

Electronic Supplementary Information

Morphology-Dependent Electrochemical Supercapacitors in Multi-Dimensional Polyaniline Nanostructures

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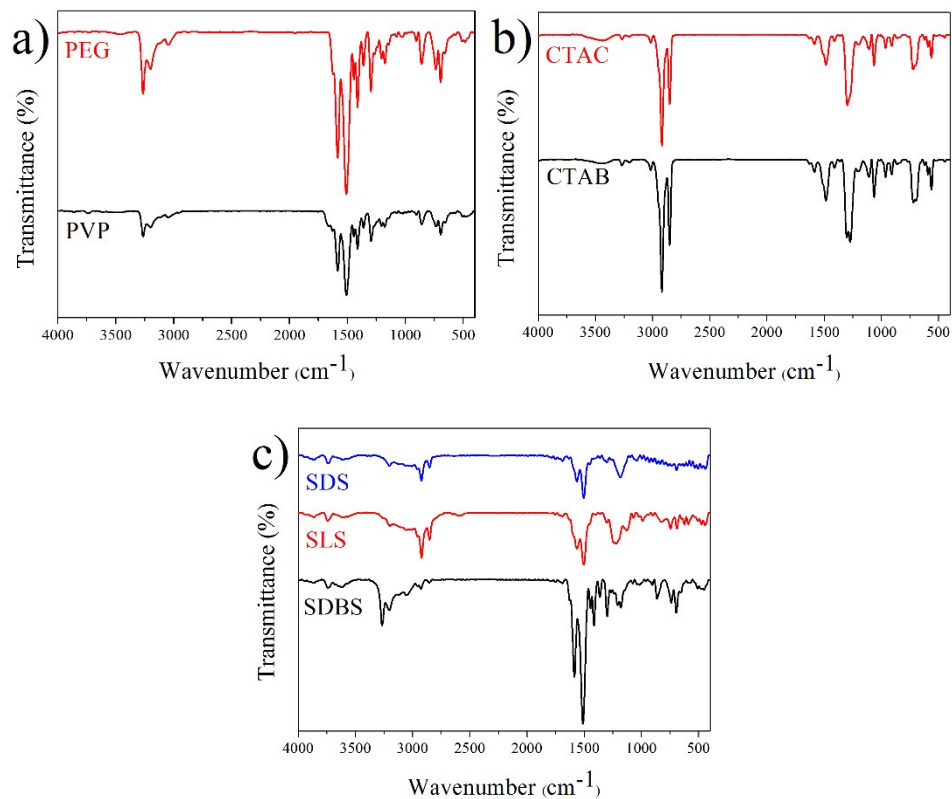


Fig. S1 FTIR spectra of PANI samples obtained by using **(a)** nonionic surfactants PVP and PEG, **(b)** cationic surfactants CTAB (0.50 g) and CTAC, and **(c)** anionic surfactant SDBS, SLS, and SDS.

