

THE CHEMICAL SOCIETY

NOTICE OF FORTHCOMING SCIENTIFIC MEETINGS

MEETINGS IN LONDON.

Thursday, April 16th, at 4.30 p.m.

Sir Joseph J. Thomson Memorial Lecture, by the Right Honourable Lord Rayleigh, D.Sc., F.R.S., to be held at the Royal Institution, Albemarle Street, W. 1. The meeting is open to Fellows and their guests; cards of admission will not be issued.

Thursday, May 21st, at 4.30 p.m.

Tilden Lecture, by Professor R. D. Haworth, D.Sc., Ph.D., entitled "The Chemistry of the Lignan Group of Natural Products."

MEETING OUTSIDE LONDON.

BRISTOL.

Thursday, May 14th, at 6.30 p.m.

Tilden Lecture, by Professor R. D. Haworth, D.Sc., Ph.D., entitled "The Chemistry of the Lignan Group of Natural Products," to be held in the Department of Chemistry of the University.

PAGES MISSING FROM 3 TO 14

PROCEEDINGS

OF THE

CHEMICAL SOCIETY.

MEETINGS OUTSIDE LONDON.

LECTURE AT BANGOR, MARCH 6th.

A joint meeting of the Society with the Chemical Society of the University College of North Wales, Bangor, was held in the Chemistry Lecture Theatre of the College at 5.30 p.m. on March 6th, with Professor J. L. Simonsen in the Chair. Mr. C. R. Bury, M.Sc., B.A., discussed the remarkable properties of soap as a detergent and as a colloid in a most interesting lecture on "Soap and Allied Colloids." A cordial vote of thanks by Mr. J. G. T. Brown, seconded by Mr. W. P. Davies, was enthusiastically carried.

LECTURE AT CARDIFF, FEBRUARY 27th.

A meeting of the Society was held jointly with the Cardiff Section of the Institute of Chemistry and the South Wales Section of the Society of Chemical Industry at 5.30 p.m. on Friday, February 27th, in the Chemistry and Physics Lecture Theatre, University College, Cathays Park, Cardiff, with Mr. S. Dixon in the Chair. Professor H. V. A. Briscoe delivered a lecture on "Chemical Methods of attacking Certain Biological Problems," during which he described his investigations into the effects of inorganic dusts on the grain-weevil.

An interesting discussion followed, in which Messrs. S. Dixon and V. Rawson, and Drs. D. P. Evans, V. R. Sharma, and W. T. H. Williamson participated. A hearty vote of thanks to the lecturer was proposed by Dr. Williamson, seconded by Mr. F. S. Kernick, and enthusiastically carried. There were 68 persons present.

LECTURE AT EDINBURGH, MARCH 6th.

A meeting of the Society was held jointly with the local sections of the Institute of Chemistry and the Society of Chemical Industry at 7.30 p.m. on Friday, March 6th, in the North British Station Hotel; Dr. W. M. Ames in the Chair.

Mr. S. Ellingworth, M.Sc., gave a stimulating lecture on "Chemotherapy" to a large and appreciative audience. The lecturer discussed the chemotherapy of trypanosomiasis, malaria, and bacterial infections, with special reference to the development and mode of action of many synthetic chemotherapeutic agents. Drs. A. E. Cameron, Mitchell, Nisbet, Kermack, and Messrs. Bolton and Dodds participated in the discussion which followed, and the proceedings concluded with the adoption of a vote of thanks proposed by Professor Marrian.

MEETING AT LEEDS, MARCH 10th.

A joint meeting of the Leeds Area Local Section and the University of Leeds Chemical Society was held at the Medical School, Leeds, on Tuesday, March 10th. A discussion on "The Enzymatic Break-down of Tryptophan to Indole" was opened by Drs. F. C. Happold, H. A. Krebs, and J. W. Baker. During the first session the Chair was taken by Professor M. G. Evans, President of the University Chemical Society: Dr. Happold discussed "The Enzyme System responsible for the Tryptophan-Indole Reaction," Dr. Krebs, "*o*-Aminophenylacetaldehyde as an Intermediate in Bacterial Indole Formation," and Dr. Baker, "Structural Evidence."

After an interval for coffee, the second session, held under the Chairmanship of Professor F. Challenger, was devoted to general discussion. A large number of the 54 members present took part in an interesting interchange of ideas, a more detailed report of which it is hoped to publish elsewhere. The meeting was closed with a cordial vote of thanks to the openers, proposed from the Chair.

LECTURE AT LIVERPOOL, MARCH 12th.

A joint meeting of the Society with the Liverpool University Chemical Society was held in the Muspratt Lecture Theatre of the University on March 12th at 4 p.m., when Professor M. G. Evans delivered a lecture on "Some Problems in the Chemistry of Macro-molecules."

The lecturer discussed the types of motion of long chain molecules and attempts to obtain expressions for the entropy contributions for these various types of motion. These ideas were then applied to some simple equilibrium and rate processes showing, for example, that in the melting of a long-chain solid the complete internal randomness of the molecule was not fully operative in the liquid state. It was shown, however, that the large increase in the possibilities of internal randomness which accomplish the melting of solids of macro-molecules accounts for the shape of the curve of melting point against chain length and for the asymptotic approach of the melting point to a constant value as the chains become longer. Under the application to kinetic problems the lecturer discussed the entropy change which accompanies the formation of the activated complex in a polymerisation step, and reached the conclusion that the steric factor did not increase indefinitely as polymerisation proceeds, but would rapidly reach a constant value as the chain length of the polymer increased. It was also shown that in a depolymerisation reaction occurring entirely in the gas phase or in solution the greatest probability of breakdown is, if all the bonds are of equal strength, in the middle of the polymer molecule, yielding equal fragments. Depolymerisation of a solid polymer, on the other hand, will most probably occur to yield a gaseous monomer.

Lastly, some problems in the field of the activation energy of polymerisation reactions were discussed, chiefly from the point of view of the stabilising influence of resonance energy upon free radical endings and the influence of the resonance energy in the transition state in lowering the activation energy for such reactions.

LECTURE AT NOTTINGHAM, MARCH 5th.

A joint meeting of the Society with the University College Physical and Chemical Society was held in the Chemistry Lecture Theatre, University College, University Park, Nottingham, at 4.30 p.m. on March 5th, with Professor J. Masson Gulland, D.Sc., in the Chair. Professor R. D. Haworth, D.Sc., delivered a lecture on "The Propylbenzene Unit in Biosynthesis." After drawing attention to the very frequent occurrence of the propylbenzene unit in certain naturally occurring compounds, the Lecturer proceeded to a discussion of the analytical and synthetic methods which have been applied to such compounds, and finally greatly interested his audience by speculating on the possible courses of relevant biosyntheses. A vote of thanks proposed by Mr. G. R. Barker, President of the University College, Nottingham, Physical and Chemical Society, was carried with acclamation.

LECTURE AT SHEFFIELD, FEBRUARY 27th.

A joint meeting with the Sheffield University Chemical Society was held in the Chemistry Department of the University at 5.30 p.m. on February 27th, 1942, with Professor R. D. Haworth in the Chair. There was a large attendance, and Professor E. L. Hirst, F.R.S., delivered a lecture on "The Constitution of Starch."

After a general account of earlier data bearing on the structure of starch, the lecturer showed how recent developments had led to an understanding of why the very large starch molecule behaved in certain respects as if constituted of chains each of about twenty-four glucose units, and to the expression of the known facts in a more exact structural picture, and explained the relationship between the synthetic starch recently obtained from glucose phosphate and the main components of natural starch. A vote of thanks proposed by Dr. A. W. Chapman and seconded by Mr. T. Wathen was carried with acclamation.

OFFICIAL ANNOUNCEMENTS

DEATHS.

The death of Sir William H. Bragg, O.M., F.R.S. (Honorary Fellow), was reported to the Council at their meeting on March 19th. The following resolution was passed and has been conveyed by the President to the members of the family :

The President, Officers and Council of the Chemical Society learned with profound sorrow at their meeting on 19th March, 1942, of the death of Sir William H. Bragg, O.M., F.R.S., who was elected an Honorary Fellow of the Society on October 17th, 1929.

Sir William Bragg's outstanding researches on the X-Ray Analysis of the Structure of Crystals placed him among the pioneers in physical science. He will ever be remembered, not only as an experimentalist but as a great teacher, and as one whose graciousness and genius for friendship endeared him to all those with whom he came into contact. By his death, Science in this Country, and throughout the world, has suffered an irreplaceable blow.

The Council mourn the loss of their distinguished Honorary Fellow and desire to express their deep sympathy to Sir Lawrence Bragg and Mrs. Alban Caroe in their sorrow.

The deaths of the following Fellows were also announced :

	Elected.	Died.
Francis B. Arnold	1921	February 23rd, 1941.
Arthur Geake	1918	December 19th, 1941.
Grace C. Leitch	1921	March 12th.
Alexander Lipworth	1928	August, 1941.
Geoffrey Milne	1932	January 16th.
Ernest B. Naylor	1900	January 31st.
George Senter	1903	March 14th.

FELLOWSHIP.

The names of three Fellows have been removed from the List of Fellows under the action of Bye-Law 15 ; two Fellows have been reinstated and the following 122 new Fellows have been elected :

Raymond Spencer Airs.	Walter Graham.	Frederick James Paton.
James Joseph Allen.	Maurice Berkeley Green.	Dennis Raymond Peck.
Denzil Malcolm Atkinson.	Isidore Greenfield.	Max Pemberton.
Douglas William Edward Axford.	Alan Donald Greenhalgh.	Cyril Henry John Vezey Phillips.
Robert Edwin Bache.	Dorothy Muriel Hall.	Albert Reginald Pinder.
Kenneth Charles Barraclough.	Peter Harker.	Jack Leake Pinder.
John Barrett.	Andrew Nicoll Harrow.	Edward Pinnington.
James Alfred Beardall.	Charles Royston Henshaw.	Stanley Credland Porter.
John Henry Beynon.	Thomas Francis Heyes.	Walter Ernest Portwood.
John Birchenough.	Fred Holme.	Pulle Annapurna Devi Shrikant Rao.
Claude Montague Blow.	Paul Frederic Holt.	Valentin Stratford Rawson.
Edward James Boorman.	William Hunter.	Albert Lloyd George Rees.
Albert Edgar Boyes.	James Jackson.	Bertram Pusey Ridge.
Blendal Mellor Boyns.	John Richard Jarratt.	Samuel John Rowland.
George Edward Arthur Bramley.	William Johnston.	Derrick Rowley.
Philip Ingram Brewer.	David Aubrey Jones.	John Ernest Salmon.
Francis Joseph Brislee.	David Gwyn Jones.	Raymond Walter Sear.
Cecil Austin Broomhead.	Anne Millicent King.	Ernest Shepherd.
Ernest Brown.	Maurice Joseph Kelley.	John Gilbert Simmons.
Kathleen Fane Brown.	John King.	Eric Brian Jeffcoat Smith.
Cyril William Buckles.	Claude Leonard Knight.	Reginald Bradbury Southall.
Arthur Carroll.	George Landells.	John Walker Spence.
Kenneth George Arthur Cock.	Alfred Norman Leather.	Cyril Edward Spooner.
Horace Cole.	John Bryn Lewis.	Frederick Stanbridge.
Graham Percy Cooper.	Walter Probert Glover Lewis.	Robert Holroyd Stanley.
Arthur James Curtin Cosbie.	William John Lie.	Elizabeth Brownsword Stirling.
Walter Rowden Davis.	John Herbert Linford.	Juston O'Grady Tatton.
Robert James Dawson.	Peter Lloyd.	Ronald Hunter Thomson.
Edward John Dickinson.	John Leslie Loasby.	Norman Strafford.
Raymond Samuel Drew.	Leonard Haynes Long.	Hubert Threadgold.
Roger Duncalfe.	Charles Alexander McDowell.	Sidney Keenlyside Tweedy.
Eric Vincent Elwes.	James Alistair Ross MacLean.	John Leonard Walpole.
Francis William Elliston Erwood.	Frank Marshall Menheneott.	James Wardleworth.
James Russell Ferguson.	Stephen Ernest Michael.	Bernard George Welsh.
Edwin Ernest Fitzgerald.	William Mitchell.	Arthur Scott Weygandt.
John Warrington Fletcher.	Walter Ronald Monk.	David Harold Widocks.
Alfred Thomas French.	George Moore.	Arthur Charles Wiggins.
Barbara Mary Gaunt.	Robert Harry Moses.	Robert Foster Wilkinson.
Donald Henry Geard.	Roger Paget.	Francis Derek Williams.
Frank Philip Gloyns.	Roger Graham Partington.	Harold Edward Woosely.
Arthur Leslie Graham.	Kenneth Parvin.	

LIST OF APPLICATIONS FOR FELLOWSHIP

(Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries not later than Monday, April 13th. Such objections will be treated as confidential. The forms of application are displayed in the Library.)

- Ackroyd, Gordon Campbell**, B.Sc.Hons. (Lond.), A.I.C. British. 2, The Glebe, S.E. 3. Research Chemist.
Signed by : J. J. Fox, J. G. King, R. Leslie Collett.
- Adamson, John Ernest**, B.Sc. (Lond.), A.I.C. British. 55, Huntingtower Road, Grantham. Research Chemist. Signed by : J. J. Fox, Robert H. Pickard, R. Leslie Collett.

- Allan, James MacGregor**, B.Sc. (Lond.), A.I.C. British. 21, Glenshiel Road, S.E. 9. Analytical Chemist. Signed by : G. White, D. M. Cowan, R. Leslie Collett.
- Attwell, Brian Judd**, Inter B.Sc. (Lond.), seven years Analytical and Research experience in Chemical Industry. British. 22, Southampton Street, Farnborough, Hants. Works Chemist. Signed by : D. J. G. Ives, George W. Ferguson, F. J. Llewellyn.
- Barkley, Harry**, B.Sc. (L'pool), A.I.C. British. Greenford. Research Chemist. Signed by : E. Lester Smith, E. M. Gibbs, R. Leslie Collett.
- *Bartrop, John Alfred**, B.A.Hons. (Oxon). British. 9, St. Cross Road, Holywell, Oxford. Engaged in Chemical Research at Dyson Perrins Laboratory, Oxford. Signed by : Ronald P. Bell, M. J. S. Dewar, J. C. Smith.
- Campbell, Robert**. British. 716, Great West Road, Osterley. Chief Chemist and Works Manager to firm of Distillers, Chiswick. Signed by : J. Stuart Cook, T. McLachlan, A. Houston, J. W. Smith.
- *Chambers, William Edward**, Open Scholarship (Chemistry), Oriel College, Oxford. British. Oriel College, Oxford. Student. Signed by : D. Ll. Hammick, L. E. Sutton, G. P. Armstrong
- Crowder, Norman Frederick**, Assoc.M.C.T., A.I.C. British. 50, Higher Lane, Lymm. Research Chemist. Signed by : F. C. Wood, R. P. Foulds, A. J. Hall.
- Cunneen, John Ivan**, B.Sc. and Ph.D. (B'ham). British. Hanside Farm House, Hanside Lane, Welwyn Garden City. Research Chemist. Signed by : E. H. Farmer, J. Wilson, Frederick Hilton.
- Davidson, Wilmot Alvin**, M.A.Hons. (Toronto), Canadian. Food and Drug Division, 59, Victoria Street, Toronto. Superintendent of Laboratory. Signed by : J. G. Breckenridge, C. H. Robinson, R. R. McLaughlin, A. Linton Davidson.
- Edwards, Cyril**, B.Sc. (Lond.), F.I.C., Ph.C. British. 45, Stanmore Road, Stevenage. Works Chemist to A. Ibbetson & Co., Gt. North Road, Stevenage. Signed by : H. V. A. Briscoe, Robert H. Pickard, R. Leslie Collett.
- Gardiner, Sidney David**, Inter B.Sc. English. 11, Shirley Road, Addiscombe, Croydon. Analytical Chemist. Signed by : H. E. C. Powers, F. L. Allen, Ernest A. Rudge.
- Grindle, William George**, M.Sc. (Leeds), A.I.C. British. 66, Durban Road, Watford. Analyst. Signed by : J. J. Fox, G. E. Bessey, F. M. Lea.
- Hamnett, Ernest Norman**. English. 11, Spinney Road, Northenden, Manchester. Analytical Chemist. Signed by : Harold Heron, R. H. Hopkins, Alex. K. Miller.
- Heywood, Mark Mellallieu**, F.I.R.I., B. of E. Higher, Organic and Inorganic. English. 259, Staines Road, Twickenham. Chief Works Chemist. Signed by : Philip Schidrowitz, Sam S. Pickles, William H. Ballantyne.
- Howard, John Leslie**, M.Sc. (B'ham), A.I.C. British. 20, Clee Road, Cleethorpes. Senior Chemistry Master at Clee Grammar School, Old Clee, near Grimsby. Signed by : M. Stacey, F. Smith, S. R. Carter.
- *Huson, Brian Lewis**, Senior Open Scholarship, Oriel College. British. Oriel College, Oxford. Student. Signed by : D. Ll. Hammick, L. E. Sutton, S. W. Hawkins.
- Lewin, John Buckingham Grey**, B.Sc. (Lond.), A.I.C. British. 72, Bromsgrove Road, Redditch. Works Chemist. Signed by : C. A. Kloss, Julian L. Baker, R. Leslie Collett.
- *Llewelyn, David Arthur Bosworth**, Diploma of Loughborough College, Subsidiary B.Sc. in Chemistry and in Physics, Registered Student of Institute of Chemistry. British. Belgrave Vicarage, Leicester. Chemical Engineer. Signed by : C. Whitworth, J. M. Connolly, R. Leslie Collett.
- Marriott, John Albert**, M.Sc. (Lond.), Ph.D. (Lond.), A.I.C. British. 96, Coventry Road, Market Harborough. Research Chemist. Signed by : L. Hunter, A. Hickling, G. Malcolm Dyson.
- Marsh, Bert Billington**, B.Sc. (Lond.). British. 131, Wigan Road, Westoughton, Bolton. Analytical Chemist. Signed by : T. J. Morrison, T. Heap, J. H. Dickin.
- *Morrell, Stanley Herbert**, Second Class Honours in Science Honour Moderations, 1940. British. Christ Church, Oxford. Undergraduate, reading for Honours Degree in Chemistry. Signed by : A. S. Russell, E. Hope, J. C. Smith.
- Morris, Samuel**, A.S.T.C., A.A.C.I. Australian, 12, Gartfern Avenue, Five Dock, N.S.W. Manager, Grosvenor Laboratories Pty., Ltd. Signed by : G. F. Birks, J. C. Earl, T. Iredale.
- Nellist, George Rippon**, A.I.C. British. 28, Malvern Road, Billingham. Chemist. Signed by : Michael H. M. Arnold, Robert R. Coats, S. C. Bevan, A. E. J. Vickers.
- Osborn, William**, B.Sc. and Ph.D. (Leeds). English. 394, Moorside Road, Flixton. Research Chemist. Signed by : Frederick M. Rowe, F. R. Goss, H. Burton, Arnold T. Peters, J. W. Baker, E. Rothstein.
- Papineau-Couture, Armand**, B.A.Hons. (McGill). Canadian. Room 204, 379, Common Street, Montreal. Superintendent of Laboratory. Signed by : A. Linton Davidson, Leon Lortie, C. H. Robinson.
- Partridge, Maurice William**, Ph.D., B.Sc., B.Pharm. (Lond.), Ph.C. British. 47, South Hill Park, Hampstead, N.W. 3. Research Assistant to the British Pharmacopoeia Commission. Signed by : J. Masson Gulland, John C. Roberts, F. R. Mumford.
- Peters, Raymond Henry**, B.Sc. (Lond.). British. 38, Studley Drive, Ilford. Chemist. Signed by : D. W. Stammers, A. Davidson, de B. Ashworth, Jas. Buchanan, W. J. Wilson.

