON

EXETER.

“Clay,” by Dr. G. Nagelschmidt.

A highly successful joint meeting with the British Rheologists' Club was held in the Washington Singer Laboratories on Friday, May 16th, 1947, being attended by about thirty visitors and some fifty students and chemists from Exeter and district.

Dr. Nagelschmidt gave an outline of modern views on the structure of clays and of the techniques used in investigating them, and showed how wide was the field of interests to which research on clay is useful. He was followed by Dr. D. M. C. MacEwan who described some new work on the X-ray patterns of clays containing various organic absorbates, and drew some interesting conclusions as to the way in which the organic molecules were oriented between the sheets of the clay.

After the tea interval, Mr. H. Macey spoke on the rheology of clay and dealt with both the theoretical and the practical aspects of the manufacture of pottery and refractories.

On the Saturday, the party visited the china clay workings at Hendra and the laboratories of Lovering Pochin & Co. at St. Austell.

NEWCASTLE and DURHAM.

A meeting was held at King's College, Newcastle-on-Tyne, May 1st, 1947, at which the following original papers were read and discussed :

"The Chemistry of 1-Azanthraquinone," by Professor G. R. Clemo, F.R.S., and Mr. N. Legg.

"Developments in High Efficiency Fractionation," by Mr. O. G. Dixon.

"On the Nature of Hydrogen Electrodes," by Dr. J. Weiss and Mr. G. Stein.

"The Synthesis of Derivatives of 4- and 5-Azaindole," by Professor G. R. Clemo and Dr. G. A. Swan.

On invitation by the Bedson Club, Fellows of the Society also attended the Bedson Lecture at King's College on May 9th, 1947, which was delivered by Professor E. L. Hirst, F.R.S., on "The Chemistry of some Plant Gums and Mucilages."

SHEFFIELD.

"Some Relationship between the Structure and Properties of Natural and Synthetic Fibres," by Professor J. B. Speakman, D.Sc.

A joint meeting with the University Chemical Society was held in the General Lecture Theatre of the University on May 15th, 1947, at 5.30 p.m. with Professor R. D. Haworth, F.R.S., in the Chair.

Professor Speakman dealt with natural cellulose, rayon, alginic acid, wool, silk, and nylon. Such varied topics as creasing, shrinkage, and moth-proofing were considered in a manner which the audience clearly found to be both informative and entertaining.

A vote of thanks proposed by Mr. B. G. Skinner and seconded by Mr. H. D. Turner was accorded heartily by the meeting.

SOUTHAMPTON.

"Electron Diffraction," by Professor G. I. Finch, D.Sc., F.R.S.

A joint meeting with the Portsmouth and District Chemical Society and the Chemical Society of University College, Southampton, was held at Portsmouth Municipal College on June 6th, 1947, with Mr. G. N. S. Farrand in the Chair.

After a preliminary discussion of the technique of the electron diffraction camera, its construction and use, Professor Finch gave a brilliant account of various phenomena observed, particularly in the study of surface structure, including evidence for the essentially non-crystalline nature of the Beilby layer on certain polished surfaces and for the recrystallisation which occurs on others. The lecture was illustrated by numerous excellent slides.

A vote of thanks, proposed by Dr. K. R. Webb, Local Representative, was carried with acclamation by the large audience.

LIST OF APPLICATIONS FOR FELLOWSHIP

(Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries within ten days of the date of publication of the Journal for June, 1947. Such objections will be treated as confidential. The forms of application are displayed in the Library.)

***Audy, Genevieve Marie-Caroline Andree Alice**, B.Sc. (Lond.). French. 39, Frederick Street, W.C. 1. Biochemistry research at University College, London. *Signed by* : F. G. Young, S. P. Datta, P. N. Campbell.

Aylward, Francis, B.Sc. and Ph.D. (L'pool), F.R.I.C. British. c/o The Borough Polytechnic, S.E. 1. Head of a Department. *Signed by* : E. C. Pickering, Peter G. Gugenheim, Thomas McLachlan.

Barak, Montefiore, M.Sc. (N.Z.), D.Phil. (Oxon). British. Chloride Electrical Storage Co., Ltd., Clifton Junction, Manchester. Chief Chemist. *Signed by* : C. N. Hinshelwood, F. M. Brewer, J. H. Wolfenden.

- Barlow, Fred**, B.Sc.Hons. (Lond.). British. Medical Laboratories, P.O. Box 41, Kampala, Uganda. Chemist, Colonial Insecticide Research Unit. *Signed by* : C. K. Ingold, Henry Terrey, C. A. Bunton.
- Baum, Gustav**, Dr.techn.Sc. and Dipl.Eng. (Vienna). British. 2, Nutley Close, 44, Fitzjohns Avenue, N.W. 3. Head of the Technical Department, Messrs. F. W. Berk & Co., Ltd., W.C. 1. *Signed by* : Arthur W. Kay, J. R. Boorer, L. N. Tyrrell.
- Beaton, Elsie Mabel**, M.Sc. (Leeds). British. 8, York Road, Maidenhead. Senior Chemistry Teacher, Maidenhead County Boys School. *Signed by* : Wm. Wardlaw, D. J. G. Ives, R. W. Pittman, W. Rigby.
- Blaauw, August Frederik Hendrik**, Lt.-Col., O.B.E., Chem.Eng. (Delft). Dutch. A 775 Royal Netherlands Army, Unilever Liaison Mess, 609 H.Q., C.C.G., Hamburg, B.A.O.R. Director of Unilever interests in Germany. *Signed by* : F. Montague Dyke, L. V. Cocks, P. N. Williams.
- Braidwood, James Patrick**, B.Sc. (Glas.). British. 61, Craigview Avenue, Johnstone. Chemistry and Physics Teacher, St. Columba's School, Callander Street, Glasgow. *Signed by* : A. R. Chambers, A. Mackie, James D. Loudon.
- ***Charlton, Philip Thomas**, B.Sc. and Ph.D. (Leeds), A.R.I.C. British. 2, Caledon Road, Sherwood, Nottingham. Research Chemist, Boots Pure Drug Co., Ltd., Nottingham. *Signed by* : S. K. Hutchinson, W. Wilson, T. I. Watkins.
- ***Clifton, Peter Vincent**. British. St. John's College, Oxford. Chemistry Student. *Signed by* : F. E. King, H. W. Thompson, E. J. Bowen, C. N. Hinshelwood.
- Cooper, Norman Calvert**, M.Sc. (Q.U.B.). British. Vismourne, Monbrief, Lurgan, Belfast. Chemist. *Signed by* : J. M. Wilson, Chas. A. McDowell, J. A. Stock.
- Curnow, David Henry**, B.Sc.Hons. (Western Australia). British. Courtauld Institute of Biochemistry, Middlesex Hospital, W. 1. Biochemist. *Signed by* : Wilfrid Lawson, A. E. Wilder Smith, Frank Dickens.
- Dasgupta, Jagadish Chandra**, B.Sc.Hons. (Calcutta). British. 1, Anthony Bagan Lane, P.O. Amherst Street, Calcutta IX. Chemist and Superintendent, The Calcutta Chemical Co., Ltd., 35, Panditia Road, Calcutta. *Signed by* : J. N. Rakshit, B. Maitra, J. C. Bardhan.
- Deschamps, Jean Maurice Roger**, Licencié-es-Sciences physiques (Paris). French. 3, Elvaston Place, S.W. 7. Ingénieur chimiste en Laboratoire Central des Services Chimiques de l'Etat, 12, Quai Henri IV, Paris IV. *Signed by* : C. A. Bunton, C. K. Ingold, Allan Maccoll.
- ***Drain, David John**, B.A.Hons. (Cantab.). British. 12, Spencer Road, Isleworth. Research Chemist, Boots Pure Drug Co. *Signed by* : W. Wilson, C. I. Brodrick, T. I. Watkins.
- ***Edwards, Alan Charles**. British. 46, Bembridge Crescent, Southsea. Assistant Experimental Officer, Chemical Research, Admiralty. *Signed by* : G. N. S. Farrand, F. M. Valentine Flint, C. G. Lyons.
- Ellison, Leonard**, B.Sc.Hons. (Durham), A.R.I.C. British. 4, Empress Avenue, South Chingford, E. 4. Lecturer in Chemistry, Woolwich Polytechnic. *Signed by* : G. H. Jeffery, Arthur I. Vogel, D. M. Cowan.
- ***Emery, Anthony Roland**, B.Sc.Hons. (Lond.), A.R.I.C. British. 37, Lee Road, Blackheath, S.E. 3. Research Student in Chemistry at King's College. *Signed by* : D. H. Hey, Gwyn Williams, S. H. Harper.
- ***Essex, Claude Douglas**. British. 57, Bridge Way, Whitton, Twickenham. Analytical and Biochemical Chemist. *Signed by* : G. Pam, B. Sturgeon, J. Saper.
- Fantes, Karl Heinz**, B.Sc.Hons. (Birm.). British. 18, Belmont Road, Bushey. Research Chemist, Glaxo Laboratories, Greenford. *Signed by* : E. Lester Smith, L. F. J. Parker, J. G. Waller.
- Farmer, Cecil Redvers Cheyney**, B.Sc. (Lond.), A.R.C.S., D.I.C., A.R.I.C. British. Merford, Highfields Road, Witham. Chemist and Works Manager. *Signed by* : H. J. T. Ellingham, Alex. Findlay, R. Leslie Collett.
- Fath Allah, Ahmad Hilmy**, B.Sc.Hons. (Fouad I Univ.). Egyptian. 157, Queen's Drive, Finsbury Park, N. 4. Research Student at Queen Mary College. *Signed by* : J. R. Partington, James F. Williams, A. L. Whynes.
- Flood, Donal Thomas**, M.Sc. (N.U.I.), F.R.I.C. Irish. Institute for Industrial Research and Standards, 45, St. Stephens Green, Dublin. Research Director. *Signed by* : T. S. Wheeler, A. G. G. Leonard, V. C. Barry.
- ***Gallagher, James Joseph**, B.Sc.Hons. (Glas.). Scottish. 24, Clive Street, Shotts. Research Student. *Signed by* : Wilfred Sweeny, Ezra Golombok, Alex C. Maclean.
- ***Gellner, Otto Heinz**, B.Sc.Hons. (Manc.). Czechoslovak. University Union, Burlington Street, Manchester, 15. Undergraduate, Manchester University. *Signed by* : J. M. Blakeway, H. D. Springall, J. B. M. Herbert.
- ***Golding, Ivor Lawrence Sidney**. British. 58, Vegal Crescent, Englefield Green, Egham. Assistant Research Chemist, Delanium Ltd., 140, Battersea Park Road, S.W. 11. *Signed by* : W. D. Parker, R. H. Smith, D. A. B. Llewelyn.
- Goodyear, Frank Haigh**. British. 8, Rylands Avenue, Gilstead, Bingley. Student, London University (External). *Signed by* : Sydney Pickles, Geoffrey Skirrow, D. W. Riley.
- Hales, Walter Leslie**. British. Boothby Road, Navenby, Lincoln. Student, University College, Nottingham. *Signed by* : John C. Roberts, Ronald H. Smith, C. C. Addison.
- Halsbury, Rt. Hon. The Earl of**, B.Sc.Hons. (Lond.). British. The Decca Record Co., 1—3 Brixton Road, S.W. 9. Principal, Research Laboratories. *Signed by* : H. K. Dean, K. A. Williams, George W. Ferguson.

- Hearne, James Frederick**, F.R.I.C. British. c/o Scientific Advisers Division, Ministry of Food, Portman Court, Portman Square, W. 1. Technical Officer. *Signed by* : R. Leslie Collett, Raymond Wadsworth, L. H. G. Barton.
- Hobday, Gordan Ivan**, B.Sc. and Ph.D. (Lond.). British. Brook House, Lowdham, Notts. Research Chemist. *Signed by* : M. W. Partridge, Joseph Marshall, W. Frank Short.
- Horrex, Charles**, M.Sc. and Ph.D. (Manc.). British. Lyme House, 141, Marsland Road, Brooklands, Manchester. Lecturer in Chemistry, Sheffield University. *Signed by* : Alex. H. Lamberton, E. Gertrude Turner, T. S. Stevens.
- Howe, Dennis John Thomas**, B.Sc. (Lond.), A.R.I.C. British. Ivanhoe, Hadley Ridge, Barnet. Chemist. *Signed by* : E. G. V. Barrett, R. Leslie Collett, H. J. T. Ellingham.
- ***Huck, Norman David**. British. 59, Corby Avenue, Swindon. Honours Chemistry Student, Bristol University. *Signed by* : W. E. Garner, G. E. Coates, W. Baker.
- ***Hutchison, Henry Peter**. British. Corpus Christi College, Oxford. Student. *Signed by* : F. E. King, Harry Irving, D. Ll. Hammick.
- ***Kaminsky, Simon**, B.Sc. (Lond.), A.R.C.S. British. 17, Pegwell House, Pembury Road, E. 5. Post-graduate Research Student. *Signed by* : A. A. Eldridge, J. O'Mara-Bockris, J. F. Herringshaw.
- ***Kilner, Alistair Edward Hinchliffe**. British. Murmur-y-Don, Aberdovey. Student. *Signed by* : J. C. Smith, G. B. Pickering, Harry Irving.
- Koppel, John Patrick**, B.A. (Oxon). British. c/o Courtaulds Ltd., 16, St. Martins-le-Grand, E.C. 1. Representative of Courtaulds Ltd. *Signed by* : D. Entwistle, H. J. Hegan, R. M. Lodge, Ernest E. Tallis.
- ***Lawrence, Anthony Henry**. British. Kharis, Venn Way, Hartley, Plymouth. Student, Cambridge University. *Signed by* : James Baddiley, A. D. Walsh, B. Lythgoe.
- ***Luscombe, Mollie**, B.Sc. (Lond.). British. 44, Lanhydrock Road, St. Judes, Plymouth. Research Assistant. *Signed by* : Jeffrey Lee, Robert Heyworth, Eric R. Braithwaite.
- ***McIntyre, John**, B.Sc.Hons. (Glas.), A.R.I.C. British. c/o Knight, 163, Blake Road, West Bridgford, Nottingham. Research Chemist with Boots Pure Drug Co., Ltd. *Signed by* : D. A. Peak, W. Howieson, C. I. Brodrick.
- Mehta, Arvind Mangaldas**, M.Sc. (Bombay). Indian. 10, Abbey Road, Oxford. Research Student, Dyson Perrins Laboratory, Oxford. *Signed by* : F. E. King, R. Robinson, R. M. Acheson.
- ***Melville, Jack Learmonth**. British. Department of the Government Chemist, The Laboratory, 4, Prince's Dock, Glasgow, S.W. 1. Laboratory Assistant. *Signed by* : D. A. Crighton, W. M. Cumming, A. R. Jamieson.
- Morris, Edgar Archibald**, M.Sc. (Lond.), F.R.I.C. British. 8, Clarence Drive, Hyndland, Glasgow, W. 2. Divisional Chemist (Scotland), L.M.S. Railway. *Signed by* : A. R. Jamieson, R. Leslie Collett, H. J. T. Ellingham.
- Muil Leitch, James**, B.Sc. (Glas.), A.R.I.C. British. 16, Polwarth Gardens, Glasgow, W. 2. Lecturer in Bakery Technology, The Royal Technical College, Glasgow, C. 1. *Signed by* : W. M. Cumming, John R. Campbell, F. Rumford.
- ***Norris, Alan Hedley**, B.Sc. (Manc.), A.R.I.C. British. Quorn Hall, Loughborough. Chemical Engineering Student. *Signed by* : C. Whitworth, J. M. Connolly, H. Stevenson.
- Raudnitz, Harry**, RNDr. (Prague). British. High Point, Elmsey, Hale. Research Chemist. *Signed by* : Thomas Kennedy Walker, O. Rhys Howell, A. F. H. Ward.
- ***Roberts, Melville Harries**, B.Sc.Hons. (Wales), A.R.I.C. British. Gwenlais Fawr, Pontliw, Swansea. Research Student. *Signed by* : L. E. Hinkel, J. E. Coates, N. H. Hartshorne.
- ***Rogers, Kenneth Charles**, B.Sc.Hons. (Birm.), A.R.I.C. British. 23, Princess Drive, Borrowash, Derby. Assistant Chemist. *Signed by* : E. B. Johnson, A. S. Taylor, J. J. Allen.
- Samuel, Reginald Oliver**, B.Sc. (Lond.), A.R.I.C. British. 105, Thornbury Road, Osterley, Isleworth. Research and Analytical Chemist. *Signed by* : E. B. Hughes, Leslie H. Lampitt, P. Bilham.
- Sayers, Ronald**, M.A. (Cantab.), A.R.I.C. British. 37, Lee Road, Blackheath, S.E. 3. Research Student. *Signed by* : L. N. Owen, A. R. Graham, R. M. Evans.
- Sherriff, James Munro**, L.R.C.P.E., L.R.C.S.E. British. Biochemical Department, Hillerd Hospital St. Albans. Biochemist, Ministry of Health. *Signed by* : W. M. Cumming, I. V. Hopper, Eva B. Cumming, F. Rumford.
- Simonian, Vartkes Hovanes**, Ph.C. (Beirut). Iraqi. Royal College of Pharmacy, Baghdad, Iraq. Assistant Professor of Pharmacognosy. *Signed by* : A. Cordes, A. E. Corker, H. E. Johnson.
- Thompson, Wilfred Robert**, B.Sc.Hons. (Lond.), F.R.I.C. British. 7, The Risings, Walthamstow, E. 17. Research Chemist, Optrex Ltd., Perivale. *Signed by* : Christopher C. Yates, A. W. C. Downer, P. W. Ranby.
- Troup, Wilfrid**, B.Sc.Hons. (Edin.). British. 32, Boswall Green, Edinburgh, 5. Teacher. *Signed by* : E. G. V. Percival, T. R. Bolam, Mowbray Ritchie.
- Wild, Francis Eric**, B.Sc. (Birm.), F.R.I.C. British. Ministry of Supply Factory, Rocksavage, Runcorn. Chemist. *Signed by* : Alex Findlay, R. Leslie Collett, H. J. T. Ellingham.
- ***Winnett, Ronald**. British. The Stag Hotel, Liskeard. Student, Oxford University. *Signed by* : F. E. King, N. V. Sidgwick, P. B. Turner.
- Worboys, Walter John**, B.Sc. (Western Australia), D.Phil. (Oxon). British. Hill End House, Essendon, Hatfield. Chairman of Board, Plastics Division, Imperial Chemical Industries Ltd. *Signed by* : M. P. Applebey, J. W. C. Crawford, R. G. Heyes.

***Wyss, Walter Frederick**. British. 68, Galpins Road, Thornton Heath. Research Assistant. *Signed by* : Gordon H. Thomson, I. G. C. Dryden, H. K. Dean.

UNDER SPECIAL PROVISION APPERTAINING TO CANDIDATES RESIDENT ABROAD.

Blachford, Henry Lloyd, B.Sc. (McGill). Canadian. 977, Aqueduct Street, Montreal 3. President, H. L. Blachford Ltd. *Signed by* : W. D. McFarlane.

Gaines, Paschal Clay, M.S. (Washington State). American. Chemistry Department, Montana State College, Bozeman, Montana. Head, Department of Chemistry and Vice-President, Montana State College; Professor of Analytical Chemistry. *Signed by* : Ralph L. Evans, Foster Dee Snell.

Hamlin, Marston Lovell, B.A. (Amherst), M.A. and Ph.D. (Columbia). American. c/o American Home Products Corporation, Room 3000, 22, East 40th Street, New York, 16. Associate Patent Attorney. *Signed by* : Foster D. Snell, K. George Falk.

***Hine, Jack Sylvester**, B.S. (Arkansas). American. 254 Noyes Laboratory, University of Illinois, Urbana. Graduate Student. *Signed by* : Roger Adams.

***Larrabee, Clifford Everett**, B.S. (Bates College, Lewiston). American. Department of Chemistry, University of Rochester, Rochester, New York. Student. *Signed by* : H. Richard Frank.

Nyholm, Ronald Sydney, M.Sc. (Sydney), A.R.I.C. British. 77, Bland Street, Ashfield, N.S.W. Senior Lecturer in Physical Chemistry, Sydney Technical College. *Signed by* : R. J. W. Le Fèvre, T. Iredale.

Sattler, Thomas Peter, D.Sc. (Budapest). Hungarian. Bimbo ut 63, Budapest II. Research Chemist, Arzola Chemical Works, Mogyorodi ut 42, Rakospalota. *Signed by* : Z. Foldi.

Tigerman, Henry, B.S. (Illinois), M.S. (North-western). American. 32-A College Courts, Stillwater, Oklahoma. Assistant Professor of Chemistry, Oklahoma A. and M. College. *Signed by* : Martin Seidman.

***White, Howard Louis**, Ph.D. (McGill). British. Department of Organic Chemistry, Squibb Institute for Medical Research, New Brunswick, N.J. Research Chemist. *Signed by* : Eric T. Stiller.

Work, Harold Knowlton, A.B. and Ch.E. (Columbia), Ph.D. (Pittsburgh). American. Jones & Laughlin Steel Corporation, Research and Development Laboratory, 40 Longworth Street, Pittsburgh 7, Pennsylvania. Director of Research. *Signed by* : Foster Dee Snell.

