Supporting Information

Ultrahigh pressure preparation and catalytic activity of MOF-derived Cu nanoparticles

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1. Preparation of ICP-OES Samples

Cu standard solution (Cu 1000 ppm, solvent 0.1 mol/L HNO_3) was diluted with 1.3 mol/L HNO_3 to prepare Cu standard samples for making calibration curve at concentrations of 10 ppm, 5 ppm, 2.5 ppm, 1.25 ppm, and 500 ppb. Sample solutions to measure Cu content were prepared as follows: the sample powder was added to a flask with 13 mol/L (60 wt%) HNO_3 10 mL, then the dispersion was heated until all of the powder was dissolved with refluxing. The obtained solutions were diluted with distilled water to make the HNO_3 concentration of 1.3 mol/L. These original solutions were further diluted with 1.3 mol/L HNO_3 to prepare two sample solutions with different concentrations for one sample.

2. Curve Fitting of XANES spectra

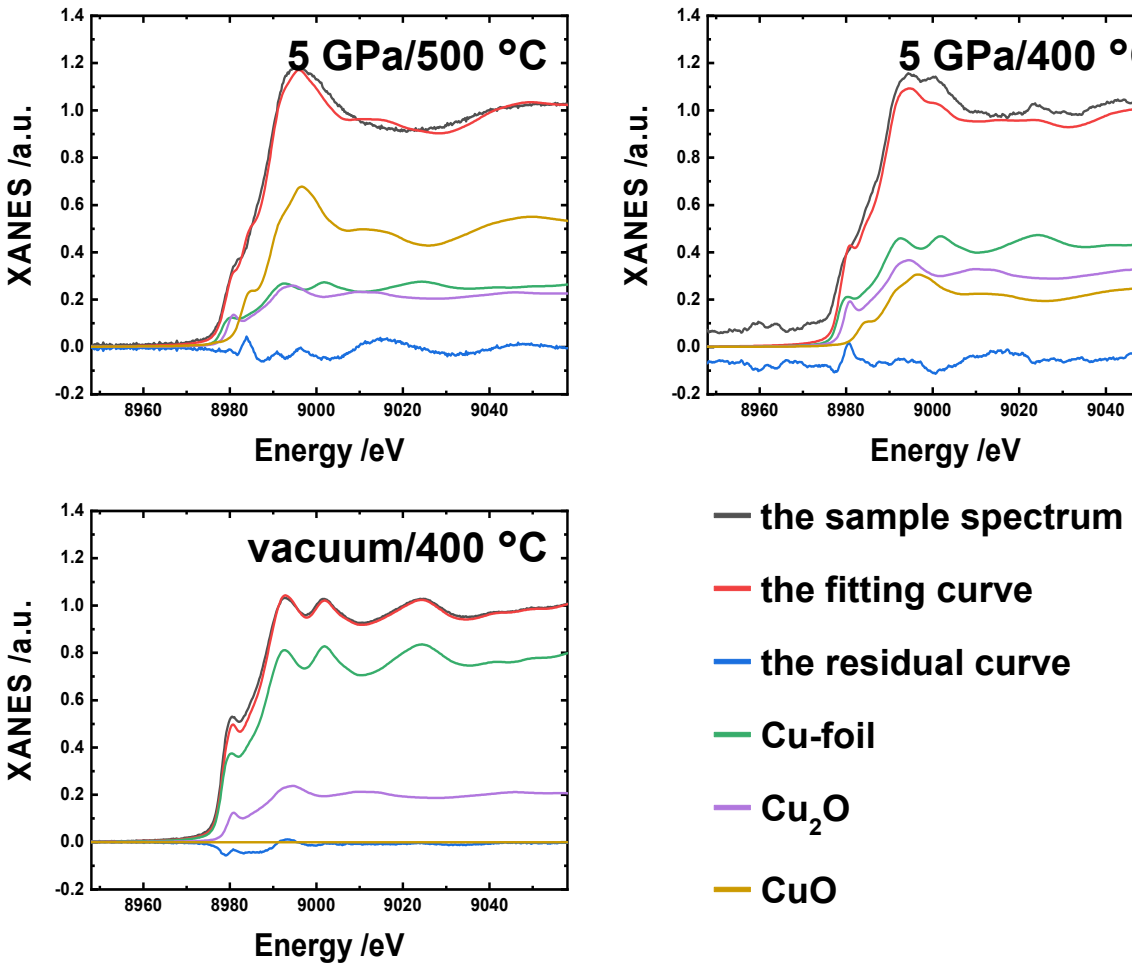

Figure S1: Curve fitting of the XANES spectra was least square of the residuals using spectra of Cu foil, Cu_2O and CuO.