- Randall, Frank Gordon**, B.Sc. (Lond.). British. 1, Arundel Gardens, Goodmayes, Ilford. Chemist. *Signed by* : J. R. Partington, D. C. Jones, H. D. K. Drew.
- ***Robertson, Andrew John Blackford**, B.A.Hons. (Cantab). British. St. John's College, Cambridge. Research Chemist. *Signed by* : Fredk. S. Dainton, P. Johnson, Erick K. Rideal.
- Ryder, Stanley Howarth**, B.Sc. (Lond.), A.I.C. British. 5, Jesson Street, West Bromwich. Metallurgical Chemist. *Signed by* : Robert H. Pickard, H. V. A. Briscoe, R. Leslie Collett.
- ***Sayer, Frederick George**, Inter B.Sc. (Lond.). English. 80, Sunningfields Road, Hendon, N.W. 4. Experimental Chemist. *Signed by* : R. F. West, J. R. Partington, H. D. K. Drew.
- Smith, Ernest**, City and Guilds Final Exam. in Iron and Steel Manufacture. British. 17, Coquet Street, Jarrow-on-Tyne. Analytical Chemist. *Signed by* : H. L. Riley, S. E. Groves, H. E. Blayden.
- Suddaby, Arthur**, B.Sc.Hons. (Lond.). British. 60, Melrose Street, Hull. Works Chemist. *Signed by* : C. E. C. Nicholls, E. E. Connolly, H. J. Davis.
- ***Taylor, Albert**, M.P.S. External Student of London University. British. c/o The Ferns, Seascale. Analytical Chemist. *Signed by* : S. Hornsby, J. D. Johnson, Peter F. Ward.
- Timmis, Geoffrey Millward**, M.Sc. (Manc.), F.I.C. British. 19, Gib Lane, Blackburn. Chemist. *Signed by* : Paul A. Barrett, W. R. Boon, S. Ellingworth.
- Tullis, David High**, B.Sc. (St. Andrews), A.R.T.C. (Glas.), A.I.C. British. Box 15, c/o Bapco, Bahrein Island, Persian Gulf. Chemical Engineer (Research and Development). *Signed by* : W. M. Cumming, J. G. Duncan, W. L. Glen.
- Wakeford, John Ellis**, M.B.E., M.I.Gas.Eng. British. Bloom Street, Salford, 3. Deputy Gas Engineer and Manager. *Signed by* : R. L. Jones, Thomas Fitzpatrick, M. Sinclair Gaskill.
- Walker, George William**, A.I.C. Scottish. 17, John Street, Dalbeattie. Chemist. *Signed by* : J. J. Fox, Robert H. Pickard, R. Leslie Collett.
- Watson, Herbert Arthur**, M.Sc. (Manitoba), F.C.I.C. English. Box 4712, Postal Station "B," Magnus and Main Streets, Winnipeg, Manitoba. Superintendent of Food and Drug Laboratories. *Signed by* : M. A. Parker, A. Linton Davidson, C. H. Robinson.
- Watson, Mearns Bruce**, B.Sc. and Ph.D. (Aberd.). British. 65, Craigton Road, Mannofield, Aberdeen. Assistant Lecturer in Chemistry, Aberdeen University. *Signed by* : Alex. Findlay, T. Harold Reade, R. B. Strathdee.
- Wells, Hal**, National Certificate in Chemistry, Northern Counties Industrial Chemistry. English. 100, Wellesley Road, Slough. Analytical Chemist. *Signed by* : R. J. Cole, J. Macer Wright, G. W. McCrea.
- Willcocks, Reginald Gerald Wallace**, B.Sc.Hons (Lond.), A.I.C. British. 17, Oxford Avenue, Heston. Analytical Chemist. *Signed by* : J. Kenyon, C. W. Davies, A. Houston, J. W. Smith.
- Winter, Eric Frederick David**, B.Sc. (Lond.), A.I.C. British. Greenford. Technical Research Chemist. *Signed by* : E. Lester Smith, E. M. Gibbs, R. Leslie Collett.
- Winter, Ernest Roy Sealey**, B.Sc.Hons. (Lond.), A.R.C.S. British. 2, Newton Road, Bletchley. Research Chemist. *Signed by* : H. V. A. Briscoe, H. J. Emel us, R. Leslie Collett.
- Wood, James Herbert**, A.I.C. British. 1, Walkden Avenue, Mesnes Road, Wigan. Analytical Chemist. *Signed by* : Cecil L. Wilson, G. L. Hammond, A. Cooksey.
- Wood, Ronald**, M.P.S., trained at Stratford Technical College and the University of Leeds. British. Friern Cottage, Sandy Walk, Bramhope, near Leeds. Analytical Chemist. *Signed by* : J. W. Baker, H. J. Hodsman, H. Burton.
- ***Wright, Alfred**, Northern Matric, 1936, National Certificate, 1939. British. 28, Culme Road, Liverpool, 12. Metallurgical Chemist. *Signed by* : John V. Loach, A. E. Findley, Donald Atherton, R. R. Butler.
- Wright, Winifred Booth**, B.A.Hons. (Cantab), A.I.C. British. 30, Castelnau Barnes, S.W. 13. Analytical Chemist. *Signed by* : Charles H. F. Fuller, L. F. Barron, H. W. Christian.

UNDER SPECIAL PROVISION APPERTAINING TO APPLICANTS RESIDENT ABROAD.

- Brown, Harold Probert**, Ph.D. (Nebraska). American. Chemistry Department, University of Kansas City, Kansas City, Missouri. Associate Professor of Chemistry (Organic). *Signed by* : Frank C. Whitmore.
- Calcott, William Stansfield**, Ch.E. (Virginia), Hon. LL.D. (Notre Dame). American. P.O. Box 525, Wilmington, Delaware. Director, Jackson Laboratory. *Signed by* : Foster Dee Snell.
- Clark, Robert H.**, M.A. (Toronto), Ph.D. (Leipzig), F.R.S.C., Professor of Chemistry. British. Department of Chemistry, University of British Columbia, Vancouver, B.C. Head of Department of Chemistry. *Signed by* : I. M. Heilbron.
- Edwards, Cyril**, B.Sc. (Lond.), F.I.C., Ph.C. British. 45, Stanmore Road, Stevenage. Works Chemist to A. Ibbetson & Co., Gt. North Road, Stevenage. *Signed by* : H. V. A. Briscoe, Robert H. Pickard, R. Leslie Collett.
- Elsley, Howard McKee**, A.M. and Ph.D. (Stanford), Assistant Professor of Chemistry, University of Kansas, 1918-21; Assoc. Professor 1921-25; Research Chemist, Westinghouse, 1925 to date. American. Ardmore Boulevard, East Pittsburgh, Pa. Consulting Chemist. *Signed by* : Foster Dee Snell.

* Reduced Annual Subscription

- Hill, William Henry**, B.S.A. (Toronto), M.S.A. (British Columbia), Certified Public Analyst (Dominion of Canada), Registered Chemical Engineer (B.C.). British Food and Drugs Division, Health Branch, Department of Pensions and National Health, 325, Granville Street, Vancouver, British Columbia. Superintendent of Laboratory. *Signed by* : A. Linton Davidson, C. H. Robinson.
- Lancaster, Henry Mill**, B.A.Sc. (Toronto), F.C.I.C. British Food and Drug Laboratories, Sussex and John Sts., Department of Pensions and National Health, Ottawa, Ontario. Chief Dominion Analyst. *Signed by* : A. Linton Davidson, C. H. Robinson.
- Mallinckrodt, Edward**, A.B., A.M. (Harvard). United States. 3600, North Second Street, St. Louis. Chairman of Board of Chemical Works. *Signed by* : Foster Dee Snell.
- Ryder, Stanley Howarth**, B.Sc. (Lond.), A.I.C. British. 5, Jesson Street, West Bromwich. Metallurgical Chemist. *Signed by* : Robert H. Pickard, H. V. A. Briscoe, R. Leslie Collett.
- Twining, Frederick Edward**. American. 2527, Fresno Street, Fresno. Conducting the Twining Laboratories. *Signed by* : Foster De Snell.

PAPERS RECEIVED

List of papers received between February 19th and March 23rd, 1942. (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 comparative reactivity of the carbonyl groups in the thionaphthenquinones. Part I. A study of the constitution of certain thioindigoid dyes." By J. HARLEY-MASON and F. G. MANN.
- "Studies in the Sterol group. Part XLIV. The oxidation of phytosterols with the Oppenauer reagent." By E. R. H. JONES, P. A. WILKINSON, and (in part) R. H. KERLOGUE.
- "The self-condensation of acetylcyclohexene." By E. R. H. JONES and H. P. KOCH.
- "Molecular dissymmetry due to symmetrically placed hydrogen and deuterium. Part III. The attempted resolution of 2 : 3 : 5 : 6-tetradeutero-4 : 4'-dibromobenzhydrylamine." By G. R. CLEMO and G. A. SWAN.
- "A synthesis of 'heavy' *dl*-adrenaline." By G. R. CLEMO and G. A. SWAN.
- "Rare-earth metal amalgams. Part I. The reaction between sodium amalgam and rare-earth acetate and chloride solutions." By J. K. MARSH.
- "The magnitude of the solvent effect in dipole-moment measurements. Part V. The solvent effect constant and the moments of alkyl iodides." By A. AUDSLEY and F. R. GOSS.
- "The synthesis of 2-methylpyrrolizidine." By G. R. CLEMO and T. A. MELROSE.
- "The Graebe-Ullman synthesis of carbazole derivatives. Preparation and synthesis of 1-nitrocarbazole." By R. W. G. PRESTON, S. H. TUCKER, and (in part) J. M. L. CAMERON.
- "The preparation of 1-substituted carbazoles." By N. CAMPBELL and J. A. R. MACLEAN.
- "The coupling of *m*-halogenophenols with diazotised aniline and the existence of chromoisomerism among the 3-halogeno-4-benzeneazophenols." By H. H. HODGSON and G. TURNER.
- "Some reactions of the diazonium salts of certain arylazo- β -naphthylamines." By H. H. HODGSON and C. K. FOSTER.
- "Adsorbed films of gases on solids and their resemblance to surface films on water." By S. J. GREGG.
- "Long-chain acids containing a quaternary carbon atom. Part I." By A. J. BIRCH and SIR ROBERT ROBINSON.

ADDITIONS TO THE LIBRARY.

I. Donations.

BRITISH PLASTICS YEAR BOOK, 1942. The handbook and guide to the plastics industry. Bedford 1942. pp. 464. ill. (*Reference.*) 15s. net.

From the Publishers : Plastics Press, Ltd.

JOURNAL OF INDUSTRIAL HYGIENE AND TOXICOLOGY. Vol. XXII. Baltimore 1940. From the Association of British Chemical Manufacturers.

II. By Purchase.

AMERICAN ASSOCIATION OF CEREAL CHEMISTS. Cereal laboratory methods, with reference tables. 4th edition. Lincoln, Nebraska 1941. pp. xii + 264. ill. \$2.50. (*Recd.* 27/2/41.)

BADGER, W. L., and BAKER, E. M. Inorganic chemical technology. 2nd edition. New York 1941. pp. xii + 237. ill. \$2.50. (*Recd.* 25/2/42.)

BERKMAN, SOPHIA, and EGLOFF, GUSTAV. Emulsions and foams. New York 1941. pp. viii + 591. ill. \$8.50. (*Recd.* 10/3/42.)

BRIDGMAN, P. W. The nature of thermodynamics. Cambridge, Mass. 1941. pp. xii + 229. \$3.50. (*Recd.* 3/3/42.)

CLAPPERTON, ROBERT HENDERSON, and HENDERSON, WILLIAM. Modern paper-making. Oxford 1941. pp. xii + 376. ill. 18s. 6d. net. (*Recd.* 19/2/42.)

FITZPATRICK, FREDERICK L. The control of organisms. New York 1940. pp. xiv + 334. ill. \$2.75. (*Recd.* 27/2/42.)

April, 1942

THE CHEMICAL SOCIETY

NOTICE OF FORTHCOMING SCIENTIFIC MEETINGS

MEETING IN LONDON.

Thursday, May 21st, at 4.30 p.m.

Tilden Lecture, by Professor R. D. Haworth, D.Sc., Ph.D., entitled "The Chemistry of the Lignan Group of Natural Products."

MEETING OUTSIDE LONDON.

BRISTOL.

Thursday, May 14th, at 7 p.m.

Tilden Lecture, by Professor R. D. Haworth, D.Sc., Ph.D., entitled "The Chemistry of the Lignan Group of Natural Products," to be held in the Department of Chemistry of the University.

LEEDS.

Tuesday, May 12th, at 7 p.m.

Eighth Pedler Lecture, by Dr. W. H. Mills, M.A., F.R.S., entitled "Recent Progress in Stereochemistry," to be held in the Chemistry Department of the University.

PROCEEDINGS

OF THE

CHEMICAL SOCIETY.

MEETINGS OUTSIDE LONDON.

LECTURE AT CARDIFF, MARCH 27th.

A meeting of the Society was held jointly with the local sections of the Institute of Chemistry and Society of Chemical Industry in the University College, Cardiff, at 6.45 p.m. on Friday, March 27th, 1942, Mr. F. KERNICK, Chairman of the South Wales Section of the Society of Chemical Industry, in the Chair.

Mr. L. T. LOWE, of the Usk Agricultural Institute, delivered a lecture on "The Chemistry of Soils," in which he paid particular attention to the classification of soils. The lecture was followed with great interest, and gave rise to a lively discussion in which Drs. D. P. Evans and J. F. J. Dippy, and Messrs. H. F. Adams, F. Bird, and P. H. Griffiths took part. A vote of thanks was proposed by Mr. F. Bird, seconded by Mr. D. Hicks, and enthusiastically carried. There were 48 persons present.

LECTURE AT MANCHESTER, MARCH 21st.

A joint meeting of the Chemical Society and the Institute of Chemistry was held at Manchester University on Saturday, March 21st, 1942, at 2.15 p.m., when Dr. J. M. Robertson read a paper on the application of X-ray diffraction methods to problems of molecular structure.

Electron and X-ray deflection methods were contrasted as regards the type of information which they yield about structures of atomic dimensions. The X-ray diffraction method as applied to crystalline materials was then discussed in more detail, with special reference to organic structures. Illustrations of recent results were given in the form of contour maps of electron density distribution. The results obtained from such work were compared with the theoretical calculation of density distribution and of bond length. In conclusion, it was pointed out that the subject of X-ray analysis is an essential connecting link, a sort of half-way house, between the experiments of pure chemistry and the more recent advances in theoretical chemistry.

Minutes of a SCIENTIFIC MEETING

held at the Royal Institution, Albemarle Street, London, W.1, on Thursday, April 16th, 1942, at 4.30 p.m.

The President, Dr. W. H. MILLS, M.A., F.R.S., was in the Chair.

After a brief introduction, the PRESIDENT called on the Right Honourable LORD RAYLEIGH, F.R.S., to deliver the Sir Joseph Thomson Memorial Lecture. At the conclusion of the lecture, a vote of thanks to the Lecturer, proposed by the PRESIDENT, was carried with acclamation.

OFFICIAL ANNOUNCEMENTS

DEATHS.

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

	Elected.	Died.
Lionel S. Hartz	1941	June 30th, 1941.
Andrew McKeown	1926	September 5th, 1940.
Francis G. H. Tate	1908	April 10th.
David W. W. Spittle	1938	Killed in action.

ACKNOWLEDGMENTS.

The thanks of the Council have been conveyed to Mr. W. French for presenting a number of volumes of the *Annual Reports* and to Sir Prafulla C. Rây for a contribution to the Library Fund.

FELLOWSHIP.

On April 16th, the resignations of 8 Fellows were accepted; the names of 2 Fellows were removed from the List of Fellows under the action of Bye-Law 15; 2 Fellows were reinstated and the following 64 candidates were elected Fellows of the Society :

Gordon Campbell Ackroyd.	John Leslie Howard.	Stanley Howarth Ryder.
John Ernest Adamson.	Brian Lewis Huson.	Frederick George Sayer.
James MacGregor Allan.	Leo Ivanovszky.	Ernest Smith.
Richard Joachim Ascher.	Karl Jellinek.	Arthur Suddaby.
Brian Judd Attwell.	Pavel Kohn.	Albert Taylor.
Harry Barkley.	Henry Mill Lancaster.	Geoffrey Millward Timmis.
John Alfred Barltrop.	Bernhard Landau.	David High Tullis.
Harold Probert Brown.	John Buckingham Grey Lewin.	Frederick Edward Twining.
William Stansfield Calcott.	David Arthur Bosworth Llewelyn.	John Ellis Wakeford.
Robert Campbell.	Edward Mallinckrodt.	George William Walker.
William Edward Chambers.	John Albert Marriott.	Herbert Arthur Watson.
Robert H. Clark.	Bert Billington Marsh.	Mearns Bruce Watson.
Norman Frederick Crowder.	Stanley Herbert Morrell.	Joseph Weiss.
John Ivan Cunneen.	Samuel Morris.	Hal Wells.
Wilmot Alvin Davidson.	George Rippon Nellist.	Reginald Gerald Wallace Willcocks.
Cyril Edwards.	William Osborn.	Eric Frederick David Winter.
Howard McKee Elsey.	Armand Papineau-Couture.	Ernest Roy Sealey Winter.
Sidney David Gardiner.	Maurice William Partridge.	James Herbert Wood.
William George Grindle.	Raymond Henry Peters.	Ronald Wood.
Ernest Norman Hamnett.	Frank Gordon Randall.	Alfred Wright.
Mark Mellalieu Heywood.	Andrew John Blackford Robertson.	Winifred Booth Wright.
William Henry Hill.		

LIST OF APPLICATIONS FOR FELLOWSHIP.

(*Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries not later than Monday, May 18th. Such objections will be treated as confidential. The forms of application are displayed in the Library.*)

- Baddley, James**, B.Sc.Hons. (Manc.). British. 6, Willow Bank, Fallowfield, Manchester, 14. Student at Manchester University doing research in organic chemistry under Professor A. R. Todd. *Signed by* : A. E. Gillam, Alex. R. Todd, Alex Parkinson.
- *Bidwell, Ethel**, B.Sc. (Lond.). British. 4, Wickham Road, Beckenham. Assistant Chemist. *Signed by* : Leslie H. Lampitt, T. S. Moore, G. E. Forstner.
- Coen, James**, B.Sc.Hons., A.I.C. British. 267, Heywood Road, Prestwich. Technical Assistant. *Signed by* : S. Horwood Tucker, T. S. Patterson, T. S. Stevens.
- Eadie, Robert George Watt**, B.Sc. (Glas.), F.I.C. British. 17, The Avenue, Roundhay, Leeds, 8. Deputy Coal Tar Controller (Technical). *Signed by* : W. M. Cumming, I. V. Hopper, F. Rumford.
- Goodchild, Sydney Laurence**, British. 14, Downs Hill, Beckenham. Chief Chemist and Director, Messrs. British Cellulose Lacquers, Ltd. *Signed by* : N. J. L. Megson, J. O. Cutter, H. Langwell.
- Green, Edmund**, M.Sc. (Lond.). British. 35, Tudorville Road, Bebington. Research Chemist. *Signed by* : W. H. C. Simmonds, P. N. Williams, A. D. Scott.
- Hackney, Norman**, B.Sc. (Lond.), F.I.C. English. 6, Esplanade East, Calcutta. Deputy Director of Metals. *Signed by* : S. S. Bhatnagar, Wm. Cullen, R. Leslie Collett.
- *Hawkins, Lawrence Hugh Cecil**, English. 27, Carlton Road, Burnley. Undergraduate at Manchester University. *Signed by* : Alex. R. Todd, H. T. Openshaw, G. N. Burkhardt.
- James, Frank**, M.Sc. (B'ham). British. Hilboro, Tenby Road, Cardigan. Research Chemist. *Signed by* : F. G. Willson, W. W. Jones, R. C. Gale.
- Jarrett, Stanley Graham**, B.Sc. and Ph.D. (Lond.), A.I.C. British. 35, Lyndale Avenue, Birkby, Huddersfield. Chemist in Industry. *Signed by* : W. R. H. Hurtleley, Wm. Cullen, R. Leslie Collett.
- Jones, Patricia La Touche Turner**, B.A.Hons. (Cantab.). British. 1133, Greenford Road, Greenford. Research Chemist. *Signed by* : James E. Page, F. A. Robinson, B. Arthur Hems.
- Lemon, Cecil George**, British. 4, Pembroke Walk, Kensington, W. 8. Technical Consultant. *Signed by* : O. Silberrad, A. J. Amos, D. W. Kent Jones.
- *Lumb, Nora Holden**, B.Sc. and Ph.D. (Leeds). British. 27, Patterdale Avenue, Marton, Blackpool. Student in Education Department, Leeds University. *Signed by* : J. W. Baker, William Wild, R. Spence.

- Macdonald, John Herbert**, 10 years with The Dunlop Rubber Co. British. 13, Eskdale Road, Liverpool, 9. Technical Assistant. *Signed by* : R. R. Butler, A. E. Findley, L. Maddison.
- Markland, Joseph**, B.Sc. (Lond.), A.I.C. British. 16, Marcus Street, Chester Green, Derby. Analytical Chemist. *Signed by* : R. W. Sutton, A. L. Bacharach, T. P. Hilditch.
- Mason, William Alexander**, B.Sc.Hons. and Ph.D. (L'pool), A.I.C. British. 85, Londonderry Road, Stockton-on-Tees. Chemist in Heavy Chemical Industry. *Signed by* : A. R. Martin, A. E. Dunstan, Francis H. Carr.
- Mills, John Eric**, B.Sc.Hons. (Lond.), passed A.I.C. exam. English. 21, Lyndhurst Avenue, Mill Hill, N.W. 7. Analytical Chemist. *Signed by* : H. Lambourne, W. Taylor, S. Humphreys.
- *Nye, Peter Hague**. British. Sherwood, Tongdean Road, Hove, 4. Student, reading for Honours degree, Oxford University. *Signed by* : Ronald P. Bell, D. H. Everett, F. E. King.
- *Parker, Donald**, B.Sc.Hons. (Lond.). British. 29, Robert Street, Crag Road, Shipley. Ferrous Metallurgist *Signed by* : R. M. Barrer, H. I. Stonehill, D. Rowley.
- *Pollard, Alan**. British. 73, Dewsbury Road, Leeds, 11. Undergraduate, Leeds University. *Signed by* : J. W. Baker, R. B. Hardwick, Frederick Challenger.
- Rabinovitch, Jacob**, Ingenieur Chimiste de l'université de Caen, Sterol-Chemist. Palestinian. 9, West Bank, N. 16. Research Chemist. *Signed by* : A. L. Bacharach, Ernest Berdmann, V. A. Petrow.
- *Wolf, Werner Max**, B.Sc. (Lond.). Stateless (formerly German). 56, Muswell Hill Road, N. 10. Chemist in Industry. *Signed by* : C. K. Ingold, E. D. Hughes, H. G. Poole, J. Pomeranic.
- Wood, John Henry George**, 20 years' experience as nutritional investigator and advisor on Health Magazines and 12 years as Managing Director of Health Food Manufacturers. British. Loxleys, Wiggington, Tring. Editor, *Health Magazine*. *Signed by* : D. W. Kent Jones, A. J. Amos, Stephen Miall.
- Wright, Robert Allen**, A.I.C., Assoc. M.C.T. British. 23, Albert Road, Eccles, Manchester. Chemist to a Rubber Company. *Signed by* : Francis H. Carr, A. E. Dunstan, H. Tempany.