Zeiss, Harold Hicks, B.S. (Indiana) and A.M. (Columbia). American. 70, Sussex Road, Tenafly, N.J. Director of Organic Research and Secretary at Ridbo Laboratories Inc., Paterson 3, N.J. *Signed by* : David Y. Curtin.

* Reduced annual subscription

PAPERS RECEIVED

List of papers received between May 5th, 1947, and June 5th, 1947. (This list does not include the titles of papers which have been read at a Scientific Meeting or which have appeared in the *Journal*.)

“The synthesis of some aryl 2-thienyl sulphones and the nitration of thiophen-2-sulphonyl chloride.” By H. BURTON and W. A. DAVY.

“The use of phenylmagnesium bromide for the preparation of phenyl aryl sulphides, sulphoxides, and sulphones.” By H. BURTON and W. A. DAVY.

“The decomposition reactions of sodium aryl diazotates. Part I. Replacement of the diazo- by the nitro-group in alkaline solution with sodium nitrite.” By H. H. HODGSON and E. R. WARD.

“Search for new analgesics. Part II. Further homologues of pethidine and the pharmacology of these and other compounds.” By R. H. THORP and E. WALTON.

“Contributions to the chemistry of synthetic antimalarials. Part VI. Some derivatives of 1 : 3 : 5-triazine.” By W. W. CUTHBERTSON and J. S. MOFFATT.

“Chemistry of the *Coprosma* Genus. Part I. The colouring matters from *Coprosma Australis*.” By L. H. BRIGGS and J. C. DACRE.

“Chemistry of the *Coprosma* Genus. Part II. The colouring matters from *Coprosma Areolata*.” By L. H. BRIGGS, (MISS) M. R. CRAW, and J. C. DACRE.

“The structure of molecular compounds. Part V. The clathrate compound of quinol and methanol.” By D. E. PALIN and H. M. POWELL.

“Preparation of unsymmetrical carbocyanines.” By J. D. KENDALL and J. R. MAJER.

“Preparation of symmetrical and unsymmetrical neocyanines. Structure of the neocyanines.” By J. D. KENDALL and J. R. MAJER.

- "Synthetic antimalarials. Part XXIII. 2-Arylguanidino-4-aminoalkylaminopyrimidines. Further variations." By W. H. CLIFFE, F. H. S. CURD, F. L. ROSE, and (MISS) M. SCOTT.
- "Synthetic antimalarials. Part XXIV. Some 2-phenylureido- and 2-phenylthioureido-4-dialkylaminoalkylamino-6-methylpyrimidines." By R. de B. ASHWORTH, A. F. CROWTHER, F. H. S. CURD, and F. L. ROSE.
- "Synthetic antimalarials. Part XXV. Some 4-arylguanidino-2-dialkylaminoalkylamino- and 4-arylguanidino-6-dialkylaminoalkylaminopyrimidines." By A. F. CROWTHER, F. H. S. CURD, and F. L. ROSE.
- "Synthetic antimalarials. Part XXVI. Pyridyl- and pyrimidyl-aminopyrimidines." By F. H. S. CURD, W. GRAHAM, and F. L. ROSE.
- "Esters containing phosphorus. Part IV. Diisopropyl fluorophosphonate." By B. C. SAUNDERS and G. J. STACEY.
- "Esters containing phosphorus. Part V. Esters of substituted phosphonic acids and of substituted phosphonous acids." By B. C. SAUNDERS, G. J. STACEY, F. WILD, and I. G. E. WILDING.
- "A reaction of diazosulphonates derived from β -naphthol-1-sulphonic acid. Part XXIV. The phthalazine reaction with bases not containing a nitro-group. Derivatives of halogenobenzene-2-naphthol-1-diazosulphonates." By A. T. PETERS, G. T. PRINGLE, and (the late) F. M. ROWE.
- "The synthesis of some *p*-arylsulphonylbenzaldehydes and related aldehydes and ketones." By H. BURTON and P. F. HU.
- "*p*-Methylthiobenzenesulphonyl chloride and related compounds." By H. BURTON and P. F. HU.
- "Experiments with diazomethane. Part XIV. Action of diazomethane on (a) *N*-acyl compounds, and (b) *o*-hydroxy-diaryl sulphones and the corresponding *peri*-compounds." By A. SCHÖNBERG and A. MUSTAFA.
- "Physical properties and chemical constitution. Part X. *n*-Alkylbenzenes." By A. I. VOGEL.
- "Physical properties and chemical constitution. Part XI. Ketones." By A. I. VOGEL.
- "Physical properties and chemical constitution. Part XII. Ethers and acetals." By A. I. VOGEL.
- "Physical properties and chemical constitution. Part XIII. Aliphatic carboxylic esters." By A. I. VOGEL.
- "Physical properties and chemical constitution. Part XIV. The parachors and the refractivities of the halogens." By A. I. VOGEL.
- "Physical properties and chemical constitution. Part XV. The phenyl group." By A. I. VOGEL.
- "Physical properties and chemical constitution. Part XVI. Ethylenic compounds." By G. H. JEFFREY and A. I. VOGEL.
- "Physical properties and chemical constitution. Part XVII. Acetylenic compounds and nitriles." By G. H. JEFFREY and A. I. VOGEL.
- "A determination of the structures of the isomeric 2-chlorovinyl dichlorides." By C. A. McDOWELL, E. A. MOELWYN-HUGHES, and H. G. EMBLEM.
- "The structure of molecular compounds. Part VI. The beta-type clathrate compounds of quinol." By D. E. PALIN and H. M. POWELL.
- "The configuration of naturally occurring mixed glycerides. Part IV. The configuration of the major component glycerides of palm oil." By M. L. MEARA.
- "The significance of the transition state in aromatic substitution." By W. A. WATERS.
- "The synthesis of the nuclear-*C*-methylated tryptophans. A note on the aldehyde reactions for tryptophan." By H. N. RYDON.
- "The condensation of benzamidine with α -diketones." By J. W. CORNFORTH and H. T. HUANG.
- "Methyl derivatives of 1:4:5:8-tetra-aminoanthraquinone." By R. H. HALL and D. H. HEY.

- "A new preparation of 3:3':4:4'-tetrahydroxy- γ - δ -diphenylhexane." By G. FODOR and J. WEIN.
- "Synthesis of 3-methyl-6:7-diethoxyisoquinolines." By V. BRUCKNER, G. FODOR, J. KISS, and J. KOVÁCS.
- "Steroids and the Walden inversion. Part III." By C. W. SHOPPEE.
- "Steroids and the Walden inversion. Part IV. Derivatives of 6-ketositostane and 6:7-diketoandrostandane." By C. W. SHOPPEE.
- "The mechanism of indole formation from phenylarylamines. Part II. The stability and reactions of phenacyl-*N*-alkylarylamines." By F. BROWN and F. G. MANN.
- "The mechanism of indole formation from phenacylarylamines. Part III. The conditions and mechanism of the isomerisation and indolisation of phenacylarylamines." By F. BROWN and F. G. MANN.
- "Experiments in the piperidine series. Part IV." By R. M. ANKER and A. H. COOK.
- "Strychnine and brucine. Part XLIX. A new method for the preparation of *pseudo*-strychnine." By A. S. BAILEY and (SIR) ROBERT ROBINSON.
- "Stereochemistry of the disalicylides." By A. SCHÖNBERG.
- "Some derivatives of benz-1:2:3-thiadiazole, the nature of the thiadiazole ring, and a note on the thiolation of 2-chloro-5-nitroaniline." By H. H. HODGSON and D. P. DODGSON.
- "Dibenzal- and diacetone-glyoxal." By H. RAUDNITZ.
- "The growth of coliform bacteria in media containing nitrate and nitrite. Part I. Adaptation to growth with nitrate and nitrite as nitrogen sources." By P. R. LEWIS and C. N. HINSHELWOOD.
- "The growth of coliform bacteria in media containing nitrate and nitrite. Part II. Influence of ammonia and of aeration, and the coupling of the oxidation-reduction system involved." By P. R. LEWIS and C. N. HINSHELWOOD.
- "The growth of coliform bacteria in media containing nitrate and nitrite. Part III. The later stages of reduction of nitrite." By P. R. LEWIS and C. N. HINSHELWOOD.
- "The growth of coliform bacteria in media containing nitrate and nitrite. Part IV. Some biochemical considerations." By P. R. LEWIS.
- "The dissociation constants of benzimidazole and certain purine derivatives." By H. F. W. TAYLOR.

July, 1947.

PROCEEDINGS
OF THE
CHEMICAL SOCIETY

OFFICIAL ANNOUNCEMENTS

DEATHS.

The Council regret to announce the deaths of the following Fellows :

	Elected.	Died.
Mario Betti (Bologna).....	Feb. 16th, 1928.	1942.
George Harry Briggs (Manchester)	Dec. 15th, 1938.	May 17th, 1946.
Victor Scotthorn George (Smethwick)	June 16th, 1927.	April 28th, 1947.
Sir Philip Joseph Hartog (India)	Feb. 6th, 1890.	June 27th, 1947.
Philip Foale Rowsell (Exmouth)	Feb. 15th, 1906.	May 1st, 1946.
David Alexander Ruffman (W.1)	Dec. 14th, 1934.	Feb. 15th, 1947.
Alfred Walter Stewart (Belfast)	Dec. 3rd, 1903.	July 2nd, 1947.

CONGRATULATIONS.

The congratulations of the Council have been conveyed by the President to the following Fellows whose names appear in the Birthday Honours List :

Knight Bachelor.

Ernest Laurence Kennaway.

C.B.E.

James Arthur Prescott.

CENTENARY PUBLICATIONS.

Copies of the Chemical Society Centenary publications are now on sale as follows :

The Chemical Society 1841—1941.

A historical review of the Chemical Society by T. S. Moore and J. C. Philip. 236 pp., 10 plates. Price to Fellows, 7s. 6d.

British Chemists.

A collection of biographies of a number of eminent British chemists. Edited by A. Findlay and W. H. Mills. 430 pp., 16 plates. Price to Fellows, 12s. 6d.

These may be obtained on application to the General Secretary. Please send remittance with order.

CENTENARY PROGRAMME.

A small number of copies of the Centenary Programme are available at 2s. 6d. each, and may be obtained on application to the General Secretary.

REPORT ON CELEBRATIONS.

No report of the Centenary Celebrations is being made in these Proceedings as it is hoped to publish a full report of the Celebrations in due course.

ELECTION OF FELLOWS.

The following 129 candidates were elected Fellows of the Chemical Society on July 7th, 1947 :

Yehya Mahmoud Abouzeid.	Edgar William Jackson.
Norman Herbert Edgar Ahlers.	Ole Svensmark Jensen.
Peter William Allen.	Jiri Jilek.
David Arthur Andrews.	Michael Jonason.
Harold Archer.	Spencer Ainsworth Jones.
James Baddiley.	Irving Allan Kaye.
Eric Raymond Baggott.	Albert Edison Kerr.
J. P. Baxter.	Adolf Koebner.
Robert Nigel Beale.	William Kenneth Houghton Lakin.
Desmond Beall.	John Leslie Lampitt.
Alan Wilmot Beeston.	Kenneth Geoffrey Latham.
Alan Ronald Arthur Bettridge.	Kenneth Robert Lawrence.
Cecil Wilfred Luscombe Bevan.	Stewart Joseph Lloyd.
Rattan L. Bhasin.	Charles Alexander Long.
Peter Bladon.	Ruskin Longworth.
James Wennington Boyd.	Iain Coutts MacWilliam.
Geoffrey Trelawney Bray.	John Langton Maddison.
Roden John Bridgwater.	Arumugamangalam Padmanagwaiyer Mahadevan.
Nigel Philip Hunter Brown.	Kenneth Henry Benjamin Major.
William Gillespie Gilbert Bruce.	William Manson.
Reginald Buckingham.	Charles Roy Marshall.
William Burns.	John Franklin Millard.
Wilfrid Roger Butt.	Antonio Rius y Miro.
William Willett Byford.	Christopher Thomas Morley-Smith.
Bridget Cairns.	Ronald John Kerr Muir.
Raymond N. Castle.	Joseph Enda.
Jnanendra Nath Chatterjea.	John Stuart Nicholson.
Ahindra Kumar Chatterjee.	Olav Notevarp.
Hamish Christie.	Noel Vincent Nowlam.
Robert George Cockerham.	John Douglas Oliver.
James Caithness Cuthill.	Nigel Montgomerie Parsons.
Walter Cecil Davey.	Johnson Pattison.
Florence Dickinson.	Frank Trevor Perkins.
Henry Arthur Druett.	Michael John Perry.
John Stanley Dunning.	Onkar Nath Perti.
Thomas George Edward Edwards.	Ian Rae Phillips.
Gosta Carl Henrik Ehrensvarid.	Richard Pickup.
Benjamin B. Elsner.	Eric Gwynne Powell.
Charles Charlton Evans.	Reginald Frank Rackham.
Matzas Alfonso Fill.	Ramaswami Iyer Ananta Raman.
Joseph Barry Fincham.	Peter John Rennie.
Charles Douglas Fisher.	Henry Walter Robinson.
Gabor Fodor.	Joseph Henry Lindsey Royal.
Roydon Leonard Frost.	Fathy El Said.
Gerald David Galvin.	John Dennis Sandrock.
John Michael Geoghegan.	Cecil Samuel Semmens.
James William Gibson.	Leonard George Sherrington.
Raymond Frederick Glasock.	Benjamin Thomas Smith.
Harry Gollop.	Frantisek Sorm.
Reginald Goode.	Vera Pearl Stewart.
Manfred Gordon.	Peter Willerton Sykes.
William John Gray.	Stefan Antoni Szpilfogel.
John William Griffin.	William Irving Taylor.
Francis James Griffin.	James Wilson Teesdale.
Edward Armand Guggenheim.	Francis James Toole.
Jagram Gupta.	Leslie Mackenzie Valentine.
William Edward Harvey.	Otakar Viktorin.
John Godfrey Heathcote.	Henri Wahl.
Ernest Frederick George Herington.	Clifford Reginald Watts.
Minna Doris Herz.	Arthur Chandler Way.
Alfred Donald Hewitt.	James Charles David White.
Leon Hirschberg.	Frederick Hugh Williams.
Stanley Reginald Charles Hughes.	Alfred Gee Williamson.
Ronald Bryan Humphrey.	Henryk Zenftman.
Barry Sidney Jackson.	

MEETING OF COUNCIL.

A meeting of Officers as Council was held on July 7th, 1947.

Consideration was given to the programme of meetings in London for the forthcoming Session and an invitation to hold an official meeting in Manchester was accepted with pleasure.

The thanks of the Council were conveyed to Mr. E. S. Lower for a gift of the Society's publications.

The report of the meeting of the Board of Directors of the Bureau of Abstracts, held on May 13th, was received.

Certain formal and financial items of business were also transacted.

RESEARCH FUND.

A meeting of the Research Fund Committee will be held in November next. All persons who have received grants, and whose accounts have not been declared closed by the Council, are informed that reports must be received by the Society not later than November 1st, 1947.

Applications for Grants, to be made on forms obtainable from the General Secretary, must be received on or before November 1st, 1947. Applications from Fellows will receive prior consideration.

Attention is drawn to the fact that the income arising from the Donation of the Worshipful Company of Goldsmiths is principally devoted to the encouragement of research in Inorganic and Metallurgical Chemistry, and that the income from the Perkin Memorial Fund is to be applied to investigations relating to problems connected with the Coal Tar and Allied Industries.

MEETINGS OUTSIDE LONDON
HULL.

"Some Aspects of the Chemistry of Penicillin," by Sir Ian Heilbron, D.S.O., D.Sc., LL.D., F.R.S.

An Inaugural Meeting was held in the Assembly Hall of the University College on June 6th, 1947, with Professor Brynmor Jones in the Chair.

After expressing his pleasure at the establishment of a local section in Hull, and emphasising the importance of the local sections in stimulating interest in chemical research and development, Sir Ian gave a brief summary of the discovery and value of penicillin and went on to give a very lucid and fascinating account of its chemistry.

The audience showed its warm appreciation of Sir Ian's visit by carrying with acclamation a vote of thanks proposed by Professor R. D'O. Good (Dean of the Faculty of Science) and seconded by Mr. Wormald (Secretary of the College Scientific Society).

LIST OF APPLICATIONS FOR FELLOWSHIP

(Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries within ten days of the publication of the "Journal" for May, 1947. Such objections will be treated as confidential. The forms of application are displayed in the Library.)

Baker, Kingsley Ferguson, M.Sc. (Queensland), A.A.C.I. British. c/o Schweizerischer Bankverein, Parade Platz, Zurich. Research Chemist. *Signed by* : J. C. Earl, Adrien Albert, R. Royer.

***Barracrough, Rodney Norman John**. British. 39, Endway, Tolworth, Surbiton. Research Assistant. *Signed by* : D. A. Sutton, S. H. Bell, D. R. Duncan.

Carlisle, Charles Harold, M.Sc. (Lucknow), D.Phil. (Oxon.), A.Inst.P. British. 10, Taviton Street, W.C. 1. Research Assistant at Birkbeck College. *Signed by* : D. J. G. Ives, R. W. Pittman, J. D. Bernal.

Carruthers, Albert, B.Sc.Hons. (St. Andrews), Ph.D. (Cantab.). British. c/o British Sugar Corporation Ltd., Latymer House, 134, Piccadilly, W. 1. Director of Research. *Signed by* : C. E. H. Bawn, G. Tyndale Young, T. Malkin.

- Chang, Pang**, B.A. (National South-western University). Chinese. St. Catharine's College, Cambridge. Research Student. *Signed by* : B. Lythgoe, Peter Maitland, B. C. Saunders.
- ***Cox, John Douglas**. British. 16, Christchurch Road, Sidcup. Student, Exeter College, Oxford. *Signed by* : F. E. King, H. E. Cox, Eric Voelcker.
- ***Entwistle, Norman**, B.Sc. (Manc.). British. 35, Eastbourne Street, Oldham. Research Student, Manchester University. *Signed by* : A. E. Gillam, J. K. N. Jones, A. Holt.
- ***Evans, Dennis Frederick**. British. 82, Woodborough Road, Nottingham. Student, Lincoln College, Oxford. *Signed by* : H. V. Sidgwick, A. D. Caunt, F. E. King.
- ***Gillespie, Ronald James**, B.Sc.Hons. (Lond.). British. 72, North View, Eastcote, Pinner. Temporary Assistant Lecturer, University College, London. *Signed by* : D. J. Millen, S. Sugden, C. K. Ingold.
- ***Golden, John**, B.Sc. British. 38, Quarry Road, Hebburn-on-Tyne, Co. Durham. Student. *Signed by* : G. R. Martin, G. H. Christie, W. K. R. Musgrave.
- ***Gowan, James Edward**, B.Sc.Hons. (N.U.I.). Irish. 59, Dublin Road, Skerries, Co. Dublin. Research Student. *Signed by* : T. S. Wheeler, A. G. Leonard, Vincent C. Barry.
- ***Harding, William Kenneth Latham**, B.Sc.Hons. (Wales), A.R.I.C. British. 8, Lon Cwmgwyn, Sketty, Swansea. Research Student. *Signed by* : J. E. Coates, L. E. Hinkel, E. E. Ayling, R. H. Davies.
- ***Harris, Graham**, B.Sc. (Lond.), A.R.C.S. British. 38, Chilton Road, Richmond. Research Chemist. *Signed by* : A. H. Cook, A. L. Levy, J. A. Elvidge.
- ***Hill, Royston Arthur Walter**, B.A. and B.Sc. (Oxon.). British. 31, Museum Road, Oxford. Research Student. *Signed by* : F. E. King, Rex E. Richards, Tom Cottrell.
- Khishen, Shafik Ali El**, B.Sc.Hons. (Edin.), Ph.D. (Lond.), D.I.C. Egyptian. Faculty of Agriculture, Faruk 1st University, Damanhur. Lecturer and Head of Chemistry and Insecticides Department. *Signed by* : Alexander Schönberg, Ahmed Mustafa, Hussein Ahmad Fahim, James Kendall.
- ***Jackson, Leon Norman Bennett**. British. 459, Idle Road, Bradford. Student. *Signed by* : G. Skirrow, Leonard Seal, D. W. Riley.
- ***Jones, Mervyn Francis**. British. 11, Charminster Road, Fishponds, Bristol. Junior Chemist. *Signed by* : Arthur Marsden, G. H. Moore, H. J. Willavoys.
- Karsten, Gertrude M.**, B.Sc. (Lond.). Czech. 126, Cholmley Gardens, N.W. 6. Works and Research Chemist with Chemo-Metals (London) Ltd. *Signed by* : Ernest A. Pokorny, D. J. G. Ives, W. M. Wolf.
- McKay, Herbert Alwyn Cochrane**, B.A. (Oxon.). British. 41, Wayland Crescent, Chilton, Didcot. Senior Scientific Officer, Chemistry Division, Atomic Energy Research Establishment. *Signed by* : W. R. E. Maton, Fred Hudswell, A. G. Maddock.
- Maclean, Graham**, B.Sc.Hons. (Glas.), A.R.I.C. British. 78, Headstone Lane, North Harrow. Chemist. *Signed by* : T. E. Bashford, John P. Allchin, V. L. S. Charley.
- Mattingly, Geoffrey Edward Graham**, B.Sc. (Reading). British. 14, Walden Avenue, Arborfield, Reading. Research Chemist, Horticultural Station, The University, Reading. *Signed by* : E. A. Guggenheim, H. S. Lilley, G. H. Cheesman.
- Preston, Iris Winifred**, B.A. (Cantab.). British. 41, Highlands Heath, Portsmouth Road, Putney, S.W. 15. Chemist. *Signed by* : F. A. Freeth, J. Ferguson, I. L. Clifford.
- ***Rule, Arthur Thomas Walter**. British. 121a Shacklewell Lane, Hackney, E. 8. Assistant Bacteriologist in Laboratories of John Wyeth & Bro., Ltd., and the International Chemical Co., Braydon Road, N. 16. *Signed by* : Percy Edgerton, Geo. R. Wilkinson, John W. Lowry.
- Sivaramakrishna Ayyar, Palghat Manuvadhya**, M.Sc. (Madras), A.R.I.C. British. c/o Messrs. Jenson & Nicholson Ltd., Stratford, E. Research Chemist. *Signed by* : H. W. Chatfield, H. H. Topper, H. G. Rains.
- Speight, George Edward**, B.Sc. (Lond.), A.Met. (Sheffield), F.R.I.C. British. 740, Barnsley Road, Sheffield, 5. Research Chemist. *Signed by* : G. Murfitt, R. D. Haworth, Arthur W. Chapman.
- Stewart, Robert Charles McKellar**, B.Sc. (New Zealand), A.R.I.C., A.A.C.I. British. c/o Associated Pulp & Paper Mills Ltd., 360, Collins Street, Melbourne, C. 1. Industrial Chemist. *Signed by* : W. Davies, F. G. Soper, S. N. Slater.
- Tarbell, Dean Stanley**, A.M. and Ph.D. (Harvard). American. Department of Chemistry, University of Rochester, Rochester, New York. Associate Professor of Organic Chemistry. *Signed by* : F. E. King, R. N. Chakravarti, A. D. Kemp.
- Thompson, Alan**, B.Sc. (Lond.), A.R.I.C. British. 6B, Queensway, Penwortham, Preston. Staff Chemist, Home Office Laboratory, Jordan Street, Preston. *Signed by* : J. B. Firth, E. Pedley, R. E. Stuckey.
- ***Turner, Alan**. British. 30, Bute Avenue, Lenton Sands, Nottingham. Senior Assistant in Public Analyst's Laboratory, Nottingham. *Signed by* : J. R. Rowlands, John W. Gailer, R. W. Hale.
- Warbrook, Reginald Harold**. Irish. Green Rushes, Mountmellick, Laoighis, Eire. Chemist and Works Manager, Mountmellick Products Ltd., Irishtown Maltings, Mountmellick. *Signed by* : T. S. Wheeler, J. M. Jones, Thomas McLachlan.
- Wells, Margaret Amy**. English. 22, Thurleigh Road, Wandsworth Common, S.W. 12. Student, King's College, London. *Signed by* : A. J. Allmand, D. H. Hey, V. Gold.
- ***Whitfield, Gordon Howard**. British. Burton Road, Rolleston on Dove. Student. *Signed by* : A. R. Pinder, B. P. Moore, Alex. H. Lamberton.
- Woodger, Stanley Claude**, B.A. (Oxon.). British. 25, Weeping Cross, Stafford. Chemist, Imperial Chemical Industries, Ltd., Dyestuffs Division, Blackley, Manchester. *Signed by* : Harry Irving, L. A. K. Staveley, J. W. Linnett.

