

*Organic Syntheses, Collective Volume 6*; edited W.E. Noland, John Wiley and Sons, Inc., 1988, xviii + 1208 pages, £52.50, ISBN 0-471-85243-0

This collective volume is a revised edition of the annual volumes of *Organic Syntheses* 50 to 59, published between 1970 and 1979. It consists of well-described and well-checked preparations, together with background information and spectroscopic data. This series is regarded with well-deserved affection by synthetic organic chemists, for its clarity and reliability. That a student cannot repeat an organic synthesis preparation is traditionally a damning indictment.

The earlier part of this period seems distant to me, but comparison of this volume with its predecessors reveals some interesting developments. Styles of presentation have changed, particularly of spectroscopic data, and the editors have made a commendable effort to standardise the usage. There is considerably more information as to the potential hazards of the procedures described; benzene, hexamethylphosphoric triamide, methyl iodide and chloromethyl methyl ether all rate specific hazard warnings. To organometallic chemists, however, the most interesting observation will be that this seems to be the period in which synthetic organic chemists discovered them. In comparison with earlier collective volumes there is a substantial increase in the number of syntheses in which organometallic reagents or catalysts are used. For example there are 11 syntheses involving silicon reagents, 20 involving copper, 17 with mercury, 7 with iron and 5 with thallium containing reagents or catalysts. Homogeneous hydrogenation by rhodium complexes, preparation of organoaluminium reagents, and coupling of Grignard reagents catalysed by nickel phosphine complexes are also featured.

For the first time in this volume there is an expanded general index, formed by consolidation of the separate sections for types of reaction, types of compound etc. which appeared previously. This is a considerable improvement. The standards of production are high as always, and this volume, like its predecessors, is essential to any serious chemistry library. The publishers are to be congratulated on keeping the price to a reasonable level. My only criticism would be the time which has elapsed in production; 9 years is too long, even by the most forgiving standards, and I shall hope to see *Collective Volume 7* (to cover only five years) very soon!

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