

Book Review

Works intended for notice in this column should be sent direct to the Book-Review Editor (J. H. Robertson, School of Chemistry, University of Leeds, Leeds LS2 9JT, England). As far as practicable books will be reviewed in a country different from that of publication.

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The molten state of matter. By A. R. UBBELOHDE, Pp. xvi + 454. Chichester: John Wiley, 1978. Price £23.50.

The major emphasis of this book is appropriately implied by the subtitle *Melting and Crystal Structure*. The author states that the aim is to examine general relationships between structural and thermodynamic changes which accompany melting. This goal is aptly pursued and in the end one is left with an enhanced appreciation of an important area. The second chapter delves deeply into the thermodynamics of melting and so sets the stage for the developments to come. Although important equations are given, the book presents an essentially non-mathematical treatment of the important concepts. Succeeding chapters move through theories of fusion, structural melting for different kinds of molecules or substances, and finally cover important new areas related to crystallography: liquid crystals, melts and glasses, and polymer systems. Original articles and all important reviews have been cited.

Two points come across very clearly from the overall perusal of the manuscript. First, there has been a large

amount of elegant work done over the past 50 years by relatively few workers. Second, the importance of expanded research in this area is shown. As the variety of new compounds available for study has increased and as the ease of crystal structure analysis has made its impact, studies on melt behavior have lagged behind. Wide circulation of this book will help to remedy this situation.

One important aspect of the book is the large number of tables of structural and thermodynamic data. This information has been painstakingly gleaned from the literature and put together in a cohesive and illustrative fashion. The book fulfills its stated purpose admirably. By the end of the reading one is filled with numerous ideas, one sees avenues for attack on important problems, and one has a feeling of being up-to-date on the present state of development in this important area. The text overall is laid out in fine fashion and is put together in a thoroughly readable form.

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