## anNual general meeting,

Thursday, March 22nd, 1928, at 4 f.m.
Professor H. Brereton Baker, C.B.E., D.Sc., F.R.S., President, was in the Chair.

The Report of the Council for 1927-1928, together with the Balance Sheets and Statements of Accounts for 1927, was presented, and a statement on the finances of the Society was made by the Treasurer. The adoption of the Report was proposed by Dr. L. J. Spencer, seconded by Professor J. C. Philip, and carried unanimously.

Report of Council, 1927-1928.

## I. Fellowship Statistics.

Tre number of Fellows at the 31st December, 1926, was 4093. During 1927, 190 Fellows were elected and 10 reinstated, giving the gross total of 4293 . The deaths recorded were 40 ; the resignations numbered 103, and the names of 110 Fellows were removed from the List of Fellows for non-payment of Annual Subscriptions, the corresponding figures for the previous year being 32, 101, and 115, respectively. The number of Fellows, therefore, at the 31st December, 1927, was 4040, showing a decrease of 53 in the membership of the Society.

This decline in the number of Fellows is more than accounted for by the fact that the elections of new Fellows numbered only 190 as against an average of 270 for the past 10 years. The Council views the position with concern, and trusts that Fellows will use their best endeavours to bring before those interested in the advancement of chemical knowledge the advantages offered by the Fellowship of the Chemical Society.

During the year the Society has had to mourn the loss of one of its distinguished Past-Presidents, Dr. Arthur W. Crossley, who was President from 1925 to 1926, relinquishing the office after one year, owing to ill-health. He served on the Council in all for a period of twenty-two years, and a record of his eminent services to Chemistry in general and to the Society in particular is given in the obituary notice prepared by Professor W. P. Wynne appearing in the December Journal. The Council elected Sir William J. Pope as a Vice-President to fill the vacancy caused by Dr. Crossley's death.

The Council has also suffered the loss of its two senior Honorary Fellows, Professor Svante Arrhenius and Professor Ira Remsen,
who were elected on the 20th January, 1898. A memorial lecture to the former will be delivered by Sir James Walker next May, and an obituary notice of Professor Ira Remsen, prepared by Professor W. A. Noyes, appears in the Journal for December. During 1927, Sir Joseph J. Thomson, O.M., and Professor Richard Willstätter were elected Honorary Fellows, the number of whom, therefore, still remains at 23.

The congratulations of the Society have been conveyed to Mr. Oliver Quibell, elected March 4th, 1868, who has completed 60 years of Fellowship, and to the following Fellows who have attained their jubilee as Fellows during the year :

|  |  |  |  |  |  | Elected. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Beeby Thompson | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | June 21st, 1877. |
| Frederick Woodland Toms | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | June 21st, 1877. |
| Ayerst Henham Hooker | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | Feb. 7th, 1878. |
| Frederick Stuart Harris | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | Feb. 7th, 1878. |
| Walter Bezant Lowe | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | Feb. 21st, 1878. |
| Lewis Thompson Wright | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | Feb. 21st, 1878. |

## II. Publications.

The Journal for 1927 contains 3205 pages, of which 3096 pages are occupied by 414 memoirs and 28 notes, the remaining 109 pages being devoted to Obituary Notices ( 43 pages), two Lectures ( 39 pages), the Report of the General Meeting ( 17 pages), and the Presidential Address ( 10 pages). The volume for 1926 contains 3248 pages, of which 3089 are devoted to 437 memoirs and 29 notes.

During 1927, 485 papers were offered to the Society for publication in the Journal ; of these, 23 were declined. The corresponding numbers for 1926 were 528 and 35 .

The average interval between the dates of receipt and of publication of papers was $10 \frac{1}{2}$ weeks for 1927, 14 weeks for 1926, and 13 weeks for 1925.
The Council again records its indebtedness to those Fellows who referee papers.

## III. Library.

Excluding the evenings on which meetings of the Chemical Society were held, there were 8002 attendances during the past year. Of these, 5408 were made by Fellows of the Chemical Society, and 2594 by members of contributing Societies, compared with 7692 and 2419 , respectively, in 1926, while the number of books borrowed during 1927 was 5489 as against 5353 the previous year.