UNDER SPECIAL PROVISION APPERTAINING TO CANDIDATES RESIDENT ABROAD.

- Bruckner, Victor**, Dr.Ing.Chem. Hungarian. Department of Organic Chemistry, The University, Szeged. Professor of Organic Chemistry. *Signed by* : G. R. Clemo, R. Raper.
- Cagniant, Paul Maxine Augustin**, Ing.Chem. French. Ecole du Pétrole, 2, rue Boussingault, Strasbourg. Chef de laboratoire a l'Institut français du Pétrole. *Signed by* : Delépine.
- Deluzarche, Antonin Rene Jean**, Licencié es Sciences (Strasbourg), Ing.Chem. French. Ecole du Pétrole, 2, rue Boussingault, Strasbourg. Ingenieur a l'Institut français du Pétrole. *Signed by* : Delépine.
- Gróh, Julius**, D.Phil. (Budapest). Hungarian. Esterhazy utca 11—13, Budapest VIII. Professor and Director of the Institute for General Chemistry, The University, Budapest. *Signed by* : F. G. Donnan.
- Garcia, Ramon**, Dr.Chem. Argentine. c/o Duperial, Paseo Colon 285, Buenos Aires. Manager of Industrias Químicas Argentinas. *Signed by* : N. W. Krase.
- Iskander, Youssef**, M.Sc. and Ph.D. (Fouad I Univ.). Egyptian. Faculty of Science, Farouk I University, Alexandria. Lecturer in Organic Chemistry. *Signed by* : N. Fakhoury, G. Soliman.
- Marullo, Gerlando**, Doctor in Industrial Engineering. Italian. 2, Via del Lavoro, Novara. Director of Research Laboratory of S.A., Montecatini. *Signed by* : Livio Cambi.
- Niemann, Carl George**, B.S. and Ph.D. (Wisconsin). American. Gates and Crellin Laboratories of Chemistry, California Institute of Technology, Pasadena 4. Professor of Organic Chemistry. *Signed by* : Edwin R. Buchman.
- Riad, Youssef**, B.Sc. (Fouad I Univ.). Egyptian. Faculty of Science, Farouk I University, Alexandria. Demonstrator in Organic Chemistry. *Signed by* : N. Fakhoury, G. Soliman.
- Shahat, Mohamed el**, M.Pharm. (Fouad I Univ.). Egyptian. 14, Abdelrazik Barakat Street, Sayeda Zeinab, Cairo. Lecturer in Chemistry, Faculty of Medicine, Cairo. *Signed by* : A. Riad Tourky, R. Moubasher.
- Valota, Giuseppe**, Chem.Eng. Italian. 18 Via Albania, Milan. In charge of Technical Documentation Department, S.A., Montecatini. *Signed by* : Livio Cambi.
- Weigner, Jaromir**, D.S. (Brno). Czech. Stepanska 30, Praha 11. Technical Secretary and Consultant. *Signed by* : George Lewi.
- Weil, Ruth Alice Norman**, B.A. (Smith College), M.A. and Ph.D. (Columbia). American. Hickory Hill, Kantonah, N.Y. Research worker with Hickrill Chemical Research Foundation. *Signed by* : William von Eggers Doering.

* Reduced Annual Subscription.

PAPERS RECEIVED

List of papers received between May 5th, 1947, and June 5th, 1947. (This list does not include the titles of papers which have been read at a Scientific Meeting or which have appeared in the *Journal*.)

- “The photochemistry of selenium. Part I. The photochemical oxidation of hydrogen selenide.” By D. J. G. IVES and R. W. PITTMAN.
- “2-Thienyl- and 3-thienyl-thioacetic acids and their derivatives.” By F. CHALLENGER, S. A. MILLER, and G. M. GIBSON.
- “Some notes on the preparation of 4-hydroxyquinoline derivatives from aromatic amines and ethyl ethoxymethylenemalonate.” By G. F. DUFFIN and J. D. KENDALL.
- “The preparation of N⁴-carboxyacylsulphanilamides. Part II. The synthesis of N⁴-phthalylsulphanilamide derivatives.” By C. W. PICARD, E. REID, (MISS) J. REYNOLDS, and D. E. SEYMOUR.
- “The cross-linking of vinyl polymers by Friedel-Crafts catalysts.” By J. C. BEVINGTON and R. G. W. NORRISH.
- “The ε-galactan of larch wood.” By W. G. CAMPBELL, E. L. HIRST, and J. K. N. JONES.
- “The constitution of mesquite gum. Part I. Isolation of 6-glucuronosido- and 4-glucuronosido-galactose.” By J. I. CUNNEEN and F. SMITH.
- “The constitution of mesquite gum. Part II. Methylated mesquite gum.” By J. I. CUNNEEN and F. SMITH.
- “The application of the method of molecular rotation differences to steroids. Part IV. Optical anomalies.” By D. H. R. BARTON and J. D. COX.
- “Synthetic antimalarials. Part XXVII. Some derivatives of phthalazine, quinoxaline, and isoquinoline.” By R. D. HAWORTH and S. ROBINSON.

- "The kinetics of anionotropic rearrangement. Part VII. The simultaneous rearrangement and hydrolysis of propenylethynylcarbinyl acetate. General discussion of the mechanism of anionotropy and a comparison of the mobility of the hydroxyl and acetoxy groups." By E. A. BRAUDE.
- "The kinetics of anionotropic rearrangement. Part VIII. Further observations on the simultaneous rearrangement and hydrolysis of propenylethynylcarbinyl acetate." By E. A. BRAUDE.
- "The kinetics of consecutive first-order reactions." By E. A. BRAUDE and R. W. NICHOLLS.
- "The oxidation of some aldoses by alkaline solutions of iodine." By O. G. INGLES and G. C. ISRAEL.
- "Carbazoles, carbolines, and related compounds. Part II. Transformations of some quaternary salts of quindoline." By S. J. HOLT and V. PETROW.
- "Carbazoles, carbolines, and related compounds. Part III. Quinindoline derivatives." By S. J. HOLT and V. PETROW.
- "Substitution reactions of triphenylethylene and its derivatives. A contribution to the problem of synthetic analogues of progesterone." By Ng. Ph. BUU-HOÏ and R. ROYER.
- "The amylolytic degradation of starch. A revision of the hypothesis of sensitisation." By E. J. BOURNE, Sir NORMAN HAWORTH, A. MACEY, and S. PEAT.
- "The properties of freshly formed surfaces. Part VII. The application of the vertical-plate technique to the study of soluble films at air-liquid and liquid-liquid interfaces." By C. C. ADDISON and S. K. HUTCHINSON.
- "The properties of freshly formed surfaces. Part VIII. The expansion of soluble films of decoic acid at the air-water interface." By C. C. ADDISON, J. BAGOT, and H. S. MCCAULEY.
- "The properties of freshly formed surfaces. Part IX. The expansion of soluble films of sodium dodecyl sulphate at air-water and toluene-water interfaces." By C. C. ADDISON and S. K. HUTCHINSON.
- "The adsorption of acetic acid and *n*-butylamine from aqueous solutions by activated charcoals." By J. J. KIPLING.
- "The behaviour of charcoal columns in the adsorption and desorption of acetic acid in aqueous solution." By J. J. KIPLING.
- "Strychnine and brucine. Part L. Experiments with *pseudostrychnine*, dihydro-*pseudostrychnine*, and *neostrychnine*." By K. H. PAUSACKER and Sir ROBERT ROBINSON.
- "Measurement of specific surfaces of calcined and hydrated alumina powders by adsorption of *n*-heptylic acid from aqueous solutions." By L. SAUNDERS.
- "A modified synthesis of chrysene." By G. M. BADGER.
- "Attempts to prepare new aromatic systems. Part I. *cyclopentindene*. 2- and 3-Phenylcyclopentanecarboxylic acids, and derived ketones." By W. BAKER and W. G. LEEDS.
- "Experiments on the synthesis of karanjin." By A. SEETHARAMIAH.
- "Estimation of α -amino-acids in pure solutions with *perinaphthindane-2:3:4-trione hydrate*." By R. MOUBASHER.
- "The elimination of sulphur in certain reductions of the 2:2':4:4'-tetranitrodiphenyl mono- and di-sulphides, and an alternative route to the preparation of some 5-substituted benz-1:2:3-thiadiazoles." By H. H. HODGSON and D. P. DODGSON.
- "Esters containing phosphorus. Part VI. Preparation of esters of fluorophosphonic acid using phosphorus oxydichlorofluoride." By N. B. CHAPMAN and B. C. SAUNDERS.
- "Some 2:4-diamino-5-acylamido-6-hydroxypyrimidines." By W. WILSON.
- "Experiments on the synthesis of purine nucleosides. Part XVII. A synthesis of 9-*d*-glucopyranosidoadenine." By A. HOLLAND, B. LYTHGOE, and A. R. TODD.
- "Experiments on the synthesis of purine nucleosides. Part XVIII. A synthesis of adenosine." By J. DAVOLL, B. LYTHGOE, and A. R. TODD.
- "The kinetics of halogen addition to unsaturated compounds. Part XIII. $\alpha\beta$ -Unsaturated ketones and quinones." By H. P. ROTHBAUM, I. TING, and P. W. ROBERTSON.

- “ An *X*-ray and thermal examination of the glycerides. Part IX. The polymorphism of simple triglycerides.” By C. E. CLARKSON and T. MALKIN.
- “ Lanosterol. Part V. Hydrogenation of the inert double bond in lanosterol derivatives.” By C. DORÉE, J. F. MCGHIE, and F. KURZER.
- “ Chemistry of the *Coprosma* genus. Part III. A synthesis of areolatin and an isomer, 3 : 5 : 6 : 7-tetrahydroxy-2-methylanthraquinone.” By L. H. BRIGGS, J. C. DACRE, and G. A. NICHOLLS.
- “ Amides. Part I. The preparation of diacetamide.” By J. B. POLYA and P. L. TARDREW.

LOCAL REPRESENTATIVES OF THE CHEMICAL SOCIETY

- Aberdeen.* J. M. C. Thompson, M.A., D.Phil., A.R.I.C., Chemistry Department, Marischal College, The University, Aberdeen.
- Australia.* T. Iredale, D.Sc., F.R.I.C., The University, Sydney, Australia.
- Birmingham.* L. L. Bircumshaw, M.A., D.Sc., Department of Chemistry, The University, Edgbaston, Birmingham, 15.
- Bristol.* C. E. H. Bawn, Ph.D., Chemistry Department, The University, Woodland Road, Bristol.
- Cambridge.* B. Lythgoe, Ph.D., Organic Chemistry Department, The University, Cambridge.
- Canada.* Professor W. D. McFarlane, M.A., Ph.D., Macdonald College, St. Anne de Bellevue, Quebec, Canada.
- Edinburgh.* E. G. V. Percival, D.Sc., Ph.D., F.R.I.C., Chemistry Department, King's Buildings, West Mains Road, Edinburgh.
- Eire.* Professor T. S. Wheeler, D.Sc., Ph.D., F.R.I.C., Chemical Department, University College, Upper Merrion Street, Dublin.
- Exeter.* S. J. Gregg, Ph.D., A.R.C.S., A.R.I.C., Department of Chemistry, Washington Singer Laboratories, Prince of Wales' Road, Exeter.
- Glasgow.* J. D. Loudon, Ph.D., D.Sc., A.R.I.C., Chemistry Department, The University, Glasgow, W. 2.
- India.* Sir Shanti S. Bhatnagar, O.B.E., D.Sc., F.R.S., The University, Lahore, Punjab, India.
- Leeds.* F. R. Goss, D.Sc., Ph.D., F.R.I.C., The University, Leeds, 2.
- Liverpool.* W. B. Whalley, B.Sc., Ph.D., Organic Chemistry Department, The University, Liverpool.
- „ L. A. Haddock, M.Sc., F.R.I.C., I.C.I., Ltd. (General Chemicals Division), Research Department, Widnes Laboratory, Widnes.
- Manchester.* A. E. Gillam, D.Sc., F.R.I.C., Chemistry Department, The University, Manchester.
- „ J. C. Withers, Ph.D., A.R.I.C., Shirley Institute, Didsbury, Manchester.
- Newcastle and Durham.* P. L. Robinson, D.Sc., F.R.I.C., Chemistry Department, King's College, Newcastle-on-Tyne.
- New Zealand.* Professor F. G. Soper, D.Sc., Ph.D., F.R.I.C., University of Otago, Dunedin, New Zealand.
- Northern Ireland.* H. Graham, D.Sc., A.R.I.C., 26, Malone Hill Park, Belfast.
- North Wales.* W. Rogie Angus, M.A., D.Sc., Ph.D., F.R.I.C., Department of Chemistry, University College of North Wales, Bangor.
- Nottingham.* D. O. Jordan, Ph.D., M.Sc., A.R.I.C., University College, University Park, Nottingham.
- Oxford.* F. E. King, M.A., D.Sc., Ph.D., D.Phil., Dyson Perrins Laboratory, South Parks Road, Oxford.
- St. Andrews and Dundee.* J. D. M. Ross, M.B.E., M.A., D.Sc., Chemistry Department, University College, Dundee.
- Sheffield.* A. H. Lamberton, B.Sc., Ph.D., Chemistry Department, The University, Sheffield, 10.
- South Africa.* Professor W. Pugh, Ph.D., B.Sc., F.R.I.C., Chemistry Department, University of Cape Town, Rondebosch, S. Africa.
- Southampton.* K. R. Webb, B.Sc., Ph.D., University College, Southampton.
- South Wales.* Professor J. E. Coates, O.B.E., D.Sc., F.R.I.C., University College, Singleton Park, Swansea.

August, 1947

THE CHEMICAL SOCIETY

SCIENTIFIC MEETINGS DURING OCTOBER, 1947

LONDON.

Thursday, October 2nd, at 7.30 p.m.

Ernst Julius Cohen Memorial Lecture, by Professor F. G. Donnan, C.B.E., D.Sc., LL.D., F.R.S.

Thursday, October 23rd, at 7.30 p.m.

Tilden Lecture, **Crystallographic Technique and its Chemical Significance**, by Professor E. G. Cox, D.Sc.

EDINBURGH.

Thursday, October 16th, at 7.30 p.m.

Lecture, **Modern Ideas of Valency**, by Professor W. Wardlaw, D.Sc., F.R.I.C.

Joint meeting with the local sections of the Royal Institute of Chemistry and Society of Chemical Industry to be held in the North British Station Hotel.

GLASGOW.

Friday, October 31st, at 3.45 p.m.

Lecture, **From the Highest to the Lowest**, by Professor H. Nicol, Ph.D., F.R.I.C.

Joint meeting with the Alchemists' Club and the Andersonian Chemical Society to be held in the Chemistry Lecture Theatre of the University of Glasgow.

HULL.

Thursday, October 23rd, at 6 p.m.

Lecture, **Addition Polymerisation**, by Professor D. H. Hey, Ph.D., D.Sc., F.R.I.C.

Joint meeting with the Hull and District Section of the Royal Institute of Chemistry and the University College Scientific Society to be held in the University College.

MANCHESTER.

Thursday, October 9th, 1947.

Lecture, **Inorganic Catalytic Halides**, by D. F. Fairbother.

To be held in the Chemistry Department of the University.

NORTH WALES.

Thursday, October 9th, at 4 p.m.

Lecture, **DDT and Gammexane in the Control of Insect-borne Diseases**, by Sir Ian Heilbron, D.S.O., D.Sc., F.R.S.

Joint meeting with the University College of North Wales Chemical Society to be held in the Lecture Room of the Department of Chemistry, University College of North Wales, Bangor.

SHEFFIELD.

Thursday, October 30th, at 5.30 p.m.

Lecture by Professor G. R. Clemo, D.Sc., F.R.S.

Joint meeting with the University Chemical Society to be held in the Chemistry Lecture Theatre of the University.

SOUTHAMPTON.

Friday, October 24th, at 5 p.m.

Lecture, **Isotopes and Molecular Spectra**, by Professor C. K. Ingold, D.Sc., F.R.S.

Joint meeting with the Southampton University College Chemical and Physical Societies to be held in the Physics Department of University College.

PROCEEDINGS
OF THE
CHEMICAL SOCIETY

OFFICIAL ANNOUNCEMENTS

RESEARCH FUND.

A meeting of the Research Fund Committee will be held in November next. All persons who have received grants, and whose accounts have not been declared closed by the Council, are informed that reports must be received by the Society not later than November 1st, 1947.

Applications for Grants, to be made on forms obtainable from the General Secretary, must be received on or before November 1st, 1947. Applications from Fellows will receive prior consideration.

Attention is drawn to the fact that the income arising from the Donation of the Worshipful Company of Goldsmiths is principally devoted to the encouragement of research in Inorganic and Metallurgical Chemistry, and that the income from the Perkin Memorial Fund is to be applied to investigations relating to problems connected with the Coal Tar and Allied Industries.

HARRISON MEMORIAL PRIZE, 1947.

In accordance with the Trust Deed governing the Harrison Memorial Fund, the Selection Committee consisting of the Presidents of the Chemical Society, the Royal Institute of Chemistry, the Society of Chemical Industry and the Pharmaceutical Society, will proceed to make an award of the Harrison Memorial Prize in December, 1947, subject to the condition that the Selection Committee shall be of opinion that there is a candidate of sufficient distinction to warrant an award of the Prize.

The Prize, not exceeding £150, will be awarded to the chemist of either sex, being a natural born British subject and not at the time over 30 years of age, who, in the opinion of the Selection Committee, shall, during the previous 5 years, have conducted the most meritorious and promising original investigations in Chemistry and published the results of those investigations in a scientific periodical or periodicals.

Applications, five copies of which must be submitted, should contain the following information :

- (a) Name (in full).
- (b) Age (birth certificate must accompany application).
- (c) Degrees (name of University where obtained).
- (d) Other qualifications.
- (e) Experience.
- (f) Titles of published papers, with authors' names, including full references to publication.
- (g) Where research was carried out.
- (h) Testimonials and references.
- (i) Any other particulars bearing on the application.

