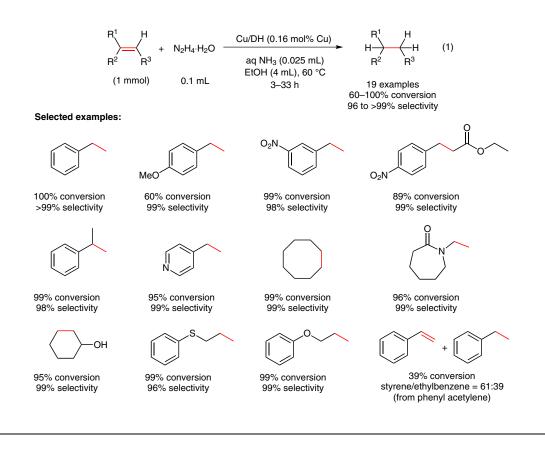
A. DHAKSHINAMOORTHY,* S. NAVALON, D. SEMPERE, M. ALVARO, H. GARCIA* (UNIVERSITAT POLITÈCNICA DE VALÈNCIA, SPAIN) Reduction of Alkenes Catalyzed by Copper Nanoparticles Supported on Diamond Nanoparticles *Chem. Commun.* **2013**, *49*, 2359–2361.

Hydrogenation of Alkenes Using Copper Nanoparticles Supported on Diamond



Significance: Copper nanoparticles supported on diamond nanoparticles (Cu/DH) catalyzed the hydrogenation of alkenes with N₂H₄·H₂O to give the corresponding alkanes in 60–100% conversion with selectivities of the desired products from 96 to >99% (19 examples, eq. 1). The catalyst was recovered by centrifugation and reused three times without significant loss of the catalytic activity in the hydrogenation of styrene (3th reuse: 94% conversion, >99% selectivity). **Comment:** The authors previously reported the preparation of Cu/DH and their application to the aerobic oxidation of thiols (*ChemCatChem* **2013**, 5, 241). The catalytic activity of Cu/DH was superior to that of copper nanoparticles supported on activated carbon, graphite, and multi-walled carbon nanotubes and gold and palladium nanoparticles supported on DH. Phenyl acetylene underwent the hydrogenation under similar conditions to give styrene and ethylbenzene (39% conversion; styrene/ethylbenzene = 61:39).

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Polymer-Supported Synthesis

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