

## THE HUNDRED AND FIRST ANNIVERSARY MEETING.

THE Annual General Meeting was held at Burlington House on Thursday, 26th March, 1942, at 12 noon. The President, Dr. W. H. Mills, F.R.S., occupied the Chair.

The notice convening the meeting was read.

The Report of Council for 1941 was presented, and Dr. C. W. Davies the senior Secretary, in introducing the general sections of the Report, referred to the action taken in sending out of London the duplicate volumes of Journals published earlier than 1920. This had caused little inconvenience to borrowers, and it was satisfactory to know that a large number of volumes most difficult to replace would not be endangered by further air raids on London. He also paid a tribute to Mr. Carr and the depleted staff for their success in keeping the business of the Society moving smoothly during a very difficult year. In particular, the prompt dispatch of the Society's publications was subject to recurring difficulties, some of which were outside the control of the Editors or Mr. Carr, and it was only by constant effort that the inevitable delays had been minimised.

The Treasurer, who was then called upon by the President to deal with the accounts, stated that the most significant feature of the year's accounts was the increase in subscriptions of £587 16s. 2d. above those received in 1940; this was due to the co-operation scheme, which though launched in war time—late in 1939—had made a good start. The following table shows the variation in number of Fellows and the subscriptions received since 1926, which was the peak year:—

Year .....	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941
Membership	4093	4040	3980	3925	3840	3775	3608	3620	3628	3725	3746	3775	3799	3773	3695	4516
Subscriptions in £ .....	9910	9909	9827	9521	9448	9134	8598	8757	8945	8934	8922	8888	8994	8809	8503	9091

The subscriptions given in any year are those received in that year for the current year, past years and in advance for the coming year. While the amount received for 4516 members is £819 less than in 1926, yet the cost of each co-operation member to the Society is less, as there is a limit to the number of publications received. Also in 1933 was instituted the new scheme of Fellows paying 30s. and likewise receiving fewer publications.

According to the co-operation agreement, after deducting such monies as are due to the Institute of Chemistry, the balance has been divided equally between the Chemical Society and the Society of Chemical Industry. This is only a just division in the unlikely event of the cost of publications supplied by the two Societies to co-operative members being the same, and the Chemical Council has set up a Committee consisting of the Officers of the Chemical Council, the Treasurers of the three bodies, Dr. J. J. Fox, and Dr. H. J. T. Ellingham, to examine the effect of the scheme on the finances of the two publishing societies. The reason for the inclusion of Dr. Ellingham on the Committee is that originally Dr. Brady, Dr. Ellingham, Dr. Lampitt and Mr. Davidson Pratt advised the Chemical Council on the details of the scheme, and Dr. Ellingham was largely responsible for the calculations on which the scheme was based. The Treasurer felt that we were greatly indebted to these Fellows for the successful foundations which they had laid. Any inequalities in the division of the subscriptions between the two Societies will be eventually adjusted.

The 30s. Fellowship Scheme appears to be meeting with success as the percentage of resignations is not unduly high. The statistics are as follows:—

30s. Fellows 1933—41.						
Total Elected.	Resigned before Transfer to Full Fellowship.	Resigned on Transfer.	Transferred to Full Fellowship.	Resigned since Transfer.	Present Number of 30s. Fellows.	
793	49	91	192	40	421	

The main increase in expenditure for the year is that due to War Damage Insurance, amounting to £699 17s. 6d., and the total abnormal expenditure after including the sums shown under Air Raid Precautions is over £1000. Nevertheless after putting to the Special Reserve Fund a sum of £1800 as against £1100 in 1940 for publications the deficit on the year's working is reduced from £403 10s. 11d. to £187 19s. 11d.

A new fund, the Quinquennial Index Fund, has been instituted to provide for the Chemical Society's share of the cost of the next Quinquennial Index of the Abstracts. Into that fund will be paid any sums received from the Bureau from sales of the two indexes already published by them and such sums as the Council may decide year by year to transfer thereto. The Bureau, which is responsible for the accounts for Section AIII, has been able to put £700 to reserve so as to provide for post war eventualities.

The Treasurer stated that the Society owed special thanks to its representatives on the Bureau, as many wartime problems requiring careful consideration had had to be met.

Finally he paid tribute to the staff and to Mr. Carr and Mr. Morris in particular, who in spite of working in London and Oxford, respectively, had overcome the inherent difficulties.

The adoption of the Report of Council for 1941, including Statements of Accounts and Balance Sheets, was proposed by Professor H. T. S. Britton, seconded by Dr. A. E. Gillam and carried unanimously.

The names of Fellows elected to vacancies on the Council were declared as follows:—

*President* : Dr. W. H. Mills.

*Vice-Presidents, who have not filled the office of President* : Dr. Francis H. Carr, Professor Alexander Findlay, Professor C. S. Gibson, Professor W. N. Haworth.

*Elected Ordinary Members of Council* :

Constituency I. South-East England.

Dr. D. J. G. Ives.

Dr. F. B. Kipping.

Dr. H. W. Thompson.

Constituency II. Central and South-West England and South Wales.

Dr. G. S. Hartley.

Dr. E. B. Maxted.

Dr. H. B. Watson.

Constituency III. North-West England, North Wales and the Isle of Man.

Dr. F. Fairbrother.

Dr. E. H. Rodd.

Constituency IV. North-East England.

Dr. J. W. Baker.

The Report of the Scrutators on the ballot for the election of an Elected Ordinary Member of Council for Constituency V. (Scotland) was received, and Professor J. W. Cook was declared elected.

A Vote of Thanks to the Vice-Presidents, Treasurer, Honorary Secretaries, Council and Committees for their services during the past year, proposed by Dr. J. W. Baker and seconded by Dr. E. G. V. Percival was carried unanimously and acknowledged by Dr. H. J. T. Ellingham.

On the motion of Dr. J. D. M. Ross, seconded by Mr. D. O. Jordan, Messrs. W. B. Keen & Co., were appointed Auditors for 1942.

The Meeting was then adjourned.

A Luncheon at which 63 Fellows and their guests were present, was held at Stewarts' Restaurant at 1 p.m.

