section of heteropolytungstate syntheses. While oxo ligands themselves do not qualify technically with the mandate of ligand syntheses suggested in the Preface, the growing interest in the heteropolytungstate complexes reported for the study of oxidation catalysis renders these species quite significant enough to merit inclusion. Furthermore, the syntheses provided here will undoubtedly help maintain the growth of interest in these complexes as oxidation catalysts, and possibly for other applications. This chapter also highlights the syntheses of synthetically useful undecacarbonyl $[M_3(CO)_{11}]^{2-}$ homo- and heteroclusters (M = Ru, Os), as well as other carbonyl-predicated clusters of significance to homogeneous catalysis, containing the metals Rh, Ru, and Pt. Again, the carbonyl ligands are hardly novel, but the reports of the complexes here should be of considerable utility in research laboratories where cluster synthesis and catalysis are the foci.

Chapter Five is a short, but useful, review of main group and transition-metal hydrides (with principally carbonyl and phosphine ancillary ligands) of relevance, naturally, to further synthetic endeavor. One typical example is an air-stable hydrido-manganese carbonyl diphosphine, with labile hydride, which offers a possible starting point for novel complexes, clusters, and potential catalysts.

In summary, the editor has compiled a good number of useful ligand syntheses into a single volume to render a very useful reference text, likely to have a steady impact on the synthetic endeavors of inorganic chemists in the fields of laboratory instruction, catalysis, cluster chemistry, and bioinorganic chemistry well into the foreseeable future.

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JA985698J

10.1021/ja985698j

Applications of Anionic Polymerization Research. ACS Symposium Series 696. Developed from a symposium sponsored by the Division of Polymer Chemistry at the 212th National Meeting of the American Chemical Society. Orlando, Florida, August 25−29, 1996. Edited by Roderic P. Quirk (University of Akron). American Chemical Society: Washington, DC. 1998. xii + 332 pp. $125.00. ISBN 0-8412-3565-1.

This volume is based on an international symposium on anionic polymerization held during the Orlando ACS meeting in the fall of 1996. The aim of the symposium and the present book was, according to the editor, "to describe the usefulness of anionic polymerization research and emphasize the industrial research perspective on anionic processes for the preparation of polymeric materials". This application-oriented perspective is reflected in the affiliations of the close to 100 contributors to the volume. Out of the 22 chapters, only four (including the general introduction) have no contributor affiliated with industry. More remarkable even is the large number of contributions (12) coming in their entirety from corporate research. This option to provide an industrial viewpoint on anionic polymerization reactions and processes is, in my opinion, the most interesting and the most successful aspect of this book. It complements nicely other recent or older books available on the subject whose focus is more academically oriented.

The volume is structured in seven sections, whose lengths vary from two to five chapters. The general organization of the book, in particular the logic behind the assignment of some chapters to specific sections, is not entirely clear to me, but this minor point does not prevent a rapid identification of topics of interest, as for the most part titles of individual chapters are both factual and informative. A very adequate and detailed subject index is included at the end.

After an introductory section on the basic principles of anionic polymerization and a review on existing industrial applications, a section entitled "Fundamentals and Polymerization Processes" includes an experimental study on the aggregation behavior of polymeric lithium species in nonpolar solvents, a description of a technique to monitor anionic polymerization using UV spectrophotometry, and two chapters dealing with new initiators for diene polymerization. This section looks a little bit unfocused at first sight, but the individual contributions are strong enough to make its reading both interesting and enjoyable. Two sections are then entirely devoted to the synthesis of macromolecular architectures (block copolymers and star polymers), and two other consecutive sections are devoted to the polymerization of specific monomer structures (diene polymers and polymerization of polar and inorganic monomers). A last section (and, in my view, one of the most interesting) is entitled prudently "Other Applications of Controlled Anionic Polymerization" and includes two chapters dealing with macromonomers and photolithographic resists. The only real weakness in this book is the scarcity of experimental details in most chapters, in particular for the synthetic contributions. It is hoped that full papers will appear with a more comprehensive coverage of experimental points, but a rapid look at the 1996−99 literature based on the names of the contributors to the present volume does not look very promising.

Despite its cost, I found this book is of great scientific and technological interest. It will definitely constitute a useful addition to the library of chemists and chemical engineers interested in anionic polymerization and/or industrial polymerization processes.

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JA985744F

10.1021/ja985744f

Second Supplements to the 2nd Edition of Rodd's Chemistry of Carbon Compounds. Vol. IV. Heterocyclic Compounds. Part F. Six-membered Heterocyclic Compounds with a Single Hetero-Atom in the Ring: Pyridine, Quinoline, Isoquinoline and Their Derivatives. Part G. Six-membered Heterocyclic Compounds with (a) a Single Hetero-Atom in the Ring (contd): Polycyclic Fused Ring Compounds, (b) an Atom of Phosphorus, Arsenic, Antimony or Bismuth. Alkaloids with a Six-membered Heterocyclic Ring. Part H. Six-membered Fused-Ring Heterocyclic Compounds with a Single Nitrogen Atom in the Ring (contd): Monocyclic Ring Compounds with Two Hetero-Atoms in the Ring from Group VI B, or One Each from Groups V and VI B. Alkaloids (contd). Edited by M. Sainsbury. Elsevier: New York. 1998. Parts F/G: 650 pp; $402.50; ISBN 0-444-82979-2. Parts G/H: 620 pp; $379.50; ISBN 0-444-82943-1.

These new volumes of "Rodd" continue to be a major service to organic chemistry, since they collect a very great deal of specialized heterocyclic chemistry into a relatively small volume by today's standards. The chapters are uniformly well written and remarkably free from errors, both in the text and in the structures. It is very pleasing to see that the text discusses structures that are usually on the same page, and does so with admirable clarity. On the negative side, the titles of these books are becoming increasingly cumbersome, and it seems unnecessary to separate sections that are continuations of one another. While the price of the books makes individual ownership virtually impossible, they should be a standard component of any good organic chemical library.

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JA995681G

10.1021/ja995681g