Electronic Supplementary Material (ESI) for Nanoscale.
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Controllable synthesis of CeO_2 nanospheres with different hollowness and size induced by copper doping

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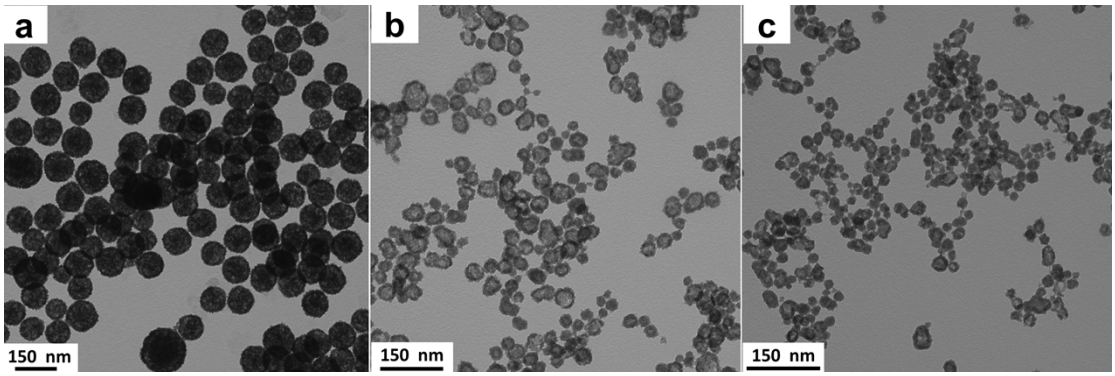

Fig. S1 The TEM images of the Cu^{2+} doped CeO_2 (a-c): P_2, P_5 and P_6.

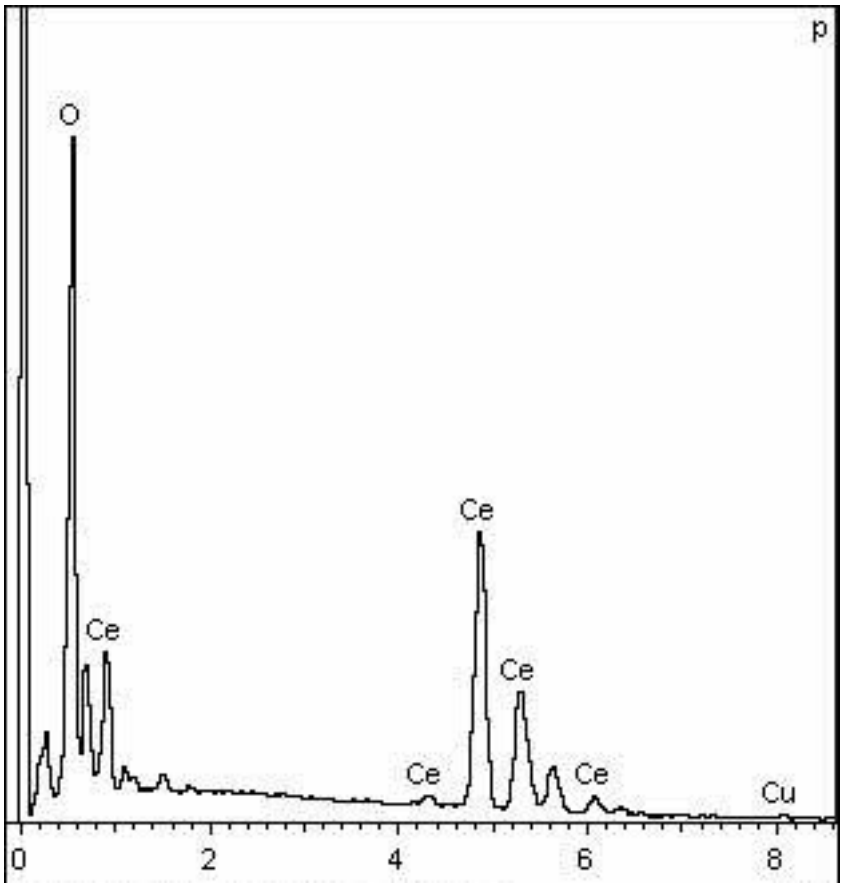

Fig. S2 EDS spectrum of the Cu^{2+} doped ceria sample.