UNDER SPECIAL PROVISIONS APPERTAINING TO APPLICANTS RESIDENT ABROAD.

- Legge, Denis Ivor**, B.Sc. (Lond.), A.I.C. British. c/o Trinidad Leaseholds, Ltd., Pointe à Pierre, Trinidad, B.W.I. Assistant Research Chemist. *Signed by* : Arthur G. V. Berry.
- Smith, Charles Frederick**, B.Sc. (Florida), 2 years post-graduate study in Graduate School, Yale University. American. 735, Delaware Avenue, Buffalo, N.Y. Technical Representative, U.S. Rubber Reclaiming Co., Inc. *Signed by* : Foster Dee Snell.
- Wissler, William Arthur**, A.M. (Indiana). American. 4625, Royal Avenue, Niagara Falls, N.Y. Research Metallurgist and Development Engineer. *Signed by* : Foster Dee Snell.

* Reduced Annual Subscription.

PAPERS RECEIVED.

List of papers received between March 23rd and April 16th, 1942. (This list does not include the titles of papers which have been read at a Scientific Meeting or which have appeared in the *Journal*.)

- "Derivatives of 3(N), 4-pyridine-pyrene." By M. WEIZMAN and F. BOGRACHOV.
- "Antiplasmodial action and chemical constitution. Part V. Carbinolamines derived from 6-methoxyquinoline." By H. KING and T. S. WORK.
- "Antiplasmodial action and chemical constitution. Part VI. Compounds related to lepidylamine." By T. S. WORK.
- "The synthesis of amines from amides through the amidodichlorides." By T. S. WORK.
- "Constitution of the coloured condensation product from furfural, aniline, and aniline hydrochloride." By G. WILLIAMS and C. L. WILSON.
- "Some further observations on the interchange of heavy oxygen between water and certain inorganic oxyanions." By E. R. S. WINTER and H. V. A. BRISCOE.
- "The inter-relation of first- and second-order asymmetric transformation." By M. M. JAMISON and E. E. TURNER.
- "The crystal structure of *trans-trans*-dimethyl fumarate and *trans-trans*-dimethyl muconate." By M. I. E. KNAGGS and Mrs. K. LONSDALE.

ADDITIONS TO THE LIBRARY.

I. *By Purchase.*

ADVANCES IN COLLOID SCIENCE. Edited by ELMER O. KRAEMER, in collaboration with FLOYD E. BARTTELL and S. S. KISTLER. Vol. I. New York 1942. pp. xii + 434. ill. (*Reference.*) \$5.50.

ALLEN, R. M. Photo-micrography. New York 1941. pp. viii + 365. ill. \$5.50. (*Recd.* 16/4/42.)

HEALEY, R. H., and REED, J. W. The behaviour of slow electrons in gases: an account of diffusion methods together with a comparison between results obtained by these and by various other methods. Sydney 1941. pp. xii + 179. ill. 20s. net. (*Recd.* 16/4/42.)

MERRILL, G. R., MACORMAC, A. R., and MAUERSBERGER, H. R. American cotton handbook: a practical reference book for the entire cotton industry. New York 1941. pp. [xx] + 1024. ill. (*Reference.*) \$6.

MORTON, AVERY ADRIAN. Laboratory technique in organic chemistry. New York 1938. pp. x + 261. ill. \$2.50. (*Recd.* 16/4/42.)

NOYES, WILLIAM ALBERT, jun., and LEIGHTON, PHILIP ALBERT. The photochemistry of gases. (American Chemical Society, Monograph Series.) New York 1941. pp. 475. ill. \$10. (*Recd.* 9/3/42.)

PIGOTT, E. C. The chemical analysis of ferrous alloys and foundry materials. London 1942. pp. xvi + 362. 28s. net. (*Recd.* 16/4/42.)

RHODES, THOMAS J. Industrial instruments for measurement and control. New York 1941. pp. x + 573. ill. \$6. (*Recd.* 16/4/42.)

SHERMAN, HENRY C., and LANFORD, CAROLINE SHERMAN. Essentials of nutrition. New York 1940. pp. x + 418. ill. \$3.50. (*Recd.* 16/3/42.)

STRAIN, HAROLD H. Chromatographic adsorption analysis. New York 1942. pp. x + 222. ill. \$3.75. (*Recd.* 16/4/42.)

WOODROFFE, D. Fundamentals of leather science. Croydon 1941. pp. 158. ill. 8s. 6d. net. (*Recd.* 19/2/42.)

II. *Pamphlets.*

BORON AGRICULTURAL BUREAU. Boron in agriculture. London 1940. pp. 36. ill.

BRITISH STANDARDS INSTITUTION. B.S. 997: 1941. Crude sperm oil. pp. 15. ill.

— B.S. 998: 1941. Pure vacuum salt for dairy purposes. pp. 11.

— B.S. 1011: 1942. Red lead ready mixed points. pp. 12. ill.

HOLDER, E. J. Surgical sutures and ligatures. Edinburgh 1939. pp. 64. ill.

INSTITUTE OF CHEMISTRY OF GREAT BRITAIN AND IRELAND. "The precious metals." By H. GORDON DALE. 24th Streatfeild Memorial Lecture. London 1941. pp. 20. ill.

PROCEEDINGS

OF THE

CHEMICAL SOCIETY.

Minutes of a SCIENTIFIC MEETING

held at Burlington House, London, W.1, on Thursday, May 21st, 1942, at 4.30 p.m.

The President, Dr. W. H. MILLS, M.A., F.R.S., was in the Chair.

The minutes of the 101st Annual General Meeting on March 26th, and of a Scientific Meeting on April 16th, 1942, which had been circulated, were taken as read and were confirmed and signed.

FORMAL ADMISSION OF FELLOWS.

The following were formally admitted Fellows of the Chemical Society: S. E. Michael, B. Landau, and J. E. Salmon.

TILDEN LECTURE.

After a brief introduction, the PRESIDENT called on Professor R. D. Haworth to deliver his Tilden Lecture, entitled: "The Chemistry of the Lignan Group of Natural Products." At the conclusion of the lecture, a vote of thanks to the Lecturer, proposed by Professor R. P. Linstead, was carried with acclamation.

OFFICIAL ANNOUNCEMENTS

DEATHS.

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

	Elected.	Died.
Herbert Lister Bowman	1896	April 22nd.
Edward Gardner	1906	March 2nd.
Alfred Greeves	1894	April 12th.
Joseph Lones	1920	February 4th.
Alfred William Nash	1925	March 14th.
William John Young	1913	Recently.

CONGRATULATIONS.

The President has conveyed the congratulations of the Council to Messrs. R. B. Brown, F. Comyns, J. T. Hewitt, H. F. Hills, and C. G. Moor, who completed 50 years of Fellowship on May 5th.

COMMITTEES.

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

The following Committees have been appointed for 1942—1943:

Finance and General Purposes Committee.

F. H. Carr, A. E. Dunstan, H. J. T. Ellingham, G. I. Finch, I. M. Heilbron, R. G. W. Norrish, Sir Robert Pickard, R. E. Slade, 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.

T. S. Moore as Chairman, A. J. Allmand, W. Baker, R. P. Bell, E. J. Bowen, H. V. A. Briscoe, F. Challenger, J. E. Coates, J. W. Cook, W. E. Garner, J. M. Gulland, C. R. Harington, G. S. Hartley,

R. D. Haworth, I. M. Heilbron, T. A. Henry, D. H. Hey, E. L. Hirst, E. D. Hughes, J. Kenyon, F. G. Mann, H. W. Melville, J. R. Partington, A. Robertson, S. Sugden, H. Terrey, A. R. Todd, together with the Officers, and the Editor as Secretary.

Research Fund Committee.

J. W. Cook, W. E. Garner, I. M. Heilbron, C. N. Hinshelwood, H. McCombie, J. Kenyon, Sir Robert Robinson, J. L. Simonsen, S. Sugden, together with the Officers. The President as Chairman, and the General Secretary as Secretary.

Publications Exchange Committee.

A. C. G. Egerton, H. J. Emeléus, E. E. Turner, with T. A. Henry (ex-officio representative of the Joint Library Committee on the Council) and the Officers, with the Librarian as Secretary.

CONJOINT OFFICE.

The Conjoint Chemical Office is now installed at 6, Burlington Gardens. Set up by the Chemical Council with the concurrence of the Constituent Bodies, it is dealing with the finances of the Chemical Society and of the Society of Chemical Industry and with the distribution of all publications of the two Societies. This will greatly simplify the working of the co-operation scheme and will add to the efficiency of the Societies' work. The Staff is seconded from the Chemical Society and the Society of Chemical Industry.

ADDITIONAL MEMBER OF COUNCIL.

Dr. H. J. T. Ellingham has been appointed as an additional Member of Council.

RESEARCH GRANT.

The Council have made a grant of £25 to Professor A. C. G. Egerton for a research on "Preparation of Hydrocarbons of High Purity."

AMERICAN CHEMICAL SOCIETY.

The President has received the following letter from the Secretary of the American Chemical Society :

"DEAR DR. MILLS,

"President Harry N. Holmes requests me to express to you our sincere appreciation of your cablegram of March 26th sending greetings from the One Hundred and First Annual Meeting of your Society to the American Chemical Society, and expressing your hopes for early Allied victory, which of course we echo. It was nice of you to remember us at this time, and such an expression tends to increase the feeling of solidarity between the chemists of our two countries who are so deeply concerned in eliminating the Axis psychology from humanity.

"With all good wishes.

(Signed) C. L. PARSONS."

FELLOWSHIP.

One Fellow has been reinstated, the resignations of 5 have been accepted, and the name of one has been removed from the List of Fellows under the action of Bye-Law 15. The following 26 candidates were elected Fellows on May 21st :

James Baddiley.
Ethel Bidwell.
James Coen.
Robert George Watt Eadie.
Sydney Laurence Goodchild.
Edmund Green.
Norman Hackney.
Lawrence Hugh Cecil Hawkins.
Frank James

Stanley Graham Jarrett.
Patricia La Touche Turner Jones.
Denis Ivor Legge.
Cecil George Lemon.
Nora Holden Lumb.
John Herbert Macdonald.
Joseph Markland.
William Alexander Mason.
John Eric Mills.

Peter Hague Nye.
Donald Parker.
Alan Pollard.
Charles Frederick Smith.
William Arthur Wissler.
Werner Max Wolf.
John Henry George Wood.
Robert Allen Wright.

LIST OF APPLICATIONS FOR FELLOWSHIP.

(*Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries not later than Monday, June 15th. Such objections will be treated as confidential. The forms of application are displayed in the Library.*)

- Ballard, William Edward**, A.I.C. British. 20, Croftdown Road, Harborne, Birmingham, 17. Managing Director of a Works. *Signed by* : J. J. Fox, R. Leslie Collett, Robert H. Pickard.
- Barnes, Harry**, B.Sc.Hons. and Ph.D. (L'pool), A.I.C. British. 8, Chatsworth Road, West Bridgford. Chemist. *Signed by* : Wilfred F. Elvidge, Norman H. Law, John R. Jarratt.
- Chapman, Henry Esmond**, M.P.S.; formerly Assistant Editor, Pharmaceutical Journal and Editor, Chemist Trade Record; certified as Gas Instructor, France 1918. British. Mill House, Mill Lane, Tempsford. Secretary to Trade Association of manufacturing wholesale and retail chemists. *Signed by* : Wilfred H. Linnell, T. E. Wallis, T. W. Jones.
- Copp, Frederick Charles**, B.Sc. and Ph.D. (Wales), A.I.C. British. Langley Court, Beckenham. Research Chemist. *Signed by* : J. L. Simonsen, L. F. Gilbert, G. R. Ramage, L. N. Owen.
- Dolby, Derek Ernest**, B.Sc.Hons. and Ph.D. (Birm.). British. 14, Woodland Park Road, Leeds, 6. Demonstrator in Bacteriology, School of Medicine, Leeds University. *Signed by* : J. W. Baker, W. A. Wightman, F. R. Goss, Frederick Challenger.
- ***Fielden, Richard James**, B.Sc. (Lond.), A.R.C.S. British. 9, Atlas Road, Darwen. Works Chemist. *Signed by* : G. A. R. Kon, E. R. H. Jones, A. H. Cook.
- Foley, John**, B.Sc. (Lond.), A.R.C.S. British. 5, Lancaster Place, W.C.2. Sales Manager. *Signed by* : Frank Hartley, G. A. R. Kon, Charles Simons.
- Gregory, Edwin**, Ph.D. and M.Sc. (Lond.), A.Met. (Sheffield), F.I.C., M.I.E.I. British. Sycamore Cottage, Moorgate, Rotherham. Chief Metallurgist to an Iron and Steel Co. *Signed by* : J. J. Fox, Wm. Cullen, R. Leslie Collett.
- Halberstadt, Ernst Siegfried**, B.Sc.Hons. (Lond.). German. Wylfa, Shore Road, Llanfairfechan. Student at University College, London, at Aberystwyth. *Signed by* : E. D. Hughes, C. K. Ingold, Henry Terrey.
- Halstead, Philip Edward**, B.Sc. and Ph.D. (Lond.), A.I.C. British. 22, Elgar Avenue, Pollards Hill, S.W.16. Works Chemist, engaged mainly in analysis and research. *Signed by* : Philip S. Allam, Robert H. Pickard, R. Leslie Collett.
- ***Hargreaves, Michael Kenneth**, Natural Sciences Tripos, Part I. British. Downing College, Cambridge. Studying for Part II Natural Sciences Tripos in Organic Chemistry. *Signed by* : F. Wild, F. G. Mann, D. H. Peacock, B. A. Kilby.
- Johnson, Alan Woodworth**, Ph.D. (Lond.), A.R.C.S., D.I.C. British. 102, Redcliffe Gardens, S.W.10. Research Chemist. *Signed by* : G. A. R. Kon, E. R. H. Jones, A. Spinks.
- Lawson, John Charles**, B.A. (Cantab), A.I.C. British. Broadheath, Hall Park, Lancaster. Research Chemist. *Signed by* : J. J. Fox, Wm. Cullen, R. Leslie Collett.
- Le Pine-Williams, Basil Heathcote**. British. 57, Liverpool Road, Chester. Works Chemist. *Signed by* : F. D. Williams, F. Holme, W. J. C. Dyke, F. E. Rymill.
- Lightfoot, Percy Robinson**, A.I.C. British. 3, Morley Road, Runcorn. Research Chemist. *Signed by* : J. J. Fox, Wm. Cullen, R. Leslie Collett.
- Pryce, Norman Arthur Chetwynd**, B.Sc.Hons. (Wales), A.I.C. British. c/o 37, Balfour Road, Highbury, N. 5. Research Chemist. *Signed by* : Francis H. Carr, P. G. Marshall, W. D. Johnson.
- Raeburn, Leonard Thom**. British. 61, Hutton Avenue, West Hartlepool. Metallurgical Analyst. *Signed by* : G. H. Christie, J. C. E. Simpson, C. W. Gibby.
- ***Raphael, Ralph Alexander**, B.Sc. (Lond.), A.R.C.S. British. 79, Church Hill, E. 17. Research Student at Royal College of Science, S.W. 7. *Signed by* : A. H. Cook, E. R. H. Jones, G. A. R. Kon.
- Ratcliffe, John**, B.Sc. (Lond.), A.I.C. British. Technical College, Derby. Lecturer in Chemistry, Derby Technical College. *Signed by* : J. J. Fox, R. Leslie Collett, Robert H. Pickard.
- Rawson, William Ignatius Snell**, Sc.M. and Ph.D. (Chattanooga). National of the Union of South Africa. 88, Gloucester Place, W. 1. Bacteriologist and Chemist Analyst. *Signed by* : O. Silberrad, Pierce A. Arnold, Alexander H. Hayes.
- Robson, John Hamilton**. British. Ashbourne, Jesmond Dene Road, Newcastle-on-Tyne. Company Director (Technical Chemist). *Signed by* : G. R. Clemo, P. L. Robinson, Richard Raper.
- ***Rose, Gerald Gershon**, B.Sc. (Lond.), A.R.C.S. British. 25, Prothero Gardens, Hendon, N.W. 4. Research Student of Royal College of Science, S.W. 7. *Signed by* : E. R. H. Jones, A. H. Cook, G. A. R. Kon.
- ***Stack, Maurice Vincent**, B.Sc. (Lond.). British. 7, Mowbray Road, Edgware. Student. *Signed by* : H. D. K. Drew, J. R. Partington, V. A. Petrow.
- Staples, Michael**. British. 120, Eglinton Street North, Sunderland. St. Johns Malting Co., Ltd., Lombard Street, Sunderland. *Signed by* : J. Stewart Cook, J. H. Wilkinson, H. L. Riley.
- Suttie, Harold Kershaw**, A.I.C., A.M.I.Chem.E. British. 16, Abercrombie Street, Chesterfield. Chemist and Chemical Engineer. *Signed by* : G. W. J. Bradley, W. T. Gardner, H. M. Spiers.
- ***Taylor, Henry**. Second year student for Honours B.Sc. in Chemistry. British. 73, Royal Park Avenue, Leeds, 6. Student, Leeds University. *Signed by* : J. W. Baker, W. A. Wightman, G. F. Smith, F. Challenger.
- Tee, Frederick William**, A.I.C., A.M.C.T. British. c/o Cumberland Pencil Co., Ltd., Southry Works, Keswick. Works (Analytical and Research) Chemist. *Signed by* : John K. Wood, T. K. Walker, W. Bradley.
- Turner, Stephen Henry**, B.Sc. (Lond.), A.I.C. British. c/o The Hindustan Vanaspati Manufacturing Company, Limited, Sewri, Bombay, 15. Deputy Works Manager. *Signed by* : J. Kenyon, A. Houston, C. W. Davies.
- Ungar, Rudolf**, Ing. (Vienna). Austrian. 77, Ormonde Court, Upper Richmond Road, Putney, S.W. 15. Chemist. *Signed by* : Thomas McLachlan, A. Krajckeman, R. L. Edwards.
- Warr, John Culver**, B.A.Hons. (Oxon), F.I.C., M.I.Chem.E., Barrister-at-Law. British. 8, Avenue Road, Wolverhampton. Supply Officer. *Signed by* : J. J. Fox, Wm. Cullen, R. Leslie Collett.
- Woodcock, David**, M.Sc. and Ph.D. (Dun.). English. 38, Watt Lane, Crosspool, Sheffield, 10. Research Chemist. *Signed by* : Alex H. Lamberton, R. D. Haworth, Brynmor Jones.

* Reduced Annual Subscription.

UNDER SPECIAL PROVISIONS APPOINTING TO CANDIDATES RESIDENT ABROAD.

- Gooding, Chester M.**, M.S. and Ph.D. (Michigan). U.S.A. 99, Avenue A, Bayonne, N.J. Research Chemist. Signed by : Foster Dee Snell.
- Sachs, Werner**, Phil. D. (Berlin). German. 5, Lauriston Road, S.W. 19. Chemical Engineer. Signed by : P. P. Hopf.

PAPERS RECEIVED.

