

Supporting Information

Design and Evaluation of Novel Zn Doped Mesoporous TiO₂ Based Anode

Material for Advanced Lithium Ion Batteries

Zahid Ali,^a Seung Nam Cha,^b Jung Inn Sohn,^b Imran Shakir,^a Chanzeng Yan,^a Jong Min Kim^b
and Dae Joon Kang*^a

^aBK 21 Physics Research Division, Department of Energy Science, Institute of Basic Sciences,
SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Suwon 440-746,
Korea.

^bFrontier Research Lab, Samsung Advanced Institute of Technology, Yongin, Republic of Korea

*Corresponding Author: djkang@skku.edu

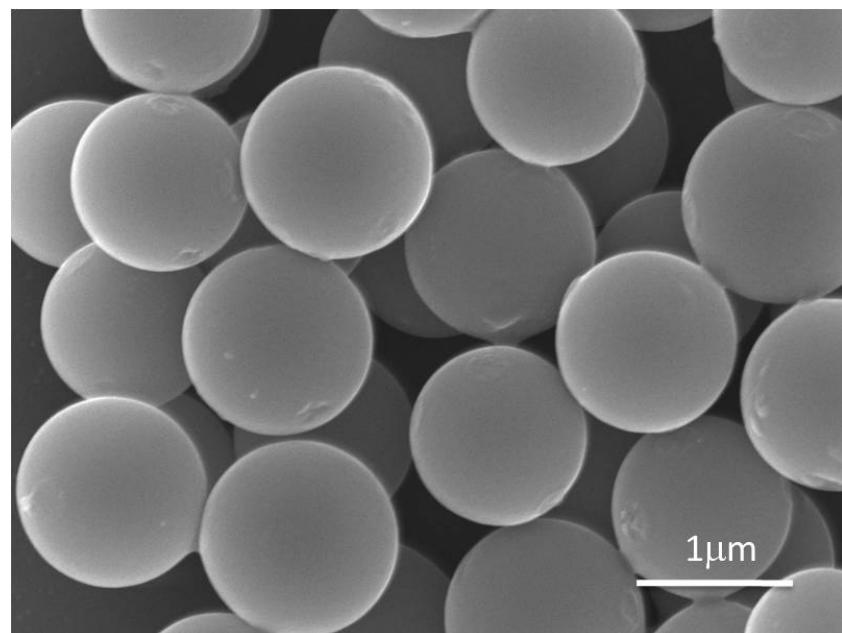


Fig. S1: SEM image of as synthesized TiO₂ microspheres.

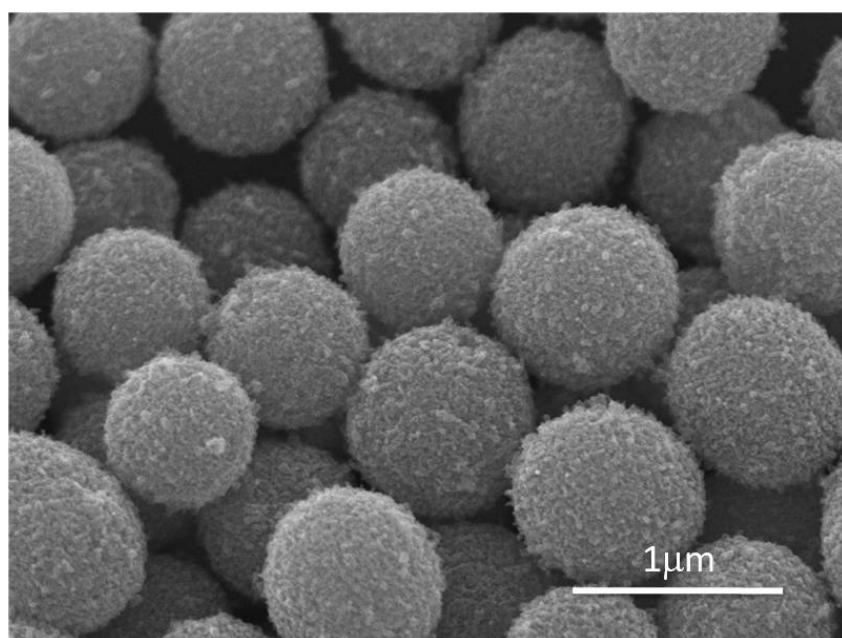


Fig. S2: SEM image of mesoporous TiO₂ microspheres calcined at 500 °C.

