

Fabrication of Three Dimensional CeO₂ Hierarchical Structures: Precursor Template Synthesis, Formation Mechanism and Properties

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Characterization:

The crystallinity of the products was characterized using a high resolution transmission electron microscope (HRTEM, JEM-2100) with an accelerating voltage of 200 kV.

Figures

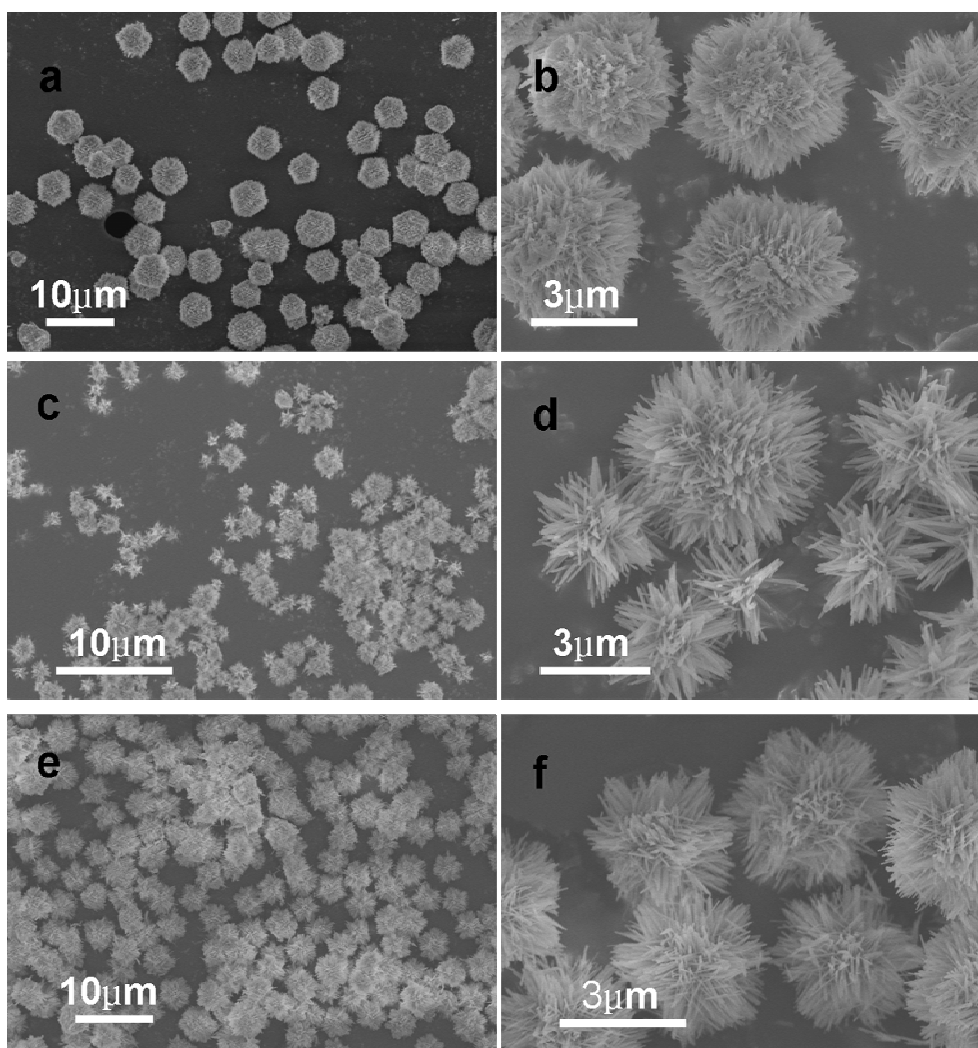


Fig. S1 SEM images of the Ce(HCOO)₃ urchin-like structures obtained at 150 °C for different reaction times: (a,b) 10 min; (c,d) 30 min; (e,f) 60 min.

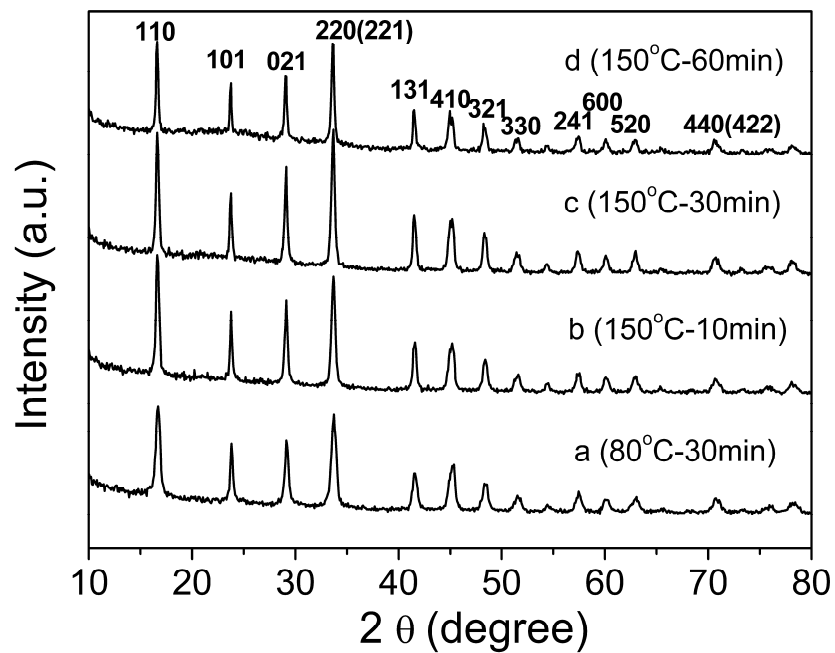


Fig. S2 XRD patterns of the precursors obtained under different reaction conditions:
(a) 80 °C for 30 min; (b) 150 °C for 10 min; (c) 150 °C for 30 min; (d) 150 °C for 60 min.

