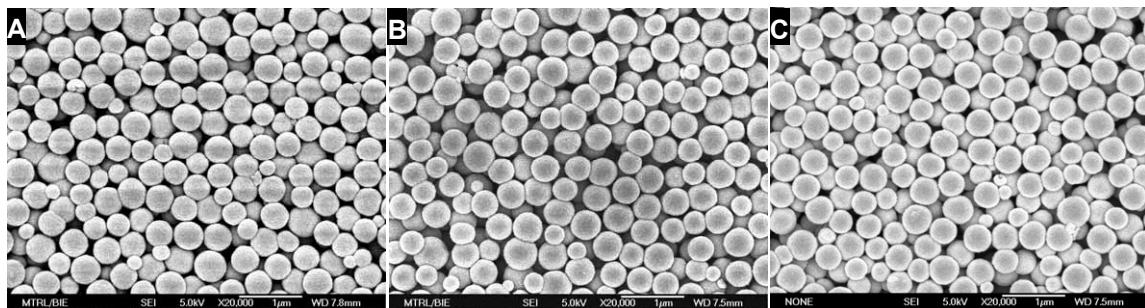


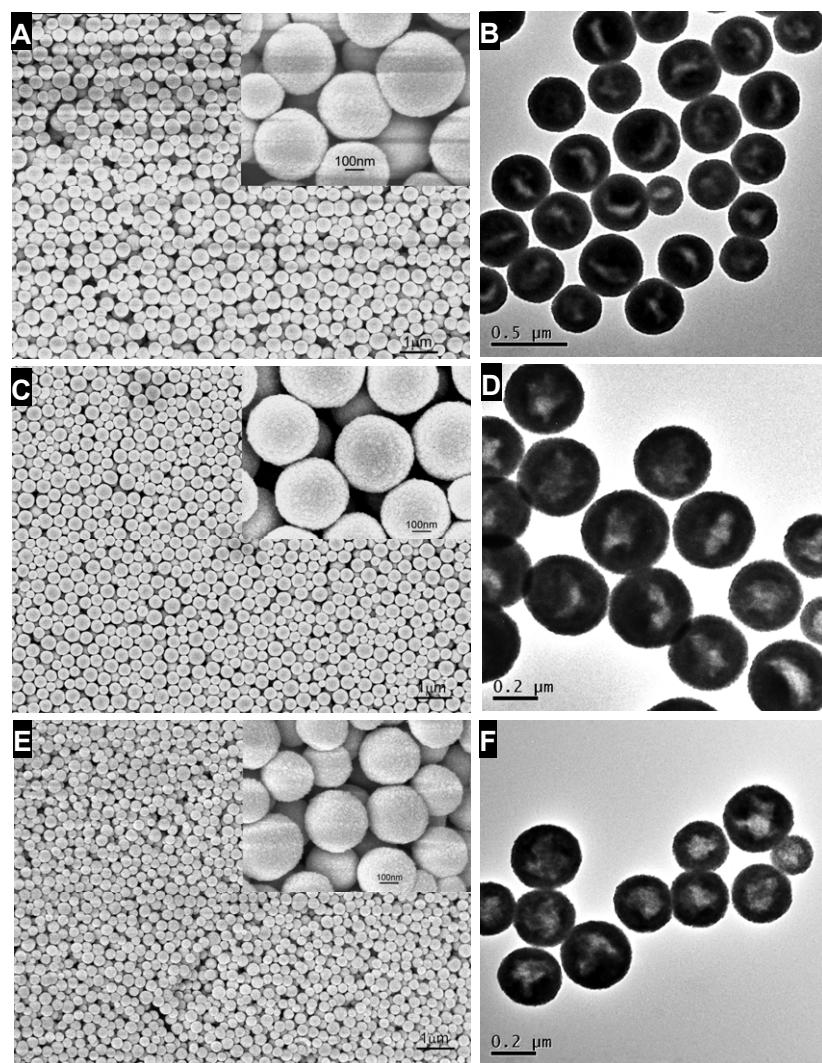
## Supporting Information

### One-pot Formation of SnO<sub>2</sub> Hollow Nanospheres and $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>@SnO<sub>2</sub> Nanorattles with Large Void Space and Their Lithium Storage Properties

