**Electronic Supplementary Information** 

## Hematite nanodiscs exposing (001) facet: Synthesis, formation mechanism and application for Li-ion battery

Jun Lu, Qing Peng<sup>\*</sup>, Zhongying Wang, Caiyun Nan, Lihong Li and Yadong Li



Fig. ESI 1 TEM images of  $Fe_2O_3$  nanodiscs after cycling. The nanodiscs generally maintained the morphology and size after the electrochemical cycling, but their became porous and their smooth surface became rough due to the conversion reaction.