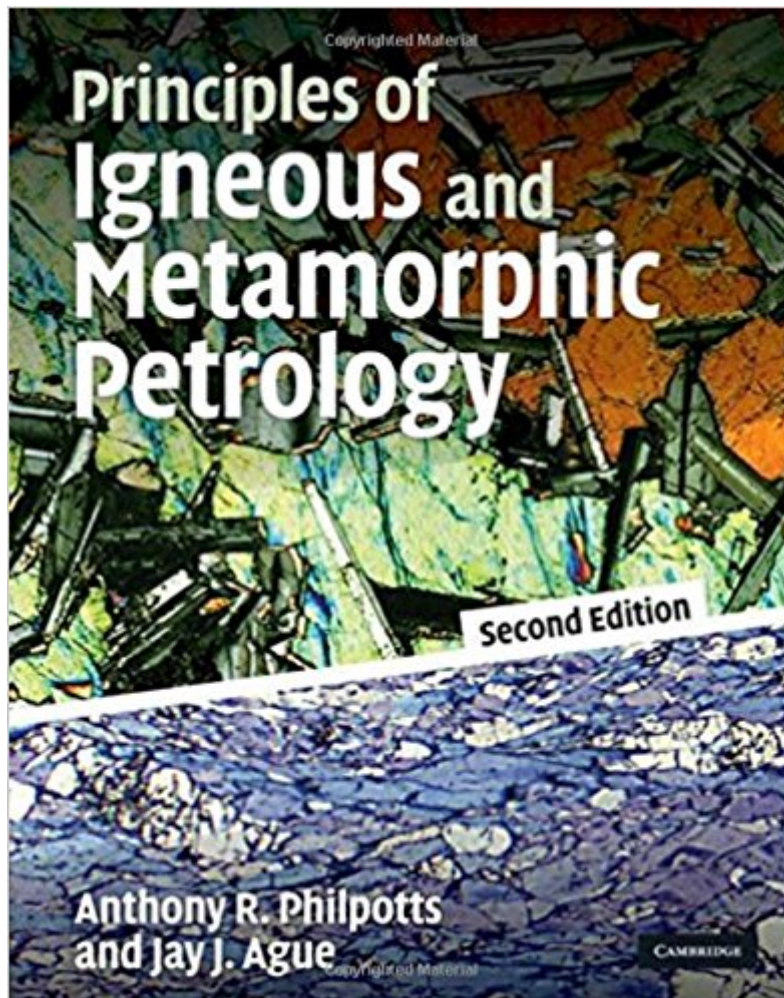


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Principles Of Igneous And Metamorphic Petrology



Synopsis

This textbook provides a basic understanding of the formative processes of igneous and metamorphic rock through quantitative applications of simple physical and chemical principles. The book encourages a deeper comprehension of the subject by explaining the petrologic principles rather than simply presenting the student with petrologic facts and terminology. Assuming knowledge of only introductory college-level courses in physics, chemistry, and calculus, it lucidly outlines mathematical derivations fully and at an elementary level, and is ideal for intermediate and advanced courses in igneous and metamorphic petrology. The end-of-chapter quantitative problem sets facilitate student learning by working through simple applications. They also introduce several widely-used thermodynamic software programs for calculating igneous and metamorphic phase equilibria and image analysis software. With over 350 illustrations, this revised edition contains valuable new material on the structure of the Earth's mantle and core, the properties and behavior of magmas, recent results from satellite imaging, and more.

