

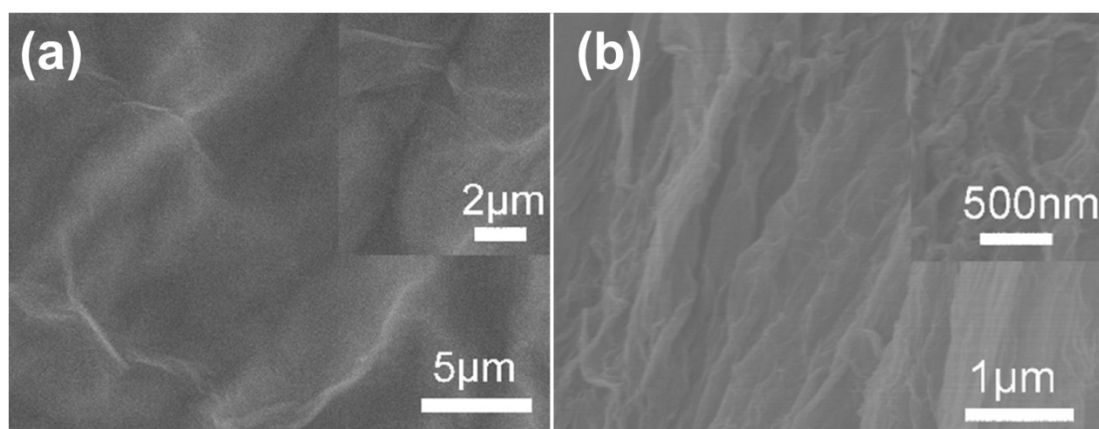
## Supplementary Information

### **A facile hydrothermal synthesis of reduced graphene oxide modified cobalt disulfide composite electrode for high-performance supercapacitors**

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## Figures



**Fig. S1†** SEM images of (a) GO and (b) RGO.

## Tables

**Table S1†** Supercapacitors performance on some literature of CoS<sub>2</sub> and CoS<sub>2</sub>/Graphene in terms of capacitance, working voltage window, stability, energy density and power density.

Ref.	samples	capacitance (F/g)	working voltage window (V)	stability	energy density (Wh/kg)	power density (W/kg)
1	CoS <sub>x</sub>	475 (5 mA/cm <sup>2</sup> )	-0.3 to 0.35 (aqueous electrolyte)	–	–	–
2	CoS <sub>1.097</sub> - GE	1535 (2 A/g)	-0.1 to 0.5 (aqueous electrolyte)	97% (after 4000 cycles)	38.9	9600
3	CoS <sub>2</sub> -GE	314 (0.5 A/g)	-0.6 to 0.4 (aqueous electrolyte)	94% (after 1000 cycles)	–	–
4	CoS <sub>2</sub>	965 (2 A/g)	-0.1 to 0.4 (aqueous electrolyte)	66% (after 1000 cycles)	–	–
5	CoS <sub>2</sub>	52 (0.7 A/g)	0 to 3.0 (organic electrolytes)	80% (after 10000 cycles)	15	1000
6	CoS <sub>2</sub> -GE	331 (0.5 A/g)	-0.3 to 0.65 (aqueous electrolyte)	97% (after 2000 cycles)	41.5	238
<b>This work</b>	<b>CoS<sub>2</sub>RG O</b>	<b>930.3 (2.0 A/g)</b>	<b>0 to 1.6 (aqueous electrolyte)</b>	<b>90% (after 6000 cycles)</b>	<b>45.7</b>	<b>797</b>

## References

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