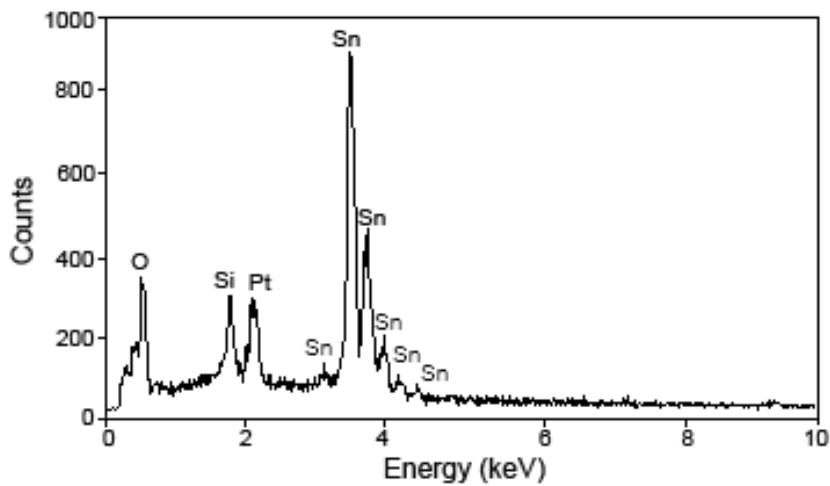
*Jun Song Chen, Chang Ming Li, Wen Wen Zhou, Qing Yu Yan, Lynden A. Archer,  
and Xiong Wen Lou\**



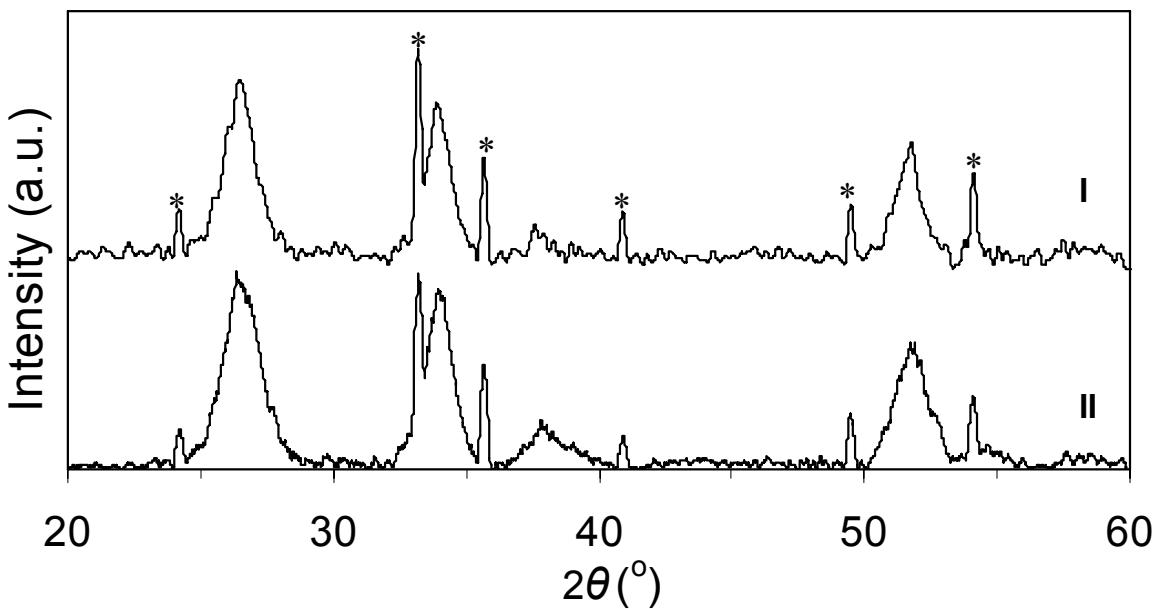
**Figure S1.** Low-magnification FESEM images of SnO<sub>2</sub> nanospheres synthesized at 200 °C with different reaction times: A, 4 h; B, 8 h; C, 24 h.



**Figure S2.** SnO<sub>2</sub> hollow nanospheres synthesized at 150 °C for 4 h (A, B), 8 h (C, D) and 24 h (E, F).



**Figure S3.** EDX spectrum of as-prepared  $\text{SnO}_2$  hollow nanospheres after 24 h of reaction. The Si peak is from the Si wafer substrate, while the Pt peak is from Pt coating.



**Figure S4.** XRD patterns of as-prepared  $\text{Fe}_2\text{O}_3@\text{SnO}_2$  nanorattles synthesized with different reaction times: I, 2 h; II, 24 h. Peaks marked with asterisks are from  $\alpha$ - $\text{Fe}_2\text{O}_3$  (JCPDS card no. 33-0664).