On the resumption of the Meeting at 2.30 p.m., the President said that this was the first Annual General Meeting of the Society since the entry of the United States of America into the War. He was sure that Fellows would agree that it was appropriate and desirable that they should make it the occasion of a cordial message of greeting to the American Chemical Society. He then asked Fellows present to signify their approval of the following cable:—

The Chemical Society Hundred and First Annual General Meeting to-day send hearty greetings to American Chemical Society and express their earnest hope that the united efforts of the allied nations may achieve early victory.

This was dispatched during the meeting.

The President then stated: "Our next business is the presentation of the Longstaff Medal. Dr. G. D. Longstaff, a physician, was a generous benefactor to this Society; we owe to him a munificent bequest which formed the nucleus of The Research Fund, and with this bequest he associated the stipulation that a gold medal of not less value than £20 be awarded triennially to the Fellow of the Society, who, in the opinion of the Council, has done the most to promote chemical science by research. The first medal was presented in 1881, and this is the twenty-first award."

"On this occasion, the Council have awarded the medal to Professor Hugh Stott Taylor who holds the Chair of Physical Chemistry in the University of Princeton. Professor Taylor is chiefly distinguished for his extensive and important researches on adsorption and heterogeneous catalysis. He was probably the first to discover the presence of active centres in heterogeneous catalysts, and has been particularly successful in investigating the connection between heterogeneous catalysis and adsorption phenomena. He has taken a leading part in developing the theory of activated adsorption (or 'chemisorption'), and has also carried out, or directed, numerous researches in other branches of physical chemistry, as in

photochemistry and in reaction-kinetics as well as on the preparation of deuterium oxide. Under present circumstances he is naturally unable to be present to receive the medal in person, but has asked Professor Rideal, a very old friend of his, to receive it on his behalf."

On receiving the medal, Professor Rideal said that he gladly fulfilled Professor Taylor's wish that he should receive the Longstaff Medal on his behalf. Indeed it gave him a very definite pleasure in being a participant at this function. Some might wonder why Professor Taylor had chosen him. The explanation was a simple one. During the last War when invalided back from France, Professor Taylor and he had investigated catalytic hydrogen production and had thus had ample opportunity for days and nights of discussion. From this association "Catalysis in Theory and Practice" had emerged and there was born a friendship and mutual esteem which in spite of some differences in opinion had lasted and had grown stronger in the intervening period of almost a quarter of a century. Professor Taylor had sent him a cablegram in which he wished him to express the grateful appreciation of his American colleagues and the Princeton authorities whose support had made the work possible, and had offered the £20 to the Research Fund. Professor Rideal felt that if longer cables had been permitted, Professor Taylor would have enlarged upon this question of research which he evidently had so much in mind.

Professor Rideal added that our junior Fellows could be quite certain that there would be many opportunities for winning Longstaff Medals in the future in the subject of heterogeneous catalysis. If asked what aspect of the subject was important he would have said from the scientific point of view, all; from the material point of view, coal. Professor Taylor, as was well known, was now contributing to the catalytic chemistry of the hydrocarbons, the native raw material of the United States. Here in this country coal was almost our only native source of chemicals, and whilst the aromatic side of our chemical industry was provided for, thanks to the enterprise of our gasification industry, it was a national weakness that the other half of a well balanced chemical organisation, namely the aliphatic chemical industry, had hitherto been ignored. There were many ways in which this might be developed, through carbide or through hydrocarbon or methanol synthesis. Developed it must be, and in each step catalysis would intrude. The work of the recipient of the Longstaff Medal had pointed the way; it was for us to take it.

In presenting the Harrison Memorial Prize for 1941 to Dr. H. N. Rydon, the President said that in making this award, the Electors had been impressed by his work on unsaturated compounds—particularly by the contribution he had made to our knowledge of the Michael reaction. They had also appreciated his share in investigations on the mobility of hydrogen in ethylene compounds by observation of isotopic exchange and had recognised the merit of his simple but elegant syntheses of degradation products from terpenes, and the value of his work, done in collaboration with Sir Robert Robinson, on nor-œstrone. The President added that on becoming a Harrison prizeman Dr. Rydon had joined a distinguished company which would prove a great incentive to him.

In receiving the medal, Dr. Rydon expressed his high appreciation of the honour and his debt of gratitude to all those with whom he had been associated in his research work, and especially to the late Sir Jocelyn Thorpe.

The President then delivered the Eighth Pedler Lecture entitled: "The Basis of Stereochemistry."

At the conclusion, a Vote of Thanks to him for his services in the Chair and for his lecture was proposed by Dr. J. Kenyon, seconded by Dr. E. E. Turner, and carried with acclamation.

## REPORT OF COUNCIL, 1941.

The Hundredth Anniversary Meeting of the Society was held on 3rd April, 1941. The Council look forward to the time when fitting celebrations of the Society's Centenary will be possible, and are glad to report that Professor T. S. Moore has accepted the task of completing the Centenary History of the Society, begun by the late Professor J. C. Philip.

As a result of the Scheme of Co-operation between the Chemical Society, the Institute of Chemistry, and the Society of Chemical Industry, our Society entered upon its hundred-and-first year with a large increase in membership. In the list of nearly a thousand new Fellows are many names well known and honoured in the field of applied chemistry, and this gives encouragement to the hope that, in the years of development that lie ahead, the activities of the Chemical Society will have the direct support of a very high proportion of British chemists.

During 1941 the Chemical Council formulated a plan, which was accepted by the Councils of the participating bodies, for the establishment of a joint accounts office to which subscriptions would be

paid, and from which circular letters and publications would be distributed to members of the two publishing societies. This plan, a logical outcome of the joint subscription arrangements, should effect considerable economies by eliminating the overlap in the functions common to the two publishing societies, and it is expected that it will be possible to put the plan into operation during 1942.

## I. FELLOWSHIP.

### (1) *Fellowship Statistics.*

The number of Fellows on the 31st December, 1940, was 3695. During 1941, 863 Fellows were elected and 122 reinstated, the corresponding figures in 1940 being 153 and 11, respectively. The Society has lost 38 Fellows through death, 69 by resignation, and 57 by removal for non-payment of annual subscription, making a total loss of 164, compared with 242 in 1940. The number of Fellows on the 31st December, 1941, therefore, was 4516; of these, 1335 are joint members of the three Bodies, and 364 joint two-Body members. Of the joint members of the three Bodies, 585 were Fellows of the Chemical Society in 1940 and 750 are new Fellows; of the joint two-Body members, the corresponding figures are 293 and 71.

