Palladium Nanoparticles Supported onto Ionic Carbon Nanotubes

**Significance:** An aqueous solution of IL-f-MWCNTs 1 and Na₂PdCl₄ was hydrogenated under 1 atm of H₂ pressure for 30 min at room temperature to give Pd/IL-f-MWCNTs 2a (eq. 1). Direct anion exchange of the hydrophilic Br anion with NTf₂ and SbF₆⁻ afforded the hydrophobic Pd/IL-f-MWCNTs 2b and 2c, respectively (eq. 2). The catalytic activities of 2a–c were examined for the hydrogenation of trans-stilbene in MeOH. Pd/IL-f-MWCNT 2c with the SbF₆⁻ anion showed superior catalytic activity compared to 2a and 2b (eq. 3).

**Comment:** In this paper, the authors reported imidazolium-functionalized ionic multi-walled carbon nanotubes (IL-f-MWCNT) supported Pd nanoparticles as a catalyst for the hydrogenation of olefins. Pd/IL-f-MWCNT 2c was effectively immobilized in an ionic liquid, [bmim][SbF₆], with extraordinary stability. Thus, 2c/[bmim][SbF₆] was recovered by simple phase separation and reused ten times without any loss of catalytic activity.

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