

Electronic Supplementary Information (ESI) for *RSC Advances*

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Electronic Supplementary Information (ESI)

**Synthesis, self-assembly and photovoltaic
applications of tribenzopentaphene derivatives**

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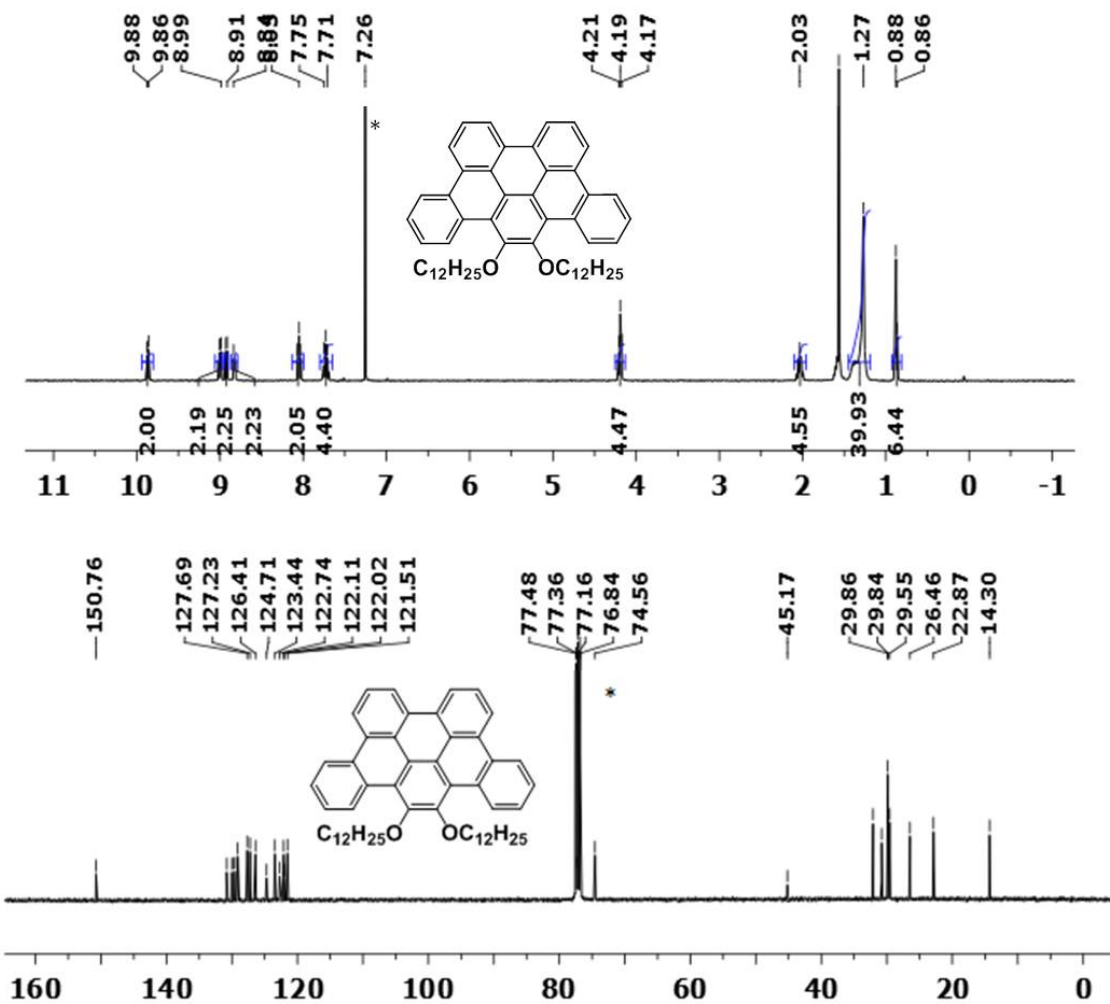


Figure S1: ¹H (top) and ¹³C (bottom) NMR (CDCl₃, 298K) spectra of **1a** (*solvent).

