



The Geochemical News

NUMBER 28

October 1961

ANNOUNCEMENT OF ANNUAL MEETING

The annual meeting of The Geochemical Society will take place in Cincinnati, Ohio, Nov. 2-4, 1961 in connection with that of The Geological Society of America and associated societies. Place: Netherland Hilton Hotel.

Council meeting: Thursday, Nov. 2, 9:30 a.m., Parlor H, Netherland Hilton.

Presidential address: Dr. Harold C. Urey, "Evidence Regarding the Origin of the Earth." Friday, Nov. 3, 10:30 a.m., Parlors LMNO.

Business meeting: Friday, Nov. 3, 11:30 a.m., Parlors LMNO.

Council meeting: Saturday, Nov. 4. Probably a luncheon meeting.

The scientific sessions are scheduled as follows (room assignments will appear on the regular program to be issued later):

Inorganic Geochemistry	
Geochronology	Thursday, Nov. 2, 2-5 p.m.
General	Friday, Nov. 3, 2-5 p.m.
Phase relations	Saturday, Nov. 4, 9-12 a.m.
General	Saturday, Nov. 4, 2-5 p.m.
Organic Geochemistry	
General	Friday, Nov. 3, 2-5 p.m.
Isotope studies	Saturday, Nov. 4, 9-12 a.m.
Bergmann Memorial Discussion	Saturday, Nov. 4, 2-5 p.m.

ORGANIC GEOCHEMISTRY GROUP

On June 3 and 4, 1959, two events occurred in connection with the Fifth World Petroleum Congress in New York that ultimately resulted in the formation of the Organic Geochemistry Group of The Geochemical Society. One event was a symposium, "Chemical Approaches to the Recognition of Petroleum Source Rocks." This meeting was sponsored by the committee dealing with a resolution, passed by the Third World Petroleum Congress, concerned primarily with nomenclature for organic materials found in the earth. The second event was a general geochemistry symposium held at Fordham University sponsored by its Department of Chemistry. From these events an organizing committee consisting of Bartholomew Nagy, as chairman, with Philip H. Abelson, E. G. Baker, Irving A. Breger, W. E. Hanson, Earl Ingerson, and Paul A. Witherspoon drew up suitable bylaws for an Organic Geochemistry Group, and at the meeting of The Geochemical Society in Denver in November, 1960, the group was officially recognized as an integral part of The Geochemical Society.

At the time of its organization it had slightly less than 200 members; this has since increased to over 230. Approximately 40 live outside of the United States, with a considerable number in Europe and South America.

At the Denver meeting 12 papers on organic geochemistry in Recent sediments, 7 papers on the formation and composition of coal, and 12 papers on organic geochemistry in petroleum were presented, and the Warner Bergmann Memorial Discussion on petroleum geochemistry was held. At this meeting the following officers for 1961 were elected: chairman, Harold M. Smith, Bureau of Mines, Bartlesville, Oklahoma; chairman-elect, Paul A. Witherspoon, University of California, Berkeley, California; secretary, Irving A. Breger, U. S. Geological Survey, Washington, D. C.; editor, William E. Hanson, Mellon Institute, Pittsburgh, Pennsylvania; councilor, Bartholomew Nagy, Fordham University, New York, N. Y. Nagy has also been placed on the Society ballot as councilor for a 1962-64 term. If he is elected, it will insure representation of the group in The Geochemical Society council.

Considerable activity has ensued since the Denver meeting. A European Section is being organized under the leadership of Dr. Umberto Colombo of Italy, assisted by Dr. Marcel Louis of France, Dr. G. D. Hobson of England, Dr. E. Eisma of Holland, and Dr. Schultze of Germany. They have already had one meeting and plan to have another in June, at which it will be possible for Dr. Irving Breger, our secretary, to be present. We expect that the organization of this European Section will be of considerable strength to the Organic Geochemistry Group, and will bring a number of new members to The Geochemical Society. A letter has been sent to the suitable official in Russia, inviting Russian scientists, also, to become members.

Correspondents have been established in Europe through the European Section, in South America and in Canada, to furnish items for a newsletter which is issued two or three times a year. As planned, this newsletter will contain information of mutual interest on scientists, research, and travel. The first issue appeared in January, 1961; another in June, and a third is planned for October, preceding the annual meeting.

