

# **Hierarchically micro/nanostructured porous metallic copper: convenient growth and superhydrophilic and catalytic performance**

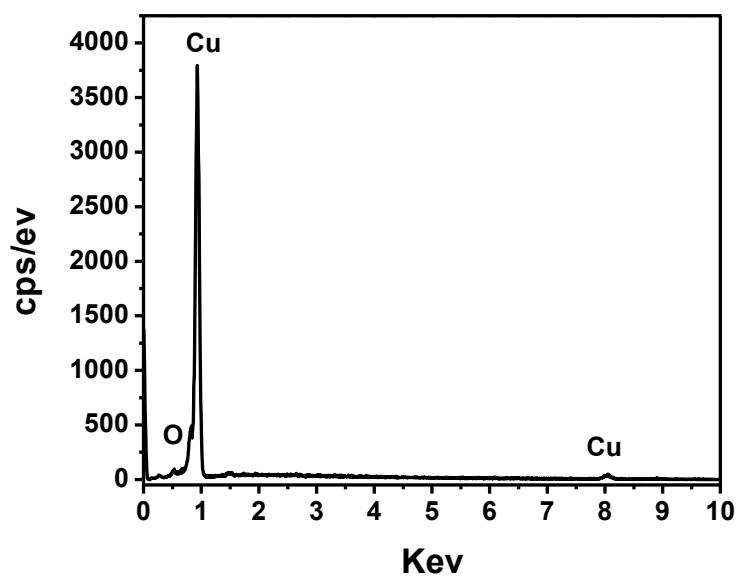
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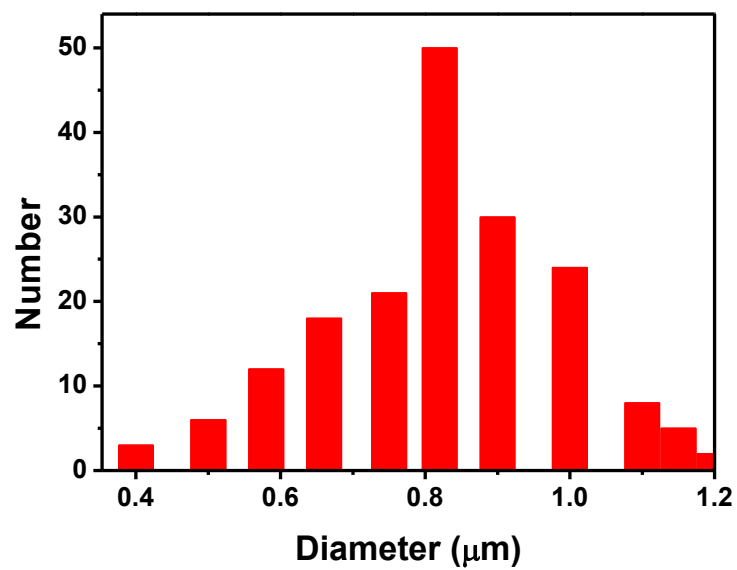
