

Supplementary Material

A facile method to prepare reduced graphene oxide with nano-porous structure as electrode materials for high performance capacitors

Nian Yang^a, Xiaoyang Xu^a, Lingzhi Li^a, Heya Na^a, Huan Wang^a, Xuefang Wang^a,

Fubao Xing^{a,b,*}, Jianping Gao^{a,b,†}

^aSchool of Science, Tianjin University, Tianjin 300072, P R China

^bCollaborative Innovation Center of Chemical Science and Engineering, Tianjin 300072, P R China

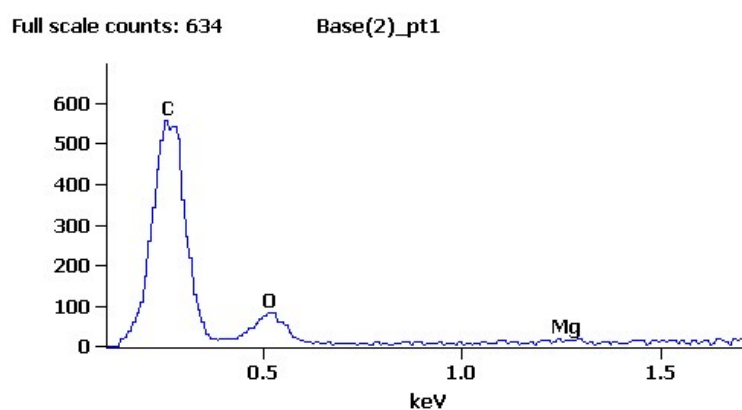


Figure S1 EDX spectra of M-rGO

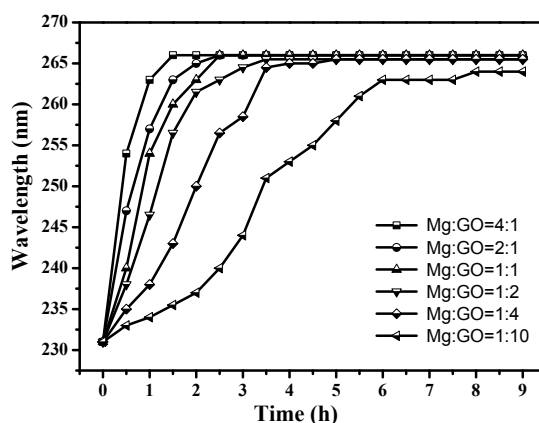


Figure S2 The reduction of GO at different Mg/GO ratio

* Corresponding author. Tel.: (+86)15522461762; Fax: (+86)22-2740-3475.
E-mail address: fbxing@sohu.com (F.B. Xing), jianpinggaols@126.com (J.P. Gao).