The names of those Fellows to whom the Council have conveyed the congratulations of the Society on completing 60 and 50 years of Fellowship have appeared in the *Proceedings*.

### (2) *Deaths.*

The Council record with sorrow the death on 6th August of Professor J. C. Philip, who was elected President on 3rd April, and they deplore the deaths of three of their distinguished Honorary Fellows, Professor Herbert Freundlich, Professor Walther Nernst, and Professor Paul Sabatier.

The Council have arranged for obituary notices of Professor J. C. Philip and Professor Freundlich to be published in the *Journal*, but have had to postpone for the present the question of paying a tribute to the memory of Professor Nernst and of Professor Sabatier.

The Council also record with regret the death of Mr. W. B. Keen, of Messrs. W. B. Keen & Co., who have acted as Auditors to the Society since 1903.

### (3) *Honours.*

The congratulations of the Society have been conveyed to Sir Shanti S. Bhatnagar, on his receiving the honour of Knighthood, to Mr. E. M. Rich, on his being made a C.B.E., and to Mr. R. Murdin Drake, Commander C. F. Goodeve, R.N.V.R., and Mr. E. R. Thomas on receiving the O.B.E.

The Council record with pleasure that the Davy Medal of the Royal Society for 1941 has been awarded to Dr. H. D. Dakin, and that the first award of the Paracelsus Gold Medal has been made to Sir Robert Robinson by the Swiss Chemical Society.

## II. PUBLICATIONS.

### (1) *Journal.*

During the year 210 papers were received by the Society; of these 3 were declined.

In addition to Obituary Notices and reports on Atomic Weights and the Annual General Meeting, the *Journal* for 1941, occupying 878 pages, contains 155 memoirs (26 on General, Physical, and Inorganic Chemistry, and 129 on Organic Chemistry), 15 notes, and 4 lectures, including the Presidential Address. The corresponding figures for 1940 are 1576 pages, 297 memoirs, 15 notes, and 5 lectures.

### (2) *Abstracts.*

The report of the Bureau of Chemical and Physiological Abstracts for 1940 appears as Appendix A to this report.

### (3) *Annual Reports.*

Volume XXXVII (1940) of the *Annual Reports on the Progress of Chemistry*, published in June 1941, contained 477 pages.

## III. MEETINGS.

### (1) *Scientific Meetings.*

During the year, 7 lectures have been held in London and 26 meetings outside London. A complete list of these is given in Appendix C.

*(2) Annual General Meeting.*

The Anniversary Meetings of the Society were held in London on 3rd April, 1941, and a full report appeared in the *Journal* for April.

**IV. LIBRARY.**

The Report of the Joint Library Committee for 1941 is given in Appendix B.

**V. THE CHEMICAL COUNCIL.**

The agreement between the three Chartered Chemical Bodies and the Chemical Council has been extended for seven years as from the 1st July, 1940.

**VI. ADVISORY RESEARCH COUNCIL OF THE CHEMICAL SOCIETY.**

The Advisory Research Council of the Chemical Society has continued to receive offers of assistance from Supervisors of Research, and has now allocated 215 topics of research. The War Cabinet Scientific Advisory Committee, through Lord Hankey the Chairman, has expressed appreciation of its work.

The Scheme initiated last year to meet, through the agency of volunteer workers, demands for fine chemicals required for work of national importance and not available through normal channels has continued to function with success. The Advisory Research Council received with regret the resignation of Dr. D. H. Hey as Chairman of the Fine Chemicals Sub-Committee and expressed its appreciation of his valuable services. Dr. J. C. Smith was appointed to this Office.

**VII. ADMINISTRATION.***(1) Presidency.*

In September, Dr. W. H. Mills was appointed President until the next Annual General Meeting.

*(2) Elected Ordinary Members of Council.*

Dr. D. H. Hey retired from the Council on leaving the London area in December. The vacancy has not been filled.

*(3) Local Representatives.*

The resignations of Dr. G. N. Burkhardt and Dr. E. A. Moelwyn-Hughes as Local Representatives for Manchester and Cambridge, respectively, were received with regret, and the Council expressed their appreciation of their services. Dr. A. E. Gillam and Dr. F. S. Dainton were appointed to fill the vacancies. Dr. A. McGookin, whose term of office has expired, has consented to serve for a further period.

**VIII. FINANCE.***(1) Contributions.*

The Council have received £1050 from the Chemical Council; the Royal Society has contributed £400 from the Rockefeller Grant in aid of Scientific Publications and £300 from the Government Publications Grant. The Council have expressed their sincere thanks for these substantial sums, and have acknowledged with gratitude contributions to the Publications Fund received from the following Fellows: Messrs. P. Appleyard, N. Campbell, P. K. Dutt, T. Ewan, W. E. Garner, F. A. Freeth, J. C. Jennings, F. W. Kirkbride, J. Bruce Miller, D. H. Peacock, W. G. Polack, J. E. B. Price, Sir David Rivett, H. G. Rule, F. C. Smith, E. E. Tallis, R. B. Turbutt, G. Watson Young.

Gifts of the Society's publications have been received from the following, to whom the Council have expressed their thanks: Messrs. A. F. Campbell, G. V. Davies, E. R. Marle, Miss C. M. G. Mohrhenn, R. Raper, C. H. Wright, and G. H. Wyatt. Contributions to the Library have been received with gratitude from Mr. J. E. B. Price, Sir Prafulla C. Rây, and Mr. J. C. Somerville, and the Society's collection of Medals has been enriched by the Nobel Gold Medal received under the Will of the late Sir Arthur Harden.

*(2) Bequests.*

A bequest of £1000 for the Publications Fund has been received from the late Mr. Robert Henry Parker, and further sums of £101 11s. 5d., and £43 17s. 1d. from the Gilles and Tilden Bequests, respectively.

**(3) Travelling Expenses of Members of Council.**

In May, the Council decided that Members of Council living more than 50 miles from London should be entitled to claim an amount not exceeding the third-class return fare from their place of residence to the place of the Council Meeting. Members of Council are also entitled to make an additional claim up to an amount not exceeding the difference between the third- and first-class fares if they are unable to complete the double journey in one day.