A letter has been sent to the chairman-elect of the Division of Petroleum Chemistry of the American Chemical Society, who is also program chairman, suggesting that when the Petroleum Division of the ACS wishes to have a symposium on petroleum geochemistry, cooperation with the Organic Geochemistry Group of The Geochemical Society would be an excellent way in which to insure a good program and active attendance.

Harold M. Smith, Chairman
Bartlesville, Okla.

EARLIER GEOCHEMICAL PROSPECTING FOR ORE METALS

F. Manheim
Geochemical Laboratory, Geological Survey of Sweden

Those engaged or interested in geochemical prospecting for metals may be interested to note the following instructions of the 17th century Spaniard, Alvaro Alonzo Barba, for finding copper and other ore minerals. Barba was director of the famous Potosi mines in the Spanish West Indies (Mexico) and wrote several books which were jealously-guarded and rare items in the original Spanish until translations became generally available in the 18th century. The present quote is from A TREATISE UPON METALS, MINES AND MINERALS (1640), translated into English by George Platte, and published in 1740 (2nd edition) by J. Hodges, London:

"When we come to the rocky and craggy Mountains, the first Thing we are to observe, is the Barrenness of them; for the more barren they are, the greater Probability there is that they contain rich Mines and Minerals.

"The next Work is to find out the Springs of Water issuing out of the said Mountains, and those being found, a Quantity of the said Water is to be boiled in a new clean Pipkin, to the Consistency of thin Oil, but not so thick as a Sirrup, and when it is almost cold, then to put it in an Urinal and to set it in the coldest Place that can be found for three Days, then to

play the Physician, and to observe it exquisitely what Residence it yieldeth: if nothing settle but a black Earth or Mud, it is a sign of Coals: If some Part thereof shoot into Ice, or a Substance like Ice or Vitriol, then to observe the Colour thereof; if it be green or blueish, it is an evident Sign of Copper; if whitish, then it may signify any other Metal without exception.

"The next Work is to go to the bare Rocks and there to find out the Clifts, Cracks, and Crannies; this done, to go to the Top, or till you find some Grass growing right upon the Top of the said Crannies; and then to observe diligently the Kind of that Grass, and how it differeth from other Grass, ordinarily growing in the same Mountain; not only in Form, but also in Colour, which Colour sheweth the greatest Difference in the Heat of the Summer; for the subterranean Vapours issuing out of the Orifice of the Mines differ from those which issue out of more solid Places of the Mountains.

"The next Work is to see if there be any Marcasites [pyrite and marcasite] to be found in the Superficies of the said Mountains; which tho' they are usually of divers Colours, and seldom good for any Thing, yet they are strong Signs of Minerals within, being themselves the Spume and Froth of the better Metals, breathed forth, even as Drink breatheth up it's Yest or Froth to the Superficies."

SYMPOSIUM ON "PROBLEMS OF THE ORIGIN OF POSTMAGMATIC
ORE DEPOSITION (WITH SPECIAL REFERENCE TO
THE GEOCHEMISTRY OF ORE VEINS)"

Supplementary Information

On the basis of comments by Professor L. C. Graton and requests from other economic geologists, the Organizing Committee of the symposium to be held in Czechoslovakia in September 1963 presents some information supplementary to the notice published in The Geochemical News, No. 27, June 1961.

The Term "Postmagmatic"

In selecting the title of the symposium, the Organizing Committee attempted to exclude from the program problems of deposits regarded as magmatic (e.g., so-called "liquid magmatic deposits") as well as pegmatite deposits because each of the above mentioned groups could well form the subject of a special symposium. The term "postmagmatic" appears to us to be most suitable for the remaining types of hypogene deposits, especially hydrothermal and pneumatolytic. It is commonly used by some European schools of economic geology, based on the widespread belief in the genetic relationship of these ore deposits with magmatic activity.

The term "postmagmatic" is not meant to restrict entirely discussion to those deposits which originated only after magmatic activity had ceased completely.

The Subtitle of the Symposium

"With Special Reference to the Geochemistry of Ore Veins" does not mean that contributions on postmagmatic deposits of forms other than ore veins will not be welcome.

The reason for emphasizing ore veins in the subtitle is because visits to classical vein deposits in Czechoslovakia are included in the program of pre- and post-symposium excursions.