The Selection Committee is prepared to consider applications, nominations, or information as to candidates eligible for the Prize. Any such communication must be received by :

The President,
The Chemical Society,
Burlington House,
Piccadilly, W. 1.

not later than Monday, December 1st, 1947. Candidates must not have attained the age of 30 years at this date.

NOMENCLATURE OF AMINO-ACIDS AND CARBOHYDRATES.

Enclosed with the August number of the *Journal* is a statement of certain rules on the nomenclature of stereoisomeric forms of amino-acids which have been agreed upon between the Editors of the *Journal* and of the *Biochemical Journal* after consultation with their American colleagues.

Although the rules deal specifically with amino-acids, they carry certain obvious implications with regard to the naming of stereoisomeric carbohydrates and carbohydrate derivatives.

LIST OF APPLICATIONS FOR FELLOWSHIP

(*Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries within ten days of the date of publication of the Journal for August, 1947. Such objections will be treated as confidential. The forms of application are displayed in the Library.*)

- Birch, Frederic William**, A.M.C.T. British. 1, Kirkby Avenue, Sale, Manchester. Chemist in charge of Testing Laboratory, Bleachers' Association Ltd., Blackfrais House, Parsonage, Manchester. *Signed by* : William Scholes, F. B. Lewis, C. J. Whitelegg.
- Booth, Peter Rowson**, B.Sc. (Lond.). British. 68, Erskine Hill, Golders Green, N.W. 11. Assistant Chemist, Wm. P. Hartley, Ltd., Green Walk, Tower Bridge Road, S.W. 1. *Signed by* : H. Threadgold, L. E. Campbell, C. L. Hinton.
- *Burley, (Mrs.) Elsa Anna Cesarina**, Licenciee in Chemistry (Ghent). British. St. Peter's Vicarage, Walthamstow, E. 17. *Signed by* : A. D. Mitchell, W. H. Shilling, A. E. Werner.
- Chapman, John Stocker**, A.R.I.C. British. 31, Gordon Road, Borrowash. Chemist. *Signed by* : A. C. Macfarlane, M. H. Wilcox, W. P. Dore.
- Clapp, Daniel Brennan**, B.A. (Montana), Ph.D. (Mass.). American. Office of Assistant Naval Attache for Research, 20, Grosvenor Square, W. 1. Deputy Scientific Director, London Branch Office of U.S. Naval Research. *Signed by* : H. D. Springall, A. E. Flood, J. K. N. Jones.
- Clasper, Matthew**, A.R.I.C. British. 2, Braehead Place, Saltcoats. Analytical Chemist. *Signed by* : J. W. Tait, C. R. N. Strouts, Andrew McLean.
- *Diaper, Dennis George Mayhew**. B.A. (Oxon). British. Oriel College, Oxford. Research Student. *Signed by* : J. C. Smith, Harry Irving, Ronald A. Hancock.
- Dishon, Binyamin Refael**, D.Phil. (Vienna). Palestinian. Daniel Sieff Research Institute, P.O.B. 26, Rehovot. Research chemist. *Signed by* : S. Israelashwili, Ernst Bergmann, Harold Davies.
- Dux, Eric Ferdinand William**, B.Sc. (Lond.). British. 18, St. Georges Road, E. Twickenham. Research Chemist. *Signed by* : J. Kenyon, J. W. Smith, J. C. James.
- Eaton, Richard Victor**, B.Sc. (Lond.), A.R.C.S., M.I.Chem.E., F.R.I.C. British. Royal Naval Propellant Factory, Caerwent, Chepstow. Deputy Superintendent, Royal Naval Propellant Factory. *Signed by* : H. N. Read, R. McIntyre, F. E. Wilson.
- Gilchrist, John**, M.P.S. British. 47, Delhi Street, Ormeau Road, Belfast. Pharmacist, Medical Department, Boots Ltd., Nottingham. Chief Medical Representative for Scotland and Ireland. *Signed by* : Herbert W. Pratt, R. Cobb, H. Graham.
- Grossett, John Bennett**, M.P.S. British. 142, Marchmont Road, Edinburgh, 9. Partner, Wm. King & Son, Pharmacists, 142 and 144, Marchmont Road, Edinburgh, 9. *Signed by* : Donald C. Wilson, Jas. W. Tessedale, John H. Ramsay.
- Haig, Alexander Salusbury**, B.Sc. (Reading). British. 2, Victoria Place, Stirling. Chemist, Distillers Company Ltd., Glenochil Laboratory, Clackmannanshire. *Signed by* : H. Bassett, W. G. Bennett, D. Roy Maxted.
- Hausmann, Werner**, Dr.chem., dipl.ing.chem. (Zurich). Swiss. Courtauld Institute, Middlesex Hospital, W. 1. Scholarship from Switzerland. *Signed by* : Wilfrid Lawson, Frank Dickens, Joan M. L. Stephen.
- Herold, Milos**, Chem.Eng. (Prague). Czechoslovak. 20, Na Zajezdu, Prague. Director of Research, "United Pharmaceutical Works," Prague. *Signed by* : G. Fragner, Gerald Druce, S. Sugden.
- *Hobson, John Duncan**. British. 3, Swaldale Road, Sheffield, 7. Chemistry Student. *Signed by* : R. D. Haworth, A. R. Pinder, P. R. Carter.
- James, William Robert**, B.Sc.Hons. and M.Sc. (Dunelm). British. 21, Glenbrooke Terrace, Low Fell, Gateshead, 9. Head of the Chemistry Department, The Grammar School, Gateshead. *Signed by* : R. E. Dodd, P. L. Robinson, G. R. Clemo.
- Jones, Robert**, M.Sc. (L'pool), A.R.I.C. British. 36, Judges Drive, Newsham Park, Liverpool, 6. Research chemist, J. Bibby & Sons, Ltd., Gt. Howard Street, Liverpool, 3. *Signed by* : John E. Gregory, Harold H. Hutt, B. H. Chorley.
- Mander-Jones, Burnett**, M.Sc. (Sydney). British. c/o Bank of New South Wales, Berkeley Square, W. 1. Post-graduate student. *Signed by* : Allan Maccoll, David P. Craig, R. G. Monk.
- Mathieson, Alexander McLeod**, B.Sc.Hons. (Aberd.). British. c/o Cowan, 128, Byres Road, Glasgow, W. 2. Research student, Glasgow University. *Signed by* : James D. Loudon, J. M. Robertson, J. W. Cook.

- *Mehta, Vimod Prakash**, B.Sc.Hons. and M.Sc.Tech. (Punjab). Indian. c/o Wool Industries Research Association, Headingley, Leeds, 6. Research Chemist. *Signed by* : B. H. Wilsdon, S. Blackburn, R. Consdon.
- Peeling, Eric Robert Alfred**, B.Sc. and Ph.D. (Lond.). British. University College, University Road, Leicester. Lecturer in Physical Chemistry. *Signed by* : L. Hunter, C. K. Ingold, D. J. Millen.
- Rawlinson, John Geoffrey**. British. 8, Park Parade, Cambridge. Student, Cambridge University. *Signed by* : B. C. Saunders, D. S. Payne, N. A. Iliff.
- Scarisbrick, Ronald**, B.A. and Ph.D. (Cantab.), M.R.C.V.S., A.R.I.C. British. 114, Huntingdon Road, Cambridge. Research. *Signed by* : D. J. Bell, A. C. Chibnall, A. R. Todd.
- *Sheppard, Malcolm Frederick**. British. 53, Danson Crescent, Welling. Student, King's College, London. *Signed by* : D. H. Hey, A. J. Allmand, A. D. Jenkins.
- *Spickett, Robert Geoffrey William**. British. 123, Southover, Bromley. *Signed by* : L. P. Walls, A. G. Caldwell, S. Wilkinson.
- Sundenin, Charles Eugene**, B.A. (Montana and Oxon.), Ph.D. (Rochester). American. 20, Grosvenor Square, W. 1. Scientific Liaison Officer, Office of Naval Research, U.S. Navy. *Signed by* : H. D. Springall, A. E. Flood, J. K. N. Jones.
- Tame, David Alan**, B.Sc. (Lond.), A.R.I.C. British. 14, Goodhart Way, West Wickham. Food chemist. *Signed by* : Leslie H. Lampitt, E. B. Hughes, R. W. Money.
- Taylor, Raymond George**, M.P.S. British. 48, Garden Village, Barton-on-Humber. Pharmacist. *Signed by* : H. Humphreys Jones, F. J. Manning, T. Balmforth.
- Wakkad, Salah Eldin Said El**, M.Sc. and Ph.D. (Fouad 1st Univ. Cairo). Egyptian. Fouad 1st University, Faculty of Science, Chemistry Department, Abbassia, Cairo. Lecturer in Chemistry Department. *Signed by* : A. Riad Tourky, F. G. Baddar, R. Razouk.
- *Ward, John Cameron**. British. 40, Station Approach, Wembley. Student, King's College, London. *Signed by* : D. H. Hey, John Honeyman, S. H. Harper.
- *Welch, Geoffrey Arthur**, B.Sc.Hons. (Lond.), A.R.C.S. British. 76, Pine Ridge, Carshalton. *Signed by* : Ernest R. S. Winter, B. E. Conway, Roger Parsons.
- Woodward, Leonard Ary**, M.A. (Oxon.), Ph.D. (Leipzig). British. Jesus College, Oxford. Fellow and Tutor in Chemistry. *Signed by* : Ronald P. Bell, E. J. Bowen, Richard Barrow.

UNDER SPECIAL PROVISION APPERTAINING TO CANDIDATES RESIDENT ABROAD.

- Erdem, Baha**, Dipl.Ing. (Hanover). Turkish. Karacehennem Ibrahim Sokak Nr. ii, Istanbul-Sultan Ahmet, Turkey. Lecturer in Chemistry, Istanbul University. *Signed by* : F. G. Arndt.
- Glasner, Abraham**, B.Sc. (Lond.), Ph.D. (Hebrew Univ. Jerusalem). Palestinian. The Hebrew University, Jerusalem, Palestine. Assistant, Inorganic Chemistry Department. *Signed by* : S. Israelash-wili.
- McCormack, William Brewster**, B.Sc. (Alberta). Canadian. Chemistry Department, University of Wisconsin, Madison 6, Wisconsin. Student as American Chemical Society Predoctoral Fellow. *Signed by* : S. M. McElvain, Homer Adkins.
- Tanko, Bela**, Ph.D. (Debrecen). Hungarian. Institute of Organic Chemistry, Simonyi ut 4, Debrecen, Hungary. Professor at the University, Debrecen. *Signed by* : J. Masson Gulland.
- Watt, Joseph Herbert Saltmarsh**, Major, I.A., R.A.O.C., B.Sc. (Manc.). British. Central Ordnance Depot, Kandivli, B.B. & C.I. Railway, Bombay, India. Commandant of C.O.D., Kandivli. *Signed by* : Frederick Challenger.

* Reduced subscription.

PAPERS RECEIVED

Correction.—The dates given in the *Proceedings* for July as the dates of receipt of the papers listed should read "June 6th, 1947, and July 7th, 1947".

List of papers received between July 8th, 1947, and August 19th, 1947. (This list does not include the titles of papers which have been read at a Scientific Meeting or which have appeared in the *Journal*.)

- "Investigations relating to the synthesis of patulin." By Z. FOLDI, G. FODOR, and (the late) I. DENJEN.
- "Applications of periodate oxidation to some problems of carbohydrate chemistry." By D. J. BELL.
- "Improved preparations of 3 : 3'-dinitrodiphenylamine and 3 : 3'-diaminodiphenylamine together with some derivatives." By H. H. HODGSON and D. P. DODGSON.
- "Reactions of $\alpha\beta$ -unsaturated cyclic aldehydes and ketones. Part VI. (+)-*cis*- and (-)-*trans*-Cryptol from (-)-cryptone." By D. T. C. GILLESPIE, A. KILLEN MACBETH, and J. A. MILLS.

- "The nitration of benz-1:2:3-thiadiazole; the synthesis of 7-nitro-, 5-methyl-, and 7-nitro-5-methyl-benz-1:2:3-thiadiazole with improved preparations of 1-chloro-2:6-dinitrobenzene and 2-chloro-3-nitroaniline." By H. H. HODGSON and D. P. DODGSON.
- "A new synthesis of *NN'*-diarylformamides." By W. B. WHALLEY.
- "The thermochemistry of solutions. Part V. The heats of ionisation of some organic acids." By T. L. COTTRELL, G. W. DRAKE, D. L. LEVI, K. J. TULLY, and J. H. WOLFENDEN.
- "The thermochemistry of solutions. Part VI. The heat of ionisation of succinic acid." By T. L. COTTRELL and J. H. WOLFENDEN.
- "Stilbenecarboxylic acids." By F. BELL and D. H. WARING.
- "The heats of formation of the N=N and C=N bonds." By G. E. COATES and L. E. SUTTON.
- "Electrolytic dissociation processes. Part V. The solvolytic ionisation of molecular iodine." By F. FAIRBROTHER.
- "A reaction of certain diazosulphonates derived from β -naphthol-1-sulphonic acid. Part XXV. The phthalazine reaction with bases not containing a nitro-group. Derivatives of 2'-chlorobenzene-2-naphthol-1-diazosulphonate." By C. I. BRODRICK, A. T. PETERS, and (the late) F. M. ROWE.
- "The kinetics of aromatic sulphonation reactions. Sulphonation by sulphuric acid in nitrobenzene solution." By F. J. STUBBS, C. D. WILLIAMS, and C. N. HINSHELWOOD.
- "Purpurogallin. Part I." By R. D. HAWORTH, B. P. MOORE, and P. L. PAUSON.
- "On the relative strengths of some fatty acids." By D. H. EVERETT and B. R. W. PINSENT.
- "Synthetic oestrogens related to triphenylethylene." By W. TADROS, K. FARAHAT, and J. M. ROBSON.
- "A thermochemical evaluation of the bond strengths in some carbon compounds. Part I. (Methyl carbon)-iodine and (methyl carbon)-magnesium." By H. MACKLE and A. R. UBBELOHDE.
- "The coupling reaction of cinnamyl halides. *meso*- $\alpha\beta$ -Divinyldibenzyl and the phenylvinylmethyl radical." By H. P. KOCH.
- "Molecular configuration and isomorphism in the *meso*- $\alpha\beta$ -divinyldibenzyl series." By G. A. JEFFREY, H. P. KOCH, and S. C. NYBURG.
- "Absorption spectra of dicinnamyl and some related compounds." By H. P. KOCH.
- "Studies in the azole series. Part IV. The preparation of some thiazolones." By A. H. COOK, G. HARRIS, SIR IAN HEILBRON, and G. SHAW.
- "Studies in the azole series. Part V. A synthesis of β -phenylcysteine." By A. H. COOK, G. HARRIS, and SIR IAN HEILBRON.
- "Geometrical isomerism in the styrylpyridine series." By B. D. SHAW.
- "The problem of molecular asymmetry based on isotopic differentiation of hydrogen. An attempted asymmetric synthesis by the Marckwald method." By D. J. G. IVES and (Miss) M. R. NETTLETON.
- "Some physicochemical properties of *cis*-2-chlorovinylchloroarsine." By G. H. WHITING.
- "The adsorption of water vapour on insulin and plasma albumin." By R. A. ROBINSON.
- "The structures of Hantzsch's isomeric diazo-compounds. Part II. A reaffirmation of the structural as opposed to the geometrical viewpoint with a critical review of the properties of the alleged *cis*-azobenzene." By H. H. HODGSON.
- "The formation of tartaric acid by the oxidation and hydrolysis of nitrogen tetroxide oxycelluloses." By F. S. H. HEAD.
- "Cinnolines. Part XVIII. The preparation of 3-halogeno-4-hydroxycinnolines, and halogen exchange reactions of diazotised ω -halogeno-*o*-aminoacetophenones." By K. SCHOFIELD and J. C. E. SIMPSON.
- "Acridine syntheses and reactions. Part IV. A new synthesis of aminoacridines from formic acid and diarylamines." By A. ALBERT.
- "Note on the fractionation of cerium (III) and neodymium mixtures on an ion exchange column." By B. A. LISTER and M. L. SMITH.

- “2-Methoxy*mesobenzanthrone* (caledon jade green).” By F. G. BADDAR.
- “Kationoid reactivity of aromatic compounds. Part VI. The direct amidation of *mesobenzanthrone*.” By W. BRADLEY.
- “Studies in the detoxication of catalyst poisons. Part VI. Use of a revivable filter-column.” By E. B. MAXTED.
- “Studies in the detoxication of catalyst poisons. Part VII. The self-poisoning effect in the hydrogenation of pyridine.” By E. B. MAXTED and A. G. WALKER.

LOCAL REPRESENTATIVES OF THE CHEMICAL SOCIETY

- Aberdeen.* J. M. C. Thompson, M.A., D.Phil., A.R.I.C., Chemistry Department, Marischal College, The University, Aberdeen.
- Australia.* T. Iredale, D.Sc., F.R.I.C., The University, Sydney, Australia.
- Birmingham.* L. L. Bircumshaw, M.A., D.Sc., Department of Chemistry, The University, Edgbaston, Birmingham, 15.
- Bristol.* C. E. H. Bawn, Ph.D., Chemistry Department, The University, Woodland Road, Bristol.
- Cambridge.* B. Lythgoe, Ph.D., Organic Chemistry Department, The University, Cambridge.
- Canada.* Professor W. D. McFarlane, M.A., Ph.D., Macdonald College, St. Anne de Bellevue, Quebec, Canada.
- Edinburgh.* E. G. V. Percival, D.Sc., Ph.D., F.R.I.C., Chemistry Department, King's Buildings, West Mains Road, Edinburgh.
- Eire.* Professor T. S. Wheeler, D.Sc., Ph.D., F.R.I.C., Chemical Department, University College, Upper Merrion Street, Dublin.
- Exeter.* S. J. Gregg, Ph.D., A.R.C.S., A.R.I.C., Department of Chemistry, Washington Singer Laboratories, Prince of Wales' Road, Exeter.
- Glasgow.* J. D. Loudon, Ph.D., D.Sc., A.R.I.C., Chemistry Department, The University, Glasgow, W. 2.
- Hull.* Professor Brynmor Jones, B.Sc., Ph.D., F.R.I.C., University College, Hull.
- India.* Sir Shanti S. Bhatnagar, O.B.E., D.Sc., F.R.S., The University, Lahore, Punjab, India.
- Leeds.* F. R. Goss, D.Sc., Ph.D., F.R.I.C., The University, Leeds, 2.
- Liverpool.* W. B. Whalley, B.Sc., Ph.D., Organic Chemistry Department, The University, Liverpool.
- „ L. A. Haddock, M.Sc., F.R.I.C., I.C.I., Ltd. (General Chemicals Division), Research Department, Widnes Laboratory, Widnes.
- Manchester.* A. E. Gillam, D.Sc., F.R.I.C., Chemistry Department, The University, Manchester.
- „ J. C. Withers, Ph.D., A.R.I.C., Shirley Institute, Didsbury, Manchester.
- Newcastle and Durham.* P. L. Robinson, D.Sc., F.R.I.C., Chemistry Department, King's College, Newcastle-on-Tyne.
- New Zealand.* Professor F. G. Soper, D.Sc., Ph.D., F.R.I.C., University of Otago, Dunedin, New Zealand.
- Northern Ireland.* H. Graham, D.Sc., A.R.I.C., 26, Malone Hill Park, Belfast.
- North Wales.* W. Rogie Angus, M.A., D.Sc., Ph.D., F.R.I.C., Department of Chemistry, University College of North Wales, Bangor.
- Nottingham.* D. O. Jordan, Ph.D., M.Sc., A.R.I.C., University College, University Park, Nottingham.
- Oxford.* F. E. King, M.A., D.Sc., Ph.D., D.Phil., Dyson Perrins Laboratory, South Parks Road, Oxford.
- St. Andrews and Dundee.* J. D. M. Ross, M.B.E., M.A., D.Sc., Chemistry Department, University College, Dundee.
- Sheffield.* A. H. Lamberton, B.Sc., Ph.D., Chemistry Department, The University, Sheffield, 10.
- South Africa.* Professor W. Pugh, Ph.D., B.Sc., F.R.I.C., Chemistry Department, University of Cape Town, Rondebosch, S. Africa.
- Southampton.* K. R. Webb, B.Sc., Ph.D., University College, Southampton.
- South Wales.* Professor J. E. Coates, O.B.E., D.Sc., F.R.I.C., University College, Singleton Park, Swansea.

September, 1947.

THE CHEMICAL SOCIETY

SCIENTIFIC MEETINGS DURING NOVEMBER, 1947

LONDON.

Thursday, November 6th, 1947, at 7.30 p.m.

The following papers will be read and discussed :

- “ Studies on biological methylation. Part XII. A precursor of the dimethyl sulphide evolved by *Polysiphonia fastigiata*, dimethyl-2-carboxyethylsulphonium hydroxide and its salts.” By F. Challenger and (Miss) M. I. Simpson.
- “ Attempts to prepare new aromatic systems. Part I. *cyclopentindene*. 2- and 3-phenylcyclopentanecarboxylic acids, and derived ketones.” By W. Baker and W. G. Leeds.
- “ Acridine syntheses and reactions. Part IV. A new synthesis of aminoacridines from formic acid and diarylamines.” By A. Albert.

