Electronic Supplementary Material (ESI) for Sustainable Energy & Fuels.


**Supplementary Information**

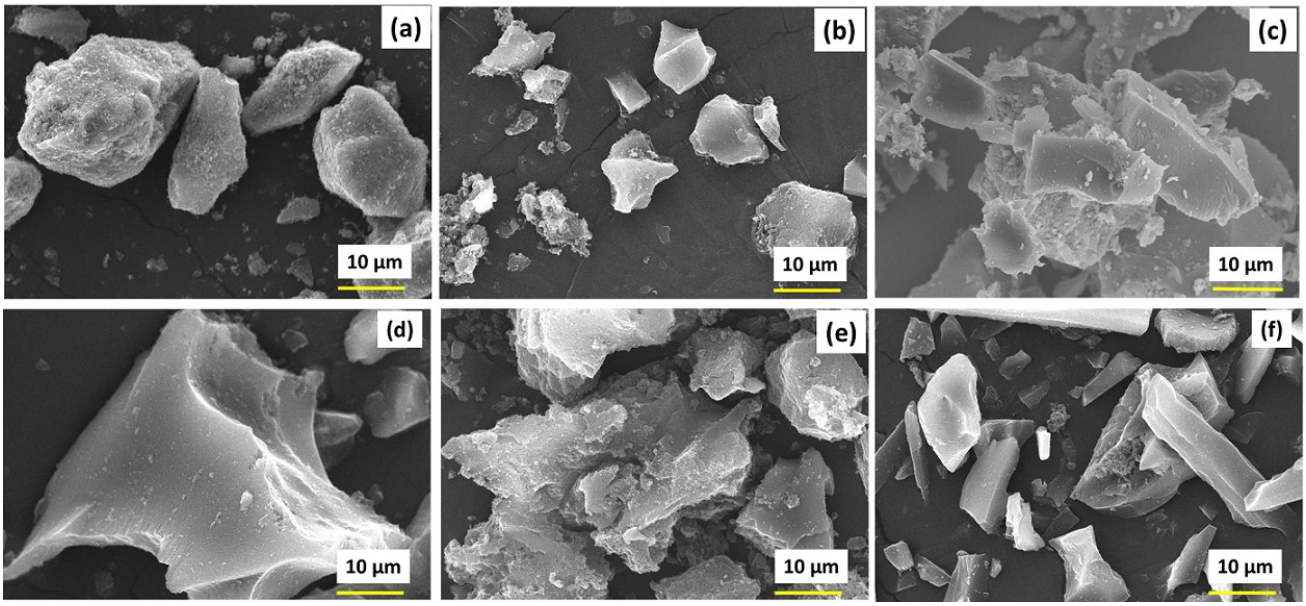



**Fig. S1** SEM images of (a) EuAC-0, (b) EuAC-1, (c) EuAC-2, (d) EuAC-3, (e) EuAC-4, and (f) commercial AC

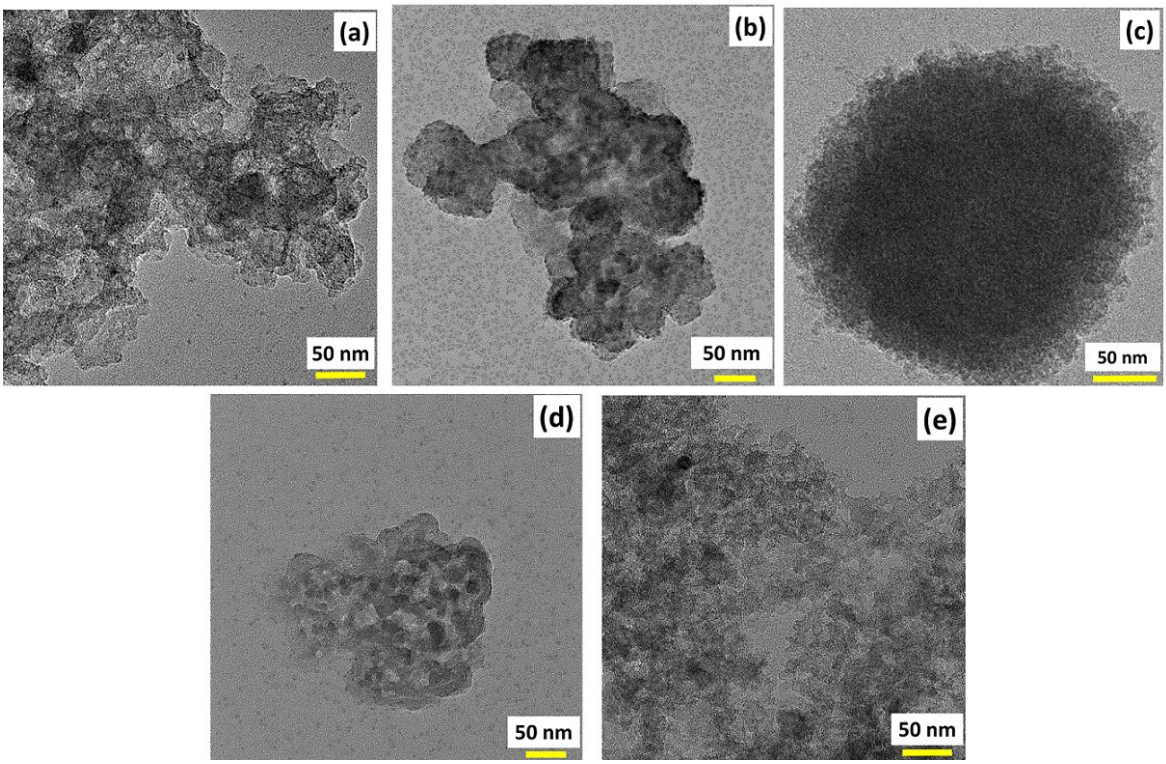
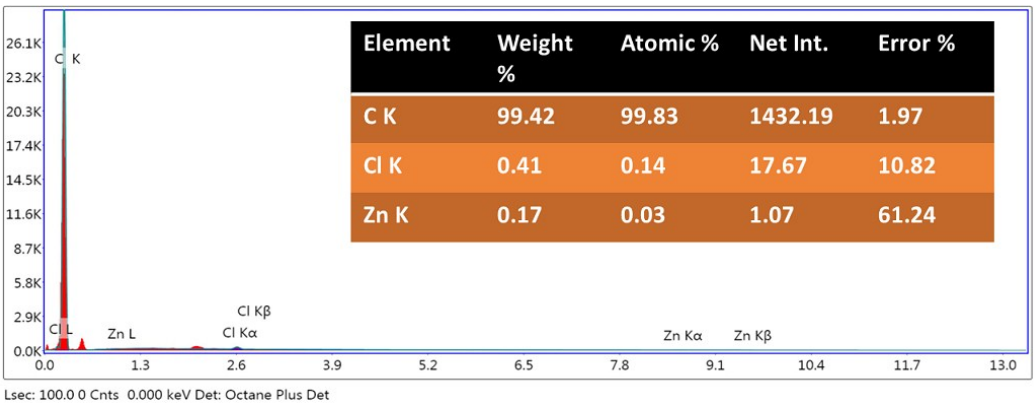



**Fig. S2** TEM images of of activated carbon samples, (a) EuAC-0, (b) EuAC-1, (c) EuAC-2, (d) EuAC-3, and (e) EuAC-4




| Element | Weight % | Atomic % | Net Int. | Error % |
|---|---|---|---|---|
| C K | 99.42 | 99.83 | 1432.19 | 1.97 |
| Cl K | 0.41 | 0.14 | 17.67 | 10.82 |
| Zn K | 0.17 | 0.03 | 1.07 | 61.24 |

