

Supported Materials

Economical and green synthesis of Cu nanowires and their use as catalyst for selective hydrogenation of cinnamaldehyde

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The effect of NaNO₃ on the morphology of Cu nanowires.

Experimental: The synthesis of Cu nanowires was conducted in a 500 ml round bottom flask. In a typical synthesis, 120 g NaOH was dissolved into 200 ml deionized water to obtain a concentrated NaOH solution. Then 1 mmol of Cu(NO₃)₂·3H₂O and *different amounts of NaNO₃* were dissolved into this NaOH solution. Finally, 1.5 ml of EDA and 0.25 ml of reducing agent (namely 35 wt.% hydrazine solution) were successively added into the above solution, and the obtained mixture was placed in an 70 °C waterbath without stirring for 1 h. After the reaction, the Cu product was removed from the solution by centrifugation and then dried under vacuum.

Results (SEM images):

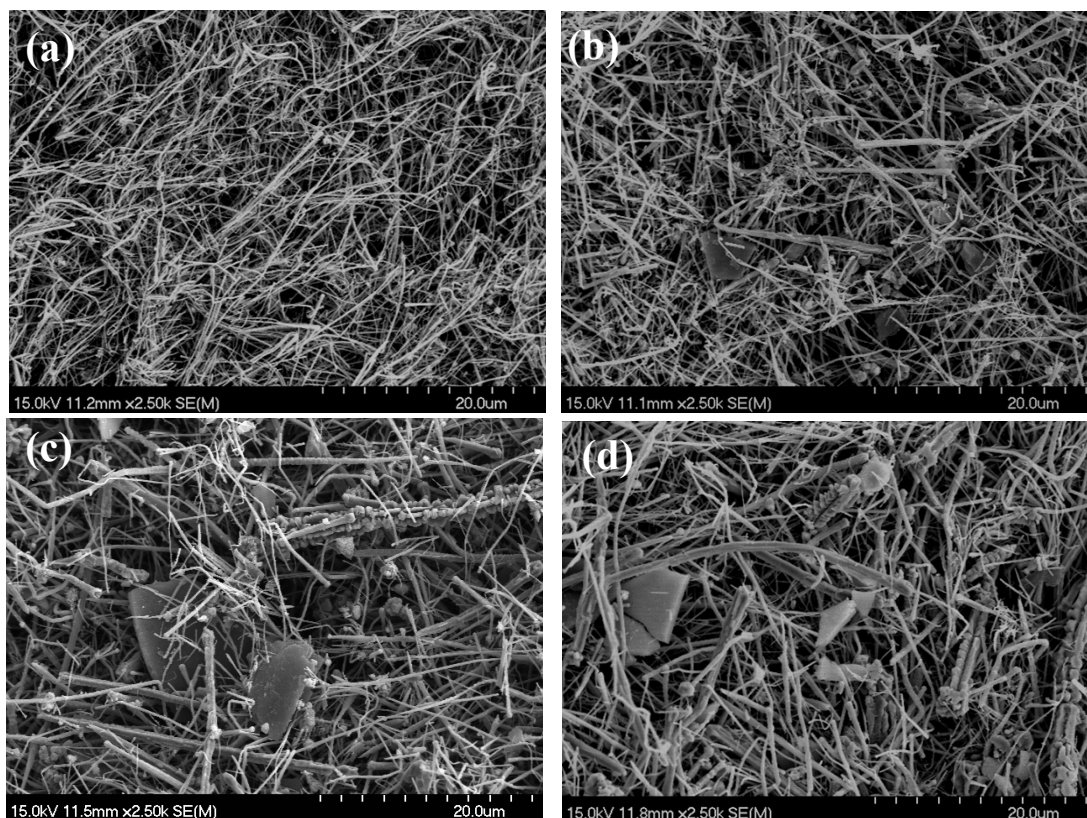


Figure S1 SEM images of the Cu products formed at 70 °C for 1 h in a reaction mixture containing NaNO₃ of different concentrations: (a) ~0 M, (b) ~1 M, (c) ~2 M, and (d) ~4 M.