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BOOK REVIEWS

Monolithic Materials: Preparation, Properties and Applications. Journal of Chromatography Library, Volume 67. Edited by František Švec (University of California, Berkeley), Tatiana B. Tennikova (Russian Academy of Sciences, St. Petersburg), and Zdeněk Deyl (Academy of Sciences of the Czech Republic, Prague). Elsevier: Amsterdam. 2003. xx + 780 pp. $350.00. ISBN 0-444-50879-1.

This book is a multi-author comprehensive compilation on the science and uses of monolithic materials. In agreement with the broad definition of monolith, the book covers a wide range of materials made of a single block or piece, such as polymeric blocks of various shapes, silica columns, and blocks resulting from fusing particles, zeolites, and textiles.

The editors have included 28 chapters describing the fundamental properties and preparation of these materials (Chapters 2−14) and their applications (Chapters 15−28). The content is primarily relevant to those readers interested in the field of chromatography and related separation techniques. However, it also includes chapters on applications of monoliths to areas of applied interfacial chemistry, such as solid-phase extraction, catalysis, solid-phase synthesis, and combinatorial chemistry.

As it is for many multi-author books in the first edition, there is the occasional inconsistency between the text and the figures, cross-referencing between chapters is somewhat vague, and some chapters covering very nascent areas (e.g., microchip technologies) are adorned with an overly long introduction. However, these minor distractions are outweighed by the thoroughness of the compilation, the invaluable source of current references, and the abundance of practical details. Chapter 24, "Survey of Chromatographic and Electromigration Separations" and the "Index of Compounds Separated" should be of great value to those interested in using monolithic materials for chromatographic or capillary electrochromatographic separations. The latter points the reader to those chapters that specifically address separations of a compound of interest. The style of presentation of this book will make it a good reference for both the expert and the neophyte in the field of monolith-based separations.

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Progress in Inorganic Chemistry, Volume 52, Dithiolene Chemistry: Synthesis, Properties, and Applications Volume. Edited by Edward I. Stiefel (Princeton University). Series edited by K. D. Karlin (Johns Hopkins University). John Wiley & Sons, Inc.: Hoboken, NJ. 2004. xii + 738 pp. $150.00. ISBN: 0-471-37829-1.

Metal dithiolene complexes (derived mainly from *cis*-ethylene-1,2-dithiolates, benzene-1,2 dithiolates and their oxidized forms) first burst upon the chemical scene in the early 1960s and evoked much attention owing to the intense colors, multiple oxidation states, reversible redox reactions, planar and trigonal prismatic stereochemistry, and nonclassical electronic structures displayed by many of them. In the ensuing years, interest broadened to their unusual conductive, optical, and magnetic properties. In the past decade, dithiolenes reemerged as components of the pyranopterin cofactors of molybdenum and tungsten enzymes. This remarkable development circumscribes a full circle in inorganic chemistry: from a significant but academic group of compounds at first to physical development and application and, finally, to an obligatory biological function in enzymic catalysis. It is therefore most appropriate that the entire field of dithiolenes be the subject of this thematic volume in a venerable series.

The volume editor, a veteran contributor to and observer of dithiolene chemistry, has produced a balanced and comprehensive treatment of incontestable currency and utility, beginning with his adroit capsule history of the field. It is all here: synthesis of ligands and complexes, analytical uses, electronic and vibrational spectroscopy, theoretical treatments of electronic structure, geometrical structure, electrochemistry, photochemistry, solid state electronic properties, dithiolenes in biology, and synthetic analogues of enzyme sites. Coverage is uniformly good but uneven in level, as would be expected in an edited volume. This reviewer, a continuing worker in the dithiolene area, has made numerous profitable excursions to this volume in the few months since its acquisition. All researchers in the dithiolene field, or in metal−sulfur chemistry in general, will come to value this volume as a primary, and possibly indispensable, resource.

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