

meteoritics. One major criticism, however, is the abbreviated reference list in the final appendix. I feel that to be of greater use to students, the book should contain a more inclusive and up-to-date list of references to more specialist publications. Notwithstanding this comment, I have no hesitation in recommending the purchase of this volume, as an interesting addition to the library of any specialist or student of meteoritics.

M. M. GRADY

Vaughan, D. J. and Patrick, R. A. D., Eds. *Mineral Surfaces*. London (Chapman and Hall), 1995. x + 370 pp. Price £26.00. ISBN 0-412-56340-1.

This splendid book is the fifth in the Mineralogical Society series and results from a meeting held at Manchester University. The study of mineral surfaces is becoming increasingly important, because of the role that they play in many geological processes. This excellent book provides an up-to-date summary of the methods of study and applications of mineral surface science.

The initial chapter, by Professor David Vaughan, provides an overview of mineral surfaces, and includes a general discussion of surface-science

techniques and a review of the many areas where mineral surfaces determine geological and environmental processes. This general review chapter is followed by one written by Michael Hochella, which describes in detail the tools of mineral-surface science, and discusses the physics, chemistry and reactivity of mineral surfaces. The next chapter by Jack Tossell, places mineral-surface studies in their theoretical context, and outlines the state-of-the-art of atomistic simulations and quantum mechanical studies of surfaces. The final techniques-based chapter, by Dr G. N. Greaves, introduces new X-ray techniques and approaches to mineral surfaces.

The remaining chapters in the book focus on specific aspects of surface mineralogy, with excellent reviews of sorption at mineral-water interfaces, surface processes during dissolution, the surfaces of sulphides, the role of surfaces in flotation, and final chapters on clay and zeolite surfaces and reactivity.

As a whole the book is well written and presented, and provides an excellent introduction to a developing and important subject. The authors and publishers should feel proud of this contribution to the literature, and the book should appear on all library and many scientists' shelves.

G. D. PRICE