

## Supporting Information

### Mesoporous Hollow TiO<sub>2</sub> Microspheres with Enhanced Photoluminescence

#### Prepared by Smart Template of Amino Acid

Shangjun Ding,<sup>a</sup> Fuqiang Huang,<sup>\*a</sup> Xinliang Mou,<sup>b</sup> Jianjun Wu,<sup>a</sup> and Xujie Lü<sup>a</sup>

<sup>a</sup> CAS Key Laboratory of Materials for Energy Conversion,

Shanghai Institute of Ceramics, Chinese Academy of Sciences (SICCAS),

Shanghai 200050, P. R. China (P.R.C).

Fax: +86 21 5241 6360, e-mail: [huangfq@mail.sic.ac.cn](mailto:huangfq@mail.sic.ac.cn)

<sup>b</sup> Inorganic Materials Analysis and Testing Center, SICCAS,

Shanghai 200050, P.R.C.

Fig. S1 The XRD pattern (a) and SEM morphology (b) of TiO<sub>2</sub> obtained with n-octane as solvent.

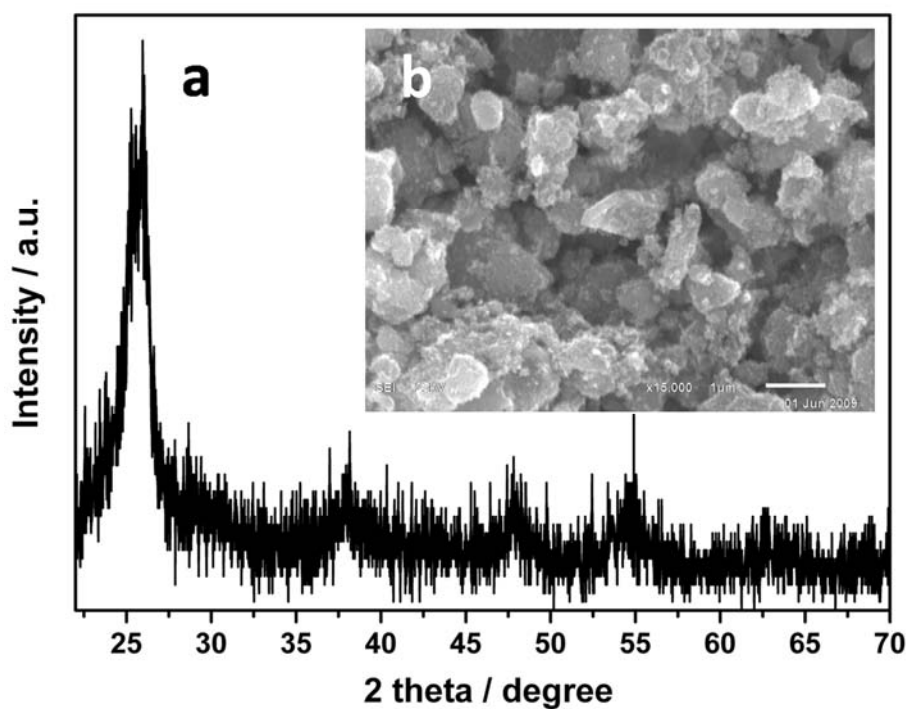


Fig. S2 The SEM images of TiO<sub>2</sub> microspheres obtained with n-butanol (a) and isopropanol (b) as solvent.

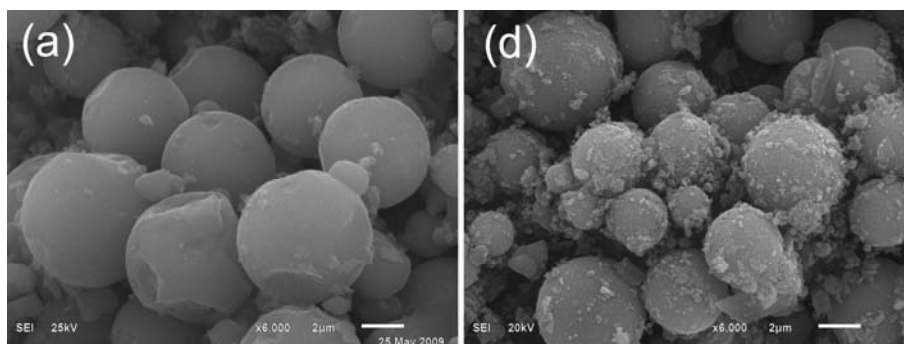


Fig. S3 The typical TEM images (a-b), XRD pattern (c) and EDS spectrum (d) of the Eu-doped TiO<sub>2</sub> hollow spheres.