The additions to the Library comprise 286 books, of which 114 were presented, 702 volumes of periodicals (including a gift of 77
volumes from the Faraday Society), and 86 pamphlets; as against 295 books, 593 volumes of periodicals, and 48 pamphlets last year The Library now contains 31,887 volumes, consisting of 9,647 books and 22,240 bound volumes of periodicals.

## IV. General.

The Faraday Lecture was delivered by Professor Richard Willstätter at the Royal Institution (by courtesy of the Managers) on May 18th, and the Council decided to issue reprints of the lecture at the price of $1 s$. each. Of two other lectures arranged to take place in the Meeting Room of the Society, the first was given by Professor W. A. Bone, F.R.S., on November 24th, the title of his Lecture being "Gaseous Combustions at High Pressures," and the second, entitled "Spectra and Atoms," was delivered by Professor A. Fowler, on February 23rd.

The President, together with Mr. A. Chaston Chapman and Professor C. S. Gibson, represented the Society at the Berthelot Celebrations held in Paris in September, and an Address of Congratulation was presented by the President at the Séance Solennelle in the Sorbonne; Mr. Chaston Chapman was also the Society's delegate at the 7 -ième Congrès de Chimie Industrielle. The President, who was the Society's delegate at the Jubilee Celebrations of the Institute of Chemistry, presented an Address of Congratulation at the Dinner on December 15th, the Ordinary Scientific Meeting fixed for that day having been abandoned.

Professor W. A. Bone acted as the Society's delegate at the Conference on "Methods of Coal Analysis" held in October, and Dr. J. J. Fox agreed to continue to serve on the Aircraft SubCommittee on Chemicals of the British Engineering Standard Association. Dr. Fox also represents the Society on the New International Association for Testing Materials.

The President has been nominated to serve on the Court of Bristol University in the place of the late Sir William A. Tilden; Dr. V. J. Harding was the Society's delegate at the Annual Convention of Chemists of Canada held in Quebec in June, and Sir William J. Pope has been nominated to serve on the Organising Committee of the 7th International Congress of Photography to take place in London on July 9th to 14th, 1928.

At the Anniversary Dinner on March 24th, at which the company numbered 170, the Society was honoured by the presence of Professor Camille Matignon, representing the French Chemical Society, and Hofrat Professor Dr. W. Schlenk, the President of the German Chemical Society. The Presidents of the Belgian, Danish, Dutch, Finnisk, Norwegian, Swedish, and Swiss Chemical Societies have
been invited to be the foreign guests of honour at the next Anniversary Dinner on March 22nd, 1928.
The Council has agreed to co-operate in a joint chemical dinner to be held in London in the autumn of 1928, and has appointed the Assistant Secretary to serve on the Committee responsible for the arrangements.

The Society's representatives on the Bureau of Chemical Abstracts for 1928 are Professor C. S. Gibson, Mr. A. J. Greenaway, Dr. J. T. Hewitt, Professor G. T. Morgan, and the Treasurer, who serves as an ex-officio member. The "A" Abstracts for 1927 contained 8010 abstracts occupying 1230 pages, compared with the corresponding figures in 1926, of 7978 abstracts occupying 1284 pages, and the average length per abstract was 0.30 of a column as against 0.32 . The 8010 abstracts comprised 4157 in General, Physical, and Inorganic Chemistry, 80 in Mineralogical, 2095 in Organic, and 1678 in Bio.chemistry. As from January 1928, the title of "Mineralogical Chemistry" will be altered to " Geochemistry." For the Abstracts for 1928, it has been decided to use a paper 30 per cent. lighter in weight than that previously utilised. A substantial saving in the cost of paper will follow as a result of this change, and it is anticipated that there will be a saving in postage on the "A" Abstracts.

