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Supporting Information

Polyaniline Wrapped Graphene Quantum Dot Decorated Strontium titanate for Robust High-performance Flexible Symmetric Supercapacitors

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Figure S 1. FESEM images of STO (a) and SGP (b)



Figure S 2. EDAX for SG (a) and SGP (b)



Figure S 3. Color mapping of SGP composite



Figure S 4. HRTEM images (a,b) and SAED pattern (c) of SG (STO:GQD) composite



Figure S 5. Enlarged FTIR spectrum of SGP composite



Figure S 6. Raman spectra of (a) PANI and (b) GQD. (c) PL spectra of GQD



Figure S7. a) N_2 adsorption-desorption isotherm of STO and SGP b) BJH pore size distribution plot of SGP



Figure S8. a) Cyclic voltammetric study of composite with different loading percentage of GQD from 1 to 7 mg at 100 mV s⁻¹ scan rate (b) CV curves of STO, PANI, STO:PANI and SGP- a comparative study in 1M H_2SO_4 at 100 mV s⁻¹ (c) cyclic voltammetric curves of SGP in 1M H_2SO_4 at different scan rates



Figure S 9. a) GCD curves of STO, PANI, STO:PANI and SGP in 1M H_2SO_4 at 1 A g⁻¹ current density (b) GCD curves of SGP 1M H_2SO_4 at different current densities



Figure S10. XRD and SEM images of SGP before and after cyclic study

Table S1. Comparison of the Specific Capacitance (SC) of different supercapacitors based on STO, GQD and PANI

Electrode material	Specific Capacitance (F g ⁻¹)	Current density (A g ⁻¹)	Reference
GQDs	296.7	1	[12]
PANI nanofibers	428	2	[19]
polyaniline nanofiber/large mesoporous carbon (PANI-F/LMC) hybrid	473	0.1	[20]
graphene-SrTiO ₃ - PPy composite	465	1.5	[29]
Nb-doped strontium cobaltite/GQD	485.8	0.1	[31]
Ni ²⁺ -doped SrTiO ₃	142	1	[32]
PANI nanowire/TiO ₂ nanotube arrays	897.35	0.21	[40]
GQD@PANi	3632	1	[50]
(PANI/CNT/e-MoS ₂)	532	1	[55]
porous graphene/polyaniline	710	2	[57]
STO:GQD:PANI	2134	1	this work