Date for Final Submission of Manuscripts

Unlike for many other symposia, the Organizing Committee intends to publish the contributions in a pre-symposium volume, which will be received several months before the symposium by those who indicate interest. This will provide sufficient time for participants to be prepared for the open discussion which will be a part of the symposium.

In order to provide the time necessary for printing the volume and for reviewing the papers submitted, as well as for possible correspondence with authors, the Organizing Committee has selected the deadline of December 15, 1961 for the submission of manuscripts. The Organizing Committee is inclined to accept contributions received after the deadline, but it cannot guarantee that they will be included in the pre-symposium volume.

When it is not possible to include contributions in the pre-symposium volume, the Organizing Committee will publish them in a different form and distribute them among the participants, at the latest, by the opening of the symposium.

Length of a Manuscript

The length of a contribution to each individual question must not exceed five typewritten pages, and the manuscript must be related to questions 1a, 1b, 1c, 1d, 2, 3, 4 or 5 as published in the first communication on the symposium. Contributors may send papers on as many of these questions as they wish. Thus, the individual questions of zoning -- 1a, 1b, 1c, 1d -- may be treated separately in several contributions, none of which may exceed five double-spaced pages. Not more than two pages of illustrations will be accepted in addition to the limit for written text.

Present State of Information Cards

On September 1, 1961 fifty-two non-Czechoslovakian participants had promised to send written contributions for the pre-symposium volume.

General Note

The first circular about the symposium and suggestions for authors of contributions may be received from the General Secretary of the Symposium, Miroslav Štemprok, (Ústřední ústav geologický, Malostranské náměstí 19, Praha 1, Czechoslovakia), who will also give further details.

J. Kutina,
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M. Vaněček,
Geological Survey of Czechoslovakia,
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COMMENTS ON PROGRAM FOR THE SYMPOSIUM ON ORE DEPOSITION
Prague, 1963

L. C. Gratton

Foreword

As indicated therein, the "Supplementary Information" offered by the Organizing Committee in Czechoslovakia and appearing in this issue of The Geochemical News is an outgrowth of, and in part a reply to, discussion mailed recently by this writer to the three members of that committee. In preparing to publish this "Information," Editor Heinrich has suggested to me that some amplifying comments might possibly afford a fuller insight as to the scope of the symposium and perhaps thereby stimulate additional contributions to that important project.

The reply which my letter received from Doctors Štemprok, Kutina, and Vaněček was so sympathetic and cordial that I feel justified in concluding that they will similarly view this adoption of Doctor Heinrich's suggestion as earnest of my desire for utmost success of the symposium.

The Main Target

From the broad and complex field of ore genesis, the principal title chosen for the symposium is "Postmagmatic Ore Deposition" -- assuredly an intriguing topic for consideration. And if "postmagmatic" conveys essentially the same connotation to most ore investigators, inescapable yet enriching diversity of attack could be achieved by those offering contributions, the while all kept clear aim on the same bullseye. This would comport with the committee's understandable desire to keep consideration focused on the named target, and, thereby, -- together with the limitation of each manuscript to five pages -- to hold the total offering to feasible limits.

Yet the question arises whether the committee's proposed restrictions of scope for "postmagmatic" can be expected to harmonize with views held by all in a wide group of workers with varying experience likely to have interest in the broad field wherein, or contiguous to which, the named topic lies. Unless such expectation be justified, is it not probable that contributions will come mainly from those already conditioned to that narrowed aspect of the whole field, or else will occasion, in addition, various offerings dealing with other facets of the subject?

It is not to be supposed that the committee conceives the symposium to include consideration of ores and processes that have nothing whatever to do with a magma. Yet its "Supplementary Information" seems unfortunately negative in import. After excluding "liquid magmatic" and "pegmatitic deposits" because "... each could well form the subject of a special symposium," one finds that "... deposits which originated only after magmatic activity had ceased completely" are not strictly excluded. Is it not true that the entertainable range of ideas suggested by "postmagmatic" comprises such contrasts of timing as to bring ore deposition (a) into the orbit of genetic relationship with local magmatic action, versus (b) solely after any nearby magma had completely ceased activity and influence? In the case of (b), therefore, an ore could be postmagmatic provided a magma had previously existed in the region, no matter how much earlier! The nature of the detailed subtopics fortunately suggests no involvement with so extreme a time relation. And do not anomalies enter with respect to other factors than timing?

