

Application of hierarchical TiO_2 spheres as scattering layer for enhanced photovoltaic performance in dye sensitized solar cell

Zhiyong Gao^a, Zhuangli Wu^a, Xiaomin Li^a, Jiuli Chang^{a,b}, Dapeng Wu^{a,b}, Pengfei Ma^c, Fang Xu^a, Shuyan Gao^a, Kai Jiang^{a,c*}

^a College of Chemistry and Chemical Engineering, Henan Normal University, Henan Xinxiang 453007, PR China

^b Collaborative innovation center of motive power & key materials, Henan, 453007, PR China

^c Key Laboratory of Photovoltaic Materials of Henan Province, Henan Xinxiang, 453007, PR China

Corresponding author:

Email: jiangkai6898@126.com (K. Jiang), Tel/fax: +86 373 3326209

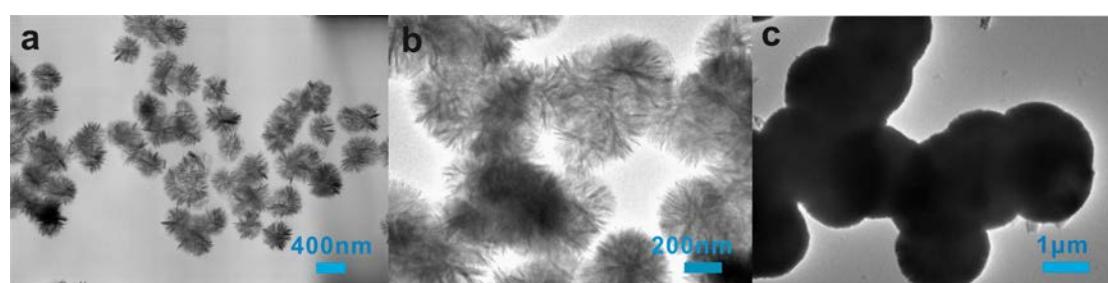


Fig. S1 TEM of a) H1, b) H2 c) H5.

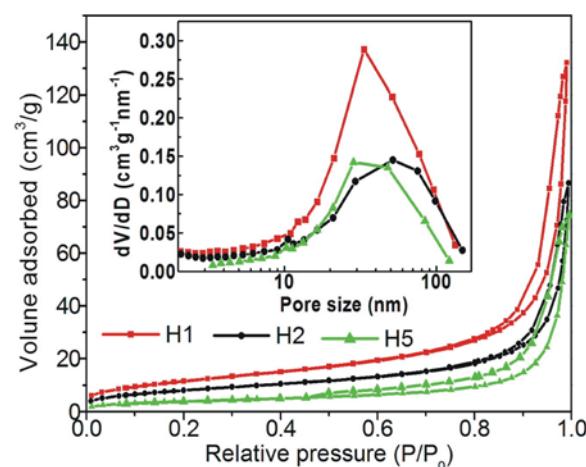


Fig. S2 N_2 sorption isotherms and corresponding BJH pore size distributions of H1, H2 and H5 after calcination at 450 °C for 2 h.

Table S1 Surface parameters of calcinated H1, H2 and H5.

Products	BET surface area (m^2/g)	Pore size (cm^3/g)	Pore size (nm)
H1	42.71	0.20	33.42
H2	29.84	0.13	51.75
H5	14.23	0.11	28.48

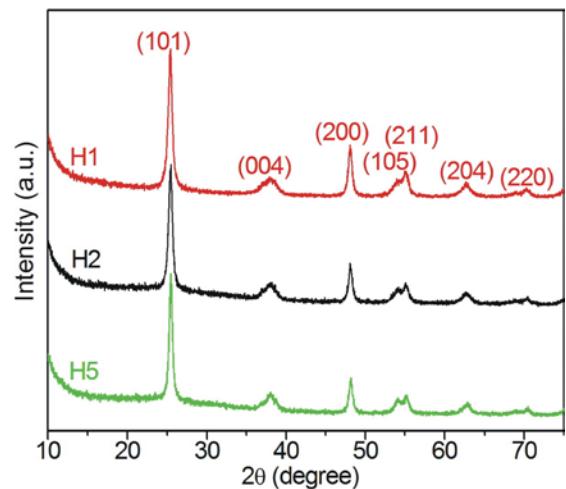


Fig. S3 XRD of calcinated H1, H2 and H5.