**(4) War Damage Insurance.**

Though insurance against war damage is not compulsory in the case of a Society recognised as a Charitable Institution such as the Chemical Society, the Council has insured the property of the Society for £37,500.

**IX. REPRESENTATION ON JOINT COMMITTEES AND ON OTHER BODIES.**

The Society's representatives are as follows :

*Bureau of Chemical and Physiological Abstracts :*

Dr. H. J. T. Ellingham, Professor C. R. Harington, Dr. G. A. R. Kon, and Dr. C. W. Davies (Honorary Secretary), with the Treasurer ex-officio.

*Chemical Council :*

Dr. C. W. Davies, Mr. F. P. Dunn, Dr. L. H. Lampitt.

*Joint Library Committee :*

Professor A. J. Allmand, Professor H. Bassett, Dr. O. L. Brady, Professor C. H. Desch, Mr. M. B. Donald, Dr. H. J. T. Ellingham, Dr. H. J. Emeléus, Dr. C. F. Goodeve, Dr. P. Haas, Professor C. R. Harington, Dr. T. A. Henry, Dr. E. W. McClelland, Dr. E. E. Turner, and Professor W. Wardlaw.

*Bristol University Court :*

Professor F. G. Donnan.

*British National Committee for Chemistry :*

Dr. C. W. Davies (Honorary Secretary), Professor F. G. Donnan, and Mr. F. P. Dunn (Treasurer).

*British Standards Institution :*

Council of Chemical Division : Dr. J. J. Fox.

*Technical Committees :*

Co-ordinating the work of the Divisional Councils in regard to any British Standard which may be issued in future for units, conversion factors, fundamental formulæ, values for properties or materials, etc. : Dr. H. J. T. Ellingham.

Specifications for Materials and Plant used in Electroplating : Dr. U. R. Evans.

Standardisation of Scientific Glassware : Mr. F. R. Ennos.

Standards for use in Dairying Chemistry : Mr. Eric Voelcker.

Standardisation of Letter Symbols : Dr. C. F. Goodeve.

*City and Guilds of London Institute :*

The President.

*Faraday Society :*

Colloid Committee : Mr. D. C. Henry.

*Lawes Agricultural Trust :*

Committee of Management : Dr. E. F. Armstrong.

*Royal Society :*

Joint Standing Committee for Symbols and Abbreviations : Dr. C. W. Davies and Dr. H. J. T. Ellingham.

**X. ACKNOWLEDGMENTS.**

The Council are glad of this opportunity of expressing their gratitude to those Fellows who have continued to give their services freely to the Society during the year. They would especially mention Local Representatives, referees of papers for the *Journal*, contributors to the *Annual Reports*, and those delivering lectures.

**APPENDIX A.****REPORT OF THE BUREAU OF CHEMICAL AND PHYSIOLOGICAL ABSTRACTS FOR 1941.**

The Bureau, in common with other scientific publishing organisations, has had a number of difficulties with which to contend during the past year, not least in importance being the impossibility of obtaining certain foreign journals.

Attempts have been made by the Bureau to stimulate official interest in this matter, but without success. The Committee, however, is concerned at the natural repercussions of this lack of journals : journals which will arrive after the war and the abstracting of which will then throw considerable strain on the finances of the Bureau. In this connexion it is of interest to recollect that the Bureau is unique

in its constitution, particularly from the financial aspect. The responsibility for the finance of A I and A II lies with the Chemical Society, of B I, B II, and B III with the Society of Chemical Industry, and of A III with the Bureau itself. The original sponsor societies (the Chemical Society and the Society of Chemical Industry) have already put sums of money aside for post-war publications; the Bureau proposes to do the same for A III.

The appointment of an Honorary Treasurer last year has considerably simplified the consideration of the finances of the Bureau, and in pursuance of this thought the Committee are of opinion that the more autonomous the Bureau becomes, the more efficiently will its duties be carried out.

For a number of years, figures of the Annual Income and Expenditure Account of the Bureau have been published, but as these have shown certain items only of the expenditure on abstracts (they have not included cost of printing and paper, overheads, etc.) the Committee, on the advice of the Honorary Treasurer, has decided to cease publication of these figures, which can only be misleading to those who read them without a full knowledge of their limitations.

It is obviously desirable that the Bureau should publish figures which will enable the scientific fraternity to realise the cost of this work, and it is hoped that in the near future the consent of the sponsoring societies will be obtained to such a procedure.

Other items of interest arising out of the work of the Bureau for the past year have been: (1) the economies effected, particularly in respect of saving of paper, by the adoption of the smaller type; (2) the difficulties of publishing the Abstracts on the first of each month owing to shortage of staff at the printers and other difficulties inherent in present conditions; these the Bureau is endeavouring to overcome; (3) the publication of the whole of the Quinquennial Index; (4) the rearrangement of Abstracts A II.

During the year the Bureau held seven meetings and the Committee six.

#### Finance.

The Finance Committee has continued to present to the Bureau detailed statements showing the whole of the costs of producing the abstracts in the various sections for each quarter of the year, and is now presenting quarterly statements to the Chemical Society and the Society of Chemical Industry of the funds required to meet estimated expenditure for the succeeding quarter.

The methods of allocating among the various sections costs of certain items of expenditure and overheads have been modified.

#### Abstracts.

Starting with the issues of January, 1941, the classes of abstracts in A II and in the three sections of B were re-numbered to give the number I to the first class in each of these four sections, thus bringing them in line in this respect with Abstracts A I and A III.

*Statistics.*—The figures given in the appended table show the number of abstracts and pages printed in each section during 1941, together with comparative figures for 1940.

