# Additions and Corrections

William J. Evans,* Raul Dominguez, Keith R. Levan, and Robert J. Doedens: Synthesis and X-ray Crystal Structure of a Dialkyldicyclopentadienylyttrium Complex: $\{(C_5H_5)_2Y[CH_2Si(CH_3)_3]\}_2Li_2(CH_3OCH_2CH_2OCH_3)_2(C_4H_8O_2)$. **1985**, *4*, 1836.

In the Results and Discussion on page 1838 (second paragraph), "resonance at −0.91 ppm" should read "resonance at −0.87 ppm" and "($J_{YH}^2$ = 6.4 Hz)" should read "($J_{YH}^2$ = 2.8 Hz)".

William J. Evans,* Laura A. Hughes, and Timothy P. Hanusa: Synthesis and X-ray Crystal Structure of Bis(pentamethylcyclopentadienyl) Complexes of Samarium and Europium: $(C_5Me_5)_2Sm$ and $(C_5Me_5)_2Eu$. **1986**, *5*, 1285.

Footnote 33 should read $c$ = 16.14 (1) Å and $V$ = 5660 Å$^3$.

# Book Reviews

**Organic Syntheses by Oxidation with Metal Compounds.** Edited by W. J. Mijs and C. R. H. I. de Jonge. Plenum Press, New York. 1986. xxv + 908 pages. $115.00.

This book, edited by Mijs and de Jonge, considers the oxidation of organic compounds by metal compounds that function as catalysts or reagents. There are 16 chapters, classified according to the metal (e.g. vanadium, palladium) or to a specific compound (e.g. ruthenium tetroxide, lead tetraacetate). The format for each chapter consists of an introduction, a brief discussion of mechanism, followed by examination of the synthetic utility of the metal compound, and then a selection of detailed experimental procedures. This framework, used by all contributors to this volume, is quite attractive, and the representative experimental procedures are also a positive feature of the book. In addition to a good index, there is a helpful table classifying oxidation reactions according to substrate and resulting product classes.

Three of the chapters are the result of contributions by F. Freeman [vanadium, cobalt, and oxochromium(VI)]. The content and quality of the text are very good. One exception concerns the significant work done by Sharpless and his group on asymmetric epoxidation of allylic alcohols. Neither the chapter on vanadium, nor the one by Ogata and Sawaki on oxidations with metal compounds and peroxides, considers the matter in sufficient depth. The use of manganese dioxide in oxidation reactions is examined in detail by Fatiadi, who previously published reviews on this subject in Synthesis. Chapters on manganese(II) acetate (de Klein), nickel peroxide (George), ruthenium tetroxide (Courtney), silver carbonate on Celite (Fetizon et al.), osmium tetroxide (Singh), and lead tetraacetate (Mihailovic et al.) constitute a useful source of the state of knowledge on these compounds as oxidants. What little is known about bismuth salt oxidations is competently discussed by Kitchen, including the useful contributions of Barton and co-workers. However, since the latest reference is to work published in 1981, the material is quite out-of-date. This criticism also applies to the chapter by Davison and Maitlis on the use of palladium compounds in olefin oxidation, substitution, and coupling reactions. The industrially important palladium-catalyzed oxidative carbonylation reaction is treated in a rather cursory manner. The remaining chapters are by de Jonge [copper and cobalt–amine complexes], Ho [cerium(IV)], and McKillop and Taylor [thallium(III) salts], the latter providing a good assessment and emphasizing the need for solid mechanistic work in this area.

Libraries should purchase this volume, as it is a fine reference book. It is also recommended to organic and organometallic chemists doing research in oxidation reactions.

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**Hypercarbon Chemistry.** By George A. Olah, G. K. Surya Prakash, Robert E. Williams, Leslie D. Field, and Kenneth Wade. Wiley, New York. 1987. xvi + 311 pages. $49.95.

Organometallic chemists might well ask why a book with this title is reviewed here, but after a quick look inside the book the reason is self-evident. Organometallic compounds are cited extensively as models for the elusive pentacoordinate carbocations, the "nonclassical carbonium ions" of the famous controversy between H. C. Brown and S. Winstein.

W. N. Lipscomb has contributed an appropriate forword to this book. Lipscomb's Nobel Prize work provides the real theoretical underpinning for much of what is discussed, but the book avoids mathematical quantum theory and describes delocalized bonding in terms that ordinary chemists and graduate students can understand.