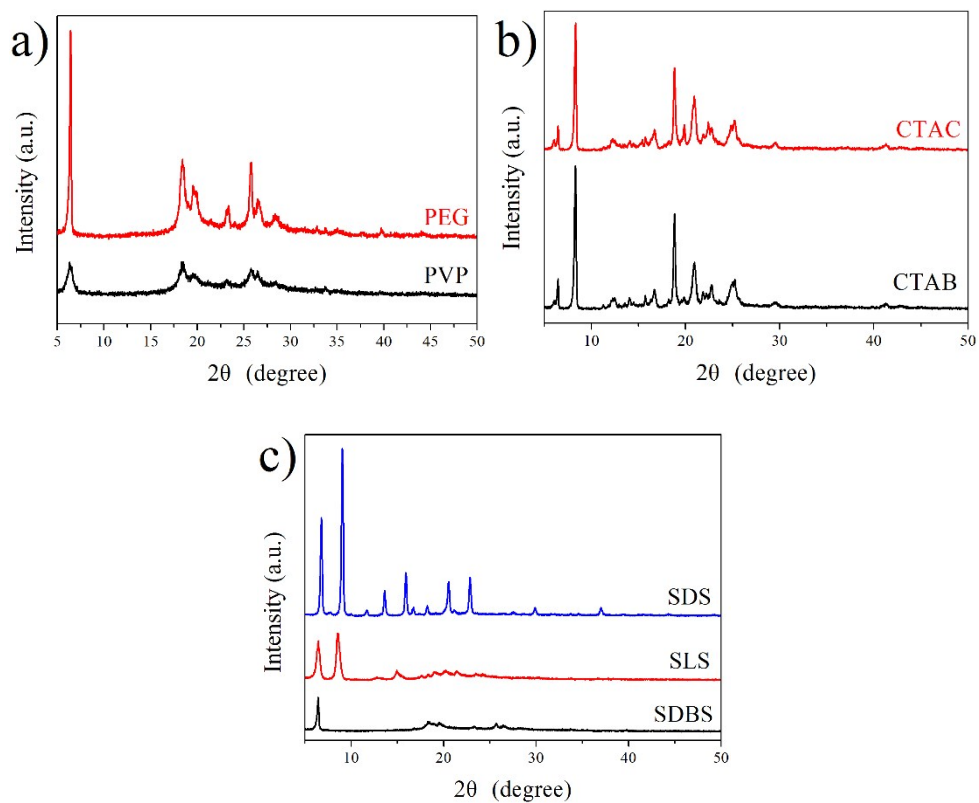
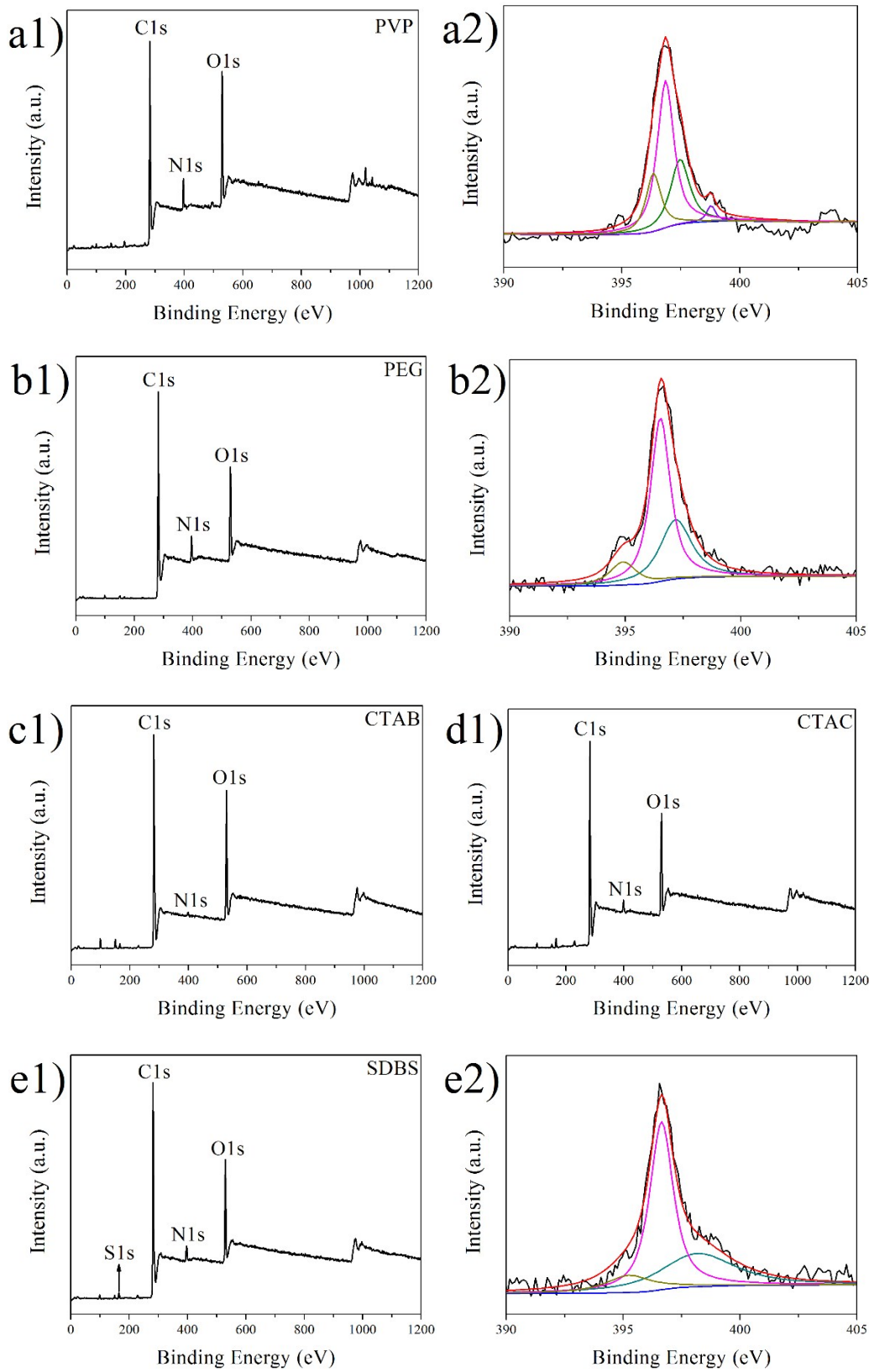


