

Petrography of Igneous and Metamorphic Rocks

By Anthony R. Philpotts, Prentice Hall, Englewood Cliffs, New Jersey 07632, 1989, xi + 178 p., softcover (ISBN 0-13-662313-1): \$26.67.

Teachers of petrology and mineralogy have always needed to develop their own collections of handouts for laboratory exercises and lecture illustrations. Many good (and not so good) textbooks for petrology, mineralogy, and optical mineralogy are available, but laboratory manuals have been sadly lacking even though most courses include labs with similar contents. About the only ones I know of (and use) have been *Laboratory Manual for Optical Mineralogy* by Jones and Bloss (Burgess Publishing), and *Petrography Laboratory Manual* by Loren Raymond (GEOSI, Boone, North Carolina 28607). Tony Philpotts has provided a welcome addition to this small, but useful, group.

The manual starts with a review of optical principles that is no substitute for a course in optical mineralogy, but will do for students who do not wish to go back through their old notes. A chapter describing major rock-forming minerals is next, in an alphabetical tabular format by mineral group. Most students will still need reference to a more complete book of mineral descriptions. The discussion on optical methods for determining plagioclase composition is particularly good. Excellent black-on-white line drawings are made here and in following sections on microscopic views of minerals and rocks. The only color illustration is an interference spectrum chart on the inside cover, but Philpotts can provide a video cassette that shows and describes color slides of the same views.

The rest of the manual is taken up with chapters on classification (the igneous part fits in well with class use of

computer software IGPET, by M.J. Carr of Rutgers University, New Brunswick, New Jersey 08903), and with descriptions and illustrations of microscopic textures. Because the texture figures are grouped into their own sections, students sometimes have a hard time using them with text references. The manual emphasizes igneous somewhat more than metamorphic minerals and textures, but both groups are treated with excellent, easily-understood descriptions.

Philpotts' manual is purely descriptive; it does not provide for lectures, nor does it offer exercises in the manner of the manual by Jones and Bloss. The price is a little high, considering the lack of color. Because of Philpotts' emphasis on thin-section views, Raymond's lab manual of hand-specimen petrography complements it (we use both). Philpotts is preparing a petrology textbook that should also fit well with the use of his manual. We have found Philpotts' petrography manual to be very useful, well written, and liked by students. The same good reception is likely in any undergraduate petrology course.

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