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In situ generated Pd(0) nanoparticles stabilized by bis(aryl)acenaphthenequinone diimines as catalysts for aminocarbonylation reactions in water

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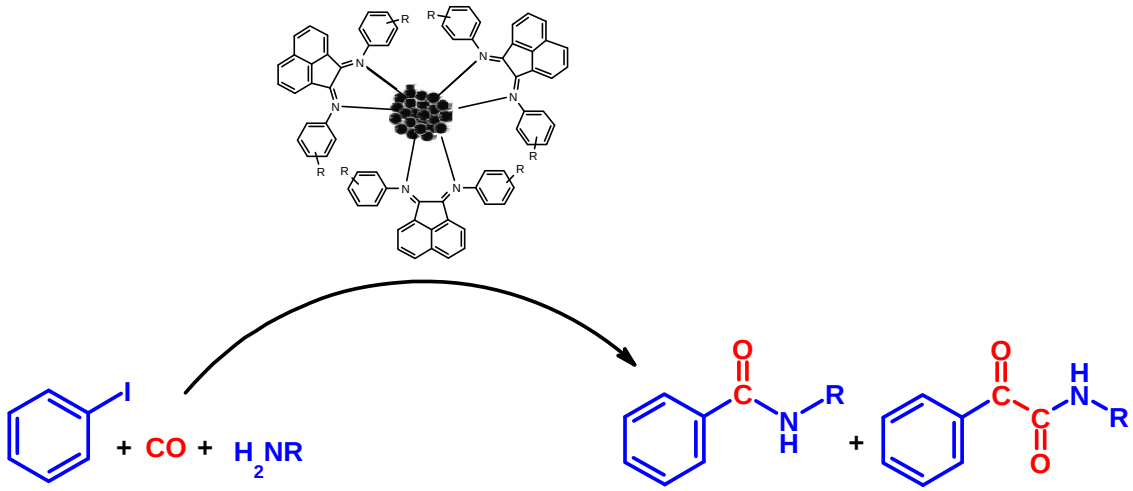
Graphical abstract



Highlights

- High catalytic activity in aminocarbonylation of the *in situ* formed Pd-nanoparticles.
- Excellent recycling of Pd-nanoparticles stabilized with diimine ligands only.
- Phosphine-free aminocarbonylation in water at ambient CO pressure.
- Efficient formation of α-ketoamides at 10 atm of CO performed without any additives.