Thursday, November 20th, 1947, at 7.30 p.m.

The following papers will be read and discussed :

- “ A thermochemical evaluation of the bond-strength in some carbon compounds. Part I. (Methyl carbon)-iodine and (Methyl carbon)-magnesium.” By H. Mackle and A. R. Ubbelohde.
- “ The heats of formation of the N=N and C=N bonds.” By G. E. Coates and L. E. Sutton.
- “ The photochemistry of selenium. Part I. The photochemical oxidation of hydrogen selenide.” By D. J. G. Ives and R. W. Pittman.

BRISTOL.

Thursday, November 6th, 1947.

Lecture, **The Oxidation of Phenols**, by Professor R. D. Haworth, D.Sc., F.R.S.

To be held in the Chemical Department of the University, Woodland Road.

CAMBRIDGE.

Friday, November 7th, 1947.

Lecture, **A Problem in Chemical Kinetics**, by Professor C. N. Hinshelwood, D.Sc., F.R.S.

Joint Meeting with Cambridge University to be held in the University Chemical Laboratory.

EDINBURGH.

Thursday, November 13th, 1947, at 7.30 p.m.

Lecture, **Diffusion in Biological Processes**, by Dr. Philip Eggleton.

Joint Meeting with the Local Sections of the Royal Institute of Chemistry and Society of Chemical Industry to be held in the North British Station Hotel.

GLASGOW.

Friday, November 21st, 1947, at 7.15 p.m.

Lecture, **Electron Transfer Reactions**, by Professor M. G. Evans, D.Sc., F.R.S.

To be held in the Royal Technical College.

HULL.

Thursday, November 20th, 1947, at 6 p.m.

Lecture, **The Structure of Proteins from the Viewpoint of the Chemist**, by Professor A. C. Chibnall, M.A., Sc.D., F.R.S.

Joint Meeting with the University College Scientific Society to be held in the University College.

LIVERPOOL.

Thursday, November 20th, 1947, at 4.30 p.m.

Lecture, **The Chemistry of Ethylenic Polymers**, by Professor H. W. Melville, D.Sc., F.R.S.

To be held in the Chemistry Lecture Theatre of the University.

NEWCASTLE and DURHAM.

Friday, November 21st, 1947, at 5 p.m.

Meeting for the reading of original papers.

To be held in the Chemistry Department, King's College, Newcastle-upon-Tyne 2.

NOTTINGHAM.

Thursday, November 6th, 1947, at 6 p.m.

Lecture, **Some Contributions of the Organic Chemist to Biological Science**, by Professor F. S. Spring, D.Sc., Ph.D.

To be held in the Chemistry Lecture Theatre of University College.

SHEFFIELD.

Thursday, November 13th, 1947, at 5.30 p.m.

Lecture, **The Hydrogen Bond in Organic Chemistry**, by Professor L. Hunter, D.Sc., Ph.D., F.R.I.C.

Joint Meeting with the University Chemical Society to be held in the Chemistry Lecture Theatre of the University.

Thursday, November 27th, 1947, at 6 p.m.

Lecture, **The Function of Sulphuric Acid in Aromatic Nitration**, by Dr. G. M. Bennett, M.A., F.R.S.

Joint Meeting with the Local Section of the Royal Institute of Chemistry to be held in the Chemistry Lecture Theatre of the University.

SOUTHAMPTON.

Friday, November 14th, 1947, at 5 p.m.

Lecture, **The Corrosion of Metals**, by Dr. U. R. Evans, M.A.

Joint Meeting with the Southampton University College Chemical Society to be held in the Physics Department of University College.

ADDITIONAL MEETING FOR OCTOBER, 1947

EIRE.

Friday, October 31st, 1947, at 7.45 p.m.

Lecture, **Oxidation of Phenols**, by Professor R. D. Haworth, D.Sc., F.R.S.

Joint Meeting with the Werner Society of Trinity College to be held in the Department of Chemistry, Trinity College, Dublin.

POSTPONED MEETINGS

LONDON.

The Tilden Lecture by Professor E. R. H. Jones which was arranged for Thursday, January 22nd, 1948, has been postponed.

ABERDEEN.

The Tilden Lecture by Professor E. R. H. Jones which was arranged for Friday, February 27th, 1948, has been postponed.

NOTTINGHAM.

The Lecture by Professor E. R. H. Jones which was arranged for Thursday, February 19th, 1948, has been postponed.

SHEFFIELD.

Professor G. R. Clemo's lecture has been unavoidably postponed from October 30th, 1947, to December 4th, 1947.

PROGRAMME OF MEETINGS OUTSIDE LONDON

With reference to the programme of meetings to be held outside London, circulated with the *Journal* for August, attention is drawn to the following amendment.

EDINBURGH.

The lecture by Professor W. F. K. Wynne-Jones, is to be held on Tuesday, February 24th, 1948, and not Thursday as stated.

PROCEEDINGS

OF THE

CHEMICAL SOCIETY

OFFICIAL ANNOUNCEMENTS

DEATHS.

The Council regret to announce the deaths of the following Fellows :

	Elected.	Died.
Govindra Chandra Das (Calcutta).....	May 2nd, 1918.	July 15th, 1946.
William Shields Myers (New York)	Feb. 18th, 1892.	Jan. 1945.
George Newbery (Brentwood).....	May 2nd, 1918.	June 14th, 1947.
Frank Clifford Whitmore (Pennsylvania)	Feb. 19th, 1931.	June, 1947.

RESEARCH FUND.

A meeting of the Research Fund Committee will be held in November next. All persons who have received grants, and whose accounts have not been declared closed by the Council, are informed that reports must be received by the Society not later than November 1st, 1947.

Applications for grants, to be made on forms obtainable from the General Secretary, must be received on or before November 1st, 1947. Applications from Fellows will receive prior consideration.

Attention is drawn to the fact that the income arising from the Donation of the Worshipful Company of Goldsmiths is principally devoted to the encouragement of research in inorganic and Metallurgical Chemistry, and that the income from the Perkin Memorial Fund is to be applied to investigations relating to problems connected with the Coal Tar and Allied Industries.

HARRISON MEMORIAL PRIZE, 1947.

In accordance with the Trust Deed governing the Harrison Memorial Fund, the Selection Committee consisting of the Presidents of the Chemical Society, the Royal Institute of Chemistry, the Society of Chemical Industry and the Pharmaceutical Society, will proceed to make an award of the Harrison Memorial Prize in December, 1947, subject to the condition that the Selection Committee shall be of opinion that there is a candidate of sufficient distinction to warrant an award of the Prize.

The Prize, not exceeding £150, will be awarded to the chemist of either sex, being a natural born British subject and not at the time over 30 years of age, who, in the opinion of the Selection Committee, shall, during the previous 5 years, have conducted the most meritorious and promising original investigations in Chemistry and published the results of those investigations in a scientific periodical or periodicals.

Applications, five copies of which must be submitted, should contain the following information :

- (a) Name (in full).
- (b) Age (birth certificate must accompany application).
- (c) Degrees (name of University where obtained).
- (d) Other qualifications.
- (e) Experience.
- (f) Titles of published papers, with authors' names, including full references to publication.
- (g) Where research was carried out.
- (h) Testimonials and references.
- (i) Any other particulars bearing on the application.

The Selection Committee is prepared to consider applications, nominations, or information as to candidates eligible for the Prize. Any such communication must be received by :

The President,
The Chemical Society,
Burlington House,
Piccadilly, W. 1.

not later than Monday, December 1st, 1947. Candidates must not have attained the age of 30 years at this date.

ELECTION OF NEW FELLOWS.

The following 116 candidates were elected Fellows of the Chemical Society on August 21st, 1947 :

Genevieve Marie-Caroline Andree Alice Audy.	Royston Arthur Walter Hill.
Francis Aylward.	Jack Sylvester Hine.
Kingsley Ferguson Baker.	Gordon Ivan Hobday.
Montefiore Barak.	Charles Horrex.
Fred Barlow.	Dennis John Thomas Howe.
Rodney Norman John Barraclough.	Norman David Huck.
Gustav Baum.	Henry Peter Hutchison.
Elsie Mabel Beaton.	Youssef Iskander.
August Frederick Henrik Blaauw.	Leon Norman Bennett Jackson.
Henry Lloyd Blachford.	Mervyn Francis Jones.
James Patrick Braidwood.	Simon Kaminsky.
Victor Bruckner.	Shafik Ali El Khishen.
Paul Maxime Augustin Cagniant.	Gertrude M. Karsten.
Charles Harold Carlisle.	Alistair Edward Hinchliffe Kilner.
Albert Carruthers.	John Patrick Koppel.
Pang Chang.	Clifford Everett Larrabee.
Philip Thomas Charlton.	Anthony Henry Lawrence.
Pater Vincent Clifton.	James Muil Leitch.
Norman Calvert Cooper.	Mollie Luscombe.
John Douglas Cox.	John McIntyre.
David Henry Curnow.	Herbert Alwyn Cochrane McKay.
Jagadish Chandra Dasgupta.	Graham Maclean.
Antonin René Jean Deluzarche.	Gerlando Marullo.
Jean Maurice Roger Deschamps.	Geoffrey Edward Graham Mattingly.
David John Drain.	Arvind Mangaldas Mehta.
Alan Charles Edwards.	Jack Learmouth Melville.
Leonard Ellison.	Edgar Archibald Morris.
Anthony Roland Emery.	Carl George Niemann.
Norman Entwistle.	Alan Hedley Norris.
Claude Douglas Essex.	Ronald Sydney Nyholm.
Dennis Frederick Evans.	Iris Winifred Preston.
Karl Heinz Fantes.	Harry Raudnitz.
Cecil Redvers Cheyney Farmer.	Youssef Riad.
Ahmad Hilmy Fath-Allah.	Melville Harries Roberts.
Donal Thomas Flood.	Kenneth Charles Rogers.
Paschal Clay Gaines.	Arthur Thomas Walter Rule.
James Joseph Gallagher.	Reginald Oliver Samuel.
Ramon Garcia.	Thomas Peter Sattler.
Otto Heinz Gellner.	Ronald Sayers.
Ronald James Gillespie.	Mohamed el Shahat.
John Golden.	James Munro Sherriff.
Ivor Lawrence Sidney Golding.	Vartkes Novanes Simonian.
Frank Haigh Goodyear.	Palghat Manuvadhya Sivaramakrishna-Ayyar.
James Edward Gowan.	George Edward Speight.
Julius Groh.	Robert Charles McKellar Stewart.
Walter Leslie Hales.	Dean Stanley Tarbell.
Rt. Hon. The Earl of Halsbury.	Alan Thompson.
Marston Lovell Hamlin.	Wilfred Robert Thompson.
William Kenneth Latham Harding.	Henry Tigerman.
Graham Harris.	Wilfrid Troup.
James Frederick Hearne.	Alan Turner.

Guiseppe Valota.
Reginald Harold Warbrook.
Jaromir Weigner.
Ruth Alice Norman Weil.
Margaret Amy Wells.
Howard Louis White.
Gordon Howard Whitfield.

Francis Eric Wild.
Ronald Winnett.
Stanley Claude Woodger.
Walter John Worboys.
Harold Knowlton Work.
Walter Frederick Wyss.
Harold Hicks Zeiss.

MEETING OF COUNCIL.

A meeting of Officers as Council was held in August 21st, 1947.

An invitation received from Professor T. S. Wheeler, Local Representative for Eire, that March 2nd, 1948, the date of the delivery of the Pedler Lecture in Dublin, be made the occasion of an official meeting of the Society, was accepted with much pleasure.

It was noted with pleasure that the Royal Society had made a grant to the Society from the Parliamentary grant in aid of Scientific Publications.

It was reported that Professor J. D. Bernal and Professor F. Paneth had agreed to represent the Society at the International Geological Congress, XVIIIth Session 1948, and that Dr. A. H. Cook had agreed to represent the Society on the Bureau of Abstracts in the place of Professor G. A. R. Kon who had resigned.

Certain formal and financial items of business were also transacted.

BRITISH STANDARDS INSTITUTION.

The following drafts of British Standards Specifications have been received for technical comment :

CJ (FCC) 1672—THIRD DRAFT BRITISH STANDARD FOR DIACETIN (GLYCERYL DIACETATE).

CJ (FCC) 1673—DRAFT REVISION OF B.S.577—HEXACHLORETHANE.

CJ (FCC) 1674—DRAFT REVISION OF B.S.576 and 578 FOR ACETIC ACID (GLACIAL, TECHNICAL, AND DILUTE).

CJ (FCC) 1675—REVISED DRAFT BRITISH STANDARD FOR PERCHLORETHYLENE.

CJ (FCC) 1676—DRAFT BRITISH STANDARD FOR *iso*PROPYL ALCOHOL (*iso*PROPANOL).

These have been placed in the Library, and Fellows wishing to make technical comment are requested to do so before December 12th, 1947, to the British Standards Institution, 28, Victoria Street, London, S.W. 1.

LIST OF APPLICATIONS FOR FELLOWSHIP

(Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries within ten days of the date of publication of the "Journal" for September, 1947. Such objections will be treated as confidential. The forms of application are displayed in the Library.)

Adams, Arthur, B.Sc. (Lond.). English. Netherley House, Rowlands Castle, Hants. Research Student, King's College, London. *Signed by* : D. H. Hey, P. C. Crofts, W. J. Hawkes.

***Auckland, Peter**. British. 10, Gleadless Avenue, Gleadless, Sheffield, 2. Research Assistant. *Signed by* : A. R. Pinder, P. R. Carter, A. Butler, F. V. Tideswell.

***Baker, Helena Nelson Bevan**. British. Swannaton, Dartmouth. Student, University College of the South-west of England. *Signed by* : H. T. S. Britton, R. King, S. J. Gregg.

***Binns, Peter James Lester**. British. 22, The Close, Lichfield. Student, Bristol University. *Signed by* : C. E. H. Bawn, E. B. Maxted, T. Malkin.

***Brown, Ronald Drayton**, B.Sc. (Melbourne). British. 500, High Street, Windsor, S. 1, Victoria. Research Student, University of Melbourne. *Signed by* : E. Heymann, W. Davies, F. N. Lahey.

Carter, Kenneth, M.R.C.S.Eng., L.R.C.P., M.P.S. British. 87, Park Avenue, Ruislip. Secretary and Research Liaison Officer, Medical Institution. *Signed by* : William Bradley, T. H. Mead, Frank Hartley.

***Comyns, Alan Edward**, B.Sc.Hons. (Lond.). British. 53, Uvedale Road, Enfield. About to enter H.M. Forces. *Signed by* : R. W. West, W. Gerrard, E. G. Cowley.

***Cooper, Peter Dodd**, B.Sc.Hons. (Lond.), A.R.I.C. British. 33, Ansell Road, S.W. 17. Post-graduate Student. *Signed by* : J. Kenyon, J. W. Smith, J. C. James.

***Cunningham, Josephine Leonora**. British. 10, West View, Chadwell Heath Lane, Romford. Junior Assistant Chemist and Assistant Librarian. *Signed by* : B. Dudley Sully, J. R. Young, Michael F. Carroll.

- Edwards, William Arthur Meredith**, B.A. and B.Sc. (Oxon.). British. 51, Ballantrae Road, Allerton, Liverpool, 18. Development Director, Imperial Chemical Industries Ltd., General Chemical Division, Liverpool. *Signed by* : D. Ll. Hammick, L. J. Burrage, L. A. Haddock.
- ***Ellis, Stuart Colin**, B.Sc. (Lond.), A.R.I.C. British. 137, Wavertree Road, Streatham Hill, S.W. 2. Research Chemist, British Leather Manufacturers Research Association. *Signed by* : Kenneth G. A. Pankhurst, M. P. Balfe, J. H. Bowes.
- Everdell, Maurice Henry**, B.Sc. and Ph.D. (Lond.). British. Chemistry Department, University College, Nottingham. Lecturer. *Signed by* : John C. Roberts, D. O. Jordan, C. C. Addison.
- ***Feuchtwanger, Heinz Lothar**. British. 68, Hodford Road, Golders Green, N.W. 11. Student, Medway Technical College, Gillingham. *Signed by* : J. Leicester, H. L. Lehmann, H. Schweitzer.
- Godding, Edmund Walter**, M.P.S. British. 5, Cedar Court, East Sheen, S.W. 14. Head of the Medical Department, The Crookes Laboratories, N.W. 10. *Signed by* : E. H. Hopkins, J. F. Wood, J. I. M. Jones.
- Hadow, Henry John**, B.Sc.Hons. (Oxon.). British. c/o R. Kingan, Esq., Room 475, 1785, Massachusetts Avenue, Washington, 6, D.C. Government Servant (Science). *Signed by* : K. Stewart, John Wright, L. T. D. Williams.
- Hargreaves, Kenneth Robert**, B.Sc.Hons. (Lond.), A.R.I.C. British. 5, Crawford Avenue, Hough Green, Widnes. Chemist. *Signed by* : J. G. Cockburn, R. Wild, D. A. S. Barnes.
- ***Hartley, James**, B.Sc.Hons. (L'pool). British. 84, Lord Street, Southport. Research Chemist. *Signed by* : C. N. Thompson, B. T. Witham, T. Backhouse.
- ***Hilton, Marjorie Lowe**, B.Sc.Hons. (Birm.). British. 36, The Chesils, Styvechale, Coventry. Research Student, Birmingham University. *Signed by* : L. L. Bircumshaw, M. Stacey, Fred Smith.
- ***Jocelyn, Peter Charles**. British. Keble College, Parks Road, Oxford. Student, Oxford University. *Signed by* : F. E. King, G. D. Parkes, Richard Barrow.
- Kelly, Thomas James**, B.Sc. (Lond.). British. 41, Winifred Road, Urmston, Manchester. Technical Assistant, Marks & Clerk, Patent Agents, 2, Pall Mall, Manchester, 2. *Signed by* : S. K. Tweedy, E. W. S. Press, A. S. Nickelson.
- Laszlo, Steven**, D.Phil. (Budapest), Chem.Eng. Hungarian. Lytton Hall, Lytton Grove, S.W. 15. Chief Chemist of Fubex Ltd. and Industrial Detergents Ltd., 27, Albemarle Street, W. 1. *Signed by* : E. R. Bugge, V. Rieder, J. Bondi.
- ***Leake, Eleanor Mary Walpole**, B.Sc.Hons. (Western Australia). Australian. Chemistry Department, University of Sydney, N.S.W. Teaching Fellow in Chemistry, University of Sydney. *Signed by* : R. J. W. Le Fèvre, Thomas Iredale, L. E. Lyons.
- ***Marrable, Christopher David**, B.Sc.Hons. (Leeds). British. 364, King's Road, Bolton, Bradford. Service with R.A.F. *Signed by* : Frederick Challenger, J. W. Baker, M. G. Evans.
- ***Miles, Leslie William Charles**, A.R.C.S. British. 45, Candover Road, Romford. Research Student, Organic Chemistry Department, Royal College of Science, S.W. 7. *Signed by* : A. L. Levy, L. N. Owen, J. H. Chapman.
- Morgan, Phillip**, M.A. (Cantab.). British. 46, Mount Park Road, Ealing, W. 5. Assistant Editor, "British Plastics". *Signed by* : Gwyn Williams, J. B. Wilkinson, N. J. L. Megson.
- Ostle, Joseph Carleton**, B.Sc.Tech. (Manc.), A.R.I.C. British. c/o Ferguson Bros., Ltd., Holme Head Works, Carlisle. Research and Development Manager. *Signed by* : H. J. T. Ellingham, R. Leslie Collett, Alex. Findlay.
- Ramanayya, Samayajula Venkata**, M.Sc. (Andhra), F.R.I.C. Indian. Seshadri Sastry Street, Governospeta, Berwada. Chief Chemist, Andhra Vegetable Oil Products Ltd. *Signed by* : R. Leslie Collett, H. J. T. Ellingham, D. W. Kent-Jones.
- Randles, Norman John**, M.P.S. British. 112, Wipton Lane, Heavitree, Exeter. Chief Pharmacist to The Royal Devon and Exeter Hospital. *Signed by* : David J. Williams, Fredk. Highley, J. B. Gilliss.
- Richardson, Ronald Wilfred**, B.Sc.Hons. (Lond.), A.R.C.S., A.R.I.C. British. 63/65, High Street, Halstead. Research Chemist, Organic Chemistry Department, Imperial College, S.W. 7. *Signed by* : E. R. H. Jones, Ralph A. Raphael, K. H. Sargent.
- Roberts, Enid Elizabeth**. British. 6, Southville Road, Newport. Student. *Signed by* : J. Ormston, W. D. Williams, H. B. Watson.
- Seal, Eli**, B.Sc.Hons. and M.Sc. (Wales). British. 49, Corningham Road, N.W. 11. Chief Chemist, McDougalls Ltd., Millwall Docks, E. 14. *Signed by* : Thomas H. Fairbrother, D. W. Kent-Jones, A. J. Amos.
- Shaw, Bernard**, B.Sc.Hons. (Lond.), A.R.I.C. British. 100, Kerrysdale Avenue, Barkby Road, Leicester. Research Student. *Signed by* : J. Masson Gulland, John C. Roberts, D. O. Jordan.
- ***Sherwood, Alan Frank**. British. 33, Mereworth Drive, Plumstead, S.E. 18. Research Assistant. *Signed by* : D. A. Sutton, S. H. Bell, D. R. Duncan.
- ***Singleton, Jack Howard**, B.Sc. (Lond.), A.R.C.S. British. 12, Station Road, Huncoat, Accrington. Research Student. *Signed by* : Roger Parsons, Ernest Winter, J. F. Herringshaw.
- Smith, Peter**, B.Sc.Hons. and Ph.D. (Lond.), A.R.C.S., D.I.C., A.R.I.C. British. 86, Lenton Boulevard, Nottingham. Assistant Lecturer in Organic Chemistry, University College, Nottingham. *Signed by* : E. R. H. Jones, Ralph A. Raphael, K. H. Sargent.
- ***Smith, Ronald Gregson**. British. 1, Seafield Road, New Ferry, Wirral. Laboratory Tester. *Signed by* : W. T. Sedley, R. Mackinder, A. French.

