

Electronic Supporting Information (ESI)

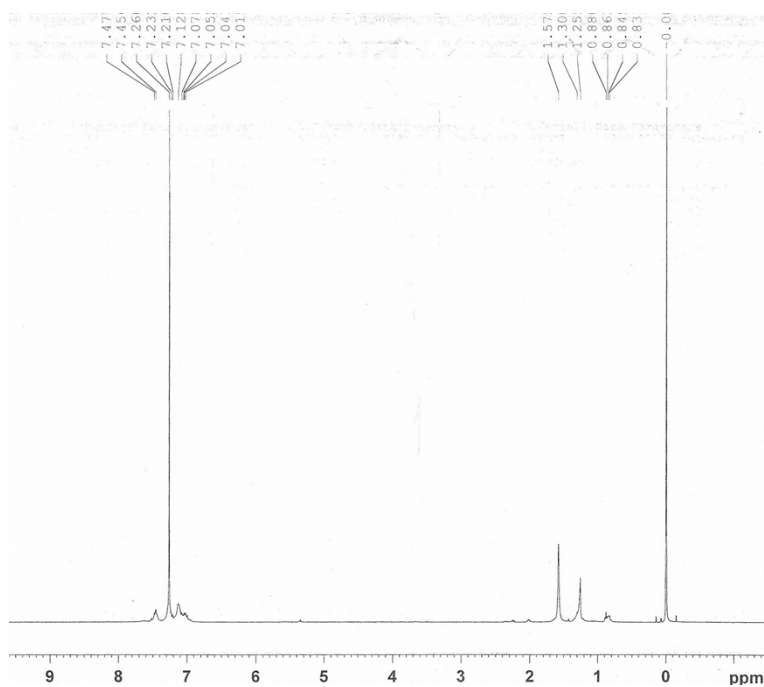
Organic Pseudo-capacitors of Higher Cut-off Voltage and Energy Density Based on Electroactive Conducting Poly(triphenylamine) with Optimized Structures as Polymeric Cathode Materials

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a)



b)

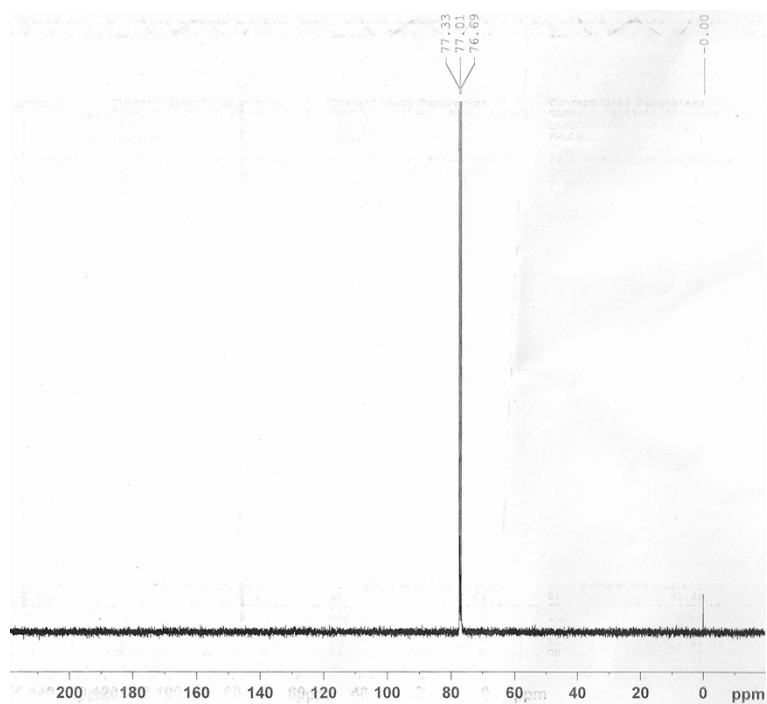


Figure S1. a) ^1H NMR and b) ^{13}C NMR spectroscopy of the $\text{PTPA}_{(\text{particulates})}/\text{CDCl}_3$ suspension. Chemical shifts were expressed in parts per million (δ) using tetramethylsilane (TMS) as internal standards (^1H : chloroform: δ 7.26 ppm; ^{13}C : CDCl_3 : 77.23 ppm). It showed very weak characteristic peaks of the polymer PTPA except the background peaks corresponding to the solvent (deuterated chloroform), which further verified the insolubility in solvents of the PTPA particulates.