	A I.				A II.			
	1940.		1941.		1940.		1941.	
	No. of Abs.	Pages.	No. of Abs.	Pages.	No. of Abs.	Pages.	No. of Abs.	Pages.
1st quarter .....	1471	136	683	46	606	112	308	40
2nd ,, .....	1525	138	1016	70	734	130	381	50
3rd ,, .....	1200	106	858	62	444	78	403	48
4th ,, .....	747	68	955	68	335	66	459	56
	<u>4943</u>	<u>448</u>	<u>3512</u>	<u>246</u>	<u>2119</u>	<u>386</u>	<u>1551</u>	<u>194</u>
A III.								
	1940.		1941.					
	No. of Abs.	Pages.	No. of Abs.	Pages.	No. of Abs.	Pages.	No. of Abs.	Pages.
1st quarter .....	3225	276	2065	118				
2nd ,, .....	3442	274	1893	124				
3rd ,, .....	2858	230	1908	116				
4th ,, .....	2169	166	3100	186				
	<u>11,694</u>	<u>946</u>	<u>8966</u>	<u>544</u>				

		1940.		B.		1941.	
		No. of		No. of		No. of	Pages.
		Abs.	Pages.	Abs.		Abs.	Pages.
1st quarter	.....	2798		250		2493	152
2nd "	.....	2719		252		2401	160
3rd "	.....	2380		208		2820	182
4th "	.....	2126		194		2964	190
		<hr/>		<hr/>		<hr/>	<hr/>
		10,023		904		10,678	684
		<hr/>		<hr/>		<hr/>	<hr/>
		B I.		1941.		B III.	
		No. of Abs.	Pages.	No. of Abs.	Pages.	No. of Abs.	Pages.
		B II.					
1st quarter	.....	1010	58	775	52	708	42
2nd "	.....	986	66	706	52	709	42
3rd "	.....	1387	84	841	58	592	40
4th "	.....	1262	74	934	64	768	52
		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
		4645	282	3256	226	2777	176
		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>

It will be seen that all the sections of A abstracts show a considerable decrease, amounting to some 20—25%, compared with 1940. Abstracts B, on the other hand, show an increase of about 6%, due to certain arrears in sundry journals and patents having been cleared off.

*Abstracts A II.*—A Sub-Committee was appointed by the Bureau to report on criticisms which had been received regarding faulty classification of certain abstracts in Section A II. The Sub-Committee recommended a revised classification of the abstracts in this Section, involving the addition of three new sub-sections, the revision of the name of another, and the inclusion of all abstracts on organo-metallic compounds in one class, as well as the transfer of the "Miscellaneous" section to follow "Proteins." Further recommendations were that an extended system of cross-references within each section be introduced and that every abstract should commence with a concise statement of the scope of the paper unless this was clearly indicated in the title.

These recommendations, approved by the Chemical Society, were adopted by the Bureau, with the addition that the system of cross-references should also apply to A I. They will be put into effect in the beginning of 1942.

The Bureau also endorsed the opinion expressed by the Sub-Committee that the value of the Abstracts would be much enhanced by the inclusion of a formula index as soon as circumstances permit.

*Abstracts A III.*—The Bureau is gratified to record that the Anatomical Society of Great Britain and Ireland has decided to continue its annual contribution to the A III fund at least until the end of 1942, and has expressed the hope that financial considerations will permit it to support the fund after that date. The Society has, moreover, expressed its appreciation of the work being done by the Bureau in publishing abstracts of anatomical papers. The Society of Chemical Industry has made a grant of £50 towards the expenses of A III, and the Bureau is encouraged in its work by the Society's action in once again showing its appreciation of Abstracts A III.

A highly gratifying mark of the sympathy of organisations outside the Bureau was the receipt, from the Royal Society, of a grant of £250 from the American Physiological Society's gift. This grant has been transferred by the Bureau to the A III fund.

It will be seen from the Income and Expenditure Account that the gross receipts from sales of Abstracts during 1941 have been maintained at almost the same level as in 1940, despite a decreased number of subscribers; the increase in the published price of this section has been fully justified. Partly as a result of a reduction of about 20% in the volume of abstracts printed, and partly owing to the increased grants so generously made to the fund by the supporting Societies, the income of the fund has exceeded the expenditure for the first time. £700 has been transferred to a Reserve Fund.

On the Editorial side of A III, Dr. E. Boyland has handed over the sub-editing of abstracts on "Tumours" to Dr. A. Haddow, and Dr. E. A. Carmichael is no longer able to assist Professor Wright with the section on the "Nervous System."

*Abstracts B.*—Despite the increase in the number of abstracts printed and the increases in costs of printing and paper, the total cost of printing Abstracts B, including paper, was approximately the same in 1941 as in 1940. This is partly due to the change in type and partly to the sub-division of B Abstracts into three sections, which has resulted in a smaller number of copies being required. A very substantial saving in the amount of paper used has been achieved.



At the suggestion of the Council of the Society of Chemical Industry, a notice has been inserted in the Abstracts inviting readers to apply to the Editor for information as to where the various journals abstracted may be consulted.

### Collective Indexes.

The demands for copies of the Decennial Index 1923—1932 continues, and the Bureau has refunded one half of the balance of £100 from recent sales to the Chemical Society and the same amount to the Society of Chemical Industry.

Both volumes of the Quinquennial Index 1932—1937 were published during the year, the Name Index (1964 pp.) in January and the Subject Index (1584 pp.) in November. The Bureau feels that it was no small achievement to issue the complete Index in less than a year, under the circumstances, and welcomes this opportunity of recording its high appreciation of the efforts of the Indexer and her staff and of the Printers in producing such excellent volumes.

The Chemical Society and the Society of Chemical Industry have agreed to the proposal of the Bureau to proceed with the preparation of a Collective Index covering the period 1938—1942, and work on this Index is now in progress.

### General.

*Offices.*—After an absence of about a year at South Kensington, the Bureau returned to Clifton House in the Autumn and has accorded its sincere thanks to the Governing Body of the Imperial College for having granted it accommodation in the Royal School of Mines.

*Staff.*—There have been several changes among the staff of the Office and Indexing Department during the year. Miss Tanner, the Assistant Indexer, has resigned, and arrangements have been made for distributing her work among the remaining staff as a temporary measure.

### QUINQUENNIAL INDEX ACCOUNT TO END OF JANUARY, 1941.

(Subject to audit.)

	£	s.	d.		£	s.	d.
Balance forward from 1940 ... ..	810	7	2	Salaries ... ..	285	8	8
Receipts less refunds ... ..	1117	7	5	Rent ... ..	26	5	0
Grants ... ..	2250	0	0	Printing Names Volume ... ..	1940	5	6
Bank interest ... ..	1	12	9	"    Subjects Volume ... ..	1640	3	9
				Postage on volumes ... ..	63	4	1
				Sundry expenses ... ..	52	5	10
				Balance ... ..	171	14	6
	<hr/>				<hr/>		
	£4179	7	4		£4179	7	4
	<hr/>				<hr/>		

## APPENDIX B.

### REPORT OF THE JOINT LIBRARY COMMITTEE, 1941.

During the year there were 3836 attendances, as compared with 4381 in 1940. Of these 3658 were made by the three Constituent Bodies (the Chemical Society, Institute of Chemistry, and Society of Chemical Industry) or by persons introduced by them, and 178 by other Contributing Bodies, as against 4160 and 221 in 1940.