- Snijders, Cornelis Jacobus**, Chem.Eng. (Delft). Dutch. c/o N.V. Research, Velperweg, 76, Arnhem. Chemist, Chief Central Analytical Laboratory of the N.V. Research. *Signed by* : Donald G. Barkla, Eliot Stone, J. Kastelein.
- ***Tholen, John Clifford**. British. No. 1 Flat, Winchester House, 13, Osborne Road, Windsor. Student, University of London. *Signed by* : W. H. J. Vernon, D. V. N. Hardy, K. W. Pepper.
- ***Thompson, Alan**, B.Sc. (Manc.). British. Brooklyn, 93, Preston New Road, Blackburn. Service with R.A.F. *Signed by* : A. E. Gillam, T. G. Halsall, J. K. N. Jones.
- Trautner, Edward Michel**, B.Sc. (Munich), M.D. (Berlin). British. Department of Botany, High Street, Oxford. Research in medicinal drugs. *Signed by* : Noel L. Allport, Wm. Mitchell, H. M. Perry.
- Verdiere, Edward**, Ph.D. (Vienna). Stateless (formerly Austrian). 45, Mortimer Court, Abbey Road, N.W. 8. Research Chemist. *Signed by* : Arthur M. Janser, Francis J. Griffin, John A. Silk.
- Wentworth, John Michael**, M.A. (Cantab.), A.M.I.E.E. British. 11, Victoria Road, Harrogate. Engineer, Hess Products Ltd., 4, Albion Street, Leeds. *Signed by* : Walter J. Rees, A. O. Jones, F. G. Mann.
- Whitehouse, John Colston**, M.P.S. British. 46, St. Davids Hill, Exeter. Assistant Pharmacist, Royal Devon and Exeter Hospital. *Signed by* : David J. Williams, Fredk. Highley, J. B. Gillies.

UNDER SPECIAL PROVISION APPERTAINING TO CANDIDATES RESIDENT ABROAD.

- Amin, Indubhai Bhailalbai**, M.R.C.S.Eng., L.R.C.P. Indian. Jyoti Bungalow, Alkapuri, Baroda. Technical Adviser, The Alembic Chemical Works Co., Ltd., Baroda. *Signed by* : M. B. Amin.
- Aylett, Kenneth Clarence**, Ph.C., M.P.S. British. Senior Pharmacist, R.N. Hospital, Malta. Admiralty Pharmacist. *Signed by* : L. Crombie, Stewart A. Hood.
- Coster, David Gordon**, M.Sc. (N.Z.), A.R.I.C. British. 7, Avon Street, Island Bay, Wellington. Chemist. *Signed by* : J. K. Dixon, G. D. Gemmill.
- Eekelan, Marie van**. Dutch. Catharijnesingel, 59, Utrecht. Director, Central Institute. Nutrition Research. *Signed by* : A. L. Bacharach, Leslie J. Harris.
- Jenny, Erwin F.** Swiss. Rutlistrasse 2, Basle. Chemistry Student. *Signed by* : T. Reichstein.
- Johnson, Irving**, A.B. (Cornell), M.A. and Ph.D. (Columbia). American. Department of Chemistry, Oklahoma A. and M. College, Stillwater, Oklahoma. Assistant Professor of Chemistry. *Signed by* : Martin Seidman.
- Felton, Lloyd Cresser**, M.A. and Ph.D. (Princeton). American. c/o Hynson, Westcott and Dunning, Inc., 1030, North Charles Street, Baltimore, 1, Maryland. Research Chemist. *Signed by* : Hugh S. Taylor.
- Horning, Marjorie G.**, A.B. (Goucher), M.S. and Ph.D. (Michigan). American. Department of Chemistry, University of Pennsylvania, Philadelphia, 4, Pa. Research Chemist. *Signed by* : Lee Irvin Smith, C. F. Koelsch.
- McGrew, Frank Clifton**, M.Sc. (Nebraska), Ph.D. (Illinois). American. 530, Marsh Road, Wilmington 281, Delaware. Research Supervisor, Chemical Department, E.I. du Pont de Nemours & Co., Wilmington. *Signed by* : J. M. Tinker.
- Mason, Cecil George Willmot**, M.Sc. (N.Z.), A.N.Z.I.C., A.M.I.Chem.E. British. Technical Executive, Boracure (N.Z.) Ltd., P.O. Box 632, Wellington. Research Chemist. *Signed by* : J. K. Dixon.
- Owen, John Drummond**, Diploma in Chemical Engineering and Industrial Chemistry (Sydney Technical College). British. 252, Wardell Road, Marrickville West, N.S.W. Chemical Engineer, R. Fowler Ltd., Pottery Manufacturers, Fitzroy Street, Marrickville, N.S.W. *Signed by* : George C. Gould.
- Wilds, Alfred Lawrence**, M.S. and Ph.D. (Michigan). American. Department of Chemistry, University of Wisconsin, Madison, 6, Wisconsin. Professor of Organic Chemistry. *Signed by* : Homer Adkins, S. M. McElvain.

* Reduced Annual Subscription.

PAPERS RECEIVED

List of papers received between August 20th, 1947, and September 15th, 1947. (This list does not include the titles of papers which have been read at a Scientific Meeting or which have appeared in the *Journal*.)

- "The structure of certain polysulphides and polythionates. Part II. The crystal structure of $\beta\beta'$ -di-iododiethyl trisulphide." By I. M. DAWSON and J. M. ROBERTSON.
- "Synthetic oestrogens related to triphenylethylene." By WADIE TADROS.
- "The infra-red examination of some terpenoid substances." By H. W. THOMPSON and D. H. WHIFFEN.
- "The infra-red spectrum of keten." By N. GRIMKE DRAYTON and H. W. THOMPSON.

- "Infra-red analysis of stereoisomers of benzene hexachloride." By D. H. WHIFFEN and H. W. THOMPSON.
- "Vibrational spectra and thermodynamic properties of fluorochloromethanes." By H. W. THOMPSON and R. B. TEMPLE.
- "Infra-red spectra of fluorinated hydrocarbons. II. Methyl fluoroform." By H. W. THOMPSON and R. B. TEMPLE.
- "Infra-red spectra of fluorinated hydrocarbons. III." By H. W. THOMPSON and R. B. TEMPLE.
- "The conversion of mepacrine and similar derivatives of 5-aminoacridines into thioacridones by the action of hydrogen sulphide." By R. S. ASQUITH, D. LL. HAMMICK, and P. L. WILLIAMS.
- "The ultra-violet absorption spectra of some 1-aminobenzthiazole and 1-imino-2-methyl-1:2-dihydrobenzthiazole derivatives." By J. R. EDISBURY, R. F. HUNTER, and A. D. SCOTT.
- "Occurrence of betunlic acid in the platene bark." By V. BRUCKNER, J. KOVÁCS, and I. KOCZKA.
- "The isolation of the hitherto unknown *anti*-diazosulphonates in the naphthalene series, with improved preparations of 2- and 4-nitro- and of 4-chloro-1-naphthylamine." By H. H. HODGSON and DONALD BAILEY.
- "The condensation of fluorene with acetone. Part IV. Synthesis of 2:4-dimethyl-fluoranthene." By JAMES FORREST and S. HORWOOD TUCKER.
- "Some derivatives of 4-styrylpyrimidine." By W. C. J. ROSS.
- "2:4:6-Triamino-4-(*p*-aminostyryl)pyrimidine." By W. C. J. ROSS.
- "Studies on phosphorylation. Part IV. Further studies on the use of dibenzyl chlorophosphonate and the examination of certain alternative phosphorylation methods." By F. R. ATHERTON, H. T. HOWARD, and A. R. TODD.
- "The preparations of 2:2'-dichloro-4:4'-dinitrodiphenyl sulphide and of 2'-chloro-2-amino-4:4'-dinitrodiphenyl sulphide, with some derivatives, and attempts at cyclisation to thiazines." By H. H. HODGSON, DOUGLAS P. DODGSON, and ERNEST W. SMITH.
- "The system hydrogen chloride-dioxan-water at 25°." By R. A. ROBINSON and R. C. SELKIRK.
- "The constitution of a specific somatic polysaccharide from *M. tuberculosis* (human strain)." By (SIR) W. N. HAWORTH, P. W. KENT, and M. STACEY.
- "The constitution of a lipid-bound polysaccharide from *M. tuberculosis* (human strain)." By (SIR) W. N. HAWORTH, P. W. KENT, and M. STACEY.
- "Viscosity and molecular association." Part I." By L. H. THOMAS.
- "Viscosity and molecular association. Part II. A relationship between viscosity and vapour pressure of associated liquids." By L. H. THOMAS.
- "The crystal structure of 1:12-benzperylene: a quantitative X-ray investigation." By J. G. WHITE.
- "The conversion of carbon dioxide to acetylene on the scale 2—20 micromoles." By W. J. ARROL and RAYMOND GLASCOCK.
- "The structure of ozone." By M. J. S. DEWAR.
- "3:4-Benzfluorenes. Part II. Further observations on the effect of groups on their fission with alkalis." By F. GHALI BADDAR and M. GINDY.
- "The application of the method of electrostatic energy differences. Part I. Stereochemistry of the diterpenoid resin acids." By D. H. R. BARTON and (in part) G. A. SCHMEIDLER.
- "The adaptation of bacteria to acridine derivatives—the influence of pH." By A. R. PEACOCKE and C. N. HINSHELWOOD.
- "Benzimidazole analogues of paludrine." By F. E. KING, R. M. ACHESON, and P. C. SPENSLEY.
- "*cyclo*Hexa-1:3-dione: a reagent for the characterisation of aldehydes." By F. E. KING and D. G. I. FELTON.
- "The mechanism of substitution at a saturated carbon atom." By I. DOSTROVSKY, E. D. HUGHES, and C. K. INGOLD.

- “ Observations on the absorption spectra of terpenoid compounds. Part VI. *iso*Cadinene.”
By A. E. GILLAM, D. G. MOSS, and T. F. WEST.
- “ Studies in the azole series. Part VI. The interaction of α -aminonitriles and *isothio*-
cyanates.” By A. H. COOK, J. D. DOWNER, and (SIR) IAN HEILBRON.
- “ Phenylpropionic acids. Part II. The dimerisation of *p*-nitro- and *p*-methoxy-phenyl-
propionic acids.” By F. G. BADDAR and L. S. EL-ASSAL.
- “ 1-Phenylnaphthalenes. Part I. The synthesis of 2' : 5-dimethoxy-, 4' : 7-dimethoxy-,
and 4' : 7-dimethyl-1-phenylnaphthalene-2 : 3-dicarboxylic acids.” By F. G. BADDAR,
L. S. EL-ASSAL, and M. GINDY.
- “ The action of nitric acid on polycyclic indole derivatives. Part XIV. Acenaphthylene-
(7' : 8' : 2 : 3)indole.” By B. BANNISTER and S. G. P. PLANT.
- “ Synthetical and stereochemical investigations of reduced cyclic bases. Part II. The
cis- and *trans*-decahydroquinolines.” By F. E. KING, T. HENSHALL, and R. L. St. D.
WHITEHEAD.

October, 1947

THE CHEMICAL SOCIETY

SCIENTIFIC MEETINGS DURING DECEMBER, 1947

LONDON.

Thursday, December 4th, 1947, at 7.30 p.m.

Pedler Lecture, **Recent Developments in the Vitamin A Field**, by Sir Ian Heilbron, D.S.O., D.Sc., F.R.S.

Wednesday, December 17th, 1947, at 5 p.m., at The Royal Institution, Albemarle Street, W. 1.

Lecture, **Chemical Personalities a Century Ago**, by Professor John Read, D.Sc., F.R.S.

Thursday, December 18th, 1947, at 7.30 p.m.

Discussion, **Infra Red Spectra**, arranged by Dr. H. W. Thompson, F.R.S.
(Details to be announced later.)

BIRMINGHAM.

Monday, December 8th, 1947, at 4.30 p.m.

Lecture, **Mechanisms of Oxidation**, by Dr. W. A. Waters, M.A., F.R.I.C.
To be held in the Main Chemistry Lecture Theatre of the University, Edgbaston.

LIVERPOOL.

Thursday, December 11th, 1947, at 4.30 p.m.

Lecture, **Hormones and Enzyme Action**, by Professor F. G. Young, D.Sc., Ph.D.
To be held in the Chemistry Lecture Theatre of the University.

MANCHESTER.

Friday, December 5th, 1947.

Lecture, **Industrial Uses of Atomic Energy**, by Sir Wallace Akers, C.B.E., B.A.
Joint Meeting with the local sections of the Royal Institute of Chemistry and the Society of Chemical Industry to be held in the Chemistry Department of the University.

NOTTINGHAM.

Thursday, December 4th, 1947, at 6 p.m.

Meeting for the reading of original papers.

To be held in the Chemistry Lecture Theatre of University College.

SHEFFIELD.

Thursday, December 4th, 1947, at 5.30 p.m.

Lecture, **The Bearing of the Isotopes of Carbon, Hydrogen, Oxygen, and Nitrogen on Organic Chemistry**, by Professor G. R. Clemo, D.Sc., F.R.S.

Joint Meeting with the University Chemical Society to be held in the Chemistry Lecture Theatre of the University.

PROCEEDINGS
OF THE
CHEMICAL SOCIETY

**Minutes of a
SCIENTIFIC MEETING**

held at Burlington House, Piccadilly, W. 1, on Thursday, October 2nd, 1947, at 7.30 p.m.

The President, PROFESSOR C. N. HINSHELWOOD, Sc.D., F.R.S., was in the Chair.

MINUTES.

The Minutes of the Scientific Meeting held on Thursday, June 5th, 1947, were confirmed and signed.

FORMAL ADMISSION OF FELLOWS.

The following were admitted Fellows of the Society :

V. Vouk, S. R. C. Hughes, Harry H. Topper, D. G. O'Sullivan, F. O. Isaac, John G. F. Miller, D. H. Curnow, Frank C. Cooper, C. C. Evans, Annie M. Brown, V. H. Simonian, C. H. Carlisle, A. G. Davies, G. Howard Smith, M. A. Wells, B. Das Jain, W. A. Snow, E. M. Beaton, G. C. Lowrison, R. C. Rogers, F. Poppelsdorf, A. Nicholson, J. H. Linford, A. Colin-Russ, Peter J. Rennie.

ERNST JULIUS COHEN MEMORIAL LECTURE.

The President called upon Professor F. G. Donnan, C.B.E., M.A., F.R.S., a Past President of the Society, to deliver his memorial lecture on Professor Ernst Julius Cohen.

At the conclusion of the lecture a vote of thanks to Professor Donnan proposed by the President was carried with acclamation.

**Minutes of a
SCIENTIFIC MEETING**

held at Burlington House, Piccadilly, W. 1, on Thursday, October 23rd, 1947, at 7.30 p.m.

Professor S. Sugden, D.Sc., F.R.S., Vice President, was in the Chair.

MINUTES.

The Minutes of the Scientific Meeting held on Thursday, October 2nd, 1947, were read, and were confirmed and signed.

FORMAL ADMISSION OF FELLOWS.

The following were admitted Fellows of the Society : Marjorie Treadgold, H. E. Slaap, J. Munro Sherriff, Kathleen Lonsdale, Malcolm F. Sheppard, J. C. Ward, Bernard W. V. Hawes, Elsa Burley, J. Bourne, L. Ellison, A. S. Lindsey, Ronald A. Hancock, H. H. Smith, W. J. Oldham, D. R. Goddard, R. J. Gillespie, C. W. L. Bevan, J. R. C. Duke, P. R. Booth.

TILDEN LECTURE.

The Chairman called upon Professor E. G. Cox, D.Sc., to deliver his Tilden Lecture entitled, "Crystallographic Technique and its Chemical Significance."

At the conclusion of the lecture a vote of thanks to Professor Cox proposed by Dr. Kathleen Lonsdale, F.R.S., was carried with acclamation.

OFFICIAL ANNOUNCEMENTS
DEATHS.

The Council regret to announce the deaths of the following Fellows :

	Elected.	Died.
Harry Thornton Calvert (W. 1)	April 22nd, 1903.	Sept. 23rd, 1947.
Kurt Heller (Aberystwyth)	March 16th, 1944.	July 28th, 1947.
Victor Lefebure (N.W. 11).....	June 19th, 1913.	Aug. 13th, 1947.
Frederick Alfred Mason (Pinhoe)	Feb. 18th, 1915.	Sept. 19th, 1947.

ELECTION OF NEW FELLOWS.

The following 38 candidates were elected Fellows of the Chemical Society on October 2nd, 1947.

Frederick William Birch.	Robert Jones.
Peter Rowson Booth.	William Brewster McCormack.
Elsa Anna Cesarina Burley.	Burnett Mander-Jones.
John Stocker Chapman.	Alexander McLeod Mathieson.
Daniel Brennan Clapp.	Vinod Prakash Mehta.
Matthew Clasper.	Eric Robert Alfred Peeling.
Dennis George Mayhew Diaper.	John Geoffrey Rawlinson.
Binyamin Refael Dishon.	Ronald Scarisbrick.
Eric Ferdinand William Dux.	Malcolm Frederick Sheppard.
Richard Victor Eaton.	Robert Geoffrey William Spickett.
Baha Erdem.	Charles Eugene Sundenlin.
John Gilchrist.	David Alan Tame.
Abraham Glasner.	Bela Tanko.
John Bennett Grossett.	Raymond George Taylor.
Alexander Salusbury Haig.	Salah Eldin Said El Wakkad.
Werner Hausmann.	John Cameron Ward.
Milos Herold.	Joseph Herbert Saltmarsh Watt.
John Duncan Hobson.	Geoffrey Arthur Welch.
William Robert James.	Leonard Ary Woodward.

INCREASED PRICES OF PUBLICATIONS.

Subscription renewal notices for the year 1948 are now being despatched to Fellows paying separate and joint subscriptions.

The particular attention of all Fellows is drawn to the revised prices of publications which the Council have decided should be adopted for the coming year.

Rising costs of printing, paper, and the generally increased cost of all administrative services have made it necessary to draw heavily upon the special reserve fund which was built up during the War to meet the additional cost of publishing the accumulated papers of wartime research without extra cost to the Fellows.

Withdrawals from the reserve fund must be very substantially reduced and the Council have decided that this can only be done by raising the Fellowship price of the Society's publications.

In addition, in the case of separate Fellows of the Society the mode of choice of publications has been amended and will be as follows :

(i) *Fellows paying a subscription of £3 10s.*

To receive publications to the value of £3 without further charge, and to make additional purchases over and above this amount at the reduced rate to Fellows.

(ii) *Fellows paying the reduced subscription of £1 15s.*

To receive publications to the value of £1 10s. without further charge, and to make additional purchases at the reduced rate to Fellows up to a further £1 10s.

The Council feel that the adoption of this new method of choice for separate Fellows is the most equitable arrangement since an increased expenditure will only be incurred by those Fellows who take the more expensive publications and the extra amount which they will be called upon to pay will be in proportion to the number of publications they desire to receive. In fact Fellows who elect to receive the *Journal*, *Annual Reports*, and *Quarterly Reviews* will not be required to pay more than the basic subscription of £3 10s.

The new prices of publications will also apply to Fellows paying a joint subscription. Under the Joint Scheme, however, the cost incurred by the Fellow is already related to the cost of the publications selected.

SURVEY OF SCIENTIFIC AND TECHNOLOGICAL MAN-POWER.

The Report on Scientific Man-Power (Cmd. 6824) which was based on the work of a Committee presided over by Sir Alan Barlow, emphasises the need for increasing the output of qualified scientists and technologists. In order that the part which Universities and Technical Colleges will be called upon to play in this connection may be estimated with greater accuracy than has been possible hitherto, the Government Advisory Council on Scientific Policy has asked for the help of the Technical and Scientific Register of the Ministry of Labour and National Service in measuring the existing man-power in the Scientific and Technological fields. The Ministry is anxious that every qualified chemist should receive the letter and accompanying questionnaire which has recently been issued. Fellows, who for any reason did not receive these documents, are asked to apply for them to the Technical and Scientific Register, York House, Kingsway, London, W.C. 2, or to any Regional Appointments Office of the Ministry.

GENERAL SECRETARY.

Mr. J. R. Ruck Keene, M.B.E., B.A., has been appointed by the Council of the Society to be General Secretary in succession to Mr. L. R. Batten, O.B.E., LL.B., B.Sc., Barrister at Law, who is resigning to take up a business appointment. Mr. Ruck Keene will assume his duties on November 1st, 1947.

