Electronic Supporting Information

Supported Bimetallic Nano-alloys as Highly Active Catalysts for the One-Pot Tandem Synthesis of Imines and Secondary Amines from Nitrobenzene and Alcohols

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Figure S1. Time-on-line profile of the total TON and individual product TONs for the tandem synthesis of \(N\)-benzylideneaniline (5) and \(N\)-benzylaniline (6) using the 1\%Ru-Pd/TiO\(2\) (M\textsubscript{Im}) catalyst. Reaction conditions: catalyst: 0.1 g; nitrobenzene: 4.5 mmol; benzyl alcohol: 45 mmol; mesitylene (solvent): 5 mL; catalyst: 100 mg; Ar: 20 bar; T: 433 K. The TONs are calculated using the nominal molar metal loading, the moles of substrate (3) consumed and the moles of product (6) formed.
Figure S2. Representative high angle annular dark field (HAADF) images of the (a) 1%Au-Pd/TiO₂ and (b) 1%Ru-Pd/TiO₂ M₉₅ samples showing the existence of sub-nm metal clusters (white circles).
Figure S3. Isolated Au L\textsubscript{3}-edge and Pd K-edge EXAFS and associated Fourier Transform data for the two-shell fits for 1% Au-Pd/TiO\textsubscript{2} (S\textsubscript{1m}). Key: Solid line: experimental data, dotted line: theoretical fit; top two spectra were recorded at Au L\textsubscript{3} edge and bottom two spectra were recorded at Pd K-edge. EXAFS spectra were fitted in k-space.