The number of books borrowed was 4858, against 4307 in the previous year; of these 2143 were issued by post, compared with 1702 in the preceding year.

The Library telephone calls included 881 enquiries which necessitated reference to books in the Library, as against 741 the previous year.

950 pages of printed matter were photocopied, as against 1159 the preceding year.

The additions to the Library comprise :

90 books, of which 26 were presented, 347 volumes of periodicals and 163 pamphlets, as against 115 books, 432 volumes of periodicals, and 202 pamphlets, last year.

The total number of volumes added during the year was 437. The Library now contains 44,630 volumes, consisting of 13,257 books and 31,373 bound volumes of periodicals.

### Analysis.

	Attendances.	Books borrowed.	Books added.	Volumes of periodicals.	Pamphlets.
1941 .....	3836	4858 (2142 by post)	90	347	163
1940 .....	4381	4307 (1702 by post)	115	432	202

The fewer attendances are mainly due to the fact that in consequence of enemy action it was necessary to close the Library for reference purposes from 17th April to 10th May, inclusive. It was, however, possible to lend books to callers and by post, and this in part accounts for the considerable increase in books borrowed.

No books were damaged as a direct result of enemy action, but a few volumes were damaged during subsequent repairs to the roof.

A considerable number of duplicate serials have been removed to places of greater safety, and, as in previous years, these removals have provided temporary space for current additions. The necessity for providing adequate Library accommodation, a subject which has now been under consideration for over 40 years (see Presidential Address, *J.C.S.*, 1901, **79**, 880), is still a vital one, and a most acute problem will occur at the close of hostilities, when the question will arise of the return of volumes removed for safety, for which it will not be possible to find room in the present building.

The Committee wishes to record its grateful appreciation of the gifts received from Fellows and others during the year, and its thanks to the Librarian and staff, who, in spite of current difficulties, have maintained the service of the Library at almost peace-time level.

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## APPENDIX C.

### LECTURES AND DISCUSSIONS.

3rd April. *Presidential Address* on "The Mechanism of the Benzidine Re-arrangement and some Related Topics," by Sir Robert Robinson.

#### *Lectures given in London.*

24th April. *Tilden Lecture* on "Some Themes in the Chemistry of Macromolecules," by Professor H. W. Melville; 15th May, *Eighth Liversidge Lecture* on "Complex Formation," by Professor N. V. Sidgwick; 19th June, *Tilden Lecture* on "Vitamins of the B Group," by Professor A. R. Todd; 16th October, *Eighth Hugo Miller Lecture* on "Some Aspects of Algal Chemistry," by Professor I. M. Heilbron; 30th October (Joint Meeting with the Plastic Group of the Society of Chemical Industry), on "The Constitution of Plastics," by Dr. C. Redfarn; 20th November, on "X-Rays and the Stoichiometry of the Proteins," by Dr. W. T. Astbury.

#### *Lectures given outside London.*

*Bristol.* At the University: 5th June, on "Liquid Crystals," by Professor G. M. Bennett.

*Edinburgh.* At the North British Station Hotel (joint meeting with the Institute of Chemistry and the Society of Chemical Industry): 27th January, on "Nucleic Acids," by Professor J. M. Gulland; 24th February, at the North British Station Hotel, *Tilden Lecture* on "Some Problems in Macromolecular Chemistry," by Professor H. W. Melville; 11th November, at the University (joint meeting with the Edinburgh University, the Chemical Society, and the local sections of the Institute of Chemistry and Society of Chemical Industry), on "The Crystallisation of Graphite," by Professor H. L. Riley.

*Glasgow.* At the Royal Technical College: 21st February, on "Correlations between Cancer-producing Compounds," by Professor J. W. Cook; 7th November, on "Forty Years of Optical Activity," by Professor T. S. Patterson.

*Leeds.* At the University (joint meeting with the University of Leeds Chemical Society): 11th March, Discussion on "Some Aspects of Adsorption," opened by Dr. R. M. Barrer and Mr. R. S. Bradley; 13th May, at the University, *Eighth Liversidge Lecture* on "Complex Formation," by Professor N. V. Sidgwick; 13th October, on "Analysis of Molecular Structure by X-Ray Methods," by Dr. J. Monteath Robertson.

*Liverpool.* At the University (joint meeting with the Liverpool University Chemical Society): 13th February, on "Some Chemical Aspects of Modern Bacteriological Research," by Professor H. D. Wright; 1st May, on "Chemical Research in Electrical Industry," by Dr. J. Brisley; 13th November, on "Some Recent Developments in the Experimental Study of Animal Fats," by Professor T. P. Hilditch.

*Manchester.* At the University (joint meeting with the Institute of Chemistry and Society of Chemical Industry): 8th November, on "Long Molecules," by Dr. H. Hunter and Mr. D. F. Howitt.

*North Wales.* At University College, Bangor: 7th November, on "Hemp Drugs," by Professor A. R. Todd.

*Nottingham.* At University College: 15th November, Eighth Hugo Müller Lecture on "Some Aspects of Algal Chemistry," by Professor I. M. Heilbron.

*Oxford.* In the Biochemistry Department, University Museum: 30th May, *Seventh Pedler Lecture* on "Recent Developments in the Chemistry of the Carbohydrates," by Professor W. N. Haworth.

*St. Andrews and Dundee.* At University College, Dundee: 24th January, on "The Teaching of Chemistry in the University of St. Andrews," by Sir James Irvine; 12th November, on "The Crystallisation of Graphite," by Professor H. L. Riley.

*Sheffield.* At the University: 28th February, on "Diazotisation," by Professor J. Kenner; 21st November (joint meeting with the Sheffield University Chemical Society): on "Polymers," by Professor H. W. Melville.

