

The Size Effect of TiO₂ Hollow Microspheres on Photovoltaic Performance of ZnS/CdS Quantum Dots Sensitized Solar Cell

Zhen Li ^{1,2}, Libo Yu ^{1,*}

- ¹ Institute of Flexible Composite Materials, College of Chemistry and Chemical Engineering, Hexi University, Zhangye City 734000, Gansu Province, China; lizhen@hxy.edu.cn
- ² Key Laboratory of Hexi Corridor Resources Utilization of Gansu, Hexi University, Zhangye City 734000, Gansu Province, China
- * Correspondence: yulibo@hxy.edu.cn; Tel.: +86-1569-364-8726

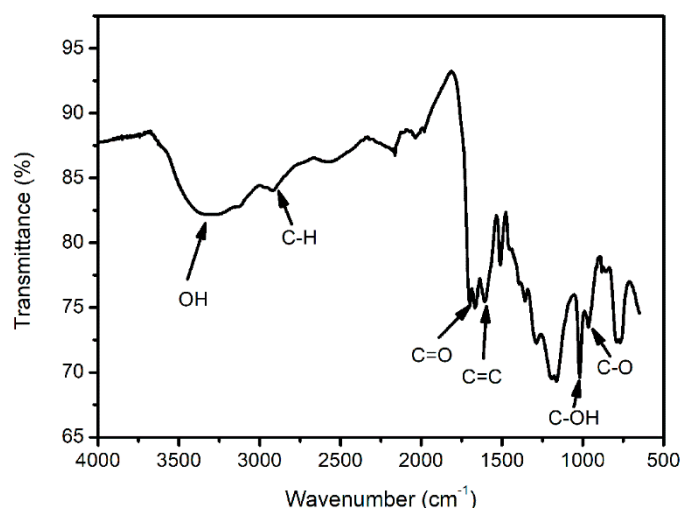


Figure S1. The IR spectrum of carbonaceous spheres template.

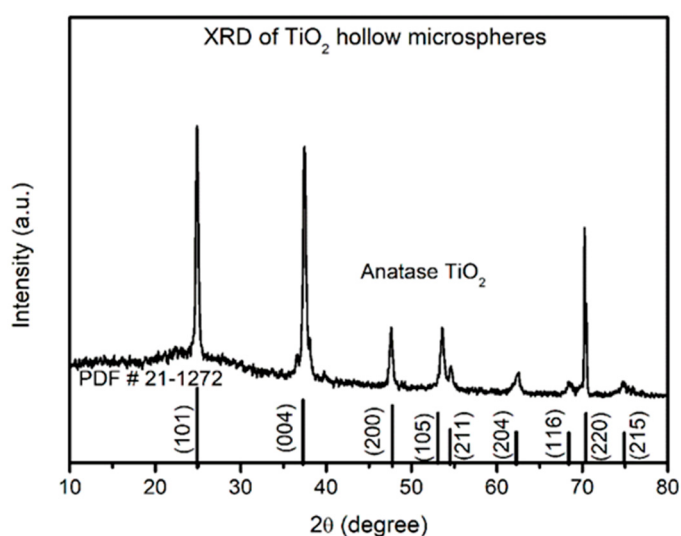


Figure S2. The XRD pattern of TiO₂ hollow microspheres obtained by carbonaceous template method.

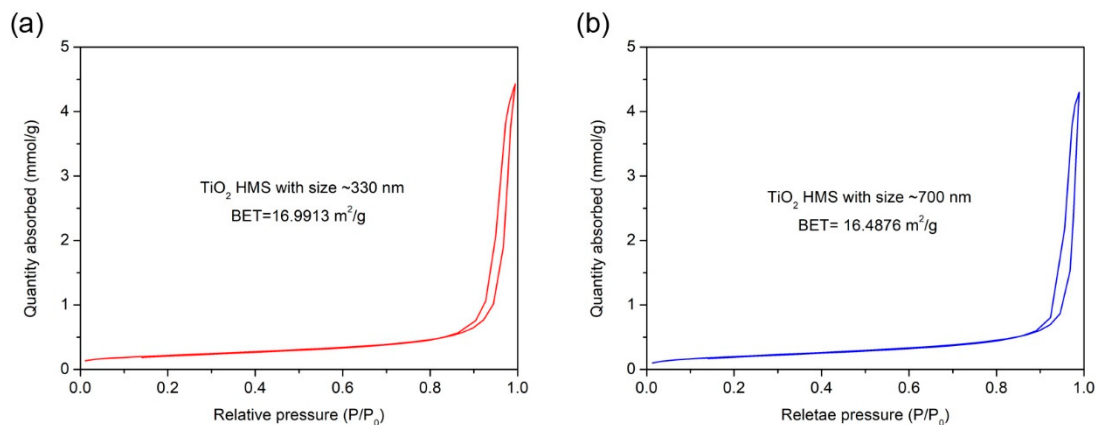


Figure S3. The N₂ adsorption-desorption isotherm curves of TiO₂ HMS with different sizes, (a) ~330 nm, (b) ~700 nm.

