

## THE GEOCHEMICAL NEWS

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### Results of Election

The results of the election as reported by the ballot-counting committee, consisting of R. B. Sosman, Chairman, C. S. Corbett and J. R. Arnold are as follows:

President – Earl Ingerson

Vice-Pres. – Julian R. Goldsmith

Secretary – J. C. Maxwell

Treasurer – George T. Faust

Councilors, to serve until close of annual meeting 1959 –

John A.S. Adams and A. O. Nier

Question: Shall “Geochimica et Cosmochimica Acta” be designated the official publication of the Geochemical Society?

Yes – 655

No – 125

Total ballots cast – 843

John C. Maxwell  
Secretary

### Membership in American Geological Institute

The Geochemical Society became the 14<sup>th</sup> member society of the American Geological Institute early in January 1957, when the governing bodies of two-thirds of the member organizations acted favorably upon the Society’s application. Representatives of the Society to the AGI are Dean E. F. Osborn, Pennsylvania State University for 1957, and Professor Ian Campbell, California Institute of Technology for 1957-58.

Affiliation with the Institute is an additional step in strengthening the relations between the Society and other organizations in the field of earth sciences. The AGI, which operates as a separate entity under the National Academy of Sciences – National Research Council, is a non-profit service organization established and managed by the member scientific societies, who employ the Institute as an instrument of the geological and geophysical profession to serve the earth scientist in all matters relating to education, professional responsibilities, and relations to government. The American Geological Institute also is a member of the Scientific Manpower Commission. It publishes monthly a stimulating journal called GeoTimes, which is distributed to the members of all member societies as part of their societies’ membership. The GeoTimes can also be obtained by subscription at a cost of \$2.00 per year to non-members in the United States, its possessions, Canada and Mexico, and to non-members elsewhere for \$2.50 per year. The current issue of GeoTimes, Vol. 1, No. 8, Feb. 1957, carries an article on page 9 on the affiliation of the Geochemical Society and describes its organization and purposes.

The next meeting of the representatives of the member societies of the AGI will be held in connection with the annual meeting of the American Association of Petroleum Geologists April 4 in St. Louis, Missouri.

### Cubic Boron Nitride Discovered

General Electric Company announced on February 12, 1957, that Dr. Robert H. Wentorf had succeeded in synthesizing cubic boron nitride, which has been given the trade name of "borazon." This new substance scratches diamond and remains hard at temperatures at which diamond burns readily. Diamonds burn in air at about 1600° F, whereas borazon can withstand temperatures of more than 3500° F. Dr. Wentorf suggests that the hardness of diamond and borazon is approximately equal, "...borazon scratches diamond almost exactly as diamond scratches diamond...and diamond scratches borazon." In actual lapping tests, borazon powder has polished the surface of a large diamond at the same rate as the surface was polished by diamond powder.

The new substance was synthesized by using the same general techniques, namely combination of tremendous pressures with high temperatures, that were successful in the synthesis of diamonds by General Electric two years ago. In the transformation of the previously known hexagonal boron nitride to the cubic modification, the pressures involved more than 1,000,000 psi and temperatures exceeded 3000° F. The minute crystals are of varying color, black, brown, dark red, gray and yellow and have a specific gravity of 3.45.

### Symposium on Geochemistry

As was previously announced (The Geochemical News, No. 3, p. 4, Oct. 6, 1956), the Commission on Geochemistry of the International Union of Pure and Applied Chemistry is arranging a Symposium on Geochemistry in Paris on July 22, 23, and 24, 1957. This symposium will be held in conjunction with the XVth International Congress of Pure and Applied Chemistry, July 18 – 24, 1957. A two-day field excursion to the volcanic area of the Auvergne will be held after the symposium, and a dinner will be arranged for the members during the symposium.

Prospective members are requested to send their applications to Prof. E. Raguin, Ecole des Mines, 60 Boulevard Saint-Michel, Paris 6e. Members wishing to present scientific papers (time allotted is 15 min. per paper) are requested to submit the titles to Professor Raguin at an early date. An abstract of the paper not exceeding 250 words must be sent to Professor Raguin by May 1, 1957. Abstracts will be mimeographed and issued to members on the opening of the symposium.

