

Supplementary information for “One-step solvothermal synthesis of interlaced nanoflake-assembled flower-like hierarchical Ag/Cu₂O composite microspheres with enhanced visible light photocatalytic properties”

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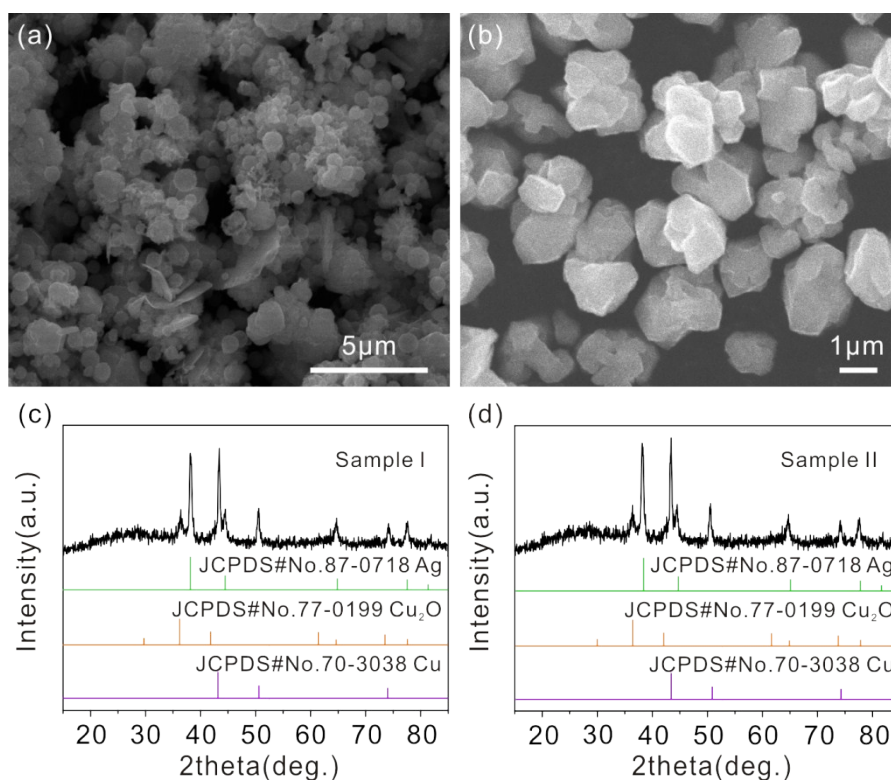


Fig. S1 SEM images of products collected at different reaction times: (a) 2 h (Sample I) and (b) 3 h (Sample II), (c) and (d) the corresponding XRD patterns of the above samples. Other parameters are fixed, including 1.5mmol Cu(NO₃)₂ · 3H₂O, 0.252mmol AgNO₃, 30 mL EG, 0.2g PVP, and T = 180 °C.

Time-dependent experiments are usually conducted to reveal the growth

processes. When the reaction time is 50min, no products can be gotten. However, to our surprise, we observed the flower-like products are obtained after 1h reaction time, as shown in Fig.1 and Fig.2 in main text. When the reaction time increases to 2h, flakes, smooth spheres and irregular particles appear in the obtained product (Fig. S1(a)). Further increasing the reaction time to 3h, we observe that the obtained product is composed of some irregular particles (Fig. S1(b)). In addition, XRD is also used to examine the crystal structures and phase purities of the products at different reaction time. It is clearly observed that the diffraction peaks of Cu appear with the prolongation of reaction time (Fig. S1(c) and (d)). And the diffraction peak intensities of Cu in Sample II are stronger than that in Sample I. Therefore, the prolongation of reaction time is not beneficial for preparation of the flower-like hierarchical Ag/Cu₂O composite microspheres, either.