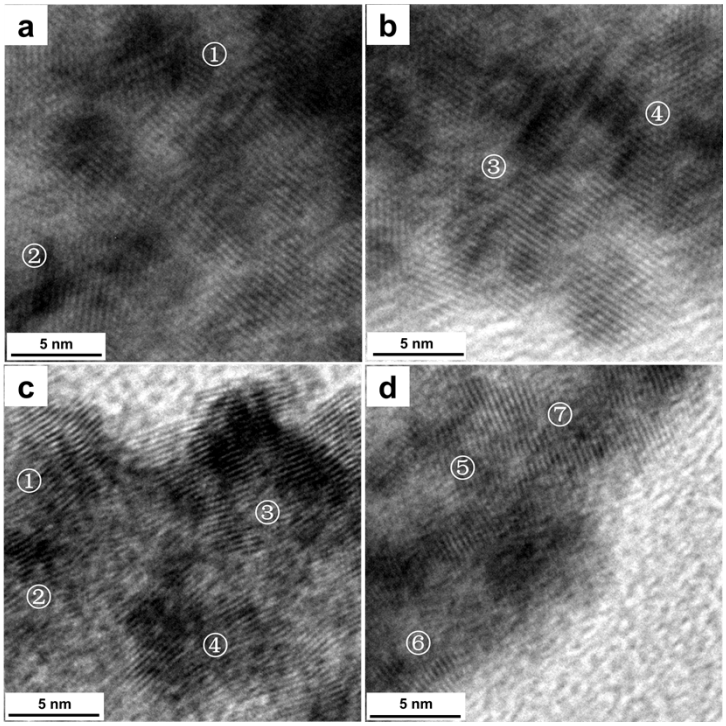

Fig. S3 The HRTEM images about lattice fringes of the Cu^{2+} doped CeO_2: (a, b) P_3; (c, d) P_4.