Professor C. S. Gibson, Sir William J. Pope, and Professor J. F. Thorpe continue to represent the Society on the Federal Council, and Professor A. J. Allmand and Professor F. G. Donnan have been appointed to serve for two years on the Editorial Board of the Journal of Physical Chemistry, in the place of Professor J. W. McBain and Professor J. C. Philip, retired. During 1927, the British Members of the Editorial Board received 26 papers, of which 12 have been published, 10 await publication, and 4 are under consideration; 12 reviews of books have also been prepared.

Under the will of the late Professor W. Carleton Williams, the Society is to receive at the death of his daughter the sum of $£ 1000$ for the maintenance and support of the Society's Journal and Library. Further, a bequest of $£ 500$ has been made by the late Professor Archibald Liversidge to found a lectureship for the express purpose of encouraging research. Accordingly, it has been decided to create a " Special Lectures Fund" into which the $£ 500$ from Professor Liversidge and an equal amount from the general funds of the Society will be paid, the income derived from this fund to be devoted to providing honoraria for the lecturers to be appointed by the Council. Two Annual Lectureships have thus been established, one to be designated the "Liversidge Lecture" and the other the "Pedler Lecture." The lectures will deal as far as $\mathbf{M M}$
practicable with the description of new knowledge, and the lecturers, who will be selected by reason of their own discoveries, will indicate in their lectures the directions in which further research work is desirable. The lectures will be open to the public free by ticket.

Volume II of the Memorial Lectures has been reproduced by the photolithographic process and can be obtained by Fellows at $7 s$. per copy. It has also been decided to publish in the near future a volume containing the Faraday Lectures delivered before the Society.

The cordial thanks of the Council have been conveyed to Miss Gladstone for presenting an Album containing photographs of eminent Chemists and other Men of Science, which belonged to the late Dr. John Hall Gladstone, Past.President, and to Lady Ramsay for presenting to the Library a number of books from the library of the late Sir William Ramsay. The Council has also gratefully acknowledged gifts of the Society's publications from Mr. Leonard Archbutt, Mr. R. E. Crowther, Mrs. E. D. Gravill, Mr. H. F. Robinson, and Dr. F. K. Viccajee.

The collection of medals has been enriched by replicas of the Horace Brown Medal from the Institute of Brewing and the Amé Pictet Medal struck in commemoration of his seventieth birthday, which was celebrated last November.

The Council has referred to a committee for consideration and report the question of revising the Bye-Laws, such revision being rendered especially necessary by the fact that they contain no provision for the establishment of the Bureau of Chemical Abstracts. The Council hopes shortly to be in a position to submit its recommendations to the Fellows for their consideration.

The List of Fellows corrected up to July 31st was issued in September free of charge to those Fellows who had made application.

During the year, 90 applications for research grants were received from Fellows asking for $£ 960$ 10s., and 9 from nonFellows asking for $£ 95.85$ grants amounting to $£ 67710$ s. were made to the former and 3 grants amounting to $£ 20$ to the latter. Since the sum applied for each year far exceeds the amount available for distribution, the Council has resolved that in ordinary circumstances, if a grantee incurs no expenditure during two consecutive years while holding the grant, the amount in his hands shall be returned to the Society; also, that any balance remaining in a grantee's hands after he has held the grant for four years shall be returned to the Society.

At the Ordinary Scientific Meeting on June 16th, 1927, the President made a presentation to Mr. S. E. Carr of two cheques,
one from the Council and the other from Fellows, together with an album containing the signatures of the Honorary Fellows and Fellows who had contributed, and a clock, to mark the completion of his 25th year as Assistant Secretary.

The Council again acknowledges its indebtedness to those who have delivered lectures before the Society, to Fellows and others who have prepared obituary notices, and to the authors of the Annual Reports for 1927.

## V. Financial.

It is gratifying to record that during the year under review the income of the Society has increased by $£ 2069 s$. $6 d$. ., whilst the expenditure has decreased by $£ 114 \mathrm{l7s} .2 d$., and that there is a balance in hand of $£ 4566 s .8 d$.