*South Wales.*

*Cardiff.* At University College of South Wales: 15th February, on "Disinfectants," by Mr. N. Berry, and on 21st March (both joint meetings with the Institute of Chemistry and Society of Chemical Industry): on "More Recent Investigations on Organic Compounds of Gold," by Professor C. S. Gibson; 18th April, on "Some Recent Developments in Microchemistry," by Dr. Janet W. Matthews; 1st November, on "Chemical Determination of Vitamins," by Dr. M. Pyke.

*Swansea.* At the Royal Institution, Swansea: 18th January (joint meeting with the local section of the Institute of Petroleum): on "The Combustion of Gaseous Hydrocarbons," by Mr. A. R. Ubbelohde; at University College (joint meeting with the University College of Swansea Students Chemical Society): 20th March, on "The Life and Work of William Jackson Pope," by Professor C. S. Gibson.









INCOME AND EXPENDITURE ACCOUNTS OF OTHER FUNDS FOR THE YEAR ENDED 31ST DECEMBER, 1941.

SPECIAL LECTURES FUND.

		1940		1941	
		£	s. d.	£	s. d.
<i>Income.</i>					
	To Dividends on Investments	34	15 8		
	" Income Tax recovered	9	16 6		
	" Interest on Deposit	9	4		
	" Balance, being Excess of Expenditure over Income, carried to Balance Sheet	5	8 6		
		<u>£50</u>	<u>10 0</u>		
				<u>£44</u>	<u>11 10</u>
<i>Expenditure.</i>					
	By Honoraria				
	" Lecture Expenses				
	" Balance, being Excess of Income over Expenditure, carried to Balance Sheet			44	11 10
				<u>£50</u>	<u>10 0</u>

STAFF PENSIONS FUND.

		1940		1941	
		£	s. d.	£	s. d.
<i>Income.</i>					
	To Transfer from General Purposes Account	137	7 8		
	" Dividends on Investments	34	14 4		
	" Income Tax recovered	7	18 0		
		<u>£180</u>	<u>0 0</u>		
				<u>£80</u>	<u>0 0</u>
<i>Expenditure.</i>					
	By Pension paid during 1941	80	0 0		
	" Balance, being Excess of Income over Expenditure, carried to Balance Sheet				
				<u>£100</u>	<u>0 0</u>

THE EDWARD FRANK HARRISON MEMORIAL TRUST FUND.

		1940		1941	
		£	s. d.	£	s. d.
<i>Income.</i>					
	To Dividends on Investments	27	17 9		
	" Income Tax recovered	21	6 9		
	" Interest on Deposit	8	11		
		<u>£50</u>	<u>13 6</u>		
				<u>£49</u>	<u>13 6</u>
<i>Expenditure.</i>					
	By Balance, being Excess of Income over Expenditure, carried to Balance Sheet			50	7 9
				<u>£50</u>	<u>7 9</u>









THE CHEMICAL SOCIETY. BALANCE SHEETS, 31ST DECEMBER, 1941.

SPECIAL LECTURES FUND.

1940		1941		1940		1941	
£	s. d.	£	s. d.	£	s. d.	£	s. d.
1114	18 9	1189	10 7	1000	0 0	1000	0 0
44	11 10	—	—	100	0 0	100	0 0
—	—	5 8 6	—	59	10 7	59	10 7
—	—	1189	10 7	1154	2 1	1154	2 1
—	—	£1189	10 7	£1154	2 1	£1154	2 1
				<i>Liabilities.</i>			
				To Excess of Assets over Liabilities as per last Balance Sheet ... ..			
				Add Excess of Income over Expenditure for year ... ..			
				Less Excess of Expenditure over Income for year ... ..			
				By Investment as per Schedule (cost or value when acquired) ... ..			
				" Loan to General Purposes Account ... ..			
				" Cash at Bank ... ..			

STAFF PENSIONS FUND.

1940		1941		1940		1941	
£	s. d.	£	s. d.	£	s. d.	£	s. d.
907	14 0	907	14 0	902	13 9	902	13 9
—	—	2166	17 9	5	0 3	5	0 3
—	—	100	0 0	3174	11 9	3174	11 9
—	—	£3174	11 9	£3174	11 9	£3174	11 9
				<i>Assets.</i>			
				By Investments as per Schedule (cost or value when acquired) ... ..			
				" Cash at Bank ... ..			

THE EDWARD FRANK HARRISON MEMORIAL TRUST FUND.

1940		1941		1940		1941	
£	s. d.	£	s. d.	£	s. d.	£	s. d.
1162	7 6	1212	15 3	1101	7 11	1101	7 11
50	7 9	49	13 5	111	7 4	111	7 4
—	—	1262	8 8	1212	15 3	1262	8 8
—	—	£1212	15 3	£1212	15 3	£1262	8 8
				<i>Liabilities.</i>			
				To Excess of Assets over Liabilities as per last Balance Sheet ... ..			
				Add Excess of Income over Expenditure for year ... ..			
				By Investments as per Schedule (cost or value when acquired) ... ..			
				" Cash at Bank ... ..			

THE CHEMICAL SOCIETY. BALANCE SHEETS, 31ST DECEMBER, 1941.

1940		1941		1940		1941	
£	s. d.	£	s. d.	£	s. d.	£	s. d.
778	5 1	1001	11 10	3 19	2	6 16	4
223	6 9	1001	11 10	990	16 4	1015	18 3
		1026	13 9			1015	18 3
		£1026	13 9			£1026	13 9
		£1001	11 10			£1001	11 10

  

Liabilities.		Assets.	
To Excess of Assets over Liabilities as per last Balance Sheet	1001 11 10	By Sundry Debtor	...
Add Excess of Income over Expenditure for Year	25 1 11	" Cash at Bank	...
	1026 13 9	" Cash on Deposit in Post Office Savings Bank and London Savings Bank	1015 18 3
	£1026 13 9		£1026 13 9

  

THE HERBERT SPENCER BEQUEST.		THE HERBERT SPENCER BEQUEST.	
To Balance unexpended at 31st December, 1940	24 9 6	By Sundry Debtor	...
Less Excess of Expenditure over Income for Year	24 9 6	" Cash at Bank	1 10 2
	---	" Cash on Deposit in Post Office Savings Bank and London Savings Bank	22 15 2
	£24 9 6		£24 9 6

  

THE FARADAY LECTURE FUND.		THE FARADAY LECTURE FUND.	
To Excess of Assets over Liabilities as per last Balance Sheet	392 15 11	By Investment as per Schedule (cost or value when acquired)	369 4 0
Add Excess of Income over Expenditure for Year	12 12 8	" Cash at Bank	23 11 11
	405 8 7		369 4 0
	£405 8 7		369 4 0

  

THE TILDEN LECTURE FUND.		THE TILDEN LECTURE FUND.	
To Excess of Assets over Liabilities as per last Balance Sheet	1916 9 3	By Investments as per Schedule (cost or value when acquired)	1834 10 6
Add Balance of Legacy received from Executors	43 17 1	" Cash at Bank	81 18 9
Add Excess of Income over Expenditure for Year	2 8 5		1834 10 6
	1962 14 9		128 4 3
	£1962 14 9		£1962 14 9

SCHEDULE OF INVESTMENTS.

