

## Supporting Information for

### Donor-acceptor copolymers containing bithiophene and dithiophenylthienothiadiazole units with fast electrochromic response

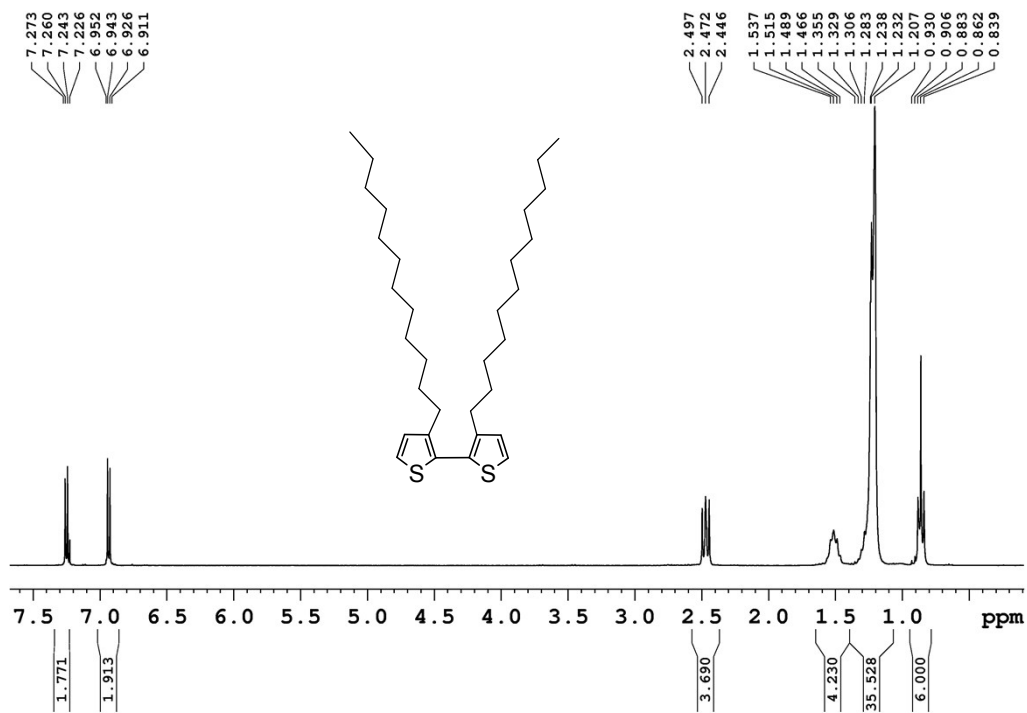
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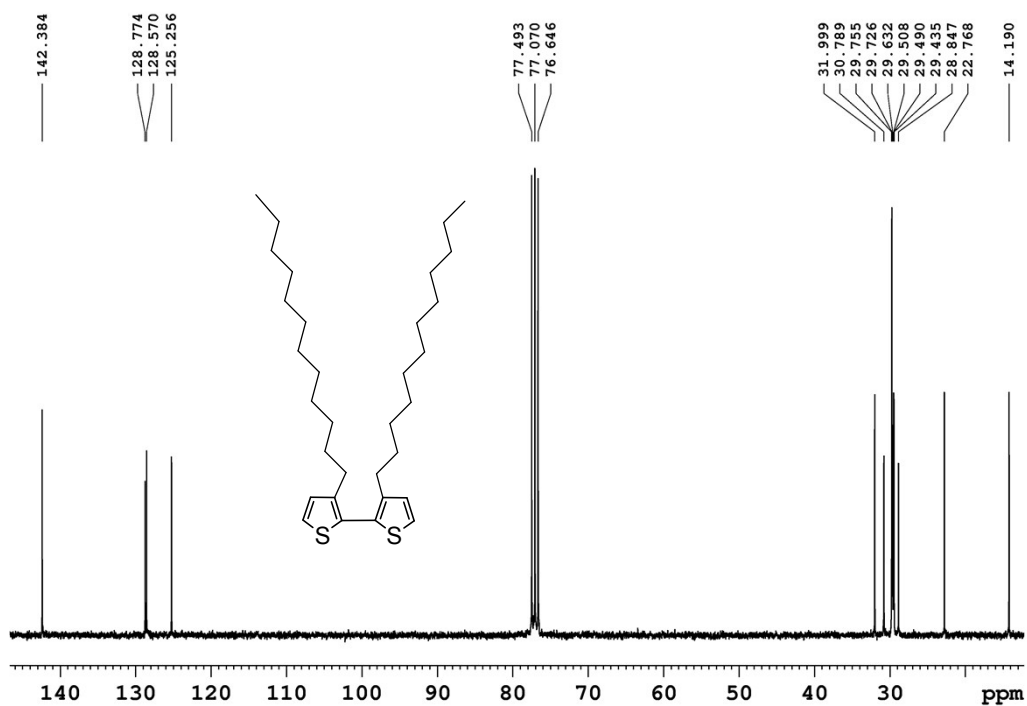