List of papers received between April 16th and May 21st, 1942. (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 magnitude of the solvent effect in dipole-moment measurements. Part VI. Induced and mesomeric moments of the alkyl halides and the halogenobenzenes." By A. AUDSLEY and F. R. GOSS.
- "Reactions of hydrazoic acid. Part II. A quantitative study of the action with substituted benzoic acids." By L. H. BRIGGS and J. W. LYTTLETON.
- "The halogenation of phenolic ethers and anilides. Part XII. Some Arrhenius activation energies." By BRYNMOR JONES.
- "Automatic adjustment of solute concentration in the 'moving boundary' method for the determination of transport numbers." By R. WRIGHT.
- "Rubber, polyisoprenes and allied compounds. Part II. The molecule-linking capacity of free radicals and its bearing on the mechanism of vulcanisation and photo-gelling reactions." By E. H. FARMER and S. E. MICHAEL.
- "*iso*Oxazolidine and orthoxyazolidine." By H. KING.
- "Alkyl-oxygen fission in carboxylic esters. Part I. Esters of $\alpha\gamma$ -dimethylallyl alcohol and other substituted allyl alcohols." By M. P. BALFE, H. W. J. HILLS, J. KENYON, H. PHILLIPS, and B. C. PLATT.
- "*Sophora* alkaloids. Part III. The alkaloids of the seeds of *S. chrysophylla*." By L. H. BRIGGS and W. E. RUSSELL.
- "Synthesis of methyl α -methoxyacrylate and α -methoxyacrylonitrile; characterisation of methoxy-derivatives of propionic acid." By J. W. BAKER.
- "The nitration of 9-*p*-toluenesulphonylcarbazole." By B. K. MENON, E. V. MENON, and D. H. PEACOCK.
- "Preparation of 1 : 2 : 4 : 5-tetraphenylbenzene from benzylideneacetophenone." By A. SCHÖNBERG and A. F. A. ISMAIL.
- "Sapogenins. Part XIII. The position of the double bond in acids of the β -amyrin group." By P. BILHAM, G. A. R. KON, and W. C. J. ROSS.
- "Sapogenins. Part XIV. The constitution of glycyrrhetic acid and its relation to oleanolic acid." By P. BILHAM, G. A. R. KON, and W. C. J. ROSS.
- "Sapogenins. Part XV. Siarasinolic acid." By P. BILHAM, G. A. R. KON, and W. C. J. ROSS.
- "Sapogenins. Part XVI. The acids of elemi resin." By P. BILHAM and G. A. R. KON.
- "The associating effect of the hydrogen atom. Part X. The N-H-N bond. The constitution of the benzthiazoles." By T. G. HEAFIELD and L. HUNTER.
- "The crystal structure of rubber hydrochloride." By C. W. BUNN and MRS. E. V. GARNER.
- "Studies on biological methylation. Part VIII. A summary of recent work on biological methylation and some hypotheses regarding its mechanism." By F. CHALLENGER.
- "Azulenes. Part I. Synthesis of vetivazulene." By R. R. COATS and J. W. COOK.
- "Observations on the absorption spectra of terpenoid compounds. Part III. The thiosemicarbazones of irone, eucarvone, and some related ketones." By A. E. GILLAM and T. F. WEST.
- "Potassium alkylselenonates and other alkyl derivatives of selenium." By MISS M. L. BIRD and F. CHALLENGER.
- "The nature of the carbohydrate residue in ovomucoid. Part II." By M. STACEY and J. M. WOOLLEY.
- "Acenaphthene series. Part I. Mono- and di-*tert*-butyl-acenaphthene, -acenaphthenequinone, and -naphthalic anhydride, and their derivatives." By A. T. PETERS.
- "*Sophora* alkaloids. Part IV. The alkaloids from the seeds of the Chatham Islands species." By L. H. BRIGGS and W. E. RUSSELL.
- "A new method of end-group assay for laminarin and similarly constituted polysaccharides." By V. C. BARRY.
- "The nitration and oxidation of dimethylaniline by aqueous nitric acid." By H. H. HODGSON and G. TURNER.
- "A colour test for certain carcinogenic hydrocarbons." By E. B. LISLE.
-

PROCEEDINGS
OF THE
CHEMICAL SOCIETY.

OFFICIAL ANNOUNCEMENTS

CONGRATULATIONS.

The congratulations of the Society have been conveyed to Group Captain W. Helmore on his receiving the honour of C.B.E., and to Mr. Horatio Ballantyne, who completed 50 years of Fellowship on June 16th.

CONTRIBUTIONS.

The thanks of the Council have been conveyed to Messrs. H. F. Hills and T. McLachlan for contributions to the Publications Fund.

MENDELÉEV ALL UNION CHEMICAL SOCIETY.

The following cable has been received from the Mendeléev All Union Chemical Society :

Dr. Mills, President of the Chemical Society.

We, the President and Members of the Mendeléev All Union Chemical Society, thank you and all members of the Chemical Society for greetings. We are in full accord with your estimation of Hitler's Nazi tyranny and barbarity. In common with the many millions of Soviet people and with all freedom-loving people throughout the world, Chemists of the Soviet Union are confident of the victory of all progressive forces of human society over the bestial Nazi executioners.

Soviet Chemists are glad that in this just War they have the support of British and American Chemists. By creative progress in the sphere of Chemical Science and Technology, and by the prompt interchange of experience and constant mutual assistance, Chemists in England, the United States of America, and the Soviet Union, as well as in other anti-Nazi countries, will make great contributions in the present historic fight. This strengthening of our common creative initiative and activity is of tremendous significance.

Members of the All Union Chemical Society warmly greet you, and call for your friendly co-operation in the joint work of defending world civilisation and achieving complete victory over the dark forces of Hitlerite obscurantism and man-hatred.

With British Chemists, we sincerely hope that with the destruction of Hitler-Nazism the prostitution of science to the annihilation of mankind will cease, and that men of science will be able to work together for the good of humanity.

President of the Mendeléev All Union Chemical Society and President and Members of the Academy.

Signed : N. ZELINSKY, A. FAVORSKY, V. KISELVES, S. WOLFKOVICH.

VACANCY ON COUNCIL.

The Council have received with regret the resignation of Professor G. F. Marrian from the office of Elected Ordinary Member of Council for Constituency V (Scotland), owing to his taking up a Government appointment. Dr. J. D. M. Ross has accepted the invitation of the Council to fill the vacancy until the next Annual General Meeting in March 1943.

PUBLICATION COMMITTEE.

Professor T. S. Moore has accepted the invitation of the Council to serve as Chairman of the Publication Committee.

LOCAL REPRESENTATIVE FOR NORTHERN IRELAND.

Dr. H. Graham has accepted the invitation of the Council to serve as Local Representative for Northern Ireland.

ADDITIONS TO THE LIBRARY.

By arrangement with the Society of Chemical Industry, the Additions to the Library will in future appear in *Chemistry and Industry*.

LIBRARY.

The Library will be entirely closed for cleaning and stocktaking from Monday, August 3rd, to Saturday, August 8th, inclusive.

The usual recall of books will, however, not take place.

FELLOWSHIP.

The resignations of 2 Fellows have been accepted, the name of 1 Fellow has been removed, and the following 33 candidates were elected on June 18th :

William Edward Ballård.	Michael Kenneth Hargreaves.	Gerald Gershon Rose.
Harry Barnes.	Alan Woodworth Johnson.	Werner Sachs.
Henry Esmond Chapman.	John Charles Lawson.	Maurice Vincent Stack.
Frederick Charles Copp.	Basil Heathcote Le Pine-Williams.	Michael Staples.
Derek Ernest Dolby.	Percy Robinson Lightfoot.	Harold Kershaw Suttle.
Richard James Fielden.	Norman Arthur Chetwynd Pryce.	Henry Taylor.
John Foley.	Leonard Thom Raeburn.	Frederick William Tee.
Chester M. Gooding.	Ralph Alexander Raphael.	Stephen Henry Turner.
Edwin Gregory.	John Ratcliffe.	Rudolf Ungar.
Ernst Siegfried Halberstadt.	William Ignatius Snell Rawson.	John Culver Warr.
Philip Edward Halstead.	John Hamilton Robson.	David Woodcock.

LIST OF APPLICATIONS FOR FELLOWSHIP

(Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries not later than Monday, July 20th. Such objections will be treated as confidential. The forms of application are displayed in the Library.)

- Collins, Ronald Bernard**, B.Sc. (Lond.), A.I.C. British. Ilford. Research Chemist. *Signed by* : G. A. Snow, J. D. Kendall, R. Leslie Collett.
- Crowther, Harold Albert Hadleigh**. English. 74, The Grove, West Wickham. Technical Director, British Hydrological Corporation. *Signed by* : C. Roy Greenwood, J. R. Booer, L. N. Tyrrell.
- ***Flood, Alan Edward**, B.A.Hons. (Cantab.). British. 199, McLeod Road, Abbey Wood, S.E. 2. Research Chemist. *Signed by* : W. W. Jones, A. Brewin, Stanley L. Thomas.
- Guggenheim, Markus**, D.Phil. and M.D.h.c. (Basle). Swiss. 37, Wettsteinallee, Basle. Director of Scientific Department, Messrs. Hoffmann-La Roche & Co., Basle. *Signed by* : Francis H. Carr, F. Bergel, Alex. R. Todd.
- Holland, Eric James**, M.P.S., A.I.C. British. 16, Loretto Drive, Upton, near Birkenhead. Pharmacist at Hospital. *Signed by* : H. Humphreys Jones, R. R. Butler, A. E. Findley.
- Kendall, James Tydesley**, B.A. (Cantab.). British. 78, Talbot Road, Old Trafford, Manchester. Chemist. *Signed by* : James Kendall, E. G. V. Percival, Mowbray Ritchie.
- Leftwich, Anthony Winnington**, B.Sc. (Lond.). British. 26, King Edward Street, Slough. Assistant Master at Boys' Grammar School. *Signed by* : F. W. Heeley, Henry Terrey, Oswald J. Walker.
- Nicholls, Stanley Frederick**, A.I.C., M.P.S. British. 60, Merchant Avenue, Spondon. Research Chemist. *Signed by* : Leslie H. Lampitt, A. E. Dunstan, R. Leslie Collett.
- Smart, Thomas Fraser Mackenzie**, O.B.E. Studied chemistry, physics, physiology, biochemistry at Edinburgh University. British. Horsham. Managing Director of a firm of manufacturing chemists. *Signed by* : H. D. Kay, A. R. Todd, G. F. Marrian.
- Stratford, Reginald Killmaster**, B.S.A. (Ontario), M.Sc. (Amherst), D.Sc. (Lyons). Canadian. c/o Imperial Oil Limited, Sarnia, Ontario. Chief Research Chemist. *Signed by* : C. H. Robinson, H. M. Lancaster, A. Linton Davidson.
- Taylor, Charles Walter Selkrig**, B.Sc. (Edin.), A.I.C. British. Horsham, Sussex. Technical Sales Manager to a firm of manufacturing chemists. *Signed by* : H. D. Kay, A. R. Todd, G. F. Marrian.
- Waters, Walter Frederick**, B.Sc. (Wales), F.I.C. British. Vine Cottage, High Street, Great Bookham. Chemist. *Signed by* : J. R. Nicholls, J. G. A. Griffiths, R. Leslie Collett.
- ***Webster, Harold**, National Certificate, Chemistry. British. 76, High Street, Skelmersdale, near Ormskirk. Assistant at Research Establishment. Part time student at Wigan Mining and Technical College. *Signed by* : F. N. Woodward, W. E. Jones, R. C. G. Moggridge.
- Woombs, Norman Tagg**. British. Ivydene, Smisby Road, Ashby-de-la-Zouch. Pilot Officer in Signals Branch of R.A.F.V.R. *Signed by* : A. R. Harriman, T. S. Smith, T. Harrington.

* Reduced annual subscription.

PAPERS RECEIVED

List of papers received between May 21st and June 18th, 1942. (This list does not include the titles of papers which have been read at a Scientific Meeting or which have appeared in the *Journal*.)

"Rare-earth metal amalgams. Part II. The separation of neodymium, samarium, and gadolinium." By J. K. MARSH.

"The preparation of certain 2-thiopyridine derivatives." By M. A. PHILLIPS and H. SHAPIRO.

- “The condensation of some aromatic ketones with ethyl succinate.” By C. L. HEWETT.
- “The decomposition of stabilised diazonium compounds by alcohols and phenol.” By H. H. HODGSON and C. K. FOSTER.
- “Studies in biological methylation. Part IX. The action of *scopulariopsis brevicaulis* and certain penicillia on salts of aliphatic seleninic and selenonic acids.” By (Miss) M. L. BIRD and F. CHALLENGER.
- “Observations on the absorption spectra of terpenoid compounds. Part IV. Five-atom ring unsaturated ketones.” By A. E. GILLAM and T. F. WEST.
- “Studies of ionisation in non-aqueous solvents. Part V. The formation of certain methoxides and ethoxides in methyl and in ethyl alcohols.” By W. L. GERMAN and T. W. BRANDON.
- “The active principles of leguminous fish-poison plants. Part VII. The reduction of elliptone.” By S. H. HARPER.
- “The active principles of leguminous fish-poison plants. Part VIII. The synthesis of dehydrotetrahydroelliptone and of dehydrotetrahydromalaccol.” By S. H. HARPER.
- “The active principles of leguminous fish-poison plants. Part IX. The synthesis of furanoisoflavones related to rotenone.” By S. H. HARPER.
- “*p*-Aminophenol-*o*-sulphonamide and some related compounds.” By R. T. WILLIAMS.
- “Quinoxaline cyanines. Part I.” By A. H. COOK, J. GARNER, and C. A. PERRY.
- “A potentiometric study of the oxidation of phenylhydrazine with cupric ions, including the titration of Fehling’s solution with phenylhydrazine.” By H. T. S. BRITTON and E. M. CLISSOLD.
- “The Fries rearrangement and subsequent isomerisation.” By G. BADDELEY.
- “The isomerisation of some aromatic ketones with aluminium chloride.” By G. BADDELEY.
- “The action of aluminium chloride on some phenolic ethers.” By G. BADDELEY.
- “The action of aluminium chloride on some aromatic bromo-compounds.” By G. BADDELEY and J. PLANT.
- “The action of aluminium chloride on some phenol homologues.” By G. BADDELEY.
- “Alkyl-oxygen fission in carboxylic esters. Part II. Derivatives of *p*-methoxybenzhydrol.” By M. P. BALFE, M. A. DOUGHTY, J. KENYON, and R. POPLETT.
- “A note on the oxidation of acetoin.” By J. R. POUND.
- “The separation of diastereoisomerides by selective adsorption on optically inactive material.” By M. M. JAMISON and E. E. TURNER.
- “Optical rotatory dispersion of (–)-tetrahydrofurfuryl alcohol.” By R. S. AIRS, M. P. BALFE, M. IRWIN, and J. KENYON.
-

ADDITIONS TO THE LIBRARY.

I. *Donations.*

FELL, ALFRED. The early iron industry of Furness and district: an historical and descriptive account from earliest times to the end of the 18th century, with an account of Furness ironmasters in Scotland, 1726—1800. Ulverston 1908. pp. xviii + 464. ill. (*Reference.*) From Mr. F. R. C. Storey,

II. *By purchase.*

BIOLOGICAL SYMPOSIA. Vol. V. Edited by HOWARD B. LEWIS. Comparative biochemistry. Intermediate metabolism of fats. Carbohydrate metabolism. Biochemistry of choline. Lancaster, Pa. 1941. pp. x + 247. ill. \$3. (*Recd.* 28/4/42.)

BOWEN, E. J. The chemical aspects of light. Oxford 1942. pp. viii + 191. ill. 12s. 6d. net. (*Recd.* 22/4/42.)

DANIELS, FARRINGTON, MATHEWS, J. HOWARD, and WILLIAMS, JOHN WARREN. Experimental physical chemistry. 3rd edition. New York 1941. pp. xviii + 460. ill. \$3.50. (*Recd.* 22/4/42.)

DAVISON, ALBERT W., KLOOSTER, HENRY S. VAN, and BAUER, WALTER H. Laboratory manual of physical chemistry. 3rd edition. New York 1941. pp. viii + 229. ill. \$2.50. (*Recd.* 30/4/42.)

KAYE, G. W. C., and LABY, T. H. Tables of physical and chemical constants and some mathematical functions. 9th edition. London 1941. pp. viii + 181. (*Reference.*) 18s. net.

KOLTHOFF, I. M., and LAITINEN, H. A. pH and electro titrations. 2nd edition. New York 1941. pp. x + 190. ill. \$3. (*Recd.* 1/5/42.)

MATTIELLO, JOSEPH J. [Editor.] Protective and decorative coatings: paints, varnishes, lacquers and inks. Vol. I. Raw materials for varnishes and vehicles. New York 1941. pp. xii + 819. ill. \$6. (*Recd.* 1/5/42.)

NELSON, W. L. Petroleum refinery engineering.

2nd edition. New York 1941. pp. x + 715. ill. \$6. (*Recd.* 4/5/42.)

NOYES, WILLIAM ALBERT, JUNR., and LEIGHTON, PHILIP ALBERT. The photochemistry of gases. (American Chemical Society, Monograph Series.) New York 1941. pp. 475. ill. \$10. (*Recd.* 9/3/42.)

SCHOLES, SAMUEL R. Modern glass practice. [Revised edition.] Chicago 1941. pp. vi + 289. ill. \$6. (*Recd.* 28/4/42.)

SHERMAN, HENRY C., and LANFORD, CAROLINE SHERMAN. Essentials of nutrition. New York 1940. pp. x + 418. ill. \$3.50. (*Recd.* 16/3/42.)

STEINER, LUKE E. Introduction to chemical thermodynamics. New York 1941. pp. xiv + 516. ill. \$4. (*Recd.* 4/5/42.)

WOODROFFE, D. Fundamentals of leather science. Croydon 1941. pp. 158. ill. 8s. 6d. net. (*Recd.* 19/2/42.)

III. *Pamphlets—*

BORON AGRICULTURAL BUREAU. Boron in agriculture. London 1940. pp. 36. ill.

BRITISH STANDARDS INSTITUTION. B.S. 997: 1941. Crude sperm oil. pp. 15. ill.

— B.S. 998: 1941. Pure vacuum salt for dairy purposes. pp. 11.

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH. *Food Investigation*. Special Report No. 51. The composition of the depot fats of aquatic animals. By J. A. LOVERN. London 1942. pp. iv + 72.

HOLDER, E. J. Surgical sutures and ligatures. Edinburgh 1939. pp. 64. ill.

INSTITUTE OF CHEMISTRY OF GREAT BRITAIN AND IRELAND. "The precious metals." By H. GORDON DALE. 24th Streatfield Memorial Lecture. London 1941. pp. 20. ill.

MINISTRY OF AGRICULTURE AND FISHERIES. Bulletin No. 124. The composition and nutritive value of feeding stuffs. By H. E. WOODMAN. London 1942. pp. 22.

THE CHEMICAL SOCIETY

NOTICE OF FORTHCOMING SCIENTIFIC MEETINGS

IN LONDON.

Thursday, October 15th, 1942, at 2.30 p.m.

Meeting for the reading of papers. (At Burlington House.)

Thursday, November 19th, 1942, at 2.30 p.m.

The **Sir William Bragg Memorial Lecture**, by Professor J. D. Bernal, D.Sc., F.R.S. (in the Lecture Theatre of the Royal Institution, by kind permission of the Managers). Tickets of admission will not be required.

Thursday, December 17th, 1942, at 2.30 p.m.

Tilden Lecture on "Recent Developments in the Theory of Reaction Kinetics in Solution," by Mr. R. P. Bell, M.A., B.Sc.

OUTSIDE LONDON.

EDINBURGH.

Tuesday, December 1st, 1942, at 7 p.m.

Lecture by Professor J. Monteath Robertson. Joint Meeting with the Edinburgh University Chemical Society and the Local Sections of the Institute of Chemistry and the Society of Chemical Industry. To be held in the Medical Chemistry Lecture Theatre, The University, Teviot Place.

LEEDS.

Monday, October 12th, 1942, at 6.30 p.m.

Lecture on "Radioactive Isotopic Indicators," by Dr. F. Fairbrother. To be held in the Chemistry Lecture Theatre of the University (Woodhouse Lane entrance only).

SOUTH WALES.

Saturday, October 31st, 1942, at 3 p.m.

In Swansea.

Lecture on "The Completion of the Periodic Table," by Professor F. A. Paneth, Ph.D. Joint meeting with the University College of Swansea Chemical Society.

Saturday, November 14th, 1942.

In Cardiff.

Lecture by Professor H. W. Melville, D.Sc., F.R.S.

Note.—Further particulars of these meetings will be given in the *Proceedings* for September.

PROCEEDINGS

OF THE

CHEMICAL SOCIETY.

OFFICIAL ANNOUNCEMENTS

DELAY IN ISSUING THE PUBLICATIONS FOR JULY.

The delay in issuing the publications for July is regretted. This was due to the breakdown of the Addressograph machine which had been in constant use for 35 years. The Society was fortunate in obtaining a licence for the purchase of a new machine, which has now been installed.

LIBRARY.

On and after September 5th, the Library will be open on Saturdays from 10 a.m. to 1 p.m.

LIST OF APPLICATIONS FOR FELLOWSHIP.