ANNUAL REPORTS 1946.

The *Annual Reports* on the Progress of Chemistry for 1946 have been published and have been despatched to Fellows who have placed orders. Copies are available to Fellows on application at 5s. 6d.

DISCUSSION ON MACROMOLECULES.

Reprints are available of the Discussion on "Some Aspects of the Chemistry of Macromolecules" which took place in April, 1946. The price is 2s. 6d. post free. Copies may be obtained on application to the General Secretary.

MEETING OF COUNCIL.

A Meeting of Council was held on Thursday, October 2nd, 1947.

A resolution was placed on record tendering to the President the Council's congratulations on the success of the Centenary Celebrations and recording their most cordial appreciation of the valuable services which he rendered the Society on that important occasion.

In reply the President accepted the congratulations on behalf of the Officers and Staff of the Society.

Reports from the Publication Committee and the Joint Library Committee were adopted.

It was reported that contributions to the Centenary Fund now amounted to £30,306 12s. 3d.

It was also reported that the meeting in Manchester on February 12th, 1948, would be an official meeting of the Society.

Certain items of a formal and financial nature were also considered.

MEETINGS OUTSIDE LONDON

NORTH WALES.

"DDT and Gammexane in the Control of Insect-borne Disease", by Sir Ian Heilbron, D.S.O., D.Sc., F.R.S.

A joint meeting with the University College of North Wales Chemical Society was held in the Department of Chemistry, Bangor, on Thursday, October 9th, 1947, at 4 p.m., Mr. J. Rodney Quayle being in the Chair. Sir Ian Heilbron dealt with the causes which led to the large-scale production of these insecticides, to differences encountered in their manufacture, and to large-scale field experiments which have been, and are being, undertaken in various parts of the world.

After a brief discussion, Professor E. D. Hughes moved, and Mr. J. C. Charlton seconded, a vote of thanks to the lecturer, which was enthusiastically carried by the large audience.

EDINBURGH.

"Modern Ideas on Valency", by Professor W. Wardlaw, D.Sc., F.R.I.C.

A joint meeting with the local sections of the Royal Institute of Chemistry and Society of Chemical Industry was held in the North British Station Hotel, Edinburgh, on October 16th, 1947, at 7.30 p.m., Dr. E. G. V. Percival, Local Representative, being in the Chair. Professor Wardlaw gave a most stimulating address which provoked a lively discussion.

A vote of thanks to the lecturer proposed by Dr. T. R. Bolam was heartily endorsed by the large audience.

LIST OF APPLICATIONS FOR FELLOWSHIP

(*Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries within ten days of the date of publication of the Journal for October, 1947. Such objections will be treated as confidential.*)

- ***Armitage, John Brian.** British. Ashfield, Pateley Bridge, Harrogate. Chemistry student, University of Manchester. *Signed by* : A. E. Gillam, F. Fairbrother, H. D. Springall.
- Austin, Albert William.** Ph.C., M.P.S. British. 12, Woodlands Avenue, Parkgate Road, Chester. Pharmacist to County Mental Hospital, Upton, Chester, and Dispenser to Messrs. Cheers and Hopley Ltd., Chemists, Chester. *Signed by* : H. B. Watson, J. Ormston, W. D. Williams.
- Bannister, Leonard Charles,** M.Sc. (L'pool), Ph.D. (Cantab.), F.R.I.C. British. Clarendon, St. Mary's Road, Huyton, Liverpool. Chief Chemist, Prescot Works, British Insulated Callenders Cables Ltd. *Signed by* : H. J. T. Ellingham, Ulick R. Evans, A. McGookin.
- ***Bradbury, John Harvey.** B.Sc.Tech. (Manc.), A.M.C.T. British. 10, Limefield, Preston New Road, Blackburn. Assistant Brewer. *Signed by* : Alan L. Vale, Norman Blakebrough, Thomas Kennedy Walker.
- Caglioti, Vincenzo.** Italian. Istituto Chimico Universita, Rome. Professor of Chemistry. *Signed by* : R. G. W. Norrish, F. P. Bowden, E. A. Moelwyn-Hughes, Charles S. Gibson.
- Cavell, Alexander Corry,** M.A. and B.Sc. (Oxon). British. Fircroft, Uppingham, Rutland. Senior Science Master, Uppingham School. *Signed by* : B. C. Saunders, G. D. Parkes, F. E. King.
- ***Clark, Alec Vincent,** B.Sc. (Lond.), A.R.I.C. British. 52, George Road, S. Chingford, E. 4. Chemist. *Signed by* : G. H. Watson, U. Shapiro, Kenneth G. A. Cock.
- ***Davis, Brenda Marguerite,** B.Sc.Hons. (Lond.). British. 45, Lime Avenue, Leigh-on-Sea. Research Chemist. *Signed by* : David W. Mathieson, W. G. Leeds, W. W. Cuthbertson.
- Gautier, Alec Armand,** Ph.D. (Edin.), Dipl.Chem.Eng. (Zurich). Swiss. 43, Ovington Square, S.W. 3. Manager, Pharmaceutical Department, Sandoz Products Ltd., W. 1. *Signed by* : Charles Walker, J. Madinaveitia, B. Arthur Hems.
- Granville, Alexander,** B.Sc.(N.U.I.), A.R.I.C. Irish. 196, Iveragh Road, Whitehall, Dublin. Director, Syntheses Ltd., Dunsinea Works, Ashtown, Dublin. *Signed by* : J. J. Wilson, James F. Williams, Thomas McLachlan.
- ***Hamlet, John Christopher.** British. 15, Glenwood Grove, Woodsmoor, Stockport. Student, Manchester University. *Signed by* : A. E. Gillam, F. Fairbrother, H. D. Springall.
- Hampson, Basil Lockwood,** B.Sc. (Lond.), A.R.I.C. British. 90, Tudor Avenue, Watford. Research Chemist. *Signed by* : K. E. Howlett, R. Wilkinson, Harold N. Thomas.
- ***Herriott, Patricia Mollie,** B.Sc.Hons. (Lond.). British. 1, Rodney Street, Liverpool, 3. Analytical Chemist. *Signed by* : J. A. Stock, C. G. Lyons, J. D. Bower.
- ***Kleinfrova, Hana.** Czech. 35, Carlton Hill, St. John's Wood, N.W. 8. Research student, London University. *Signed by* : W. Gerrard, H. J. S. King, I. L. Pinar.

- Kurzer, Frederick**, B.Sc. and Ph.D. (Lond.). British. 75, Gloucester Terrace, Hyde Park, W. 2. Assistant Lecturer, King's College of Household and Social Science, W. 8. *Signed by*: H. Burton, C. Dorée, J. W. Spence.
- McDonald, Iain**, B.Sc. (South Africa). British. Jesus College, Oxford. Student. *Signed by*: F. E. King, J. C. Smith, R. F. Barrow.
- McGhie, James Francis**, B.Sc. and Ph.D. (Lond.). British. 12, Silecroft Road, Bexleyheath. Lecturer. *Signed by*: H. K. Dean, J. H. Skellon, C. Dorée, J. F. J. Dippy, H. O. Jenkins.
- Moss, Denis George**, M.Sc. (Manc.). British. 17, Birchfield Road, Manchester, 13. Demonstrator in Chemical Pathology, University of Manchester. *Signed by*: A. E. Gillam, Norman Entwistle, Harold Varley.
- Nasini, Antonio**, Ph.D. (Cantab.). Italian. Istituto Chimico-Universita, Corso M. D'Azeglio 48, Torino. Professor of General and Inorganic Chemistry. *Signed by*: R. G. W. Norrish, F. P. Bowden, E. A. Moelwyn-Hughes, Charles S. Gibson.
- ***Parker, Derek Brian Valentine**, B.Sc.(Lond.). British. 6, Tretawn Gardens, Mill Hill, N.W. 7. Development Research Chemist, British Drug Houses, Ltd. *Signed by*: Charles Simons, E. J. Chappel, M. Pianka.
- ***Phillip, Derek Anderson**, B.Sc. (Lond.). British. Oakwood, 31, The Chase, Bromley. Experimental Officer, Government Laboratory. *Signed by*: D. H. Hey, W. J. Hawkes, A. G. Lidstone.
- Philpot, Joan Peake**, M.Sc. (Lond.), A.R.I.C. British. 1a, Manor Avenue, Hounslow. *Signed by*: F. Thomas, C. H. R. Elston, A. E. James.
- ***Rothwell, Eric**. British. Lower Makinson Farm, Horwich, nr. Bolton. Student, University of Sheffield. *Signed by*: Alex H. Lamberton, M. I. Gillibrand, B. P. Moore.
- ***Rundo, John**. British. 8, Morris Road, Farnborough, Hants. Sergeant Instructor, R.E.M.E. *Signed by*: A. A. Eldridge, A. H. Cook, L. S. Theobald.
- Singer, Derek David**. British. 9, Aberdeen Mansions, Kenton Street, Russell Square, W.C. 1. Research student, London University. *Signed by*: W. Gerrard, I. L. Finar, H. J. S. King.
- ***Small, Charles Theodore**. British. George Street, Kingsclere, Newbury. Student, University College, Southampton. *Signed by*: K. R. Webb, E. Cartmell, N. B. Chapman.
- Somerton, Kenneth Wallace**, M.B.E., B.Sc.Hons. (Birm.). British. 101, Anderton Park Road, Moseley, Birmingham, 13. Research graduate. *Signed by*: L. L. Bircumshaw, W. N. Haworth, M. Stacey.
- ***Swan, John Melvin**, B.Sc. (Melbourne). British. London House, Guildford Street, Bloomsbury, W.C. 1. Research student, Imperial College. *Signed by*: J. B. Willis, G. Harris, A. H. Cook.
- ***Thomas, Robert**, B.Sc. (Lond.). British. 15, Eglantine Road, East Hill, S.W. 18. Research Student. *Signed by*: J. W. Smith, J. H. Skellon, J. W. Spence.
- Veibel, Stig Erik**, Dr.Phil. (Copenhagen). Danish, 83, Sølvgade, Copenhagen, K. Professor of Organic Chemistry at the Technical University of Denmark. *Signed by*: A. H. Cook, L. N. Owen, I. M. Heilbron.
- ***Wacks, Norma**, B.Sc. (Lond.). British. 197, Lea Bridge Road, Leyton, E. 10. Laboratory Assistant. *Signed by*: H. Holness, K. G. Latham, M. R. Porter.
- Wilson, Raymond Ernest**, B.Sc. (Lond.). British. Astonwood, 12, Broadway, Leyland, Lancs. Analytical Chemist. *Signed by*: J. H. Wood, E. Taylor, J. N. Aldington.

UNDER SPECIAL PROVISION APPERTAINING TO CANDIDATES RESIDENT ABROAD.

- Bobtelsky, Max**, Dr.Phil. (Berne). Palestinian. Hebrew University, Jerusalem. Professor and Head of the Department of Inorganic and Analytical Chemistry, Hebrew University. *Signed by*: A. Fodor.
- Donnelly, Victor John Forsythe**, M.B.E. British. c/o J. MacG. Love & Co., P.O. Box 899, Johannesburg. Director, Detergents (Pty.) Ltd., Cape Town and Johannesburg. Technical Consultant. *Signed by*: C. L. Foxcroft.
- Johnson, Erling Bjarne**, Chem.Eng. (Oslo). Norwegian. Odda Smelteverk A/S Odda. Chief Chemist. *Signed by*: J. R. Park.
- Jordan, Joseph**, M.Sc. and Ph.D. (Jerusalem). Palestinian. 7, Chancellor Avenue, Jerusalem. Assistant in the Department of Inorganic and Analytical Chemistry, The Hebrew University, Jerusalem. *Signed by*: A. Fodor.
- King, John A.**, A.B. (Indiana), M.S. and Ph.D. (Minnesota). American. Warner Institute for Therapeutic Research, 113 West 18th Street, New York, 11. Director of Organic Research. *Signed by*: Lee Irvin Smith.
- Kosolapoff, Gennady Michael**, B.S. (Cooper), M.S. and Sc.D. (Michigan). American. Monsanto Chemical Co., Dayton 7, Ohio. Research chemist with the Monsanto Chemical Co. *Signed by*: David T. Mowry.
- Latif, Albert**, B.Agr., M.Sc. Egyptian. Faculty of Agriculture, Fouad I University, Cairo. Lecturer in Chemistry. *Signed by*: R. Moubasher, Wadie Tadros.

* Reduced annual subscription.

PAPERS RECEIVED

List of papers received between September 16th and October 6th, 1947. (This list does not include the titles of papers which have been read at a Scientific Meeting or which have appeared in the *Journal*.)

- "2-Hydroxy- and 2-amino-derivatives of 6- and 7-methylquinoxalines." By B. C. PLATT.
- "The action of methanol on naphthalene in the presence of aluminium silicate. Formation of 2-methylnaphthalene." By N. M. CULLINANE and S. J. CHARD.
- "Melanin and its precursors. Part I. The synthesis of 5:6:5':6'-tetrahydroxy-indigo." By J. HARLEY-MASON.
- "Reactions of unsaturated compounds. Part VI. The reaction of α -diisobutylene with organic peracids." By A. BYERS and W. J. HICKINBOTTOM.
- "Reactions of unsaturated compounds. Part VII. The mechanism of the formation of abnormal products from olefins by the action of organic peracids." By W. J. HICKINBOTTOM.
- "Reactions of unsaturated compounds. Part VIII. The course of the oxidation of diisobutylene by chromic acid." By A. BYERS and W. J. HICKINBOTTOM.
- "A reaction of certain diazosulphonates derived from β -naphthol-1-sulphonic acid. Part XXVI. Phthalazine and isoindolinone compounds derived from aniline." By A. T. PETERS and (the late) F. M. ROWE.
- "The oxidation of hydrobromic acid by chromic acid in the presence of manganous sulphate." By M. BOBELSKY and A. GLASNER.
- "Esters containing phosphorus. Part VII. Substituted diamino fluorophosphine oxides." By R. HEAP and B. C. SAUNDERS.
- "The correlation of vibrational absorption spectra with molecular structure." By H. W. THOMPSON.
- "The preparation of the halogeno-phenylacetic acids." By N. CAMPBELL and J. E. MCKAIL.
- "Derivatives of 2:4:6-trinitrotoluene. Mono-reduction of polynitro-compounds." By G. D. PARKES and A. C. FARTHING.
- "Reaction of ketocholanic acids with bromoacetic ester and cyanoacetic ester." By F. SMITH and M. WEBB.
- "Oxidation of methyl cholate with aluminium *tert.*-butoxide." By A. S. JONES, M. WEBB, and F. SMITH.
- "Further studies on the sydnones." By R. A. EADE and J. C. EARL.
- "The galactomannan of carob-seed gum (gum gatto)." By E. L. HIRST and J. K. N. JONES.
- "The bromination of 1:5-dihydroxynaphthalene and its methyl ethers." By E. BERGMANN.
- "The deposition of carbon on vitreous silica." By R. ILEY and H. L. RILEY.
- "Derivatives of 2:4:6-trinitrotoluene. (a) The nitration of polynitrostilbenes, (b) β -2:4:6-trinitrophenylethyl alkyl (aryl) sulphides." By F. CHALLENGER and P. H. CLAPHAM.
- "2:6-Dimethylpyridine and *p*-nitrobenzaldehyde." By M. WEIZMANN and SH. PINCHAS.
- "Silica and its hydrates. Part I. The synthesis of certain rhythmic forms." By A. C. COPISAROW and M. COPISAROW.

THE CHEMICAL SOCIETY

SCIENTIFIC MEETINGS DURING JANUARY, 1948

LONDON.

Thursday, January 8th, 1948, at 7.30 p.m.

Lecture, **Structural Relationships in the Natural Unsaturated Higher Fatty Acids**,
by Professor T. P. Hilditch, D.Sc., F.R.S.

Thursday, January 22nd, 1948, at 7.30 p.m.

The following papers will be read and discussed :

- “Solution and Diffusion of Gases in Polystyrene at High Pressures.” By
D. M. Newitt and K. E. Weale.
“Physical Properties and Chemical Constitution.” Parts X to XV by A. I.
Vogel. Parts XVI and XVII by G. H. Jeffery and A. I. Vogel.

BIRMINGHAM.

Friday, January 30th, 1948, at 4.30 p.m.

Lecture, **Recent Developments in the Application of Infra-Red Spectroscopy to
Chemical Problems**, by Dr. G. B. B. M. Sutherland, M.A.

To be held in the Main Chemistry Lecture Theatre of the University, Edgbaston.

EDINBURGH.

Thursday, January 22nd, 1948, at 7.30 p.m.

Lecture, **Some Recent Developments in Alkaloid Chemistry**, by Dr. H. T. Openshaw,
M.A.

Joint meeting with the Local Sections of the Royal Institute of Chemistry and Society of
Chemical Industry to be held in the North British Station Hotel.

EIRE.

Wednesday, January 21st, 1948.

Lecture, **Santonin**, by Professor Wesley Cocker, Ph.D., F.R.I.C.

Joint meeting with the Irish Chemical Association to be held in the Department of Chemistry,
Trinity College, Dublin.

HULL.

Friday, January 30th, 1948, at 6 p.m.

Lecture, **Phthalocyanines and Related Recent Developments in Pigments**, by Dr. R. P.
Linstead, C.B.E., M.A., F.R.S.

MANCHESTER.

Thursday, January 8th, 1948, at 6.30 p.m.

Lecture, **Crystallisation of Fertilisers**, by Dr. M. P. Applebey, M.B.E.

Joint meeting with the local Sections of the Society of Chemical Industry and Royal Institute of Chemistry to be held in the Chemistry Lecture Theatre of the University.

Thursday, January 29th, 1948, at 7 p.m.

Lecture, **Nitration by Mixtures of Nitric and Sulphuric Acids**, by Dr. G. M. Bennett, F.R.S.

Joint meeting with the local sections of the Royal Institute of Chemistry and the Society of Chemical Industry to be held in the Engineer's Club.

NORTH WALES.

Thursday, January 29th, 1948, at 5.30 p.m.

Lecture, **Reactions of the Ethylene Bond**, by Professor D. H. Hey, Ph.D., D.Sc., F.R.I.C.

Joint meeting with the University College of North Wales Chemical Society to be held in the Lecture Room of the Department of Chemistry, University College of North Wales, Bangor.

NOTTINGHAM.

Thursday, January 22nd, 1948, at 6 p.m.

Lecture, **Some Aspects of Aromatic Substitution**, by Professor Brynmor Jones, Ph.D., F.R.I.C.

To be held in the Chemistry Lecture Theatre of University College.

SHEFFIELD.

Thursday, January 29th, 1948, at 5.30 p.m.

Lecture, **Stereochemical Regularities in Catalytic Reactions**, by Dr. R. P. Linstead, C.B.E., M.A., F.R.S.

Joint meeting with the University Chemical Society to be held in the Chemistry Lecture Theatre of the University.

SOUTHAMPTON.

Friday, January 23rd, 1948, at 5 p.m.

Lecture, **Synthetic Organic Chemistry in Relation to Biology**, by Professor E. C. Dodds, M.V.O., F.R.S.

Joint meeting with the Southampton University College Chemical Society to be held in the Physics Lecture Theatre of University College.

SOUTH WALES.

Monday, January 19th, 1948, at 6 p.m.

Lecture, **The Physical Chemistry of Some Vacuum Metallurgical Processes**, by Dr. Philipp Gross.

Joint meeting with the University College of Swansea Students' Chemical Society to be held at University College.

PROCEEDINGS
OF THE
CHEMICAL SOCIETY

Minutes of a
SCIENTIFIC MEETING

held at Burlington House, Piccadilly, W. 1, on Thursday, November 6th, 1947, at 7.30 p.m.

MINUTES.

The Minutes of the Scientific Meeting held on Thursday, October 23rd, 1947, were read, and were confirmed and signed.

FORMAL ADMISSION OF FELLOWS.

The following were admitted Fellows of the Society : Sir Wallace Akers, C. T. Beer.

SCIENTIFIC COMMUNICATIONS.

The following papers were read and discussed :

“ Studies on biological methylation. Part XII. A precursor of the dimethyl sulphide evolved by *Polysiphonia fastigiata*, dimethyl-2-carboxyethylsulphonium hydroxide and its salts.” By F. Challenger and (Miss) M. I. Simpson.

“ Attempts to prepare new aromatic systems. Part I. *cyclo*Pentindene. 2- and 3-Phenylcyclopentanecarboxylic acids, and derived ketones.” By W. Baker and W. G. Leeds.

“ Acridine syntheses and reactions. Part IV. A new synthesis of aminoacridines from formic acid and diarylamines.” By A. Albert.

Minutes of a
SCIENTIFIC MEETING

held at Burlington House, Piccadilly, W. 1, on Thursday, November 20th, 1947, at 7.30 p.m.

MINUTES.

The Minutes of the Scientific Meeting held on Thursday, November 6th, 1947, were read, and were confirmed and signed.

FORMAL ADMISSION OF FELLOWS.

The following were admitted Fellows of the Society : R. V. G. Ewens, W. W. Byford, R. S. Nyholm, E. M. Gutmann, B. E. Evans.

SCIENTIFIC COMMUNICATIONS.

