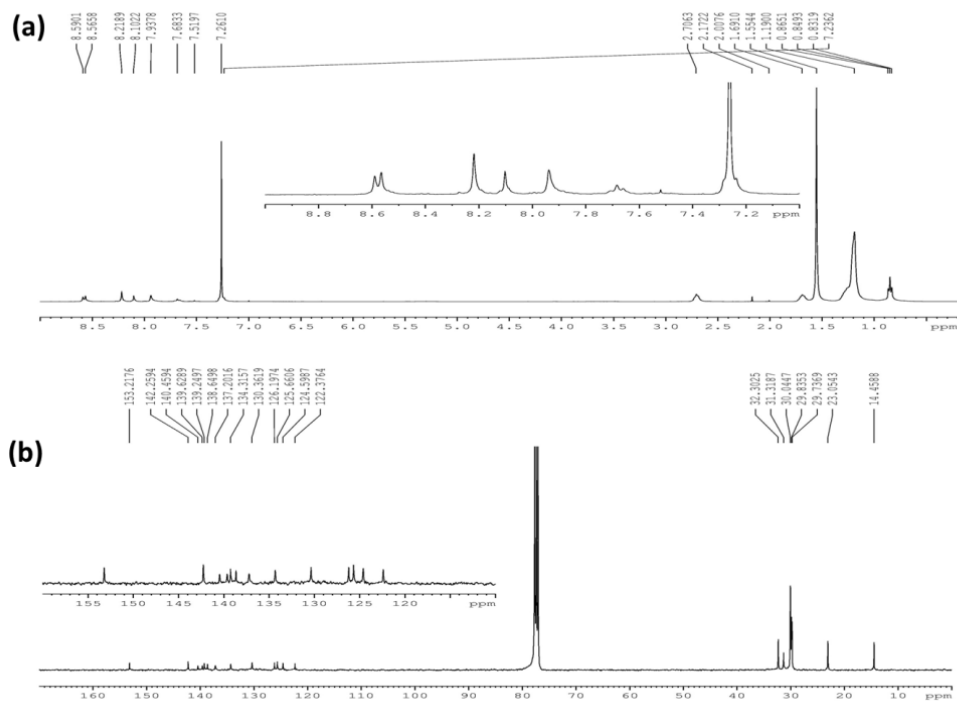Supporting Information

Azulene Based Conjugated Polymers with Tuneable Near IR Absorption Up to 2.5 μm†

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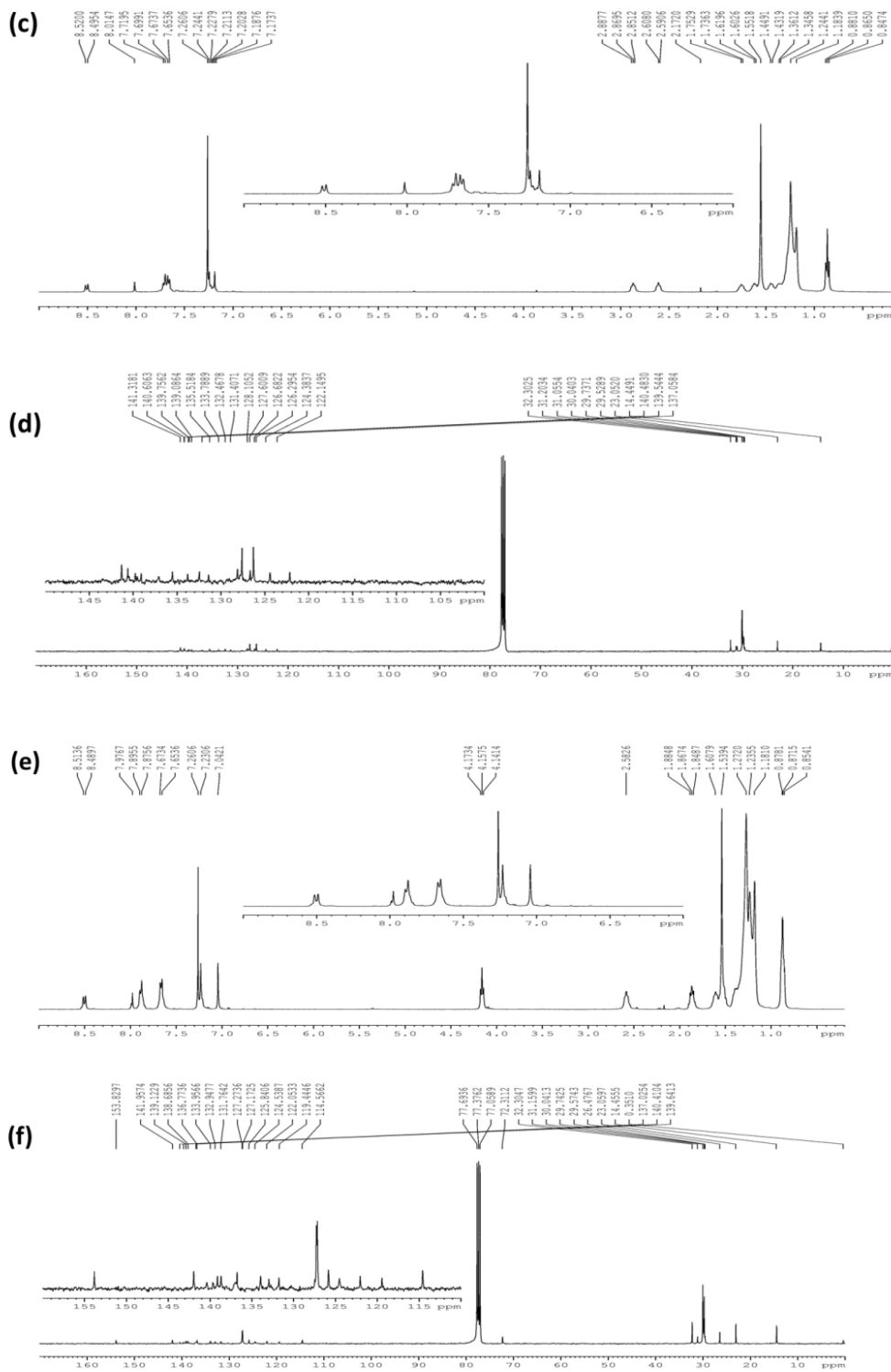
Fig. S1 Typical NMR spectra of polymers. (a) and (b), ^{1}H-NMR and ^{13}C-NMR spectra of polymer **PTAz-4**; (c) and (d), ^{1}H-NMR and ^{13}C-NMR spectra of polymer **PTAz-2**; (e) and (f), ^{1}H-NMR and ^{13}C-NMR spectra of polymer **PTAz-3**.
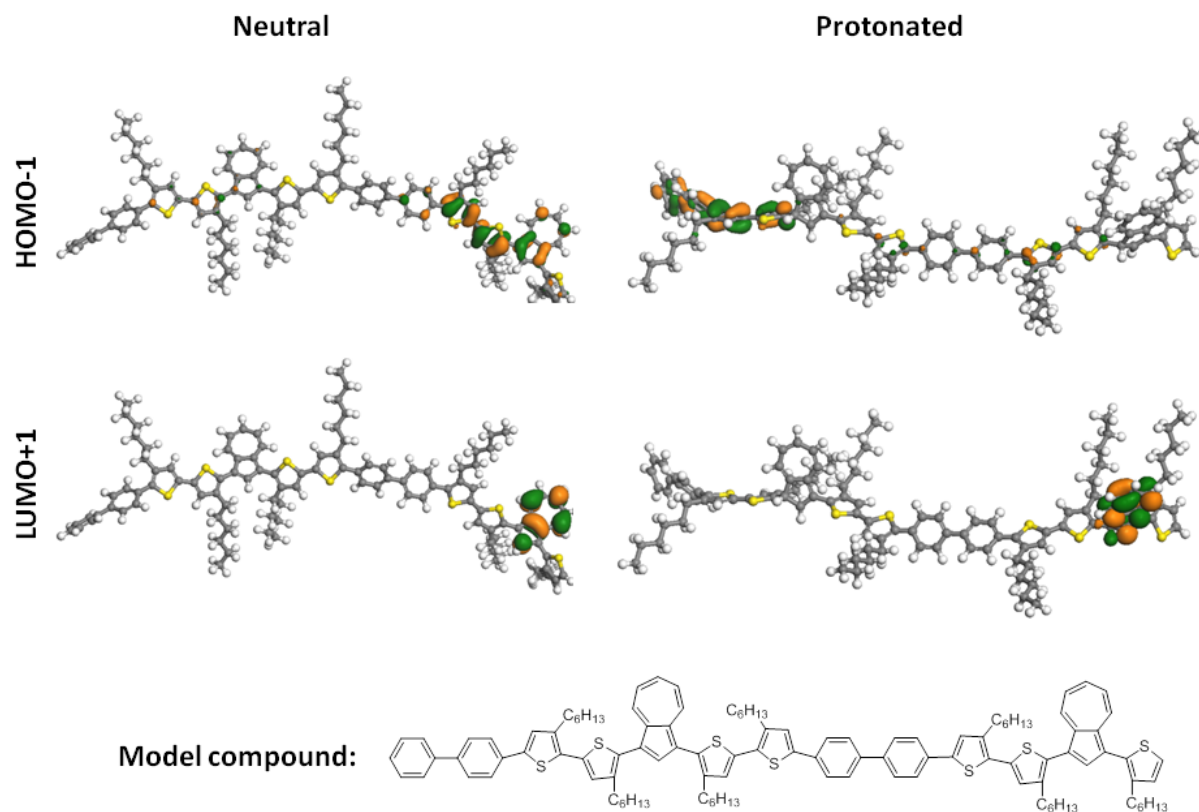
Fig. S2 Spatial distributions of the calculated HOMO-1 and LUMO+1 of model compound at neutral and protonated states. Bottom: chemical structure of the model compound for the polymers.

