

Supporting Information

# Highly Stable and Efficient Performance of Binder-Free Symmetric Supercapacitor Fabricated with Electroactive Polymer Synthesized via Interfacial Polymerization

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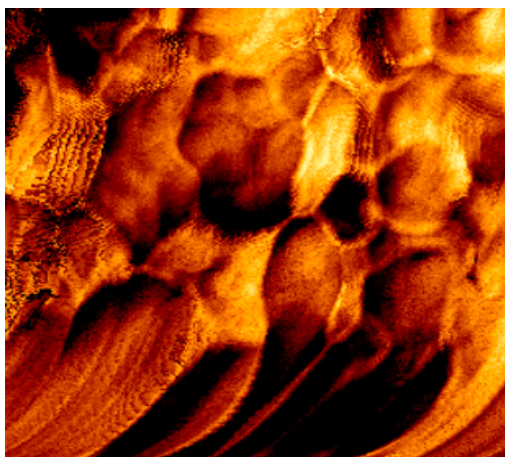
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**Figure S1.** AFM image of PANI-DBSA.

**Table S1.** FTIR band position of PANI-DBSA along with their assignments.

| Assignment                                                  | Band position (cm <sup>-1</sup> ) |
|-------------------------------------------------------------|-----------------------------------|
| Secondary bounded NH stretch of aromatic amine              | 3213                              |
| Aromatic C—H stretch                                        | 2931                              |
| Alkene C—H stretch                                          | 2907                              |
| Aliphatic C—H stretch                                       | 2835                              |
| Quinoid ring (Q)                                            | 1552                              |
| Benzenoid ring (B)                                          | 1479                              |
| C-N stretch in QBQ, QBB, BBQ                                | 1282                              |
| Electronic like absorption of N=Q=N                         | 1146                              |
| SO <sub>3</sub> stretch                                     |                                   |
| Symmetric SO <sub>2</sub> stretch                           | 1124                              |
| P=O stretch                                                 |                                   |
| S=O stretch                                                 | 1024                              |
| Aromatic C-H out of plan bending (para substituted benzene) | 789                               |
| C—S stretch                                                 |                                   |

|                          |      |
|--------------------------|------|
| S—O stretch              | 665  |
| N—H out of plane bending | 503  |
| (IQ/IB)                  | 1.05 |

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