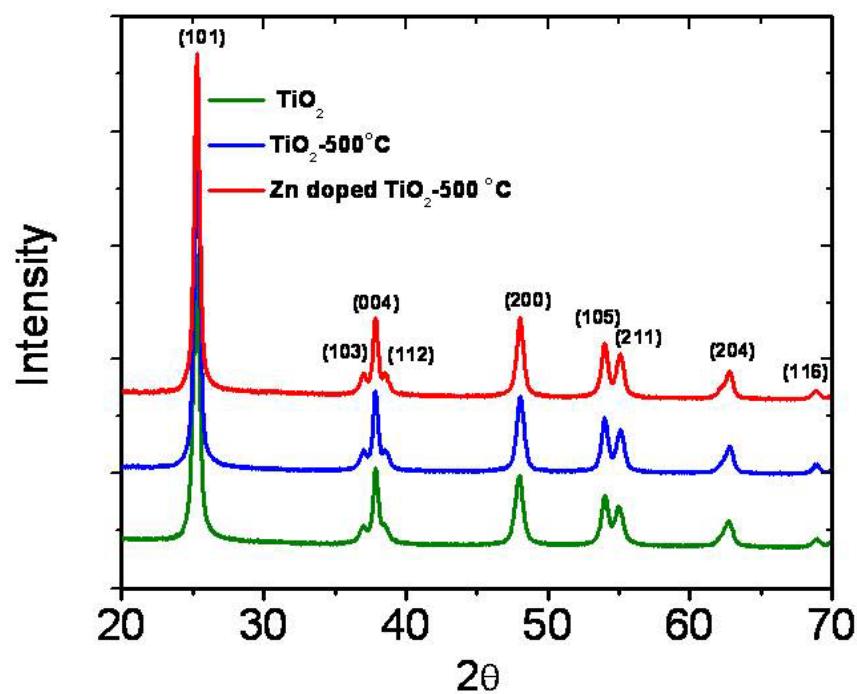


Fig.S3: XRD patterns of mesoporous TiO_2 microspheres, mesoporous TiO_2 microspheres calcined at 500°C and zinc doped mesoporous TiO_2 microspheres calcined at 500°C .

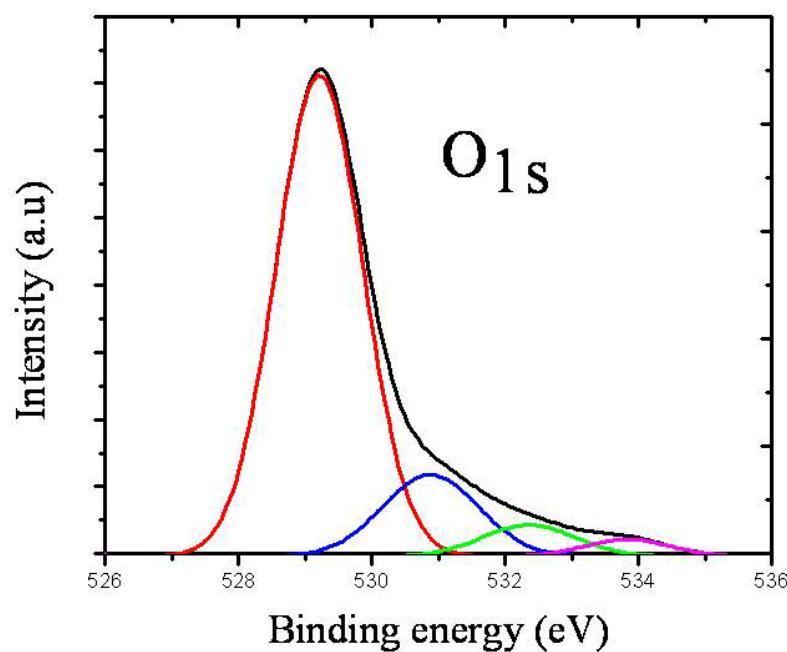


Fig.S4: O1s XPS core level spectra for Zn doped mesoporous TiO_2 microspheres.

Table 1. Quantitative ratios of elements determined by XPS and TEM

Analysis Tool	Atomic %age of Titanium	Atomic %age of Zinc	Atomic %age of Oxygen
TEM	46.25	1.69	52.06
XPS	40.28	2.01	57.71