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**Polymer-Supported Synthesis**

**Key words**

**hydrogenation**
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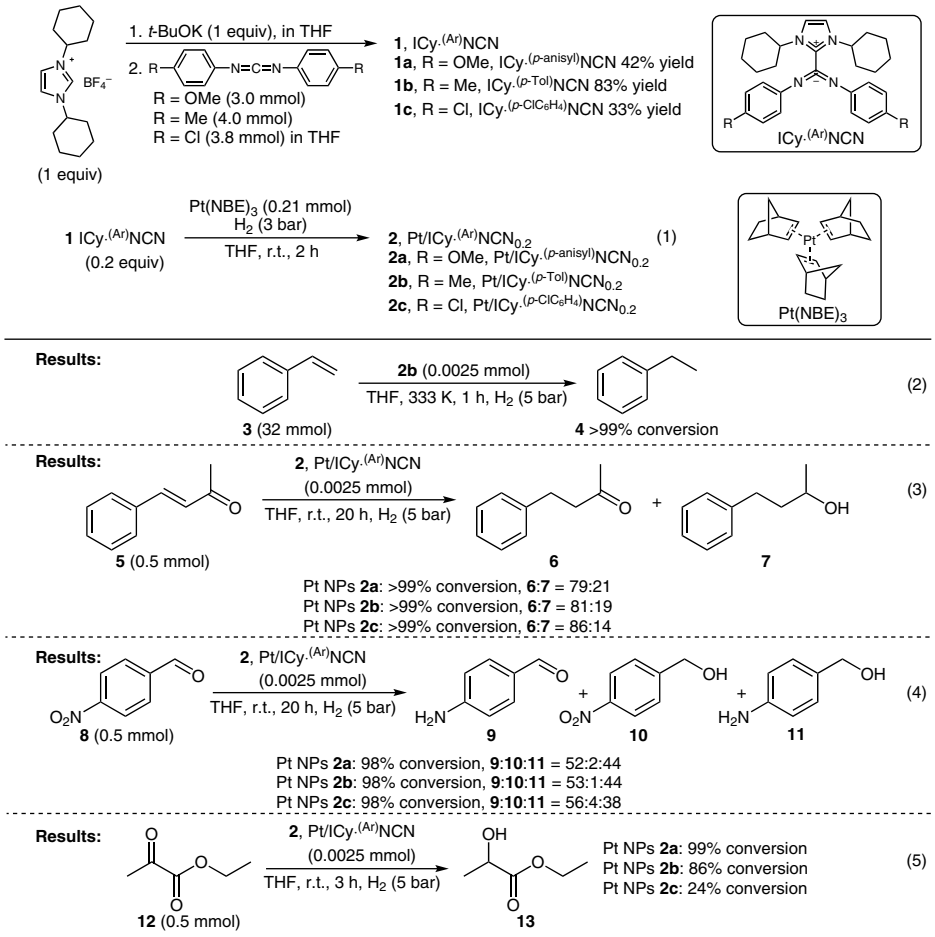
# Zwitterionic Ligand Supported Platinum Nanoparticles as Hydrogenation Catalysts




**Significance:** Zwitterionic imidazolium amidinate ligand-supported platinum nanoparticle catalysts **2a–c** [Pt/ICy·$^{(Ar)}$NCN$_{0.2}$] were prepared as shown in eq. 1. The hydrogenation of olefins, carbonyl or nitro compounds was carried out with platinum nanoparticles **2a–c** to give the corresponding reduced products (eqs. 2–5).

**Comment:** The platinum nanoparticle catalyst **2b** was characterized by means of $^{15}$N and $^{13}$C MAS NMR, TEM, HR-TEM, WAXS, TGA and elemental analyses. The authors have previously reported the synthesis of Ru-ICy·$^{(p\text{-Tol})}$NCN$_{0.2}$ and its application in the hydrogenation of styrene (L. M. Martínez-Prieto et al. *Chem. Commun.* **2015**, *51*, 4647).

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