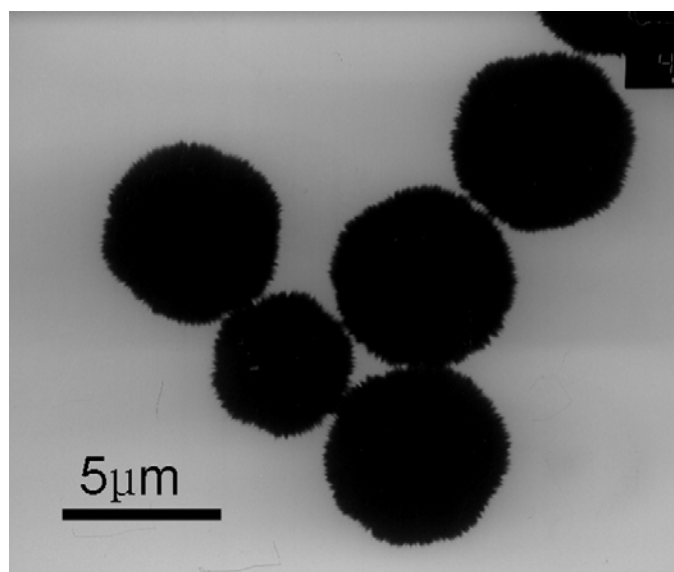


Fig. S3 TEM image of the precursors obtained in the absence of PVP

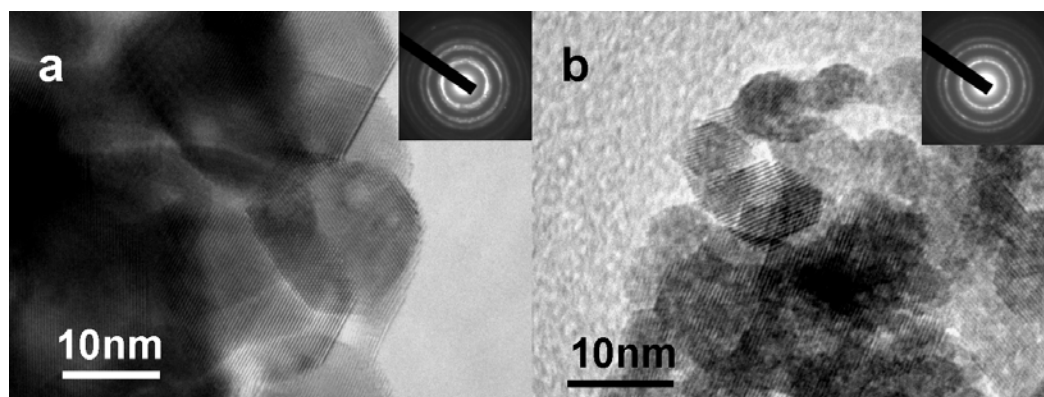


Fig. S4 HRTEM images of the as-obtained CeO₂ hierarchical structures: (a) urchin-like and (b) coral-like structures. Inset is the corresponding SAED patterns.

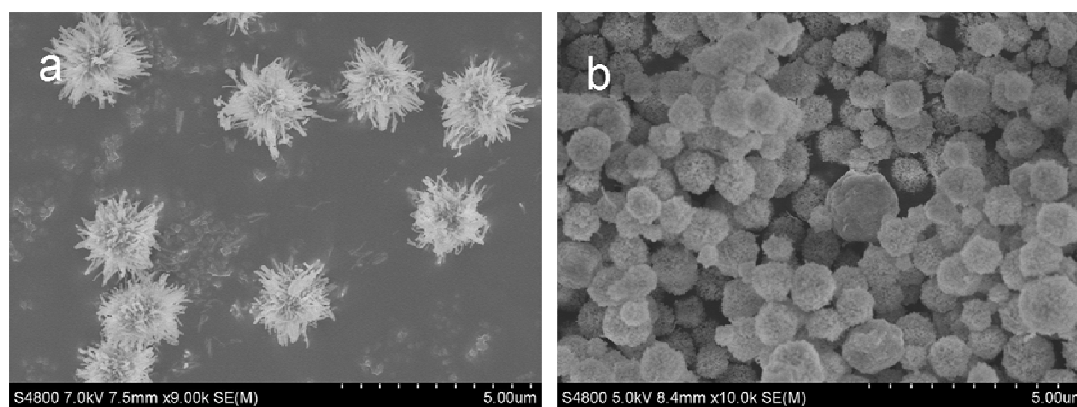


Fig. S5 SEM images of the CeO₂ hierarchical structures after catalytic measurement: (a) urchin-like; (b) coral-like structure.