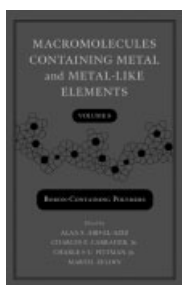


**Macromolecules
Containing Metal and
Metal-Like Elements,
Volume 8:
Boron-Containing
Polymers**



By *Alaa S. Abd-El-Aziz, Charles E. Carraher, Charles U. Pittman, Martel Zeldin, John E. Sheats*, Wiley InterScience, 2007, hardcover, 206 pages, 122, 90 €, ISBN: 978-0471730125

This is the eighth volume of a series dealing with metal and metal-like containing macromolecules. This volume presents the state-of-the-art developments with respect to boron-containing polymers. It provides a useful, application-oriented forum for the next generation of macromolecules and materials in the areas of ceramics, coatings, nanomaterials, catalysts, flame retardancy, therapeutic agents like anticancer and antiviral drugs, treatment of arthritis, antibacterial drugs, vitamin deficiencies, electric conductors and semiconductors, and especially electronic applica-

tions such as non-linear optical and fluorescent light-emitting materials.

The focus of the book is primarily on the synthesis and structures of the various types of boron-containing polymers and boron- and nitrogen-containing polymers. The appearance of these new macromolecules has been enormous since 1950s, with the number increasing explosively since the early 1990s. These new macromolecules represent marriages among many disciplines including chemistry, biochemistry, materials science, engineering, biomedical science, and physics. These materials also form bridges between ceramics, organic, inorganic, natural and synthetic, alloys, and metallic materials. As a result, new materials with specially designated properties have been made.

The first chapter provides an excellent background for those not intimately familiar with the field. The state-of-the-art in this chapter connects the remaining chapters of the book that give supportive and historical developments and allow appreciating and understanding the topics presented. Although every chapter contains an introduction to the specific topic, this first chapter provides a nice global picture of the field.

The classification of the chapters is neither practical nor reasonable because the main purpose of Chapter

5, named boron- and nitrogen-containing polymers, is to provide an overview of the chemistry of boron- and nitrogen-containing polymers and the headline of Chapter 3 is boron- and nitrogen-containing polymers for advanced materials. It seems more natural the opposite order and even the applications of these polymers as advanced materials should have been introduced as a part of the same chapter. As well, I find more general the chapter 4 directed to organoboron polymers and it would be more reasonable that it was before of that of boron- and nitrogen-containing polymers. In the same way, Chapter 6: organoboron polymer electrolytes for selective lithium cation transport should be next to Chapter 4.

One of the nice features is the large number of references, many as recent as 2006, to the primary literature and to reviews on inorganic polymers that are included at the end of each chapter. Given the inclusion of many recent developments, the book will be of interest to specialists in this interdisciplinary field with a background in either metal or polymer chemistry, and useful as a general reference.

*Virginia Cádiz
Tarragona (Spain)*