**Fig. S3** EDAX of EuAC-2 sample

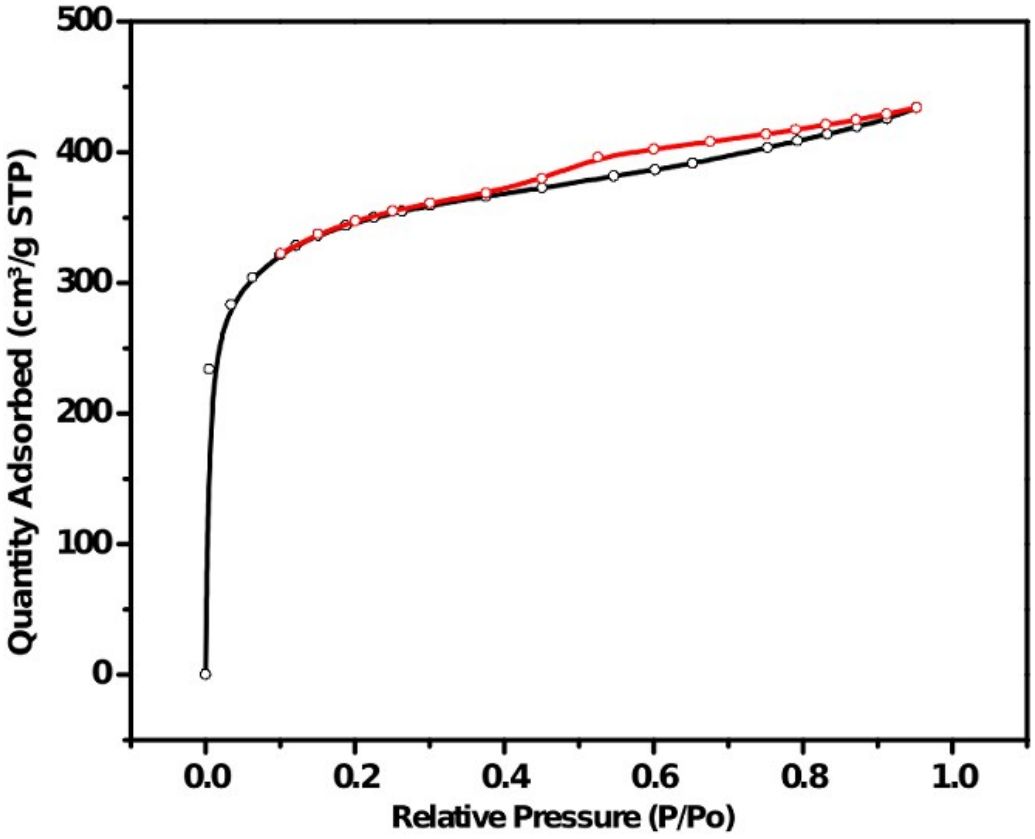



**Fig. S4** BET isotherm of commercial activated carbon

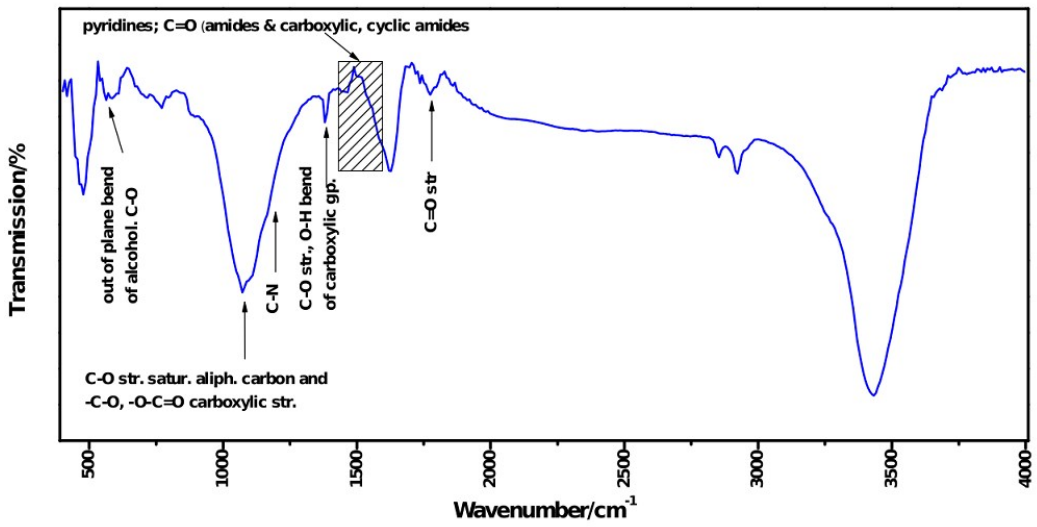



