Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting Information

New Amphiphilic Block Copolymer-Modified Electrode for Supercapacitors

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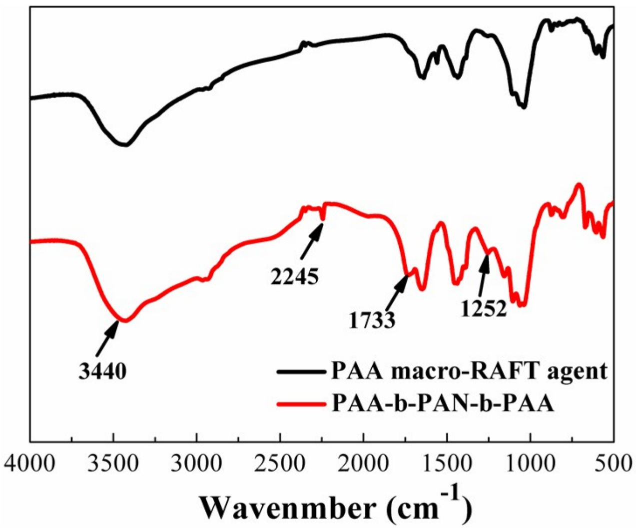

Figure S1. FTIR spectra for PAA marco-RAFT agent, and amphiphilic block copolymer PAA-*b*-PAN-*b*-PAA

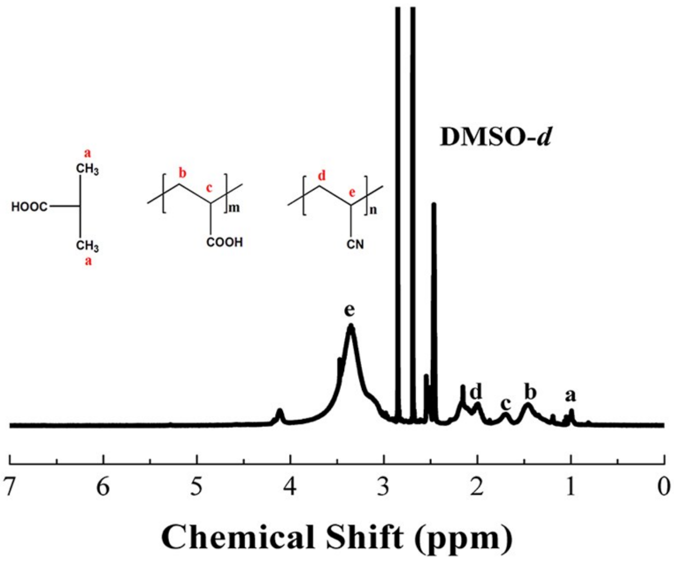

Figure S2. ^{1}H-NMR spectrum of amphiphilic block copolymer PAA-*b*-PAN-*b*-PAA (DMSO-*d* was used as solvent in the ^{1}H-NMR measurement)

