

Effect of promoter metals addition to carbon-supported Ru catalysts on hydrogenation of gluconic acid

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In this work, it was investigated that the effect of promoter metals addition to activated carbon-supported Ru catalysts on hydrogenation of gluconic acid into hexitols, mainly sorbitol, mannitol and galactitol. The catalysts were prepared by changing the various promoter metals (Sn, Cu, Fe, Co and Ni) and applying wet impregnation method. The products produced by the reaction were derivatized via silylation and quantified by GC-FID analysis. As a result, the distribution of the products was different depending on the promoter metals. Addition of promoter metal to activated carbon-supported Ru catalyst could be extended to selective hydrogenation study of alginic acid.