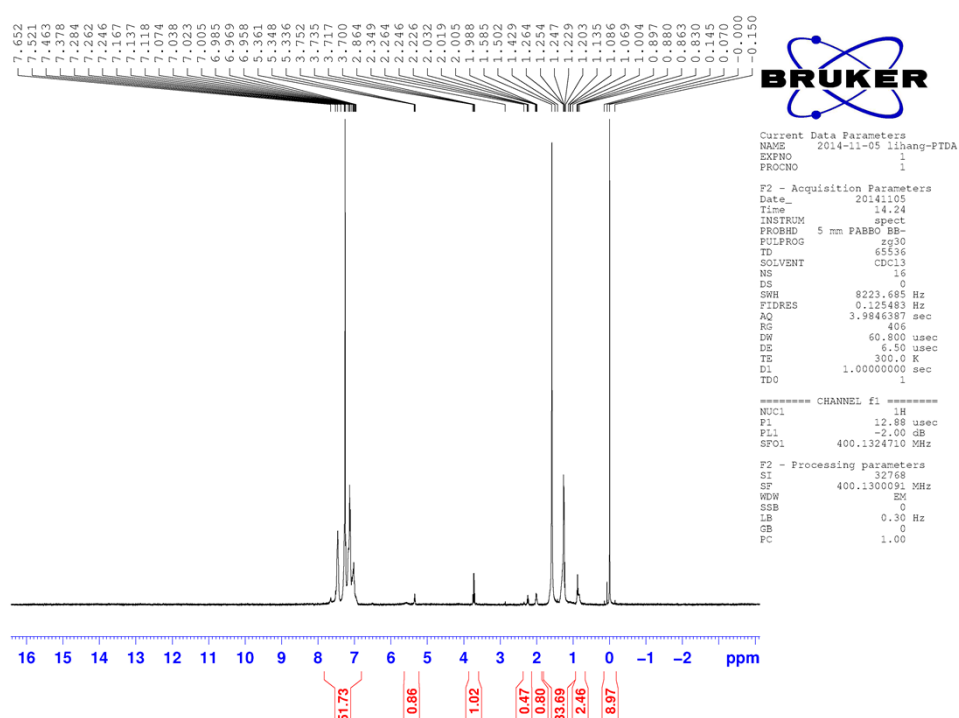
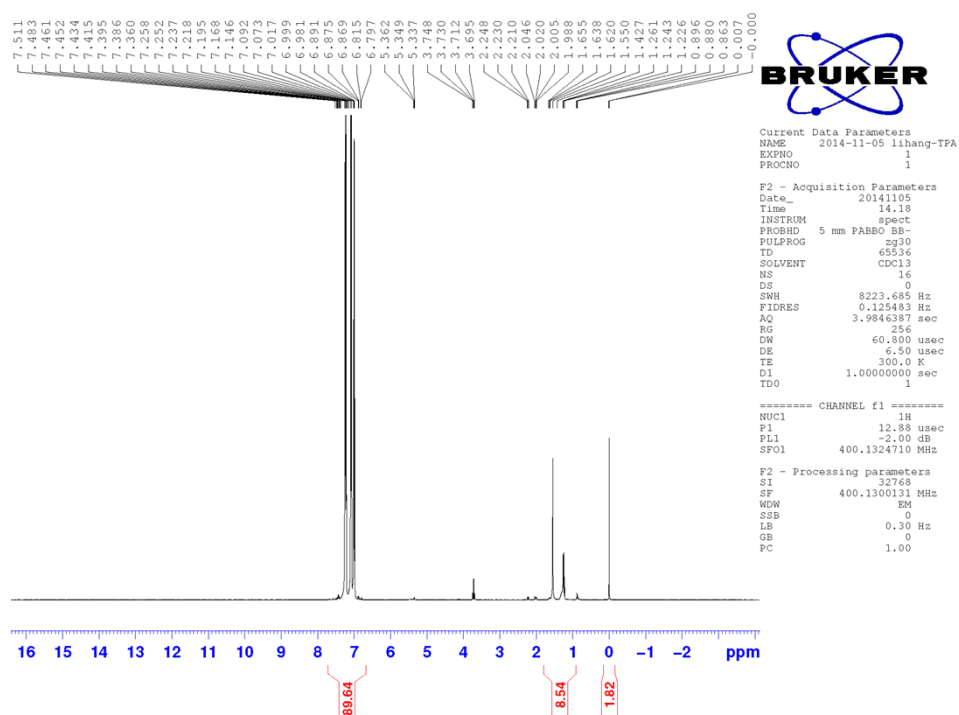
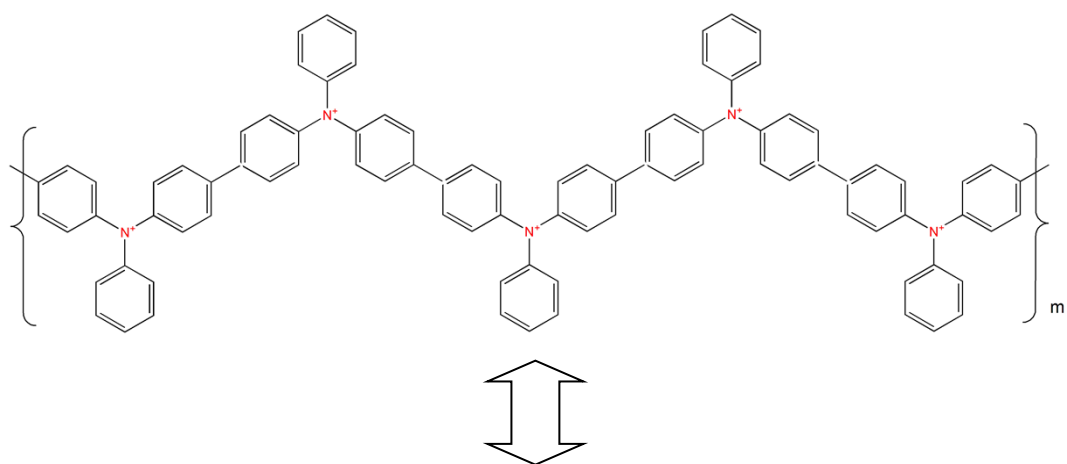