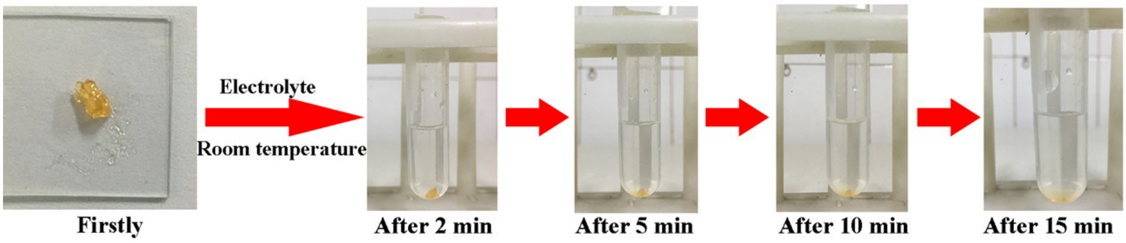

Figure S3. The stability of the ABC in the electrolyte

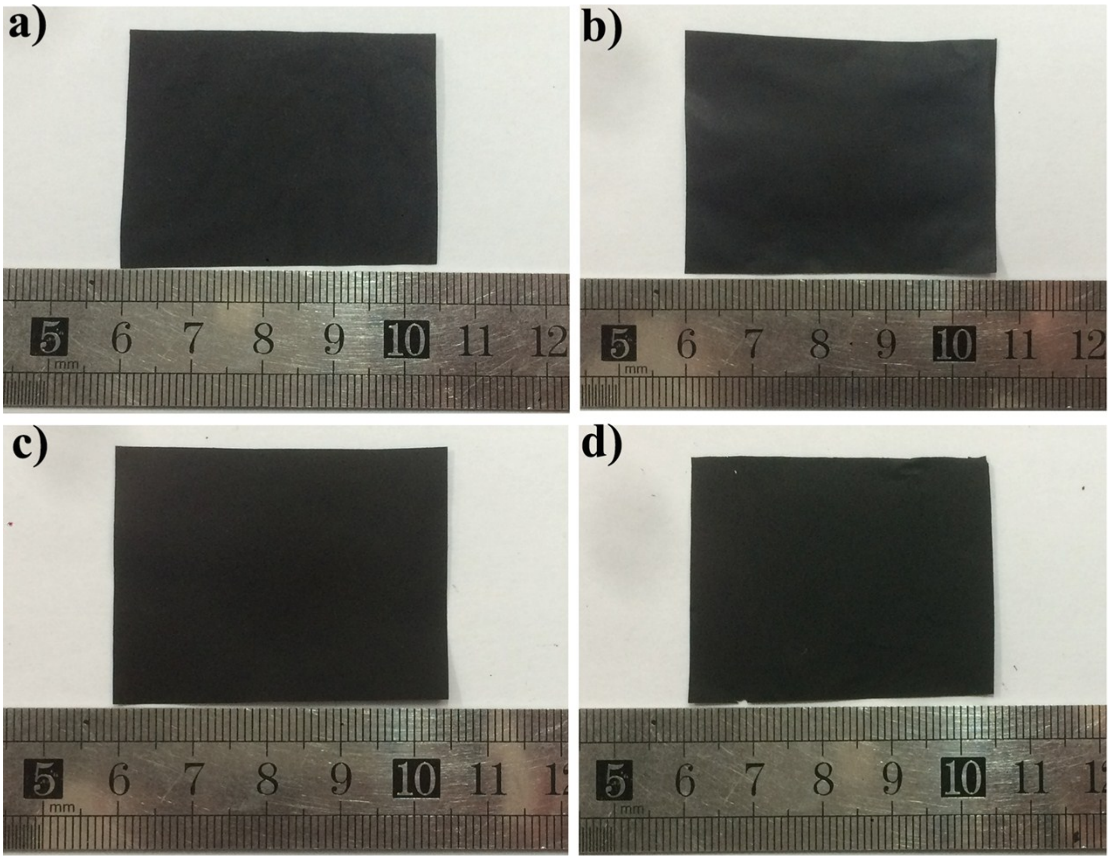

Figure S4. Photos of (a) F-ABC-0.0, (b) F-ABC-0.2, (c) F-ABC-0.5 and (d) F-ABC-0.7

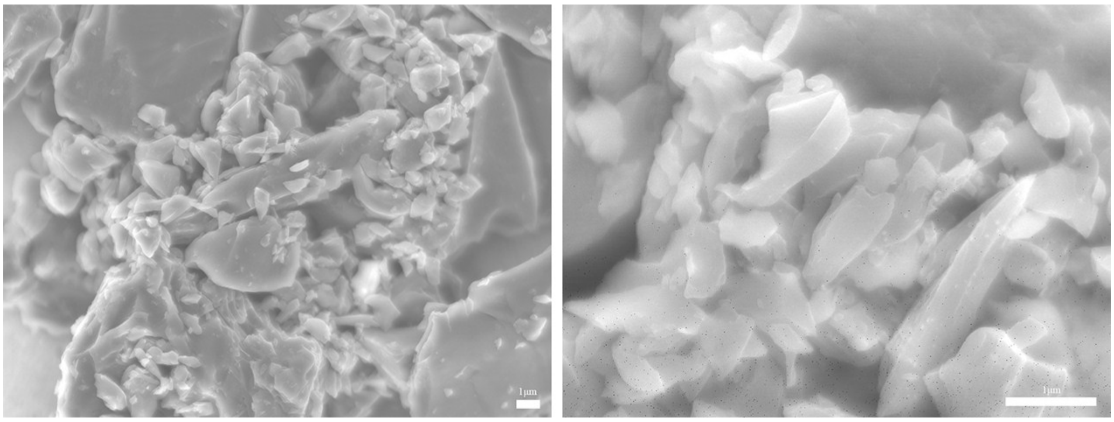

Figure S5. SEM images of activated carbon (AC)

