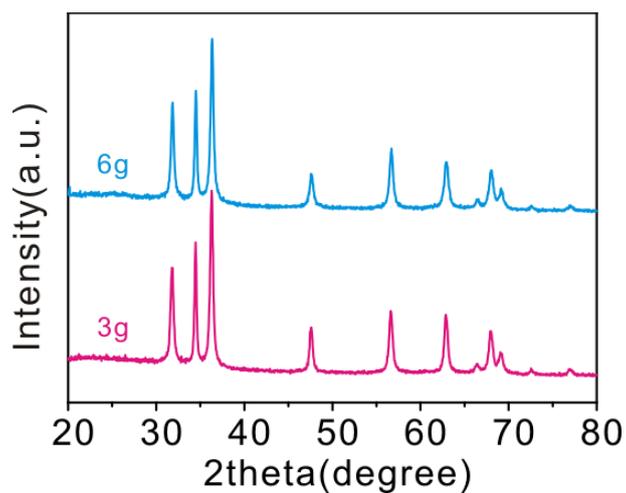


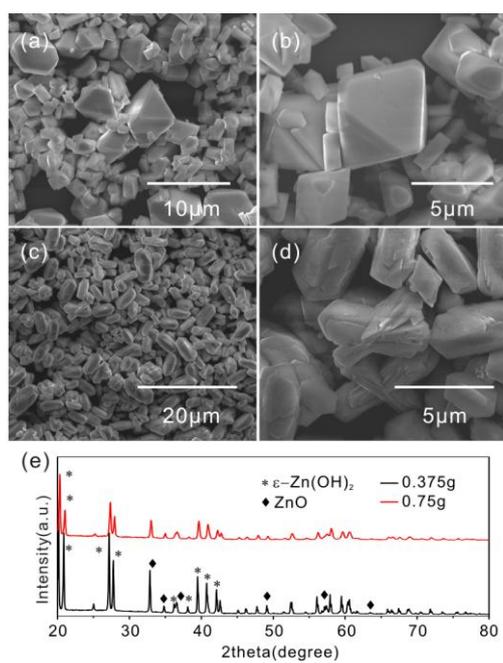
Supplementary Information for

**PEG aggregation templated porous ZnO nanostructure: room temperature solution synthesis, pore formation mechanism, and their photoluminescence properties**

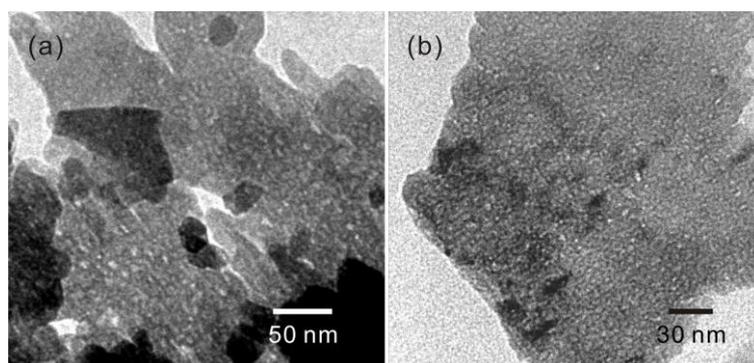
Yong Jia, Xin-Yao Yu, Tao Luo, Mei-Yun Zhang, Jin-Huai Liu and Xing-Jiu Huang



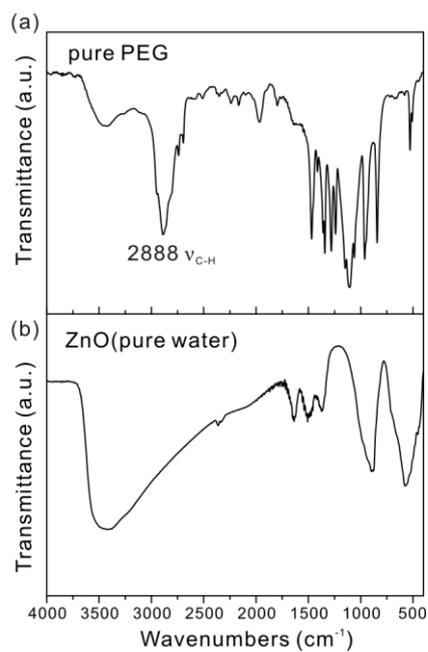
**Fig. S1** XRD patterns of the porous ZnO nanostructures prepared with 3g and 6g of zinc nitrate.



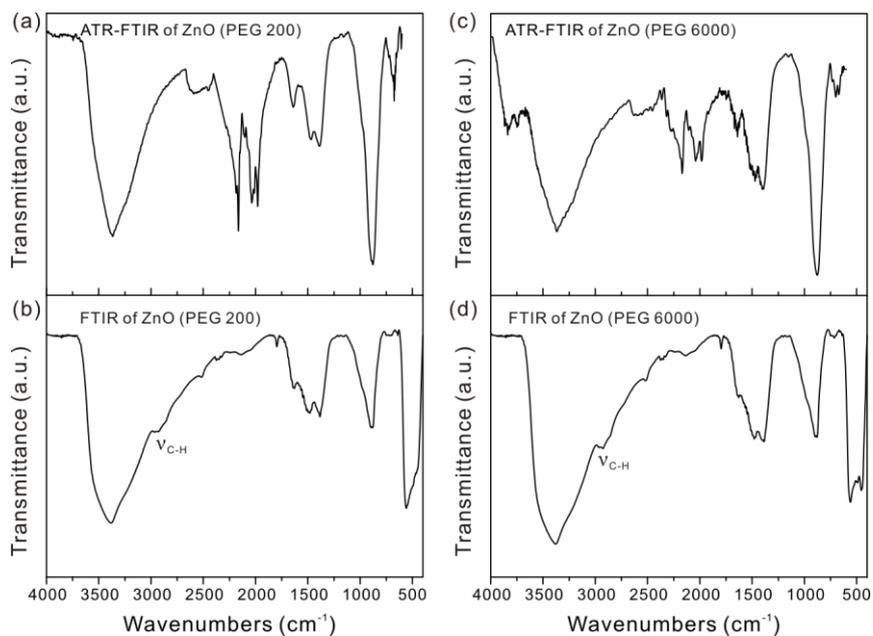
**Fig. S2** SEM images of the products prepared with 0.375g (a, b) and 0.75g (c, d) of zinc nitrate. XRD patterns (e) of the products.



**Fig. S3** TEM images of the ZnO products synthesized in the mixed water and PEG 20000.



**Fig. S4** Transmission FTIR spectra of the pure PEG (a), and ZnO (b) synthesized in pure water.



**Fig. S5** ATR-FTIR and transmission FTIR spectra of ZnO synthesized in the mixed water and PEG 200 (a, b) and PEG 6000 (c, d).