Figure S2. ^1H NMR spectroscopy of the PTPA_(microfibers)/CDCl₃ solution. It showed the enhanced characteristic peaks of the polymer PTPA. The linear polymer PTPA is soluble in the related solvent (e.g., chloroform). For the FT-NMR of TPA (triphenylamine), see the website: <http://www.sigmaaldrich.com/spectra/fnmr/FNMR011567.PDF>

a)



b)

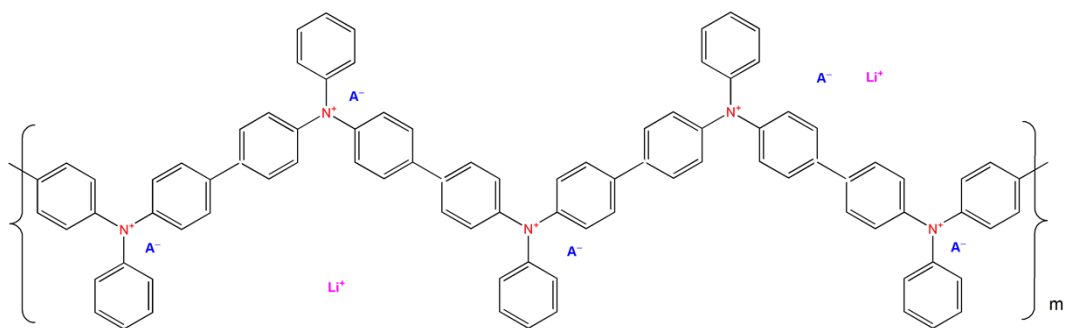
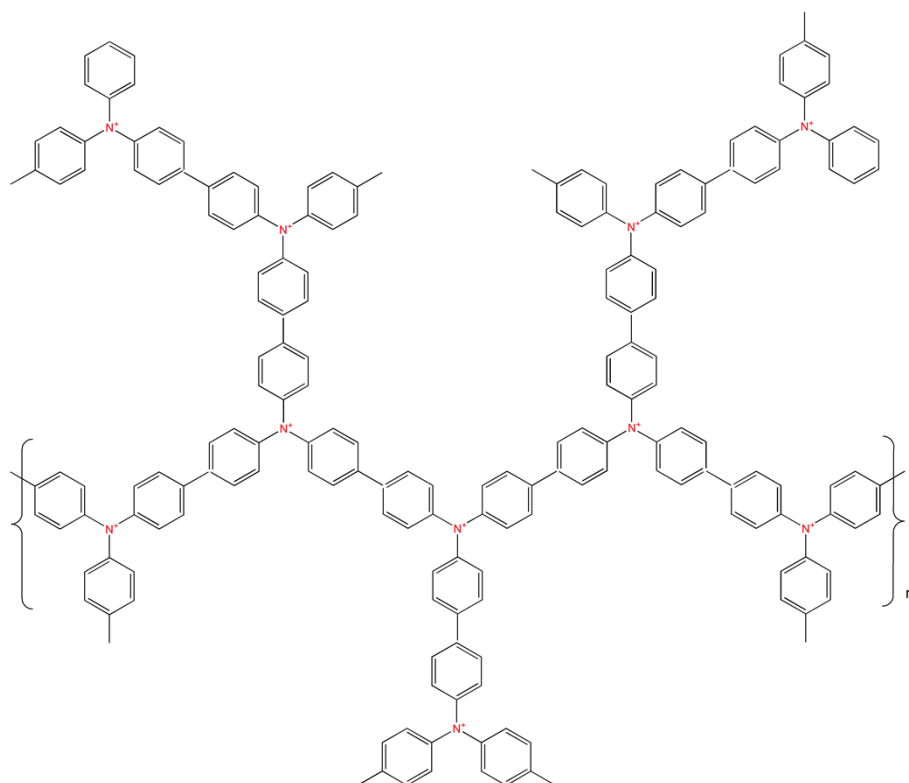