Fig. S2 XRD patterns of PANI samples obtained by using **(a)** nonionic surfactants PVP and PEG, **(b)** cationic surfactants CTAB (0.50 g) and CTAC, and **(c)** anionic surfactant SDBS, SLS, and SDS.



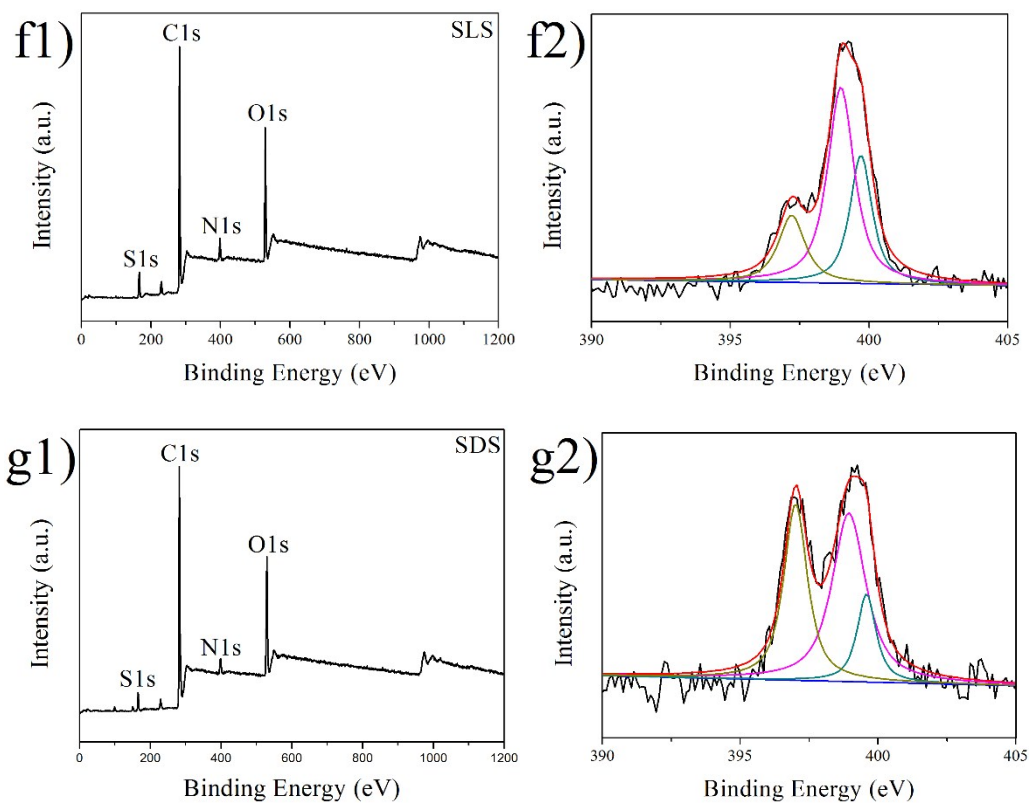


Fig. S3 XPS spectra of PANI samples obtained by using **(a)** PVP, **(b)** PEG, **(c)** CTAB (0.50 g), **(d)** CTAC, **(e)** SDS, **(f)** SLS, and **(g)** SDBS, along with corresponding N 1s core level spectra.

