

Supplementary Information:

Effectively raising the rate performance and cyclability of graphite anode via hydrothermal modification with melamine and its electrochemical derivatives

Zong-Xiao Zhao¹, Hui-Ling Zhu², Wei Liu¹, Yong-Xin Qi¹, Tao Li^{*1} and Yu-Jun Bai^{*1}

¹Key Laboratory of Liquid-Solid Structural Evolution and Processing of Materials of Ministry of Education, State Key Laboratory of Crystal Materials, Shandong University, Jinan, Shandong, 250061, PR China

²School of Materials Science and Engineering, Shandong University of Science and Technology, Qingdao, 266590, PR China

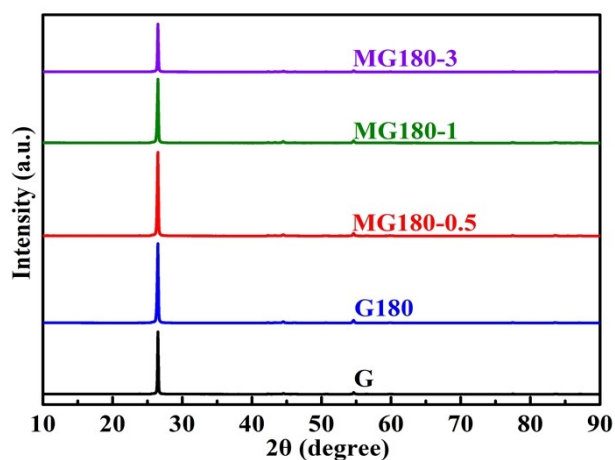


Fig. S1 XRD patterns for G, G180, MG180-0.5, MG180-1 and MG180-3.

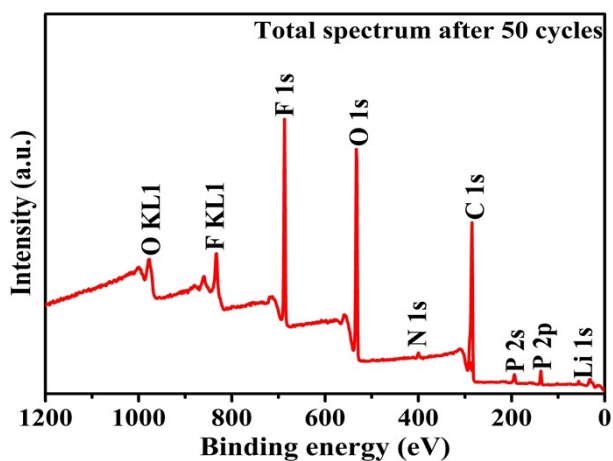


Fig. S2 Total XPS spectrum for MG180-0.5 after 50 cycles.

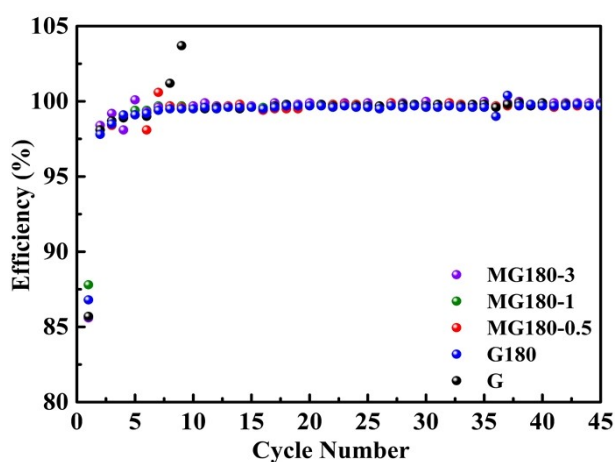


Fig. S3 Coulombic efficiency of G, G180, MG180-0.5, MG180-1 and MG180-3 at various current rates.

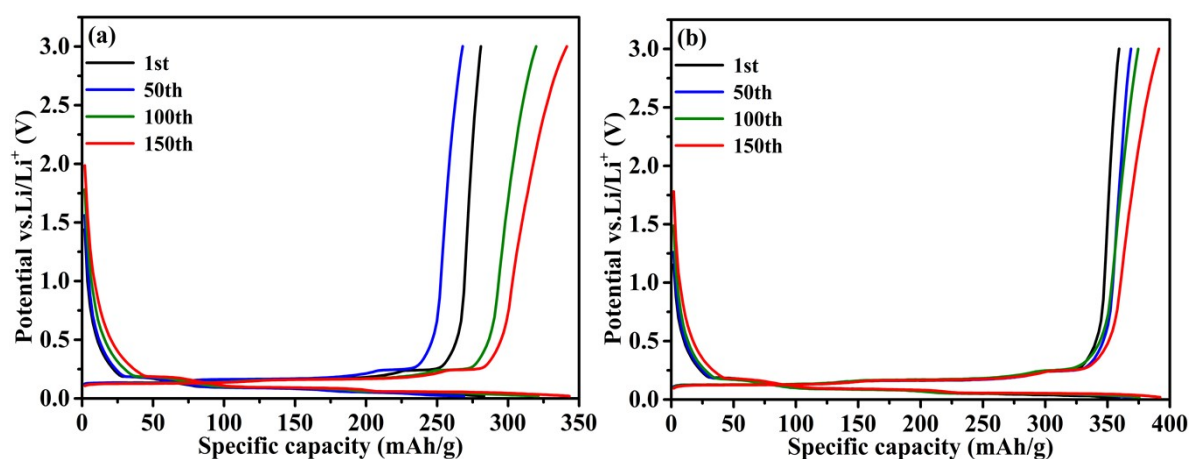


Fig. S4 Lithiation/delithiation curves of the 1st, 50th, 100th and 150th cycles at 0.3 C for G (a), and MG180-0.5 (b).

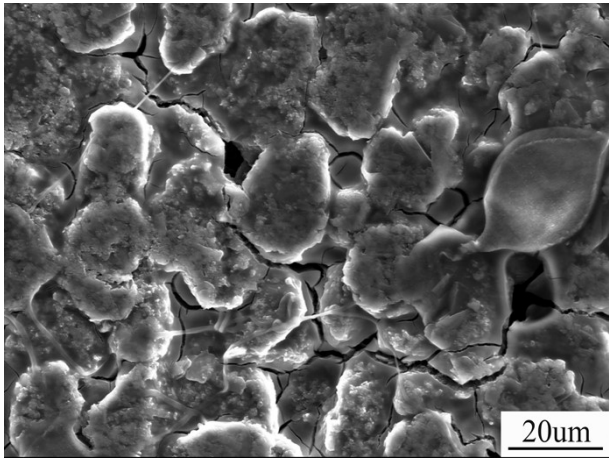


Fig. S5 SEM image of MG180-3 after 50 cycles.