Pre-Symposium Volume

The contemplated volume appearing months before the actual meeting appeals to this writer as a sound innovation, immeasurably more enlightening than the customary brief abstracts available only shortly before the full presentations.

The writer clearly realizes that, especially through his long association with Lindgren, he falls in a group conditioned to ready acceptance of many facets of magmatic action and potentiality. He recognizes, also, that other groups hold quite contrasting beliefs. Since science advances by gradual selection of the sounder theses, neither group need apologize. A symposium -- a placing together -- affords a means of elucidating contrasting ideas, testing one against another, and eventually, even if slowly, bringing into view the pathway toward the higher truth. It is hoped that the coming important symposium in Czechoslovakia will achieve, above all, a significant step toward balancing and reconciling, as well as expounding.

May I close by invoking for the coming symposium the spirit of that brilliant, dedicated, and universally-revered Czechoslovakian geologist, Professor Franz Pošepný.

Orange, Connecticut
September 20, 1961

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BOOK REVIEWS

X-RAY ANALYSIS OF ORGANIC STRUCTURES, by S. C. Nyburg. 434 + xii pages.
Academic Press, New York and London, 1961. \$13.00 (93/-).

X-RAY ANALYSIS OF ORGANIC STRUCTURES is the fourth in a series of monographs on organic and biological chemistry published by the Academic Press. The book is written for people without a background in x-rays and crystallography. The first two chapters present a simple discussion of x-ray generating equipment and emission and absorption spectra, followed by a minimum of classical crystallography. The phase problem, projections, and the accuracy of structural analysis are next discussed. The above topics constitute the first six chapters. The last three chapters describe the structural features of organic compounds of relatively low molecular weight, crystalline macromolecular substances, and fibrous macromolecular substances.

The reviewer is glad to note that the terms lattice and structure are used in their proper sense without the exacerbating confusion often encountered in general treatments of x-ray methods. The discussion of the structure of organic compounds (239 pages) is very noteworthy, particularly since it provides an excellent summary of the art. The use of the term plane of polarization rather than vibration plane (or plane of electric vector) could result in confusion in the discussion of the infrared dichroism of the polypeptides. Few typographical errors were noted.

The explanations are simple and well written, accompanied by excellent illustrations. The work will be of great value to the student of organic structures as well as to the research worker. The last three chapters should prove to be a very valuable reference to biologists, biochemists and biophysicists, and organic geochemists. Workers in the field of inorganic crystallography may well want a copy of Nyburg's book to round out their libraries. The selected bibliographies at the end of each chapter are extensive. The work terminates with an author index, an index of crystal structures, and a subject index. A number of proprietary terms appear in the index, such as teflon, saran, polythene, and dacron. The curiosity of the casual user of such products may thus readily be satisfied.

With much to offer readers with or without specialized training in the field of x-rays and/or crystallography, the book is heartily commended.

Reynolds M. Denning
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ISOTOPE EFFECTS ON REACTION RATES, by Lars Melander. 181 pages, 10 figures, 1 table. Ronald Press Co., New York, 1960. \$6.00.

This book is designed to serve as a brief introduction to the theory of kinetic isotope effects on reaction rates. Assuming his reader is familiar with the theory of absolute reaction rates and the kinetics of simple systems of consecutive reactions, the author develops formulas for the prediction of rate-constant ratios from molecular data and considers the problems involved in the evaluation of predicted ratios from experimental data. No attempt is made to review all of the major experimentation in this field but selected experimental data are introduced to illuminate the main principles of kinetic isotope effects. About one half of the book is devoted to analysis of hydrogen and carbon isotope effects and reaction mechanisms, and, in his final chapter, the author discusses effects with some elements heavier than carbon. Of particular geochemical interest is an unfortunately brief treatment of the sulfur isotope effect in the reduction of sulfate ion presented in the closing pages of the book.

This work is the first in a series of short monographs to be published by the Ronald Press, each of which will develop and synthesize current theory in a particular branch of modern chemistry.

William C. Kelly

PROGRESS IN INORGANIC CHEMISTRY, Vol. 2, ed. F. Albert Cotton. 399 pages, 15 figures, 54 tables. Interscience Publishers, New York 1, N. Y., 1960. \$10.50.

