Book Review

The Internet: A Guide for Chemists, Edited by S. M. Bachrach. American Chemical Society: Washington, 1996, 344 pp, softback. $ 25.95. ISBN 0 8412 3224 5.

This book, edited by S. M. Bacharch and with contributions from a number of leading exponents, focuses on the Internet resources now available for chemists. It is divided into two parts. The first part deals with the basics of the Internet and contains chapters on the following topics: History of the Internet; Electronic Mail; The Berkeley Mail Program; Electronic Lists; Gopher; The World Wide Web; Designing an Internet-Accessible Database; and Electronic Conferences. The second part surveys the information that is available specifically for chemists and contains chapters on: Electronic Lists for Chemists; Managing the Computational Chemistry List; Chemistry and the Gopher; Chemistry and the World Wide Web; Chemical Industry and the Internet. There is also an appendix on anonymous FTP and a useful glossary.

What is particularly commendable about this book is the way it encourages individuals to become information providers. For example, it gives tips on how to organise electronic conferences and provides guidelines for establishing a database and how to present it on the Internet. This book is suitable for complete novices as it starts from the basics, but is also sufficiently detailed to provide useful information for more advanced users. It provides a wealth of knowledge that is easily absorbed. This book is very competitively priced and should be near to every chemist's computer.

R.J. Boucher, Thieme, Stuttgart, Germany

Synthetic Methods of Organometallic and Inorganic Chemistry, Volume 6. F. T. Edelmann. Edited by W. A. Herrmann. Thieme: Stuttgart, 1997, 226 pp, hardback. DM 124. ISBN 3 13 103071 2.

This is a new series that is a modernized, English language version of a classic German language compendium, Georg Brauer's "Handbuch der Präparativen Anorganischen Chemie". Volumes 1-3 were reviewed earlier [**1996**, p 1402; **1997**, p 372 and 726], together with general features of the series. Volume 6, covering lanthanides and actinides, is divided into four chapters: lanthanide element inorganic compounds (43 pages), organolanthanide compounds (99 pages), actinide element inorganic compounds (29 pages), and organoactinide compounds (45 pages).

In subject matter, Volume 6 stands somewhat apart from the others. There are few compounds with element combinations that would logically allow placement in more than one volume (e.g., gallium arsenide), and thus minimal cross-references. Hazards associated with the syntheses, including radiological toxicity issues, are nicely highlighted. The volume is illustrated with twenty drawings of specialised apparatuses, and contains much useful tabular data and a subject index.

Most of the preparations involve compounds that have so far been utilized primarily in inorganic and organometallic contexts, or as catalysts for organic commodity chemical transformations. However, there are growing numbers of applications of lanthanide chiral Lewis acid catalysts in enantioselective organic syntheses. These include metallocenes described by Marks and the BINOL-derived systems of Shibasaki and Kobayashi. Hence, this volume will be of use to synthetic chemists in all disciplines.

Chapter one is divided into two main

This document was downloaded for personal use only. Unauthorized distribution is strictly prohibited.

sections. The first features older syntheses of simple lanthanide halides, oxides, sulfides, selenides, nitrides, and carbonates. These are adapted from a 1978 edition of Brauer. The second section is devoted to inorganic precursors to organolanthanide complexes, and contains contributions from some of the leading researchers in this field.

Chapter two is organised by oxidation state. It features an eclectic collection of bis(arene), bis(aryl), bis(alkynyl), cyclooctatetraenyl, tris(alkyl), and anionic tetra(alkyl) complexes. All manners of cyclopentadienyl complexes are described, including solvated and unsolvated, substituted and unsubstituted, and mono through tris adducts. Various hydride, dinitrogen, alkyne, alkene, and pentadienyl complexes are also included, as well as bimetallic assemblies.

Chapter three is a mixture of procedures from the 1978 Brauer, and newer offerings ($ThCl_4$, $Th(NEt_2)_4$, UCl_3, $UI_3(THF)_4$). Chapter four is organised into actinide(IV) compounds with cyclopentadienyl ligands (including some thoracyclobutanes), organoactinide(IV) compounds that lack cyclopentadienyl ligands, cyclooctatetraenyl-actinide(IV) compounds, compounds with element-actinide multiple bonds, and actinide(III) compounds (including berkelium and americium adducts).

In summary, this well-edited volume admirably captures the essence of modern lanthanide and actinide chemistry, and provides a solid preparative foundation for future applications to come. Although it is packaged as part of a library reference series, researchers who frequently utilize lanthanide and actinide compounds should find it useful to purchase their own copy as a desk reference.

J. A. Gladysz, University of Utah, USA.

This document was downloaded for personal use only. Unauthorized distribution is strictly prohibited.

Book reviews are generally by invitation. Publishers should send books to Dr Sarah Ryan, Book Review Editor, Synthesis Editorial Office, Georg Thieme Verlag, Rüdigerstrasse 14, D-70469 Stuttgart, Germany.