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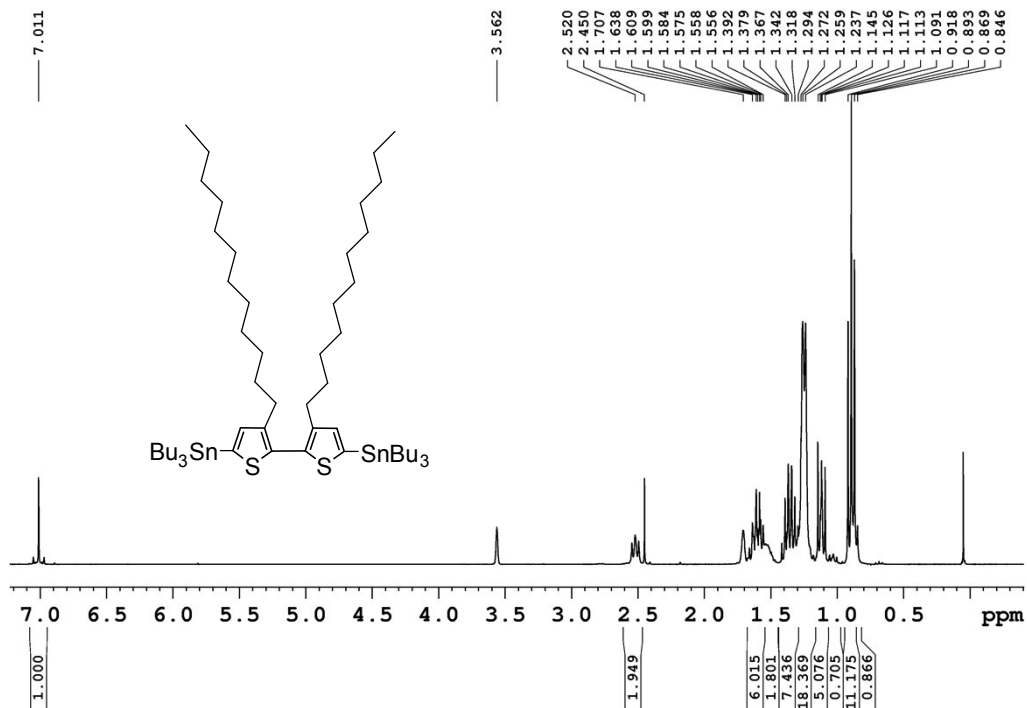
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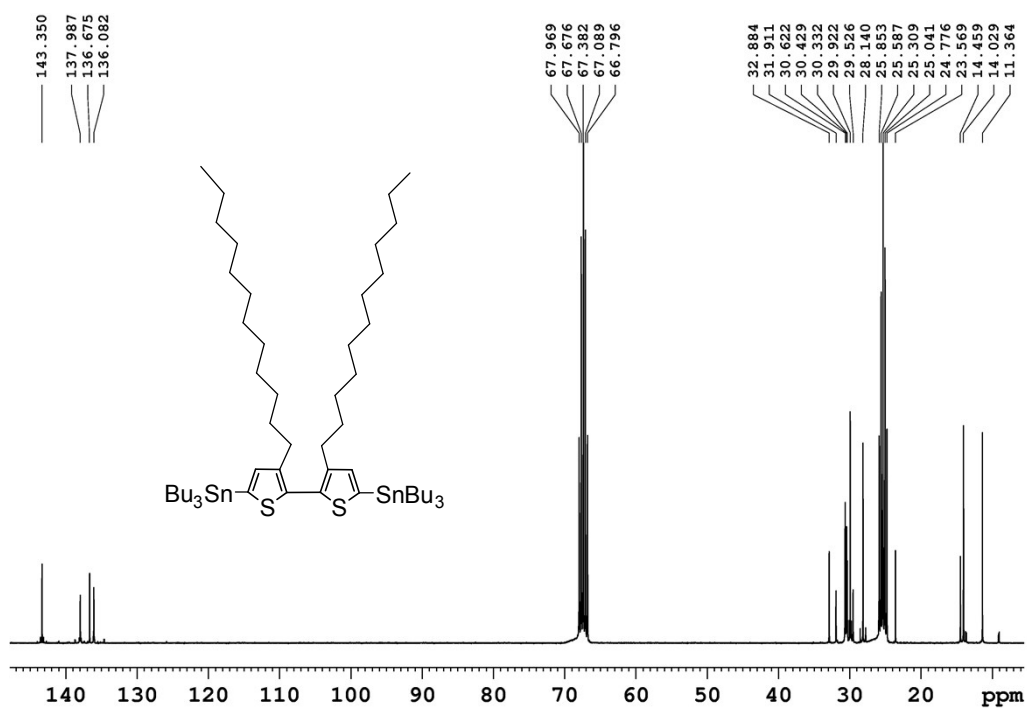
**Figure S1:**  $^1\text{H}$  NMR spectrum of 3,3'-didodecyl-2,2'-bithiophene (**1**) in  $\text{CDCl}_3$ .



