

nounced. The chapter by Joseph Katz on early days in the "MET" lab is also particularly noteworthy in its historical perspective. The book conveys the excitement of the times as these new elements were being discovered and the excitement of the future given the likelihood that there might be an island of stability where a whole new series of stable post-transuranic elements might be discovered. The book details how this search is certainly still very active. Following the initial 13 chapters of historical perspectives, there are a further 38 chapters dealing with spectroscopy, photophysics and photochemistry, chemistry, separation and thermodynamic, materials physics, materials chemistry, and analytical chemistry. Most of these later chapters, not surprisingly, relate to those transuranic elements which have been produced in larger quantities, particularly neptunium and plutonium.

This book is a very valuable resource for anyone involved in teaching aspects of the history of chemistry or physical chemistry of the transuranic elements. It is a fascinating book in its own right and should be on the shelves of every chemist.

The Editor's Desk

Supramolecular Architecture, Synthetic Control in Thin Films and Solids, ACS Symposium Series No. 499, edited by Thomas Bein, American Chemical Society, Washington, DC, 1992, US \$97.95, 441 pp. ISBN 0-8412-2460-9.

This book is developed from a symposium sponsored by the Division of Inorganic Chemistry at the 21st National Meeting of the American Chemical Society in Atlanta, Georgia in 1991.

The symposium was dedicated to the discussion of the design of supramolecular assemblies in two and three dimensions for applications in many areas of technology, especially micro-electronics and chemical sensors. There are 28 contributions in this volume. Some are relatively short articles, i.e. dedicated to a specific narrow topic. Others were more review-like in character, covering an area in more depth.

The book is introduced by an overview chapter of the area by the editor Thomas Bein and is then divided into three main sections. These are Two-Dimensional Assemblies: Thin Films, which includes in particular inorganic/organic polymers, Langmuir-Blodgett films and biomimetic thin film synthesis; a section dedicated to Layered and Low-Dimensional Structures, particularly pillared materials, clays, polymers; and a section dedicated to

Three-Dimensional Frameworks and Amorphous Networks, particularly including zeolites and gels.

Worthy of particular mention is the review article by Rouxel on low-dimensional solids, a series of particularly useful articles on zeolites, including a review by Thomas Bein, Three-dimensional periodic packaging, by Stucky and co-workers, Topotactic kinetics in zeolite, Nanoreaction chambers by Ozin and co-workers and Self-assembling electron transport chains in zeolites by Mallouk and co-workers.

The book ends with a series of articles dealing specifically with the more recent studies of sol-gel glasses and their application to new materials.

The book is produced as camera-ready copy and, for the most part, this works well. It is recommended for purchase by anyone with interests in new developments in material science.

The Editor's Desk

Coordination and Transport Properties of Macrocyclic Compounds in Solution, by B.G. Cox and H. Schneider, Vol. 76, in the series Studies in Physical and Theoretical Chemistry, Elsevier, Amsterdam, 1992, 418 pp., US \$164.00, Dfl.320.00. ISBN 0-444-88613-3.

This volume presents a series of chapters dealing with macrocyclic ligands and the binding thereof to cations. The book emphasizes fundamental aspects of the complexation reactions, being devoted in large part to the thermodynamic and kinetic properties of simple complexation and of ion transport and extraction. The work is complemented by discussion of the structural conformational properties of the ligands and complexes and strategies used to assemble large macrocyclic compounds.

Chapters include, thermodynamics, kinetics and mechanisms, solvent extraction, carrier-mediated ion transport across membranes, structural and synthetic studies. This volume is a truly remarkable book which covers the topic areas mentioned above in considerable detail. Extensive tables of data provide qualitative information about, for example, stability constants and entropies of complexation, transfer energies of various species from reference solvents to mixed or non-aqueous solvents, ion pair association constants, influence of cation size on complexation kinetics, rates of formation and dissociation of complexes, distribution efficiency between different solvents, rate constants for metal ion transport across interfaces, to name but a few, all with extensive discussion.

There is no doubt that this book is a major contribution to the field and