(*Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries not later than Monday, September 14th. Such objections will be treated as confidential. The forms of application are displayed in the Library.*)

- Bolton, Edward William**, B.Sc. (Lond.), A.R.C.S., A.I.C. British. 189, Huntingdon Road, Cambridge. Factory Manager. *Signed by* : Mamie Olliver, Theodore Rendle, F. P. Dunn.
- Bosley, Geoffrey Arthur Holmes**, M.P.S. British. Thames House, Millbank, S.W. 1. Research and Development of Pyrotechnics. *Signed by* : J. J. Laws, Wilfred H. Linnell, Harry Irving.
- *Bridges, John Edward**, National Certificate in Chemistry. English. 26, Cricklade Road, Bristol, 7. Analytical Chemist. *Signed by* : Arthur Marsden, Frank H. C. Bull, T. Malkin.
- Broom, Walter Alfred**, B.Sc. (Lond.), A.I.C. British. 53, Dunster Road, West Bridgford. Chief Pharmacologist to a firm of Chemical Manufacturers. *Signed by* : W. Frank Short, D. A. Peak, C. I. Brodrick.
- *Brown, Daniel McGillivray**. British. Viewfield, 101, Kilmarnock Road, Giffnock. Student. *Signed by* : T. S. Patterson, J. W. Cook, John A. Mair.
- Bunbury, Hugh Mills**, M.Sc. (Bristol), B.Sc. (Lond.), F.I.C. British. Dudley Lodge, Prestwich. Assistant Chief Colourist. *Signed by* : I. M. Heilbron, E. R. H. Jones, A. H. Cook, E. H. Rodd.
- *Cook, Gerald Bernard**, B.Sc.Hons. (Birm.). British. 22, Maids Causeway, Cambridge. Research Chemist. *Signed by* : Fredk. S. Dainton, G. R. Martin, A. G. Maddock.
- Collins, Ronald Bernard**, B.Sc.Hons. (Lond.), A.I.C. British. Ilford. Research Chemist. *Signed by* : Victor Gallafent, J. D. Kendall, Kenneth G. A. Pankhurst.
- Currington, Joan Muriel**, A.I.C. British. 173, Ashgate Road, Chesterfield. Assistant in a Government Department. *Signed by* : F. J. Woodman, W. Furness, W. Bullough.
- *David, Werner**, B.Sc.Hons. (Manc.). German. 109, Hurlingham Road, Fulham, S.W. 6. Chemist. *Signed by* : T. Martin A. Tudhope, G. H. Beaven, W. Davey.
- Davies, Robert Ronald**, M.Sc. (Lond.), A.I.C. British. 10, Ashfield Road, Birkby, Huddersfield. Research Chemist. *Signed by* : J. J. Fox, A. G. Francis, R. Leslie Collett.
- *Dickinson, Roland Edwin**, B.Sc.Hons. (Dun.). British. 3, Deneholm, Monkseaton, Whitley Bay. *Signed by* : Wesley Cocker, Richard Raper, St. Lorant.
- Dunby, Arthur Norman**, B.Sc. (Bristol), A.I.C. British. Forestlyn, Springfield, Chelmsford. Manager. *Signed by* : T. Wallace, E. A. Rudge, F. L. Allen.
- *Feetham, Frances Mary**, B.Sc. (Lond.). British. Norfolk House, Eaton Road, Crumpsall, Manchester, 8. Technical Assistant. *Signed by* : E. H. Rodd, C. L. Wilson, N. H. Haddock.
- Fell, John**, A.I.C. British. 20, Seaborn Road, Bare, Morecambe. Analytical Chemist. *Signed by* : E. Taylor, R. A. Cowin, A. W. Edmondson.
- *Fraser, William Stuart**, F.R.M.S. British. 6, Park Drive, The Park, Nottingham. Analytical Chemist. *Signed by* : J. E. Murphy, J. A. V. Willis, D. O. Jordan.
- *Frith, Elizabeth Mary**, B.A. (Cantab.). British. Girton College, Cambridge. Research Student. *Signed by* : G. H. Twigg, R. R. Smith, F. S. Dainton.
- Grisenthwaite, Arthur Turner**, B.Sc. (Lond.), F.I.C., A.C.G.F.C., M.I.Chem.E. British. 18, Balmoral Terrace, Stockton-on-Tees. Chemical Engineer. *Signed by* : S. P. Kipping, H. S. Foster, R. Leslie Collett.
- Guter, Mark**, B.Sc. and Ph.D. (Lond.), A.R.C.S., A.I.C. British. 28, Crayke Road, Stockton-on-Tees. Industrial Research Chemist. *Signed by* : K. W. Gee, H. E. Eduljee, D. G. Jones.
- *Hammer, Keith Graham Arthur**, B.A.Hons. (Cantab.). English. 33, Bishopsthorpe Road, Sydenham, S.E. 26. Research Chemist. *Signed by* : F. G. Mann, F. Wild, H. McCombie, B. A. Kilby.

- Harvey, Henry Guy**, B.Sc. (Lond.), A.I.C. British. 29, Court Way, North Acton, W. 3. Chief Assistant Chemist. Signed by : J. J. Fox, Robert H. Pickard, Alex. Findlay.
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- Judge, Bertha Edith**, B.A.Hons. (Cantab), A.I.C. British. 156, Kings Court, W. 6. Chemist, The Laboratories, J. Lyons & Co., Ltd. Signed by : Leslie H. Lampitt, E. B. Hughes, P. Bilham.
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- *McRoberts, Thomas Stanley**, M.Sc. (Q.U.B.), A.I.C. British. Ballykelly House, Blackscull, Dromore, Co. Down. Assistant Lecturer in Chemistry at Queen's University, Belfast. Signed by : A. W. Stewart, Chas. A. McDowell, H. Graham.
- *Martin-Jones, David Henry James**, B.A.Hons. (Oxon). British. 14, Evesham Road, Cheltenham. Chemist. Signed by : A. S. Russell, S. G. P. Plant, N. V. Sidgwick, R. Robinson.
- Mennell, Harold**, A.M.C.T., A.I.C. British. 8, Crossfield Drive, Worsley. Research Chemist. Signed by : R. P. Foulds, William H. Roscoe, F. C. Wood, A. J. Hall.
- Morton, Ronald William**, B.Sc.Hons. (Lond.), A.I.C. British. 9, Douglas Gardens, Lowes Barnes. Research Chemist. Signed by : R. H. Stanley, S. C. Bevan, K. W. Gee.
- *Mounter, Laurance Alan**, Scholar of Lincoln College, Oxford. British. 25, Canberra Road, Charlton, S.E. 7. Analytical Chemist. Signed by : J. McG. Jackson, J. Leicester, N. V. Sidgwick.
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- Nunn, Leslie Charles Alfred**, B.Sc. and Ph.D. (Lond.). British. 66, Langdale Road, Runcorn. Research and Works Chemist. Signed by : Ida Smedley MacLean, C. L. Arcus, Walter T. J. Morgan.
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- Picard, Claus Wolfgang**, M.Sc. (Manc.). German. 24, Hesketh Avenue, Didsbury. Industrial Research Chemist. Signed by : F. S. Spring, A. E. Gillam, Alex. R. Todd.
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- Stein, Rolf Herbert**, Commercial experience in connexion with the manufacture and supply of chemicals and chemical products. British. Widmore Farm, Asheridge. Managing Director of Honeywill & Stein, Ltd., Director of The Distillers Co., Ltd. Signed by : H. M. Stanley, J. G. Maltby, C. A. Brighton.

- Stern, Isaac**, B.Sc. (Lond.), F.I.C. British. 59, Southover, Woodside Park, N. 12. Chemist and Factory Manager. *Signed by* : C. Edwd. Sage, Ernest J. Parry, George W. Ferguson.
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- Strauss, Kossy**, Dr. Ing. (Karlsruhe), Dip. Ing. British. 229, Quinton Road, Harborne, Birmingham, 17. *Signed by* : H. W. Cremer, F. A. Greene, F. P. Dunn.
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- Thompson, Henry William**, Ph.D. (Lond.). British. 60, Hill Lane, Blackley, Manchester, 9. Research Chemist. *Signed by* : G. M. Badger, C. H. Vasey, A. G. Murray.
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- Vahrman, Marcus**, B.Sc. (Lond.), A.I.C. British. 12a, Marlow Court, Willesden Lane, N.W. 6. Research and Analysis in British Coal Utilisation Research Association. *Signed by* : J. C. Crocker, C. Dorée, Douglas C. Harrod.
- *Vos, Bernard**, Student. British. Pantiles, Bedford Road, Moor Park, Northwood. Royal Air Force. *Signed by* : John C. Roberts, D. Plews, W. Siddall.
- Walters, Thomas Morgan**, B.Sc.Hons. and Ph.D. (Wales), A.I.C. British. Dainsbury, Rhossili, Gower. Research Chemist. *Signed by* : Robert Robertson, J. E. Coates, L. E. Hinkel.
- *Weighall, Joseph George**, B.Sc.Hons. (Birm.). British. 16, Greyfort Crescent, Olton. Research Chemist. *Signed by* : T. T. Jones, A. A. K. Whitehouse, E. S. Fisher.
- Wheeler, Philip Charles**. British. Chemistry Department, University of Birmingham, Edgbaston. Demonstrator. *Signed by* : S. R. Carter, M. Stacey, F. W. Pinkard, Stanley Peat, W. N. Haworth.
- *White, John Alexander**, Inter B.Sc. (Lond.), Student, Birkbeck College. British. Hillside, Harrow Road, Sudbury Town. Junior Chemist. *Signed by* : G. V. James, F. Bergel, A. Cohen.
- Wilde, Bertrand Ernest**, B.Sc.Hons. (Lond.), A.I.C. British. 37, Stanmore Road, Mount Florida, Glasgow, S. 2. Research Chemist. *Signed by* : Geoffrey D. Muir, A. B. Crawford, D. M. Stead.
- Wilkie, Alexander Stewart**, A.I.C., A.H.W.C. British. 5, Newlands Close, Wembley. Chief Chemist and Assistant Manager. *Signed by* : James Sandilands, Robert G. M. Dakers, Hugh B. Nisbet.
- Wilkins, Edward Manwaring**, B.Sc. (Lond.), B.Sc.Hons. (Bristol). British. Lightpill Mills, Stroud. Works Chemist. *Signed by* : C. A. Redfarn, Thomas McLachlan, A. Krajceman.
- Wilkinson, Fred**. English. 26, Ludlow Way, N. 2. Works Manager. *Signed by* : Thos. H. Durrans, B. Dudley Sully, Denis C. Quin.
- Wilimott, Wilfrid Eric**, B.Sc.Hons. (Lond.), A.I.C. British. 21, Cambridge Road, Farnborough. Research Chemist. *Signed by* : W. Taylor, W. G. S. Parker, G. A. Earwicker.

UNDER SPECIAL PROVISIONS APPERTAINING TO CANDIDATES RESIDENT ABROAD.

- Fleischer, Hermann Carl**, Ph.D.Hons. (Halle), Dipl. Eng. (Karlsruhe). Stateless. Flat 50, 99, Haverstock Hill, N.W. 3. Consulting Chemical Engineer. *Signed by* : H. L. Lehmann.
- Lewi, George**, Engineer of Chemical Technology and Dr. of Technical Science (Univ. of Prague). Czechoslovak. 3, Wells Rise, N.W. 8. Director and General Manager. *Signed by* : J. Davidson Pratt.
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- Rewald, Bruno Albert**, Dr.Phil. (Berlin). Stateless. Brenchley, Penn Road, Beaconsfield. Chief Chemist. *Signed by* : T. P. Hilditch, M. M. Heywood.
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- Warner, Arthur James**, B.Sc. (Lond.). British. 564, Varsity Road, South Orange, N.J. Assisting in the development of plastic insulated materials. *Signed by* : Foster Dee Snell.

* Reduced annual subscription.

THE CHEMICAL SOCIETY

NOTICE OF FORTHCOMING SCIENTIFIC MEETINGS

IN LONDON.

Thursday, October 15th, 1942, at 2.30 p.m.

Meeting for the reading of papers. (At Burlington House.)

The following papers will be read and discussed :—

- “The Crystal Structure of Phosphorous Pentachloride.” By H. M. POWELL. (To be read by the Author.)
- “The Formation and Structure of some Organic Molecular Compounds.” By J. WEISS. (To be read by the Author.)
- “Alkyl oxygen fission in carboxylic esters. Part II. Derivatives of *p*-methoxybenzhydrol.” By M. P. BALFE, M. A. DOUGHTY, J. KENYON, and R. POPLITT. (To be read by Dr. J. Kenyon.)
- “Studies in the Polyene Series. Parts V, VI, and VII. An Account of Recent Work directed towards the Synthesis of Vitamin A and Analogous Compounds.” By I. M. HEILBRON, A. W. JOHNSON, E. R. H. JONES, H. P. KOCH, J. T. MCCOMBIE, and A. SPINKS. (To be read by Dr. E. R. H. Jones.)

Thursday, November 19th, 1942, at 2.30 p.m.

The **Sir William Bragg Memorial Lecture**, by Professor J. D. Bernal, D.Sc., F.R.S. (in the Lecture Theatre of the Royal Institution, by kind permission of the Managers). Tickets of admission will not be required.

Thursday, December 17th, 1942, at 2.30 p.m.

Tilden Lecture on “Recent Developments in the Theory of Reaction Kinetics in Solution,” by Mr. R. P. Bell, M.A., B.Sc.

OUTSIDE LONDON.

EDINBURGH.

Tuesday, December 1st, 1942, at 7 p.m.

Lecture on “Molecules and Crystals,” by Professor J. Monteath Robertson. Joint Meeting with the Edinburgh University Chemical Society and the Local Sections of the Institute of Chemistry and the Society of Chemical Industry. To be held in the Medical Chemistry Lecture Theatre, The University, Teviot Place.

GLASGOW.

Monday, November 16th, 1942, at 3.30 p.m.

Lecture on “Thermal Diffusion,” by Professor James Kendall, F.R.S. Joint Meeting with the Andersonian Chemical Society and the Glasgow University Alchemists' Club. To be held at the University.

Friday, December 4th, 1942, at 7.15 p.m.

Lecture on “X-ray Study of Coalification and Carbonisation,” by Professor H. L. Riley. Joint Meeting with the Local Sections of the Institute of Chemistry and the Society of Chemical Industry. To be held at the Royal Technical College.

LEEDS.

Monday, October 12th, 1942, at 6.30 p.m.

Lecture on “Radioactive Isotopic Indicators,” by Dr. F. Fairbrother. To be held in the Chemistry Lecture Theatre of the University (Woodhouse Lane entrance only).

NORTH WALES.

Friday, November 27th, 1942, at 5.30 p.m.

Lecture on "Absorption Spectra as an aid to Research in Organic Chemistry," by Dr. A. E. Gillam. To be held in the Lecture Theatre, University College of North Wales, Bangor.

SHEFFIELD.

Friday, November 20th, 1942, at 5.30 p.m.

Lecture on "Some Kinetic Problems in Heterogeneous Systems," by Dr. E. A. Moelwyn-Hughes. Joint meeting with the University of Sheffield Chemical Society. To be held in the Chemical Lecture Theatre of the University, Western Bank.

SOUTH WALES.

Saturday, November 14th, 1942, at 3.15 p.m.

In Cardiff.

Lecture on "The Mechanism of Polymerisation," by Professor H. W. Melville, D.Sc., F.R.S. Joint Meeting with the Local Sections of the Institute of Chemistry and the Society of Chemical Industry. To be held at the University College, Cathays Park.

PROCEEDINGS

OF THE

CHEMICAL SOCIETY.

OFFICIAL NOTICE.

The Council deeply regret to announce that the death of Mr. F. W. Clifford, the Librarian, took place suddenly in his sleep on Monday, 21st September. He was absent from the Library from the previous Wednesday evening owing to an attack of Gastritis; death was due to Angina Pectoris.

LIST OF APPLICATIONS FOR FELLOWSHIP.

(Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries not later than Monday, October 12th. Such objections will be treated as confidential. The forms of application are displayed in the Library.)

- Beattie, Arthur Leonard**, B.Sc. (Lond.), A.I.C. British. 8, Thorpewood Avenue, Sydenham, S.E. 26. Senior Assistant Works Chemist. *Signed by* : Donald C. Garratt, F. S. Aumonier, J. J. Fox.
- Bennett, William Frederick**, B.Sc. (Lond.), A.I.C. British. 27, Briardale Road, Woodhey, Rock Ferry. Chemist. *Signed by* : J. J. Fox, B. A. Ellis, R. Leslie Collett.
- *Berg, Samuel Sidney**, B.Sc. (Lond.), 4 years as Assistant in Research Laboratories. British. 2, Westwood Road, Tilehurst, Reading. Research Chemist. *Signed by* : George Newbery, Julius N. Ashley, H. J. Barber.
- Boardman, William**, F.I.C. British. Trout Brook House, Pleasington, Blackburn. Works Manager. *Signed by* : H. W. Cremer, F. Bell, L. A. Jordan.
- *Brian, Robert Coles**, B.Sc.Hons. (Sheffield). British. Pant-yr-Eos, Dalton Magna, Nr. Rotherham. Research Student at Sheffield University. *Signed by* : R. D. Haworth, J. C. Speakman, Arthur W. Chapman, T. B. Smith.
- Burnett, Robert McDonald**, B.Sc.Hons. (Edin.), A.I.C. British. 8, Galladale Drive, Newtongrange, Midlothian. Army. *Signed by* : E. G. V. Percival, Neil Campbell, Christina C. Miller.
- Burrough, Ernest James**. British. Hutton Road, Lambeth, S.E. 11. Director and Secretary of a Distillery. *Signed by* : Leslie H. Lampitt, Charles H. F. Fuller, E. B. Hughes.
- Burton, John Headland**, B.Sc. (Lond.), F.I.C. British. 33, Ranulf Croft, Coventry. Analytical Chemist. *Signed by* : W. H. Glover, J. J. Fox, H. Paul.
- Cuthbertson, William Francis Jack**, B.Sc. and Ph.D. (Lond.), A.I.C. British. University College, Leatherhead. Demonstrator in Biochemistry. *Signed by* : J. C. Drummond, A. L. Bacharach, G. Roche Lynch.
- Edwards, Edward Lawrence**. 40 years' experience. English. 32, Greenhill, Evesham. Director and Chemist of Edwards & Bent, Ltd., Horticultural Chemists, Evesham. *Signed by* : Leslie H. Lampitt, P. Bilham, E. B. Hughes.
- Eichner, Manfred Josef**, Engineer of Chemistry, Universities of Vienna and Zurich, Tech. Hochschule, Brno. Czechoslovakian. 9, Warrington Crescent, W. 9. Research Chemist. *Signed by* : W. Wilson, Frank W. Stoyale, J. A. R. MacLean.
- Elkin, Hugh Arthur**, B.A., M.Sc. (Trinity College, Dublin), A.I.C. British. 92, Bay Street, Port Glasgow. Technical Manager. *Signed by* : Emil A. Werner, Kenneth C. Bailey, F. P. Dunn.
- Ferguson, Alec Munro**, M.A. (Cantab.), B.Sc. (Lond.), A.I.C. British. 91, Tring Road, Aylesbury. Analytical and Control Chemist. *Signed by* : R. G. W. Norrish, H. McCombie, B. C. Saunders.
- Field, John Allen Joseph**. British. Chellowdean, Woodside Green, S.E. 25. Staff Officer in Land Forces. *Signed by* : Leslie H. Lampitt, E. B. Hughes, C. A. Bassett.
- Fuller, Albert Henry**, A.I.C., Diploma—Leeds College of Technology. British. 68, Herkomer Road, Bushey. Deputy Chief Chemist, Calne Valley Water Co. *Signed by* : Leslie H. Lampitt, E. B. Hughes, C. A. Bassett.
- Gailer, John William**, B.Sc.Hons. (Lond.), Diploma in Science and Chemistry of Wigan and District Mining and Technical College. Analytical Chemist for five years in Admiralty Chemical Post, Established Civil Servant. British. 159, Gristhorpe Road, Selly Oak, Birmingham, 29. In charge of Laboratory Work on Chemical Inspection. *Signed by* : F. W. Pinkard, F. Smith, W. J. Hickinbottom, M. Stacey.
- Gladstone, Michael Nairn**, B.Sc.Hons. (Lond.), A.I.C. British. 21, Haverhill Road, Stapleford. Research Chemist. *Signed by* : W. Lewcock, W. A. Voss, R. H. Griffith.
- *Gollin, Alban William James**, 3rd year student, Royal College of Science, Graduating July 1942. British. 14, Shepherds Gardens, Shepherds Bush, W. 12. Student. *Signed by* : H. V. A. Briscoe, A. A. Eldridge, H. J. Emeléus.
- *Green, Tom**, A.M.C.T., Higher National Certificate in Chemistry, now studying for B.Sc. and A.I.C. Registered Student of Institute of Chemistry. British. 65, Nicolas Road, Chorlton-cum-Hardy, Manchester, 21. Assistant Technical Chemist. *Signed by* : John K. Wood, R. F. Garwood, T. K. Walker.
- Heron, Harry**, B.Sc. (Lond.), A.I.C., A.M.I.Chem.E. British. Doonbrae, Bishopton, Renfrew. Chemical Engineer. *Signed by* : Leslie H. Lampitt, E. B. Hughes, C. A. Bassett.