**Fig. S5** FTIR spectrum of EuAC-2 sample

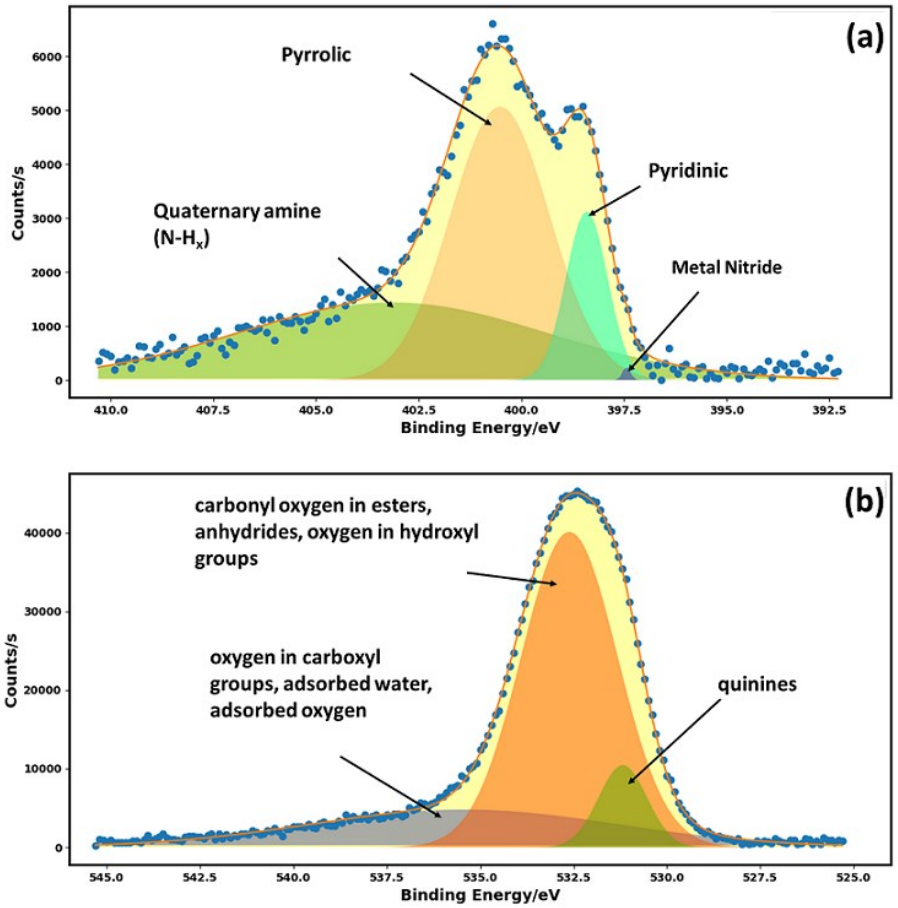



**Fig. S6** XPS spectrum of EuAC-2 samples showing (a) N1s, and (b) O1s peaks