Income. The chief cause of the increased income is to be found in the contribution from the Publications Fund, which is this year greater by $£ 1994 s .6 d$. than that of last year. There have been increases in the amounts received from Publications sales ( $£ 80 \mathrm{l} 8 \mathrm{~s} .11 \mathrm{~d}$. ) and from interest on investments ( $£ 497 \mathrm{7s} .6 \mathrm{~d}$. ), but the contributions to the Library show a decrease of £101 1 s .

Expenditure. Compared with 1926, the cost of the Journal has decreased by $£ 1414 s .3 d$., and the Abstracts by $£ 88 \mathrm{l} 6 \mathrm{~s}$.; this year each account bears its share of the cost of superannuation previously borne by administration expenses, the charges being $£ 3716 s .3 d$. and $£ 94 s .5 d$. respectively. Administration expenses are less by $£ 32316 s$., due to a saving under the item of wages of $£ 13517 s$. 0 d ., of which $£ 82 \mathrm{l} 4 \mathrm{~s}$. has been charged to the Library Account, and to a saving of $£ 1306 \mathrm{~s} .10 \mathrm{~d}$. on miscellaneous printing and stationery. This year, the Accounts have to bear the cost of the List of Fellows ( $£ 1298 s .2 d$. ) and increased cost of pensions ( $£ 945 s$.).

Income Tax. It will be noticed that Income Tax, which is deducted at the source from the interest on all the Society's investments excepting 5\% War Loan and 5\% National War Bonds, and which has been hitherto recovered without question, is, this year, shown under the items " Income tax recovered" and "Income tax recoverable." This action has been rendered necessary by the Inland Revenue Commissioners, who have informed the Council that pending the decision in the High Court of two test cases, they are unable to continue to exempt the Society from paying income tax. The figures shown under "Income tax recovered" represent the tax returned in respect of the income for 1926 up to the 5th April, and those given under the items " Income tax recoverable," amounting in all to $£ 1310 s .6 d$. , indicate the sum due in respect of the period 5th April to 31st December, 1926.

General. It is of interest to review the financial position in this the ninth year after the Armistice, in order to see how far financial conditions may be regarded as stabilised. During the war years 1914-1918, the small volume of research work published led to a succession of credit balances amounting in all to some $£ 7000$. These accumulated funds, however, were used up during the next five years, notwithstanding the fact that in 1921 the annual subscription was raised from $£ 2$ to $£ 3$, and it became clear in 1923 that new sources of income would have to be provided and drastic economies exercised. As a result of the action then taken, the accounts for the years 1924-1927 showed credit balances of $£ 210$, $£ 466$, £135, and $£ 456$ respectively, and there is thus reason to hope that a measure of stability in the financial affairs of the Society has been attained.

In this connexion it is to be observed that for 1927, while the number of pages in the Journal shows a decrease of 43 pages compared with 1926, the Abstracts also number 56 pages fewer than in the previous year. If this proves to be a true indication that the increase in expenditure on account of its publications, which the Society has had to face since the war, is ceasing, then it may be possible that the Council will be able in the near future to relax some of the restrictions that have had to be enforced.

Publications Fund. The Fund has now been established for four years, and, thanks to the benefaction from the late Sir Alexander Pedler and to donations from Fellows and manufacturers, the capital sum now stands at $£ 10,3750 s .4 d$. This year the fund contributed $£ 9610 \mathrm{~s} .8 \mathrm{~d}$. to the General Fund, but $£ 350$ of this was again derived from the Government Publications Grant administered by the Royal Society, for which the Council desires to express its thanks. The Publications Fund will continue automatically to increase by the yearly sums paid as Life Composition Fees and, it is hoped, will be augmented by further contributions and legacies.

## Special Publications Fund.

The sales of the various publications financed by means of this fund have realised $£ 2382 s .9$ d. towards the total cost of $£ 40113 s .4 d$. incurred in publication, and there is reason to anticipate that in time the various ventures will pay for themselves.

