H3+nPMo12-nVnO40-catalyzed selective oxidation of benzoins to benzils or aldehydes and esters by dioxygen.

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Abstract

Heteropolyacids H3+nPMo12-nVnO40 (HPA-n, n = 1-4) catalyze efficiently the oxidn. and the oxidative cleavage of benzoin derivs. in the presence of dioxygen. HPA-2 gave the highest total yields in aldehydes and carboxylic esters by using primary alcs. as solvents. No oxidative cleavage products were obtained with secondary or tertiary alcs. HPA-2 catalyzes the oxidn. of benzoin to benzil in the presence of t-BuOH or other polar solvents such THF, CH3CN, DME.