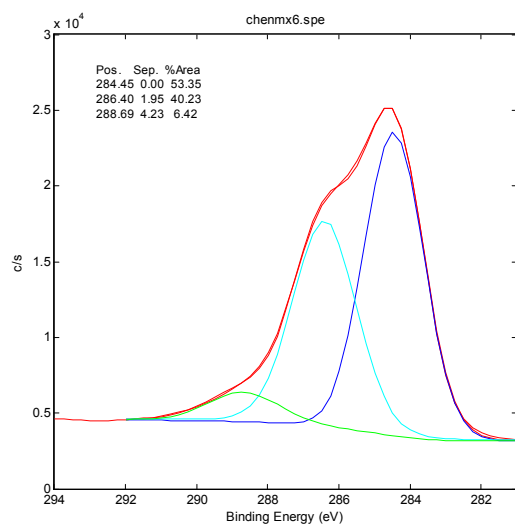


Figure S3 The C1s spectra of GO

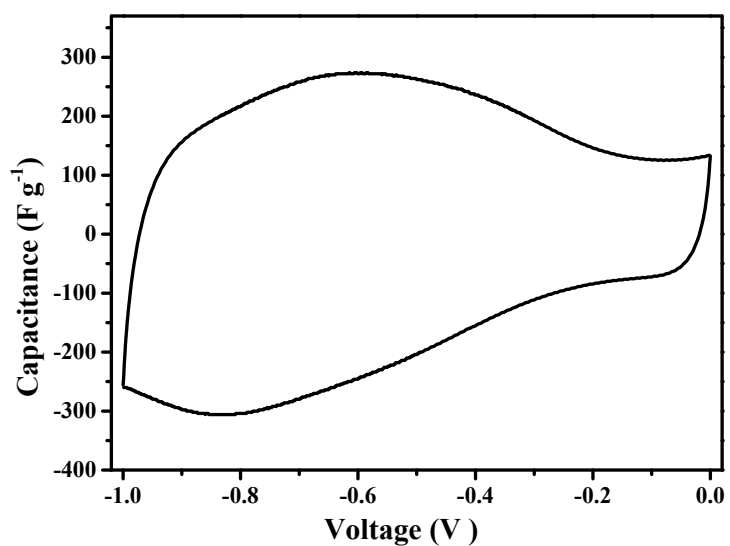


Figure S4 CV trace of M-rGO recorded at 500 mV s⁻¹

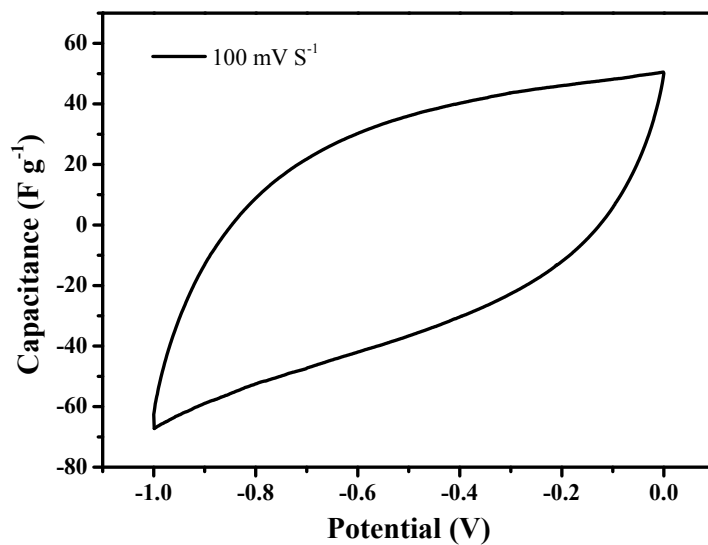


Figure S5 CV trace of rGO electrode prepared by hydrazine reduction recorded at a scan rate of 100 mV s^{-1}

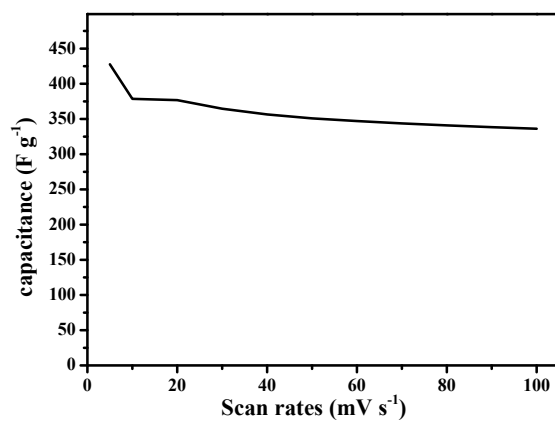


Figure S6 Scan rate dependent specific capacitance of M-rGO electrode measured in $1 \text{ M H}_2\text{SO}_4$.

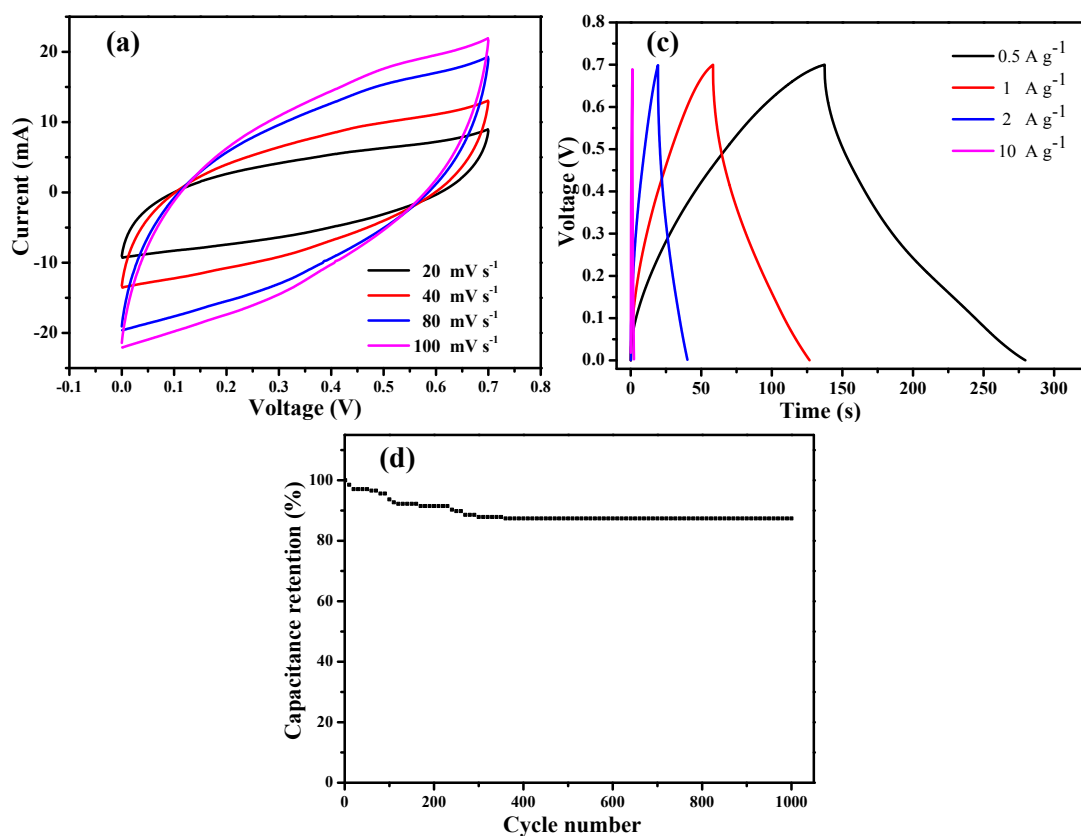


Figure S7 Capacitance performance of M-rGO measured in a two-electrode system. (a) CV trace of M-rGO electrode recorded between 0 and 0.7 V at different scan rates; (b) galvanostatic charge-discharge curves of M-rGO at different current densities; (c) Capacitance retention of the M-rGO electrode at a constant current density of 2 A g⁻¹.