This book is the second of a series to be published annually. This volume contains seven articles, of which two deal with problems of interest to geochemists, a third may have application to geological processes, and four seem to be of little direct application to geological investigations.

The first article, "Radioactivation Analysis in Inorganic Geochemistry" by John W. Winchester, presents an excellent review of some geochemical methods. This will be of interest not only to geochemists, who will find it of value in comparing the advantages and sensitivity limits of various methods of analysis, but also to geologists whose knowledge of sensitive methods of analysis is limited and who wish to learn more about these techniques. The article is well written in a style which should be understandable to non-chemists.

The second article is entitled "Halides and Oxyhalides of the Elements of Groups Vb and VIb" by John W. George. This paper discusses the halides and oxyhalides of arsenic, antimony, bismuth, sulfur, selenium, tellurium, oxygen, nitrogen, and phosphorus. Some of these compounds appear to be stable at fairly high temperatures or take part in gaseous reactions which are pressure dependent. Consequently, there appears to be a possibility that some of these halides or oxyhalides may exist in volcanic gases. Two of the sulfur-oxychlorides, which might originate in this way, also undergo interesting reactions with metal sulfides and sulfates.

The third article of interest to geochemists is entitled "Extraction of Inorganic Compounds into Organic Solvents" by R. M. Diamond and D. G. Tuck. This is a rather long paper dealing with the types of extraction systems; it includes detailed descriptions of each type with examples and the laws governing the extractions. This is a convenient compilation of various methods which have been used in analysis and extraction and should, therefore, be useful either as a convenient reference source or as a guide in designing new methods of extraction, as, for example, for geochemical prospecting.

The remaining four articles appear to have little of geologic interest. The fourth paper, "Some Fluorine Compounds of the Transition Metals" by R. D. Peacock, deals with a number of compounds not found in nature. This article is not primarily a description or discussion of crystal structures, but in cases where they are known, these structures are mentioned.

The fifth article, "Intensities of Spectral Bands in Transition Metal Complexes" by C. J. Ballhausen, may be of some interest to geochemists involved in spectrographic work. The sixth article is entitled "Unusual Oxidation States of Some Actinide and Lanthanide Elements" by L. B. Asprey and B. B. Cunningham. This, again, holds little interest for geologists, except perhaps for the suggestion that uranium in the +5 oxidation state occurs in uraninite and transiently in aqueous solutions. The last article, "Metal Alkoxides" by D. C. Bradley, seems to be of no direct interest to geology.

Paul L. Cloke

PHYSICAL CHEMISTRY, 2nd ed., by F. Daniels and R. A. Alberty. 774 pages. John Wiley & Sons, Inc., 440 Park Ave. S., New York 16, N. Y., 1961. \$8.75.

This widely used textbook, which first appeared in 1955, has now been rewritten completely and expanded substantially. It begins with an exposition of classical thermodynamics and then proceeds to a discussion of chemical kinetics, including a new chapter on kinetic theory. Other new chapters are devoted to the application of quantum mechanics to the study of molecular structure and spectroscopy. Further additions to the second edition include chapters on statistical mechanics, on one-component systems and surface chemistry, and on such topics as simple molecular orbital theory and the mechanical properties of polymers.

Each chapter is accompanied by three sets of problems. Answers to the first set are given in the book. A total of 836 problems are presented in this edition. Without a doubt, the second edition of this well-constructed textbook will receive the same popular support enjoyed by the first edition.

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HISTORY OF THE EARTH, An Introduction to Historical Geology, by B. Kummel. 610 pages, 462 illustrations, 23 charts. W. H. Freeman and Company, San Francisco and London, 1961. \$8.75.

Although this book was designed and written as a textbook for elementary students, it will, doubtless, also be of considerable value to many geologists above that level. The approach adopted consists of a satisfactory blend of paleontology, stratigraphy, and structural geology. The illustrations are numerous, appropos, and well executed. There are two appendixes: one, an introduction to animals and plants; and two, correlation charts of formations, both for North America and for outside North America.

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THE ABUNDANCE OF THE ELEMENTS, by L. H. Aller. Interscience Monographs and Texts in Physics and Astronomy, Vol. II. 283 pages. Interscience Publishers, New York 1, N. Y., 1961. \$10.00.