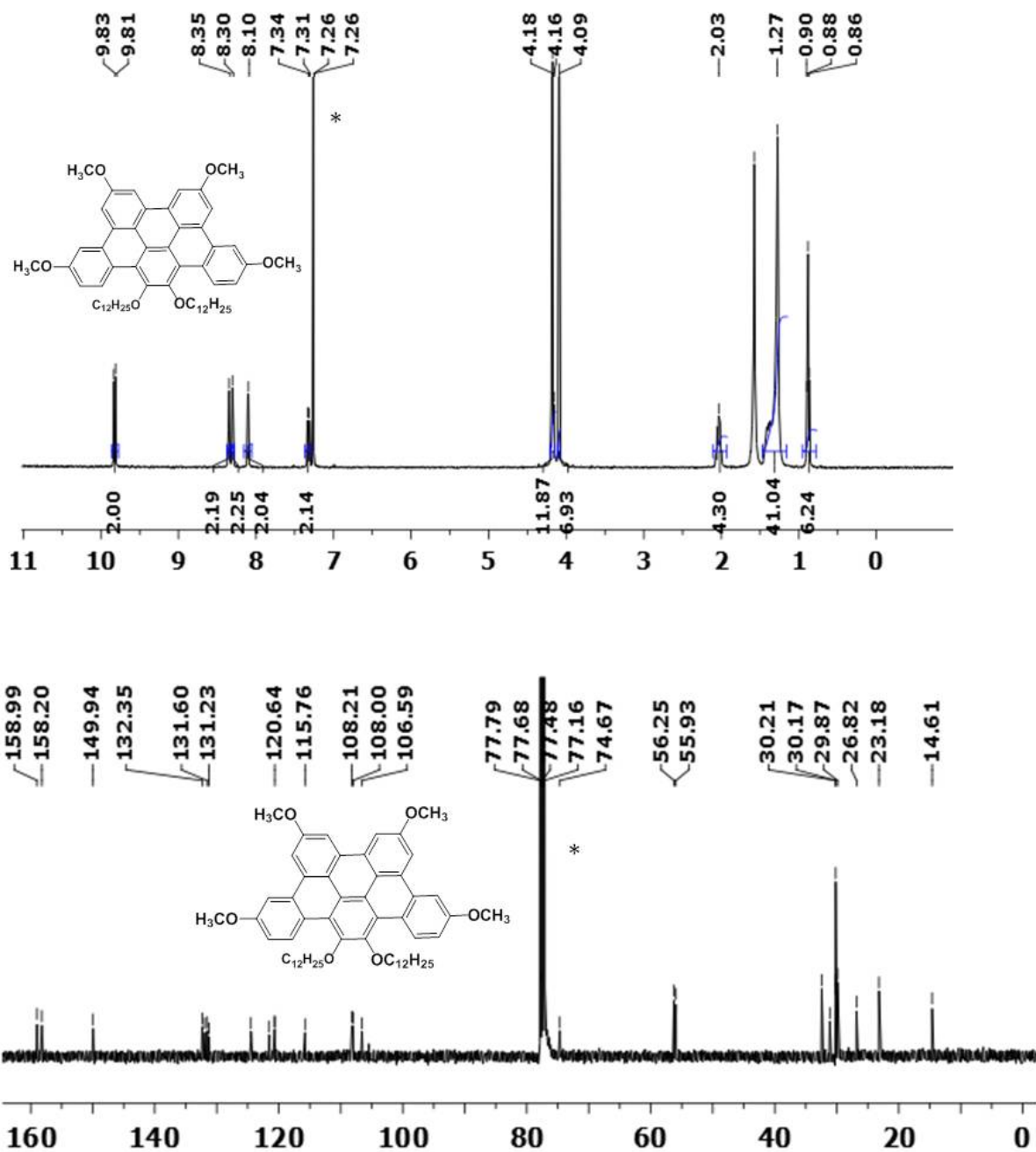


Figure S2: ^1H (top) and ^{13}C (bottom) NMR (CDCl_3 , 298K) spectra of **1b** (*solvent).

