

# The Geochemical News

NUMBER 38

August 1963

## PETITION TO NOMINATE EXECUTIVE EDITOR OF GEOCHIMICA ET COSMOCHIMICA ACTA

The following petition has been received by the secretary:

We, the undersigned members of The Geochemical Society, in accordance with Section III of the Society's Constitution and Sections II and III of the By-Laws, as revised in November, 1962, and printed on pp. 3-4 of No. 35 of the Geochemical News, December, 1962, wish to nominate Dr. John A. S. Adams of Rice University for the office of Executive Editor for the term Nov., 1963--Nov., 1966.

Donald R. Lewis	Ross A. Maxwell
H. Van Olphen	Stephen E. Clabaugh
R. D. Schwartz	Earl Ingerson
Archie Hood	E. J. Weiss
G. Edwards	William L. McIntire
Richards A. Rowland	Thomas E. Bridge
W. R. Purcell	Leon E. Long
B. Osborne Prescott	D. Hoye Eargle
Harold C. Helgeson	F. J. Pearson, Jr.
A. Mamoulides	R. J. Dunham
Virgil E. Barnes	

Nomination by petition for any elective office of The Geochemical Society is permitted by By-Law III, which reads:

Nominations for office shall be made by the Council, one nomination for each office. They shall be made known to the members at least four months before the annual meeting. Other nominations may be made in writing by any ten members; they must be in the hands of the secretary at least sixty-five days before the annual meeting. Ballots carrying all nominations without distinction between those of the Council and any others shall be distributed to the members. The officers elected shall enter on duty at the adjournment of the annual meeting.

In accordance with By-Law III, the name of Dr. John A. S. Adams will appear on the ballot to be sent to you in September along with the Council's nomination. The Council's nominee is Dr. Frederik F. Koczy, Chairman of the Division of Physical Sciences of the Marine Laboratory of the University of Miami. Dr. Koczy's nomination was submitted to the Council by the Nominating Committee, and notice of the nomination was given in the last issue of the Geochemical News.

## REPORT OF THE TREASURER

August 1--December 31, 1962

The change in the fiscal year of the Society to coincide with the calendar year (approved by Council, November, 1962) has necessitated the submission of this report of the financial operations of the Society for the interim period August 1--December 31, 1962. Hereafter, the detailed annual report of the treasurer will be made following the close of the calendar year.

During the period covered by this report, the treasurer's office assumed the responsibility of accounting for funds granted to the Society by the National Science Foundation for the translation of GEOKHIMIYA. The first installment of \$14,078 was received from NSF on October 24th and placed in the Operating Fund. At year's end \$9,271.03 in direct costs had been charged to the grant, yielding approximately \$927.10 in indirect costs (10 per cent of direct costs) that was due to the Society.

A concerted effort was made during this period to collect unpaid dues for the years 1956-1961, but an arrearage of \$910 remains. In addition, dues in arrears for 1962 amounted to \$381, making a total arrearage of \$1,291 at the end of the period. The \$910 loss in income might not in itself seem serious, but it should be realized that during the same period these members received mailings from the Society at a cost of nearly \$600. The net loss to the Society thereby amounts to fully 20 percent of its current assets.

The outlook for the coming year is one of improved financial stability which should result from increased dues. Steadily rising costs, however, doubtless will wipe out any longer term gains, and the membership should be prepared for another increase in dues in 1965.

Respectfully submitted,

C. Wayne Burnham  
Treasurer

## BALANCE SHEET

December 31, 1962

<u>ASSETS</u>		<u>LIABILITIES AND FUND BALANCES</u>	
Operating Fund:		Operating Fund:	
Cash on hand and in banks	<u>\$8,180.29</u>	Fund balance	<u>\$8,180.29</u>

Note 1: As of December 31, 1962 the following accounts receivable were due to the Operating Fund:

Indirect Costs NSF-GN-34	\$ 927.10
Indirect Costs NSF-G-19808	618.76
Subscriptions Credit, Scripta Technica	<u>120.00</u>
	\$1,655.86

As of December 31, 1962 the following accounts payable were due from the Operating Fund:

Westland Printing (directory)	1,763.55
Edwards Letter Shop. ( <u>Geochemical News</u> - Dec)	342.93
Editor, <u>Geochemical News</u> (office expenses)	<u>32.60</u>
	\$2,139.08

<u>ASSETS</u>		<u>LIABILITIES AND FUND BALANCES</u>	
Publication Fund:		Publication Fund:	
Cash on hand and in banks	<u>\$2,387.53</u>	Fund balance	<u>\$2,387.53</u>

Note 2: As of December 31, 1962 the amount of \$198.58 in royalties from "Advances in Geochemistry" was due to the Publication Fund.