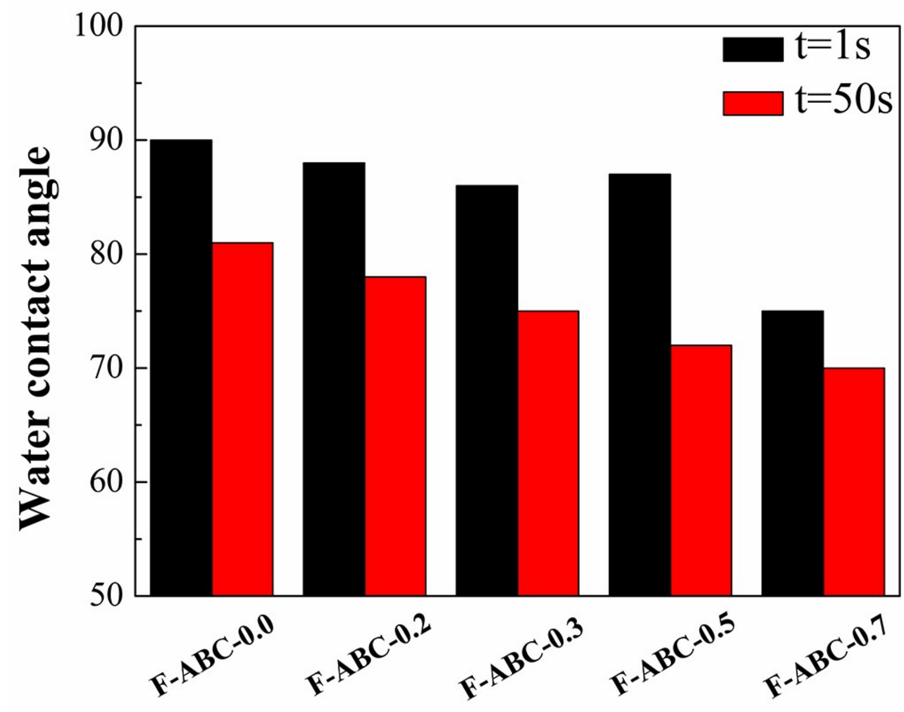

Figure S6. Water contact angle of F-ABC-0.0, F-ABC-0.2, F-ABC-0.3, F-ABC-0.5 and F-ABC-0.7

