

Electronic Supplementary Information

Surfactant-free CuO mesocrystals with controllable dimensions: Green ordered-aggregation-driven synthesis, formation mechanism and their photochemical performances

Shaodong Sun, Xiaozhe Zhang, Jie Zhang, Liqun Wang, Xiaoping Song and Zhimao Yang*

State Key Laboratory for Mechanical Behavior of Materials, MOE Key Laboratory for Non-Equilibrium Synthesis and Modulation of Condensed Matter, School of Science, Xi'an Jiaotong University, ShaanXi, Xi'an 710049, People's Republic of China.

Corresponding Author

*E-mail: zmyang@mail.xjtu.edu.cn (Yang ZM).

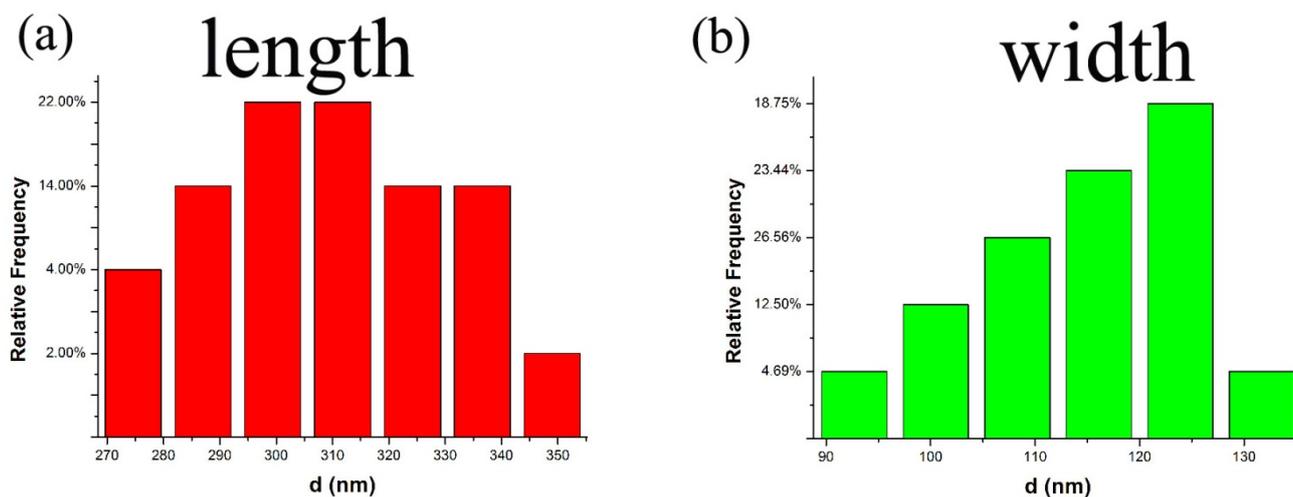


Fig. S1 The size distribution diagrams of the as-prepared spindle-like CuO products (sample A): (a) length; (b) width.