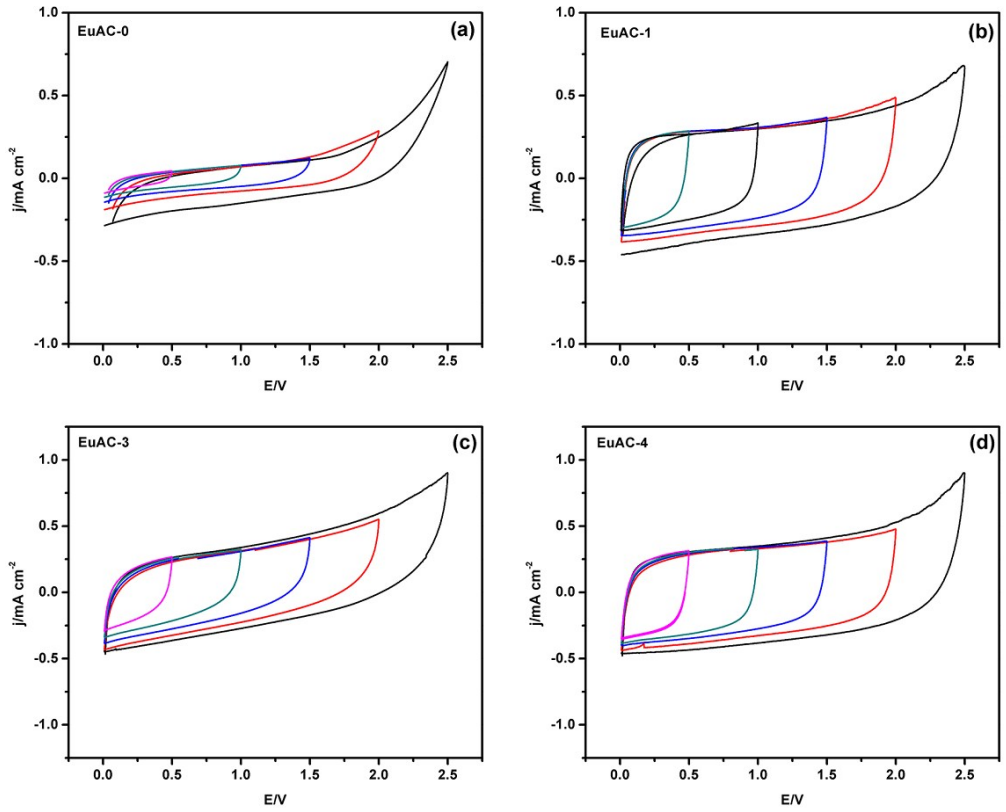



**Fig. S7** CV plots for different maximum potential for symmetric EDLC cells made using (a) EuAC-0, (b) EuAC-1, (c) EuAC-3, and (d) EuAC-4

