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## **Supporting Information**

High performance A-D-A oligothiophene-based organic solar cells employing two-step annealing and solution-processable copper thiocyanate (CuSCN) as an interfacial hole transporting layer

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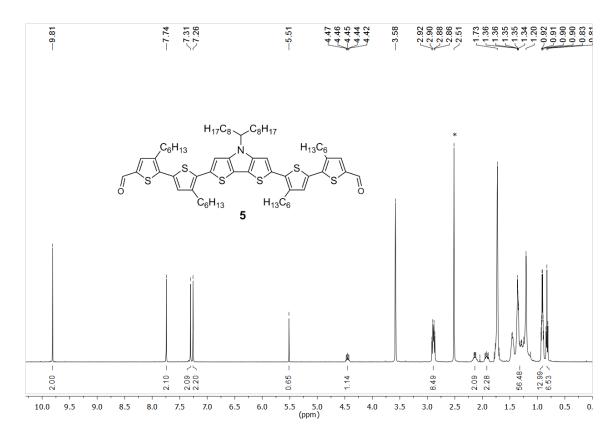
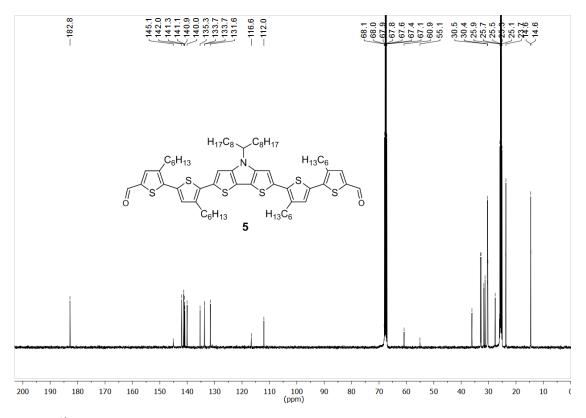


Figure S1.  $^{1}$ H-NMR spectrum of dialdehyde 5 in [D8]THF (400 MHz). \*solvent impurities.



**Figure S2**. <sup>13</sup>C-NMR spectrum of dialdehyde **5** in [D8]THF (100 MHz).

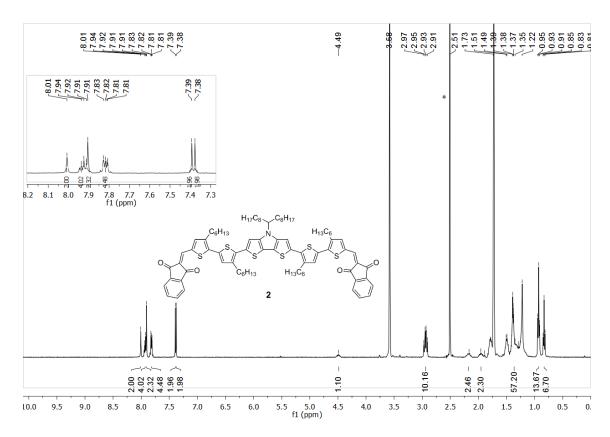
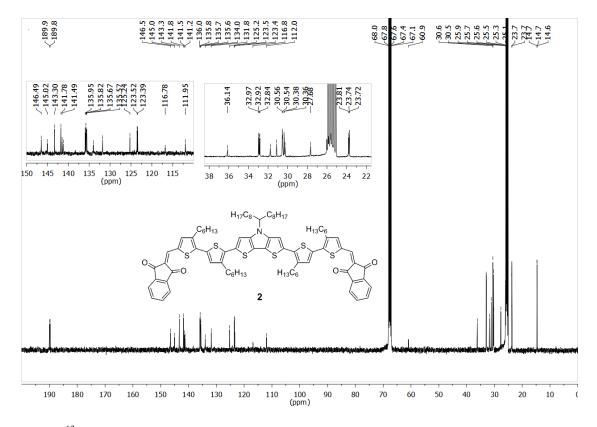


Figure S3.  $^{1}$ H-NMR spectrum of compound 2 in [D8]THF (400 MHz). \*solvent impurities.



**Figure S4**. <sup>13</sup>C-NMR spectrum of compound **2** in [D8]THF (100 MHz).