Electronic Supplementary Material (ESI) for Journal of Materials Chemistry

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Synthesis of copper(II) coordination polymers and conversion into CuO nanostructures with good photocatalytic, antibacterial and lithium ion battery performances

Yongzhang Fan, Rongmei Liu, Wei Du, Qingyi Lu, Huan Pang, Feng Gao

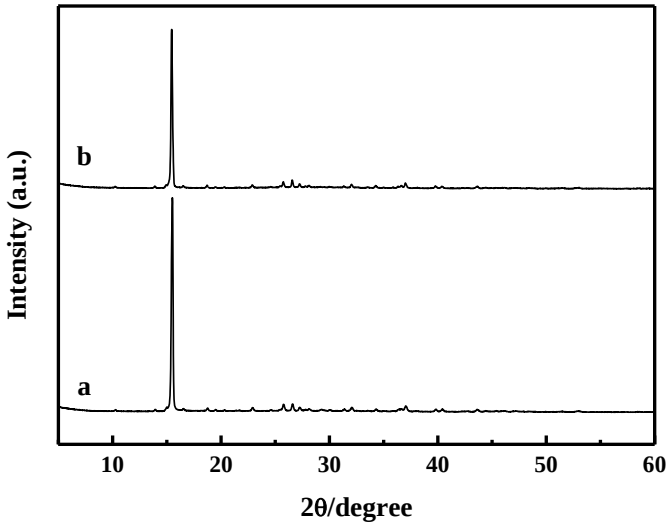

Fig. S1 XRD patterns of the products prepared with different copper sources at room temperature:

(a) $Cu(NO_3)_2$ and (b) $CuAc_2$.

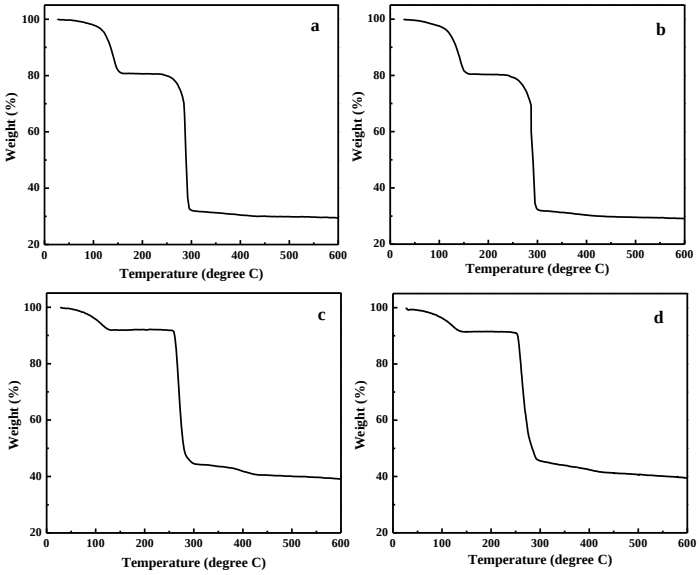

Fig. S2 TG curves of the products prepared with different copper sources at different temperatures: (a) $Cu(NO_3)_2$ at room temperature; (b) $CuAc_2$ at room temperature; (c) $Cu(NO_3)_2$ at 120 °C; (d) $CuAc_2$ at 120 °C.

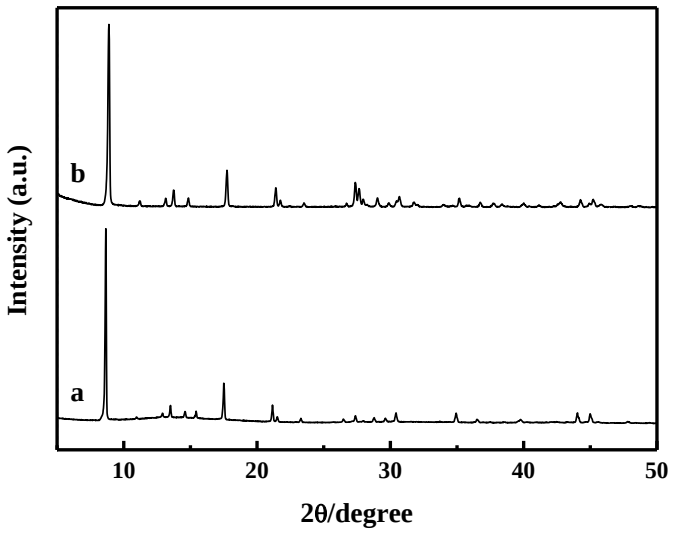

Fig. S3 XRD patterns of the products prepared with different copper sources at 120 °C: (a) $Cu(NO_3)_2$ and (b) $CuAc_2$.

