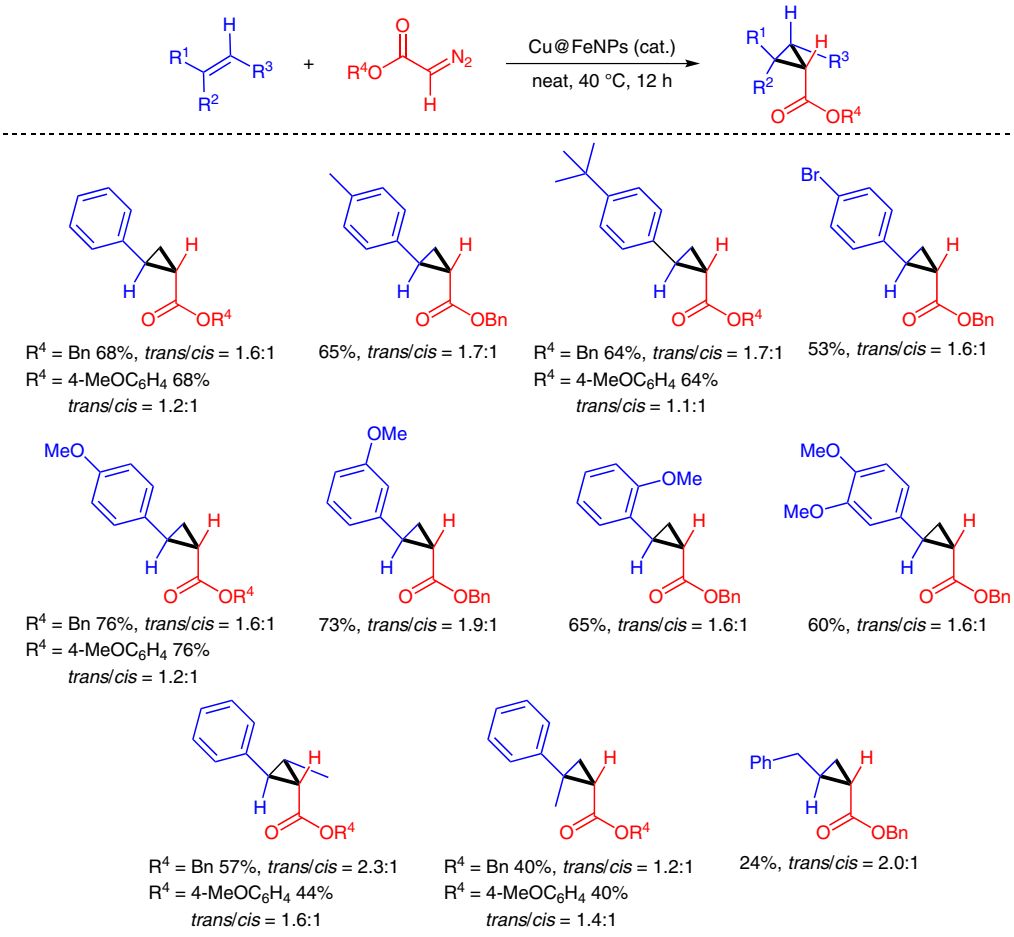
S. ISHIKAWA, R. HUDSON, M. MASNADI, M. BATEMAN, A. CASTONGUAY, N. BRAIDY, A. MOORES,* C.-J. LI* (MCGILL UNIVERSITY, MONTREAL AND UNIVERSITÉ DE SHERBROOKE, CANADA)

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



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
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Category

Polymer-Supported Synthesis

Key words

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cyclopropanation
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alkenes
copper