
Preface

It is always easier to write a textbook the second time around, or so I thought. Writing my first textbook entitled “Earth’s Materials: Minerals and Rocks” (published in 2001 by Prentice-Hall) was difficult because I had to make some tough decisions about what materials to include and what to leave out. Based on my own thinking and input from colleagues and students since that time, I decided to write a textbook on petrology and leave out mineralogy altogether. The result is the present textbook. It was anything but easy to write this book.

Petrology is a dynamic subject. Many research papers have appeared in the literature since 2001. Some important NSF-funded workshops on pedagogic practices in petrology have since occurred. It is important for any textbook to capture all these new discoveries and changes while maintaining rigor and readability. I have tried to do this and hope that students and faculty will like the book. No reward is better than that. I do not expect anyone to cover every detail in all of the chapters of the book in a single semester. There is enough useful material in this book that will make it a useful reference beyond the classroom. The format I followed is more along the lines of classical treatment of the subject, with an emphasis on phase equilibrium controlled processes. I have added some exercises that will help the student in applying their knowledge to real-world problems.

I am grateful to my ex-students and colleagues at Florida International University and elsewhere for helping me through discussions and actual reading of the revised chapters. I am grateful to the following individuals for their help and discussions at different times over the last 10 years or so: Drs. Shantanu Keshav, Zachary Atlas, Sedelia Durand, Melroy Borges, Indra Sen, Kevin Chau, Massimiliano Tirone, Michael Bizimis, Mihai Ducea, Dean Presnall, Robert Stern, Frank Spera, William Leeman, Vic Camp, Bruce Marsh, Simon Peacock, Grenville Draper, Marc Hirschmann, Asish Basu, Jibamitra Ganguly, Surendra Saxena, Frederick Frey, John Wolff, Steve Reidel, Richard Naslund, Neptune Srimal, Florentin Maurrasse, Somnath Dasgupta, Pulak Sengupta, D. Chandrasekharam, Dalim Paul, Sanjib Biswas, Arijit Ray, Jyotisankar Ray, Keith Cox, John Mahoney, and Peter Hooper. I am thankful to Lewis Ashwal, Nick Arndt, and Vic Camp for sending me photographs and figures for use in the book. I am particularly grateful to the following individuals for reading various chapters and making very helpful suggestions: Drs. Robert Stern (University of Texas at Dallas), Jason Saleeby (California Institute of Technology), Asish Basu (University of Texas at Arlington), N. Chalapathi Rao (Benaras Hindu University), Shantanu Keshav (University of Montpellier), Sedelia Durand (Florida International University), and Indra Sen (Woods Hole Oceanographic Institution and Indian Institute of Technology Bhubaneswar). I also thank various authors and journals/organizations for their permission to reproduce some of the diagrams/figures. I thank the support and encouragement I received from Carlo Schneider (Springer) for his editorial help. This book would not be possible without the support and understanding of my wife, Sanjukta. She sacrificed many weekends and evenings so that I could finish this book. I dedicate this book to my former professors—Dean Presnall and James Carter (UT Dallas), Gary Ernst (Stanford University), Amal Dasgupta (Asutosh College, Kolkata, India), and the late Aniruddha De (Calcutta University).

<http://www.springer.com/978-3-642-38799-9>

Petrology

Principles and Practice

Sen, G.

2014, VII, 368 p. 377 illus., 102 illus. in color.,

Hardcover

ISBN: 978-3-642-38799-9