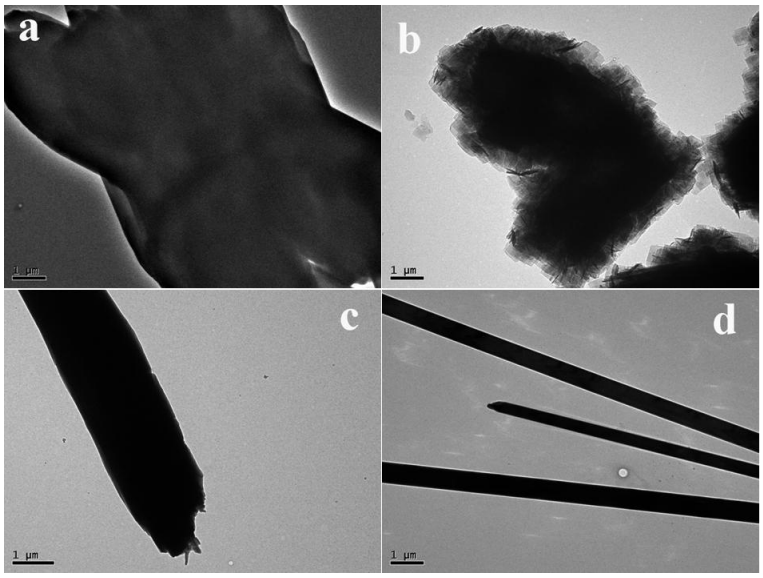

Fig. S4 TEM images of the products prepared with different copper sources at different temperatures: (a) $Cu(NO_3)_2$ at room temperature; (b) $CuAc_2$ at room temperature; (c) $Cu(NO_3)_2$ at 120 °C; (d) $CuAc_2$ at 120 °C.

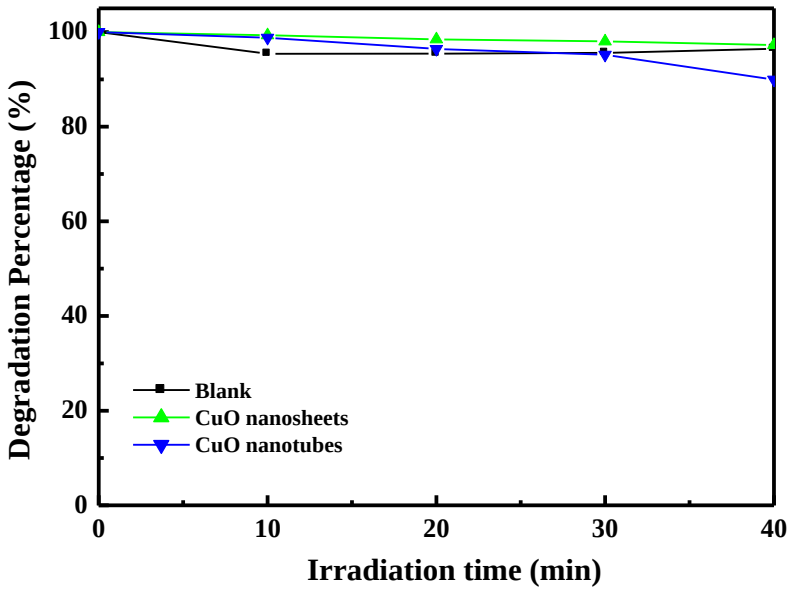

Fig. S5 Plots of the photodegradation extent of Rhodamine B dye (monitored at 553 nm) as a function of irradiation time for a blank and with the addition of the two obtained CuO nanostructures.

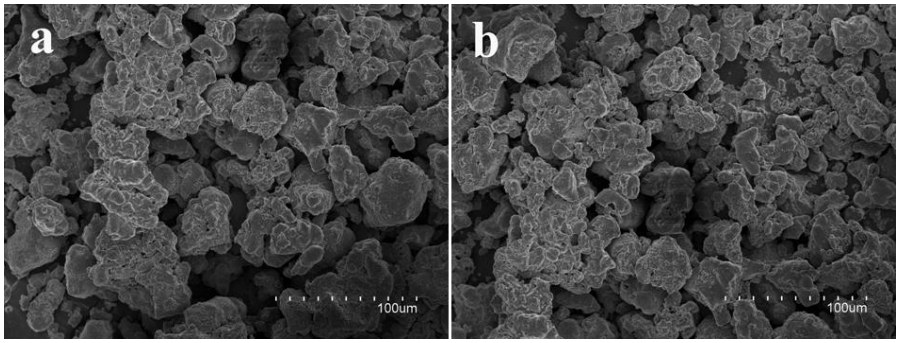

Fig. S6 SEM images of commercial CuO powders