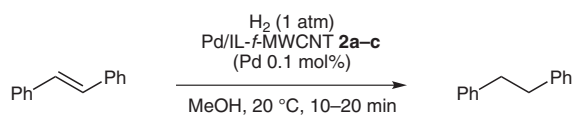
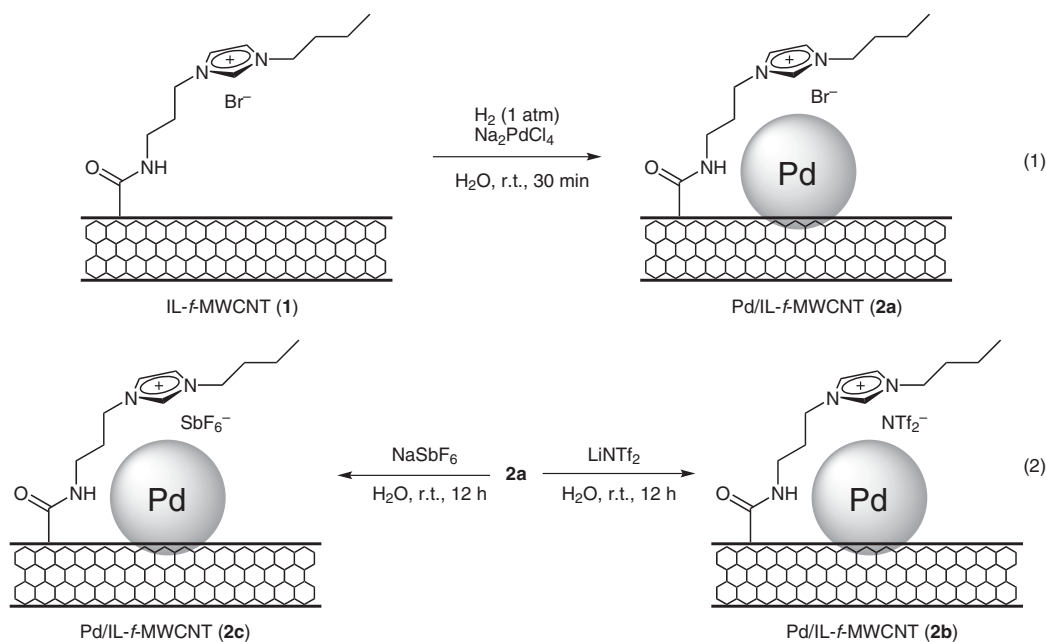


# Palladium Nanoparticles Supported onto Ionic Carbon Nanotubes



2	Conv. (%)	TOF/mol h <sup>-1</sup>
2a	22	660
2b	9	270
2c	47	2820
2c <sup>a</sup>	100	600

<sup>a</sup> 1 mol% Pd in *i*-PrOH-[bmim][SbF<sub>6</sub>]  
bmim = 1-butyl-3-methylimidazolium

**Significance:** An aqueous solution of IL-*f*-MWCNTs **1** and Na<sub>2</sub>PdCl<sub>4</sub> was hydrogenated under 1 atm of H<sub>2</sub> 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 NTf<sub>2</sub> and SbF<sub>6</sub> 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 SbF<sub>6</sub> 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 nanotube (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][SbF<sub>6</sub>], with extraordinary stability. Thus, **2c**/[bmim][SbF<sub>6</sub>] was recovered by simple phase separation, and reused ten times without any loss of catalytic activity.