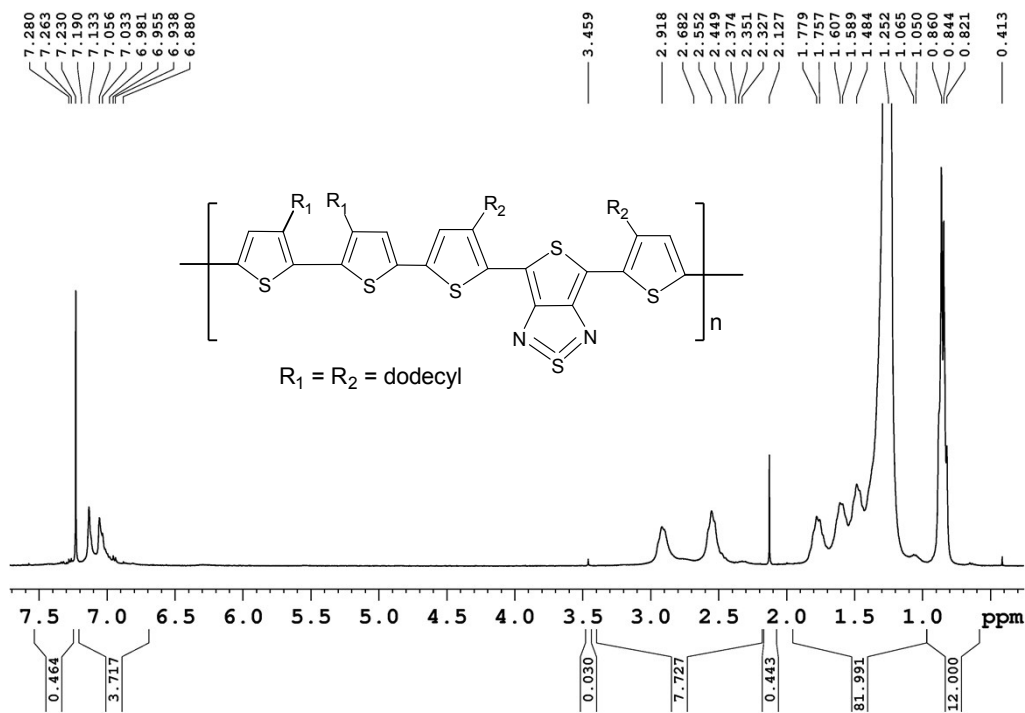
**Figure S2:**  $^{13}\text{C}$  NMR spectrum of 3,3'-didodecyl-2,2'-bithiophene (**1**) in  $\text{CDCl}_3$ .