- *Herringshaw, John Francis.** British. Yelton Hotel, White Rock, Hastings. 3rd year Student, Royal College of Science. *Signed by* : H. V. A. Briscoe, J. A. Kitchener, H. J. Emeléus.
- Hird, Samuel Arnold, A.I.C.** British. Oak Lea, Cleasby Road, Menston, Nr. Leeds. Chemist and Works Manager. *Signed by* : H. H. Hodgson, Leslie H. Lampitt, P. Bilham.
- Howat, David Dickie,** B.Sc. and Ph.D. (Glas.), A.I.C. British. 36, Elgar Circle, Newport. Metallurgist. *Signed by* : F. Rumford, W. M. Cumming, I. V. Hopper.
- Ireland, Joseph Thomas,** B.Sc.Hons. (L'pool), A.I.C. British. 339, Brodie Avenue, Liverpool, 19. 2nd Lt., R.A.O.C., Radio Maintenance Officer. Late Senior Leverhulme Research Fellow. *Signed by* : J. J. Fox, R. Leslie Collett, B. A. Ellis.
- Johnson, Edgar Bert,** M.Sc. (Birm.), F.I.C. British. Brae Lodge, Lonsdale Place, Uttoxeter Road, Derby. Research Chemist. *Signed by* : C. E. Wood, F. W. Pinkard, S. D. Nicholas.
- Miles, Sidney Edgar,** B.Sc.Hons. (Sheffield). British. 15, Medina Avenue, Esher. Technical Assistant, I.C.I., Ltd. *Signed by* : M. P. Applebey, R. D. Haworth, A. W. Taylor, Arthur W. Chapman.
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- Murray, Alexander Frederick,** B.Sc. (Glas.), A.I.C. British. Red-carr, Menstrie. Managing Director, Preserves and Food Manufacturers. *Signed by* : W. J. Skilling, F. J. Wilson, T. S. Stevens.
- Penny, Joseph Ashburner,** Trained Analytical Chemist. J.P. British. Corra-Linn, Abbot's Road, Grangemouth. General Manager of Soap, Glycerine and Candle Works. *Signed by* : Leslie H. Lampitt, P. Bilham, E. B. Hughes.
- Potter, Ronald Surman,** B.Sc.Hons. (Birm.), F.I.C. British. 532, City Road, Edgbaston, Birmingham, 17. Works Manager and Chemist. *Signed by* : S. R. Carter, R. H. Hopkins, M. Stacey, Stanley Peat.
- Pritchard, Gordon James,** B.Sc. and Ph.D. (Lond.), A.I.C. British. Holt Lodge, 95, Higher Road, Hunts Cross, Nr. Liverpool. Production Chemist. *Signed by* : J. J. Fox, I. M. Heilbron, F. S. Aumonier.
- *Pugh, Victor Charles,** Studying for degree in Chemistry at Cambridge University. English. 42, Colebrooke Drive, Wanstead, E. 11. About to enter the Royal Artillery. *Signed by* : B. C. Saunders, N. B. Chapman, H. McCombie.
- Revis, Frank Leonard Bingham,** A.C.G.F.C., F.I.C. British. 7, Dolphin Road, Glasgow, S. 1. Chemist. *Signed by* : J. J. Fox, J. R. Nicholls, R. Leslie Collett.
- Richmond, Frederick Walter,** B.Sc. (Birm.). British. Westmeads Works, Whitstable. Metallurgical Chemist. *Signed by* : S. D. Nicholas, C. E. Wood, F. W. Pinkard.
- Shanahan, Cyril Edmund Arthur,** B.Sc.Hons. (Lond.), A.I.C. 5 years' chemical apprenticeship. British. 38, Murray Road, Rugby. Research Chemist. *Signed by* : J. S. Wignall, R. Leslie Collett, A. T. Ward.
- Silverman, Israel Reuben,** B.Sc. (Manc.). British. 3, Waterpark Road, Broughton Park, Salford, 7. Food Chemist and Technical Manager. *Signed by* : H. E. Cox, G. N. Burkhardt, A. E. Gillam.
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- Summers, Donald,** Ph.D. (Lond.), A.I.C. British. 65, Fairfield Road, Stockton-on-Tees. Chemist (Heavy Chemical Industry). *Signed by* : M. P. Applebey, A. Eric J. Vickers, H. N. Wilson.
- Tully-Turner, Raymond,** B.Sc. (Lond.), A.I.C. British. 71, Prenton Road East, Birkenhead. Chemist. *Signed by* : J. J. Fox, F. S. Aumonier, I. M. Heilbron.
- Ward, George,** B.Sc.Hons. (Lond.), A.I.C. British. 61, Milburn Crescent, Norton-on-Tees. Chemist and plant manager. *Signed by* : A. W. Taylor, M. P. Applebey, J. G. M. Bremner.
- *Watts, Charles Frederick,** J.M.B. Matriculation, Higher School Cert., Inter B.Sc. British. 65, Beresford Avenue, Foleshill, Coventry. Laboratory Assistant. *Signed by* : Walter H. Glover, H. Paul, Ernest N. Johnson.
- West, Frederick Charles,** B.Sc.Eng. (Lond.). British. Caprino, Winchester Road, Chadlee's Ford, Eastleigh. Company Director. *Signed by* : Leslie H. Lampitt, P. Bilham, E. B. Hughes.
- Williams, Edward Thomas,** M.Sc. (L'pool), A.I.C. British. 40, Tudorville Road, Bebington. Chief Analytical Chemist to Lever Bros. *Signed by* : B. D. W. Luff, Francis W. Kay, A. McGookin.

UNDER SPECIAL PROVISION APPERTAINING TO CANDIDATES RESIDENT ABROAD.

- Austin, James August,** A.B. (William Jewell Coll.), work on M.A. (Univ. of Kansas) practically completed. Member, American Chemical Society and of Missouri Academy of Science. American. 580 West Pennway, Kansas City, Missouri. Chief Chemist in charge of Pharmaceutical Division. *Signed by* : Harold P. Brown.
- Buis, Marinus,** Technologist, Delft University. Dutch. Kimble, Chester Road, Whitby, Wirral. *Signed by* : L. Belchetz, J. Kewley.
- Deutsch, Berthold,** Dipl. Ing. (Vienna). Austrian. 9, Helenslea Avenue, N.W. 11. Research and Consulting Chemist. *Signed by* : M. C. Schaul, H. E. Cox.
- Evans, Ralph Liggett,** B.S. (Chicago), Ph.D. (Columbia). American. Garner Lane, Bay Shore, Long Island, New York. Executive Chemist. *Signed by* : Foster Dee Snell.
- Gillespie, Wilbur Frederick,** B.Sc. (Queen's Univ., Ont.). American. 10, Founder's Drive, Bogalusa, Louisiana. Technical Director. *Signed by* : Foster Dee Snell.
- Mittal, Dil Bahar Singh,** M.Sc. (Agra). Indian. Rewari, India. Student for the B.T. Degree at the Central Training College, Lahore. *Signed by* : H. Krall.
- Pokorny, Ernest Adalbert,** D.Sc. (Vienna). Austrian. 115, Cholmley Gardens, 5, Fortune Green Road, N.W. 6. Consulting Engineer. *Signed by* : Denis E. Wheeler, J. Kenyon.
- Tandler, Rudolf,** D.Sc. (Vienna). Czechoslovakian. 4, College Court, College Crescent, N.W. 3. Chemist to a firm of Chemical Manufacturers. *Signed by* : Pavel Kohn, Gerald Druce.
- Worsley, Richard Robert Le Geyt,** B.Sc. and Ph.D. (Lond.), D.I.C., A.R.C.S. British. Amani, Tanga, Tanganyika. Biochemist at East African Agricultural Research Station. *Signed by* : H. J. Emeléus.

PAPERS RECEIVED.

List of papers received between June 18th and September 17th, 1942. (This list does not include the titles of papers which have been read at a Scientific Meeting or which have appeared in the *Journal*.)

- "Vital stains. Part I." By A. A. GOLDBERG.
- "An interpretation of the Sandmeyer reaction. Part III. Further evidence in favour of a mechanism involving anionoid halogen." By H. H. HODGSON, S. BIRTWELL, and J. WALKER.
- "The structure of proteins." By W. HARRISON.
- "The identity of laguncurin, kino-yellow and maclurin." By M. NIERENSTEIN.
- "The associating effect of the hydrogen atom. Part XI. Hydrogen bonds involving the sulphur atom. The S-H-N bond." By G. HOPKINS and L. HUNTER.
- "Indeno-2 : 3 : 2' : 1'-benzanthrone." By G. SWAIN and A. R. TODD.
- "Isothionic acid." By A. A. GOLDBERG.
- "The influence of the 5-nitro-group on the halogenation and nitration of 5-nitro-1-naphthylamine and of some 5-nitro-1-naphthalides." By H. H. HODGSON and H. S. TURNER.
- "New syntheses of heterocyclic compounds. Part I. 2 : 3-Dimethylquinoline and 1 : 2 : 3 : 4-tetrahydroacridine." By V. A. PETROW.
- "New syntheses of heterocyclic compounds. Part II. Substituted tetrahydroacridines and 2 : 3-dimethylquinolines." By V. A. PETROW.
- "Some alkyl benzoquinols and related compounds." By A. H. COOK, I. M. HEILBRON, and F. B. LEWIS.
- "Experiments on the synthesis of substances related to the sterols. Part XL. (a) The preparation of 2 : 7-dihydroxyphenanthrene and certain derivatives. (b) Further observations on the reduction of 1- γ -ketobutyl-2-naphthol." By J. W. CORNFORTH and SIR ROBERT ROBINSON.
- "Cannabis Indica. Part XI. An examination of the alkali-soluble portion of American hemp resin." By (MRS.) A. MADINAVEITIA, P. B. RUSSELL, and A. R. TODD.
- "*p*-Aminodimethylaniline. Part II. The *o*-chloro- and -nitro-derivatives." By E. E. AYLING, JOHN H. GORVIN, and L. E. HINKEL.
- "The preparation of symmetrical azo-compounds, the positional influence of the nitro-group on the decomposition of nitronaphthyldiazonium sulphates by cuprous hydroxide, and an improved method for the production of β -nitronaphthalene." By H. H. HODGSON, E. LEIGH, and G. TURNER.
- "The preparation of β tetralone from β -naphthol and some analogous transformations." By J. W. CORNFORTH, (MRS.) R. H. CORNFORTH, and SIR ROBERT ROBINSON.
- "The mechanism of additions to double bonds. Part XIV. The nature of the activated complex in bimolecular diene syntheses." By A. WASSERMANN.
- "Homogeneous catalysis of diene syntheses. A new type of third-order reactions." By A. WASSERMANN.
- "Solvent effects in association equilibria." By A. WASSERMANN.
- "Homogeneous catalysis and solvent effects in a diene synthesis." By A. WASSERMANN.
- "Tetra-aryl phosphonium, arsonium, and stibonium salts. Part II. The mechanism of their formation by the aluminium chloride reaction." By D. R. LYON and F. G. MANN.
- "A method of preparation of certain β -substituted indoles." By (MRS.) R. H. CORNFORTH and SIR ROBERT ROBINSON.
- "Nuclear methylation of phenols by means of methanolic sodium methoxide." By J. W. CORNFORTH, (MRS.) R. H. CORNFORTH, and SIR ROBERT ROBINSON.
- "The triterpene resinols and related acids. Part XIV. The oxidation of acetylursolic acid." By E. S. EWEN and F. S. SPRING.
- "Decalin-1 : 5-dione and 2 : 2'-diketodicyclopentyl." By B. J. F. HUDSON and SIR ROBERT ROBINSON.
- "The crystal structure of phosphorus pentachloride." By D. CLARK, H. M. POWELL, and (independently) A. F. WELLS.
- "Photo-oxidation of non-ionisable thioketones in the presence of sunlight." By A. SCHONBERG and A. MOSTAFA.
- "The cleavage of the ethylene linkage by the action of thionyl chloride." By A. SCHÖNBERG and (MISS) W. ASKER.
- "Synthesis of phthalides from 3 : 4 : 5-trimethoxybenzoic acid." By F. E. KING and T. J. KING.
- "The aqueous hydrolysis of sodium phenylbromoacetate and sodium phenylchloroacetate." By W. R. BULCRAIG and the late H. M. DAWSON.
- "The halogenation of phenolic ethers and anilides. Part XIII. Arrhenius activation energies for di- and poly-substituted aromatic ethers." By BRYNMOR JONES.

- "Taurine." By A. A. GOLDBERG.
- "Absorption spectra and the structures of pyrethrins. Parts I and II." By A. E. GILLAM and T. F. WEST.
- "Studies on agar-agar. Part III." By E. G. V. PERCIVAL and T. G. H. THOMSON.
- "Reactions of chloral and its hydrate with *p*-cresol." By M. P. BALFE and W. C. WEBBER.
- "5-Hydroxyindole." By F. BERGEL and A. L. MORRISON.
- "On the oxidation of adrenaline." By F. BERGEL and A. L. MORRISON.
- "Sapogenins. Part XVII. The position of the carboxyl group in oleanolic and glycyrrhetic acids." By G. A. R. KON and W. C. J. ROSS.
- "Synthesis of 4-hydroxy-2-naphthoic acids." By R. D. HAWORTH, BRYNMOR JONES, and MISS Y. M. WAY.
- "The preparation of 1-(*p*-aminobenzenesulphonamido)-2:5-dimethylpyrrole." By E. O'FARRELL and WALSH.
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THE CHEMICAL SOCIETY

NOTICE OF FORTHCOMING SCIENTIFIC MEETINGS

IN LONDON.

Thursday, November 19th, 1942, at 2.30 p.m.

The **Sir William Bragg Memorial Lecture**, by Professor J. D. Bernal, D.Sc., F.R.S. (in the Lecture Theatre of the Royal Institution, by kind permission of the Managers). Tickets of admission will not be required.

Thursday, December 17th, 1942, at 2.30 p.m.

Tilden Lecture on "Recent Developments in the Theory of Reaction Kinetics in Solution," by Mr. R. P. Bell, M.A., B.Sc.

OUTSIDE LONDON.

EDINBURGH.

Tuesday, December 1st, 1942, at 7 p.m.

Lecture on "Molecules and Crystals," by Professor J. Monteath Robertson. Joint Meeting with the Edinburgh University Chemical Society and the Local Sections of the Institute of Chemistry and the Society of Chemical Industry. To be held in the Medical Chemistry Lecture Theatre, The University, Teviot Place.

GLASGOW.

Thursday, November 12th, 1942, at 3.30 p.m.

Lecture on "Thermal Diffusion," by Professor James Kendall, F.R.S. Joint Meeting with the Andersonian Chemical Society and the Glasgow University Alchemists' Club. To be held in the University.

Friday, December 4th, 1942, at 7.15 p.m.

Lecture on "X-ray Study of Coalification and Carbonisation," by Professor H. L. Riley. Joint Meeting with the Local Sections of the Institute of Chemistry and the Society of Chemical Industry. To be held in the Royal Technical College.

LIVERPOOL.

Saturday, November 21st, 1942, at 23.0 p.m.

Lecture on "Chemical Education in the Post-War Period," by Dr. R. A. Morton. Joint Meeting with the Local Section of the Institute of Chemistry. To be held at Reece's Restaurant, Parker Street.

NORTH WALES.

Friday, November 27th, 1942, at 5.30 p.m.

Lecture on "Absorption Spectra as an aid to Research in Organic Chemistry," by Dr. A. E. Gillam. To be held in the Lecture Theatre, University College of North Wales, Bangor.

SHEFFIELD.

Friday, November 20th, 1942, at 5.30 p.m.

Lecture on "Some Kinetic Problems in Heterogeneous Systems," by Dr. E. A. Moelwyn-Hughes. Joint meeting with the University of Sheffield Chemical Society. To be held in the Chemical Lecture Theatre of the University, Western Bank.

SOUTH WALES.

Saturday, November 14th, 1942, at 3.15 p.m.

In Cardiff.

Lecture on "The Mechanism of Polymerisation," by Professor H. W. Melville, D.Sc., F.R.S. Joint Meeting with the Local Sections of the Institute of Chemistry and the Society of Chemical Industry. To be held at the University College, Cathays Park.

PROCEEDINGS

OF THE

CHEMICAL SOCIETY.

Minutes of a SCIENTIFIC MEETING

held at Burlington House, London, W.1, on Thursday, October 15th, 1942, at 2.30 p.m.

The PRESIDENT, DR. W. H. MILLS, M.A., F.R.S., was in the Chair, and welcomed the visitors present.

The minutes of the Scientific Meeting on May 21st, 1942, were taken as read, and were confirmed and signed.

The PRESIDENT referred to the loss sustained by the Society, through death, of Professor Dr. Richard Willstätter, Honorary Fellow, of Professor G. G. Henderson, Past-President, and of Mr. F. W. Clifford, Librarian, and stated that the Council had passed the following resolutions ·

The Officers and Council of the Chemical Society deeply regret the death on the 3rd August, 1942, of Richard Willstätter, who was elected an Honorary Fellow of the Society in April 1937.

His researches on the Structure and Synthesis of Cocaine and of Atropine at the early age of 30 singled him out as a chemist of outstanding ability, and his later researches, particularly his work on the Chlorophylls, on the Anthocyanins and on the Constitution of the Enzymes placed him among the great Organic Chemists of the age.

The Council record their high appreciation of the eminent services he has rendered to the progress of Science, and are proud that his name has been inscribed on the list of Faraday Lecturers of the Chemical Society.

They express their sincere sympathy to his daughter in the irreparable loss she has sustained.

The Officers and Council of the Chemical Society learn with profound regret at their meeting on the 15th October of the death on the 28th September, 1942, of their distinguished Past-President, George Gerald Henderson.

They express their high appreciation of the services he has rendered to the Science of Chemistry by his original investigations in Organic Chemistry and also by the far reaching influence he exerted as a great Teacher of Chemistry in his native City of Glasgow, over a period of 53 years.

Henderson had the distinction of serving as President of each of the three Chartered Chemical Bodies representing the Science and Practice of Chemistry in this Country, and the Council record with gratitude the wisdom and sagacity he manifested in guiding the affairs of this Society.

The Council experience a sense of deep personal sorrow in the loss of a revered and beloved colleague, and desire to convey their sympathy to his sister in her great loss.

The Council learn with deep regret at their meeting on 15th October, 1942, of the death on September 21st of Mr. F. W. Clifford, who was appointed Librarian to the Society in 1903.

Throughout the 39 years Mr. Clifford has held this office, his intimate knowledge of the Library has ever been placed freely at the disposal of Fellows and others using the Library and has been of inestimable value to all those engaged in the profession and practice of Chemistry.

The Council record their high appreciation of the outstanding services he has rendered not only to this Society but to all Chemists and give grateful thanks for his devotion to the duties of his office.

They desire to convey their sincere sympathy to Mrs. Clifford and her son in the irreparable loss they have sustained.

The company present stood while the resolutions were read.

The PRESIDENT also referred to the loss sustained by the Society, through death, of the following Fellows :

	Elected.	Died.
Francis William Clark	1913	Reported missing.
Carleton Ellis	1917	January 13th, 1941.
Llewellyn Garbutt	1883	January 30th.
John Cyril Jennings.	1914	March 3rd.
Frederic Samuel Kernick	1930	August 28th.
Avigdors Lifsiacs	1938	Killed in action.
Albert Nash	1919	August 3rd.
Charles Smart Roy	1915	September 17th.
William Selby Simpson.	1886	April 18th.
George Percy Darnell-Smith	1892	April 10th.
Charles William Truelove	1909	July 24th.
Thomas John Underhill	1889	July 24th.
Arthur Robert Warnes	1918	August 25th.

FORMAL ADMISSION OF FELLOWS.

The following were formally admitted Fellows of the Chemical Society : R. A. Raphael, G. G. Rose, T. F. M. Smart, Charles W. S. Taylor, Rudolf Ungar, Peter Koch, and M. B. Green.

The following papers were read :

- “ The crystal structure of phosphorus pentachloride.” By D. CLARK, H. M. POWELL, and (independently) A. F. WELLS.
- “ The formation and structure of some organic molecular compounds.” By J. WEISS.
- “ Alkyl oxygen fission in carboxylic esters. Part II. Derivatives of *p*-methoxybenzhydrol.” By M. P. BALFE, M. A. DOUGHTY, J. KENYON, and R. POPLETT.
- “ Studies in the polyene series. Parts V, VI, and VII. An account of recent work directed towards the synthesis of vitamin A and analogous compounds.” By I. M. HEILBRON, A. W. JOHNSON, E. R. H. JONES, H. P. KOCH, J. T. McCOMBIE, and A. SPINKS.

OFFICIAL ANNOUNCEMENTS

RESEARCH FUND.

Hitherto, the Research Fund Committee has met in December of each year to consider applications for grants from the Research Fund. In view of present conditions, however, the Council have decided that for the present applications for grants shall be considered as and when received. Forms of application for grants are obtainable from the General Secretary.

All those who have received grants, accounts of which have not been closed, are reminded that reports should be sent to the General Secretary as soon as possible and in any case not later than Monday, 16th November.

LIBRARY.

The Council have decided that Mr. A. E. Cummins (Sub-Librarian) shall serve as Acting Librarian pending the appointment of a Librarian.

ACKNOWLEDGEMENTS.

The Council have expressed their thanks to Miss E. M. James and Mrs. R. V. Pitt-Rivers for gifts of publications of the Society, to the Chemical Council for grants of £1000 towards the cost of the Society's publications for 1942 and £50 towards the cost of publishing Summaries of Papers for 1942, and to the Faraday Society and the Society of Dyers and Colourists for contributions of £26 5s. 0d. and £10 10s. 0d. respectively, towards the maintenance of the Library for 1942.

APPEAL FOR PUBLICATIONS OF THE SOCIETY.

To assist in building up reserve stocks of publications of the Society that will be required to replace those lost by libraries, institutions and individuals as the result of enemy action, the Council will welcome gifts of the following publications of the Society from Fellows who do not need to retain them for reference purposes :

<i>Journal.</i>		
1862–1870 (inclusive)	1892	1911–1913 (inclusive)
1880	1895	1918–1920 (inclusive)
1884	1897	1925
1885	1901–1903 (inclusive)	1939 onwards
1889		

Abstracts "A."

1925
1926

1927 (index only)
1939 onwards

Annual Reports.

Vol. VIII (1911)
,, IX (1912)

Vol. X (1913)
,, XXIX (1932)

Vol. XXXVI (1939)
,, XXXVII (1940)

Vol. XXXVIII (1941)

FELLOWSHIP.

The following new Fellows have been elected :

On July 16th, 1942.