GENERAL PURPOSES.

Nominal Details.		Cost or Value when Acquired.		Market Value 31st December, 1941.	
£	s. d.	£	s. d.	£	s. d.
£787	London, Midland and Scottish Railway 4% Debenture Stock	839	3 7	806	13 6
£1520	14s. 3d. Cardiff Corporation 3% Stock, 1914/54	1650	0 0	1505	10 1
£1400	India 2 1/2% Stock	1316	1 0	1093	13 10
£2400	Bristol Corporation 2 1/2% Debenture Stock, 1957	2070	2 0	2208	0 0
£2713	London, Midland and Scottish Railway 4% Preference Stock	3572	0 4	1831	5 6
£1200	Leeds Corporation 3% Stock	1143	1 0	1104	0 0
£1096	6s. 2d. Union of South Africa 3% Stock, 1954/64	1067	12 10	1096	6 2
£1200	London and North Eastern Railway 3% Debenture Stock	1033	11 0	912	0 0
£3629	6s. 9d. 5% Conversion Stock, 1944/64	3491	2 8	3838	0 6
£11,426	15s. 0d. 3 1/2% Conversion Stock, 1961, or after	8874	2 2	12,226	13 4
£600	4% Funding Stock, 1960/90	480	0 0	687	0 4
£408	2s. 6d. 3% Funding Stock, 1959/69	394	11 5	412	4 1
		£25,931	8 0	£27,721	7 0

PUBLICATIONS FUND.

£5260	19s. 9d. 3 1/2% Conversion Stock, 1961, or after	3645	12 8	5629	5 2
£4173	1s. 6d. 5% Conversion Stock, 1944/64	3195	18 7	3355	10 6
£217	P. & O. Steam Navigation Co. Deferred Stock	2060	0 0	1123	7 6
£603	London, Midland and Scottish Railway 4% Guaranteed Stock	457	12 7	587	18 6
£1000	3% Savings Bonds, 1955/65	1000	0 0	1000	0 0
		£10,363	3 10	£11,696	1 8

THE TILDEN LECTURE FUND.

£532	London Transport "B" 5% Stock	625	2 0	609	2 10
£400	National Provincial Bank Shares £5 each, £1 paid "B"	678	18 0	599	17 0
£270	Metropolitan Water Board (Kent Water Works) 3% Deb. Stock	188	2 0	203	10 0
£376	3s. 5d. 3% Funding Stock, 1959/69	342	8 6	379	18 8
		£1834	10 6	£1792	8 6

SPECIAL RESERVE FUND.

£1000	3% National Defence Bonds	1000	0 0	1007	10 0
£400	2 1/2% National War Bonds, 1946/48	400	0 0	400	0 0
£900	2 1/2% National War Bonds, 1949/51	900	0 0	900	0 0
		£2300	0 0	£2307	10 0

RESEARCH FUND.

Nominal Details.		Value or Cost when Acquired.		Market Value 31st December, 1941.	
£	s. d.	£	s. d.	£	s. d.
£1000	London and North Eastern Railway 4% 2nd Guaranteed Stock	1010	0 0	775	0 0
£1034	Great Western Railway 2 1/2% Debentures	1049	15 11	703	2 5
£1122	Metropolitan Water Board 3% "B" Stock	1002	16 9	1088	6 10
£1483	London, Midland and Scottish Railway 4% Debenture Stock	1508	3 6	1520	1 6
£806	Victoria 3% Stock, 1929/49	706	6 2	777	15 10
£4498	11s. 0d. 5% Conversion Stock, 1944/64	4267	4 10	4757	4 4
£10,177	16s. 1d. 3 1/2% Conversion Stock, 1961, or after	8853	2 3	10,890	5 1
		£18,377	9 5	£20,511	16 0

SPECIAL PUBLICATIONS FUND.

£2115	8s. 10d. 3 1/2% Conversion Stock, 1961, or after	£1600	0 0	£2263	10
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SPECIAL LECTURES FUND.

£1298	9s. 4d. 3 1/2% Conversion Stock, 1961, or after	£1000	0	£1398	8 7
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STAFF PENSIONS FUND.

£683	6s. 1d. 3 1/2% Conversion Stock, 1961, or after	527	13 9	731	2 8
£371	17s. 1d. 5% Conversion Stock, 1944/64	375	0 0	393	4 9
£2100	2 1/2% National War Bonds, 1946/48	2100	0 0	2100	0 0
£170	3% Savings Bonds, 1955/65	170	0 0	170	0 0
		£3172	13 9	£3394	7 5

THE EDWARD FRANK HARRISON MEMORIAL TRUST FUND.

£61	15s. 8d. 3 1/2% Conversion Stock, 1961, or after	50	1 5	66	2 2
£1245	London, Midland and Scottish Railway 4% Debenture Stock	1051	6 6	1286	7 6
		£1101	7 11	£1352	9 8

THE FARADAY LECTURE FUND.

£374	19s. 0d. 3 1/2% Conversion Stock, 1961, or after	£369	4 0	£401	3 11
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F. P. DUNN, Treasurer.

We have examined the above Balance Sheets and accompanying Income and Expenditure Accounts with the Books and Vouchers of the Society, and certify them to be in accordance therewith. We have also verified the Balances at the Bankers and the Investments. Certain figures relating to the Bureau of Chemical and Physiological Abstracts have not yet been subjected to audit by the Auditors of the Bureau and are therefore liable to adjustment.

224, REGENT STREET, W. 1.  
27th February 1942.

W. B. KEEN & Co.,  
Chartered Accountants.