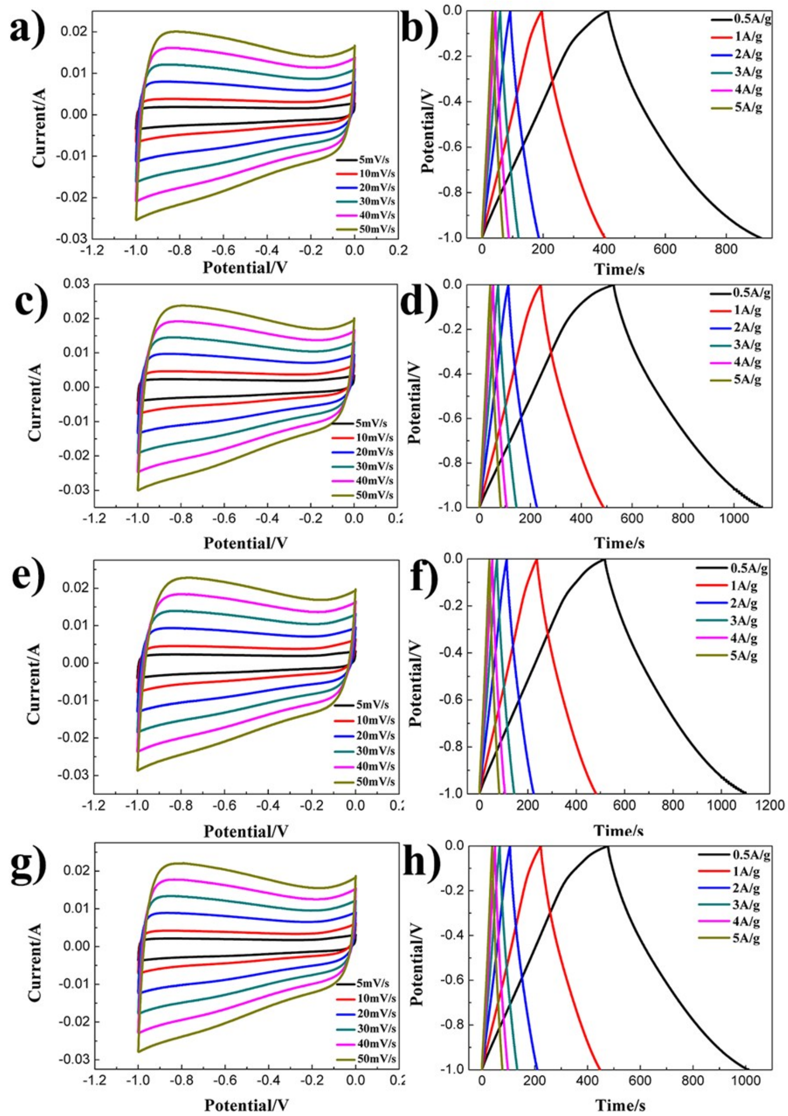

Figure S7. Cyclic voltammogram curves of F-ABCs: a) 0.00 g , c) 0.20 g, e) 0.50 g and g) 0.70 g; and galvanostatic charging-discharging curves of F-ABCs: b) 0.00 g, d) 0.20 g, f) 0.50 g and h) 0.70 g