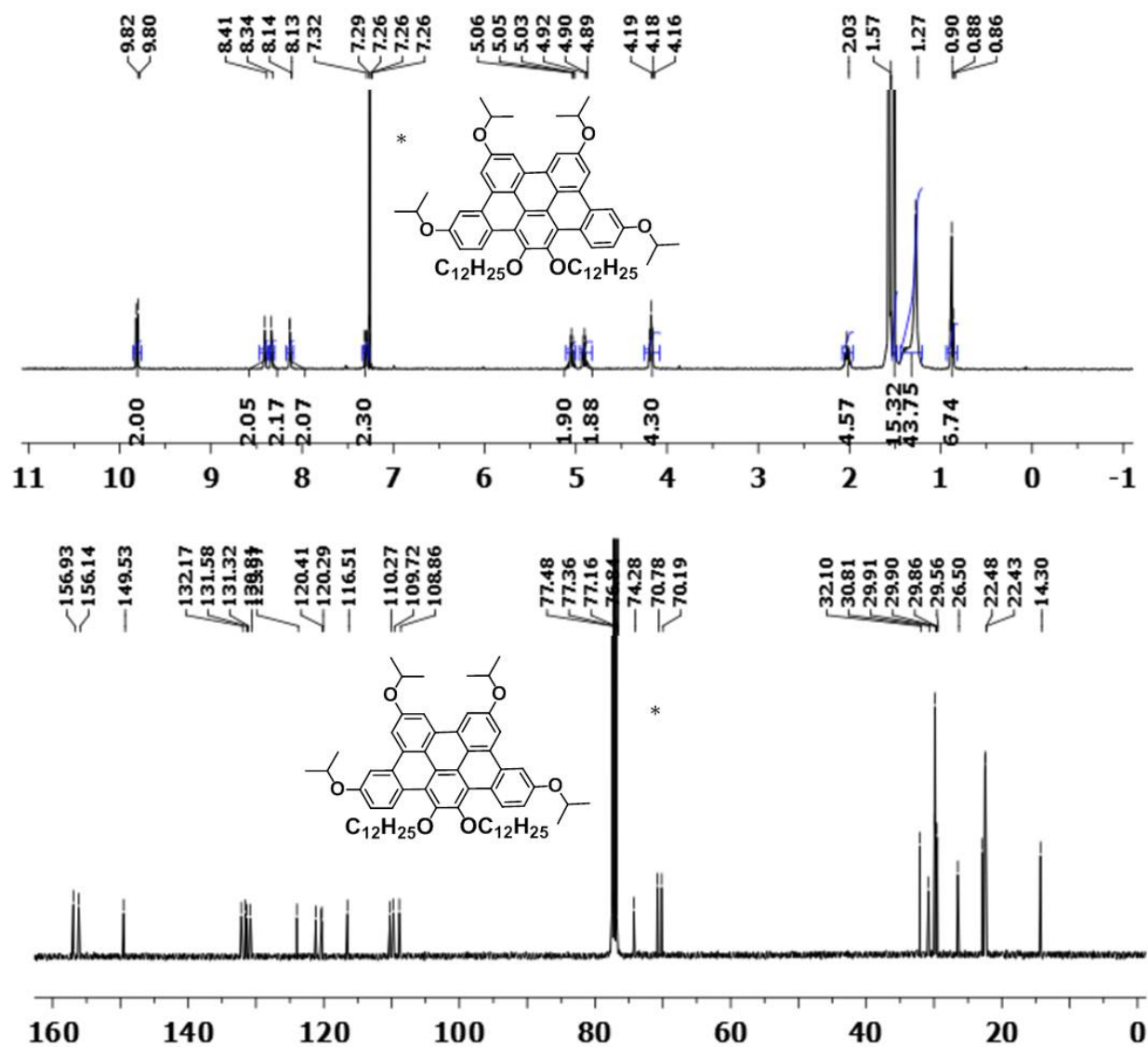


Figure S3: ¹H (top) and ¹³C (bottom) NMR (CDCl₃, 298K) spectra of **1c** (*solvent).

