

BOOK REVIEW

Angewandte Electrochemie - Grundlagen der elektrolytischen Produktionsverfahren

A. Schmidt, Verlag Chemie: Weinheim, 332 pp. 1976.

Angewandte Electrochemie has three chapters (German text throughout). The first sets out to cover the theoretical background to the many aspects of electrochemistry important in the design of industrial cells. The choice of subject matter is, however, open to criticism; there is a lengthy discussion of solution electrochemistry starting from very simple concepts (e.g. ions, covalent and ionic bonding) while surprisingly little attention is given to important topics such as the mechanism and kinetics of electrode reactions and mass transport, particularly at the complex level at which they are met in large scale electrochemical cells. The second chapter contains a discussion of the materials available for the design of the various components of industrial cells and their auxiliary equipment and outlines the way in which the economics of a technical process may be

assessed. In the final section the various industrial processes for the electrochemical preparation of inorganic products and for the electrowinning and electrorefining of metals are described in some detail and the possibilities for the large scale electrosynthesis of organic compounds are more briefly discussed. At the end of the book there are nineteen useful appendices containing tables of data and summaries of information concerning industrial processes.

Throughout, the approach of the author is essentially descriptive and uncritical and in few places are fundamental principles explained and discussed at depth. Thus while I have no doubt that this book will be of considerable interest to students of industrial electrochemistry, it cannot be considered to be the long required text-book of modern electrochemical engineering.

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