No registration fee will be charged. Cost of the dinner and field trip will be announced at the opening of the symposium. It is strongly advised that members registering for the Congress ask for pertinent circulars to receive the help of the Union in obtaining accommodations at a time when a large number of visitors will be in Paris and in participating in the extensive social program of the Congress. All correspondence should be addressed to:

Secretariat du XVIe Congrès International de Chimie  
28, rue Saint-Dominique  
Paris 7e, France

The Geochemical Society of Japan

The Geochemical Society of Japan held its annual meeting at Waseda University in Tokyo on November 3 – 4, 1956. The Secretary, Prof. Shinya Oana of the Institute of Earth Sciences, Nagoya University, Nagoya, Japan, reports that the program consisted of three sessions in which the following papers were presented:

I. Geochemistry of Volcanic Activities

Geochemical studies on Usu volcano (continued). Mode of volcanic activity and the occurrences of ejectamenta. D. Yamamoto.

On the hot spring groups of Usu volcano. I. Kayama and Y. Ikari.

Studies on volcanic sublimates, I. Sublimates of Mt. Showashinzan. I. Kayama, A. Ikehata, Y. Ikari and K. Okura.

On the influence of volcanic activity on natural gas field, especially on carbon dioxide in the vicinity of Isobe. K. Motojima.

On the volcanic rocks of Kirishima volcano. K. Takahashi and K. Sawamura.

Studies on the acidic rivers in the circumference of Kusatsu hot springs. I. Outline and seasonal variations of water properties. A. Ariizumi, M. Komatsubara, T. Hanya and F. Ichikawa.

Studies on the acidic rivers in the circumference of Kusatsu hot springs. II. Variation of water properties by the addition of acidic water and the correlations between flow and concentrations of chemical components as well as outflow. A. Ariizumi, M. Komatsubara, T. Hanya and F. Ichikawa.

On the fluctuation of the isotopic constitution of sulfur by igneous activities. II. E. Minami and H. Sakai.

Time variation of the chemical composition of volcanic gases on Asama volcano. K. Noguchi.

Analyses of sulfataric gases of Nasu volcano. K. Hayase.

On the measurement of Natural electric potentials in the vicinity of fumarole groups. S. Fujii, G. Endo and H. Matsuo.

Geochemical studies on volcanic gases. I. Iwasaki, T. Katsura, T. Kozawa and M. Yoshida.

## II. Geochemistry of Radioactive Isotopes

Isotopic constitution of lead from Japanese lead ores. H. Sakai and K. Sato.

Radioactivities of hot springs of middle Japan. K. Shimokata. Thoron and radon content of hot springs of Aichi Prefecture.

Studies on the distribution of radioactive elements in plants. N. Saito and Y. Murakami.

Report on the second expedition of Shunkotsu-Maru. On the radioactivity of sea water. Y. Miyake and K. Kamada.

Report on the second expedition of Shunkotsu-Maru. Radioactivities of fall-out and rain. K. Terada and K. Kamata.

On the radioactive irradiation sum of Tokyo by rains and fall-outs. K. Saruhashi and Y. Sugiura.

## III. General Session

Geochemical studies on minerals of granite. I. On micas. N. Shimoda.

Consideration of the occurrence of fluorine in apatite, phosphorous ores and spotted teeth by nuclear magnetic resonance measurement. S. Fujiwara, S. Hayashi and K. Noguchi.

Rare element-bearing minerals in beach sand. II. A variety of zircon from Kogushi-Machi, Toyoura District, Yamaguchi-Prefecture. M. Yoshimura and Y. Takashima.

Columbite from Nagatareyama, Fukuoka City. S. Misumi and T. Ide.

Geochemical studies on tuffaceous rocks. III. Green tuff from southwestern Hokkaido. I. T. Kayama and T. Irie.

Occurrence of traces of manganese in calcium carbonate sediments. Y. Kitano and Y. Nakama.

Occurrence of iron in lacustrine sediments. T. Koyama and S. Okabe.

Studies on lacustrine sediments of Hamana Lake (preliminary report). Y. Sugimura and T. Hanya.

Mode of the occurrence of magnesium in shells ( $\text{CaCO}_3$ ). T. Furutsu and Y. Kitano.

Analytical methods and vertical distribution of organic carbon and hydrogen in lacustrine sediments. T. Koyama and S. Kozima.

Germanium content of hot springs. I. Y. Uzumasa, M. Nishimura and Y. Seo.

Chloride, sulfate and fluoride content of rain water. I. Iwasaki, H. Fukutomi and S. Watanabe.

