Supporting information

Controlled synthesis of CuS caved superstructures and their application to the catalysis of organic dye degradation in the absence of light

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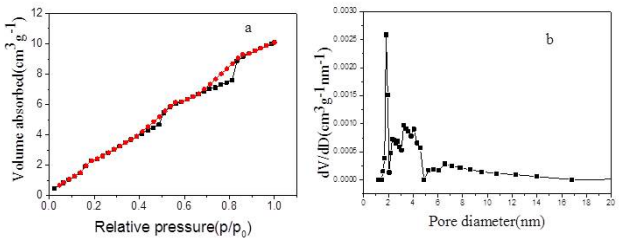

Fig. S1 Nitrogen adsorption−desorption isotherms (a) and pore size distribution (b) of the CuS caved superstructures

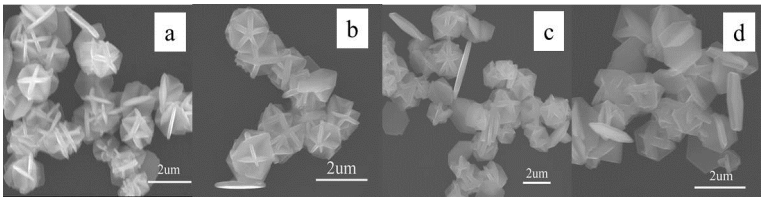

Fig.S2 The SEM images of CuS materials. The reaction temperature of CuS caved superstructures was (a) 110 °C, (b) 120 °C, (c) 130 °C and (d) 140 °C, and other reaction conditions were invariant.

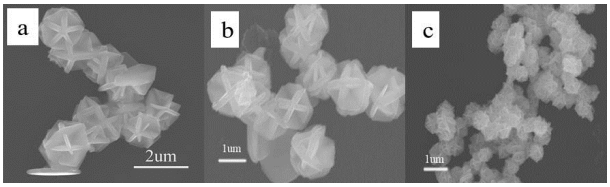

Fig.S3 The SEM images of CuS caved superstructures. The CuSO4 dissolved temperature of CuS caved superstructures was (a) 150 °C (b)160 °C and (c) 170 °C in the EG, and other reaction conditions were invariant.

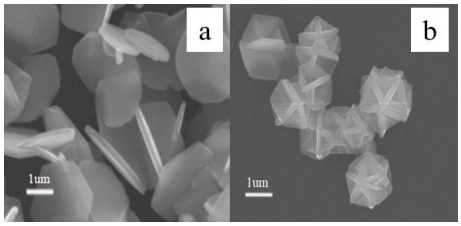

Fig.S4 The SEM images of CuS caved superstructures. (a) and (b) without and with preheating EG, and other reaction conditions were invariant.

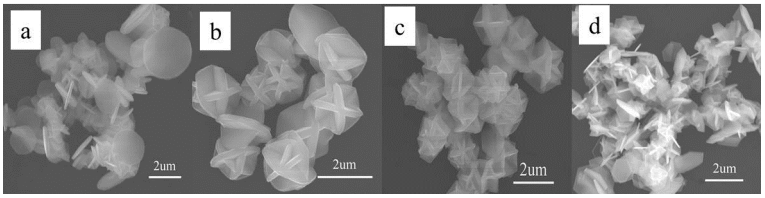

Fig.S5 The SEM images of CuS caved superstructures. The molar ratio of Cu:S was (a) 4:1,(b) 2:1, (c) 1:1 and (d) 0.5:1, and other reaction conditions were invariant.

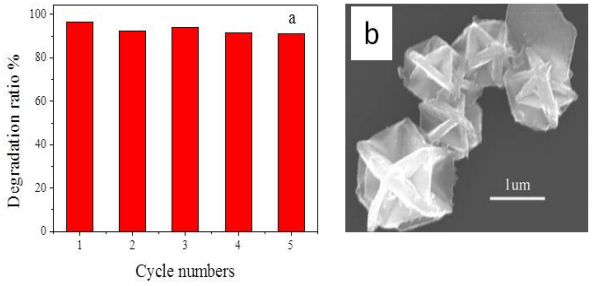

Fig.S6 (a)The cyclic utilization of CuS caved superstructures for the degradation of MB with the addition of H_2O_2 for 10 min.(b) The SEM image of the CuS caved superstructures after catalytic reaction for five cycles.