

Radiogenic and stable isotopes are used widely in the Earth Sciences to determine the ages of rocks, meteorites, and archeological objects, and as tracers to understand geological and environmental processes. Isotope methods determine the age of the Earth, help reconstruct the climates of the past, and explain the formation of the chemical elements in the Universe. This textbook provides a comprehensive introduction to both radiogenic and stable isotope techniques. An understanding of the basic principles of isotope geology is important across a wide range of sciences: geology, astronomy, paleontology, geophysics, climatology, archeology, and others.

Claude Allègre is one of the world's most respected and best-known geochemists, and this textbook has been developed from his many years of teaching and research experience.

Isotope Geology is an invaluable textbook for all undergraduate and graduate courses on the topic, and an excellent reference text for scientists. There are student problems at the end of each chapter, with solutions at the end of the book.

Praise for *Isotope Geology*:

'A prospective buyer of Allègre's new book on *Isotope Geology* will immediately want to know if it might supplant the classic and long-time favorite of the similar title by Gunter Faure. While similar in coverage, many recent advances are only to be found in Allègre's more recent book. Importantly, Allègre's book utilizes a novel and very effective use of "worked problems" ... an extremely useful pedagogical approach. This textbook will be useful for a wide audience, from undergraduate generalists, to graduate students learning the nitty gritty tools of the trade, to senior practitioners such as myself who need a refresher in some forgotten arenas.'

Stanley R. Hart, *Woods Hole Oceanographic Institution*

'... written by one of the leading geochemists for over four decades. No stone has been left unturned, whether it comes from the interior of the Earth, from the oceans, or from other planets. It is written in Allègre's unmistakable style, inordinately clear and sharp. Difficult concepts are presented without concession but are made accessible to a broad readership. A bridge between foundations and the cutting edge. A must-have for any classroom and personal library.'

Francis Albarede, *Ecole Normale Supérieure de Lyon*

'This book, written by a most prominent geochemist, is an excellent book for anyone (from serious researchers to upper-level undergraduate students) who wishes to learn the history, principles and applications of isotope geochemistry to geological problems.'

Hiroshi Ohmoto, *Director of the Astrobiology Research Center, Penn State University*

Cover image: Kilauea volcano, Hawaii.

Photo courtesy of USGS

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