Electronic Suuplementary Material for PCCP

Electronic Supplementary Information

Nanostructured Cu and Cu@Cu_2O core shell catalysts for hydrogen generation from ammonia–borane

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Figure S1. XRD pattern of Cu@Cu_2O core shell nanoparticles after 8 cycles of hydrolysis

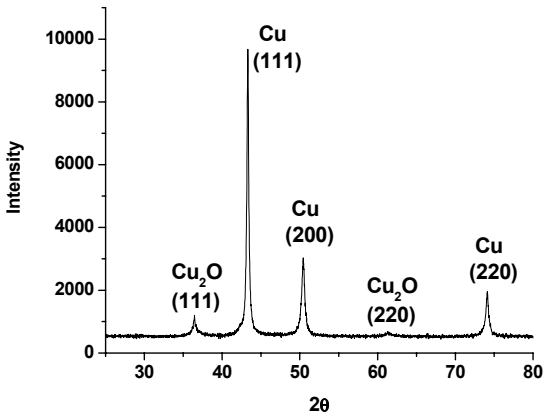

Figure S2. SEM images: surface morphology of Cu@Cu_2O core shell catalyst (a) before the hydrolysis reaction; (b) after 8 cycles of hydrolysis

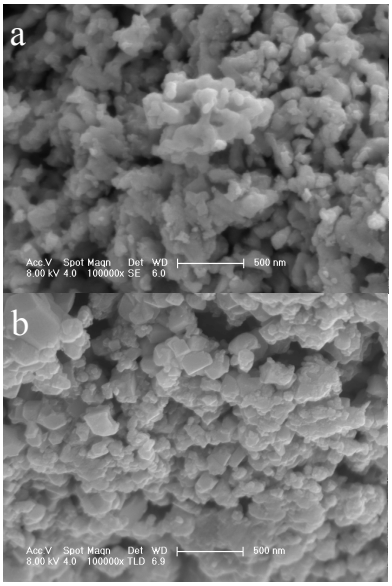

Figure S3. FTIR spectra of AB (dashed line) and $B(OH)_3$ (isolated as one of the hydrolysis reaction products) (solid line)