Publication Fund

Income:

Royalties	\$58.36
Interest	<u>46.32</u>

Total income \$ 104.68

Fund balance, August 1, 1962 2,282.85

Fund balance, December 31, 1962 \$2,387.53

## STATEMENT OF INCOME, EXPENSES, AND CHANGES IN FUND BALANCES

FOR THE PERIOD AUGUST 1, 1962 TO DECEMBER 31, 1962

Operating Fund

## Income:

Dues	\$ 808.92	
Subscriptions to <u>Geochemical News</u>	14.00	
Subscriptions to "Geokhimiya"	1,208.25	
NSF Grant GN-34 (translation of "Geokhimiya", 1962)	14,078.00	
Indirect costs (NSF G-19808)	750.00	
Interest on savings account	<u>27.84</u>	
Total income		\$16,887.01

## Expenses:

Operational	1,910.12	
Publications	1,781.53	
Translations	9,271.03	
Total expenses		<u>12,962.68</u>
Excess of income over expenses		3,924.33

## Fund balance August 1, 1962:\*

Savings account	1,384.81	
Checking account	2,863.25	
Petty cash	<u>7.90</u>	
		4,255.96

## Fund balance, December 31, 1962:

Savings account	1,412.65	
Checking account	6,766.81	
Petty cash	<u>.83</u>	
		<u>\$ 8,180.29</u>

\* The Society's savings account is with the State College Federal Savings and Loan Association at 4.0 per cent interest. The checking account is with the First National Bank of State College, Pa.

## STATEMENT OF EXPENSES FOR THE PERIOD

AUGUST 1, 1962 TO DECEMBER 31, 1962

## Operational:

Addressograph charges	\$ 166.50	
Bank charges	2.43	
Express and shipping	15.00	
Miscellaneous	44.09	
Postage and stamps	609.06	
Secretarial services		
Editor	83.50	
Secretary	330.00	
Treasurer	<u>264.00</u>	
Total operational expenses		\$ 1,910.12

## Publications:

<u>Geochemical News</u>	740.28	
Programs of the annual meeting	<u>1,041.25</u>	
Total publication expenses		1,781.53

## Translations of "Geokhimiya", 1962

Translation	7,150.00	
Storage of back issues	60.00	
Handling subscriptions	300.00	
"Geochemistry" editor	300.00	
Production and distribution	1,082.50	
Travel ("Geochemistry" editor)	253.53	
Clerical assistance (Geochemistry" editor)	100.00	
Office supplies ("Geochemistry" editor)	<u>25.00</u>	
Total translation expenses		<u>9,271.03</u>
Total expenses		\$12,962.68

## SYMPOSIUM ON RADIOACTIVE DATING

On November 19--23, 1962, the International Atomic Energy Agency, in co-operation with the Joint Commission on Applied Radioactivity (ICSU), sponsored a Symposium on Radioactive Dating in Athens, Greece. Designated delegates from 17 countries participated in the presentation of 34 papers and subsequent discussions which took place in The Archeological Institute in downtown Athens. The Symposium was opened by Sotos D. Boukis, External Relations Officer, Greek Atomic Energy Commission, who spoke on "Greece and Atomic Energy."

Both abstracts and preprints of the papers were available, with presentation in one of the four languages -- English, French, Russian, or Spanish -- and simultaneous translation provided into the other three. A full record of the proceedings will be published by the IAEA. Inquiries should be directed to:

National Agency for International Publications, Inc.  
801 Third Avenue  
New York 22, N.Y.

The complete list of papers and authors is:

Nov. 19, Afternoon Session: NEW METHODS AND POSSIBILITIES

The half-life of  $C^{14}$  and the problems which are encountered in absolute measurements on beta-decaying gases, I.U. Olsson and I. Karlén, University of Uppsala, Sweden

Low-level counting methods, H. Oeschger, Physikalisches Institut der Universität Bern, Switzerland

Simple construction of  $CO_2$  proportional counters designed for  $C^{14}$  dating measurements, W.W. Moscicki and A. Zastawny, Pracownia Geochronologii Bezwzglądnej I. B.J. P.A.N., Gdansk-Wrzeszcz, Poland

Age determinations by the rhenium-osmium method, W. Herr, B. Hirt, and W. Hoffmeister, Max Planck-Institut für Chemie, Mainz, Federal Republic of Germany

Dating methods based on the process of nuclear fission, P.K. Kuroda, University of Arkansas, Fayetteville, Arkansas

Nov. 20, Morning Session: NEW METHODS AND POSSIBILITIES (cont.)

