

BOOK REVIEW

Conduction in Low-Mobility Materials (Proceedings of the Second International Conference held at Eilat, Israel in April 1971),

Edited by N. Klein, D. S. Tannhauser and M. Pollark, Pp. 464, Taylor and Francis Ltd., London, 1971, L 10.00.

The present volume incorporates the various papers (invited and contributed) presented at the second conference on low mobility materials held at Eilat, Israel. The papers have been divided into following several sections :

(1) *Transition metal oxides*—This section includes three invited papers by I. G. Austin and R. Gramble, H. J. Van Daal and J. B. Goodenough dealing respectively with hopping models in mixed valency semiconductors, nature of bound and free charge carriers in some transition metal oxides and polaron morphologies in vanadium oxide and ten other contributed papers dealing with different aspects of transition metal oxides.

(2) *Low-mobility transport theory*—This includes two invited papers L. Friedman and H. G. Reik on small polaron transport and narrow band semiconduction—similarities and differences, and interpretation of d.c. and optical properties of transition metal oxides respectively and three other contributed papers.

(3) *Amorphous semiconductors*—This section dealing with a recent and technologically important topic has two invited papers by E. A. Davis and J. Stuke on electrical conduction in non-crystalline systems and electrical properties of amorphous semiconductors respectively and five other contributed papers.

(4) *Selenium compounds*—Four papers were contributed to this section dealing with various transport properties of selenium (crystal and film) and some of its alloys.

(5) *Switching Process*—This section dealing with an important applied field of semi-conducting materials contains an invited paper by H. Fritzsche on switching and memory effects in amorphous semiconductors and six other contributed papers.

(6) *Organic materials*—Organic semiconductors are very important from the fundamental and technological point of view and in this section, in an invited paper on conduction process in organic crystals, M. Silver tries to review the whole situation regarding this class of materials taking anthracene as an ideal example. The section contains ten other contributed papers.

(7) *Ionic crystals and liquids*—This section contains five papers dealing with different aspects of ionic crystals, films and liquids.

These fifty two papers presented at the above conference represent the current trend of research on this important branch of materials and will be of stimulating and refreshing influence on all investigators on semiconduction or low conduction.

A. K. D.

Permselective Membranes

Editor C. E. Rogers, Pp XI+206 : Marcel Dekker, Inc.,
New York, 1971

Eleven selected papers of those presented at the American Chemical Society Symposium on permselective membranes, held in New York during September 1969, form this volume. The first three papers concern the studies on transport of gases through polymers. The next two are on the permeation of gases at high pressures and through modified polymer films. The sixth one concerns the theoretical interpretations of the effect of mixture composition on separation of liquids in polymers. Papers 7, 8, 9 and 10 present the studies on permselectivity of different ions through polymers membranes. The last paper gives a general review of the transport behaviour through membranes. All these papers have already been published in the Journal of Molecular Science (Physics), Vol. B5, No. 1, 1971 and a good selection of papers has been made for including in this book. The reviewer feels that this book is worth keeping for a reasearch laboratory working on ion-transport phenomena through membranes and allied subjects.

C. V. N. B.