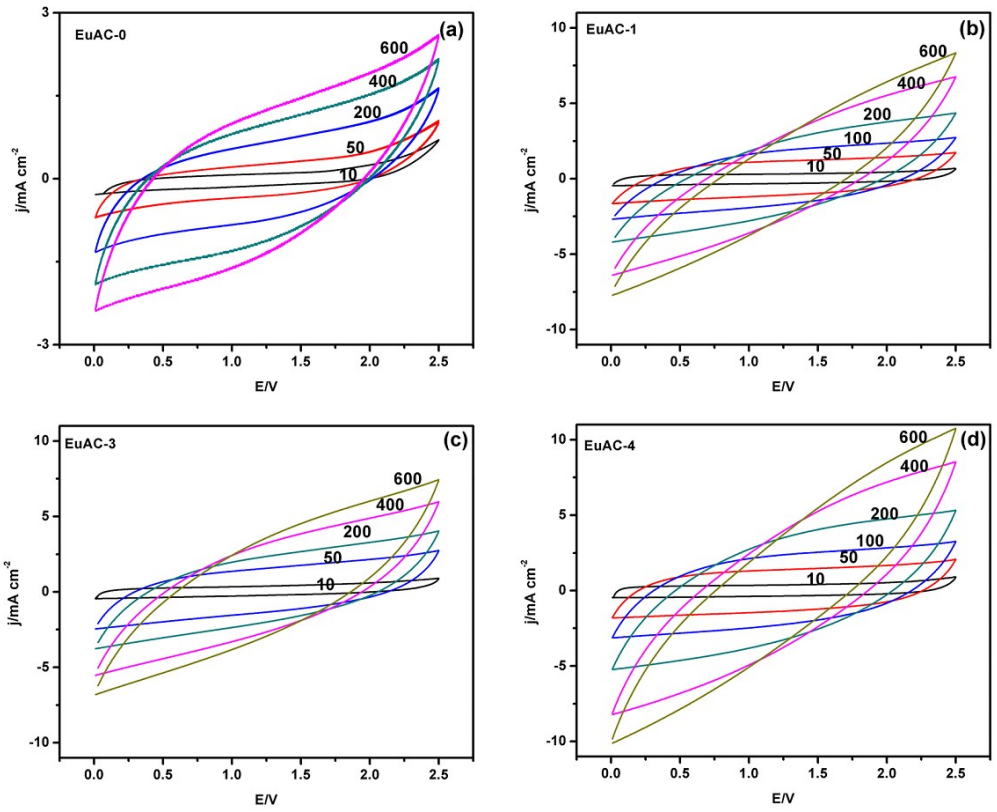



**Fig. S8** CV plots at different scan rates for symmetric EDLC cells made using (a) EuAC-0, (b) EuAC-1, (c) EuAC-3, and (d) EuAC-4

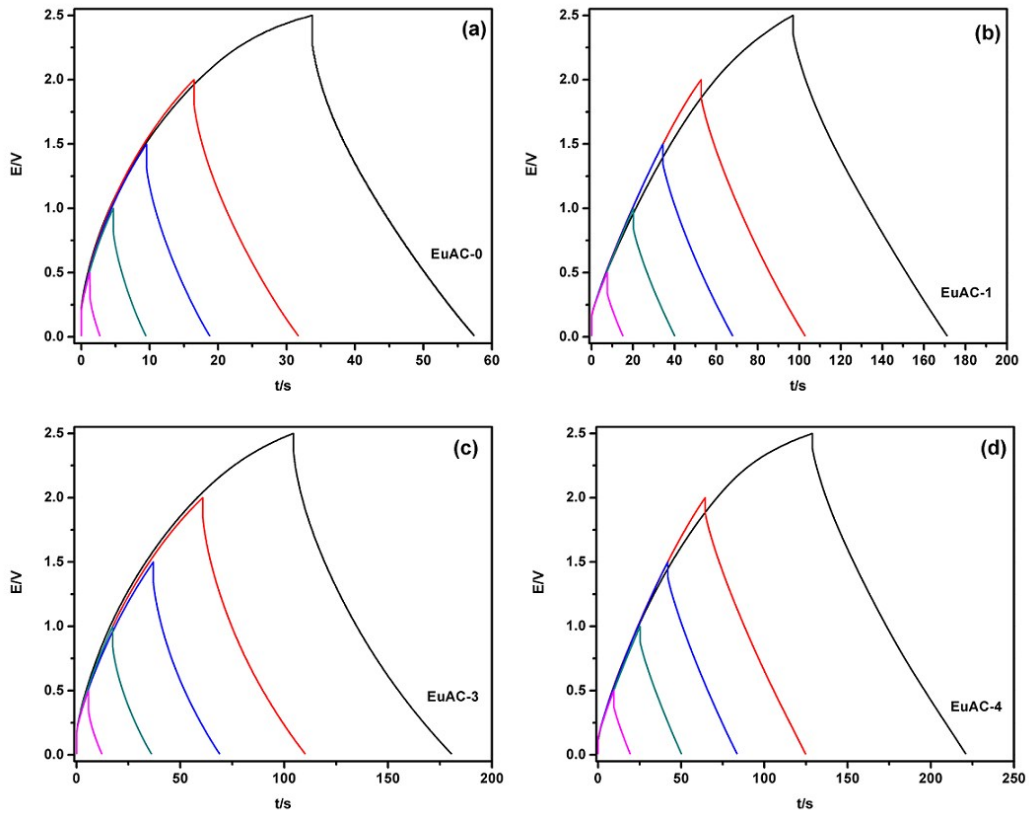



**Fig. S9** GCD plots for cycling upto varying maximum potentials for symmetric EDLC cells made using (a) EuAC-0, (b) EuAC-1, (c) EuAC-3, and (d) EuAC-4