Investigations of the helium age dating method by stable isotope dilution technique, P.E. Damon and W.D. Green, University of Arizona, Tucson, Arizona

New developments in the thermoluminescence method of geologic age determination, E.J. Zeller and L.B. Ronca, University of Kansas, Lawrence, Kansas

Age studies on basaltic lava flows using natural alpha activity and thermoluminescence, B.E. Sabels, University of Nevada, Reno, Nevada

Dating of some pitchblendes and uraninites from Yugoslav localities by the Pb-206/Pb-210 method, S. Gojković, G. Deleon, and Z. Cervenjak, Zavod za Nuklearne Sirovine, Belgrade, Yugoslavia

Nov. 20, Afternoon Session: APPLICATIONS -- GEOCHEMISTRY AND GEOPHYSICS

Natural variations in the ratio of  $U^{234}$  to  $U^{238}$ , D.L. Thurber, Lamont Geological Observatory, Palisades, N.Y.

Geochronology with  $Pb^{210}$ , E.D. Goldberg, University of California, San Diego, La Jolla, Calif.

Radioactive disequilibrium and isotopes of thorium in geochronology, C. Coquema, R. Coulomb, M. Goldsztn, and J.C. Schiltz, Centre d'Etudes Nucléaires, Fontenay-aux-Roses (Seine), France

Radioactive tracing and dating methods based on cosmic ray produced isotopes, N. Bhandari and D. Lal Rama, Tata Institute of Fundamental Research, Bombay, India

Nov. 21, Morning Session: APPLICATIONS -- GEOCHEMISTRY AND GEOPHYSICS (cont.)

Radiocarbon dating of the deep water of the Pacific and Indian Oceans, G.S. Bien, N.W. Rakestraw, and H.E. Suess, University of California, San Diego, La Jolla, Calif.

Some investigations in marine environments using cosmic ray produced isotopes as tracers, D.P. Kharkar, D. Lal, and B.L.K. Somayajulu, Tata Institute of Fundamental Research, Bombay, India

Investigation of meridional transport in the troposphere by means of carbon-14 measurements, K.O. Münnich and J.C. Vogel, Universität Heidelberg, Federal Republic of Germany

Nov. 21, Afternoon Session: APPLICATIONS -- GEOLOGY

New approaches to geochronology by strontium isotope variations in whole rocks, P.M. Hurley, H.W. Fairbairn, G. Faure, and W.H. Pinson, Jr., Massachusetts Institute of Technology, Cambridge, Mass.

Discordances in K-A and Rb-Sr isotopic ages, J.L. Kulp, Lamont Geological Observatory, Palisades, N.Y.

Examples of K-A ages with extremely low argon concentrations, H.J. Lippolt and W. Gentner, Max Planck-Institut für Kernphysik, Heidelberg, Federal Republic of Germany

Method for calculating the error in rubidium-strontium age determinations, M. Bonhomme and Y. Vialette, Faculté des sciences de Clermont-Ferrand, Clermont-Fd., France

Nov. 22, Morning Session: APPLICATIONS -- GEOLOGY (cont.)

Age determination on secondary uranium-minerals in Northern Bavaria, H. Lenz and I. Wendt, Bundesanstalt für Bodenforschung, Hannover, Federal Republic of Germany

The use of cogenetic uranium-lead isotope systems in zircons in geochronology, L.T. Silver, California Institute of Technology, Pasadena, Calif.

K-A measurements of tektites, J. Zähringer, Max Planck-Institut für Kernphysik, Heidelberg, Federal Republic of Germany

Nov. 22, No Afternoon Session

Nov. 23, Morning Session: APPLICATIONS -- METEORITES

Lead-lead and uranium lead ages of meteorites, D.E. Fisher, Cornell University, Ithaca, N.Y.

Radioactivities in meteorites and in satellites, E. Fireman, J. de Felice, and D. Tilles, Smithsonian Astro-physical Observatory, Cambridge, Mass.

