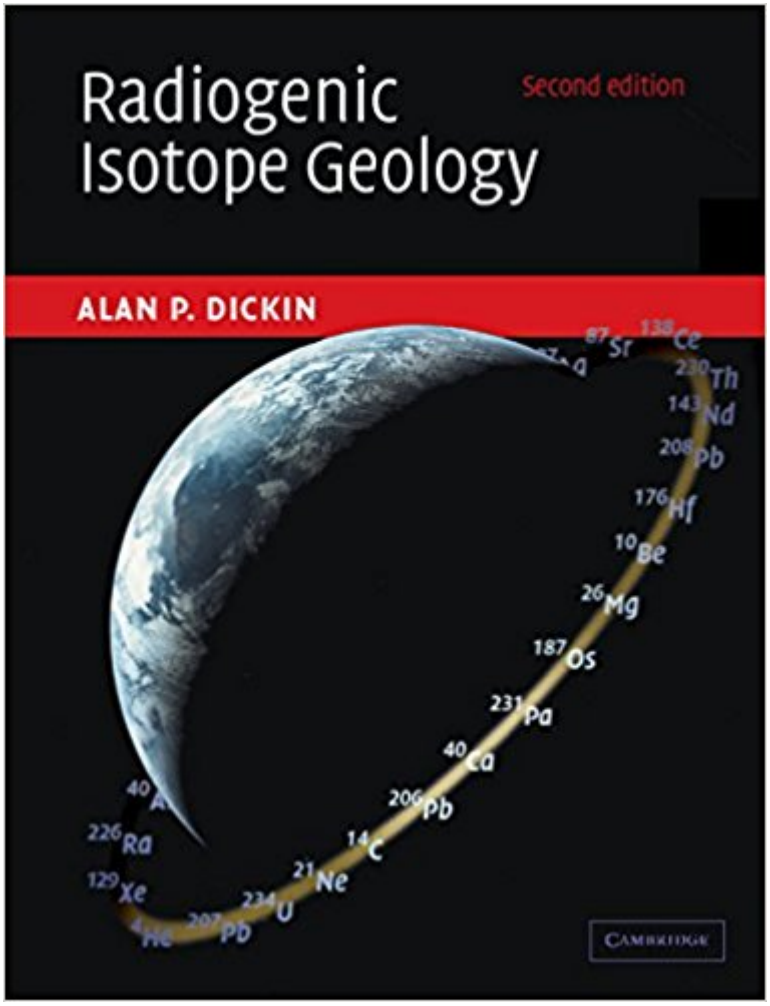
Radiogenic Isotope Geology



Synopsis

The new and fully updated edition of this popular advanced level textbook reviews the geological applications of techniques involving natural radioactive elements. Comprehensive coverage is given to both rock dating and isotopic tracer studies. Placing more emphasis on applications to the environmental sciences, this new edition covers the latest methods. First Edition Hb (1995): 0-521-43151-4 First Edition Pb (1997): 0-521-59891-5

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Customer Reviews

"Dickin has concisely and quite completely covered the applications of this field to geology...Clearly written and comprehensive." Choice"...a notable contribution to the scientific literature on radiogenic isotope geology." Nature

A new and fully updated edition of this popular advanced level textbook which reviews the geological applications of techniques involving natural radioactive elements. Comprehensive coverage is given to both rock dating and isotopic tracer studies. The new edition places more emphasis on applications to the environmental sciences. The latest methods are placed in historical context to allow the reader to understand the development of interpretation. The text is fully illustrated with over 600 diagrams to allow easy visualisation of concepts.

Some of the chapters aren’t written very clearly and it can get a little bit confusing.

First, to actually say something about this book, it’s a solid and comprehensive look at a burgeoning field. The use of radiogenic isotopes as geochemical tracers and for age determinations of various sorts is now a crucial component of studies of all parts of the Earth system. Inevitably, a single text that tries to cover such a diverse suite of rapidly developing subdisciplines will run into some glitches and not be completely current, but Dickin has provided a very good starting point for an advanced undergraduate or graduate course in isotope geochemistry and/or geochronology. This book is just about the only survey text available, and fortunately, it’s good.A second point: the "review" posted by the ’reader from Washington State’ is a dogmatic creationist screed that doesn’t address the content of the book and gets the story of the Jack Hills zircons wrong. The comments by this person could be taken as the type example of a little knowledge being a dangerous thing. For those that are really interested, I suggest that they look at the original papers involved in the controversy. For those that are just skimming this site, let me point out that the "rock unit" that was dated at Jack Hills is a sandstone, so of course the zircons showed a "confusion of information" because they were derived from all manner of different parent rocks by erosion! If you want to understand the complexities and nuances of geochronology, and learn how these very different techniques are used for purposes like characterizing geochemical reservoirs, determining the temperature history of rocks, and --yes-- determining the absolute age of rock units, read Dickin’s book, and only then visit the creation science sites for a hoot.

The content was there but the form for the saturating exponential had an incorrect sign. That just really bugged me as it was repeated in many places in the book.

This book provides a good overview of the topic of isotope geochemistry. Highly recommended for anyone who wants to begin building an understanding of this material

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