The following papers were read and discussed :

“ A thermochemical evaluation of the bond-strength in some carbon compounds. Part I. (Methyl carbon)-iodine and (Methyl carbon)-magnesium.” By H. Mackle and A. R. Ubbelohde.

“ The Heats of formation of the N=N and C=N bonds.” By G. E. Coates and L. E. Sutton.

“ The photochemistry of selenium. Part I. The photochemical oxidation of hydrogen selenide.” By D. J. G. Ives and R. W. Pittman.

OFFICIAL ANNOUNCEMENTS

DEATHS.

The Council regret to announce the deaths of the following Fellows :

	Elected.	Died.
John George Baxter (Gravesend)	May 4th, 1905.	Oct. 4th, 1947.
John Masson Gulland (Nottingham) (Hon. Sec. 1933—36, Council 1941—44)	Dec. 7th, 1922.	Oct. 26th, 1947.
Alfred William Harvey (West Hythe)	Feb. 5th, 1900.	Aug. 22nd, 1947.
Arthur Percy Hoskins (Belfast)	Mar. 4th, 1886.	Mar. 27th, 1947.
Stephen Miall (N.W. 8)	May 3rd, 1923.	Oct. 12th, 1947.
Frank Shedden (Weston-Super-Mare)	Apr. 15th, 1943.	Sept. 29th, 1947.
James Smith (Liverpool)	May 2nd, 1901.	Oct. 30th, 1947.

CONGRATULATIONS.

The congratulations of Council have been conveyed to Frank Weiss Traphagen (Chicago) who has completed 60 years of Fellowship.

ELECTION OF NEW FELLOWS.

The following 55 candidates were elected Fellows of the Chemical Society on November 6th, 1947 :

Arthur Adams.	Steven Laszlo.
Indubhai Bhailalbai Amin.	Eleanor Mary Walpole Leake.
Peter Auckland.	Frank Clifton McGrew.
Kenneth Clarence Aylett.	Christopher David Marrable.
Helena Nelson Bevan Baker.	Cecil George Willmot Mason.
Peter James Lester Binns.	Leslie William Charles Miles.
Ronald Drayton Brown.	Phillip Morgan.
Kenneth Carter.	Joseph Carleton Ostle.
Alan Edward Comyns.	John Drummond Owen.
Peter Dodd Cooper.	Samayajula Venkata Ramanayya.
David Gordon Coster.	Norman John Randles.
Josephine Leonora Cunningham.	Ronald Wilfred Richardson.
William Arthur Meredith Edwards.	Enid Elizabeth Roberts.
Marie van Eekelan.	Eli Seal.
Stuart Colin Ellis.	Bernard Shaw.
Maurice Henry Everdell.	Alan Frank Sherwood.
Lloyd Crosser Felton.	Jack Howard Singleton.
Heinz Lothar Feuchtwanger.	Peter Smith.
Edmund Walter Godding.	Ronald Gregson Smith.
Henry John Hadow.	Cornelis Jacobus Snijders.
Kenneth Robert Hargreaves.	John Clifford Tholen.
James Hartley.	Alan Thompson.
Marjorie Lowe Hilton.	Edward Michael Trautner.
Marjorie G. Horning.	Edward Verdiere.
Erwin F. Jenny.	John Michael Wentworth.
Peter Charles Jocelyn.	John Colston Whitehouse.
Irving Johnson.	Alfred Lawrence Wilds.
Thomas James Kelly.	

MEETING OF COUNCIL.

A meeting of Council was held on Thursday, November 6th, 1947.

A Report from the Publication Committee was adopted.

Dr. G. Baddeley was unanimously appointed joint Local Representative for Manchester in succession to Dr. A. E. Gillam, who had resigned.

The question of alternative accommodation for the Society was again under consideration.

Professor D. H. Hey was appointed as one of the Society's representatives on the Chemical Council in succession to Professor W. Wardlaw whose period of office expires at the end of the current year.

The Report of the Bureau of Abstracts for the year 1946 was received.

Certain items of a formal and financial nature were also dealt with.

NOMENCLATURE OF OPTICAL ISOMERS.

The following rules for scientific communications in the *Journal* have been approved by the Publication Committee :

(a) Prefixed small capital letters *D* and *L* shall be used to indicate the relationship of optical isomers to any recognised reference compound.

(b) Where the configuration of a compound has not been definitely established, or where it is desired to indicate optical rotation rather than configuration, the prefixes *dextro* and *laevo* or (+) and (−) shall be used.

LIBRARY.

The Library will be closed for the Christmas Holiday from 1 p.m. on Tuesday, December 23rd, until 10 a.m. on Monday, December 29th.

ROYAL INSTITUTE OF CHEMISTRY, EAST ANGLIAN SECTION.

An invitation has been extended to Fellows of the Society resident in East Anglia by the Honorary Secretary of the East Anglian Section of the Royal Institute of Chemistry (Dr. J. Williams, F.R.I.C., 42 Clapgate Lane, Ipswich) to attend the meetings of that section held in East Anglia.

BRITISH STANDARDS INSTITUTION.

The following draft of British Standards Specification has been received for technical comment :

CJ (OSC) 2635—Draft British Standard for Liquid Toilet Soap—General Purposes Quality (Minimum Standard).

This has been placed in the Library, and Fellows wishing to make technical comment are requested to do so before January 28th, 1948, to the British Standards Institution, 28, Victoria Street, London, S.W. 1.

MEETINGS OUTSIDE LONDON**BRISTOL.**

“The Oxidation of Phenols,” by Professor R. D. Haworth, D.Sc., F.R.S.

A joint meeting with the local sections of the Royal Institute of Chemistry, the Society of Chemical Industry, and the University Chemical Society was held in the Chemistry Department of the University on November 6th, 1947.

Professor Haworth discussed the general types of oxidation reaction of phenols including biological applications. After consideration of the dehydrogenation of *isoeugenol*, the lecturer emphasised the importance of propylphenols in the chemistry of natural products, and described the conversion of ferulic acid into a lactone of the lignan type. He outlined a mechanism of the derivation of terpenoid structures by fusion of the aromatic nucleus of propylphenols, and concluded with an account of recent work on purpurogallin.

EDINBURGH.

“Diffusion in Biological Processes,” by Dr. Phillip Eggleton.

A joint meeting with the Society of Chemical Industry and the Royal Institute of Chemistry was held on November 13th, 1947, in the North British Station Hotel, with Dr. W. M. Ames in the Chair.

Dr. Phillip Eggleton dealt with the diffusion of salts, histidine, urea, carnosine, glucose, etc., into and out of muscle under various conditions, and the question of the diffusion of gases such as nitrogen and carbon dioxide out of animal tissue when the pressure was rapidly reduced was also dealt with.

A discussion followed and Dr. Illingworth proposed a vote of thanks to the lecturer which was enthusiastically received.

EIRE.

"The Oxidation of Phenols," by Professor R. D. Haworth, D.Sc., F.R.S.

A joint meeting with the Werner Society was held in the Department of Chemistry, Trinity College, Dublin, on October 31st, 1947. Professor E. A. Werner presided.

Professor Haworth discussed the oxidation reaction of phenols involving (a) the introduction of additional atoms of oxygen and the formation of polyhydroxy-compounds and semiquinones, (b) the removal of hydrogen atoms with the production of quinones, peroxides, and derivatives of diphenyl, and (c) the fission of the aromatic nucleus.

Some important biological applications including the probable relationship of tyrosine with homogentisinic acid, adrenaline, thyroxine, and melanin were noted, and reference was made to the rearrangement of the semiquinones. After consideration of the dehydrogenation of isoeugenol, the lecturer emphasised the importance of propylphenols in the chemistry of natural products and described experiments which had led to the conversion of ferulic acid into a lactone of the lignan type. A possible mechanism for the derivation of terpenoid structures by the fusion of the aromatic nucleus of propylphenols was outlined and the lecturer concluded with an account of recent work on purpurogallin. The phenylcyclopentadienone formula of Willstätter and Heise was now untenable and strong degradative and synthetical evidence has been obtained in favour of a benzylcycloheptatrienolone structure. The mechanism of the conversion of pyrogallol into purpurogallin was briefly discussed.

A vote of thanks for this extremely interesting lecture was proposed by Professor R. A. O'Meara and seconded by Professor T. S. Wheeler.

SHEFFIELD.

"The Hydrogen Bond in Organic Chemistry", by Professor L. Hunter, D.Sc., F.R.I.C.

A joint meeting with the University Chemical Society was held in the Chemistry Lecture Theatre of the University on November 13th, 1947, with Professor R. D. Haworth, D.Sc., F.R.S., in the Chair.

Professor Hunter gave a historical sketch of the evidence for the existence of hydrogen bonds, proceeded to deal with the methods available for their detection, and finally gave a stimulating account of his own work on association and mesohydric tautomerism.

Following a discussion, a vote of thanks proposed by Dr. A. H. Lamberton and seconded by Mr. S. E. Miles was accorded heartily by the meeting.

LIST OF APPLICATIONS FOR FELLOWSHIP

(*Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries within ten days of the date of publication of the "Journal" for November, 1947. Such objections will be treated as confidential. The forms of application are displayed in the Library.*)

Allen, Maurice, B.Sc. (Lond.). British. 64, Leyton Crescent, Beeston. Demonstrator in Inorganic Chemistry, University College, Nottingham. *Signed by* : D. O. Jordan, C. C. Addison, J. M. Creeth.

***Arnold, Benjamin Harry**, B.Sc.Tech. (Manc.), Assoc.M.C.T. British. Tinnakilly, Ladythorn Road, Bramhall, nr. Stockport. Demonstrator in Chemical Technology, College of Technology, Manchester. *Signed by* : J. Kenner, R. F. Garwood, G. Baddeley.

Baastad, Finn Hoel, B.Sc. (Dun.). Norwegian. Grandeveien 5, Bygdøy, Oslo, Norway. Statens teknologiske institut, Oslo. *Signed by* : G. R. Clemo, Richard Raper, P. L. Robinson, W. M. Madgin.

***Bannister, Frank Patrick**. British. 23, Chester Road, Stockton Heath, nr. Warrington. Student, Manchester University. *Signed by* : A. E. Gillam, Colin Campbell, F. Fairbrother.

Beckett, John Christopher, B.Sc. (Lond.). British. 81, Henry Road, West Bridgford. Demonstrator in Chemistry, University College, Nottingham. *Signed by* : D. O. Jordan, B. D. Shaw, W. L. Hales.

Brooks, Leon James, A.R.I.C. British. 11, Lodge Villas, Woodford Green. Chief Chemist, Messrs. Henry Clark & Sons Ltd. *Signed by* : H. W. Keenan, Eric A. Bevan, H. J. T. Ellingham.

***Bu'lock, John Desmond**. British. 5, Swineford Road, Helsby, *via* Warrington. Student, Cambridge University. *Signed by* : B. Lythgoe, B. C. Saunders, Peter Sykes.

- Clarke, Alexander Robert Maclaren.** British. c/o Westminster Bank, Sandgate Road, Folkestone. Student of Chemistry. *Signed by* : J. Kenyon, A. Houston, J. C. James.
- ***Coote, Donald Richard.** British. 162, Westbrooke Road, Welling. Student. *Signed by* : D. H. Hey, V. Gold, D. W. G. Style.
- ***Cordes, Elsa Mary.** British. 44, Lewes Road, North Finchley, N. 12. Research Student. *Signed by* : W. Gerrard, H. J. S. King, I. L. Finar.
- Cotterill, Joseph Charles,** Assoc. M.C.T. British. Rayleigh Lodge, 217, Barnsole Road, Gillingham. Experimental Officer, Ministry of Supply, Chemical Inspection Department. *Signed by* : H. I. Stonehill, J. Leicester, R. G. Monk.
- ***Davison, Peter Maurice.** British. 137, Dobsroft Road, Sheffield, 7. Student, Queen Mary College, London. *Signed by* : J. R. Partington, V. Petrow, R. F. Hudson.
- ***Duffield, Joyce Alice,** B.Sc. (Lond.). British. 98, Redcliffe Gardens, Kensington, S.W. 10. Research Assistant to the Professor of Organic Chemistry, King's College of Household and Social Science. *Signed by* : H. Burton, A. Jackman, H. A. Rees.
- Duthie, James Betley,** British. St. John's College, Oxford. Student. *Signed by* : F. E. King, H. W. Thompson, C. N. Hinshelwood.
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PAPERS RECEIVED

List of papers received between October 7th, 1947, and November 15th, 1947. (This list does not include the titles of papers which have been read at a Scientific Meeting or which have appeared in the *Journal*.)

- "Some syntheses in the benzquinoline, benzacridine, and phenanthridine series." By A. ALBERT, D. J. BROWN, and H. DUEWELL.
- "Studies in the azole series. Part VII. A new route to α -amino- β -thiol acids." By R. CHATTERJEE, A. H. COOK, (SIR) IAN HEILBRON, and A. L. LEVY.
- "Studies in the azole series. Part VIII. The interaction of α -amino-nitriles and carbethoxyisothiocyanate." By C. W. CAPP, A. H. COOK, J. D. DOWNER, and (SIR) IAN HEILBRON.
- "Rearrangement of *N*-triphenylmethyl-*o*-toluidine." By D. V. N. HARDY.
- "Monothioethylene glycol and thiodiglycol." By F. N. WOODWARD.
- "Some reactions of ethylene sulphide and a new method of preparation of vicinal dithiols." By E. M. MEADE and F. N. WOODWARD.
- "Benzylidene guanosine." By (the late) J. MASSON GULLAND and W. G. OVEREND.
- "The constitution of yeast ribonucleic acid. Part XII. Synthesis of cytidine-2' phosphate." By (the late) J. MASSON GULLAND and H. SMITH.
- "The constitution of yeast ribonucleic acid. Part XIII. The synthesis of diuridine-2' : 2' phosphate." By (the late) J. MASSON GULLAND and H. SMITH.
- "Studies in selective extraction and adsorption. Part I. Selective solvents for ethylene chlorohydrin." By CH. WEIZMANN, E. BERGMANN, E. F. CHANDLEY, H. STEINER, M. SULZBACHER, and E. ZIMKIN.
- "Selective extraction and selective adsorption. Part II. The isolation of ethylene chlorohydrin by adsorption." By CH. WEIZMANN, M. SULZBACHER, and R. PARISER.
- "Studies on selective adsorption and extraction. Part III. The adsorption of acetone, butyl alcohol, and 2 : 3-butylene glycol from dilute solutions." By CH. WEIZMANN, E. BERGMANN, M. SULZBACHER, and E. R. PARISER.
- "Synthesis of some asymmetric naphthalene and acenaphthene hydrocarbons." By B. R. BROWN and D. LL. HAMMICK.
- "The formylation of amines with ethyl formate." By J. P. E. HUMAN and J. A. MILLS.
- "Trityl derivatives of *d*-arabofuranose." By G. J. HALLIBURTON and R. J. MCLROY.
- "The sedimentation of thymus nucleic acid in the ultracentrifuge." By R. CECIL and A. G. OGSTON.
- "The crystal structure of ethylene dinitramine." By F. J. LLEWELLYN and F. E. WHITMORE.
- "The structure of diketene: potentiometric and conductivity measurements." By A. WASSERMANN.
- "Structure of the dextran synthesised from sucrose by a new strain of *betacoccus arabinosaceus*." By M. STACEY and G. SWIFT.
- "The constitution of a levan produced from sucrose by *pseudomonas mors-prunorum* (Wormald)." By VIOLET E. GILBERT and M. STACEY.
- "Some physical properties of the specific polysaccharides from the types I, II, and III pneumococcus." By B. R. RECORD and M. STACEY.

- “Ultracentrifugal and diffusion characteristics of methylated glycogen.” By B. R. RECORD.
- “The application of the method of molecular rotation differences to steroids. Part V. Olefinic unsaturation at the 7 : 8 position.” By D. H. R. BARTON and J. D. COX.
- “The application of the method of molecular rotation differences to steroids. Part VI. Concerning neosterol.” By D. H. R. BARTON and J. D. COX.
- “A preparation of lepidine.” By D. LL. HAMMICK and B. H. THEWLIS.
- “The fission of non-enolisable ketones by potassium *tert.*-butoxide.” By G. A. SWAN.
- “A convenient laboratory preparation for anhydrous hydrazine.” By H. J. BARBER and W. R. WRAGG.
- “The preparation of 2 : 3-dimercaptopropanol from 2 : 3-dichloropropanol.” By H. R. ING.
- “Some derivatives of thionaphthen.” By F. CHALLENGER and P. H. CLAPHAM.
- “The addition of hydrogen sulphide to 2-phenyl- Δ^2 -oxazoline and benzoylethyleneimine : attempted synthesis of fused thiazolidinebutyroazlactone ring systems.” By A. A. GOLDBERG and W. KELLY.
- “The chemistry of bacteria. Part I. The synthesis of hydroxyindoles.” By R. J. BEER, K. CLARKE, H. G. KHORANA, and A. ROBERTSON.
- “Experiments on the synthesis of rotenone and its derivatives. Part XV.” By J. H. RICHARDS, A. ROBERTSON, and J. WARD.
- “The synthesis of some α -amino-acids.” By J. ELKS, B. A. HEMS, and (MISS) BRENDA E. RYMAN.
- “Some 5-azaquinoxalines and 4-azabenzimidazoles.” By V. PETROW and J. SAPER.
- “1 : 1 : 1-Trichloro-2 : 2-di-(*p*-aminophenyl)ethane.” By I. E. BALABAN and M. B. LEVY.
- “Studies of the autoxidation of tetralin. Part I. Investigation of autoxidation products.” By A. ROBERTSON and W. A. WATERS.
- “Studies of the autoxidation of tetralin. Part II. The decomposition of tetralin hydroperoxide.” By A. ROBERTSON and W. A. WATERS.
- “Studies of the autoxidation of tetralin. Part III. An interpretation of the kinetics of autoxidation.” By A. ROBERTSON and W. A. WATERS.
- “4-Aminocinnoline.” By KINGSLEY BAKER.
- “Chemotherapeutic agents of the sulphone type. Part III. Effect of homologation on the antibacterial activity of *p*-methylsulphonylbenzamidine and *p*-methylsulphonylbenzylamine hydrochlorides.” By H. S. FORREST, A. T. FULLER, and J. WALKER.
- “Chemotherapeutic agents of the sulphone type. Part IV.” By H. S. FORREST and J. WALKER.
- “Compounds related to penicillic acid. Part III. Synthesis of penicillic acid.” By R. A. RAPHAEL.
- “Solution and diffusion of gases in polystyrene at high pressures.” By D. M. NEWITT and K. E. WEALE.
- “Some examples of the Schmidt rearrangement.” By W. G. H. EDWARDS and V. PETROW.
- “The preparation of 4 : 4'-diamino-2 : 2'-dinaphthyl and 4 : 4'-dihydroxy-2 : 2'-dinaphthyl.” By H. H. HODGSON and S. DIXON.
- “The replacement of the diazonium by the nitro-group. Part IV. Decompositions involving neutral solutions of diazonium salts, with facile preparations of *o*- and *p*-dinitrobenzenes.” By H. H. HODGSON, F. HEYWORTH, and E. R. WARD.
- “Addition of thiol compounds to double-bonds. Part I. Preparation of tertiary mercaptoacids.” By Z. FÖLDI and J. KOLLONITSCH.
- “An improved method of preparing glycollide.” By A. SPORZYŃSKI, W. KOCAY, and H. V. A. BRISCOE.
- “Amidines. Part IX. Preparation of substituted amidines from ketoxime sulphonates and ammonia or amines.” By P. OXLEY and W. F. SHORT.
- “Synthetic antimalarials. Part XXVIII. An alternative route to N¹-aryl-N⁵-alkyl-diguanides.” By F. H. S. CURD, J. A. HENRY, T. S. KENNY, A. G. MURRAY, and F. L. ROSE.

- “Synthetic antimalarials. Part XXIX. The preparation of some N¹-aryl-N²-alkyl-N⁵-alkyl- and -dialkyl-diguanides.” By A. F. CROWTHER, F. H. S. CURD, (MISS) D. N. RICHARDSON, and F. L. ROSE.
- “Note on composition, pressure, and temperature relationships in binary azeotropic systems.” By O. REDLICH.
- “The kinetics of photochemical oxidation with dichromate. Part I. The oxidation of glycerol.” By K. WEBER and S. AŠPERGER.
- “A synthesis of *dl*-desthiobiotin and some related compounds.” By G. SWAIN.
- “The condensation of 2 : 3-dimethyl-1 : 3-butadiene and *p*-benzoquinone.” By M. LORA TAMAYO and J. L. LEON.
- “Derivatives of trishydroxymethylnitromethane.” By G. FORT and A. MCLEAN.
- “Condensation of nitromethane with aldehydes. Derivatives of 1-nitro-3-penten-2-ol.” By G. FORT and A. MCLEAN.
- “Addition of thiol compounds to double bonds. Part II. Addition of hydrogen sulphide to azlactones.” By Z. FÖLDI.
- “Properties of some simple oxides and spinels at high temperatures.” By D. J. M. BEVAN, J. P. SHELTON, and J. S. ANDERSON.
- “New syntheses of heterocyclic compounds. Part IX. Tetrahydrophenanthridines.” By B. L. HOLLINGSWORTH and V. PETROW.

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