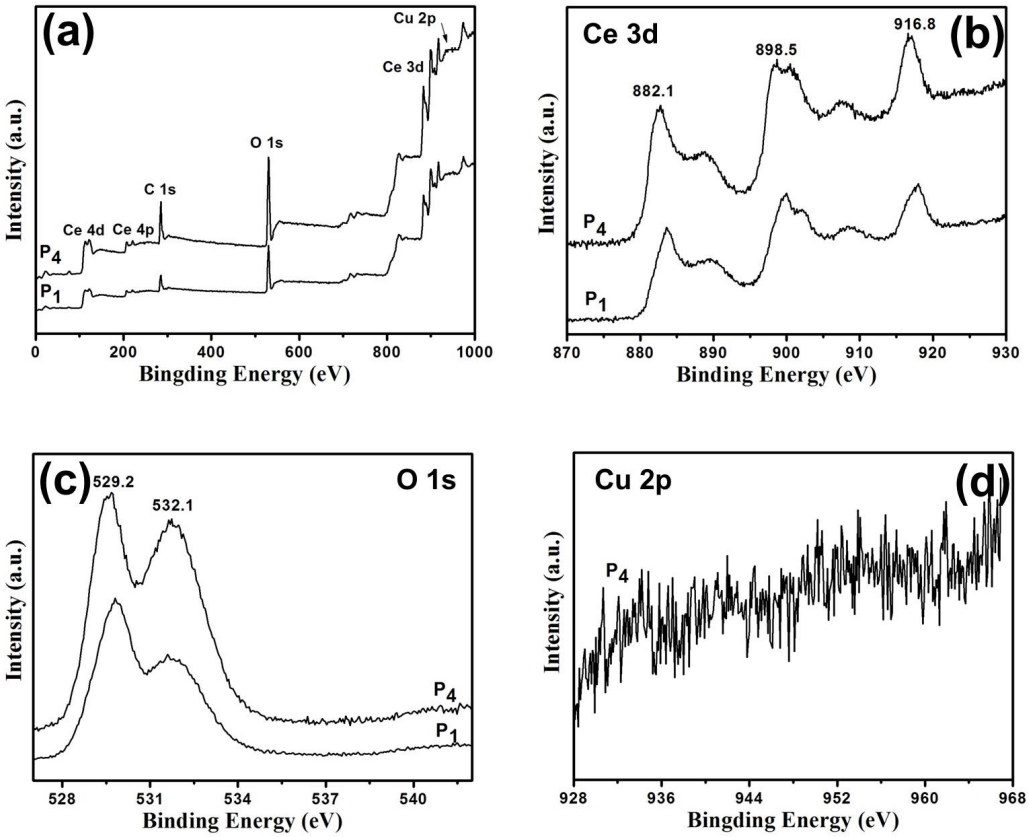

Fig. S4 (a) The corresponding XPS survey spectrum of nanospheres: P_1 and P_4; (b) Ce 3d; (c) O 1s, and (d) Cu 2p. (a), (b) and (c) are P_1 and P_4 curves, respectively.

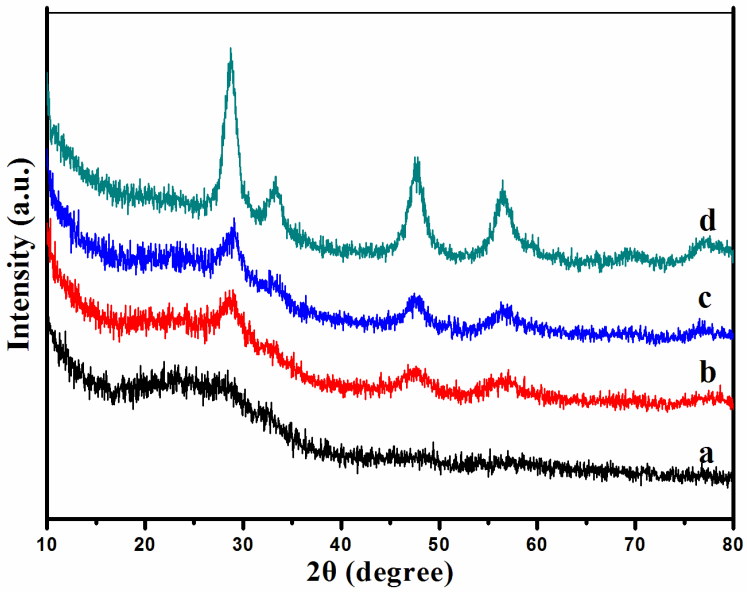

Fig. S5 XRD pattern of P_3 obtained at different solvothermal time illistrated as (a) 1 h, (b) 2 h, (c) 4 h, (d) 8 h.

