Supplementary Material (ESI) for Chemical Society Reviews

Supporting information for the paper

In situ Electron Paramagnetic Resonance: A unique tool for analyzing structure-reactivity relationships in heterogeneous catalysis

by Angelika Brückner

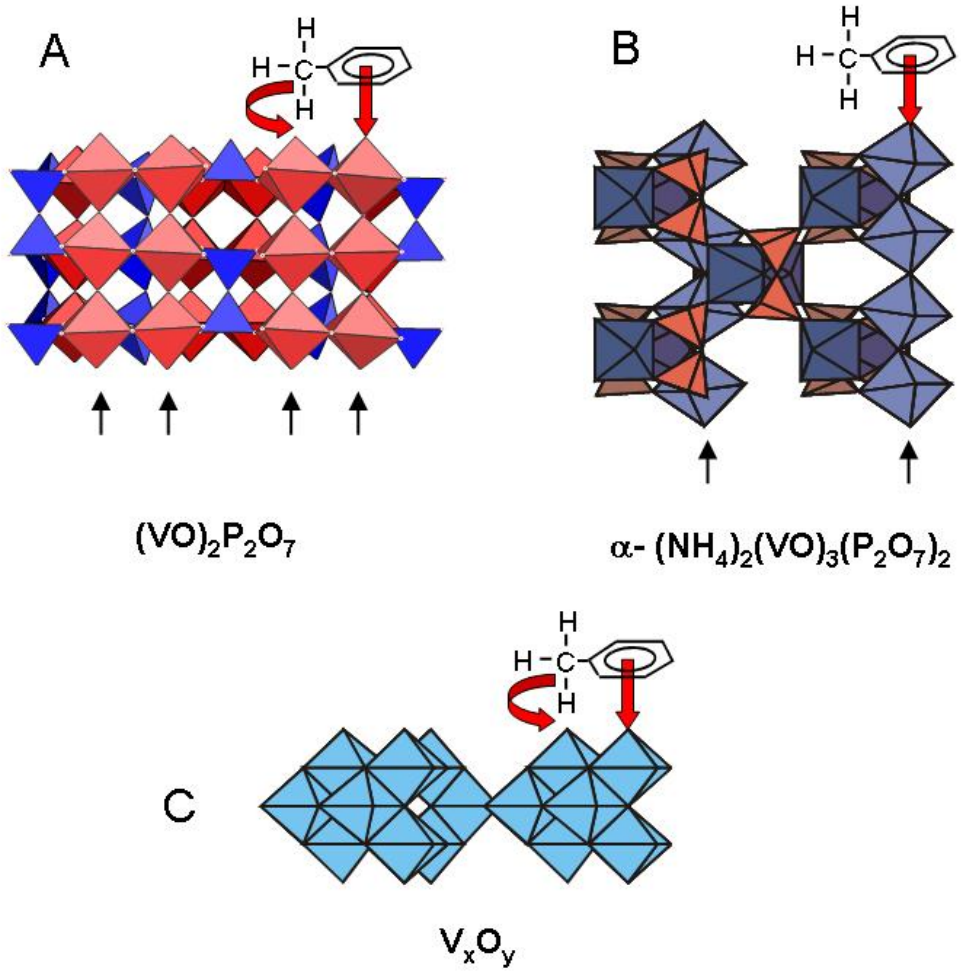

Figure S1. Schematic depiction of the adsorption of the toluene molecule on the structure of $(VO)_2P_2O_7$, α-$(NH_4)_2(VO)_3(P_2O_7)_2$ and V_xO_y clusters assuming V_2O_5 structure. The distance of the chains of VO^{2+} octahedra in the crystal structure (marked by arrows) fits the distance between the centre of the aromatic ring and the C-atom of the methyl group only in cases A and C but not in case B. This is assumed as one reason why crystalline α-$(NH_4)_2(VO)_3(P_2O_7)_2$ is catalytically inactive.

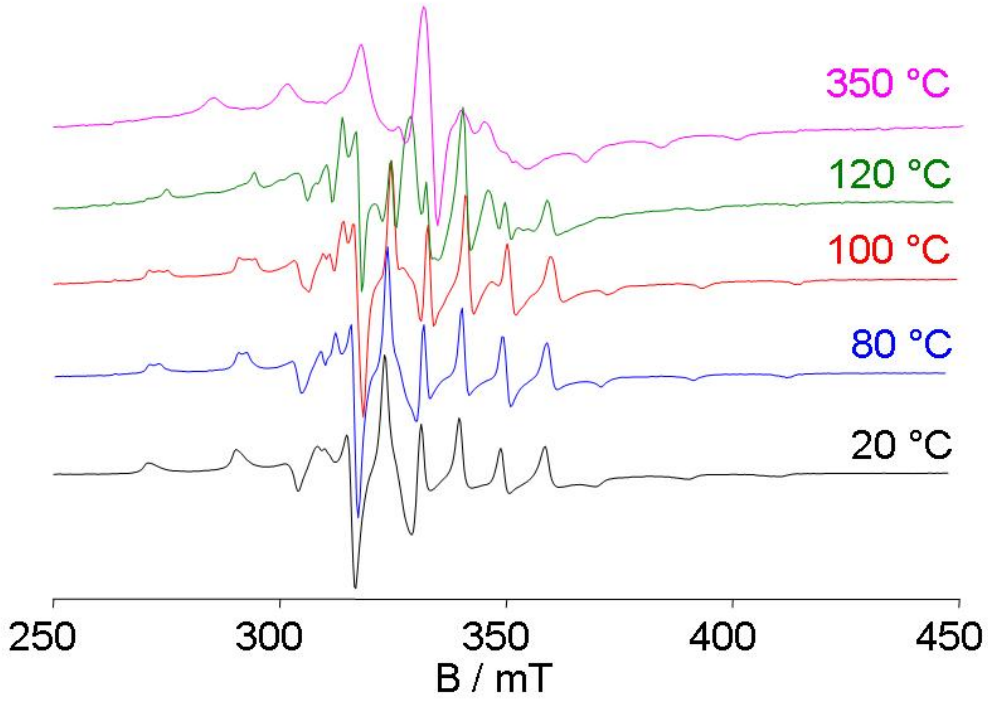

Figure S2. Complete in situ-EPR spectra of $H_4PVMo_{11}O_{40} \cdot x\ H_2O$ during heating in N_2 flow.