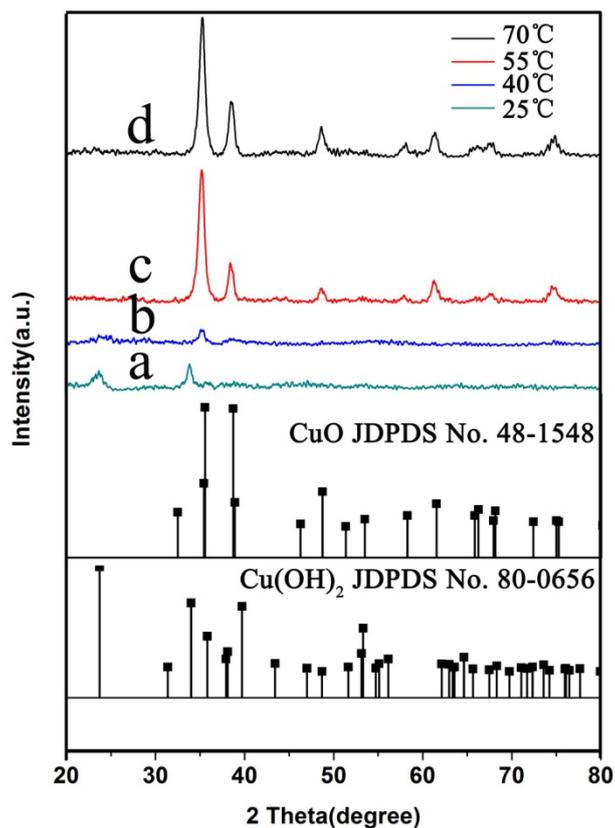


Fig. S2 XRD patterns of the products obtained at low reaction temperature based on the synthesis of sample A, (a) 25 °C; (b) 40 °C; (c) 55 °C; (d) 70 °C.

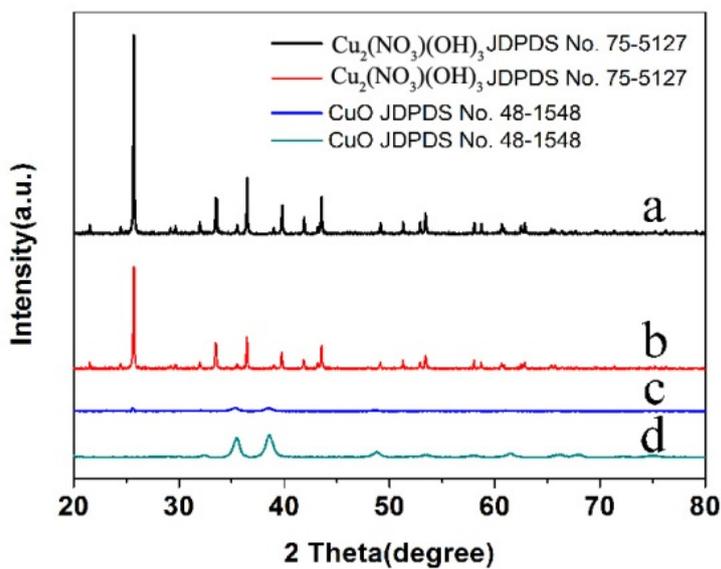


Fig. S3 XRD patterns of the products obtained in different molar concentration ratios between sodium hydroxide and copper salt, (a) 1:10; (b) 1:5; (c) 1:1; (d) 10:1.



Fig. S4 A TEM image of the products obtained in the in the concentration of reagents ($\text{Cu}(\text{NO}_3)_2 = 0.4 \text{ M}$, $\text{NaOH} = 2 \text{ M}$) under otherwise the same conditions.

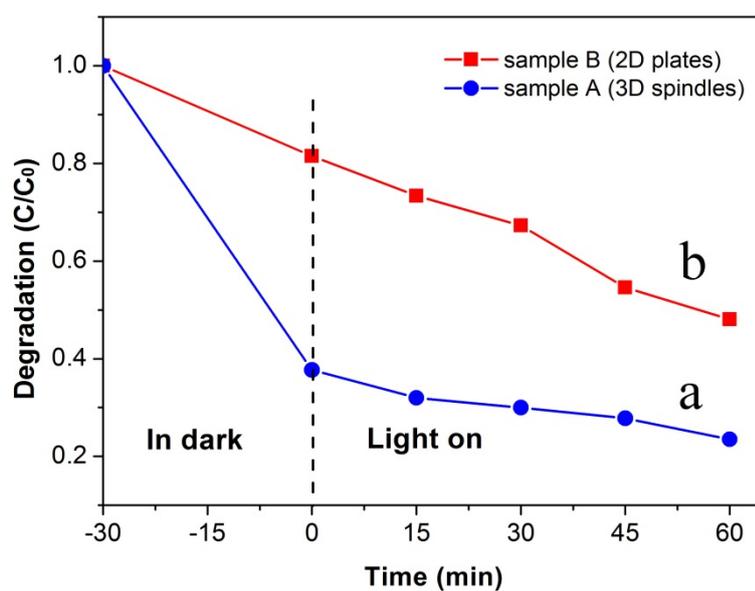


Fig. S5 A plot of the extent of photodegradation of RhB by different catalysts under UV light, Curve a: sample A; Curve b: sample B.