This volume is a most noteworthy attempt to assess the cosmic abundances of elements and as such is of very great interest to all geochemists. After discussing the nature and scope of the problem of elemental abundances, the author presents information on the abundances of elements in the earth and its crust, in meteorites, in gaseous nebulae, in stellar atmospheres, and in cosmic rays. The final four chapters deal with isotope abundances, compositional differences between stars, general abundance compilations, and theories of the origin of the elements. The book concludes with an author index, a subject index, and an index of stars, clusters, and nebulae.

ewh

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Phonetic spellings culled from student examination papers: pseunami, boxite, blagioclase, gybsom, sliltstone, manganies, lustur, lipli, hirrocanes.

CALENDAR

Oct.

- 9-12 Symposium on Recent Developments in Research Methods and Instrumentation. Nat. Inst. of Health, Bethesda, Md.
- 16-18 Tenth National Clay Minerals Conf., The Univ. of Texas, Austin, Texas.
- 16-19 Eight Annual Symposium, Amer. Vacuum Soc., Second International Congress of the International Organization for Vacuum Science and Technology. Washington, D. C.
- 18-20 Optical Soc. of Amer., Ann. Mtg., Los Angeles, Calif.

Nov.

- 2-4 GSA Ann. Mtg., Cincinnati, Ohio.
- 2-4 SECg, MSA, PALEO. SOC., and GEOCHEM. SOC., meeting jointly with GSA. Cincinnati, Ohio
- 3 Clay Minerals Group of the Mineralogical Soc. (England). Geological Soc. of London, Burlington House, Piccadilly, London, W.1.
- 5-9 31st Ann. International Mtg. of the Soc. Exploration Geophysicists. Hilton Hotel, Denver, Colo.
- 8-11 Amer. Meteor. Soc., 4th Conf. on Applied Meteorology. Atlanta, Ga.

Dec.

- 2-3 Northwest Mining Assoc. Convention. Davenport Hotel, Spokane, Wash.

ION-EXCHANGE COLUMN

The American Chemical Society announces the inauguration of a new basic journal, INORGANIC CHEMISTRY, to appear for the first time in February 1962. It will be published quarterly at first, with more issues likely to be added later as work in this field gains momentum.

Organized into Major Articles, Notes, Letters to the Editor, and Book Reviews, each issue of INORGANIC CHEMISTRY will contain about two hundred pages. All papers will be reviewed by competent scientists. They will represent fresh developments from leading minds and laboratories.

The editor of INORGANIC CHEMISTRY is Dr. Robert W. Parry, Professor of Chemistry at The University of Michigan. His broad interests and extensive experience near the center of inorganic activity distinguish him for the job.

Dr. Parry completed his doctorate in the area of Werner coordination compounds at The University of Illinois in 1946 and served as special research assistant in the Munitions Development Laboratory at the same university during World War II. He has published some fifty research papers in varied areas of inorganic chemistry and has directed the doctoral research of twenty men now holding the PhD. He is a member of the Board of Editors of Inorganic Synthesis and is secretary for the Gordon Research Conference on Inorganic Chemistry for 1961.

The members of the Board of Editors of INORGANIC CHEMISTRY insure the highest standards for this promising journal. They are Professor John C. Bailar, Jr. of the University of Illinois; Dr. Eugene Brimm of Union Carbide; Professor George Cady of the University of Washington; Professor F. Albert Cotton of MIT; Professor H. Tracy Hall of Brigham Young University; Professor Edward King of the University of Wisconsin; Professor Jacob Kleinberg of the University of Kansas; Dr. Earl Muetterties of du Pont; Dr. Robert Pennerman of the Los Alamos Scientific Laboratories, and Professor Henry Taube of the University of Chicago.

Chalmer J. Roy, professor and head of geology at Iowa State University, will spend six months in India starting 1 September 1961 under the auspices of the Department of State. He will conduct seminars and serve as consultant on educational problems in the geological sciences at leading Indian universities.

