Rh6(CO)16-H3PW12O40-catalyzed one pot hydroformylation-cyclotrimerization of cyclohexene and cyclopentene to 2,4,6-trisubstituted 1,3,5-trioxanes.

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Abstract

One-pot hydroformylation-cyclotrimerization of cyclopentene and cyclohexene was selectively catalyzed by Rh6(CO)16 and H3PW12O40·xH2O (HPA-W12) in THF at 40 atm (CO/H2 = 1/1) and afforded 2,4,6-tris(cycloalkyl)-1,3,5-trioxanes as major products along with the corresponding aldehydes.