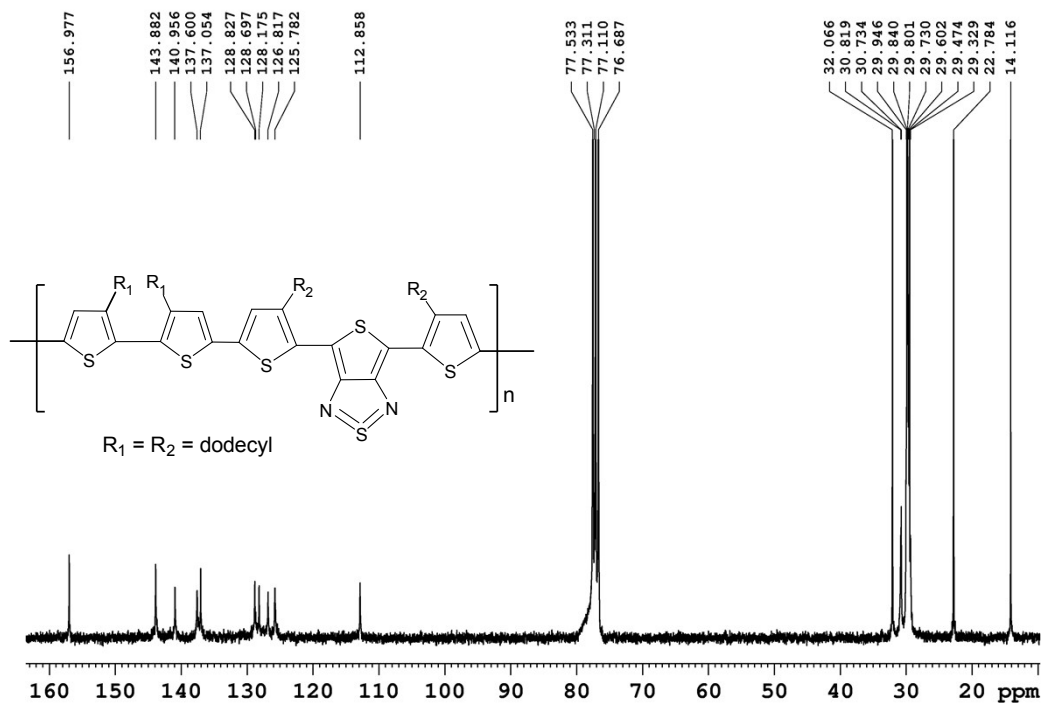
**Figure S3:** <sup>1</sup>H NMR spectrum of 3,3'-didodecyl-5,5'-tributylstannyl-2,2'-bithiophene (**2**) in deuterated tetrahydrofuran.



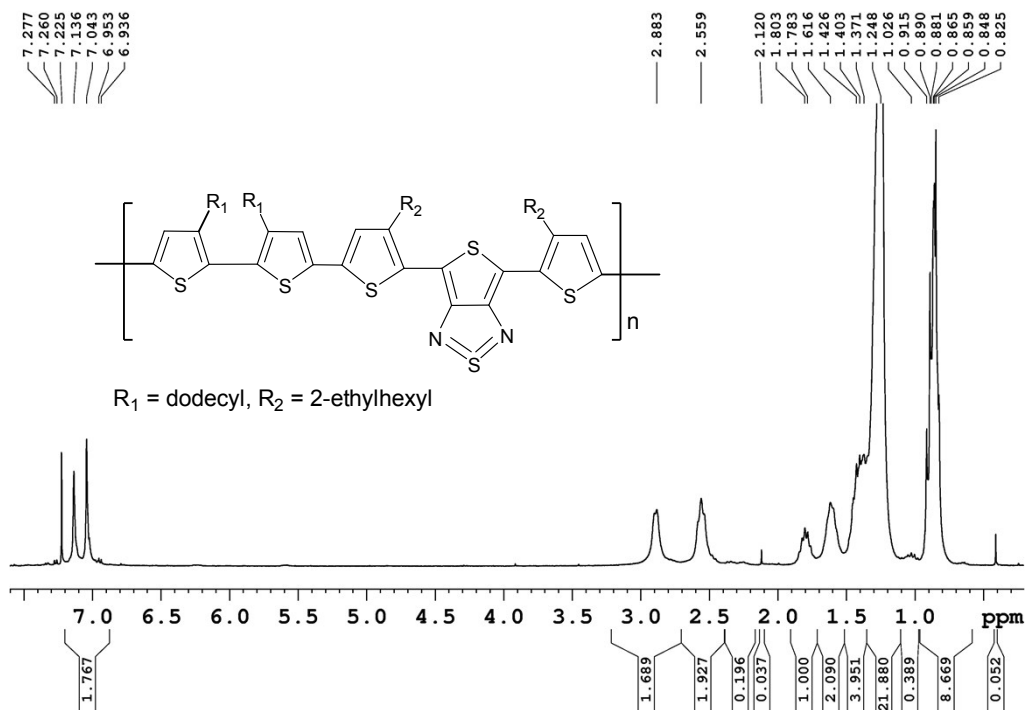
**Figure S4:** <sup>13</sup>C NMR spectrum of 3,3'-didodecyl-5,5'-tributylstannyl-2,2'-bithiophene (**2**) in deuterated tetrahydrofuran.



