Supporting Information

Carbon-Coated Core Shell Structured Copper and Nickel Nanoparticles

Synthesized in an Ionic Liquid

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Figure S1. Raman Spectrum of carbon obtained after decomposition of pure ionic liquid under 10 min microwave irradiation.

Figure S2. XRD pattern of the product obtained after MW irradiation of copper salt in pure water. The XRD pattern matches well with copper hydroxide nitrate $\text{Cu}_2(\text{OH})_3(\text{NO}_3)$. There is no formation of metal or its oxide in this reaction.

Figure S3. XRD patter of the product obtained after MW irradiation of nickel salt in pure water. The XRD pattern does not show any evidence of nickel or nickel oxide formation. The peak does not match to any XRD pattern. The obtained product was hygroscopic in nature.

Figure S4. XRD patter of the product obtained after 5 min MW irradiation of copper salt in IL. The XRD pattern shows evidence of copper (Cu) and copper oxide (Cu_2O) formation.

Figure S5. HRTEM and EDS images of product obtained after 5 min MW reaction for copper salt. The HRTEM images show metal and metal oxide particle embedded in the carbon matrix. EDS shows evidence of copper (Cu) and copper oxide (Cu_2O) in the as prepared product.

Figure S6. HRTEM and FFT images of product obtained after 5 min MW reaction for copper salt in IL. The left image show copper metal and the right image are of metal oxide particle embedded in the carbon matrix.

Figure S7. R vs. T plot for carbon-coated nickel nanoparticles.