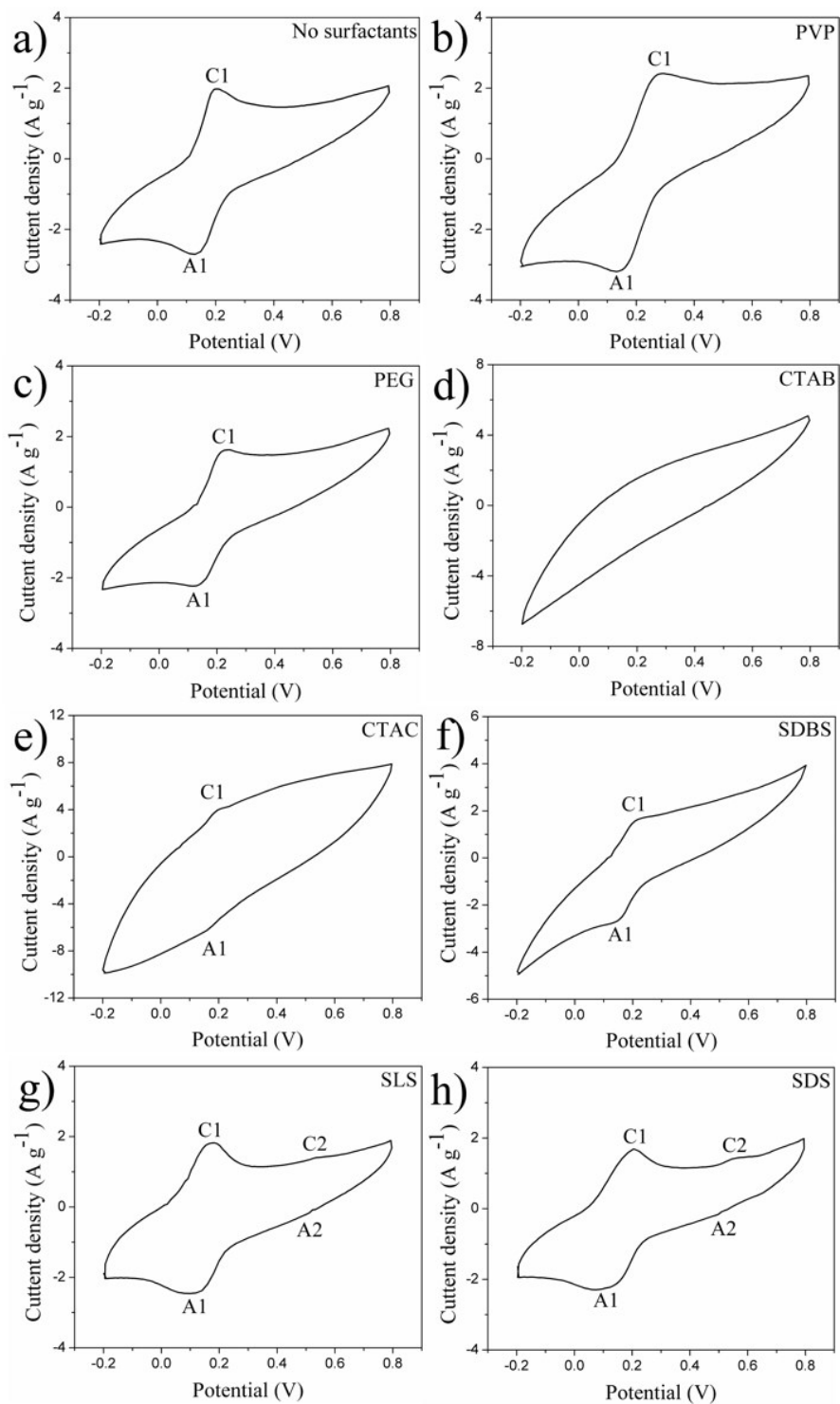


Fig. S4 CV curves of MD PANI nanostructures prepared in the presence of different surfactants:

(a) no surfactants, (b) PVP, (c) PEG, (d) CTAB (0.50 g), (e) CTAC, (f) SDBS, (g) SLS, (h) SDS.

