

Decarbonylation of Pentamethylcyclopentadienyl Tetracarbonylvanadium, $\text{Cp}^*\text{V}(\text{CO})_4$, in the Presence of Oxygen. The X-Ray Crystal Structure Analyses of $\text{Cp}^*\text{V}(\text{CO})_4$ and $[\text{Cp}^*\text{V}(\text{O})(\mu\text{-O})]_4$

Max Herberhold, Anna-Maria Dietel, and Wolfgang Milius

Anorganisch-chemisches Laboratorium der Universität Bayreuth, Postfach 101251,
D-95440 Bayreuth

Reprint requests to Prof. M. Herberhold. Fax: +49(0)921-55-2157.
E-mail: Max.Herberhold@uni.bayreuth.de

Dedicated to Professor Hartmut Bärnighausen on the occasion of his 70th birthday

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The reaction of $\text{Cp}^*\text{V}(\text{CO})_4$ (**1**) with molecular oxygen in diluted pentane solution leads to a tetrameric dioxide, $[\text{Cp}^*\text{V}(\text{O})(\mu\text{-O})]_4$ (**2**), which is a precursor of the octanuclear aggregate $\text{Cp}^*_6\text{V}_8\text{O}_{17}$ (**3**). The molecular structures of **1** and **2** have been determined by X-ray crystallography.

Key words: Vanadium, Organometallic Oxides, Crystal Structures