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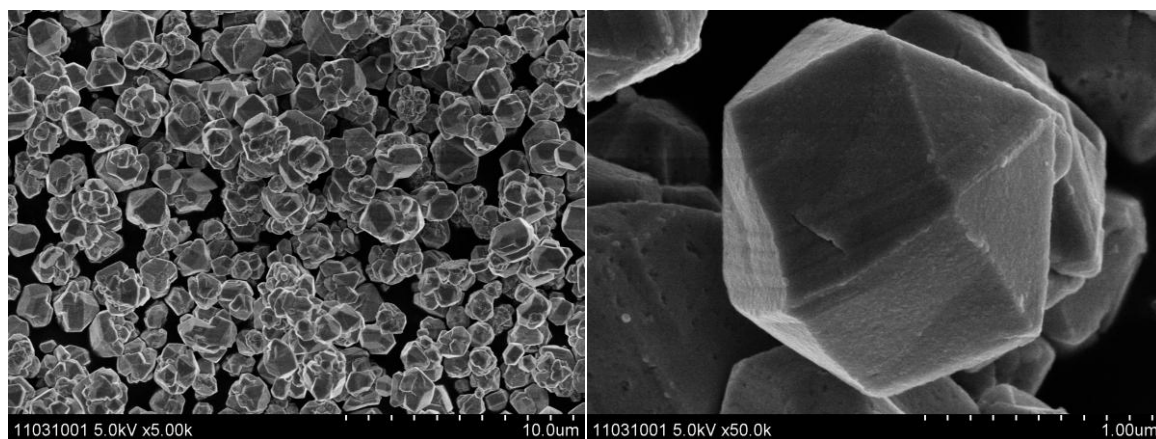
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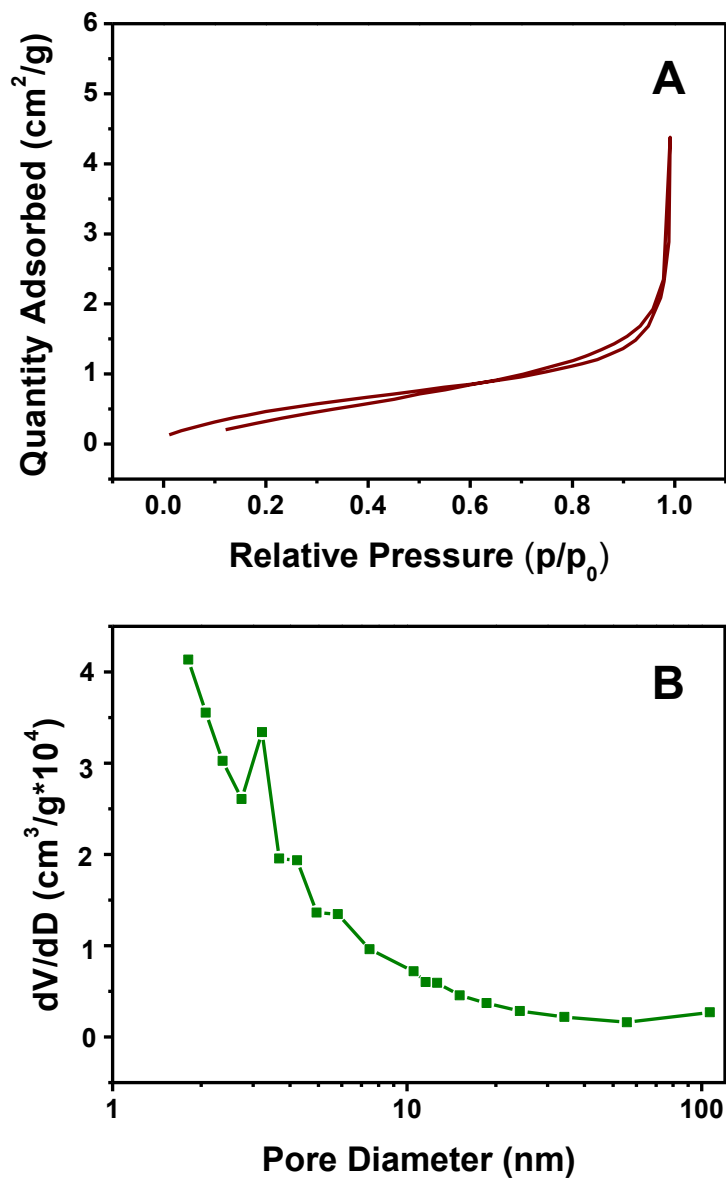
**Fig. S1.** EDX spectroscopy of the sample.