On the source of fluorine in rain water. M. Kamata, T. Onishi and K. Mori.

Chemical studies on snow of Mt. Norikura. T. Koyama, K. Terada and N. Kawasaki.

Studies on the mode of occurrence of silica in natural waters. On the dissociation and association of colloidal silica. T. Okura, K. Goto, H. Suzuki and T. Komatsu.

On aluminum in natural waters. T. Okura, K. Goto, H. Suzuki and Y. Sekikawa.

Distribution of fluorine in the upper course of Takase-River, Nagano Prefecture. S. Kobayashi

On sulfate and chloride in mine water of Joban coal field. K. Seno.

On the bromine content of inland waters. S. Ueno.

Thermodynamics of isotopic exchange equilibria. Thermodynamics with regard to the isotopic exchange equilibria of sulfur. S. Fujuwara and H. Sakai.

Measurement of the flow velocity of ground water by means of successive analysis of dissolved gases. R. Sugisaki.

Chemical studies on marine clays of shallow seas. I. On the chemical compositions. H. Matsushita and T. Takayanagi.

Chemical studies on marine clays of shallow seas. II. On the vertical distribution of clay minerals. H. Matsushita, K. Takanaka and T. Takayanagi.

Chemical studies on marine clays of shallow seas. III. On the vertical distribution of marine humus. H. Matsushita and Y. Takayanagi.

A trial for the chemical prospecting of chrome mine. N. Yamagata, T. Torii, I. Satake, Y. Suzuki and Y. Murakami.

Fundamental experiments on prospecting by analyses of plants. N. Yamagata and E. Yamagata.

Geochemistry of selenium. I. S. Misumi and N. Kokubu.

Direct determination of nitrogen and argon and the application to the gas metabolism of lacustrine sediments and soils of paddy fields. T. Koyama.

Professor Oana states that he has agreed to furnish or to have the authors of these papers furnish English abstracts of any of the papers listed in the above program. Interested persons should communicate with him.

#### Harvey W. Wiley Award

The Association of Official Agricultural Chemists has announced the establishment of the Harvey W. Wiley Award for the Development of Analytical Methods. This award is made in honor of Dr. Harvey W. Wiley, who is remembered as the instigator of the Pure Food Laws and was a founder member of the Association. The award, which will be annual, consists of \$500 to be presented to the scientist or group of scientists who have made outstanding contributions to the development of methods of analysis of those products—namely soils, fertilizers, pesticides, plants, feeds, foods, colors, cosmetics and drugs—for which provision is made in “Official Methods of Analysis of the Association of Official Agricultural Chemists”, as well as for methods in general analytical chemistry.

The first award will be made at the 71<sup>st</sup> Annual Meeting of the Association in 1957. Any interested person may submit one nomination, which must be accompanied by a biographical sketch of the nominee, including date of birth, list of his publications, specific identification of the work on which the nomination is based, and an appraisal of the nominee’s accomplishments. The nominee need not necessarily be a member of the Association, but except in unusual cases should be a resident of North America. Eight copies of the nominating material must be furnished to the A.O.A.C. Secretary, Box 540, Benjamin Franklin Station, Washington 4, D.C., before April 1 of the year in which the award is to be made. The final decision will be reached not later than July 1.

#### Notes

Chemical Abstracts—

Chemical Abstracts has an entire section (Sec.8) devoted to Mineralogical and Geological Chemistry. Some papers of Geochemical interest are to be found in other sections, as for example, in Secs. 2, 3A, 6, 9, 14, 15, 21 and 22. In 1956, Sec. 8 printed abstracts of 2, 167 papers, nearly double the number published in 1952, and there is every indication that 1957 will show an increase.

We have had some success in cutting the time required to print abstracts. Just under 80% of the papers for which abstracts were printed in 1956 were published in 1956 and 1955, and we hope to improve this record. Obviously this requires the help of many abstractors. They are paid, but remuneration is small, and the major return is the feeling of service to the scientific community. Anyone interested in helping is asked to write to me, specifying what

languages you read. We need especially abstractors for foreign language journals, particularly persons with access to the journals.

Michael Fleischer  
U.S. Geological Survey  
Washington 25, D.C.

