

Mixed-Sandwich η^5/η^7 Vanadium Complexes. The Molecular Structure of $(\eta^5\text{-2-Methyl-indenyl})\text{-}(\eta^7\text{-cycloheptatrienyl})\text{-vanadium}$

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Dedicated to Prof. C. Elschenbroich on the occasion of his 60th birthday

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Sandwich Compounds, Cycloheptatrienyl Complexes, Vanadium, Crystal Structure

The diamagnetic halfsandwich complexes $[\text{V}(\eta^7\text{-C}_7\text{H}_7)(\text{CO})_3]$ and $[\text{V}(\eta^5\text{-L}^5)(\text{CO})_4]$ have been used as intermediates in the conversion of hexacarbonylvandium, $\text{V}(\text{CO})_6$, to the paramagnetic trovacene derivatives, $[\text{V}(\eta^5\text{-L}^5)(\eta^7\text{-C}_7\text{H}_7)]$ [L^5 = cyclopentadienyl ligand, $\text{C}_5\text{H}_4\text{-R}$ ($\text{R} = \text{H}$ (**1**), Me (**1a**), ^tBu (**1b**)) and C_5Me_5 (**1c**); indenyl (**2**) and 2-methylindenyl (**2a**)]. The molecular structure of **2a** has been determined; the distances between vanadium and the center Z of the (nearly parallel) ring ligands are 193.0 pm (V-Z^5) and 146.2 pm (V-Z^7).