APPLIED ORGANOMETALLIC CHEMISTRY, VOL. 6, 305–306 (1992)

# Book reviews

**Methods of Organic Chemistry (Houben-Weyl),**
4th edn
D Klamann (ed)

**E 12b, Organotellurium Compounds**
K J Irgolic
G. Thieme Verlag, Stuttgart, 1990
1004 pages DM 1340 (subscription/preferential price: DM 1206).
ISBN 3 13 219904.

This book contains an exhaustive presentation of the literature concerning the preparation and properties of organotellurium compounds, including papers published in 1990. Although they are not truly organometallic compounds, tellurium derivatives without a direct tellurium–carbon bond, but containing at least one carbon atom in their molecule, are also treated.

The book consists of an introduction, ten chapters, and author and subject indexes.

The introduction presents a short history of organic tellurium chemistry, which suggests the increasing interest in this field. The classification and the nomenclature of organic tellurium compounds and some precautions which must be taken in work with such compounds are also discussed.

Chapter I is devoted to the synthesis of organic tellurium compounds which do not contain Te–C bonds in their molecule. These compounds are classified as derivatives of telluroxylic, orthetellurous and telluric acids. Telluroxylic and orthetellurous acid derivatives are arranged according to the groups of the Periodic Table to which the atom bonded to tellurium belongs. With the exception of hexa-alkoxytellurium compounds, all telluric acid derivatives contain at least one fluorine atom, and are arranged according to the number (one to five) of Te–F bonds contained in their molecule.

All the other chapters describe the synthesis of compounds containing at least one tellurium–carbon bond. Thus, Chapter II is devoted to neutral organotellurium compounds with one Te–C bond, and containing divalent, tetravalent or hexavalent tellurium. Ionic compounds, R—$TeHal_2^+$ and R—$TeHal_4^+$ are also presented.

Chapter III deals with organotellurium compounds containing two tellurium–carbon single bonds or one tellurium–carbon double bond, while Chapter IV describes the synthesis of compounds with three Te–C bonds.

Tetraorganotellurium, alkylidene diorganotellurium and hexaorganotellurium compounds are presented in Chapter V.

Chapter VI describes the synthesis of polymeric organotellurium compounds, e.g. poly(alkylenetellurium), poly(arylenetellurium).

The last four chapters are devoted to heterocyclic tellurium compounds: three- and four-membered ring systems (Chapter VII), five-membered (Chapter VIII), six-membered (Chapter IX) and seven-membered (Chapter X) tellurium heteroarenes.

The book contains a bibliography including the most important reviews and books on organic tellurium chemistry. The literature references are cited at the bottom of each page.

The book is warmly recommended to anyone interested in the synthesis of organotellurium compounds, providing systematic and exhaustive data about all tellurium compounds known so far, and, especially, a large number of general and particular methods for their preparation. No library of any institute or laboratory involved in organometallic chemistry should exist without this book!

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**Preparative Polar Organometallic Chemistry,**
Volume 2
L Brandsma
With the collaboration of H Andringa, Y A Heus, R Rikers, L Tip and H D Verkruijsse
Springer-Verlag, 1990
Approx. 200 pages Softcover DM86.
ISBN 3 540 52749 4.

*Preparative Polar Organometallic Chemistry* is essentially a compilation of experimental procedures for the formation and functionalization of organoalkali metal compounds. Volume 2 is concerned with compounds having metals bonded to $sp^3$-carbon atoms (Volume 1 deals with metal–$sp^2$-carbon bonded compounds).

As stated in the Preface, each procedure (usually on a 0.1 molar scale) has been established in the author's laboratory; experimental details are generally excellent and clear. Clearly only a limited number of reactions can be detailed in such a book; however, adaptions of the cited procedures to related systems should be easily