Electronic Supplementary Material (ESI) for RSC Advances

Facile and rapid synthesis of highly crumpled graphene sheets as high-performance electrodes for supercapacitors

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Table S1. Surface characterization of as-prepared CRG, FCRG and HCGSs.

Item	CRG	FCRG	HCGSs
Specific surface area (m^2 g^{-1})[a]	352.5	447.8	433.1
Total pore volume (cm^3 g^{-1})[b]	0.36	0.61	0.98
Average pore diameter (nm)[c]	4.7	6.6	11.2

[a] Specific surface area was calculated by the BET method.

[b] Total pore volume was calculated from adsorption branch isotherms by the BJH method.

[c] Average pore diameter was calculated from adsorption branch isotherms by the BJH method ($4V/S_{BET}$).

Fig. S1.

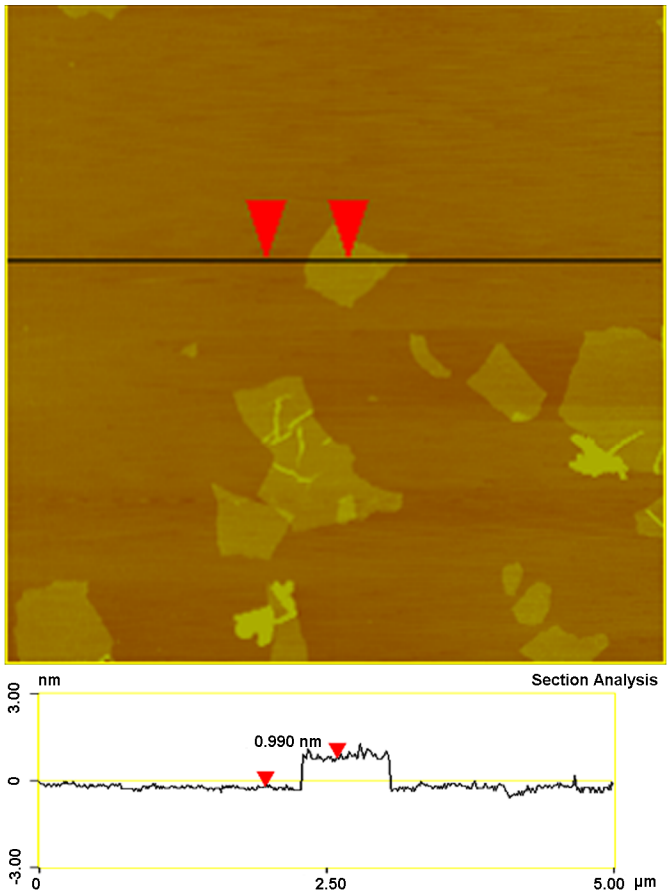

Fig. S1. Typical atomic force microscopy image and height profile of a GO monolayer deposited on a mica and its selection analysis.

Fig. S2.

