

Supplementary information

Nitrogen-doped reduced graphene oxide for high-performance flexible all-solid-state micro-supercapacitors

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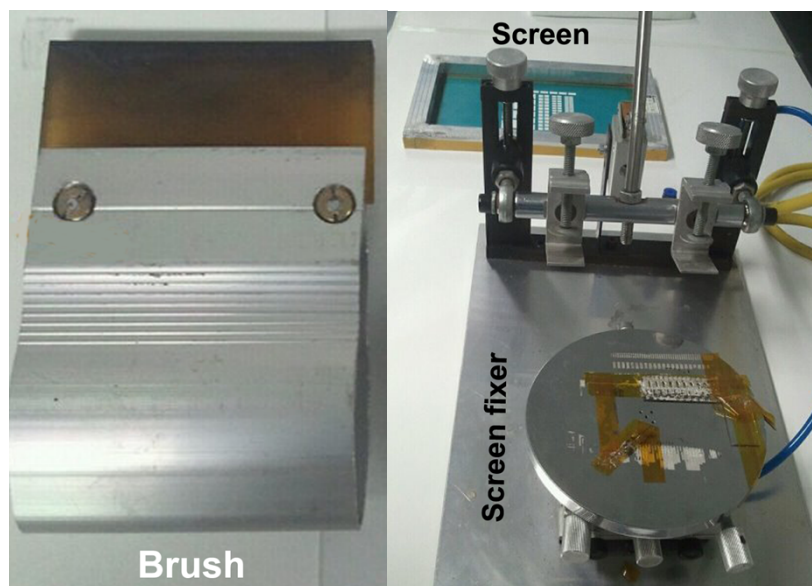


Fig. S1 Device for screen printing.

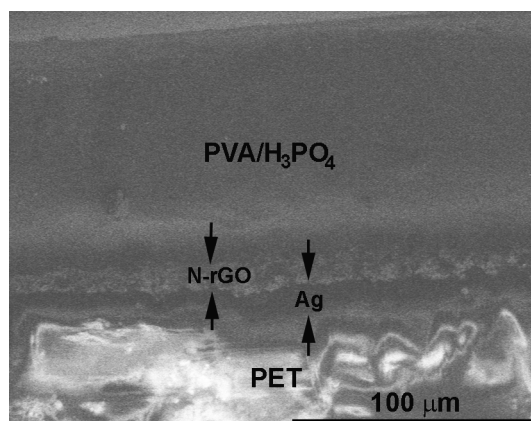


Fig. S2 Cross-sectional SEM image of the MSC using undoped rGO.

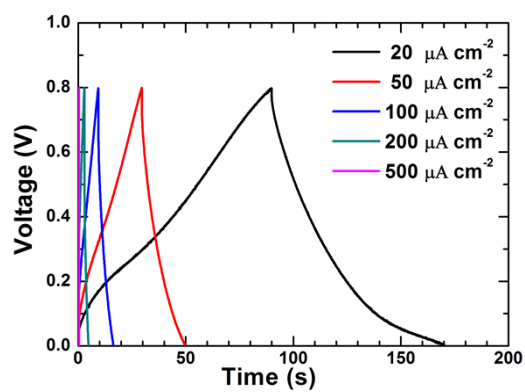


Fig. S3 Charge and discharge curves of MSC using undoped rGO at 20–500 μA cm⁻².

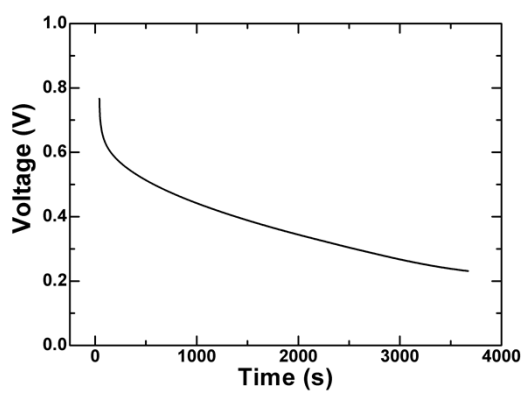


Fig. S4 Self-discharge curve of MSCs.

Table S1. Comparison of specific capacitance (mF cm^{-2}) of MSCs with graphene materials

Electrode processing method	Electrolyte	Specific capacitance [mF cm^{-2}]	Test condition	Reference
Screen printing	PVA/ H_3PO_4	3.40	$20 \mu\text{A cm}^{-2}$	This work
Laser scribing	GO	0.51	40 mV s^{-1}	[34]
Laser scribing	1 M H_3PO_4 aqueous solution	3.67	$1 \text{ A g}^{-1}_{\text{LSG/electrode}}$	[35]
Laser scribing	PVA/ H_2SO_4	2.32	16.8 mA cm^{-3}	[36]
Laser scribing	GO	0.86	200 mA g^{-1}	[37]
Spin coating	PVA/ H_2SO_4	0.08	10 mV s^{-1}	[39]
Electrophoretic deposition	PVA/ H_3PO_4	0.46	1 A g^{-1}	[38]
Electrophoretic deposition	0.5 M Na_2SO_4 aqueous solution	0.53	$15 \mu\text{A cm}^{-2}$	[40]
Electrophoretic deposition	0.5 M Na_2SO_4 aqueous solution	< 0.67	$15 \mu\text{A cm}^{-2}$	[41]
LBL assembly	PVA/ H_3PO_4	0.39	$0.28 \mu\text{A cm}^{-2}$	[30]