Ronald Bernard Collins.	Eric James Holland.	Reginald Killmaster Stratford.
Harold Albert Hadleigh Crowther.	James Tyldesley Kendall.	Charles Walter Selkrig Taylor.
Alan Edward Flood.	Anthony Winnington Leftwich.	Walter Frederick Waters.
Markus Guggenheim.	Stanley Frederick Nicholls.	Harold Webster.
	Thomas Fraser Mackenzie Smart.	Norman Tagg Woombs.

On September 17th, 1942.

Edward William Bolton.	Bertha Edith Judge.	Kenneth Schofield.
Geoffrey Arthur Holmes Bosley.	Heinz Peter Koch.	Francis Schollick.
John Edward Bridges.	George Lewi.	Herbert Daymond Segrove.
Walter Alfred Broom.	Francis William Lewis.	Ronald Gordon Shuttleworth.
Daniel McGillivray Brown.	Colin Lindley.	John George Sloan.
Hugh Mills Bunbury.	Thomas Stanley McRoberts.	Rolf Herbert Stein.
Gerald Bernard Cook.	David Henry James Martin-Jones.	Isaac Stern.
Joan Muriel Currington.	Harold Mennell.	Cyril Oswald Main Steward.
Werner David.	Ronald William Morton.	Kossy Strauss.
Robert Ronald Davies.	Laurance Alan Mounter.	William Oliver Sykes.
Roland Edwin Dickinson.	Alick Robert Munden.	Henry William Thompson.
Arthur Norman Dunsby.	William Alexander Gardiner Nelson.	Lilian May Turton.
Frances Mary Feetham.	Leslie Charles Alfred Nunn.	Julius Erwin Underwood.
John Fell.	John Ormston.	Marcus Vahrman.
Hermann Carl Fleischer.	Edgar Stagg Pemberton.	Ernest Henry Volwiler.
William Stuart Fraser.	Walter Manuel Temple Perkins.	Bernard Vos.
Elizabeth Mary Frith.	Thomas Bruce Philip.	Thomas Morgan Walters.
Arthur Turner Grisenthwaite.	Claus Wolfgang Picard.	Arthur James Warner.
Mark Guter.	Henry Tremayne Pinnock.	Joseph George Weighall.
Keith Graham Arthur Hammer.	Bruno Puetzer.	Philip Charles Wheeler.
Henry Guy Harvey.	Jacob Rabinovitch.	John Alexander White.
Thomas Percy Hoar.	Gilbert Neil Revie.	Bertrand Ernest Wilde.
George Milnes Horner.	Bruno Albert Rewald.	Alexander Stewart Wilkie.
Wynne Hughes.	Edward Frank Richardson.	Edward Manwaring Wilkins.
Kenneth Armitage Hyde.	Edwin Claxton Roper.	Fred Wilkinson.
Joseph Fox Jackson.		Wilfrid Eric Willmott.
Richard Owen Jones.		

On October 15th, 1942.

James August Austin.	John Allen Joseph Field.	Ernest Adalbert Pokorny.
Arthur Leonard Beattie.	Albert Henry Fuller.	Ronald Surman Potter.
William Frederick Bennett.	John William Gailer.	Gordon James Pritchard.
Samuel Sidney Berg.	Wilbur Frederick Gillespie.	Victor Charles Pugh.
William Boardman.	Michael Nairn Gladstone.	Frank Leonard Bingham Revis.
Robert Coles Brian.	Alban William James Gollin.	Frederick Walter Richmond.
Marinus Buis.	Tom Green.	Cyril Edmund Arthur Shanahan.
Robert McDonald Burnett.	Harry Heron.	Israel Reuben Silverman.
Ernest James Burrough.	John Francis Herringshaw.	Mervyn Leslie Smith.
John Headland Burton.	Samuel Arnold Hird.	Donald Summers.
William Francis Jack Cuthbertson.	David Dickie Howat.	Rudolf Tandler.
Berthold Deutsch.	Joseph Thomas Ireland.	Raymond Tully-Turner.
Edward Lawrence Edwards.	Edgar Bert Johnson.	George Ward.
Manfred Josef Eichner.	Sidney Edgar Miles.	Charles Frederick Watts.
Hugh Arthur Elkin.	Dil Bahar Singh Mittal.	Frederick Charles West.
Ralph Liggett Evans.	William Muir.	Edward Thomas Williams.
Alec Munro Ferguson.	Alexander Frederick Murray.	Richard Robert Le Geyt Worsley.
	Joseph Ashburner Penny.	

LIST OF APPLICATIONS FOR FELLOWSHIP

(*Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries not later than Monday, November 16th. Such objections will be treated as confidential. The forms of application are displayed in the Library.*)

- ***Barton, Derek Harold Richard**, B.Sc.Hons. (Lond.), A.R.C.S. British. Theydon, Hillside Drive, Old Road East, Gravesend. Research Student at Imperial College. *Signed by* : E. R. H. Jones, A. Spinks, W. Ross, G. A. R. Kon.
- ***Bates, William Abraham**, passed B.Sc. subsidiary (Lond.). British. 22, Kentish Road, Belvedere. Student at University College, Southampton. *Signed by* : Ishbel G. M. Campbell, K. R. Webb, S. H. Harper.
- ***Brand, John Charles Drury**, B.Sc.Hons. (Lond.). British. London House, Guilford Street, W.C. 1. Research Chemist. *Signed by* : G. M. Bennett, E. W. McClelland, Gwyn Williams.
- Bray, Harold Geoffrey**, B.Sc. and Ph.D. (Birm.). British. The Medical School, Hospitals Centre, Birmingham, 15. Lecturer in Biochemistry. *Signed by* : Stanley Peat, M. Stacey, W. V. Thorpe.
- ***Cartwright, Neville John**, B.Sc.Hons. (Sheffield). British. 65, Greenhead Lane, Chapelton, Sheffield. Industrial Chemist. *Signed by* : R. D. Haworth, Brynmor Jones, J. C. Speakman, Alex H. Lambertson.
- ***Clement, Archibald George**, B.Sc.Hons. (Glas.). British. The Cedars, Bath Road, Taplow. Research Chemist. *Signed by* : Andrew Kent, S. Horwood Tucker, T. S. Stevens.
- Denton, Cecil**, A.I.C. British. 27, Oxford Avenue, Guiseley, nr. Leeds. Chief Control Chemist in works. *Signed by* : H. Kitchen, G. G. Bradshaw, B. Rushworth.
- ***Hardman, Eric**. Northern Universities Higher School Cert. British. 23, Old Lane, Hollinwood, Oldham. Undergraduate, Leeds University. *Signed by* : J. W. Baker, Alan Pollard, H. Taylor.
- ***Katan, Leonard Louis**, A.R.C.S., B.Sc.Hons. (Lond.) to be awarded in July, 1943, Royal Scholar. British. 49, Avondale Road, South Croydon. Research Student. *Signed by* : G. Ingle Finch, H. V. A. Briscoe, H. J. Eméleus.
- Kent, Francis George**, B.Sc. (Lond.), A.I.C., A.M.I.Chem.E. British. 161, Bank Street, Irvine. Chemical Engineer. *Signed by* : J. M. C. Thompson, W. P. G. Lewis, W. D. Whitaker.
- ***Lancaster, Douglas Winston**, B.Sc. (Lond.), A.I.C. British. 9, Eversley Crescent, Osterley. Chief Analyst to a Rubber Co. *Signed by* : A. G. Maddock, G. R. Martin, V. A. Petrow.
- ***Libman, Dennis David**, B.Sc. (Lond.), A.R.C.S. British. 135, Adelaide Road, N.W. 3. Assistant Research Chemist. *Signed by* : Julius N. Ashley, George Newbery, H. J. Barber.
- ***McCombie, John Talbot**, B.Sc.Hons. (Lond.), A.R.C.S. British. Royal College of Science, South Kensington, S.W. 7. Research Chemist. *Signed by* : E. R. H. Jones, A. W. Johnson, A. H. Cook, H. J. Eméleus, G. A. R. Kon.
- ***Macfarlane, Alistair Campbell**, B.Sc. (Leeds). British. 30, Park Road, Spondon, nr. Derby. Chemist. *Signed by* : Frederick Challenger, J. W. Baker, E. Rothstein, W. A. Wightman, H. Burton, F. R. Goss.
- ***Pattison, Frederick Lewis Maitland**, First Class Prelim. Exam. Nat. Sci. Tripos. British. Clare College, Cambridge. Reading for Part II of the Natural Sciences Tripos in Chemistry. *Signed by* : B. C. Saunders, N. B. Chapman, F. G. Mann.
- ***Pickering, Geoffrey Basil**. Hope to complete B.A. (Oxon) at end of the War. British. 4, Cavendish Place, Beeston. Research Chemist. *Signed by* : Ronald P. Bell, D. L. Chapman, C. Hurst.
- Thomas, Iorwerth Bayley**, Chemist and Druggist, M.P.S. British. Avalon, Western Avenue, Newport. Analytical Chemist. *Signed by* : W. D. Williams, N. M. Cullinane, W. H. Linnell.
- Summers, Basil Charles Laurance**, B.Sc. (Lond.), British. Brewhouse Bank, North Shields. Chief Chemist. *Signed by* : Richard Raper, Jos. Brown, J. C. Drummond.
- ***Wilding, Ivor Gordon Ellis**, Major Scholar at Clare College, Cambridge. British. Clare College, Cambridge. Reading for Part II of the Natural Sciences Tripos in Chemistry. *Signed by* : B. C. Saunders, N. B. Chapman, F. G. Mann.
- Wilkinson, Samuel**, M.Sc. (Manc.). British. 27, Hayes Way, Beckenham. Research Chemist. *Signed by* : A. E. Gillam, A. R. Todd, A. Parkinson.

UNDER SPECIAL PROVISION APPERTAINING TO CANDIDATES RESIDENT ABROAD.

- Davis, Eric Gordon**, B.Sc. (Lond.), F.I.C. British. Middlesex Road, Colonia, N.J. General Manager of a Works. *Signed by* : Samuel Smiles.
- Skinner, Francis Walter**, B.Sc. (Lond.), A.R.C.S., D.I.C., A.M.I.I.A. British. P.O. Box 909, Durban. Planning Officer to Works. *Signed by* : Charles Mills.

* Reduced annual subscriptions.

PAPERS RECEIVED

List of papers received between September 17th and October 15th, 1942. (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 synthetic application of α - β -bromomethylbenzyl bromide. Part I. Some sulphanilamide derivatives of 1 : 2 : 3 : 4-tetrahydroisoquinoline.” By F. G. HOLLIMAN and F. G. MANN.
- “The influence of p -substituents on the decomposition of some zinc chloride double salts of diazonium chlorides by acetic anhydride.” By H. H. HODGSON and C. K. FOSTER.
- “The action of cuprous oxide on diazotised amines in ethyl alcoholic acid solution.” By H. H. HODGSON and H. S. TURNER.
- “Some notes on the condensation products of acetaldehyde.” By E. E. CONNOLLY.

- "The polysaccharides of Carrageen Moss (*Chondrus crispus*). Part I. The linkage of the *d*-galactose residues and the ethereal sulphate." By J. BUCHANAN, E. E. PERCIVAL, and E. G. V. PERCIVAL.
- "Some anilino-pyridine derivatives." By W. O. KERMAK and (MISS) A. P. WEATHERHEAD.
- "A rapid volumetric method for the determination of lead in brass." By P. M. FISK and F. F. POLLAK.
- "The action of phosphorus pentachloride on non-symmetrically substituted acetones, and the spontaneous elimination of hydrogen chloride." By A. ZAKI and Y. ISKANDER.
- "Syntheses in the naphthalene series. Part I. 1:3-Dihydroxynaphthalenes." By G. SOLIMAN and R. W. WEST.
- "Syntheses in the naphthalene series. Part II. 3-Hydroxy-2-alkyl-1:4-naphthaquinones." By G. SOLIMAN and (in part) A. LATIF.
- "Syntheses in the naphthalene series. Part III. 1-Hydroxy-2:3-benzfluorene and 4-hydroxy-2-methyl-5:6-benzcoumaran." By A. LATIF and G. SOLIMAN.
- "Rare-earth metal amalgams. Part III. The separation of ytterbium from its neighbours." By J. K. MARSH.
- "The nuclear alkylation of aromatic bases. Part V. The action of methyl alcohol on *m*-toluidine hydrochloride." By R. W. CRIPPS and D. H. HEY.
- " β -3:4-Methylenedioxyphenylisopropylamine." By J. ELKS and D. H. HEY.
- "The nature of the amino-group in aminoacridines. Part I. Evidence from electrometric studies." By A. ALBERT and R. GOLDACRE.
- "The nature of the amino-group in aminoacridines. Part II. Evidence from chemical reactions." By A. ALBERT and B. RITCHIE.

THE CHEMICAL SOCIETY

NOTICE OF FORTHCOMING SCIENTIFIC MEETINGS

IN LONDON.

Thursday, December 17th, 1942, at 2.30 p.m.

Tilden Lecture on "Recent Developments in the Theory of Reaction Kinetics in Solution," by Mr. R. P. Bell, M.A., B.Sc.

Thursday, January 21st, 1943, at 2.30 p.m.

Meeting for the reading of original papers.

OUTSIDE LONDON.

EDINBURGH.

Tuesday, December 1st, 1942, at 7 p.m.

Lecture on "Molecules and Crystals," by Professor J. Monteath Robertson. Joint Meeting with the Edinburgh University Chemical Society and the Local Sections of the Institute of Chemistry and the Society of Chemical Industry. To be held in the Medical Chemistry Lecture Theatre, The University, Teviot Place.

GLASGOW.

Friday, December 4th, 1942, at 7.15 p.m.

Lecture on "X-ray Study of Coalification and Carbonisation," by Professor H. L. Riley. Joint Meeting with the Local Sections of the Institute of Chemistry and the Society of Chemical Industry. To be held in the Royal Technical College.

NOTTINGHAM.

Saturday, January 23rd, 1943, at 3 p.m.

Lecture on "Vitamin A," by Dr. R. A. Morton. To be held in the Chemistry Lecture Theatre, University College, Shakespeare Street.

PROCEEDINGS

OF THE

CHEMICAL SOCIETY.

Minutes of a SCIENTIFIC MEETING

held at the Royal Institution, Albemarle Street, W.1, on Thursday, November 19th, 1942, at 2.30 p.m.

The PRESIDENT, DR. W. H. MILLS, M.A., F.R.S., was in the Chair, and welcomed the visitors present.

After a brief introduction, the PRESIDENT called on Professor J. D. Bernal, M.A., F.R.S., to deliver the Sir William Bragg Memorial Lecture.

At the conclusion of the Lecture, a vote of thanks to the Lecturer, proposed by Professor N. V. SIDGWICK and seconded by Professor A. C. G. EGERTON, was carried with acclamation.

The PRESIDENT expressed the Society's appreciation of the privilege of holding the lecture at the Royal Institution and proposed a vote of thanks to the Managers; this was passed unanimously.

OFFICIAL ANNOUNCEMENTS

DEATHS.

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

	<i>Honorary Fellow.</i>	Elected.	Died.
Max Bodenstein		1929	September 3rd.
	<i>Fellows.</i>		
John Norman Collie		1885	November 1st.
William Richard Simpson Ladell		1906	November 6th.
Walter Odling		1873	November 17th.
Thomas Henry Poulson		1921	December 16th, 1941.
Reece Henry Vallance		1931	September 27th.

CONGRATULATIONS

The PRESIDENT has conveyed the congratulations of the Council to Sir John Gustav Jarmay, who completed 60 years of Fellowship on November 16th, and to the following recipients of Royal Society Medals :

Copley Medal	Sir Robert Robinson.
Royal Medal	Professor W. N. Haworth.
Davy Medal	Professor C. N. Hinshelwood.

ACKNOWLEDGEMENTS.

The Council have expressed their thanks to the Society of Public Analysts for a contribution of £21 towards the maintenance of the Library for 1942 and to Mr. S. Hoare Collins and Lt.-Col. H. Paget for gifts of publications of the Society.

LIBRARY.

The Library will be closed on Christmas Day and Boxing Day, December 25th and 26th.

CONJOINT CHEMICAL OFFICE.

Payment of Annual Subscription 1943.

In accordance with the notice recently sent to Fellows, under the Scheme of Co-operation for the three Chartered Chemical Bodies (the Chemical Society, the Institute of Chemistry, and the Society of Chemical Industry), subscriptions of Fellows who wish to pay a Joint Membership Subscription (either three-body or two-body) should be paid to the Conjoint Office at 6, Burlington Gardens, W. 1, on or before January 1st, 1943, the date on which Subscriptions become due.

Subscriptions from Fellows, who wish to continue to pay the separate annual subscription to the Chemical Society, together with any sum due for extra publications, should be made payable to Messrs. Coutts & Co., 440, Strand, W.C. 2, and sent direct to them as heretofore. The form stating publications required should be completed and returned to the Conjoint Office.

Dispatch of Publications.

Arrangements in connection with the dispatch of the publications of the Chemical Society and the Society of Chemical Industry are now carried out at the Conjoint Office, and inquiries regarding the non-receipt of publications should be sent there. *Changes of address*, however, should be notified to the *General Secretary, The Chemical Society, Burlington House, Piccadilly, W. 1*, as heretofore.

FELLOWSHIP.

The following 22 candidates were elected Fellows on November 19th :

Derek Harold Richard Barton.	Eric Hardman.	Frederick Lewis Maitland Pattison.
William Abraham Bates.	Leonard Louis Katan.	Geoffrey Basil Pickering.
John Charles Drury Brand.	Francis George Kent.	Francis Walter Skinner.
Harold Geoffrey Bray.	Douglas Winston Lancaster.	Basil Charles Laurence Summers.
Neville John Cartwright.	Dennis David Libman.	Iorwerth Bayley Thomas.
Archibald George Clement.	John Talbot McCombie.	Ivor Gordon Ellis Wilding.
Eric Gordon Davis.	Alistair Campbell Macfarlane.	Samuel Wilkinson.
Cecil Denton.		

LIST OF APPLICATIONS FOR FELLOWSHIP

(*Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries not later than Monday, December 14th. Such objections will be treated as confidential. The forms of application are displayed in the Library.*)

- ***Anderson, William Nelson**, B.Sc.Hons. (Q.U.B.). British. 31, Wellington Park, Malone Road, Belfast. Senior Assistant in Chemistry Department, Queen's University. *Signed by* : H. Graham, A. W. Stewart, T. Stanley McRoberts, C. A. McDowell.
- Atkins, William George**, A.M.I.Chem.E. British. 69, Halford Road, Ickenham. Secretary, London Advisory Committee, Indian Jute Mills Association, Research Department. Chief Inspector for War Office and Ministry of Supply for proofing of Sandbags and allied Jute products. *Signed by* : E. F. Armstrong, G. R. Davies, F. H. Burstall, D. V. N. Hardy.
- Bailey, Frank William**, A.M.C.T., A.I.C. British. College of Technology, Manchester, 1. Lecturer in Paper Making. *Signed by* : T. K. Walker, G. Baddiley, O. Rhys Howell, John K. Wood.
- Baldwin, Oscar Theodore**, M.Inst.B.E. British. 78, Beechwood Gardens, Ilford. Proprietor of Manufacturing Chemists Tar Products Works. *Signed by* : Walter Lloyd Willey, John Knaggs, P. Parrish.
- Constantine, Stella**. British. Wharfdale Road, Tyseley, Birmingham, 11. Followed a Science course at Birmingham University, 1920—1922; passed examination in Chemistry, Course III. Chief Chemist. *Signed by* : S. R. Carter, S. D. Nicholas, C. E. Wood.
- Eaton, Robert Turner**, B.Sc.Hons. (Lond.), A.I.C. British. 28, Holme Lacy Road, Hereford. Assistant Manager. *Signed by* : G. W. Usherwood, Arthur I. Vogel, E. G. K. Pritchett, Garfield Thomas.
- Gaunt, William Eric**, B.Sc.Hons. and Ph.D. (Leeds), Diploma in Dyeing. British. 203, Hood House, Dolphin Square, S.W. 1. Chief Chemist, Ashe Labs., Ltd. & Associated Companies. *Signed by* : Charles S. Gibson, Frederick M. Rowe, H. Burton.
- ***Gilbert, Lionel Alfred**, B.Sc., A.R.C.S. (Lond.). English. 16, Lindfield Gardens, N.W. 3. Research Chemist. *Signed by* : H. J. Emeléus, E. R. H. Jones, H. V. A. Briscoe.
- ***Harris, Robert John**, London H.S.C., Inter. B.Sc., Subsid. B.Sc. British. Exeter Hall, 80, Pennsylvania Road, Exeter. Student at University College, Exeter; reading for B.Sc.Hons. Chemistry. *Signed by* : H. T. S. Britton, S. J. Gregg, R. King, P. T. Gilbert.
- ***Harris, Robert John Cecil**, B.Sc. (Lond.), A.R.C.S. British. 30, Cherry Orchard Way, Maidstone. Research Student at Imperial College. *Signed by* : E. R. H. Jones, G. A. R. Kon, A. H. Cook.
- Hayes, Frank Wynn**, A.I.C. British. Woodlands Avenue, Westville, Natal. Chief Chemical and Bacteriologist, Messrs. Hulett's S.A. Refineries, Ltd. *Signed by* : Leslie H. Lampitt, A. E. Dunstan, R. Leslie Collett.
- Hoblyn, Edward Henry Treffry**, Ph.D. (Lond.), A.R.C.S., D.I.C., A.I.C., A.M.I.Chem.E. British. Brantham Works, near Manningtree. Chemical Engineer. *Signed by* : Foster Sproxtton, G. Swann, R. S. Colborne.
- ***Holmes, Derek**. Demysip (in Natural Science) at Magdalen College; State Scholarship. British. 97, Beckside Road, Lidget Green, Bradford. Chemistry Student at Magdalen College, Oxford. *Signed by* : F. E. King, L. E. Sutton, S. G. P. Plant.
- ***James, Arthur Montague**. London H.S.C. British. 57, Parkstone Avenue, Parkstone. Undergraduate at Balliol College, Oxford, reading for Honours Degree in Chemistry. *Signed by* : F. E. King, A. G. Ogston, Ronald P. Bell.
- ***McMullen, Arnold Ivor**, B.Sc.Hons. (Q.U.B.). British. Campsie, Ballygrainey, Bangor, Co. Down. Physical Chemistry research student at Cambridge University. *Signed by* : A. W. Stewart, H. Graham, C. H. Bamford.
- Martin, Sidney Launcelot Hiam**, M.Sc. (Lond.), D.I.C., A.R.C.S., A.I.C. British. 66, Streatham Court, S.W. 16. Research Chemist. *Signed by* : H. J. Emeléus, A. A. Eldridge, M. Carlton.
- ***Mess, David**, B.Sc. (Lond.) (Degree to be awarded in 1943). British. 48, Randolph Avenue, W. 9. Works Chemist. *Signed by* : J. R. Partington, K. Wallersteiner, H. D. K. Drew.
- ***Montgomery, Rex**. British. 36, Margaret Avenue, Halesowen, Birmingham. Student, Birmingham University. *Signed by* : Stanley Peat, W. N. Haworth, M. Stacey.
- ***Naylor, Ralph Francis**, B.Sc. (Lond.), A.R.C.S. British. 42, Barleycroft Road, Welwyn Garden City. Research Chemist. *Signed by* : A. H. Cook, I. M. Heilbron, E. R. H. Jones, E. H. Farmer.
- ***Newth, Frederick Howard**. British. 155, Masons Hill, Bromley. Student, Birmingham University. *Signed by* : Stanley Peat, M. Stacey, F. Smith.
- ***O'Mara-Bockris, John**, Subsidiary B.Sc. (Lond.). British. 23, Harrington Villas, Brighton, 6. Student. *Signed by* : W. H. Linnell, G. E. Watts, P. Haas.