Two articles of interest to the members of The Geochemical Society have appeared in "Research Development":

1. "Ceramics -- New Dimension in Magnetism" J. R. Ireland. Vol. 12 (5), pages 5-13, May 1961. The story of index materials.
 2. "Fibre Optics." N. S. Kapany. Vol. 12 (7), pages 64-73, July 1961.
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The Deutsche Mineralogische Gesellschaft held its 39th Annual Meeting September 11-17 in Tübingen/Neckar this year. Of special interest to geochemists are the following papers that were presented:

- . S. Koritnig (Göttingen): Eine bemerkenswerte Differenzierungsabfolge um und in Blasenräumen eines Basaltes, sowie hydrothermale Umwandlungerscheinungen des umgebenden Muttergesteins
- . P. Hahn-Weinheimer, A. Ackermann (Frankfurt/M.): Röntgenfluoreszenzanalyse am Malsburger Granitpluton (Südschwarzwald)
- . I. Friedrich (Bonn): Geochemie der tertiären Verwitterung des Basaltes von „Ludwigssegen“ im Vogelsberg
- . H. G. F. Winkler (Marburg): Über Metamorphose und Granitgenese
- . Tom. F. W. Barth (Oslo): Berechnung der in der Erdkruste erzeugten Menge von Sediment und Eruptivgestein
- . H. U. Bambauer, G. O. Brunner, F. Laves (Zürich): Spurenelementgehalte und γ -Farbzentren in Quarzen aus Zerrklüften der Schweizer Alpen
- . H. U. Bambauer, G. O. Brunner, F. Laves (Zürich): Spurenelementgehalte in Quarzen aus Zerrklüften der Schweizer Alpen und deren regionale Abhängigkeit
- . O. W. Flörke (Zürich): DTA- und Röntgenuntersuchungen an $AlPO_4$
- . W. H. Baur (Göttingen): Zur Kristallchemie der Salzhydrate
- . S. Haussühl (Tübingen): Physikalische Kristallographie der rhombischen Formiate von Calcium und Cadmium
- . H. Hartmann (Liebenwalde): Über die Lumineszenz von ZnS-Einkristallen
- . J. E. Hiller (Stuttgart): Eisen- und Tonminerale aus der Verwitterung von Jurakalken
- . H. Lertz (München): Ein experimenteller Beitrag zur Feldspatverwitterung

- . G. Huckenholz (Köln): Ein Beitrag zur Petrochemie der Sandsteine
- . H. A. Seck (Köln): Beitrag zur Geochemie der Hauynsandidinite (Gleesite) des Laacher Seegebietes
- . O. E. Radczewski, J. Schädel: Über die Anwendung des Ultramikrotoms in der mineralogischen Forschung
- . A. Neuhaus, P. Brenner (Bonn): Über Wachstum, Tracht und Färbung hydrothermalsynthetischer Rubine und einer metastabilen Al_2O_3 -Phase
- . A. G. Herrmann (Göttingen): Geochemische Untersuchungen an salinaren Lösungen aus dem deutschen Zechstein
- . G. Deicha (Paris): Schmelz- und Kristallisations-Versuche an Glaseinschlüssen magmatischen Ursprungs
- . E. Althaus, H. G. F. Winkler (Marburg): Einfluß von Anionen auf metamorphe Mineralreaktionen
- . H. v. Platen, H. G. F. Winkler (Marburg): Kristallisation eines Obsidians bei Anwesenheit von H_2O , NH_3 , HCl und HF unter 2000 at Druck
- . H. H. Steuhl (Marburg): Die experimentelle Anatexis eines Parabiottitgneises aus dem Schwarzwald
- . K. Recker (Bonn): Untersuchungen an lösungsgezüchteten NaF/U-Mischkristallen
- . W. Munchberg (Hagen): Untersuchungen im System MgO -- CaO
- . D. Klemm (München): Die Synthese der Mischkristallreihen NiS_2 -- $NiSe_2$ und CoS_2 -- $CoSe_2$ mit ihren Beziehungen zum natürlichen Auftreten von Vaesit-Blockit und Cattierit-Trogtalit

Selected Definitions from our Unabashed Fictionary

Pegmatite - its lead in the piece form.

Hydrothermal solution - the liquid center of the earth,

Inversion - is the opposite order in which you would expect to find things.

Uniformitarianism - James Hutton started it; he was professor of geology and had one of his students recopilate what he explained in class. This recopilation is called the doctrine of uniformitarianism.

Agricolaceous sandstone - a sand rich in clay minerals.

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