Radiation ages of meteorites from  $\text{He}^3/\text{T}$ -ratios, P. Eberhart, J. Geiss, B. Hirt, and H. Oeschger, Physikalisches Institut der Universität Bern, Switzerland

The separation and measurement of  $\text{Al}^{26}$  and  $\text{Be}^{10}$  in meteorites, E.H. Crèvecoeur and O.A. Schaeffer, Université de Louvain, Heverle, Belgium

Studies on the cosmic ray produced nuclides  $\text{Be}^{10}$ ,  $\text{Al}^{26}$  and  $\text{Cl}^{36}$  in iron meteorites, F. Sammet and W. Herr, Institut für Kernchemie der Universität Köln, Federal Republic of Germany

Nov. 23, Afternoon Session: APPLICATIONS -- METEORITES (cont.)

Cosmic ray produced  $\text{A}^{37}$  and  $\text{A}^{39}$  activities in recently fallen meteorites, R. Davis, Jr., R.W. Stoenner, and O.A. Schaeffer, Brookhaven National Laboratory, Upton, L.I., N.Y.

The cosmic ray exposure ages of iron meteorites as derived from the isotopic composition of potassium and the cosmic ray intensity in the past, H. Voshage and H. Hintenberger, Max Planck-Institut für Chemie, Mainz, Federal Republic of Germany

Cosmic ray exposure ages and terrestrial ages of stone and iron meteorites derived from chlorine-36 and argon-39 measurements, E. Vilcsek and H. Wänke, Max Planck-Institut für Chemie, Mainz, Federal Republic of Germany

Terrestrial ages of meteorites from cosmogenic carbon-14, T.P. Kohman and P.S. Goel, Carnegie Institute of Technology, Pittsburgh, Pa.

Cosmic ray exposure history of meteorites from cosmogenic chlorine-36, P.S. Goel and T.P. Kohman, Carnegie Institute of Technology, Pittsburgh, Pa.

E. Wm. Heinrich  
The University of Michigan



## CALENDAR

- Sept. 8-9 Internat. Symposium on High Temperature Technology, sponsored by Stanford Research Inst. Write: Dept. 493, Stanford Research Inst., Menlo Park, Calif.
- Sept. 8-13 145th Ann. Mtg., Amer. Chem. Soc., New York, N.Y.
- Sept. 9-12 6th Gen. Assembly and Internat. Cong., Internat. Union of Crystallography, Rome. Write: Prof. Ettore Onorato, Istituto di Mineralogia, Cetta Universitaria, Rome, Italy.
- Sept. --- Internat. Min. Assoc. Session to be held jointly with Internat. Union of Crystallography, Rome, Italy (see above). Subject "Crystal Structure as Related to Morphology." Write: Prof. J.D.N. Donnay, Johns Hopkins Univ., Baltimore 18, Md.
- Sept. 10-13 Ceramic Metal Systems Fall Mtg.; French Lick-Sheraton Hotel, French Lick, Ind. Write: Charles S. Pearce, Amer. Ceramic Soc., 4055 N. High St., Columbus 14, Ohio.
- Sept. 29-Oct. 3 Electrochem. Soc. Fall Mtg.; New York Hotel, New York, N.Y. Write: Robert K. Shannon, Asst. Sec., The Electrochem. Soc. Inc., 30 E. 42nd St., New York 17, N.Y.
- Sept. 30-Oct. 4 12th Ann. Mtg., Clay Minerals Conf., Atlanta Biltmore Hotel, Atlanta, Ga. Write: Dr. W.E. Moody, School of Ceramic Engr., Georgia Inst. Tech., Atlanta, Ga.
- Oct. 14-18 2nd Ann. Mtg., Soc. Applied Spectroscopy, El Cortez Hotel, San Diego, Calif.

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This brief summer issue is intended mainly to put the notice of petition and the treasurer's interim report into your hands, but at least one contribution to the "Sand-in-the-Gears-of-Learning" department is mandatory. The following gem, as recently posted on the walls of the local Computing Center, would seem to qualify:

Achtung!

Alles Lookenspeepers

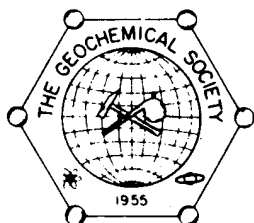
Das computermaschine\* is nicht für geffingerspoken und mittengraben

Ist easy blowenfusen, schnappen der springerwerk und poppencorken  
....mit spitzensparkenIst nicht für gewerken by das dummkopfen. Das rubbernecken sight-  
seeren keepen das hands in das pockets.

