

this is an invaluable source book for the economic geologist and with the comprehensive descriptions the student has an up-to-date précis of the essential details of the deposits. Although the price may discourage many from acquiring their own copy this is a book no library should be without.

R. J. L. COLVINE

Heimann (R. B.). *Auflösung von Kristallen: Theorie und technischen Anwendung* (Applied Mineralogy: Vol. 8). Vienna and New York (Springer-Verlag), 1975. xiv+270 pp., 172 figs. Price \$795.00; DM 115.00; \$47.20.

This book is a monograph on the dissolution of crystals in two different aspects. In the first and larger part, called 'micromorphology', the author gives a good survey of current and older theories on the formation and shape of etch pits and on the influence of 'poisons' and adsorption. Thereafter various etching techniques, methods of observation, and instrumentation are dealt with. Many applications in technical systems are given. This part ends with a chapter on etch figures and crystal symmetry, especially important for semiconductor research.

In the second part, called 'macromorphology', the irreversible dissolution of crystals is considered. It starts with a historical approach of the term 'Lösungskörper', now called 'L-form'. Since most experiments were carried out on spherical crystals, devices to form these are described. After a short review of earlier theories the author describes the theory developed by Franke, Lacmann, and himself. It starts from the concept of the equilibrium form (G-form) and then describes its transition to the L-form for four different models of the dissolution process. Computer simulations are presented and compared with experimental results on Ge, Si, MgO, spinel, quartz, and corundum.

Three appendices complete the book: a listing of results on 41 substances, a list of dislocation etching agents, and a list of polishing solutions. There are separate indexes for symbols, names, subjects, and substances, while the reference list has 681 entries.

The literature is almost exhaustively covered. The subject-matter has not always received the desirable critical attention, since sometimes rather speculative explanations of observed phenomena are recorded without comment. Although the etching theories are well presented, the systematics could have been better. Certain subjects are treated at unexpected places. Apart from these remarks it is the authors' merit to have given a detailed survey of our present knowledge about the very complicated phenomena of dissolution and etching, of which the latter is a very important characterization method for grown crystals.

The book is of interest not only for mineralogists, but for anyone working in the field of growth and morphology of crystals. It is a pity that the high price will be prohibitive for some potential buyers.

P. HARTMAN

O'Keefe (J. A.). *Tektites and their origins (Developments in Petrology, 4)*. Amsterdam, Oxford, and New York (Elsevier Sci. Publ. Co.), 1976. xii+254 pp., 44 figs., 21 pls. Price Dfl. 95.00 (approx. \$36.50).

The origin of tektites has been a subject of controversy for many years and the author of this book is well known for his preference for a lunar source over a terrestrial one. Indeed this book is, in part, a reply to an article by S. R. Taylor (*Earth Science Reviews* (9), 1973, pp. 101-25) in which it is suggested that the chemistry of the returned lunar samples excludes a lunar origin for tektites. Dr. O'Keefe is not convinced. In the first half of his book he reviews the