Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting materials:

Lithium titanate anode for high-performance lithium-ion batteries using octadecylamine and folic acid-functionalized graphene oxide for fabrication of ultrathin lithium titanate nanoflakes and modification of binder

Li Youjie[a], Li Ruiyi[a], Yang Yongqiang[b] and Li Zaijun*[a]

[a] *School of Chemical and Material Engineering, Key Laboratory of synthetic and biological Colloids, Ministry of Education, Jiangnan University, Wuxi 214122, China*

[b] *National Graphene Products Quality Supervision and Inspection Center (Jiangsu), Jiangsu Province Special Equipment Safety Supervision and Inspection Institute: Branch of Wuxi, 214174, China*

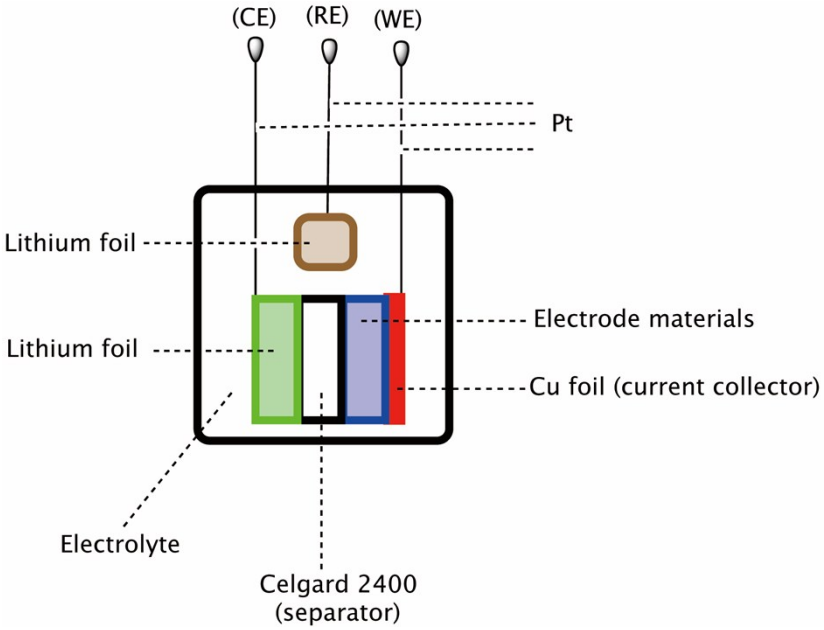

Fig. s1 The construction of three-electrode cell

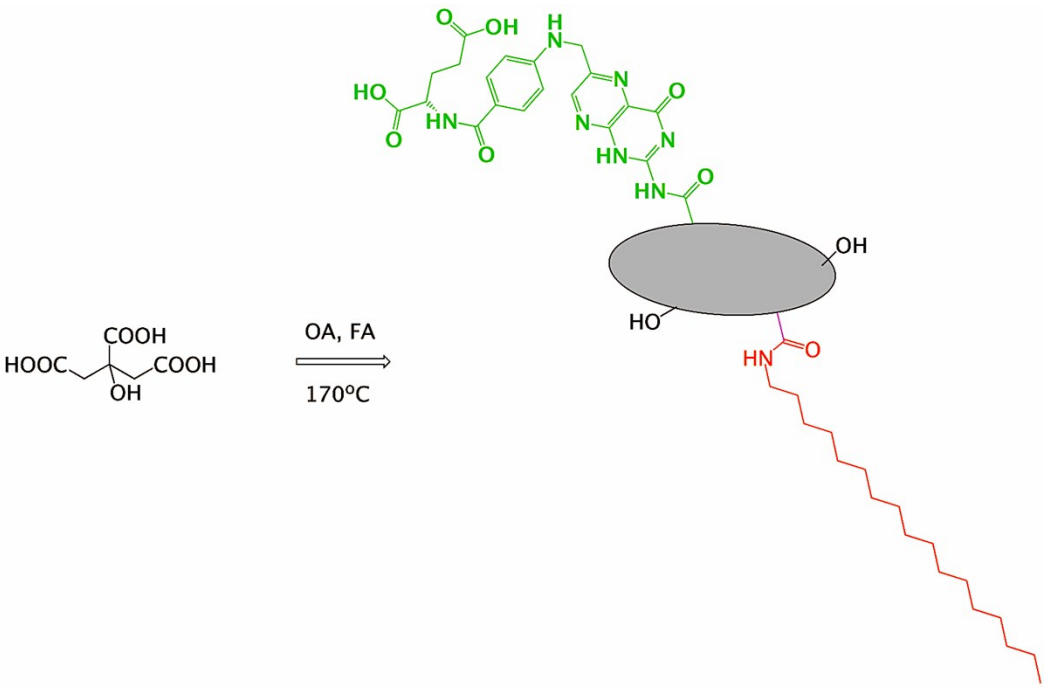

Fig. s2 The procedure for synthesis of OA-GO-FA

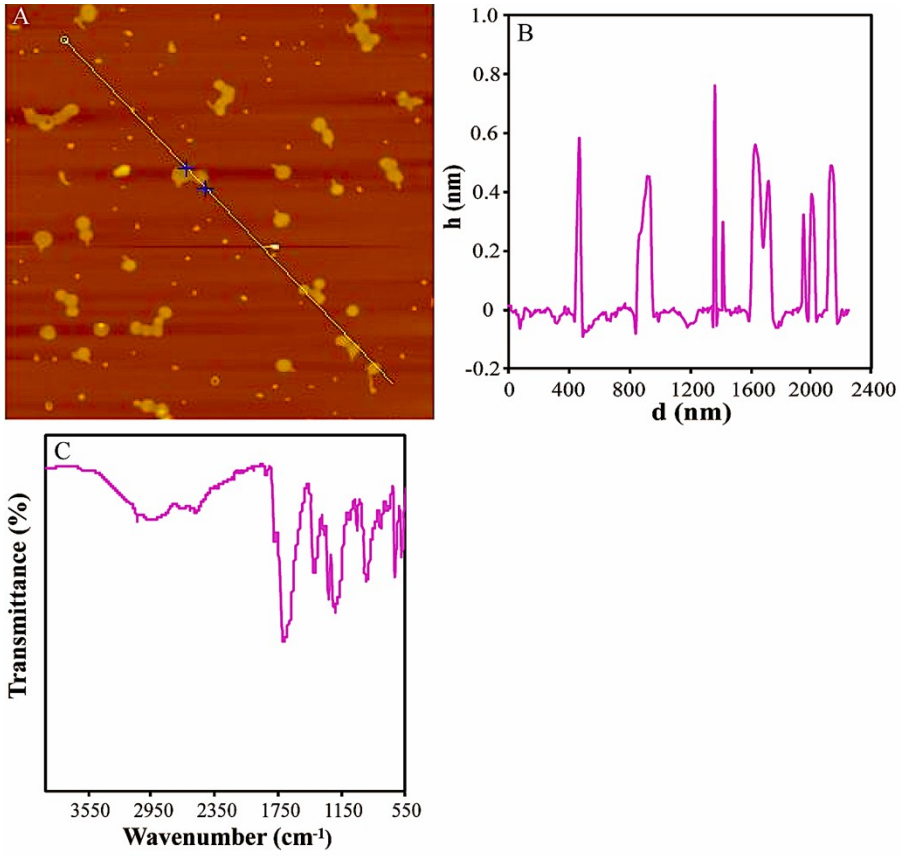