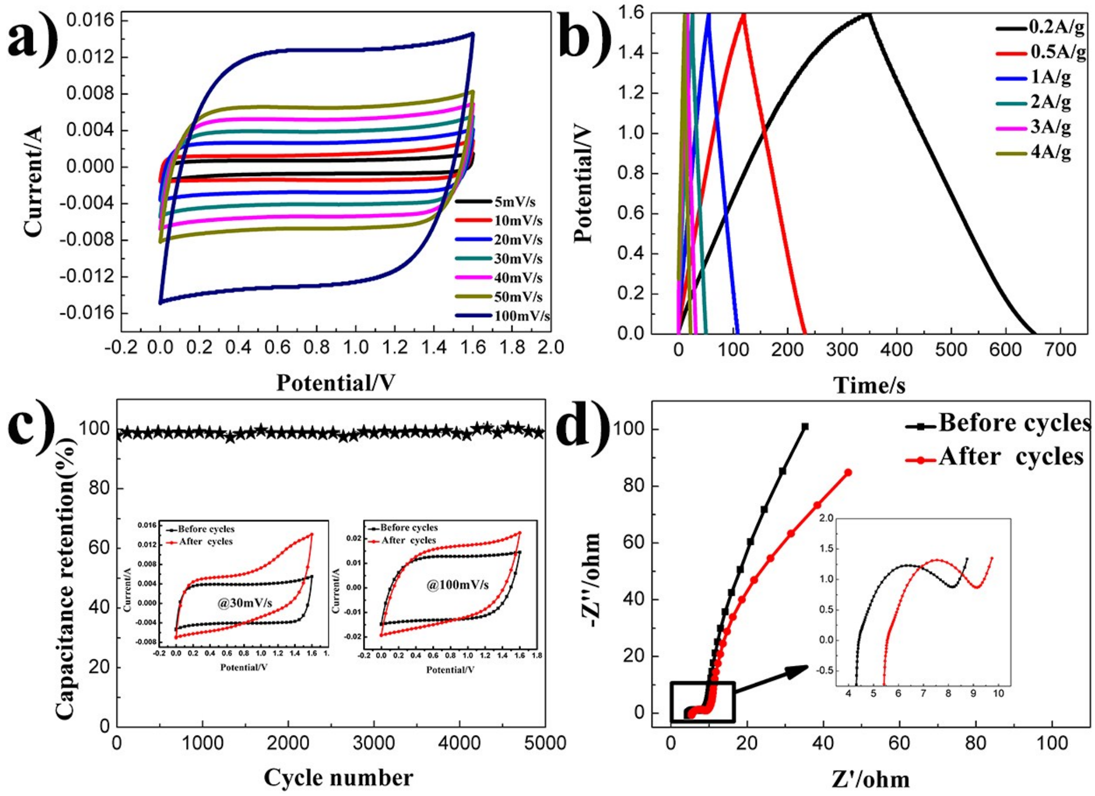

Figure S8. Electrochemical performance of symmetric supercapacitor assembled with F-ABC-0.0 in a two-electrode system: (a) cyclic voltammogram curves at different scan rates, (b) galvanostatic charging/discharging curves at different current densities, (c) cycling stability at 2 A/g. Insets are the CV curves before and after 5000 cycles at 30 mV/s (left) and 100 mV/s (right). (d) Electrochemical impedance spectroscopy before cycling and after 5000 cycles.

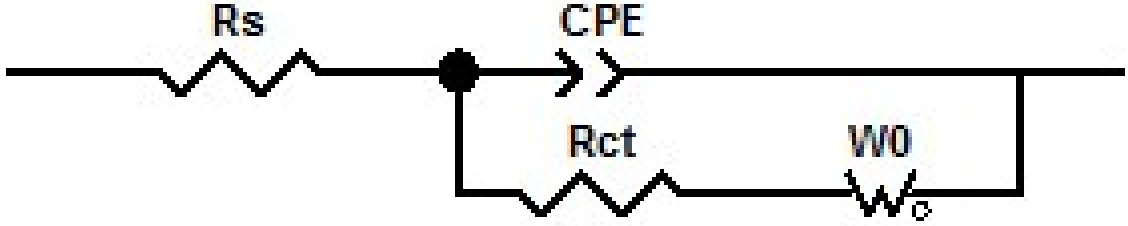

Figure S9. Equivalent circuit of all impedance spectra for different samples

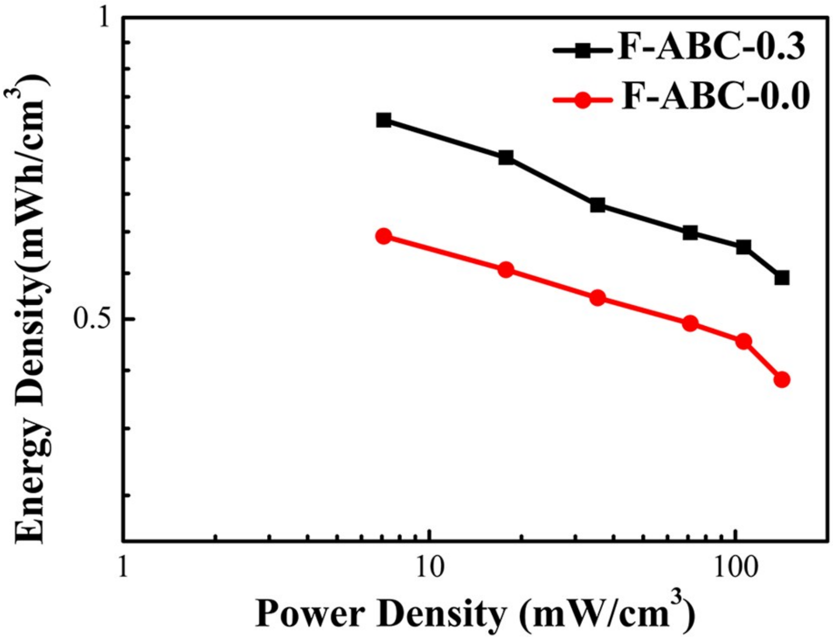

Figure S10. Volumetric energy/power density of SCs based on the overall devicein this work

Table S1. Fitted parameters for EIS obtained by Zswinpwin software of different samples

Sample	R_S (Ω)	R_{CT} (Ω)	R_w (Ω)
F-ABC-0.0//F-ABC-0.0 SC	7.1	0.01	0.0218
F-ABC-0.3//F-ABC-0.3 SC	6.912	0.03	0.0183