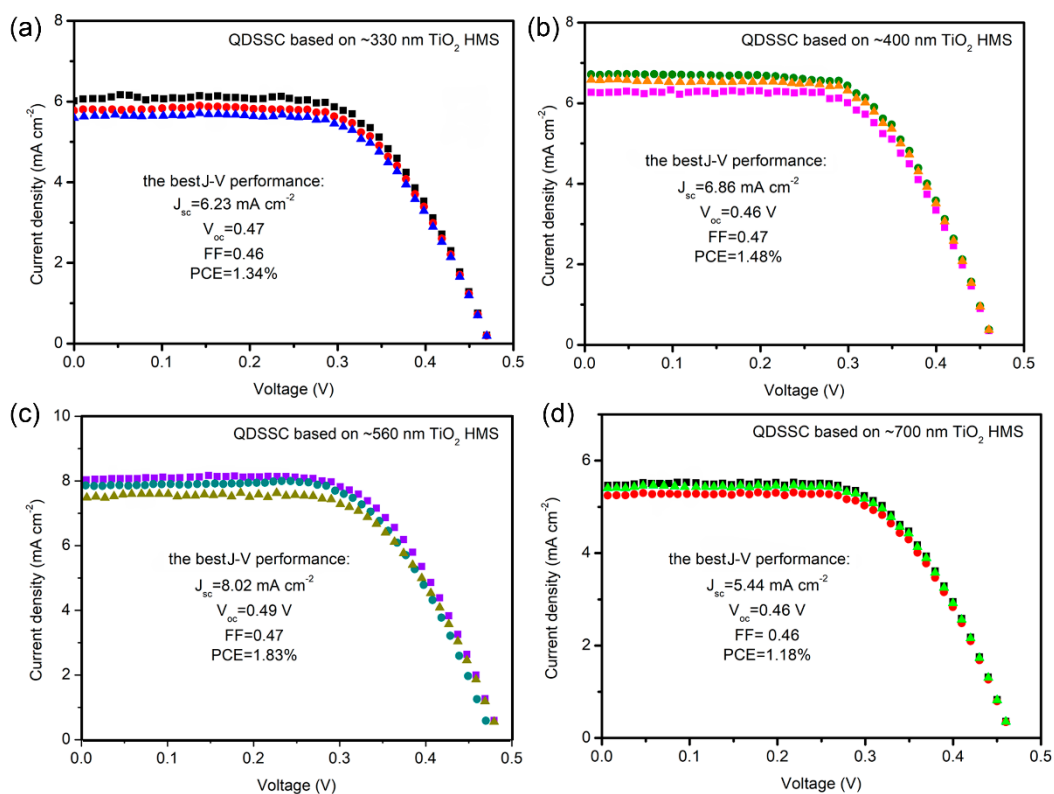


Figure S4. The J-V curves of QDSSC based on TiO₂ HMS with different sizes, (a) ~330 nm TiO₂ HMS, (b) ~400 nm TiO₂ HMS, (c) ~560 nm TiO₂ HMS, (d) ~700 nm TiO₂ HMS; three times repeated tests were carried out on each QDSSC, and the best results are showed.

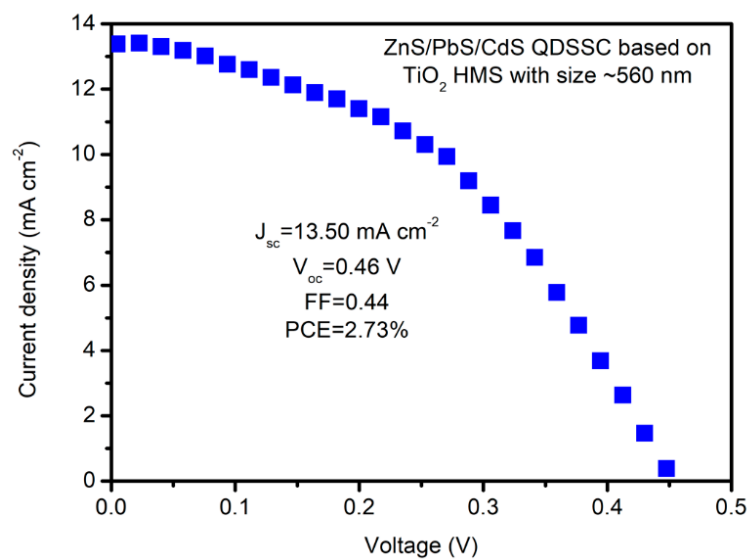


Figure S5. The J-V curve of ZnS/PbS/CdS QDSSC based on ~560 nm TiO₂ HMS.