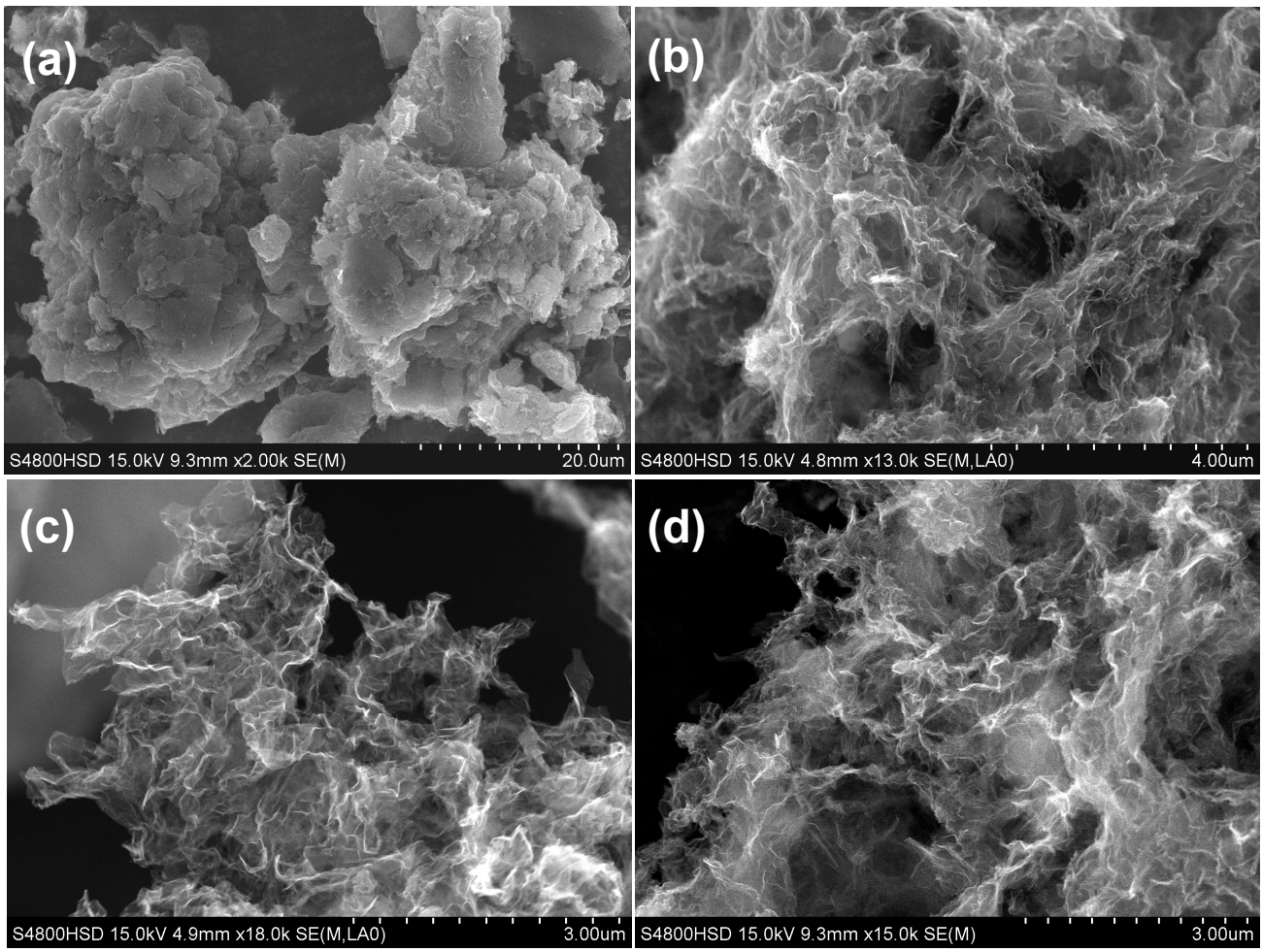

Fig. S2. SEM images of (a) CRG, (b, c) HCGSs and (d) FCRG.

Fig. S3.