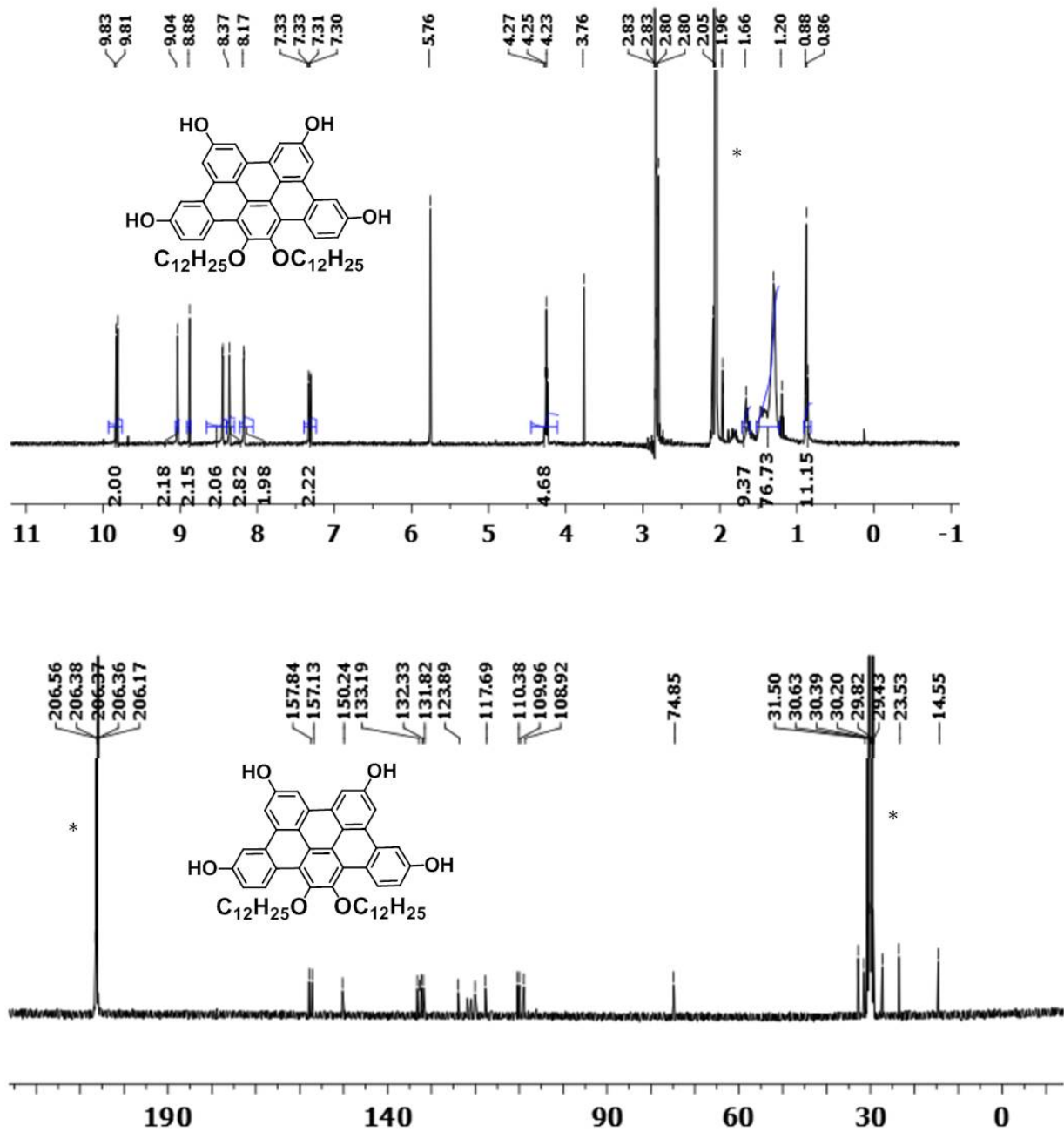


Figure S4: ¹H (top) and ¹³C (bottom) NMR (Acetone-*d*₆, 298K) spectra of **1d** (*solvent).

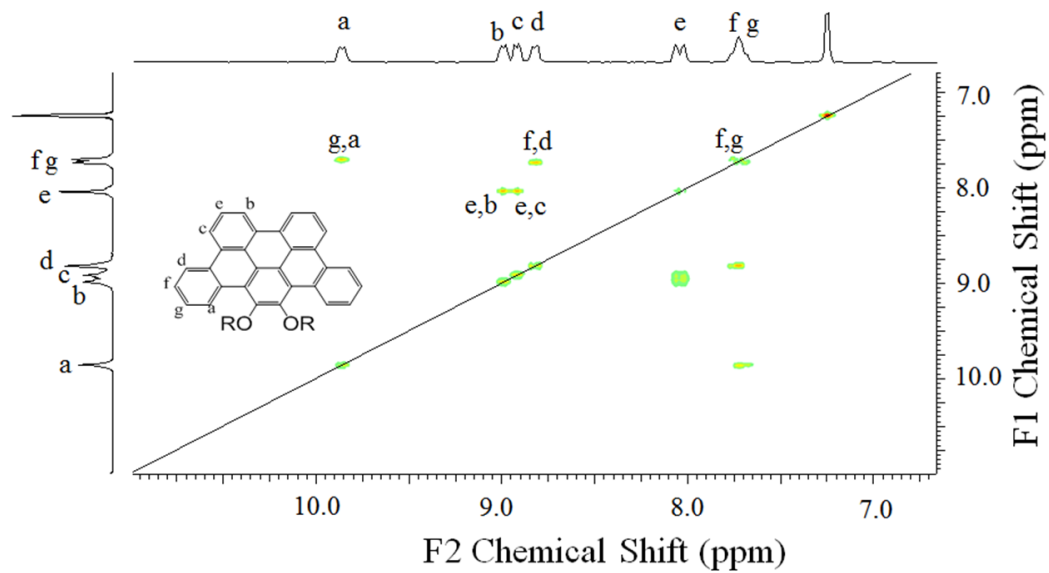


Figure S5: 2D COSY ^1H NMR spectrum of **1a** in CDCl_3 .

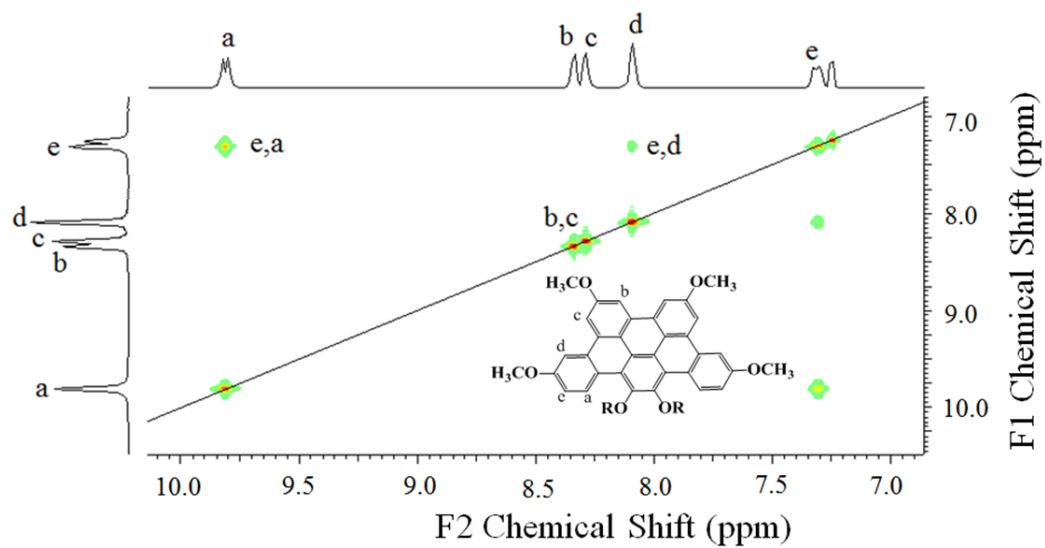


Figure S6: 2D COSY ^1H NMR spectrum of **1b** in CDCl_3 .

