

## Electronic supplementary information

### Yttrium-modified $\text{Li}_4\text{Ti}_5\text{O}_{12}$ as an effective anode material for lithium ion batteries with outstanding long-term cyclability and rate capabilities

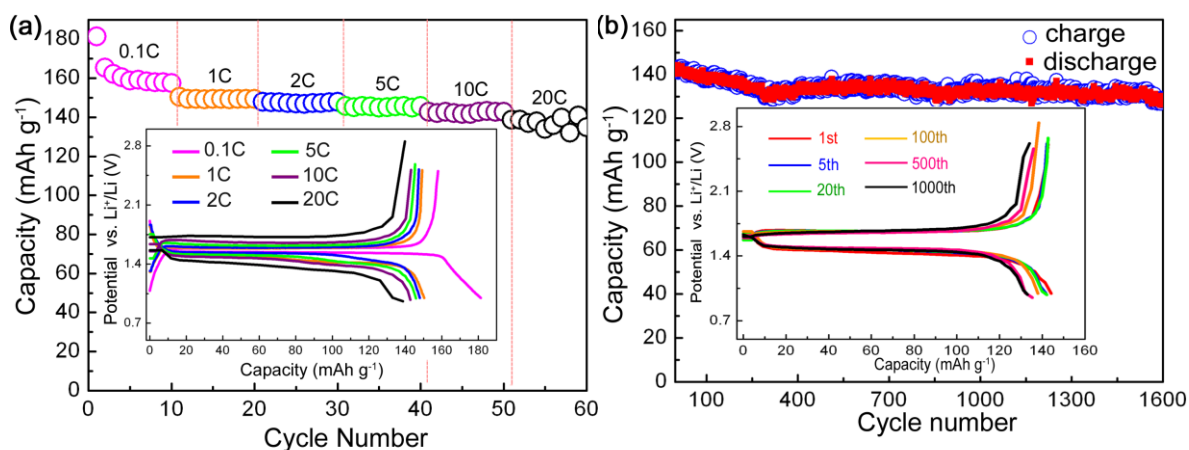
Yu-Jun Bai<sup>\*1,2</sup>, Chen Gong<sup>1</sup>, Yong-Xin Qi<sup>\*1</sup>, Ning Lun<sup>1</sup>

<sup>1</sup>Key Laboratory for Liquid-Solid Structural Evolution and Processing of Materials (Ministry of Education), Shandong University, Jinan 250061, PR China

<sup>2</sup>State Key laboratory of Crystal Materials, Shandong University, Jinan, 250100

\*Yu-Jun Bai: byj97@126.com; Tel/Fax: +8653188392315

In order to confirm the excellent electrochemical performance of  $\text{Y}_{0.06}\text{LTO}$ , the rate capabilities and long-term cyclic performance were also evaluated for another cell, as shown in Fig. S1. The reversible capacities are 158.0, 149.4, 147.8, 145.8, 142.7 and 134.9  $\text{mAh g}^{-1}$  at the current rates of 0.1, 1, 2, 5, 10 and 20 C for every 10 cycles. When cycled at 10 C for 1600 times, a reversible capacity of 129.1  $\text{mAh g}^{-1}$  can be maintained.



**Fig. S1** (a) Rate capabilities and (b) long-term cyclic performance of another  $\text{Y}_{0.06}\text{LTO}$  cell.