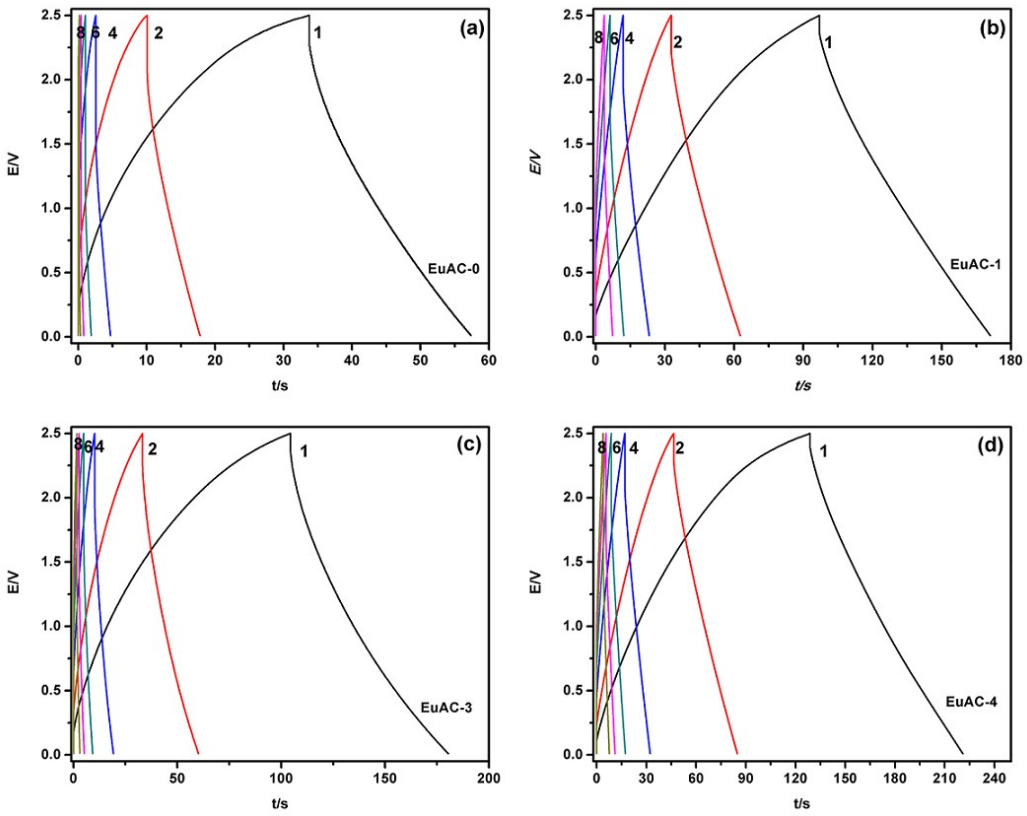



**Fig. S10** GCD plots at different current rates for symmetric EDLC cells made using (a) EuAC-0, (b) EuAC-1, (c) EuAC-3, and (d) EuAC-4