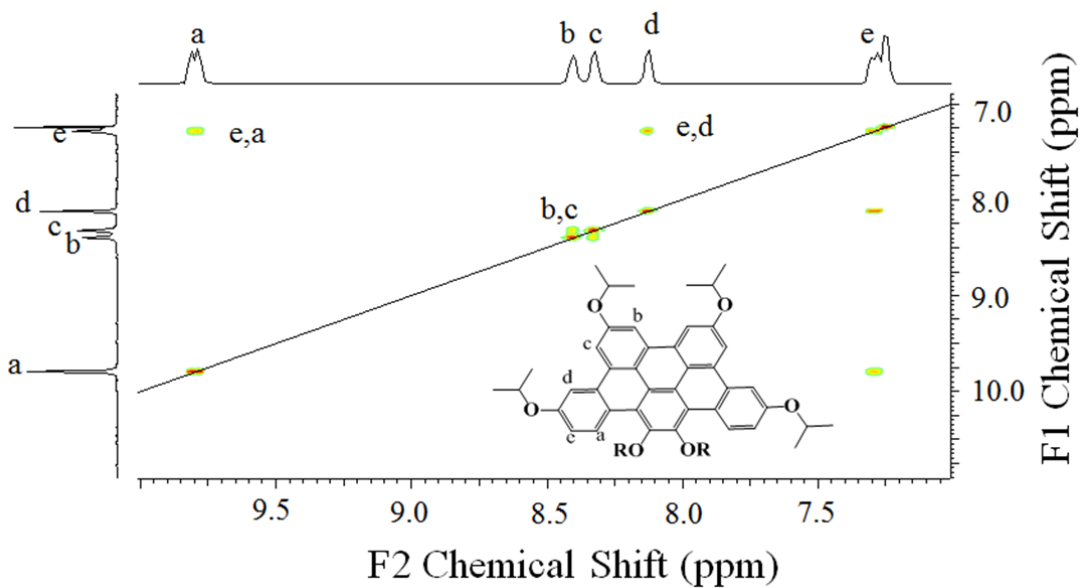


Figure S7: 2D COSY ^1H NMR spectrum of **1c** in CDCl_3 .

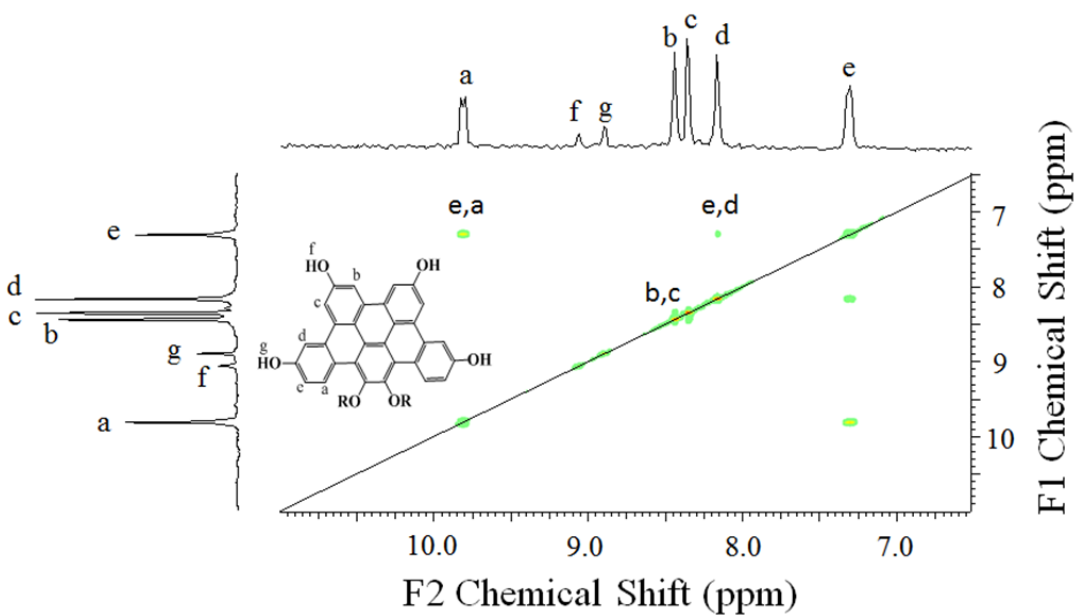


Figure S8: 2D COSY ^1H NMR spectrum of **1d** in CDCl_3 .