**Fig. S2.** Size distribution of the sample.



**Fig. S3.** FESEM image of Cu prepared in the absence of phenol.



**Fig. S4.** (A) N<sub>2</sub> adsorption–desorption isotherms of the sample. (B) Pore size distribution of the sample calculated from the desorption branch of the isotherms using the BJH algorithm.

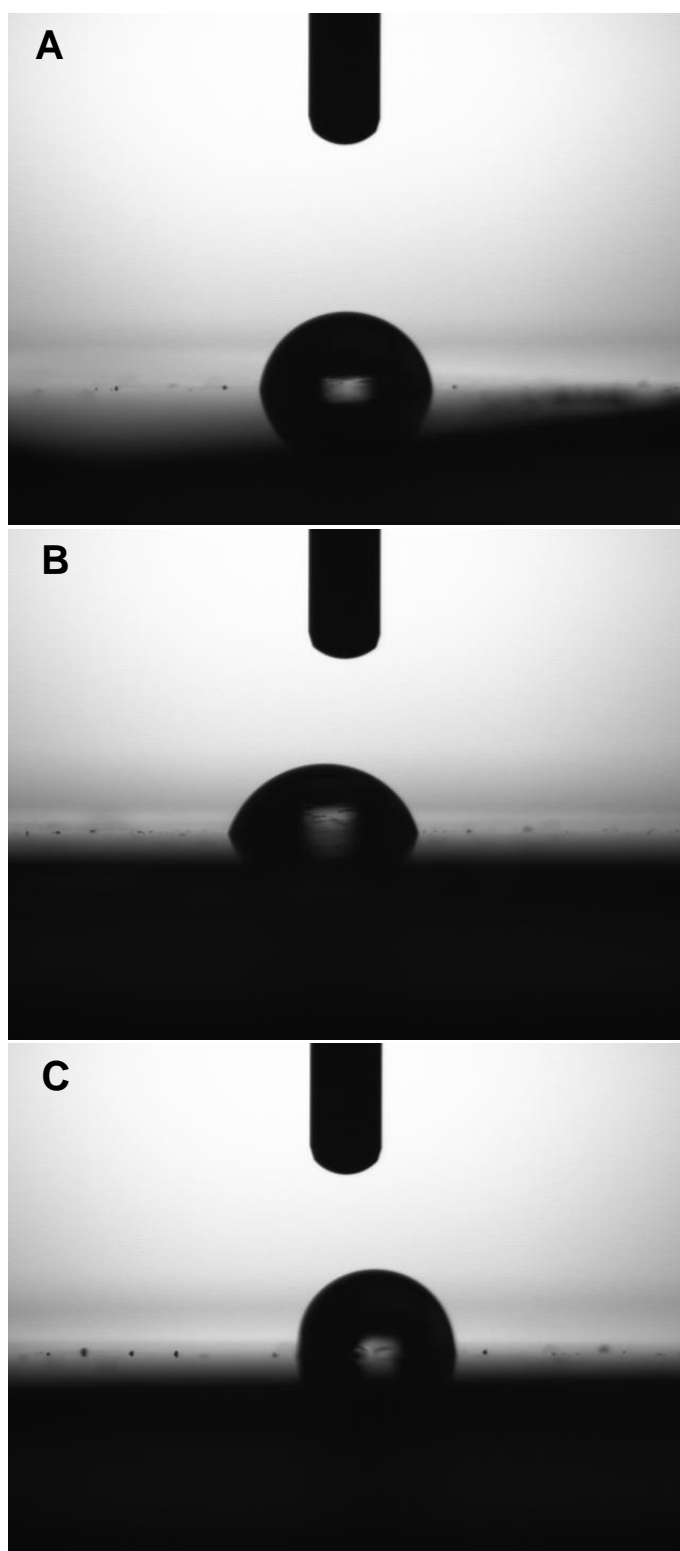