## Miscellaneous.

As in former years, the Society has again contributed $£ 100$ towards the expenses of the Federal Council. For the first time, the accounts of the Bureau of Chemical Abstracts are included with those of the Society, the Council considering that as the Society is responsible for approximately one-half of the expenditure incurred
by the Bureau, its accounts should be submitted to the Fellows. The expenses incurred on account of Abstracts "A" (Pure) are incorporated in the various items appearing in the Chemical Society's Income and Expenditure Account under the heading " Expenses on account of Abstracts." The figures are arrived at as follows:

Salaries, £472 10s. (half common) $+\mathfrak{£ 4 1 4 ( \text { Pure } ) + £ 2 1 4 7 s . 1 1 d . ~}$ $($ Index $)=£ 110017 s .11 d$.
Postages, $£ 187 s .11 d$. (half common) $+£ 25$ 17s. 10d. $($ Pure) $=$ £445s.9d.

Abstractors' fees, £1162 17s. 7d. (Pure).
Abstracts Index, $\mathfrak{£ 6 6 5} 13 \mathrm{~s} .8 \mathrm{~d}$. (Printing) $+£ 216 s .2 d$. (Banding) $+£ 1418 s .8 d$. (Distribution), (total £683 8s. 6d.).

Miscellaneous, $£ 82 s .8 d$. (Stationery, half common) $+\mathfrak{£ 6} 9 s .6 d$. (Journals, half common) + £1 1s. $8 d$. (Travelling, half common) +
 common) $=£ 414 \mathrm{~s} .6 \mathrm{~d}$.

During the year the Bureau, after receiving expert advice, decided to use a lighter paper for its publications, the change to commence with the January 1928 issue. The advantages seemed so considerable that the Council decided to use the same paper for the Journal, and by an arrangement with the printers it was found possible to effect the change in January of this year. It is considered that not only will the Fellows benefit by having a Journal which for the full year will weigh about 3 lb . less than hitherto and be 2 inches less in thickness, but the Society will save approximately $£ 250$ on postages and paper.

The Council has to thank Dr. D. S. Jerdan for a contribution of £15 in augmentation of his Life Composition Fee.

A vote of thanks to the Auditors (Dr. O. L. Brady, Dr. A. E. Dunstan, and Dr. G. W. Monier-Williams) for their services, proposed by the Treasurer, and seconded by Mr. R. L. Collett, was carried unanimously, Dr. G. W. Monier.Williams making acknowledgment. On the proposal of Professor J. R. Partington, seconded by Dr. A. Bramley, Dr. Brady, Dr. Dunstan, and Dr. Monier-Williams were unanimously elected Auditors to audit the Accounts of the Society for 1928.

A vote of thanks to the Treasurer, Secretaries, Foreign Secretary, Council, and Committees for their services during the past year, proposed by Professor A. G. Perkin, and seconded by Dr. J. J. Sudborough, was carried unanimously, and acknowledged by Professor W. P. Wynne.

The President then delivered his Address, entitled, "Constituм м 2
tion of Liquids. Some New Experiments." A vote of thanks to the President for his services in the Chair during the past year. and for his Address, was proposed by Professor H. E. Armstronc. seconded by Sir Robert Robertson, and carried unanimously, the President making acknowledgment.

The report on the election to vacancies on the Council for the year 1928-1929 was read as follows :

President.—Jocelyn F. Thorpe.
Treasurer.-T. Slater Price.
Secretary.-T. S. Moore.
Vice.Presidents who have filled the office of President.-H. Brereton Baker, W. H. Perkin, Sir William J. Pope, Sir James Walker.

Vice-Presidents who have not filled the office of President.-W. H. Mills, J. C. Philip.

Ordinary Members of Council.-
Toun Members.-W. A. Bone, H. King, J. L. Simonsen, ․ Sugden, H. Terrey, Miss M. A. Whiteley.
Country Members.-W. M. Cumming, N. V. Sidgwick.
Professor J. F. Thorpe then took the Chair and declared the mecting closed.
BUREAU OF CHEMICAL ABSTRACTS.


3, Frederick's Place, Old Jewry, London, E.C. 2.

for the YEAR ended 31st DECEMBER 1927.

Income and Expenditure Accounts of other Funds for the Year ended 31st December, 1927.

PUBLICATIONS FUND.

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SPECIAL PUBLICATIONS FUND