Book Information

Hardcover: 684 pages

Publisher: Cambridge University Press; 2nd edition (February 2, 2009)

Language: English

ISBN-10: 0521880068

ISBN-13: 978-0521880060

Product Dimensions: 8.6 x 1.7 x 10.9 inches

Shipping Weight: 4.6 pounds (View shipping rates and policies)

Average Customer Review: 5.0 out of 5 stars 8 customer reviews

Best Sellers Rank: #511,411 in Books (See Top 100 in Books) #95 in [Books > Science & Math > Earth Sciences > Mineralogy](#) #181 in [Books > Science & Math > Earth Sciences > Rocks & Minerals](#) #921 in [Books > Science & Math > Earth Sciences > Geology](#)

Customer Reviews

"This is a book to read and a book to keep as a reference. It is a must-have for every student of tectonics." Michael L. Williams, EOS"... a volume which will likely be well thumbed and littered with 'stickies' and other place markers by students and professors alike ... a 'must-have' for any self-respecting petrologist ..." Elements

"The scope of the subject is an enormous challenge for a single author, so I eagerly anticipated the second edition that included Jay Ague as coauthor to complement Philpotts' expertise in igneous petrology. My high expectations were not disappointed.

There is a good index, an up-to-date and extensive reference section (27 pages) ... Thoughtful, substantive problems at the end of each chapter have solutions that are often integrated with the main text. ... This might seem to add up to just another petrology text that is an incremental improvement over its predecessors. In fact, it is an exceptional advance. ... I will choose the second edition of Philpotts and Ague's Principles of Igneous and Metamorphic Petrology because of its forward looking coverage of transport theory." John M. Ferry, American Journal of Science "It emphasises principles rather than facts. The end-of-chapter problems for students are excellent." Tim Lutz, University of Pennsylvania "I am very pleased to see the quality of this text. It will definitely be the best undergraduate petrology text when it appears on the shelf. You have a winner." C. Page Chamberlain, Dartmouth College "The presentation is clear and concise, the illustrations extremely useful ... Of great utility are the problems at the end of each chapter ... This is a fantastic book." Steven R. Bohlen, President of Joint Oceanographic Institutions "... unquestionably the best petrology work available. ... Highly recommended." CHOICE

This textbook explains petrologic concepts through simple physical and chemical principles and quantitative applications. With instructive end-of-chapter quantitative problem sets and over 350 illustrations, this new edition is designed for intermediate and advanced courses in igneous and metamorphic petrology.

This book covers all aspects of igneous and metamorphic petrology from a more quantitative perspective. It emphasizes the key physical and chemical principles necessary not only for understanding igneous and metamorphic rocks, but also the mechanism and processes accompanying their formation, using basic mathematical tools. What makes it even better is that this book is surprisingly easy to follow as much as it is pleasant to read, considering that I am a geophysicist (with only some knowledge about general petrology) and not a dedicated geologist/petrologist. I would recommend this book not only as a textbook for undergraduate students in igneous and metamorphic petrology course, but also as a reference for earth scientists with various backgrounds.

I bought this book by mistake for a course that required a different "Principles of Igneous and Metamorphic Petrology." I found that the book I had was much better, and had many more insightful details and geographic specificities that the other did not have. Overall, I think I did better in the course because I had the better book, and you can really learn anything from this book without

having to be enrolled in the class!

This book was required for our Petrology class. Apparently it's a grad-level book and this was an undergrad class. I rented it off chegg but ended up just buying it. I would definitely recommend this book to anyone who's planning on going into Petrology/Geochem in grad school. It was a little challenging at times to read but overall very, very helpful.

This textbook provides an accessible introduction to the principles that govern the formation of igneous and metamorphic rocks. The derivations of equations and the explanations of their applicability are some of the best I've seen in a serious geology textbook. The questions at the end of each chapter are also well-designed. I've learned a lot from this book and plan on taking it with me to graduate school!

This text covers both physical and chemical aspects of igneous and metamorphic rocks in the clearest, best organized, and most succinct book on the topic. Examples are given, but not huge volumes of extraneous or trivial detail. A serious book that bears close reading, but covers the topics in a logical progression from the most basic ideas to sound conclusions. Excellent problems at the end of each chapter enlarge your understanding. Some more recent texts cover more ground but become unreadably long for students. I taught a one semester course from this book several times.

This is a British publication so expect pics and discussions based on European situations. The content of the descriptions and discussions are very helpful. There is a website on the back cover, that allows you to access more content mentioned in the book.

I use this book for self-study of petrology in Hokkaido University. Suggest the book for everyone as a fundamental comprehensive overview of modern petrology.

As described

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