

S. ISHIKAWA, R. HUDSON, M. MASNADI, M. BATEMAN, A. CASTONGUAY, N. BRAIDY, A. MOORES,\* C.-J. LI\* (MCGILL UNIVERSITY, MONTREAL AND UNIVERSITÉ DE SHERBROOKE, CANADA)

Cyclopropanation of Diazoesters with Styrene Derivatives Catalyzed by Magnetically Recoverable Copper-Plated Iron Nanoparticles

*Tetrahedron* **2014**, *70*, 8952–8958.

## Cyclopropanation of Alkenes with Diazoesters Using Cu@FeNPs

Category

Polymer-Supported Synthesis

Key words

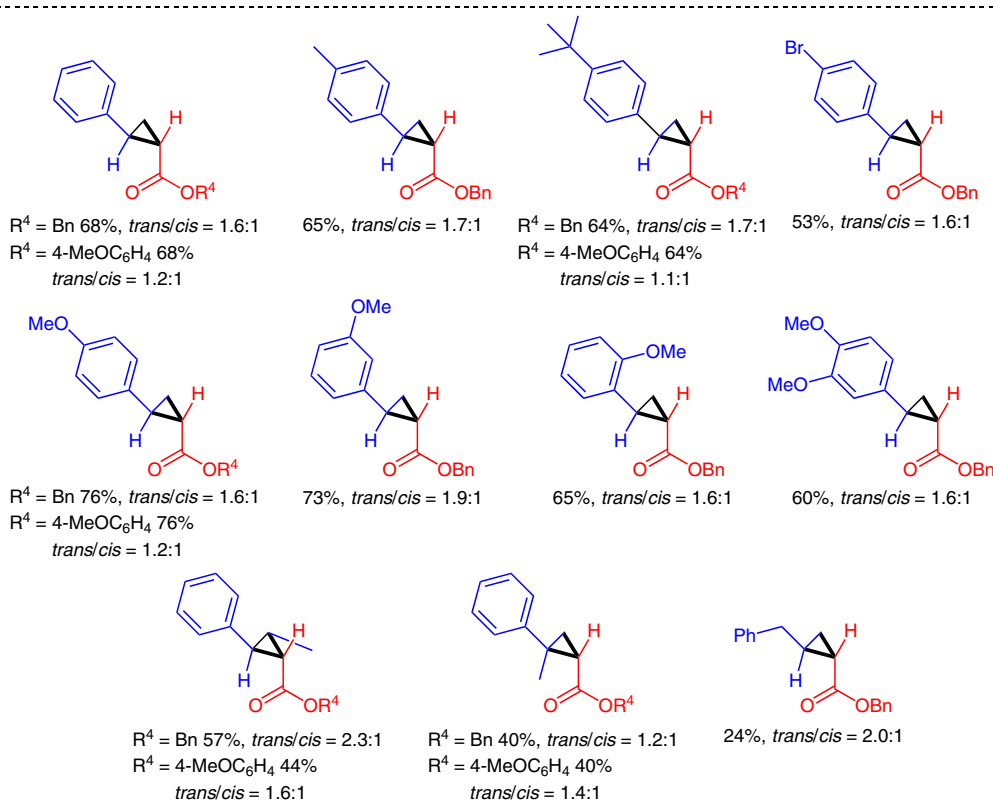
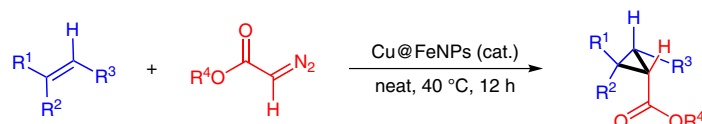
iron nanoparticles

cyclopropanation

diazoesters

alkenes

copper



**Significance:** Copper-plated iron nanoparticles (Cu@FeNPs) catalyzed the cyclopropanation of alkenes with diazoesters to give the corresponding substituted cyclopropanes in up to 76% yield (16 examples). In the reaction of 4-vinylanisole with benzyl diazoacetate, the catalyst was recovered by magnetic separation and reused four times without significant loss of catalytic activity.

**Comment:** The authors reported previously the preparation of Cu@FeNPs and its application to the Huisgen reaction (*Green Chem.* **2012**, *14*, 622). ICP analysis revealed that 12 ppm of copper leached out from the fresh catalyst during the reaction. The leached copper species showed no catalytic activity.

**SYNFACTS Contributors:** Yasuhiro Uozumi, Hiroaki Tsuji  
Synfacts 2015, 11(1), 0097 Published online: 15.12.2014  
DOI: 10.1055/s-0034-1379711; Reg-No.: Y14114SF

2015 © THIEME STUTTGART • NEW YORK