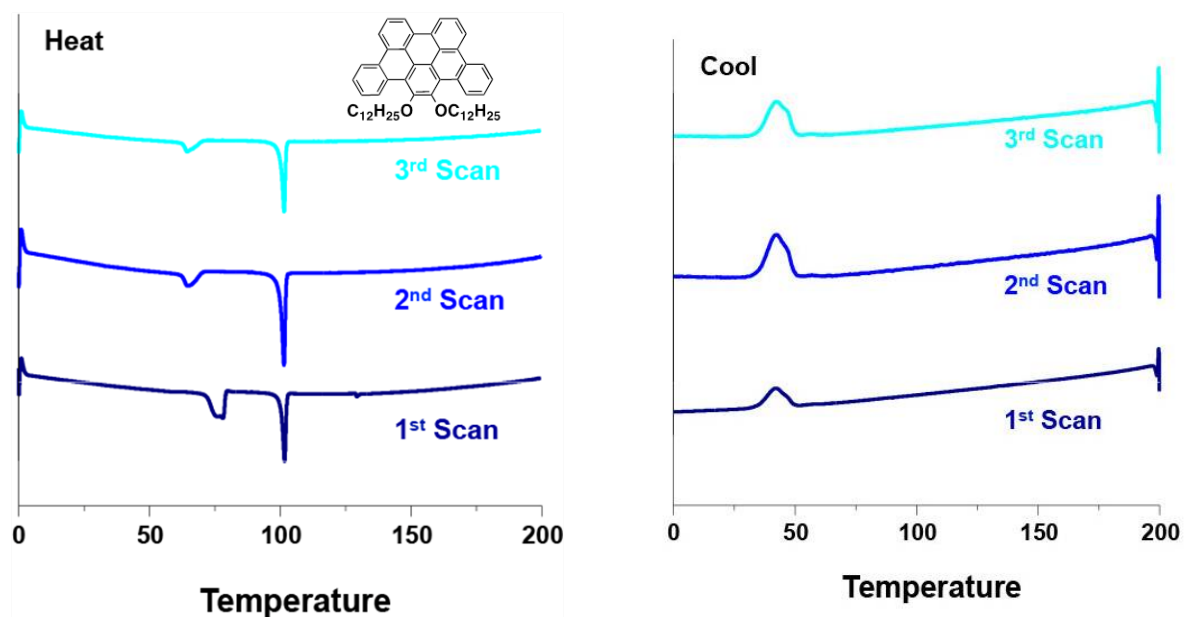


Figure S9: DSC thermograms for **1a** with a heating and cooling rate of 10 °C/min.

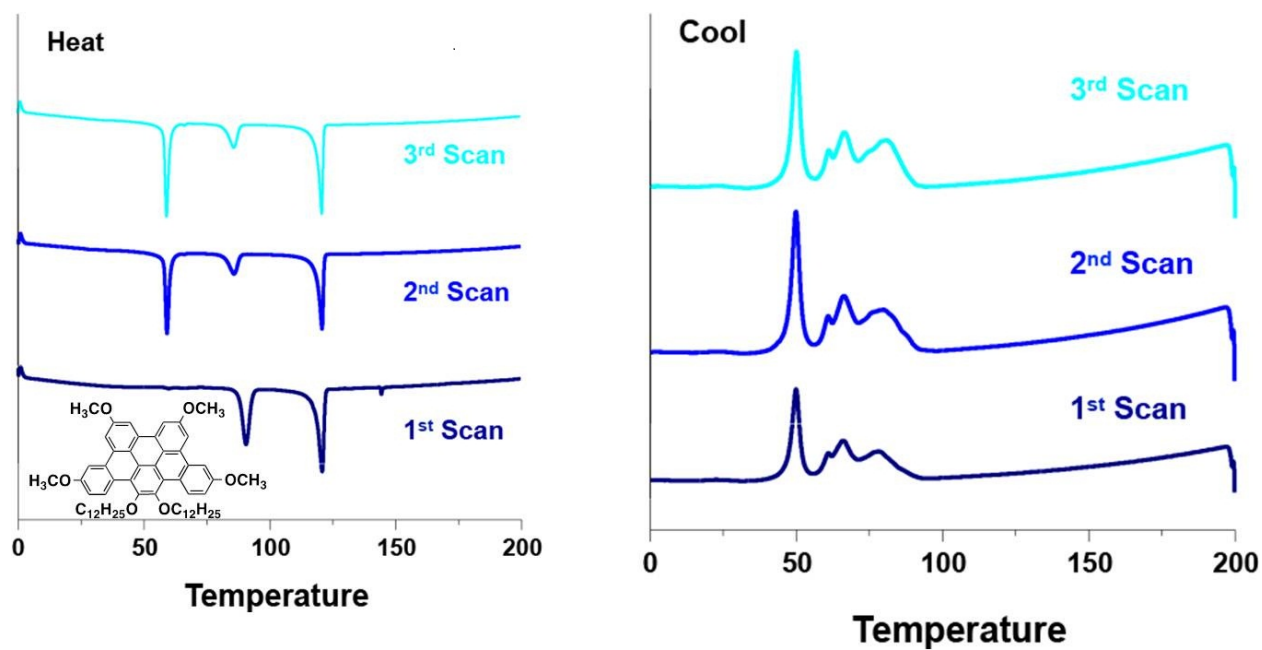


Figure S10: DSC thermograms for **1b** with a heating and cooling rate of 10 °C/min.

