A. Z. WILCZEWSKA,* I. MISZTALEWSKA (UNIVERSITY OF BIALYSTOK, POLAND)
Direct Synthesis of Imidazolinium Salt on Magnetic Nanoparticles and Its Palladium Complex Application in the Heck Reaction
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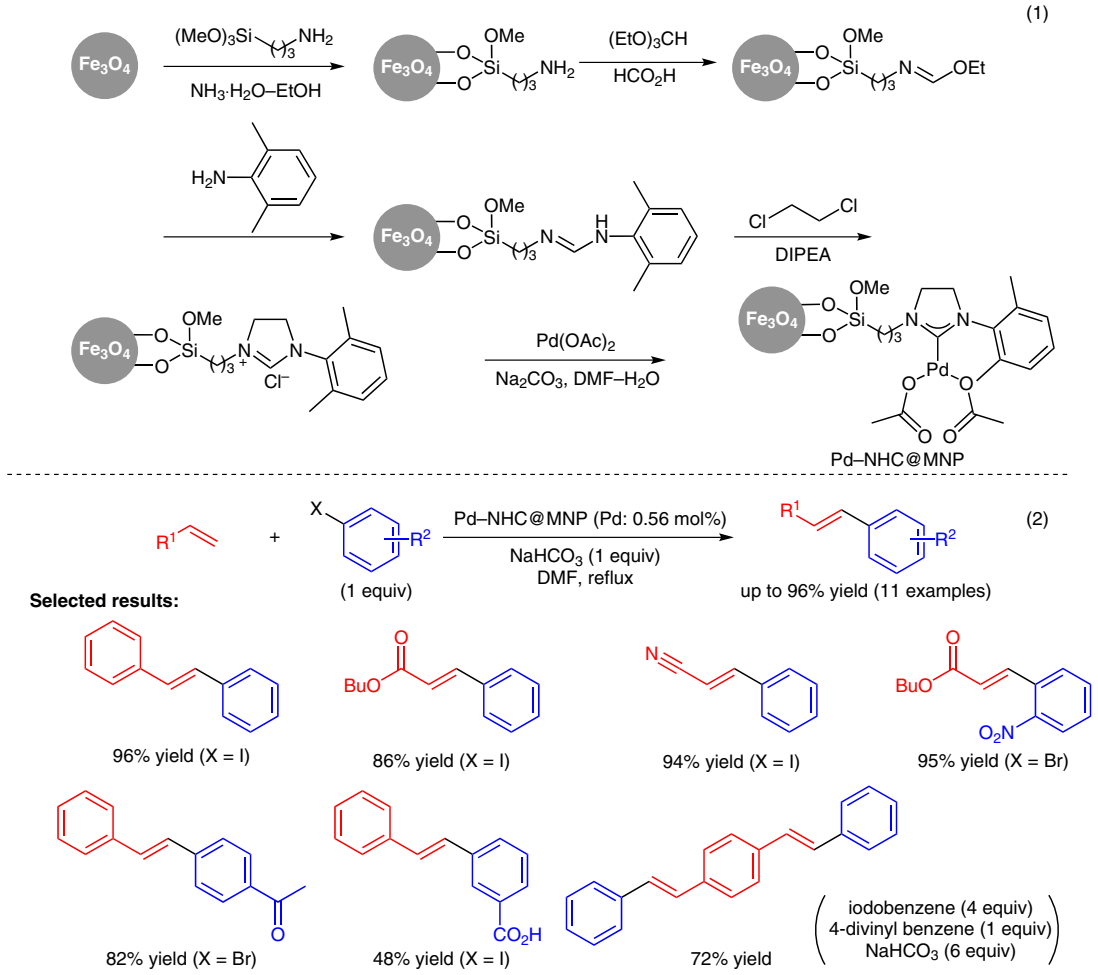
Category
Polymer-Supported Synthesis

Key words
N-heterocyclic carbenes
magnetic nanoparticles
Mizoroki–Heck reaction
palladium

The Mizoroki–Heck Reaction Using a Palladium–NHC Complex Supported on MNP



Significance: A palladium–NHC complex was immobilized on magnetic nanoparticles (Pd–NHC@MNP) according to the sequences shown above. Pd–NHC@MNP catalyzed the Mizoroki–Heck reaction of terminal alkenes with aryl halides to afford the corresponding internal alkenes in up to 96% yield (eq. 2).

Comment: The characterization of Pd–NHC@MNP was performed by TEM, EDX, IR, TGA, DSC, ^{1}H NMR spectroscopy, and ETAAS analyses. In the Mizoroki–Heck reaction of butyl acrylate with iodobenzene, the catalyst was recovered magnetically and reused four times without loss of its catalytic activity (1st run: 85% yield, 3rd run: 87% yield, 5th run: 85% yield).

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