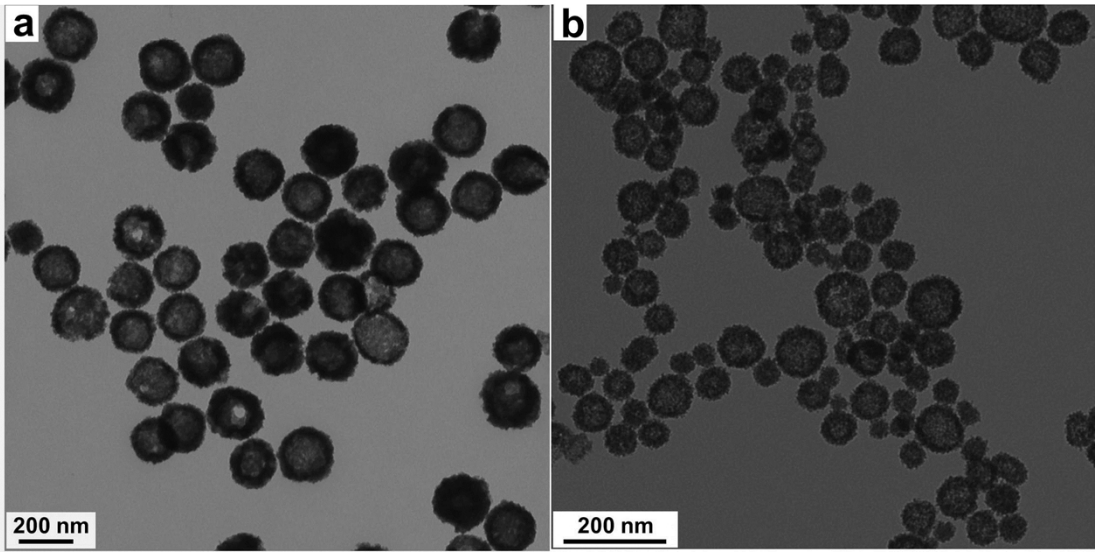

Fig.S6 The TEM images of (a) the P_1 sample at 36 h and (b) the P_4 sample at 2h.

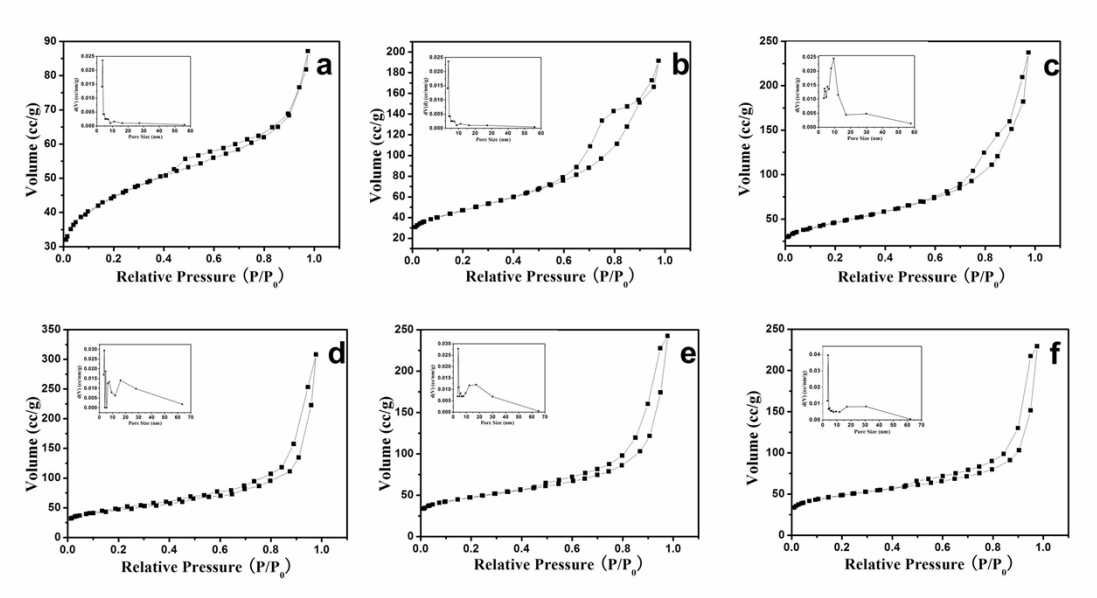

Fig. S7 N_2 adsorption - desorption isotherms of the pure and Cu^{2+} doped CeO_2: (a) P_1, (b) P_2, (c) P_3, (d) P_4, (e) P_5 and (f) P_6. Insets are the corresponding BJH pore size distribution curves.