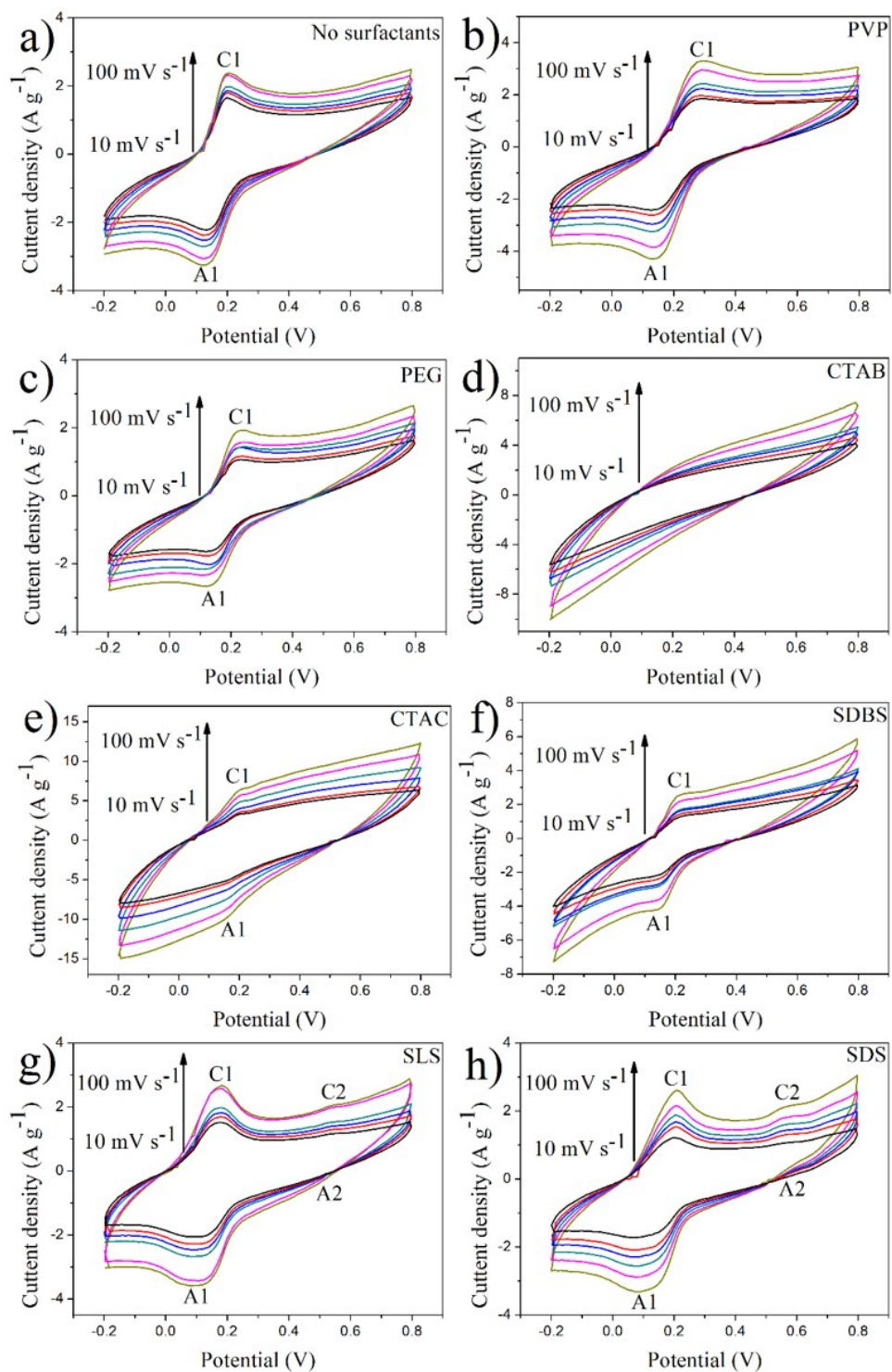


Fig. S5 CV curves of MD PANI nanostructures prepared in the presence of different surfactants:

(a) no surfactants, (b) PVP, (c) PEG, (d) CTAB (0.50 g), (e) CTAC, (f) SDBS, (g) SLS, (h) SDS

at different scan rates of 10, 20, 40, 60, 80, 100 mV s^{-1} .