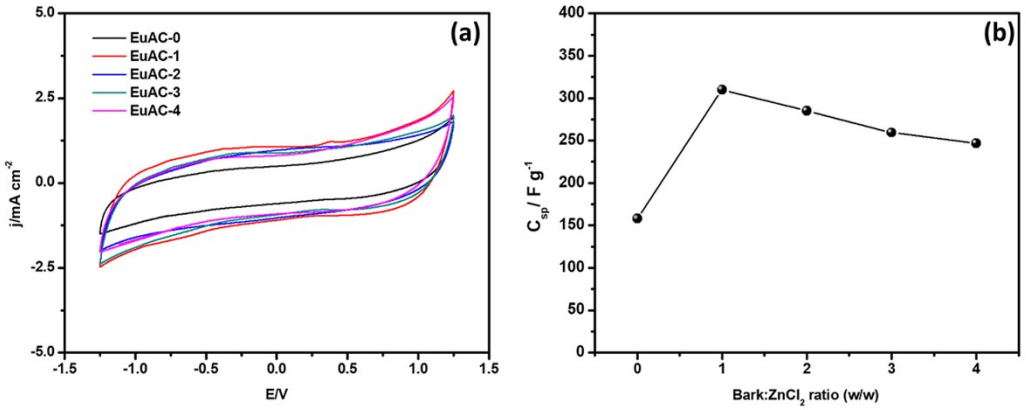



**Fig. S11** (a) CV plots for half cells at scan rate of 10 mV s-1, (b) Capacitance value at scan rate of 10 mV s-1 for various activated carbon samples

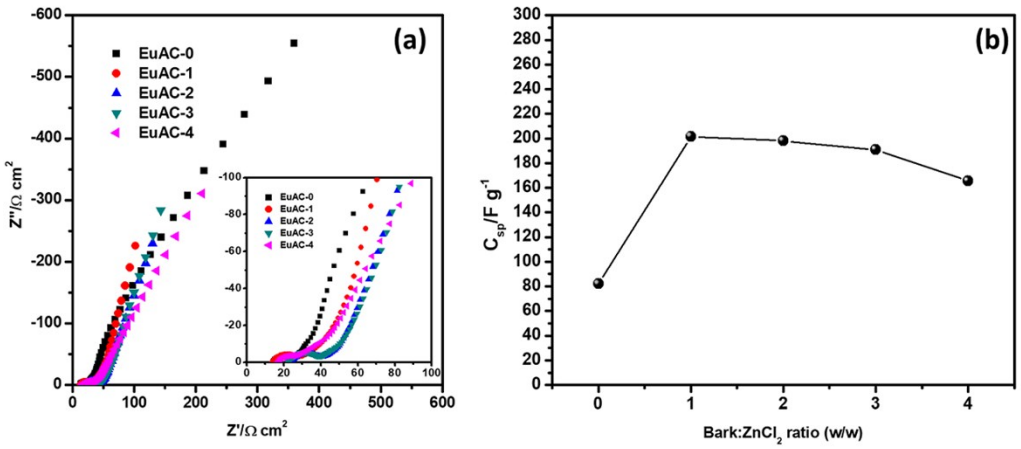



**Fig. S12** (a) Nyquist plots for half cells, (b) Capacitance values, for various activated carbon samples

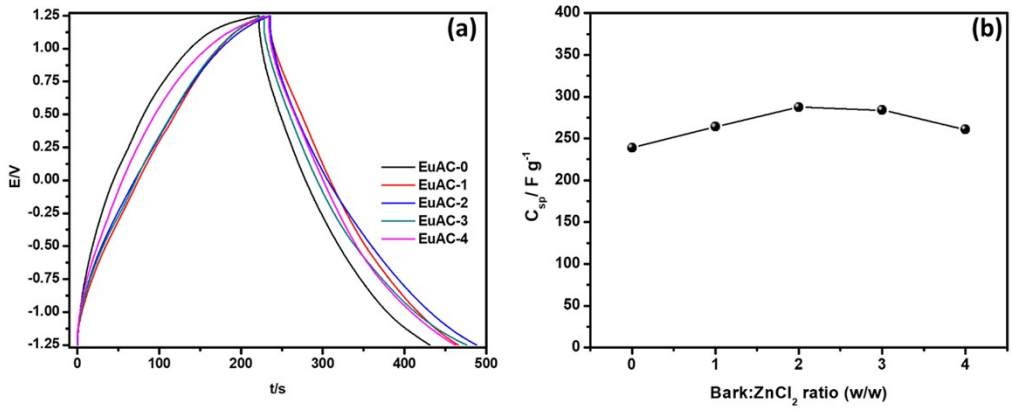



**Fig. S13** (a) GCD plots for half cells at current density of 1 mA cm-2, (b) Capacitance value at 1 mA cm-2 for various activated carbon samples