

## Supporting Information for

### Rugated porous $\text{Fe}_3\text{O}_4$ thin films as stable binder-free anode materials for lithium ion batteries

Hua Cheng<sup>1,2,3</sup>, Zhouguang Lu<sup>4</sup>, Ruguang Ma<sup>1</sup>, Yucheng Dong<sup>1,2</sup>, H. E. Wang<sup>1</sup>,  
Liujiang Xi<sup>1</sup>, Lingxia Zheng<sup>1,2</sup>, Chun Kwan Tsang<sup>1,2</sup>, Hui Li,<sup>1,2</sup> C.Y. Chung<sup>1</sup>, J. A.  
Zapfen<sup>1,2</sup>, Yang Yang Li<sup>1,2,\*</sup>

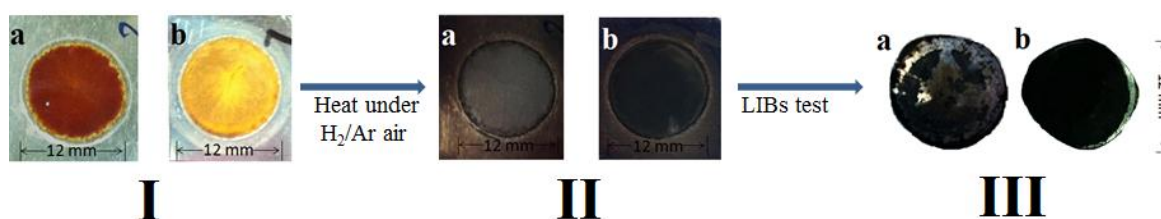


Figure S1. Optic photographs of the straight-channel (a) and rugated (b) samples at different stages: (I) as-anodized; (II) after thermal treatment in  $\text{H}_2/\text{Ar}$ ; (III) after the electrochemical test with 50 charge-discharge cycles.