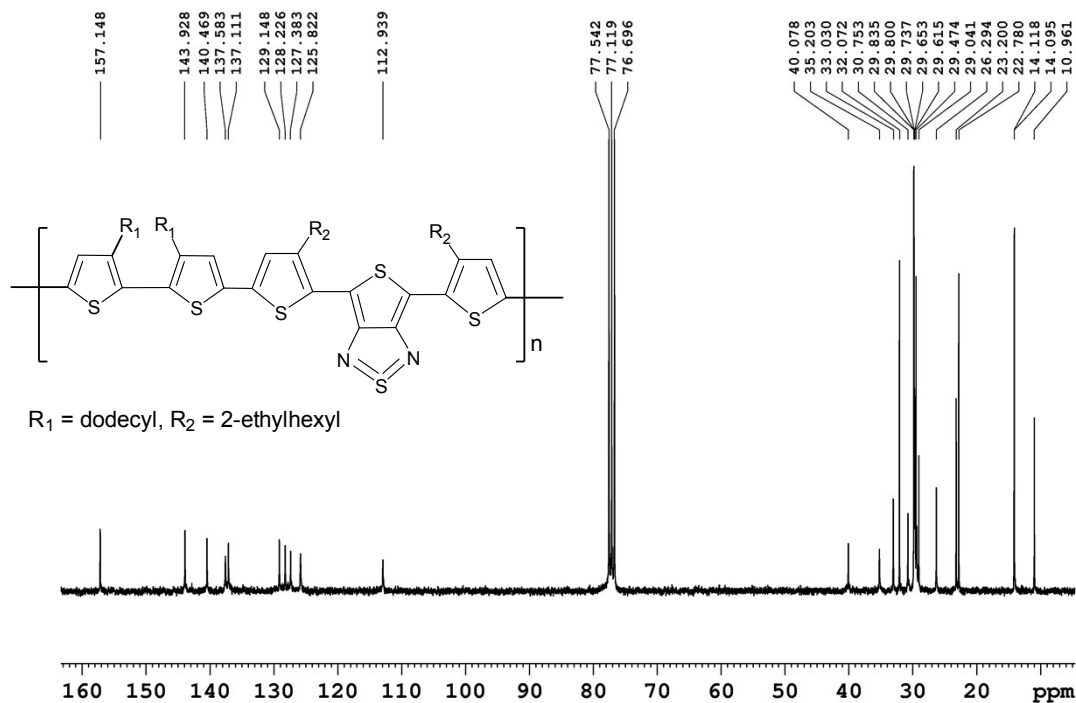
**Figure S5:**  $^1\text{H NMR}$  spectrum of poly[4,6-bis(3'-dodecylthiophen-2'-yl)thieno[3,4-c][1,2,5]thiadiazole-5',5'-diyl-alt-3,3'-didodecyl-2,2'-bithiophene-5,5'-diyl] (**CDTDBT**) in  $\text{CDCl}_3$ .



**Figure S6:**  $^{13}\text{C NMR}$  spectrum of poly[4,6-bis(3'-dodecylthiophen-2'-yl)thieno[3,4-c][1,2,5]thiadiazole-5',5'-diyl-alt-3,3'-didodecyl-2,2'-bithiophene-5,5'-diyl] (**CDTDBT**) in  $\text{CDCl}_3$ .



**Figure S7:**  $^1\text{H NMR}$  spectrum of poly[4,6-bis(3'-(2-ethylhexyl)thiophen-2'-yl)thieno[3,4-c][1,2,5]thiadiazole-5',5'-diyl-*alt*-3,3'-didodecyl-2,2'-bithiophene-5,5'-diyl] (CEHTDBT) in  $\text{CDCl}_3$ .



**Figure S8:**  $^{13}\text{C NMR}$  spectrum of poly[4,6-bis(3'-(2-ethylhexyl)thiophen-2'-yl)thieno[3,4-c][1,2,5]thiadiazole-5',5'-diyl-*alt*-3,3'-didodecyl-2,2'-bithiophene-5,5'-diyl] (CEHTDBT) in  $\text{CDCl}_3$ .