

Alaa S. Abd-El-Aziz – Books (Authored and Edited)

Photophysics and Photochemistry of Metal-Containing Polymers – Volume 10

2010 - 432 pages - [Preview](#)



Metal- and metalloid-containing macromolecules are defined as large molecules (i.e., polymers, DNA, proteins) that contain a metal or metalloid group affiliated with the molecule. This volume describes what is possible with metal-containing polymers where the metal is an essential ingredient in obtaining desired optical and electronic properties. Covering applications in nonlinear optical materials, solar cells, light-emitting diodes, photovoltaic cells, field-effect transistors, chemosensing devices, and biosensing devices, this indispensable guide focuses on the photochemistry and photophysics of metal-containing polymers, with chapters by leading contributors to the core advances in this field

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Supramolecular and Self-Assembled Metal-Containing Materials – Volume 9

2009 - 528 pages - [Preview](#)



Volume 9 focuses attention on the area of supramolecular chemistry, supramolecular architecture and supramolecular self-assemblies that involve materials containing metals and metal-like elements and the potential applications of these interesting hybrid materials.

books.google.ca - [More editions](#)

Boron-containing Polymers – Volume 8

2007 - 206 pages - [Preview](#)



This series provides a useful, applications-oriented forum for the next generation of macromolecules and materials. Applications include non-linear optical materials, specialty magnetic materials, liquid crystals, anticancer and antiviral drugs, treatment of arthritis, antibacterial drugs, antifouling materials, treatment of certain vitamin deficiencies, electrical conductors and semiconductors, piezoelectronic materials, electrodes, UV absorption applications, super-strength materials, special lubricants and gaskets, selective catalytic and multi-site

books.google.ca

[Nanoscale Interactions of Metal-containing Polymers – Volume 7](#)

2006 - 234 pages - [Preview](#)



This volume, seventh in the series, covers nanoscale interactions of metal-containing polymers. Example chapters include:

- * Nanoscale Clusters and Molecular Orbital Interactions in Macromolecular-Metal Complexes
- * Metal Oxide Clusters as Building Blocks for Inorganic-Organic Hybrid Polymers

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[Transition Metal-containing Polymers – Volume 6](#)

2006 - 219 pages - [Preview](#)



The sixth volume in this series provides useful descriptions of the transition metals and their applications, edited by high-quality team of macromolecular experts from around the world.

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[Metal-coordination Polymers: Volume 5](#)

2005 - 407 pages - [Preview](#)



This series provides a useful, applications-oriented forum for the next generation of macromolecules and materials.

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[Group IVA Polymers: Volume 4](#)



2005 - 348 pages - [Preview](#)

Volume 4 provides useful descriptions of Group IV metals and their applications, including silicon-, organogermanium-, organotin-, and organolead-containing polymers. A high-quality team of macromolecular experts from around the world have put together these leading macromolecule titles.

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Biomedical Applications – Volume 3



2004 - 218 pages - [Preview](#)

This volume will cover important biomedical applications of organometallic compounds, including metal-labeled DNA on surfaces, artificial metallo-DNA, organotin molecules as anti-cancer drugs, and much more. * Provides useful descriptions ...

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Organoiron Polymers: Volume 2



2003 - 287 pages - [Preview](#)

Compiled by an all-star cast of macromolecular experts, Macromolecules Containing Metal and Metal-Like Elements, Volume 2, Organoiron-Containing Polymers: Provides useful descriptions of applications for the reader to apply in his/her ...

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A Half-century of Metal- and Metalloid-containing Polymers: Volume 1



2003 - 268 pages - [Preview](#)

The first volume in this series consists of a number of reviews of the field, to give the reader a background to build upon.

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Inorganic and Organometallic Macromolecules: Design and Applications



2008 - 475 pages - [Preview](#)

This book describes the synthesis of some of these polymers and their potential application in many fields such as materials, biomedicine, engineering, communications, and ceramics.
Book jacket.

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[Frontiers in Transition Metal-containing Polymers](#)



[Alaa S. Abd-El-Aziz](#), [Ian Manners](#) - 2007 - 533 pages - [Preview](#)

Written by the leading researchers in the field, this thorough volume covers the routes to organometallic and coordination polymers, as well as characterization and applications of transition metal-containing monomers and polymers.

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[Organometallic and Coordination Clusters and Polymers: Syntheses and Applications](#)



[Alaa S. Abd-El-Aziz](#), Pierre D. Harvey - 2004 - 257 pages - Snippet view

This volume is a compilation of articles written by some of the leading scientists presented at the Organometallic and Coordination Clusters and Polymers: Syntheses and Applications Symposium, the 87th Canadian Chemistry Conference and Exhibition in May, 2004, in London, Ontario, Canada.

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[Metal and Metalloid-containing Macromolecules](#)



[Alaa S. Abd-El-Aziz](#) - 2003 - 353 pages - [Preview](#)

This volume features 30 articles based on presentations given in the Metal- and Metalloid-Containing Macromolecules Symposium at the 39th IUPAC Congress and 86th Conference of the Canadian Society for Chemistry in Ottawa from August 10-15, ...

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