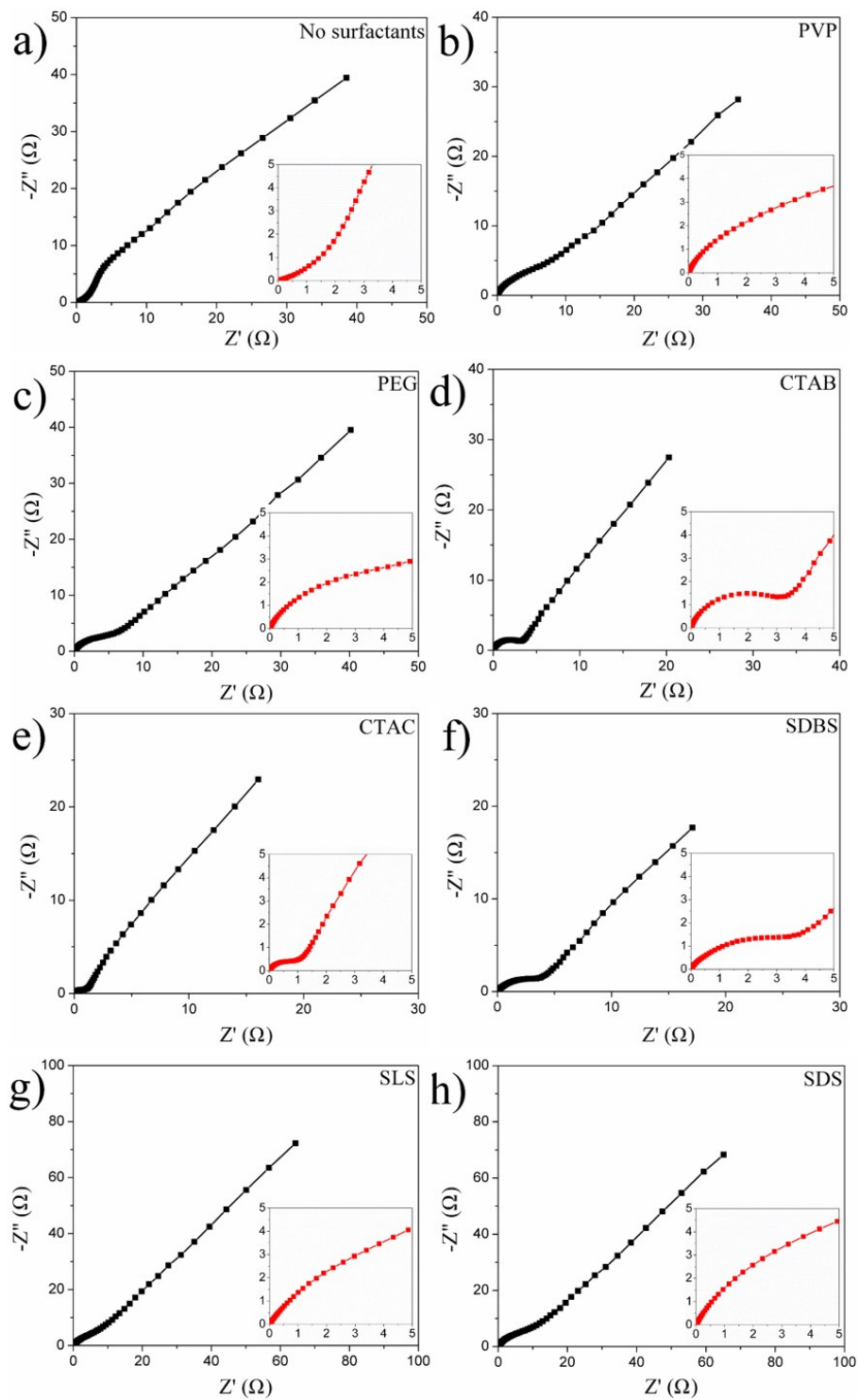


Fig. S6 Nyquist plots and corresponding enlarging view of MD PANI nanostructures prepared in the presence of different surfactants: **(a)** no surfactant, **(b)** PVP, **(c)** PEG, **(d)** CTAB (0.50 g), **(e)** CTAC, **(f)** SDBS, **(g)** SLS, **(h)** SDS.

