



# International Association of GeoChemistry

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## 2012 IAGC AWARDS

### Vernadsky Medal to Robert A. Berner

The Vernadsky Medal is awarded biennially to honor a distinguished record of scientific accomplishment in geochemistry over the course of a career.



**Robert A. Berner** obtained his BS and MS degrees from the University of Michigan and his PhD from Harvard University. He then went to the Scripps Institution of Oceanography as a Sverdrup Postdoctoral Fellow. In 1963 he joined the faculty at the University of Chicago and later moved to Yale University, where he was promoted to professor in 1971. He remains at Yale as an emeritus professor, after retiring in 2007. Dr. Berner is a member of the U.S. National Academy of Sciences. Among his

many awards are the 1991 Doctor Honoris Causa, Université Aix-Marseille (France), the 1991 Huntsman Medal in Oceanography (Canada), the 1993 Goldschmidt Medal of the Geochemical Society, the 1995 Arthur L. Day Medal of the Geological Society of America, and the 1996 Murchinson Medal of the Geological Society of London.

One of the most internationally recognized and valuable research accomplishments of Dr. Berner, along with colleagues Bob Garrels and Tony Lasaga, has been the now famous BLAG model of atmospheric CO<sub>2</sub> variations through the Cretaceous. Dr. Berner has gone on to refine this model by extending it to the beginning of the Phanerozoic in the GEOCARB models. His modeling efforts have been confirmed by various proxies, such as the density of stomata in fossil plant leaves. Dr. Berner's current research deals with computer modeling of the carbon and sulfur cycles, emphasizing their coupling to controls on atmospheric CO<sub>2</sub> and O<sub>2</sub>, the effect of CO<sub>2</sub> on paleoclimate and of O<sub>2</sub> on biological evolution, the role of plants in rock weathering and their controls on atmospheric CO<sub>2</sub> oscillations in the Phanerozoic, and weathering of kerogen in fossil shales as a measure of the modulation of atmospheric O<sub>2</sub>. Dr. Berner has tackled a number of other significant problems as well. This work includes studies of the kinetic behavior of carbonates in the ocean, experiments on the stabilities and kinetics of carbonate minerals and other sedimentary mineral types, field observations of the processes of early diagenesis, and studies of geochemical cycles.

### Distinguished Service Awards to Ernest E. Angino and Luca Fanfani

The Distinguished Service Award recognizes outstanding service by an IAGC member to the Association or to the geochemical community that greatly exceeds the normal expectations of voluntary service.



**Ernest E. Angino** is being honored for his dedicated service to IAGC as treasurer from 1980 to 1994. He was a professor and is now an emeritus professor in the Department of Geology at the University of Kansas. Ernie did research and teaching in the area of aqueous geochemistry. He contributed significantly to the understanding of the aqueous geochemistry of trace metals and the chemistry of Antarctic lakes and participated in the development of the important research area of geo-

chemistry and health. During his tenure as chair of the Department of Geology at the University of Kansas, he was instrumental in organizing the alumni association, which has resulted in significant gifts to the department. Ernie brought his organizational and management

skills to IAGC during his time as treasurer. He worked to increase the assets of IAGC, handing to his successor, D. T. Long, an association in an extremely stable financial state. He also proved to be an invaluable resource for the president and secretary of IAGC, as he contributed to negotiations with the publisher of the society's journal, *Applied Geochemistry*, worked with international collaborators, and helped in the formulation of the various awards bestowed by the society. Ernie's dedicated service to IAGC went well beyond that of being treasurer.



**Luca Fanfani's** career as a geochemist-mineralogist has spanned more than 40 years. He has been full professor at the University of Cagliari, Italy, since 1976 and dean of the Faculty of Sciences since 2009. Luca is an active member of the committee of the Water-Rock Interaction Working Group (WRI) and, as general secretary, organized the WRI-10 conference in 2001. He served as a mentor to many young geochemists in Italy and other countries. He has authored or coauthored more than

60 scientific articles, addressing a wide range of geochemical issues. He recognized, long before most of his colleagues, the important connection between geochemistry and mineralogy for understanding the transport and fate of harmful and toxic elements in the near-surface environment. Luca has had a strong impact on the foundation of environmental mineralogy and geochemistry in Italy. He created a research group that became a nationwide reference, stimulating the birth and growth of similar groups around the country. Luca was also a pioneer in understanding the importance of international cooperation and interaction. He stimulated scientific cooperation with less-developed countries, giving rise to several projects in Latin America and North Africa, and he contributed significantly to the progress of environmental geochemistry.

## URBAN GEOCHEMISTRY WORKING GROUP

The IAGC is reinvigorating the Urban Geochemistry Working Group under the leadership of Dr. Berry Lyons (The Ohio State University, USA). The group will be cochaired by Dr. David Long (Michigan State University, USA). To kick off this new working group, Dr. Lyons and Dr. Russell Harmon (U.S. Army Corps of Engineers) will be guest editors of the December 2012 issue of *Elements*, which will feature urban geochemistry as the thematic topic. Additionally, Dr. Lyons and Dr. Long will be cochairing a session devoted to urban geochemistry at the annual Geological Society of America (GSA) meeting in November 2012 in Charlotte, North Carolina, USA. If you would like to be involved in this exciting, newly reorganized working group, please contact the IAGC business manager, Chris Gardner, at [iageochemistry@gmail.com](mailto:iageochemistry@gmail.com).

## ELSEVIER/IAGC STUDENT RESEARCH GRANTS

The Elsevier/IAGC Student Research Grant Program is designed to assist PhD students in geochemistry in undertaking and acquiring geochemical analyses in support of their research. Selection is based upon a meritorious proposal. In addition to their grant stipend, each student receives a one-year membership in IAGC. This year's recipients are:

**Alice DuVivier**, Durham University, UK (\$2500) – "Using Ca isotopes to evaluate the weathering influx in seawater: Implications for the driving mechanisms of the Cenomanian-Turonian boundary oceanic anoxic event (OAE 2)"

**Jill Ghelester**, Georgia State University, USA (\$2000) – "Enhanced bioremediation of oiled salt marsh sediments using clay minerals"

**Peter Tollan**, Durham University, UK (\$1500) – "Modern arc peridotites – Analogues for continental-root evolution"