

## Supplementary Information

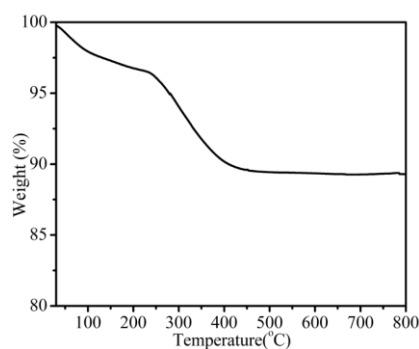
### Controlled synthesis of mesoporous anatase $\text{TiO}_2$ microspheres as scattering layer to enhanced photoelectrical conversion efficiency

Xiaohuan Miao, Kai Pan\*, Yongping Liao, Wei Zhou, Qingjiang Pan, Guohui Tian, and Guofeng Wang

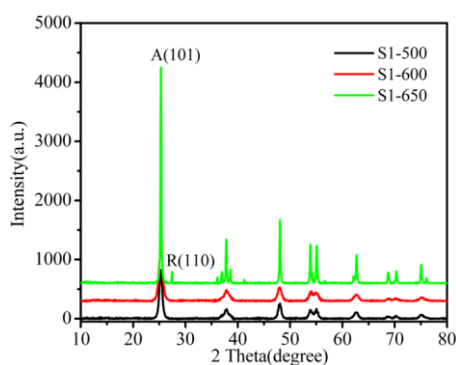
Key Laboratory of Functional Inorganic Material Chemistry, Ministry of Education, School of Chemistry and Materials Science, Heilongjiang University, Harbin 150080, People's Republic of China

Tel.: +86 451 8660 9141; fax: +86 451 8667 3647;

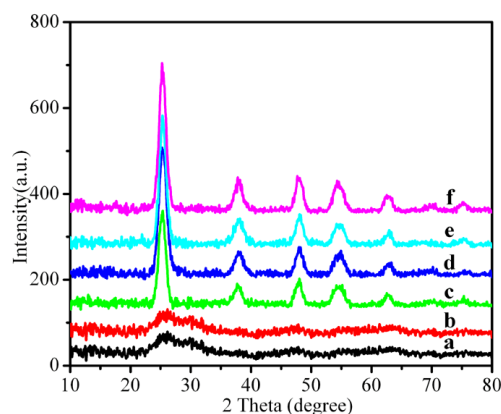
E-mail: [kaipan@hlju.edu.cn](mailto:kaipan@hlju.edu.cn)



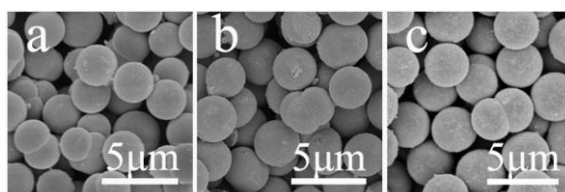
**Fig. S1** TG curve of the as-prepared S1 prepared with 24 h solvothermal reaction time.



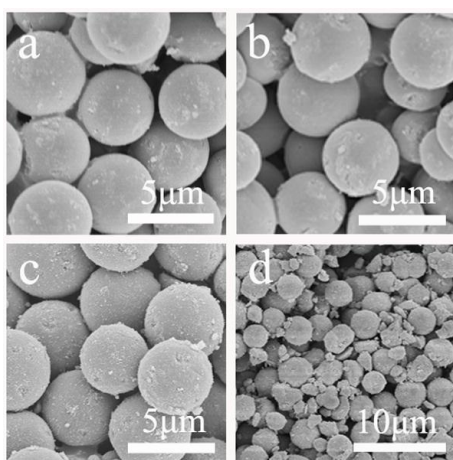
**Fig. S2** Wide-angle XRD patterns of S1-T. The T refers to the calcination temperature.



**Fig. S3** Wide-angle XRD patterns of S1 prepared at 150 °C for a given solvothermal reaction time: 10 min (a), 1.5 h (b), 3 h (c), 7 h (d), 12 h (e) and 18 h (f).



**Fig. S4** Typical SEM images of S1 calcinated at 500 °C for different solvothermal reaction times of 10 min (a), 12 h (b) and 24 h (c).



**Fig. S5** Typical SEM images of (a) c-S2, (b) c-S3, (c) c-S4 and (d) c-S5.