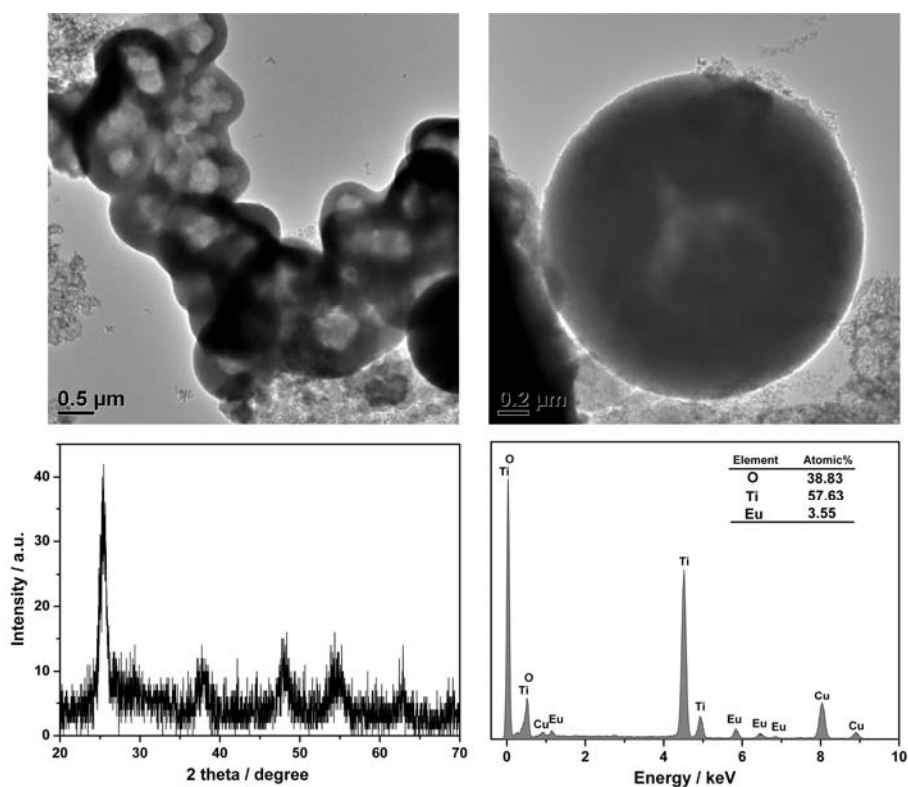


Fig. S4 The SEM morphology (a), TEM image (a, inset) and XRD pattern (b) of the Eu-doped TiO<sub>2</sub> sample prepared by conventional hydrothermal method.

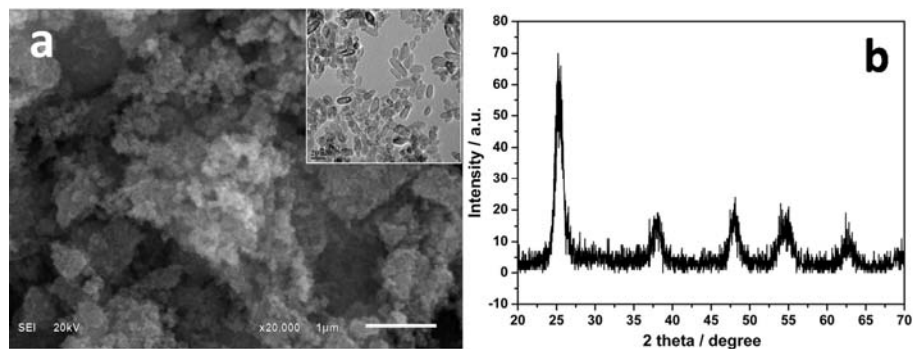


Table S1. Preparation conditions of different Eu-doped TiO<sub>2</sub> sample.

Sample	Reagents	Reaction
Hollow sphere	30mL EtOH+1mL TNB+0.06g Eu(NO <sub>3</sub> ) <sub>3</sub> +0.8g glycine	200°C(20h) in autoclave and
Nanoparticle	30mL EtOH + 1mL TNB + 0.06g Eu(NO <sub>3</sub> ) <sub>3</sub> + 2mL H <sub>2</sub> O	450°C(5h) for heat treatment