Fig. s3 The AFM image (A and B) and IR spectrum (C) of OA-GO-FA

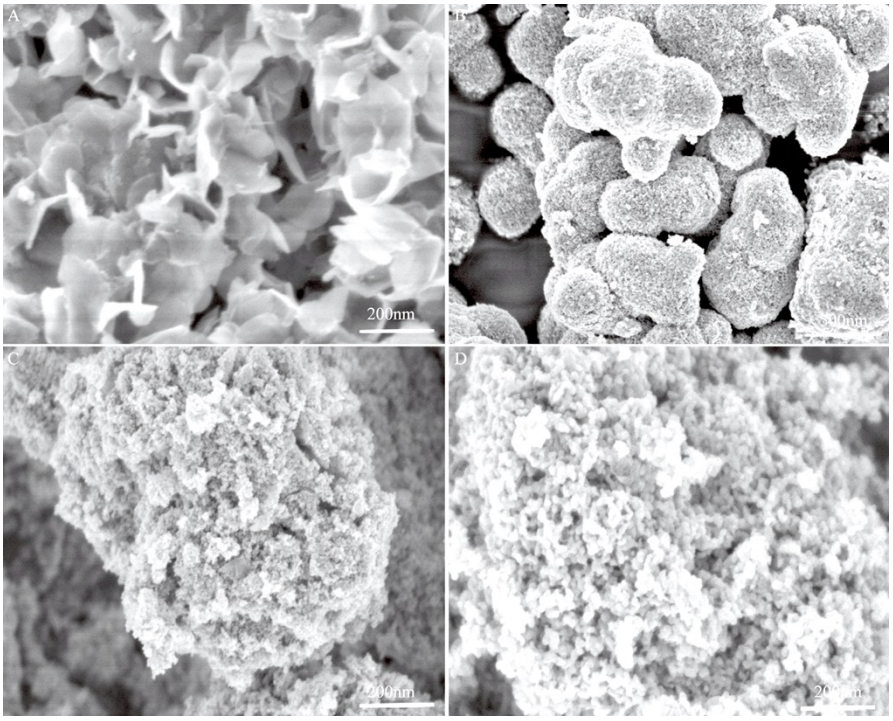

Fig. s4 The SEM images of p-LTO samples made in the absence of GO (B) and in the presence of OA-GO-FA (A), GO (C) and OA-GO (D)

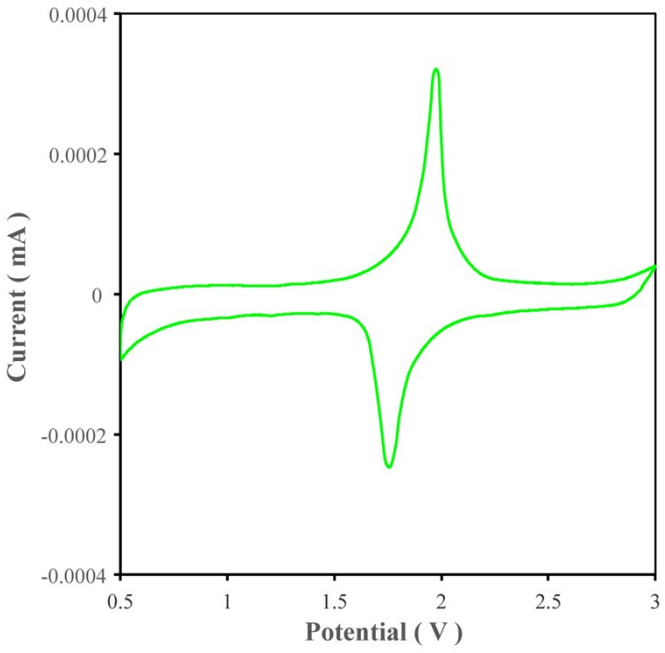

Fig. s5 The CV curve of OA-G-FA cell

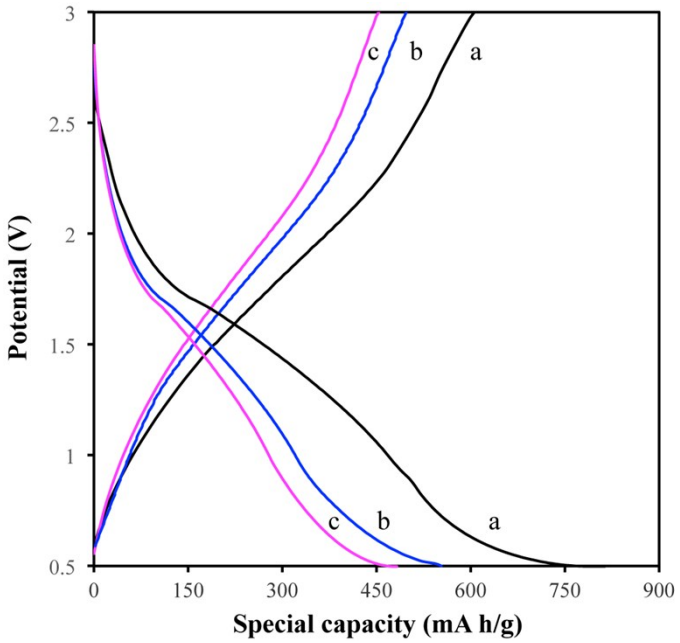

Fig. s6 The charge/discharge curves of OA-G-FA cell at 0.2 C at the first cycle (a), second cycle (b) and third cycle (c).