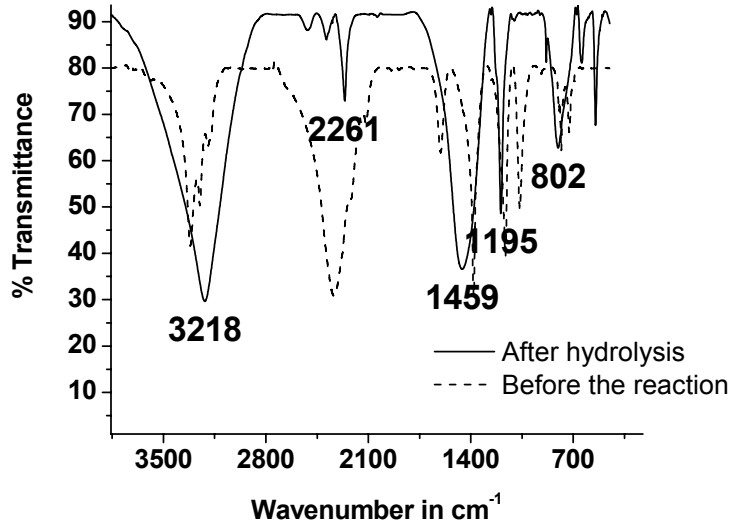

Figure S4. BET Isotherm of Cu nano powder obtained by the SMAD method

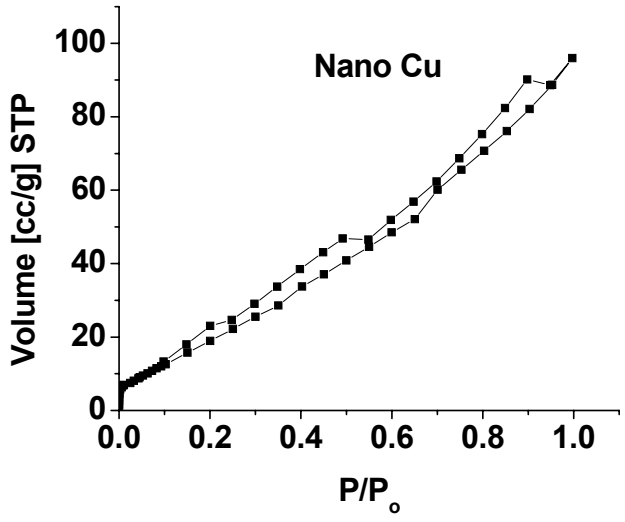

Figure S5. BET Isotherm of nano Cu_2O

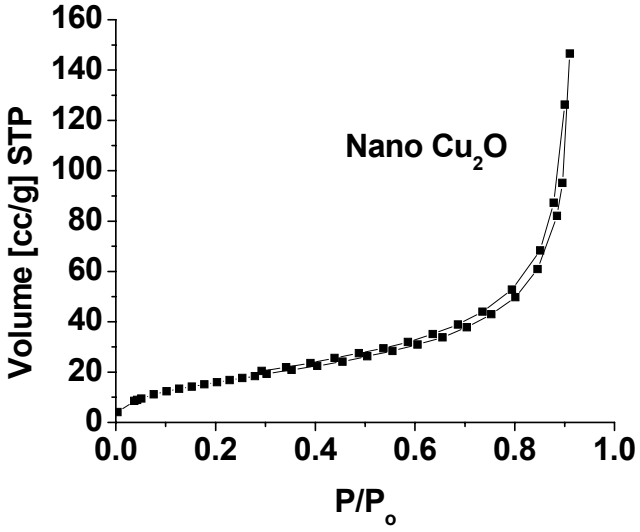

Figure S6. BET Isotherm of $Cu@Cu_2O$ core shell nanoparticles

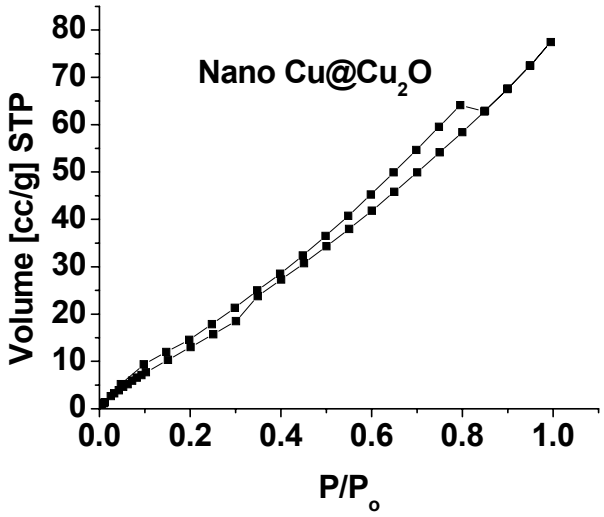

Figure S7. BET Isotherm of commercial Cu powder

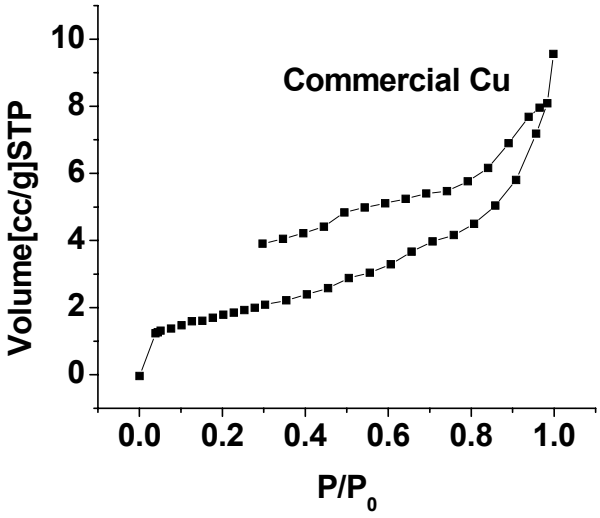

Figure S8. BET Isotherm of commercial Cu_2O powder

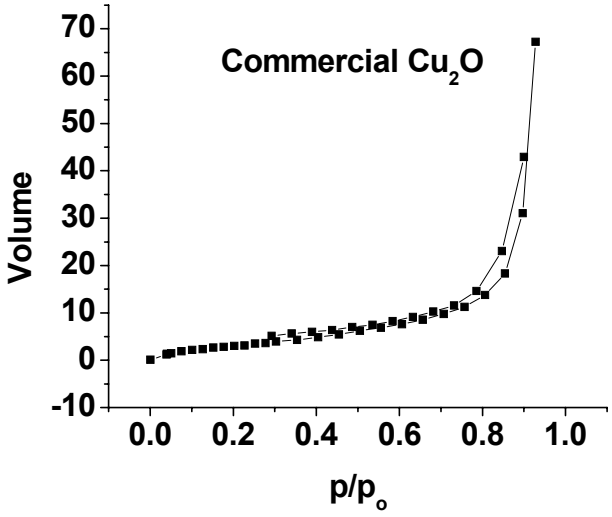

Table S1. Surface areas of the samples

Sample	**Specific surface area (m^2/g)**
Cu nano powder	91.1
Cu@Cu_2O core shell nanoparticles	79.0
Cu_2O nano powder	60.5
Commercial Cu powder	6.3
Commercial Cu_2O powder	14.1