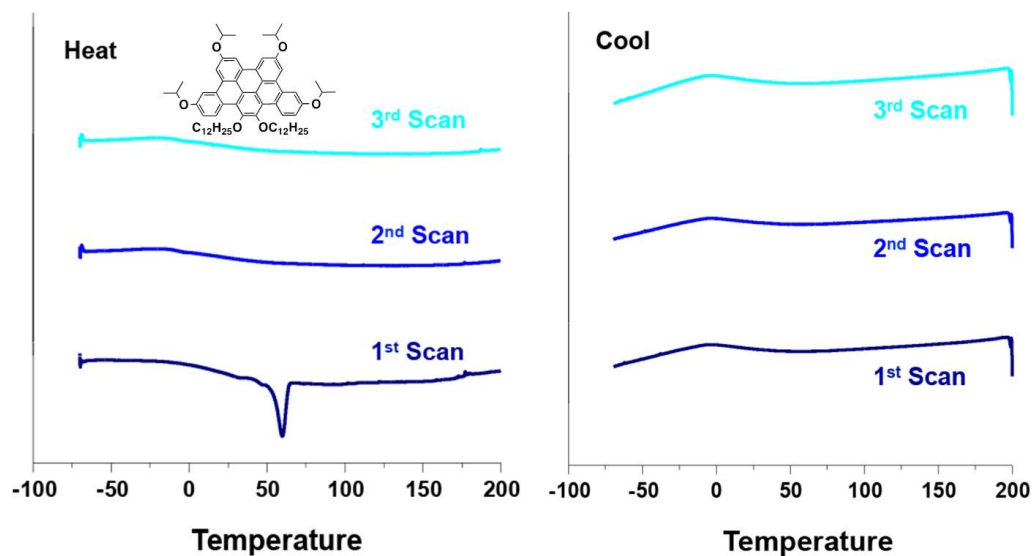


Figure S11: DSC thermograms for **1c** with a heating and cooling rate of 10 °C/min.

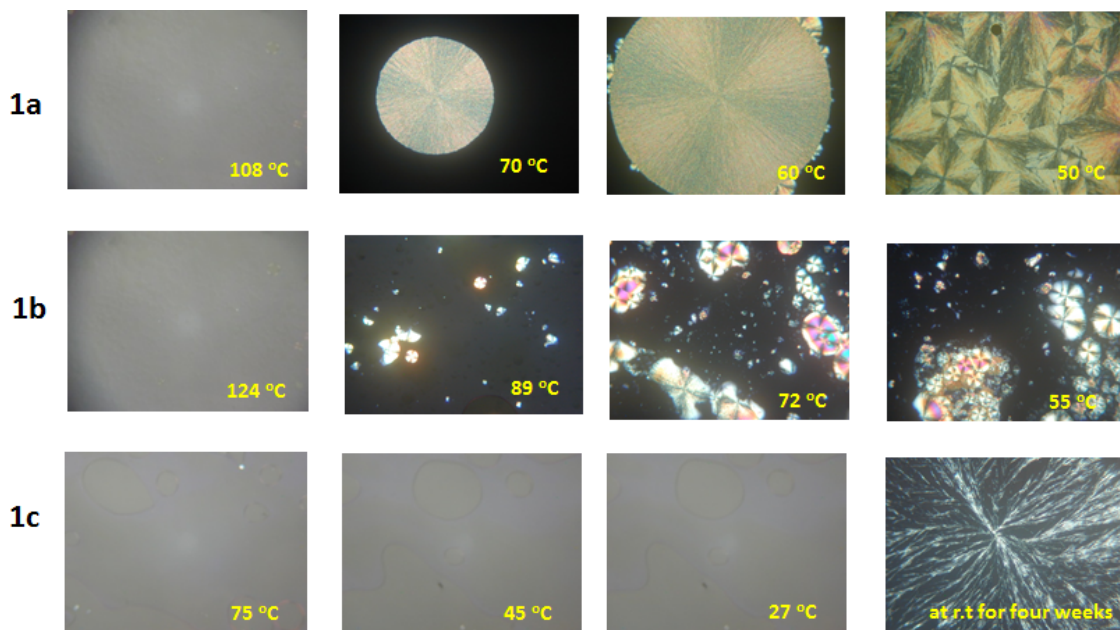


Figure S12: POM images of **1a**, **1b**, and **1c** during cooling from melt (1 °C/min).