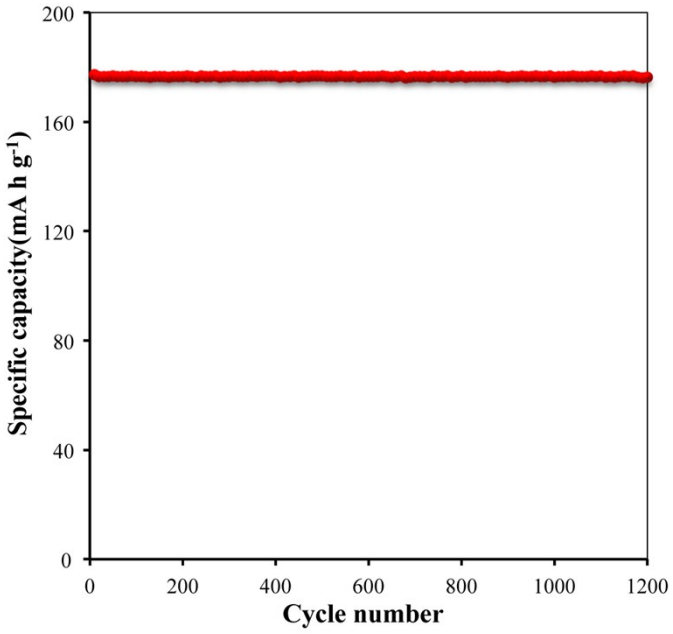

Fig. s7 The specific capacity of LTO@OA-G-FA/PVDF-OA-GO-FA electrode at 1C

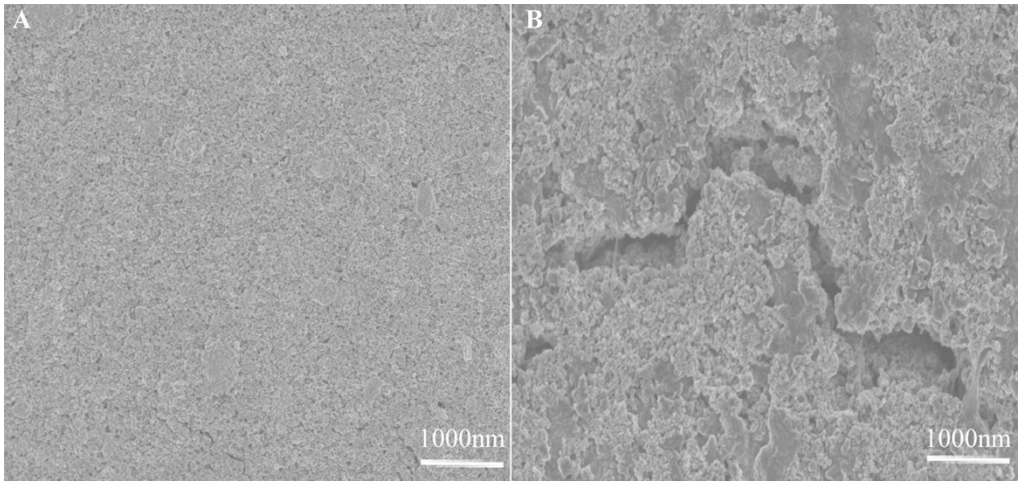

Fig. s8 The SEM images of LTO@OA-G-FA/PVDF-OA-GO-FA electrode (A) and LTO/PVDF electrode after 1200 cycles