Figure S3. The structural representation of the as-synthesized linear polymer molecule (soluble): a) pristine state, b) charged state.

a)



b)

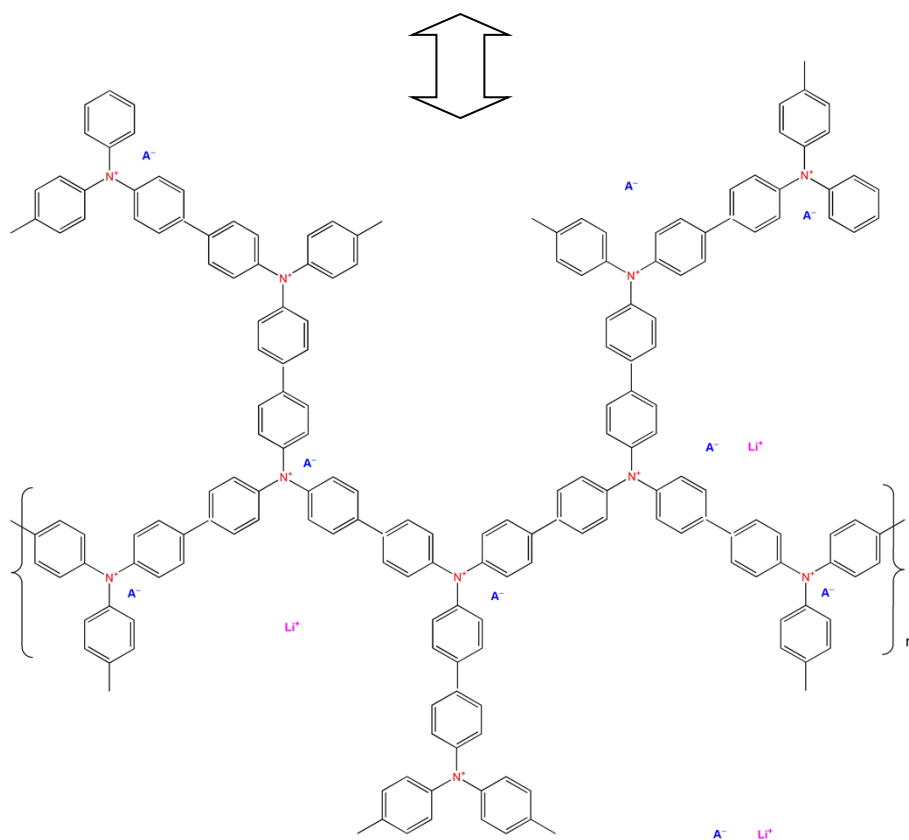


Figure S4 The structural representation of the as-synthesized crosslinked polymer molecule (insoluble): a) pristine state, b) charged state.