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Colin P. North and Kitty L. Milliken, Editors

A.J. (Tom) van Loon and Leslie A. Melim, Associate Editors for Book Reviews

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Geochemistry, by Francis Albarède, 2003. Cambridge University Press, Shaftesbury Road, Cambridge CB2 2RU, United Kingdom; 262 pp. \$50.00 paperback, ISBN 0521-89148-5; \$100.00 hardbound, ISBN 0521-81468-5.

This textbook is focused on basic geochemistry and is intended as an undergraduate introductory course book. It concentrates on the inorganic chemistry of the condensed part of the earth. The choice of subjects is, for an introductory course book, well balanced, and emphasis is always on general principles. There is, however, a lack of chapters devoted to organic geochemistry and atmospheric geochemistry.

The textbook starts with an introduction to the atomic and nuclear properties of the elements, the geochemical classification and the concept of reservoirs - propaedeutical to the principles of mass conservation - elemental and isotopic fractionation, geochronology and radiogenic tracers.

In the chapter on element transport, the reader is faced by advection and diffusion principles and their applications. A brief and mostly theoretical chapter devoted to geochemical systems follows, before a more comprehensive chapter on 'Waters present and past', including speciation in solutions, water/rock reactions, biological activity, the carbonate system, precipitation, rivers, weathering and erosion, marine chemistry, and climate. The following chapter on mineral reaction elucidates some aspects related to the formation of sedimentary and metamorphic rocks. The final part of the textbook includes, in a classical fashion, the solid earth and the earth in the solar system. In the last chapter, the geochemical behavior of some selected elements (silicon, aluminum, potassium, sodium, magnesium, calcium, iron, sulfur, phosphorus, and carbon) is presented.

The text of each chapter is well illustrated by diagrams and graphs. The composition of the Earth's main reservoirs and of CI carbonaceous chondrites, thermodynamics, an overview of analytical methods, and some useful equations are dealt with in appendices. Exercises accompanying the book are posted on the author's web page.

The chapters are characterized by brevity (an avowed major target of the author) and clearness; sometimes they may appear too concise. It is appreciable that the book relies on equations in supporting reasoning, although there is no need to know advanced mathematics, addressing the proper scientific approach to a discipline in which the principal challenge is to furnish quantitative models.

Each textbook has its strengths and weaknesses, the latter usually incurred by the omission of topics judged essential in the coverage of a complete book. The main strength of this clear and well written textbook is that it provides an updated overview of geochemistry, and that it is successful in persuading the reader that this is a quantitative discipline of which the contribution to geology is fundamental.

The author has tried not to talk just about geochemistry but to show how general facts can be used to solve problems. His effort in writing a book that is a useful tool to

introduce the basic principles of geochemistry and related matters to undergraduate students, has turned out well.

Giovanni Mongelli
Dipartimento di Scienze Geologiche
Università degli Studi della Basilicata
Potenza
Italy
e-mail: mongelli@unibas.it



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