

Title: A Hexanuclear Mixed-Valence Oxovanadium(IV,V) Complex as a Highly Efficient Alkane Oxidation Catalyst

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Abstract: The new hexanuclear mixed-valence vanadium complex $[V_3O_3(OEt)(ashz)_2(\mu-OEt)]_2$ (1) with an N,O-donor ligand is reported. It acts as a highly efficient catalyst toward alkane oxidations by aqueous H₂O₂. Remarkably, high turnover numbers up to 25000 with product yields of up to 27% (based on alkane) stand for one of the most active systems for such reactions.

Keywords Plus: Hydrocarbon Oxygenations; Vanadium Complexes; Crystal-Structure; Solid-State; Ligand; 2-Naphtols; Compound; Core; DFT

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