Table S1. Orbital energies of model compound at neutral and protonated states.

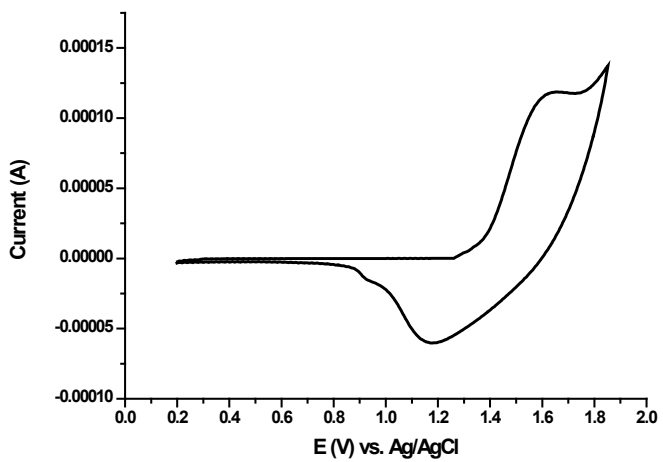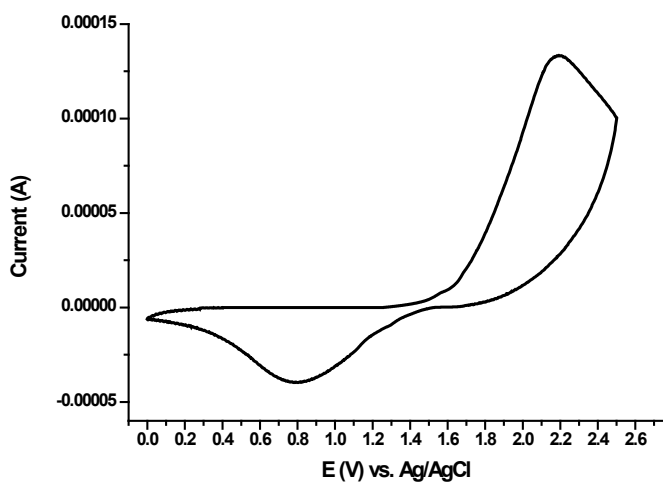| States	Total energy (Ha)	HOMO-1 (eV)	HOMO (eV)	LUMO (eV)	LUMO+1 (eV)	Energy Gap (eV)
Neutral	-7208.4968679	-4.371	-4.258	-2.953	-2.945	1.305
Protonated	-7209.2217452	-7.426	-7.419	-6.913	-6.882	0.506

Fig. S3 CV curves of polymer polyfluorene under different concentration of TFA measured in a 0.1 M LiClO$_4$/acetonitrile solution: top: 0% TFA; bottom: 15% TFA.