

Book review

Metallomesogens. Synthesis, Properties and Applications

J. L. Serrano (ed)
VCH, Weinheim, 1995
498 pages £120.
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Edited books, as opposed to single-author publications, often show little evidence of planning and normally contain articles of very variable quality. I am happy to report that this volume does not suffer from these drawbacks. The chapters form a coherent whole that covers the area of the title thoroughly and neatly. In accord with the editor's philosophy (explained in the introduction), this book, which is the product of a joint effort from staff at the University of Zaragoza, provides a comprehensive survey of the available literature on metallomesogens.

The work is divided into four parts. After a general introduction to the basic concepts of liquid-crystalline systems, Part A is concentrated on a survey of the different classes of metal-containing low-molar-mass and polymeric compounds capable of exhibiting liquid crystallinity; some useful information regarding transition temperatures is to be found here. The discussion and descriptions are not meant to be a critical appraisal of the many claims quoted, but they convey a vivid impression of the vast scope of this field. In part B the synthetic procedures that have been utilized for the preparation of such materials are discussed. The authors do not hesitate to include diagrams and reaction schemes even for the

simplest of chemical transformations in their effort to make the book accessible to non-chemists. The chapter on structural characterization (Part C) focuses on the application of X-ray techniques and electron paramagnetic resonance studies. The decision to exclude other characterization methods and refer the reader to earlier publications, although understandable, is rather unfortunate in view of the fact that the most recent of those is now 12 years old. Part D is concerned with physical properties and potential applications, again, an informative, rather than critical, approach is adopted and readers are allowed to draw their own conclusions regarding the molecular design requirements for the development of a specific property.

The book is nicely produced and well referenced, and there are many illustrations and tables to present useful information concisely. Each contributor has taken great care to introduce the complexities of his/her subject progressively. There are few typographical errors (although those on pages 206 and 402 ought to have been avoided) and a similar writing style is adopted throughout, making the book very readable. There is also a substantial index. I would, however, disagree with the publishers claim that this is a book for the established researcher; it is aimed at undergraduates working on their final-year project, those embarking on a career in research and newcomers to the field wishing to become quickly acquainted with the literature. At £120, the price is prohibitive to individuals but for some libraries and certain research groups it will be money well spent.

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