



International Association of GeoChemistry

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INGERSON LECTURER AT THE 1st IAGC INTERNATIONAL CONFERENCE – FRANÇOIS CHABAUX



François Chabaux

The International Association for GeoChemistry (IAGC) is happy to announce that the Ingerson Lecturer for 2019 will be François Chabaux. François will be presenting his lecture at the 1st IAGC International Conference in Tomsk (Russia) in July 2019. Support for the Ingerson International Lecturer is based on a bequest by Dr. Earl Ingerson, first President of the IAGC.

François Chabaux is Professor of Geoscience and Geochemistry at the École et Observatoire des

Sciences de la Terre at the University of Strasbourg (France). He is an associated researcher of the GEOTOP research center in Montréal (Canada) and a visiting scientist at the Institute of Surface-Earth System Science (ISESS) of Tianjin University (China). He is Chargé de mission (Policy Officer) at the Continental Surfaces and Interfaces department of the National Institute for Earth Sciences and Astronomy of the Centre national de la recherche scientifique (France).

For the last 25 years, François has researched the mechanisms and time constants of weathering and erosion processes in the critical zone by developing, using, and popularizing a variety of element and isotopic geochemical techniques, notably U-series nuclides. He was highly involved in the application and development of geochemical tracing approaches, including the classical radiogenic isotopes (Sr, Nd, Pb), U–Sr isotopic coupling, and the new suite of stable isotopes (Ca, B, Li) that are used to unravel the main processes involved in biogeochemical and hydrogeochemical cycles. More recently, he has investigated the nature of the water–rock interactions that control the chemical composition of waters in watersheds and aquifers by applying coupled hydrogeochemical modeling approaches. An important part of his work was carried out on the Strengbach watershed in the Vosges Mountains (France) as part of research at the Observatoire Hydro-Géochimique de l'Environnement at the Université de Strasbourg. This work contributed to making this watershed one of the current reference or emblematic sites of the French critical zone observatory network (a distributed network of research observatories around France, known as OZCAR).

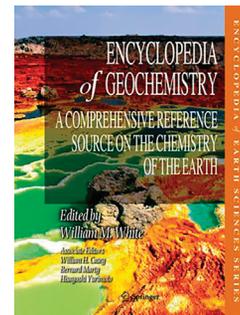
François Chabaux was awarded a PhD at the University of Paris VII in 1993 on the U-series nuclides in volcanic rocks, under the supervision of Claude Allègre. He was later a research and teaching assistant at the Université Paris 7 and then at the Institut de Physique du Globe de Paris (both in France). During 1993–1994, he was a research associate at the University of Cambridge (UK). He was appointed Assistant Professor for Geochemistry at the University of Strasbourg in 1994 and Full Professor in 1998.

1st IAGC INTERNATIONAL CONFERENCE
Tomsk, Russia, July 21–26, 2019, wri16.com



ENCYCLOPEDIA OF GEOCHEMISTRY¹

The field of geochemistry has grown rapidly over the past few decades, driven by significant advances in new analytical techniques, theoretical calculations, laboratory experiments, and the development of geochemical databases. This impressive growth has been further accelerated by the urgent needs of almost all the Earth sciences that use geochemistry to find resources, mitigate environmental impacts, and decipher physico-chemical processes in the Earth and the solar system. The massive two-volume *Encyclopedia of Geochemistry: A Comprehensive Reference Source on the Chemistry of the Earth*, edited by William M. White, is, thus, very timely and highly relevant. It represents a comprehensive update on the 1999 version, which was edited by Clare P. Marshall and Rhodes W. Fairbridge.



The two volumes of the *Encyclopedia of Geochemistry* summarize the state-of-the-art advances in all the major geochemical topics. These are covered by 331 separate entries written by 308 international experts from 22 different countries. These entries are divided into three broad categories: extensive reviews of a topic; intermediate overviews of a topic; definitions and brief descriptions. Entries can range from 1 to 27 pages. The extensive reviews of fundamental and broad topics include entries such as “Earth’s Continental Crust” (by Roberta L. Rudnick), “Carbonate Minerals and the CO₂–Carbonic Acid System” (by Abraham Lerman and Fred T. Mackenzie), and “Ocean Biochemical Cycling and Trace Elements” (by Hein J. W. de Baar, Steven M. A. C. van Heuven and Rob Middag). The intermediate-length overviews of more specific topics include “Subduction Zone Geochemistry” (by Terry Plank), “Inductively Coupled Plasma Mass Spectrometry” (by Maria Schonbachler), and “Paleoclimatology” (by Larry C. Peterson). The brief definitions of important terms include such items as the “Giant Impact Hypothesis” (by Hidenori Genda), the “Large-Ion Lithophile Elements” (by Catherine Chauvel and Roberta L. Rudnick), and “Geoneutrinos” (by William F. McDonough). In this latter category are brief summaries of the behaviors of naturally occurring elements and their isotopes, ranging from the lightest element in “Hydrogen” (by James G. Brophy and Arndt Schimmelmann) and “Hydrogen Isotopes” (by Arndt Schimmelmann and Peter E. Sauer) to the heaviest element in “Uranium” (by Vincent J. M. Salters), and the “Uranium Decay Series” (by Bernard Bourdon). All entries in both volumes are indexed in alphabetical order to provide readers with easy access to the topics.

The *Encyclopedia of Geochemistry* covers all the major disciplines in geochemistry and conveniently summarizes our current understanding of major geochemical reservoirs, important geological and biological processes, and the behaviors of all the naturally occurring elements and isotopes in the periodic table. Each entry provides an appropriate level of background and history, followed by a brief introduction to the essential concepts, important applications, current knowledge gaps, and areas of controversies. The main text usually ends with a brief summary, detailed bibliography, and cross-references. Although most of the entries are limited in length, they do provide a concise and overarching framework for readers.

The *Encyclopedia of Geochemistry* is an essential reference source for upper-level undergraduate and graduate students, as well as for educators and researchers. The entries provide handy introductory materials for researchers exploring new fields or for those who need to learn about a new topic. The references cited at the end of each entry provide

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¹ William M. White (ed) (2018) *Encyclopedia of Geochemistry: A Comprehensive Reference Source on the Chemistry of the Earth*, 1st ed. Springer International Publishing, 1557 pp, ISBN 978-3-319-39311-7 (Print US\$499.99; €414.96); ISBN 978-3-319-39312-4 (ebook US\$499.99; €474.81); ISBN 978-3-319-39313-1 (Print + ebook US\$599.99; €518.96)