Relaxen.....und vatch das blinkenlights!

Das Manageren

\*Computermaschine....das schmaradtalkwerke mit schruballische elek-  
tronik rattracen und alles gekinden tubenjunk.William C. Kelly  
Der Editor



# GEOCHEMISTRY

A Translation of

**ГЕОХИМИЯ**

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CONTENTS OF FORTHCOMING ISSUE

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No. 7, 1962

- Vinogradov, A. P. Average contents of chemical elements in the principal types of igneous rocks of the earth's crust . . . . .
- Stupnikova, N. I., S. I. Zykov and D. A. Mineyev. Lead isotopic ages of rocks of the Middle and South Urals . . . . .
- Makarov, E. S. and I. M. Lipova. An x-ray investigation of thorianites, uranothorianites and aldanites . . . . .
- Mineyev, D. A., B. A. Makarochkin and A. G. Zhabin. On the behavior of lanthanides during alteration of rare earth minerals . . . . .
- Meituv, G. M. Geochemistry of rare elements in the lead-zinc deposit of the Klichkinskii Region (Eastern Transbaikaliya) . .
- Kulikova, M. F. Behavior of indium in the oxidized zones of some polymetallic deposits of Eastern Transbaikaliya . . . . .
- Mun, A. I. and L. A. Tonkonogaya. Lithium in the lakes of Central Kazakhstan . . . . .
- Kalinin, D. V. Formation of magnetite in contact metasomatic iron deposits . . . . .
- Rodionov, D. A. Estimation of average content and dispersion of a lognormal distribution of components in rocks and ores . . . .

#### BRIEF COMMUNICATIONS

- Mogarovskii, V. V. Correlation between thallium and zinc content in the Daraiso sulfide deposit (Middle Asia) . . . . .
- Solodov, N. A. Distribution of thallium among the minerals of a zoned pegmatite . . . . .
- Slepnev, Yu. S. Gallium content in the granite pegmatites of the Sayan Mountains . . . . .

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SCRIPTA TECHNICA, INC., 1000 VERMONT AVE., N.W., WASHINGTON 5, D.C.

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SOME OF THE PAPERS SOON TO BE PUBLISHED IN

**GEOCHIMICA ET COSMOCHIMICA ACTA**  
JOURNAL OF THE GEOCHEMICAL SOCIETY

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March 1963

- Claude Huffman, Jr., H.H. Lipp and L.F. Rader: Spectrophotometric determination of micro quantities of zinc in rocks
- J.R. Richards: Isotopic composition of Australian leads - III Northwestern Queensland and the Northern Territory - A reconnaissance
- Kurt Fredriksson and Robert Gowdy: Meteoritic debris from the Southern California desert
- Kurt Fredriksson and L. Robbin Martin: The origin of black spherules found in Pacific islands, deep-sea sediments, and Antarctic ice
- L. Greenland and J.F. Lovering: The evolution of tektites: elemental volatilization in tektites
- Reed Knox, Jr.: The microstructure of several stony meteorites
- L. Greenland: Zinc in the standard rocks G-1 and W-1
- R.F. Mueller: A comparison of oxidative equilibria in meteorites and terrestrial rocks
- P.M. Hurley, J.M. Hunt, W.H. Pinson and H.W. Fairbairn: K-Ar age values on the clay fractions in dated shales

Geochemical Note:

- D.F.C. Morris and D.N. Slater: Hafnium in the rock G-1 determined by neutron-activation analysis

Letter to the Editors:

- Stefan Loewengart: Some geochemical aspects of the Dead Sea and the question of its age

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April 1963

- I.R. Kaplan, K.O. Emery and S.C. Rittenberg: The distribution and isotopic abundance of sulphur in recent marine sediments off Southern California
- L.H. Ahrens: Lognormal-type distributions in igneous rocks-IV
- George L. Bate and J.R. Huizenga: Abundances of ruthenium, osmium and uranium in some cosmic and terrestrial sources
- Otto Braitsch und Albert Gunter Herrmann: Zur Geochemie des Broms in salinaren Sedimenten Teil I: Experimentelle Bestimmung der Br-Verteilung in verschiedenen natuerlichen Salzsystemen
- P.M. Hurley, B.C. Heezen, W.H. Pinson and H.W. Fairbairn: K-Ar age values in pelagic sediments of the North Atlantic
- Luigi Paganelli: On rhenium content of molybdenite of Mount Mulat (Predazzo) and other Italian molybdenites

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