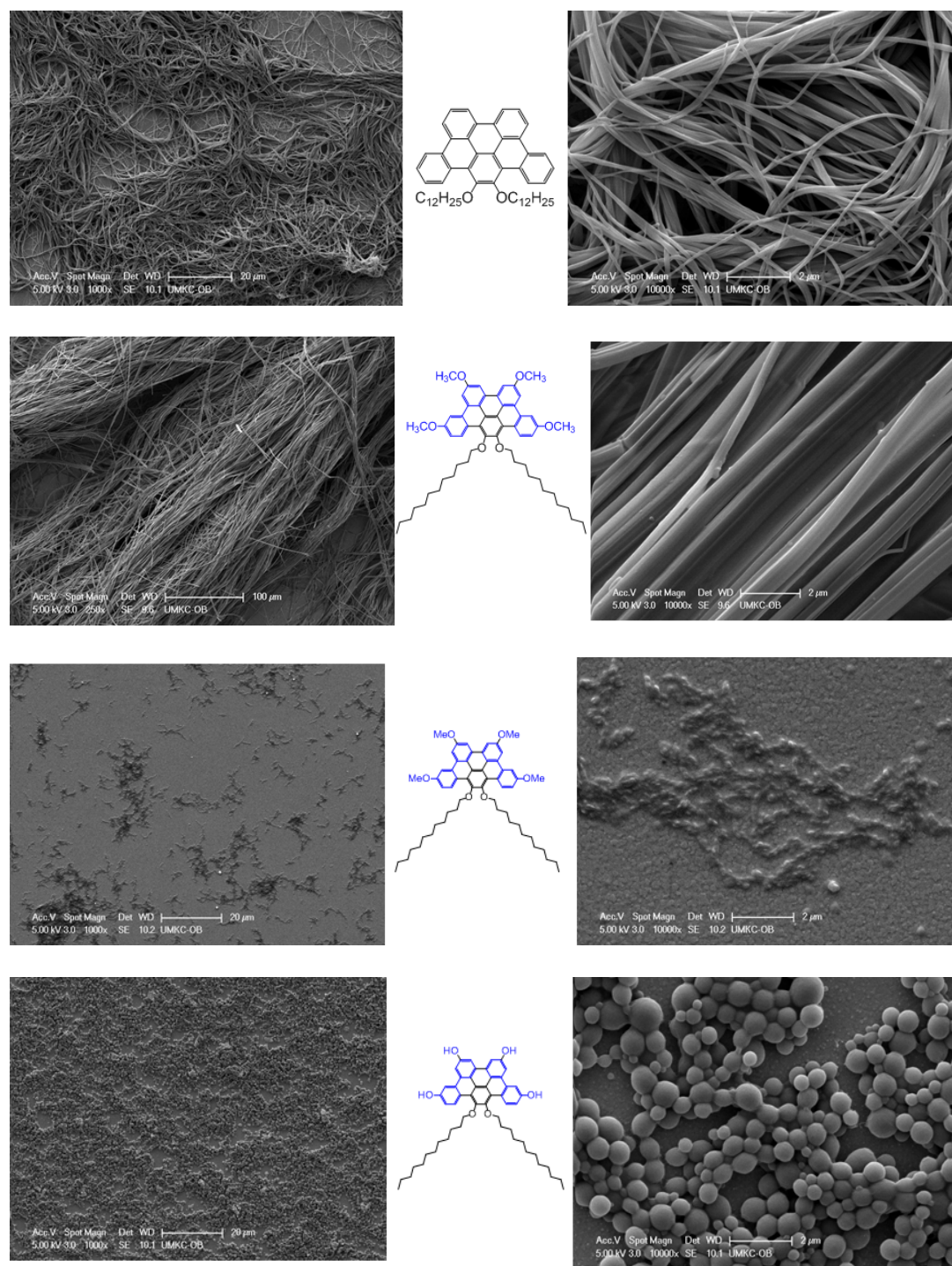


Figure S13: SEM images of self-assembled objects of **1a~1d**.

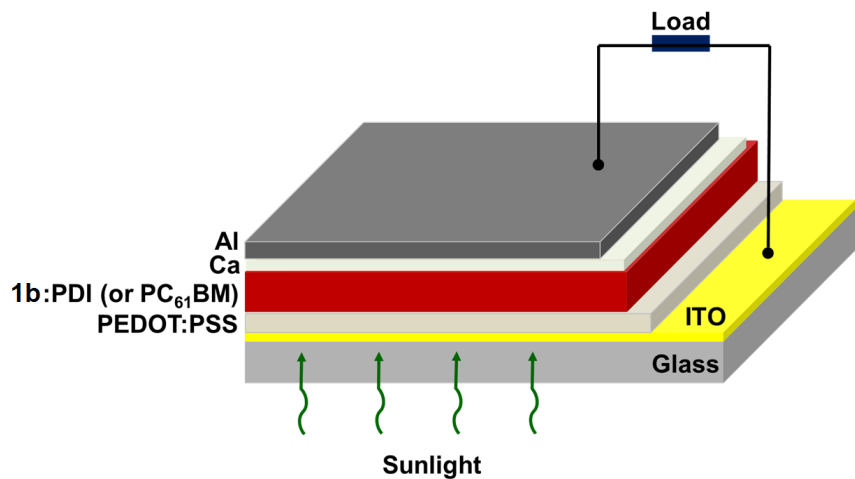


Figure S14: The solar cell device configuration of **1b** blended with PDI or PC₆₁BM.