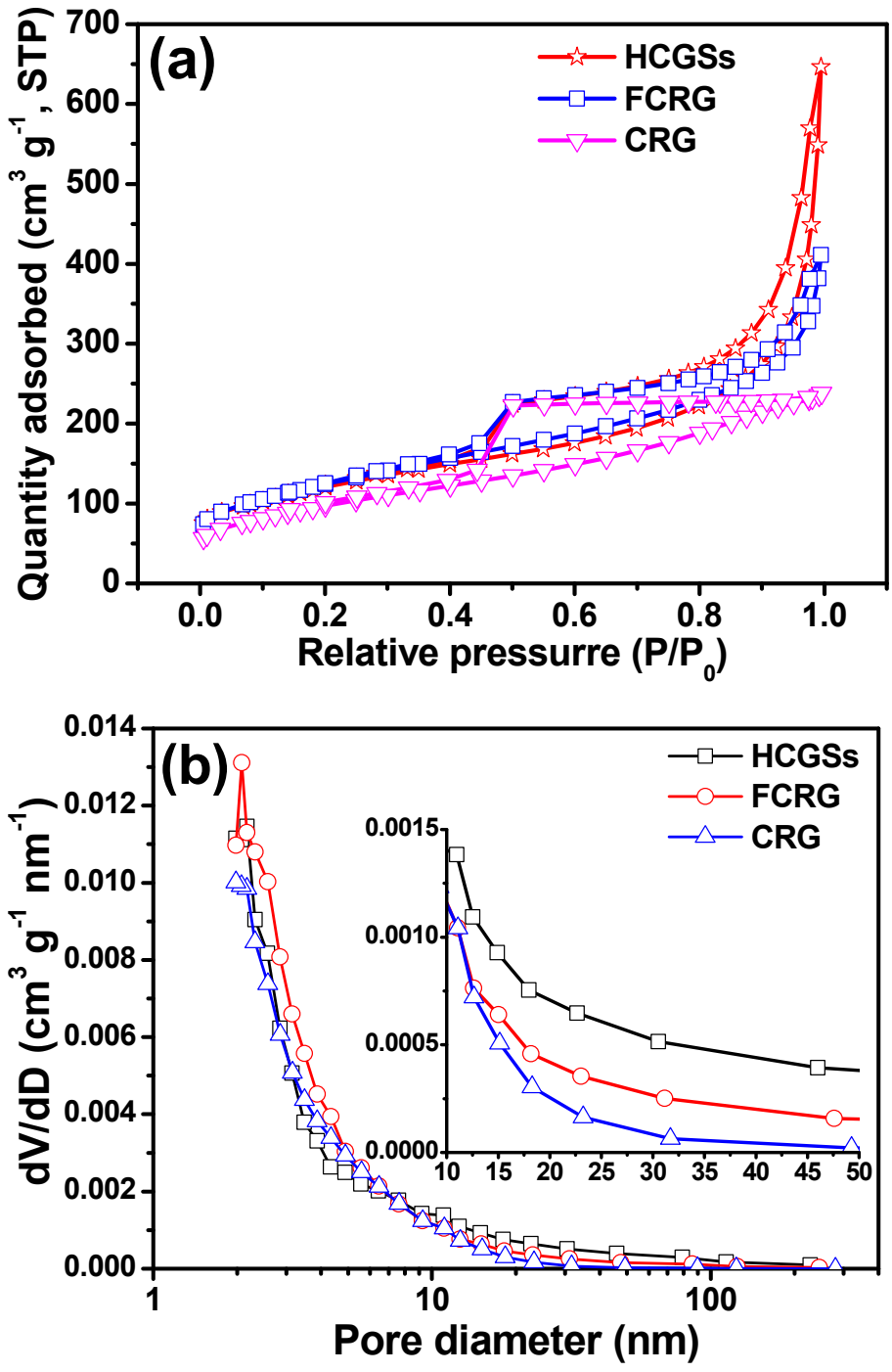

Fig. S3. (a) Nitrogen adsorption/desorption isotherms and (b) pore-size distribution curves of the CRG, FCRG and HCGSs. Inset: the enlargement of region in the range of 10-50 nm.

Fig. S4.

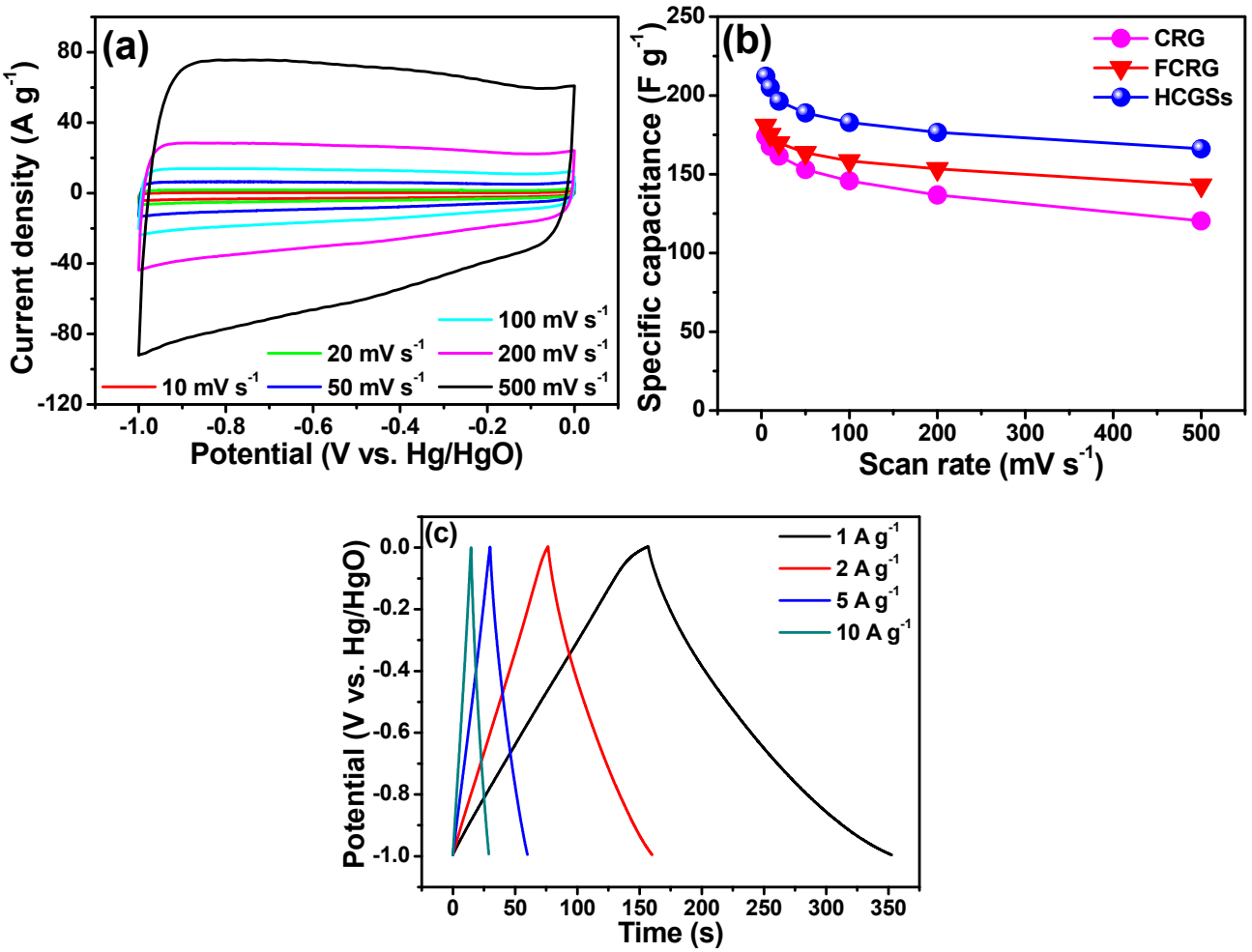

Fig. S4. (a) CV curves of HCGSs at different scan rates. (b) Specific capacitance measured at different scan rates and (c) galvanostatic charge/discharge curves at different current densities for CRG, FCRG and HCGSs.