

## Book reviews

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*Reagents for Organic Synthesis, Vol. 4*; by Mary Fieser and Louis F. Fieser, Wiley-Interscience, New York, 1974, 660 pp., \$24.95.

Synthetic chemists have found the first three volumes of the Fiesers' *Reagents for Organic Synthesis* very useful and will welcome the new fourth volume of this series. Organometallic compounds figure importantly in its contents, and, indeed, on the jacket cover one finds a single formula: that of bis(acrylonitrile)nickel(0). As before, the authors have carefully culled the recent (1970-1972) literature for applications of organic, inorganic and organometallic reagents, old and new, and present them alphabetically according to reagent. References to 297 reagents mentioned in this series for the first time, as well as references to 380 reagents previously mentioned, are provided. The organometallic reagents covered span the entire range of main group and transition metal chemistry. Not only are their applications in synthesis discussed, but useful hints, with references, concerning their preparation or commercial suppliers are given. The synthetic chemist will find this volume a veritable gold mine of useful information. Its utility is enhanced by a thorough subject index, an author index, an index of reagents according to types and purpose and cross references to the earlier three volumes.

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*Inorganic Syntheses, Volume XV*; G.W. Parshall, editor-in-chief, McGraw-Hill Book Co., New York, 1974, xiv + 282 pp., \$19.85.

This newest volume of the well-known and very useful *Inorganic Syntheses Series* has a strong bias toward organometallic chemistry in general and more specifically toward transition metal compounds which are important in homogeneous catalysis. The latter area, the editor-in-chief admits, reflects his own research interests, and through this fortunate circumstance, we have here detailed directions for the preparation of many interesting and useful organometallic compounds.

The book begins with a chapter on olefin-metal complexes and continues with preparations of transition metal hydride and dinitrogen complexes. In the third chapter the syntheses of 20 diverse triphenylphosphine complexes of Group VIII metals are detailed. A section of miscellany (Other Transition Metal Compounds) follows and it includes some  $\pi$ -allyl complexes of palladium and platinum. Chapter 5 is devoted to boron compounds and gives preparative directions for  $B_5H_9$ ,  $B_3H_8^-$  salts, some  $BH_3$  adducts, triphenylborane, some