- Porter, Joseph William Geoffrey**, B.A.Hons. (Cantab.). British. Emmanuel College, Cambridge. Research Student. Signed by : F. G. Mann, H. McCombie, B. C. Saunders, B. A. Kilby.
- Rose, Francis Leslie**, B.Sc. and Ph.D. (Lond.). British. 2, Preesall Avenue, Heald Green, Cheadle. Research Chemist. Signed by : W. R. Boon, R. Fraser Thomson, W. A. Sexton, E. H. Rodd.
- Seath, William Henry**, A.C.G.F.C., A.I.C. British. 8, Long Place, Pinelands, Cape, S.A. Chemist. Signed by : A. Herbert Spong, E. Newbery, Max Lamchen.
- *Selton, Bernard**, B.A.Hons. (Oxon). British. 140, Daneland, Cat Hill, E. Barnet. Research Chemist. Signed by : Allan Domleo, Norman A. C. Friend, F. R. Webb.
- Shorter, Alfred John**, M.Sc. (Birm.), M.S. (Ill.), A.I.C. British. South Broomage Avenue, Larbert. Chemist and Ceramist (refractory materials). Signed by : E. G. Beckett, F. Barrow, Wm. Wardlaw.
- Shreir, Louis Lionel**, A.I.C. British. 27, Summerlands Avenue, Acton, W. 3. Chief Chemist to Baker Platinum, Ltd. Signed by : J. C. Crocker, Douglas C. Harrod, E. C. Pickering.
- *Sumner, James Frederick**, Inter.B.Sc. (Lond.). British. 83, Curzon Road, St. Annes-on-Sea. Chemist. Signed by : G. H. Whiting, C. A. McDowell, E. Booth.
- Watson, James**, B.A. (Cantab.) in December, 1942. British. Trinity College, Cambridge. Research Student. Signed by : F. G. Mann, H. McCombie, B. C. Saunders, B. A. Kilby.
- *Whigham, William**, B.Sc.Hons. (Glas.). British. 26, New Bongate, Jedburgh. Research Chemist. Signed by : J. W. Cook, John A. Mair, James Bell.
- *Workman, Robert Hugh Boyle**, B.Sc.Hons. (Q.U.B.). British. c/o Technical School, Portadown, Co. Armagh. Teacher of Experimental Physics, Mathematics, and Chemistry. Signed by : A. W. Stewart, R. W. Kinkead, H. Graham.
- *Wren, William Lees**. Inter. Science (Lond.), 4½ years' experience in Industrial Chemistry. British. 46, Park Road, Chorley. Analytical Chemist. Signed by : T. J. Morrison, T. Heap, A. Cooksey.

* Reduced annual subscription.

PAPERS RECEIVED

List of papers received between October 15th and November 19th, 1942. (This list does not include the titles of papers which have been read at a Scientific Meeting or which have appeared in the *Journal*.)

- "Bromination of α -diphenylalkanes and the preparation of some stilbene derivatives. Part I. α -Diphenylethane." By S. BANCE, H. J. BARBER, and A. M. WOOLMAN.
- "Cuprous cyanide: A note on its preparation and use." By H. J. BARBER.
- "The preparation and therapeutic properties of certain acridine derivatives. Part III. 5-Styryl-acridines and their quaternary salts." By W. SHARP, M. M. J. SUTHERLAND, and F. J. WILSON.
- "Some quinoline derivatives of sulphanilamide." By O. G. BACKEBERG and J. L. C. MARAIS.
- "The polysaccharides of Iceland Moss (*Cetraria Islandica*). Part I. Preliminary study of the hemi-celluloses." By H. GRANICHSTÄDTEN and E. G. V. PERCIVAL.
- "The constitution of agar. Part IV. Isolation of hepta-acetyl *dl*-galactose from 3:6-anhydro- β -methyl-*d*-galactoside." By T. L. COTTRELL and E. G. V. PERCIVAL.
- "The mechanism of indole formation from phenacylarylamines." By A. F. CROWTHER, F. G. MANN, and (in part) D. PURDIE.
- "Catalytic reduction by formic acid under pressure. Part I. The preparation of aldehydes from carboxylic acids with titanium dioxide as catalyst." By R. R. DAVIES and H. H. HODGSON.
- "Physical properties and chemical constitution. Part VII. Alkyl sulphides, disulphides, sulphites, sulphates, and orthophosphates." By A. I. VOGEL and D. M. COWAN.
- "1:3:5:7-Tetranitronaphthalene and the isomeric tetranitro-derivatives obtained from 2:6-dinitronaphthalene by nitration." By J. CHATT and W. P. WYNNE.
- "The preparation and polymerisation of methyl vinyl ketone." By T. WHITE and R. N. HAWARD.
- "The mechanism of the oxidation of oleic and elaidic acids and their methyl esters by hydrogen peroxide in acetic acid. Further observations on the configurations of the 9:10-dihydroxystearic acids." By G. KING.
- "The cause of the variation of the colour of crystals of commercial sodium and potassium cyanoferrate (11)." By H. E. WILLIAMS.
- "Dinitrodibenzanthrone." By D. J. BENNETT, R. R. PRITCHARD, and J. L. SIMONSEN.
- "The action of bases on 1-diazoanthraquinone-2-sulphonate and its derivatives." By J. I. LYNAS-GRAY and J. L. SIMONSEN.
- "The nitrosation of phenols. Part XIX. The three cresols and their methyl ethers. Some semi-carbazide reactions." By H. H. HODGSON and E. A. C. CROUCH.
- "Melanthygenin and its identity with hederagenin." By (MISS) Z. MUSTAFA and G. SOLIMAN.
- "The action of phosphoric oxide on phenyl esters. The mechanism of the Fries reaction." By A. SCHÖNBERG and (MISS) A. MUSTAFA.
- "The cyclic methyleneimines: Preparation of aldehydes from hexamine. Part I." By J. GRAYMORE.
- "The anhydrides of basic amino-acids." By D. W. ADAMSON.

THE CHEMICAL SOCIETY

NOTICE OF FORTHCOMING SCIENTIFIC MEETINGS

IN LONDON.

Thursday, January 21st, 1943, at 2.30 p.m.

The following papers will be read and discussed:—

“Substitution Reactions of Neopentyl Halides,” by I. Dostrovsky and E. D. Hughes.

“The Mechanism of the Thermal Decomposition of Diacyl Peroxides in Solution in Organic Solvents,” by A. E. Oxford.

Thursday, February 18th, 1943, at 2.30 p.m.

Tilden Lecture on “Aspects of Nucleotide Chemistry,” by Professor J. M. Gulland, M.A., D.Sc.

MEETINGS OUTSIDE LONDON.

EDINBURGH.

Thursday, February 18th, 1943, at 7.30 p.m.

Lecture on “The Chemistry of Hashish,” by Professor A. R. Todd, F.R.S. Joint Meeting with the Local Sections of the Institute of Chemistry and the Society of Chemical Industry. To be held at the North British Station Hotel.

GLASGOW.

Friday, February 19th, 1943, at 7.30 p.m.

Lecture on “The Chemistry of Hashish,” by Professor A. R. Todd, F.R.S. Joint Meeting with the Local Sections of the Institute of Chemistry and the Society of Chemical Industry. To be held in the Royal Technical College.

NORTH WALES.

Friday, February 26th, 1943, at 5.30 p.m.

Lecture on “Some Aspects of the Chemical Constitution of Milk Fats,” by Professor T. P. Hilditch, F.R.S. To be held in the Lecture Theatre of the Chemistry Department, University College of North Wales, Bangor.

NOTTINGHAM.

Saturday, January 23rd, 1943, at 3 p.m.

Lecture on “Vitamin A,” by Dr. R. A. Morton. To be held in the Chemistry Lecture Theatre, University College, Shakespeare Street.

SHEFFIELD.

Friday, February 26th, 1943, at 5.30 p.m.

Tilden Lecture on “Aspects of Nucleotide Chemistry,” by Professor J. M. Gulland, M.A., D.Sc. Joint Meeting with the University Chemical Society. To be held in the Chemical Lecture Theatre of the University.

SOUTH WALES.

Saturday, February 13th, 1943, at 3 p.m.

Lecture on “The Reducibility of Oxides and Sulphides in the Extraction of Metals,” by Dr. H. J. T. Ellingham. Joint Meeting with the University College of Swansea Chemical Society.

PROCEEDINGS

OF THE

CHEMICAL SOCIETY.

Minutes of a SCIENTIFIC MEETING

held at Burlington House, W. 1, on Thursday, December 17th, 1942, at 2.30 p.m.

The PRESIDENT, DR. W. H. MILLS, M.A., F.R.S., was in the Chair, and welcomed the visitors present.

FORMAL ADMISSION OF FELLOWS.

The following were formally admitted Fellows of the Chemical Society: F. Turner, B. Vos, L. J. Haynes, William A. Bates, G. A. Maw, and Miss Ethel Bidwell.

TILDEN LECTURE.

After a brief introduction, the PRESIDENT called on Mr. R. P. Bell to deliver his Tilden Lecture on "Recent Developments in the Theory of Reaction Kinetics in Solution."

At the conclusion of the Lecture, a vote of thanks, proposed by Professor F. G. Donnan, was carried with acclamation.

OFFICIAL ANNOUNCEMENTS

DEATHS.

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

	Elected.	Died.
Nicholas Eumorfopoulos	1894	December 9th.
John Hargreaves	1884	November 22nd.
Ivan Douglas Lamb	1938	November 26th.
Sir Henry Alexander Miers	1888	December 10th.
Norman Philip Millard	1926	October 12th.
William Gilchrist White	1893	November 17th.

RESOLUTION.

The Council have passed the following resolution of sympathy regarding the late Professor Max Bodenstein, Honorary Fellow:

"The President, Officers and Council have learned with deep regret of the death on September 3rd of Professor Max Bodenstein, who was elected an Honorary Fellow of the Society in October 1939.

"They record their high appreciation of the services he has rendered to the Science of Chemistry by his pioneer work in photochemistry and his investigation of the kinetics of gaseous reactions, and they mourn the loss of a distinguished colleague."

CONGRATULATIONS.

The PRESIDENT has conveyed the congratulations of the Council to the following:

<i>60 years of Fellowship.</i>	Elected.
Thomas Rennie Cowie	December 7th, 1882.
Alfred Graveley Howard	" "
James Lewis Howe	" "
<i>50 years of Fellowship.</i>	
Samuel Robert Adcock.....	December 15th, 1892.
William Smellie Anderson	" "
David Avery	" "
Arthur John Bensusan	" "
Arthur James Cooper	" "
Sir Martin Onslow Forster	" "
William French	" "

LIST OF APPLICATIONS FOR FELLOWSHIP.

(*Fellows wishing to lodge objections to the election of these candidates should communicate with the Honorary Secretaries not later than Monday, January 18th, 1943. Such objections will be treated as confidential. The forms of application are displayed in the Library.*)

- ***Ashworth, Michael Carr**, 1st Class in Preliminary to Part I Nat. Sci. Tripos; Exhibitioner of Trinity College, Cambridge. British. Peak Lodge, Chapel-en-le-Frith. Undergraduate. *Signed by*: C. H. Bamford, F. G. Holliman, F. G. Mann.
- Audley, Arnold**, B.Sc.Hons. and Ph.D. (Leeds), A.I.C. British. Netherby, Westfield, Wyke, Bradford. Experimental Officer. *Signed by*: J. W. Baker, W. A. Wightman, H. Burton, F. R. Goss.
- Barker, Peter Frederick**, 4 years analytical experience. British. c/o 1, Great Northern Road, Dunstable. Analyst to a Rubber Manufacturing Firm. *Signed by*: D. P. Young, J. Kenyon, J. W. Smith.
- ***Brookfield, Kenneth Johnson**, Inter.B.Sc. (Lond.). British. The Hollies, Green End Lane, St. Helens. Experimental Assistant. *Signed by*: G. H. Whiting, E. Booth, W. E. Jones.
- Brown, Fred**, 1st Class in Part II, prelim. Senior Scholar of Trinity College. English. Trinity College, Cambridge. Research Student. *Signed by*: F. G. Mann, H. McCombie, F. G. Holliman.
- Buckley, Eric Sydney**, 22 years experience in general analytical work. British. 31, Ladbroke Drive, Potters Bar. Chemist and Technical Assistant to Messrs. Wright & Weaire, Ltd. *Signed by*: Harold Heron, John L. Horton, R. M. Savage.
- ***Campbell, Alastair**. British. 14, Newbrough Crescent, Jesmond, Newcastle-on-Tyne, 2. Final Honours Student in Chemistry, Durham University. *Signed by*: Wesley Cocker, Richard Raper, G. R. Clemo.
- Carr, Albert Robert**, B.Sc.Hons. (Lond.), A.I.C. British. Rosend Castle, Burntisland. Technical Assistant. *Signed by*: Robert G. M. Dakers, James Sandilands, Hugh B. Nisbet.
- ***Challis, Anthony Arthur Leonard**. British. 17, The Riding, Gosforth, Newcastle-on-Tyne, 3. 3rd year Honours Student in Chemistry at King's College, Durham University. *Signed by*: Richard Raper, G. R. Clemo, Wesley Cocker.
- ***Charlton, Francis Richard**, 2nd year Honours Chemistry Student. British. 50, Eldon Place, Newcastle-on-Tyne, 2. Student, Durham University. *Signed by*: Wesley Cocker, Richard Raper, G. R. Clemo.
- Cook, Bernard Michael**, 1st Class Honours Parts I and II of the Nat. Sci. Tripos, Cambridge. British. The Priory, Beech Hill, Nr. Reading. Consultant Chemist. *Signed by*: F. G. Mann, H. McCombie, F. Wild.
- ***Crisp, Edmund Theodore**, B.A. (Cantab.), Nat. Sci. Tripos Part I. British. R.A.O.C., Malta. On military service. *Signed by*: F. S. Dainton, W. G. Palmer, D. Faulkner.
- ***Czeczowiczka, Nina Magdalena**. Polish. 58, Northways, College Crescent, N.W. 3. Student. *Signed by*: J. R. Partington, W. H. Patterson, F. S. Dainton.
- ***Driver, George William**, B.Sc. (Dun.). British. Leahurst, Low Westwood, Hamsterley Colliery, Newcastle-on-Tyne. Research Student. *Signed by*: G. R. Clemo, Richard Raper, George A. Swan.
- Emley, Edward Frederick**, B.Sc.Hons. (Lond.), A.I.C. British. 12, Allenby Road, Swinton, Manchester. Metallurgical Research Chemist. *Signed by*: C. J. Bushrod, Ivan Harris, C. H. Wood, G. H. J. Neville.
- ***Fairlam, Cyril John**. British. 59, Linden Road, Gosforth, Newcastle-on-Tyne, 3. 3rd year Honours Student in Chemistry at King's College, Durham University. *Signed by*: Wesley Cocker, G. R. Clemo, Richard Raper.
- ***Felton, Desmond Geoffrey Ivins**, Higher School Cert. British. 5, Alexandra Road, Victoria Park, Dorchester. Undergraduate reading for Honours in Natural Science, Chemistry, at Balliol College, Oxford. *Signed by*: A. G. Ogston, F. E. King, Ronald P. Bell.
- Glass, Stuart Craigie**, A.H.W.C., A.I.C. British. 1, Pennywell Villas, Davidson's Mains, Edinburgh, 4. Chemist to a Corporation Gas Dept. *Signed by*: James Sandilands, Hugh B. Nisbet, Robert G. M. Dakers.
- Greenaway, Frank**, B.A.Hons. (Oxon). British. 55, Seaforth Gardens, Ewell. Chemistry Master at Epsom County School for Boys. *Signed by*: D. L. Chapman, C. Hurst, J. C. Smith, W. Baker.
- ***Gugenheim, Peter Gerhard Arthur Fritz**, Nat. Sci. Tripos Part I. German Refugee. St. John's College, Cambridge. Student, reading for Nat. Sci. Tripos Part II in Chemistry. *Signed by*: F. G. Mann, H. McCombie, F. G. Holliman.
- Gysin, Charles François**. Swiss. Plas Gwyn, Prestbury Road, Wimslow. Managing Director of Geigy Colour Co., Ltd. *Signed by*: I. E. Balaban, W. Osborn, H. Stromberg.
- Hall, David Alan**, B.Sc. (Leeds). British. 128, New Adel Lane, Leeds, 6. Textile Research Chemist. *Signed by*: Frederick Challenger, J. B. Speakman, W. A. Wightman.
- ***Hantman, Lionel Louis**. British. 224, Westmorland Road, Newcastle-on-Tyne, 4. 3rd year Honours Chemistry Student, Durham University. *Signed by*: Wesley Cocker, Richard Raper, G. R. Clemo.
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* Reduced Annual Subscription.

PAPERS RECEIVED.

List of papers received between November 19th and December 17th, 1942. (This list does not include the titles of papers which have been read at a Scientific Meeting or which have appeared in the *Journal*.)

- "5-Acetamidodisaccharin, a derivative of sulphanilamide." By O. G. BACKEBERG and J. L. C. MARAIS.
- "The course of autoxidation reactions in polyisoprenes and allied compounds. Part IV. The isolation and constitution of photochemically formed methyl oleate peroxide." By E. H. FARMER and D. A. SUTTON.
- "The course of autoxidation reactions in polyisoprenes and allied compounds. Part V. Observations on fish-oil acids." By E. H. FARMER and D. A. SUTTON.
- "The course of autoxidation reactions in polyisoprenes and allied compounds. Part VI. The peroxidation of rubber." By E. H. FARMER and A. SUNDRALINGAM.

- "Rubber, polyisoprenes and allied compounds. Part III. Heat-treatment and isomerisation to conjugated forms." By E. H. FARMER and D. A. SUTTON.
- "Studies in electrolytic oxidation. Part XIII. The electrolytic oxidation of formaldehyde." By A. HICKLING and F. RODWELL.
- "The reaction between methyl 2:4:6-trihydroxybenzoate and methylmagnesium iodide." By N. A. C. PRYCE.
- "The influence of potassium on sugar metabolism." By S. N. FARMER and D. A. JONES.
- "The reactions of cuprous oxide on diazotised amines. Part II. Reactions in solutions of various alcohols and organic solvents. Preparation of 1:6-dinitronaphthalene." By H. H. HODGSON and H. S. TURNER.
- "Dissociation pressures of compounds of ammonia and deuteroammonia with some metallic salts." By A. B. HART and J. R. PARTINGTON.
- "Gallium. Part VI. The separation of gallium and germanium from alkaline extracts of germanite by electrolysis." By D. J. LLOYD and W. PUGH.
- "Gallium. Part VII. Gallium perchlorate hydrates and urea complex." By D. J. LLOYD and W. PUGH.
- "Mechanism of the thermal decomposition of diacyl peroxides in solution in organic solvents." By A. E. OXFORD.