

# High-Conductivity, Flexible and Transparent PEDOT:PSS Electrodes for High Performance Semi-Transparent Supercapacitors

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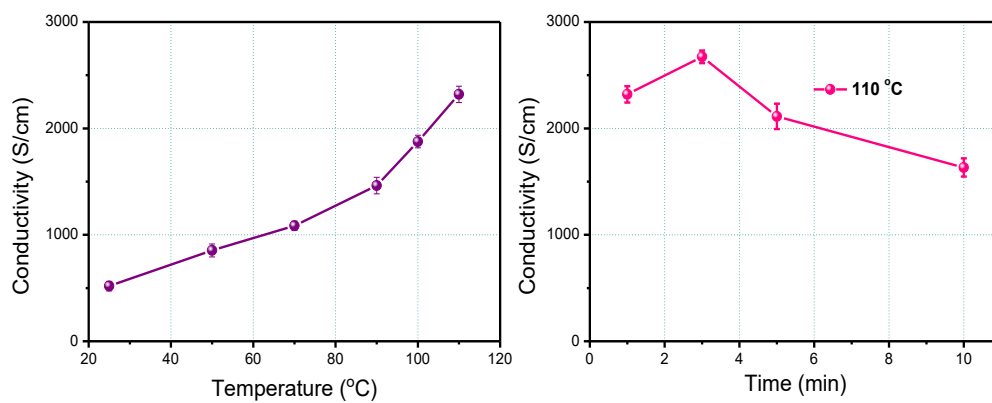
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**Table S1.** Data for semi-transparent supercapacitor based on S-PH1000 electrode.

Current density (A/g)	Time (s)	Voltage (V)	Cv (F/g)	E (W h/kg)	P (W/kg)
1	24.64	0.993	24.8	3.40	497
2	12.17	0.986	24.7	3.33	986
5	4.72	0.965	24.5	3.16	2413
6	3.89	0.959	24.3	3.11	2877
7	3.29	0.953	24.2	3.05	3335
8	2.846	0.946	24.1	2.99	3784
9	2.505	0.939	24.0	2.94	4226
10	2.24	0.933	24.0	2.90	4665
15	1.423	0.899	23.7	2.67	6743
20	1.018	0.866	23.5	2.45	8660
30	0.617	0.8	23.1	2.06	12000
40	0.419	0.735	22.8	1.71	14700
50	0.301	0.67	22.5	1.40	16750
60	0.224	0.606	22.2	1.13	18180
70	0.168	0.543	21.7	0.89	19005
80	0.127	0.48	21.2	0.68	19200
90	0.095	0.419	20.4	0.50	18855
100	0.071	0.357	19.9	0.35	17850

**Table S2.** Data for semi-transparent supercapacitor device A and B in separated, series and parallel at a discharge current density of 1 A/g.

Device (1 A /g)	Time (s)	Voltage (V)	Cv (F/g)	E (Wh kg <sup>-1</sup> )	P (W Kg <sup>-1</sup> )
A	25.8	0.9934	26	3.61	503
B	25.6	0.9922	25.8	3.58	503
A+B (series)	25.6	1.986	12.9	7.17	1008
A+B (parallel)	51.1	0.9962	51.3	7.13	502



**Figure S1.** (a) The conductivity values of S-PH1000 electrodes treated by 80 wt.% H<sub>2</sub>SO<sub>4</sub> under different temperatures from 25 to 110 °C, (b) the conductivity values of S-PH1000 electrodes treated by 80 wt.% H<sub>2</sub>SO<sub>4</sub> under different time.