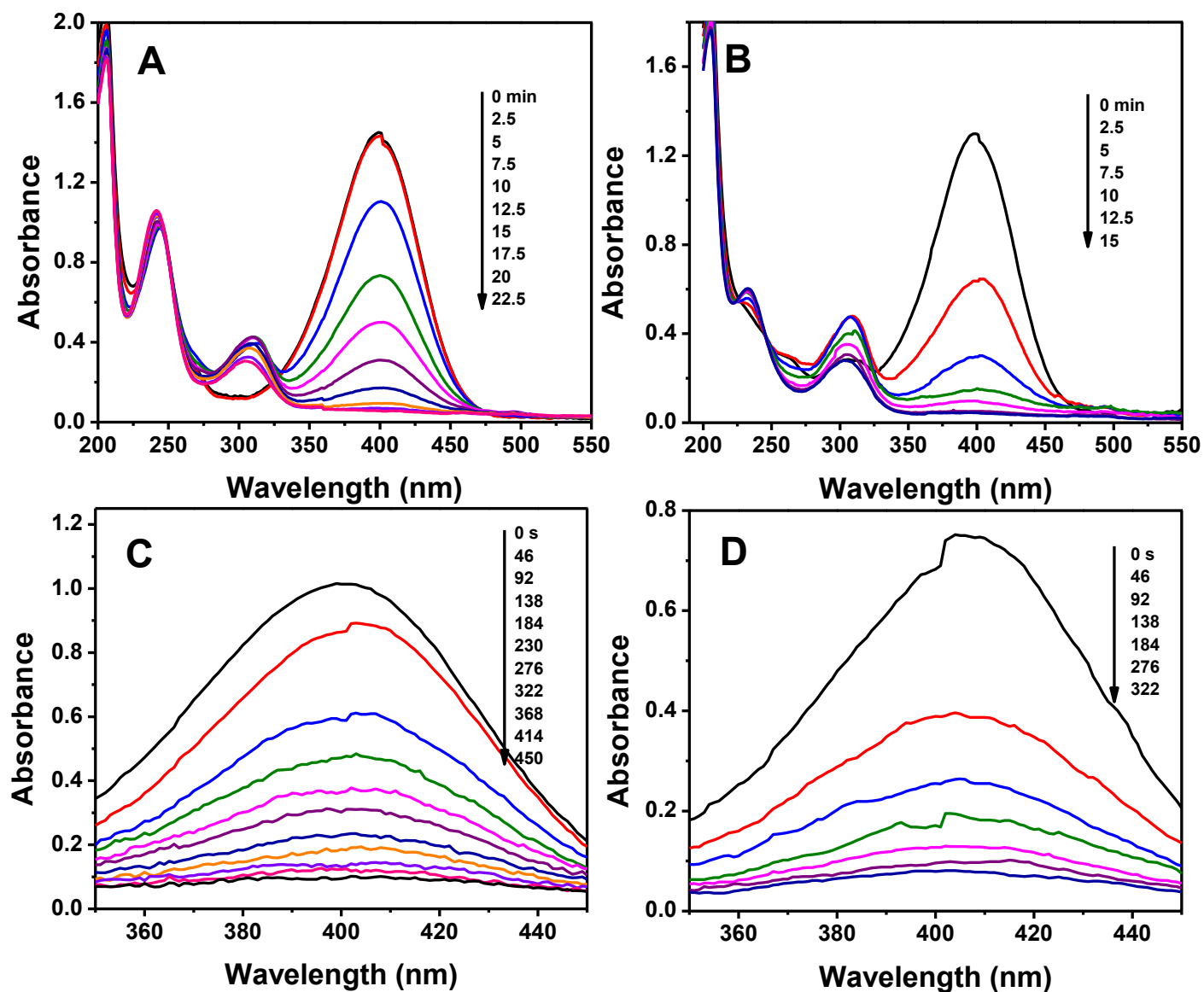


Fig. S5 The final state of the water CA of the nonporous Cu prepared by similar method (A), commercial Cu powders (B), and commercial Cu sheet (C).



**Fig. S6.** UV-Vis spectra of 4-NP in the presence of the porous Cu microspheres at 278K (A), 288K (B), 298K (C), and 308K (D).