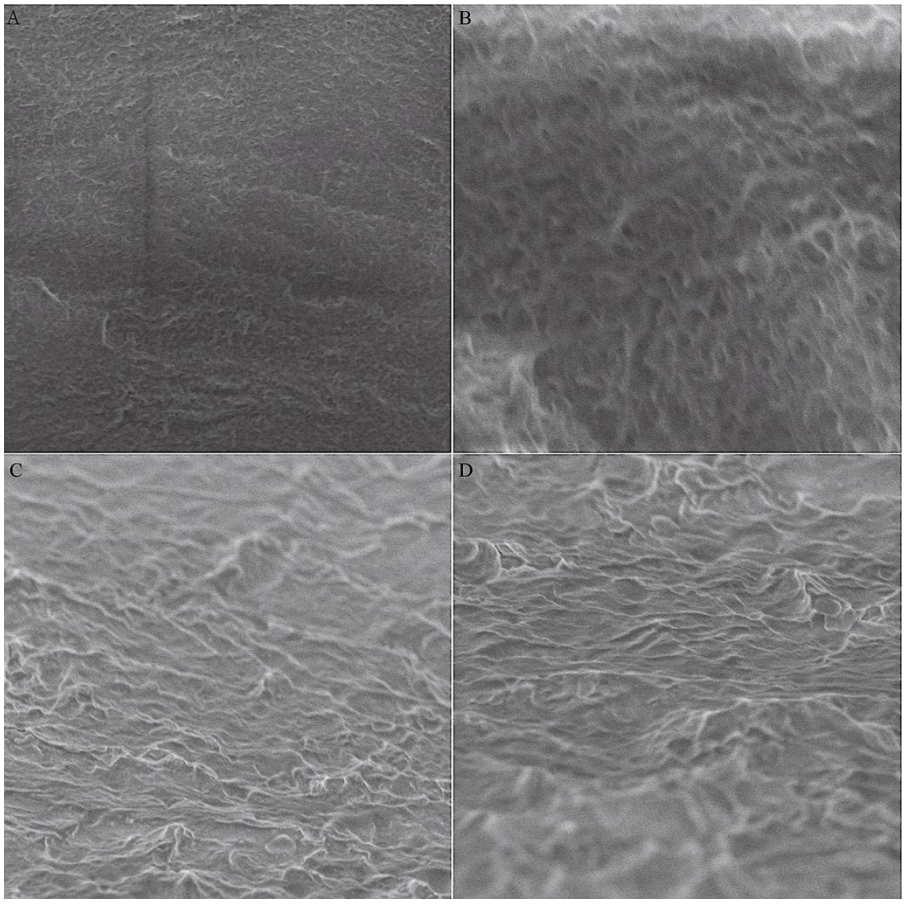

Fig. s9 SEM images of the PVDF film in the absence (A), the presence of 5% (b), 10% (c) and 20% OA-GO-FA (d)

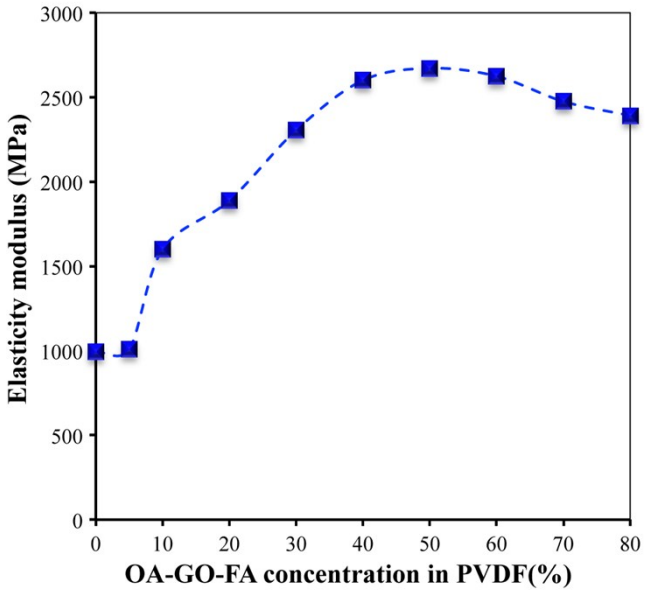

Fig. s10 The elasticity modulus of the PVDF film containing different concentration of OA-GO-FA