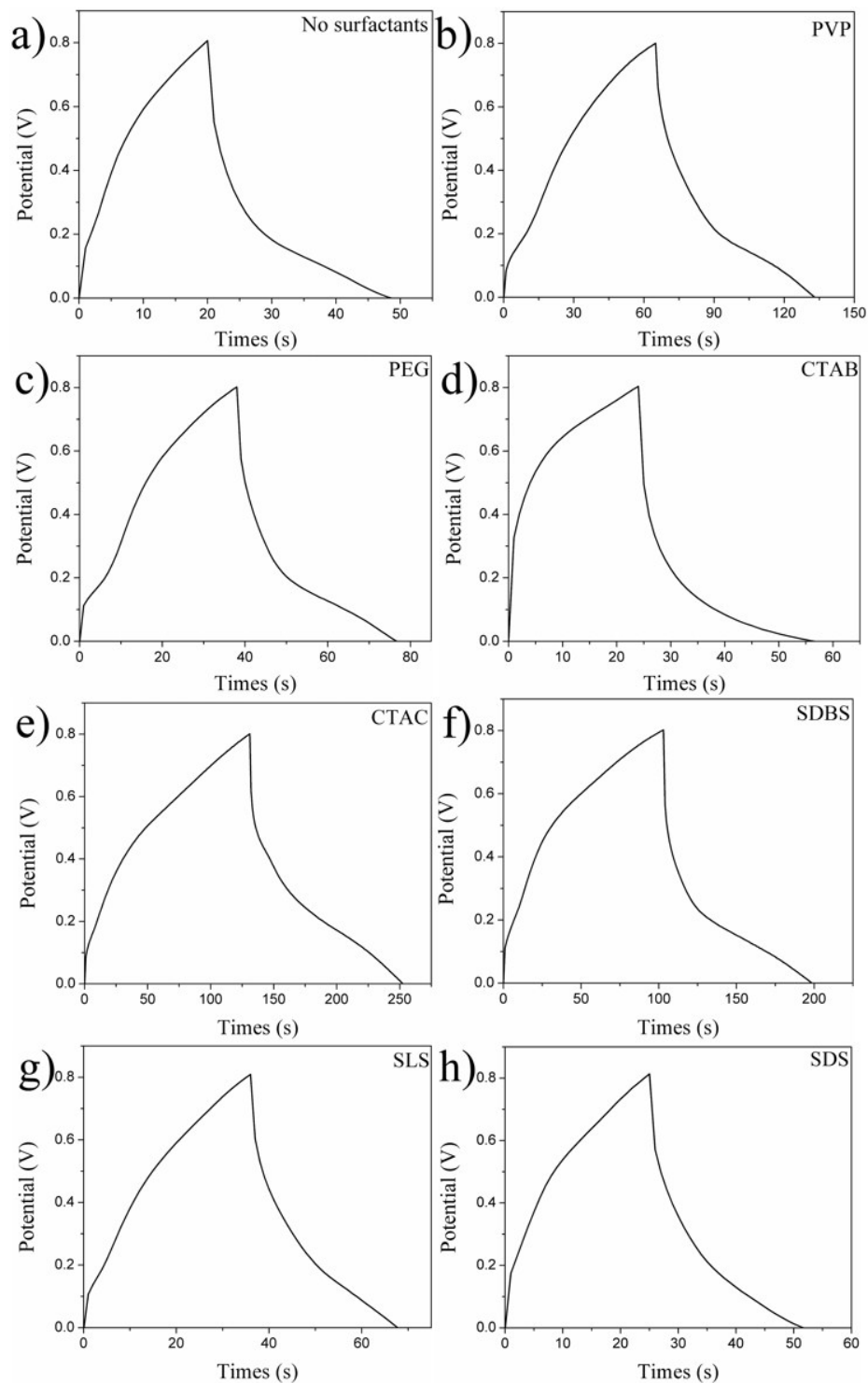


Fig. S7 Charge and discharge curves of MD PANI nanostructures prepared in the presence of different surfactants: **(a)** no surfactant, **(b)** PVP, **(c)** PEG, **(d)** CTAB (0.50 g), **(e)** CTAC, **(f)** SDBS, **(g)** SLS, **(h)** SDS at a current density of 2.0 A g^{-1} .