#### Translations of Russian Articles in Geochemistry—

Translations of Geochemical articles published in the Proceedings of the Academy of Sciences, USSR (Akademia Nauk SSSR, Doklady) are currently available in English at \$15 per volume of six issues. Translation of the journal, Geochemistry (Geokhimii) is planned as soon as subscriptions justify it. The price is \$80 per volume of 8 numbers. Subscriptions for both of these journals are being accepted by: Consultants Bureau, 227 W. 17<sup>th</sup> St., New York 11, New York.

Translations of the Geochemistry Section of Volumes 106, 107, and 108 of the Doklady have been received by the library of the U.S. Geological Survey. Subsequent volumes and translations of Geokhimii will be received as issued.

#### Festschrift for Professor Hermann Rose—

For the occasion of Professor Hermann Rose's 70<sup>th</sup> birthday in June, 1956, there was prepared under the editorship of Professor K. Drescher-Kaden, a Festschrift: Hamburger Beiträge zur angewandten Mineralogie und Kristallphysik, 1 Folge 1956, published by Gebrüder Borntraeger, Berlin. Doctor Rose, who is Professor Emeritus of the Mineralogical-Petrological Institute of the University of Hamburg, is a charter member of the Society.

#### Membership List—

There was an unfortunate printing error on the cover of the recently distributed membership list. The printer was given a copy of the membership list of the Geological Society of America to follow for style and the typesetter added "of America" inadvertently to "Geochemical Society" on the cover. It is greatly regretted that the error was not noticed until most of the copies had been mailed.

Copies were sent to all members for whom stencils have been prepared. Additional copies are available from Earl Ingerson, U.S. Geological Survey, Washington 25, D.C., for members who failed to receive them, or who would like to have extra ones for friends, libraries, etc.

Duncan McConnell has resigned as Chairman and Professor of Mineralogy to accept a research professorship in the College of Dentistry, Ohio State University.

Calendar of Forthcoming Meetings

## March

- 10-16 Second Nuclear Engineering and Science Cong., Philadelphia, Pa. (Engineers Joint Council, 29 W. 39 St., New York 18.)
- 11-18 Pakistan Assoc. for the Advancement of Science, 9<sup>th</sup> Annual Conf., Peshawar, West Pakistan. (B. Ahmad, PAAS, University Institute of Chemistry, The Mall, Lahore, Pakistan.)
- 13-15 Society of Exploration Geophysicists, 10<sup>th</sup> annual Midwestern, Fort Worth, Tex. (G. A. Grimm, Tide Water Associated Oil Co., Box 2131, Midland, Tex.)
- 14 Effect of Radiation on Foods, Assoc. of Vitamin Chemists, Chicago. Ill. (M. Freed, Dawe's Laboratories, Inc., 4800 S. Richmond St., Chicago 32.)
- 21-23 Michigan Acad. of Science, Arts and Letters, Wayne State Univ., Detroit, Mich. (John Sandford, Dept. of Geology, Wayne State Univ., Detroit, Mich.)
- 25-29 Western Metal Exposition and Congress, 10<sup>th</sup>, Los Angeles, Calif. (W. H. Eisenman, 7301 Euclid Ave., Cleveland 3, Ohio.)
- 27-29 Effects of Radiation on Materials, colloquium, Baltimore, Md. (Office of Naval Research, Glenn L. Martin Co., Baltimore 3.)

## April

- 1-4 American Assoc. of Petroleum Geologists, 42<sup>nd</sup> annual, St. Louis, Mo. (R. H. Dott, AAPG, Box 979, Tulsa, Okla.)
- 1-4 Society of Economic Paleontologists and Mineralogists, annual, St. Louis, Mo. (S.P. Ellison, Jr., Dept. of Geology, Univ. of Texas, Austin.)
- 5-6 Pacific Southwest Mineral Industry Conference, Reno, Nevada. (Nevada, San Francisco, and Southern California sections of the AIME.)
- 7-12 American Chemical Society, Miami, Fla.
- 15-19 7<sup>th</sup> Ann. High-Energy Nuclear Physics Conf., Rochester, N.Y.
- 16-17 High Temperature Materials Conference, Hotel Carter, Cleveland, Ohio. (Cleveland Section, AIME)
- 16-18 Nuclear Tests for Nondestructive Testing Applications Symposium, Chicago.
- 23-25 Solid State Devices in Electric Circuits Symposium, New York City.
- 29-1 8<sup>th</sup> Ann. Spectroscopy Symposium, Chicago. (Am. Assn. Of Spectrographers.)

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Editor

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