

would have guessed that splendid preparations of MoOCl_4 and WOCl_4 were concealed in "unusual ligands and compounds", that an attractive and convenient preparation of $[\text{Mo}(\text{H}_2\text{O})_6]^{3+}$ was described in "bridge and cluster compounds", and that an extremely convenient preparation of 5,10,15,20-tetra(4-pyridinyl)porphyrin was lurking under "compounds of biological interest". When John Newlands proposed his perceptive periodic table in 1865, some critics suggested he would have had better success in systematizing chemistry if he had arranged the elements in alphabetical order. One cannot help but feel there has to be a better way to organize *Inorganic Syntheses*: its saving grace is that the subject and formula indices are so carefully and clearly arranged.

In a short review of this type, one can only highlight the most interesting and generally useful preparations to organometallic chemists, and in this volume these syntheses include $[\text{Cr}(\text{CO})_5\text{L}]$ (L = substituted thioureas), nitrosyl {tris(3,5-dimethylpyrazolyl)hydroborato} molybdenum(III) complexes, diisocyanide complexes of molybdenum(0) and tungsten(0), cobalt η^5 -pentamethylcyclopentadienyl complexes, SnPh_2Br_2 , C_6F_5 derivatives of cobalt(I) and cobalt(II), $[\{\text{M}(\text{CO})_5\}_2(\mu\text{-H})]^-$ (M = Cr or W), $[\text{Mn}_2\text{X}_2(\text{CO})_8]$, $[\text{Nb}(\text{CO})_6]^-$ and $[\text{ReX}(\text{CO})_5]$ (X = Cl, Br or I). There are also intriguing preparations of $[\text{Re}_2\text{Cl}_8]^{2-}$, dimeric and trimeric aqua ions of molybdenum-(II), -(III), -(IV) and -(V), $\text{Cl}_2\text{PCH}_2\text{CH}_2\text{PCl}_2$, a range of lanthanide complexes with chelating ligands and crown ethers, a number of heteropolytungstates with unsaturated heteropolyanions, and a general synthesis for gold(I) complexes. This volume also contains a special hazard notice, warning of serious accidents which have occurred during the synthesis of $\text{Me}_2\text{P}(\text{S})\text{P}(\text{S})\text{Me}_2$ (usually prepared en route to $\text{Me}_2\text{PCH}_2\text{CH}_2\text{PMe}_2$).

One cannot overvalue a source of reliable synthetic routes to interesting compounds and reagents. The whole series is to be found in all respectable chemical libraries (indeed its absence would raise serious questions concerning the priorities of the institution's librarians!), and this volume will join its predecessors in becoming one of the most dog-eared books on the shelves (or, more likely, missing from the shelves — maybe this series should be purchased in duplicate; one set for reference, one for the laboratory bench). This volume is dedicated to the memory of Earl Muettterties, a former editor of the series.

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Electrochemistry, Volume 10 (Senior Reporter: D. Pletcher), A Specialist Periodical Report of the Royal Society of Chemistry, London, 1985, x + 214 pages, £66.00 (\$119.00). ISBN 0-85186-087-7.

It must be said that, after the excellent articles which were found in Volume 9 of this series, Volume 10 is going to come as rather a disappointment to the organometallic chemist. This is not a criticism of the articles themselves (vide infra), but a reflection upon the drift in the centre of interest of their

content. There is the sad, and detrimental, omission of the expected 1983 review of the electrochemistry of transition metal complexes, which has in the past offered a unique and critical review of literature of direct relevance to the synthetic chemist, although the annual review of organic electrochemistry (J.B. Kerr; 44 pp.; 268 refs.) is present, and even more perceptive and detailed than usual. The four other reviews cover the more specialist areas of adsorption at solid electrodes (P.J. Mitchell, N.A. Hampson and A.J.S. McNeil; 83 pp.; 563 refs.), pitting corrosion of ferrous alloys (C. Westcott; 31 pp.; 161 refs.), the electrochemistry of conducting polymers (G.K. Chandler and D. Pletcher; 34 pp.; 191 refs.) and electron transfer reactions studied using pulsed high energy radiation (J. Grimshaw; 20 pp.; 82 refs.). Of these the only one of any significance to organometallic chemists is that of conducting polymers, and this is a fine review, discussing specifically polypyrrole and related polymers, polyacetylene, polyparaphenylene, polythiazyl, polyanilines and TCNQ based systems. This is an area in which organometallic chemistry has an important rôle to play, and yet (with a few notable exceptions) has been largely ignored by the readers of this journal. However, I do not wish to appear to be tacitly criticizing the other three excellent reviews in this volume: it is merely that they are of only tangential interest to the non-specialist electrochemist.

The primary and overriding criticism of this volume is its ridiculously high cost. I commented last year, in a review of Volume 9 of this series, that "the price of the volume is high (more than twice the average cost per page of the 'average' research text)". For Volume 9, the cost per page was 21.72 p; for Volume 10, the cost per page is 30.84 p. This represents a 42% increase in cost! How can the Royal Society of Chemistry possibly justify price rises of this type on already overpriced books? If it is a deliberate attempt to price themselves out of the market, I suspect that they will achieve their aim rather rapidly.

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Methods for the Oxidation of Organic Compounds; Alkanes, Alkenes, Alkynes and Arenes; by Alan H. Haines, Academic Press, London, New York, 1985, xix + 388 pages, £75.00, \$83.00, ISBN 012-3155-010.

This is one of the first volumes of a new series detailing "best synthetic methods" for specific types of transformations in organic chemistry. The book considers about half of oxidation chemistry, dealing with hydrocarbons, and a further volume considering alcohols, alkyl halides, carbonyl compounds and polyfunctional compounds is planned. Carefully referenced tables occupy over one third of the work.

Any reviewer of this type of work will inevitably find omissions, but a wide range of oxidation methods are systematically treated. The emphasis is clearly on reactions of academic interest; the industrially important oxidations of alkylarenes in the presence of cobalt and manganese salts are largely neglected.