

Electronic Supporting Information

An ABA Triblock Copolymer Strategy for Intrinsically Stretchable Semiconductor

Rui Peng,^a Daqing Hu,^a Mengjie Chen,^a Bo Pang,^a Guobing Zhang,^a Xianghua Wang,^a Hongbo Lu,^{a,b} Kilwon Cho,^c Longzhen Qiu^{a,b*}

^a Key Lab of Special Display Technology, Ministry of Education, National Engineering Lab of Special Display Technology, State Key Lab of Advanced Display Technology, Academy of Opto-Electronic Technology, Hefei University of Technology, Hefei, 230009, China.

^bKey Lab of Advanced Function Materials and Devices, Anhui Province, School of Chemical Engineering, Hefei University of Technology, Hefei, 230009, China.

^c Department of Chemical Engineering, Pohang University of Science and Technology, Pohang, 790-784, Korea.

Table of contents

Figure S1. The ¹ H NMR spectrum of Br-PMA-Br (CDCl ₃)	S2
Figure S2. The ¹ H NMR spectrum of N ₃ -PMA-N ₃ (CDCl ₃)	S2
Figure S3. The ¹ H NMR spectrum of ethynyl-terminated poly(3-hexylthiophene) (CDCl ₃)	S3
Figure S4. FT-IR spectra of Br-PMA-Br, N ₃ -PMA-N ₃ and P3HT-PMA-P3HT.....	S3
Figure S5. Output and transfer characteristics of a top-contact OTFT based on P3HT ₁ , P3HT ₂ at V _D =-60V..	S4

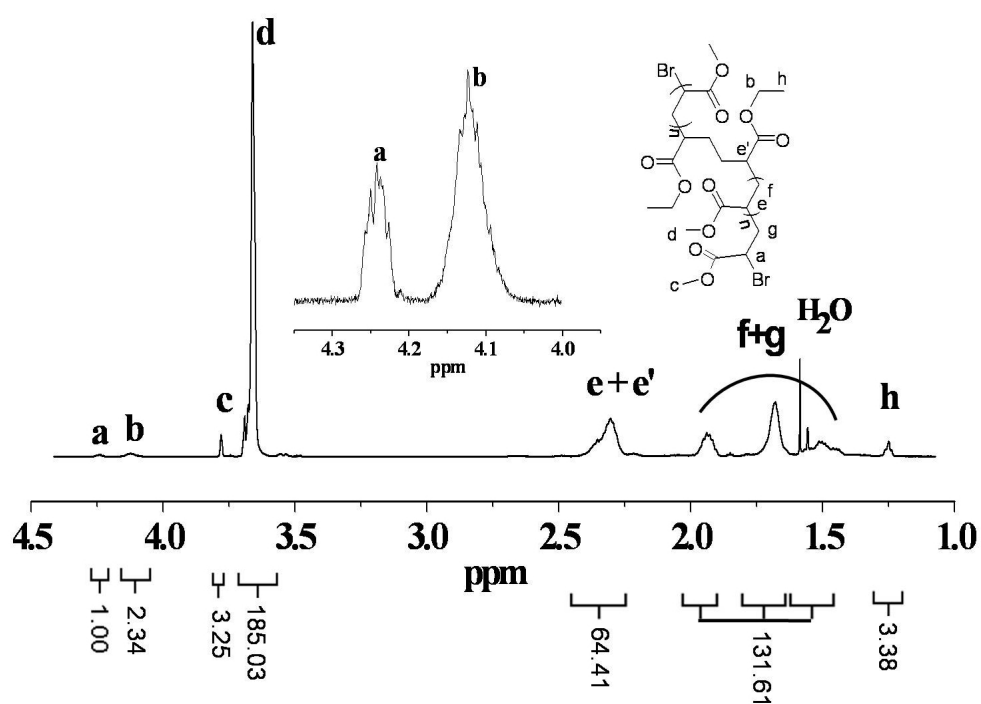


Figure S1. The HNMR spectrum of Br-PMA-Br (CDCl_3)

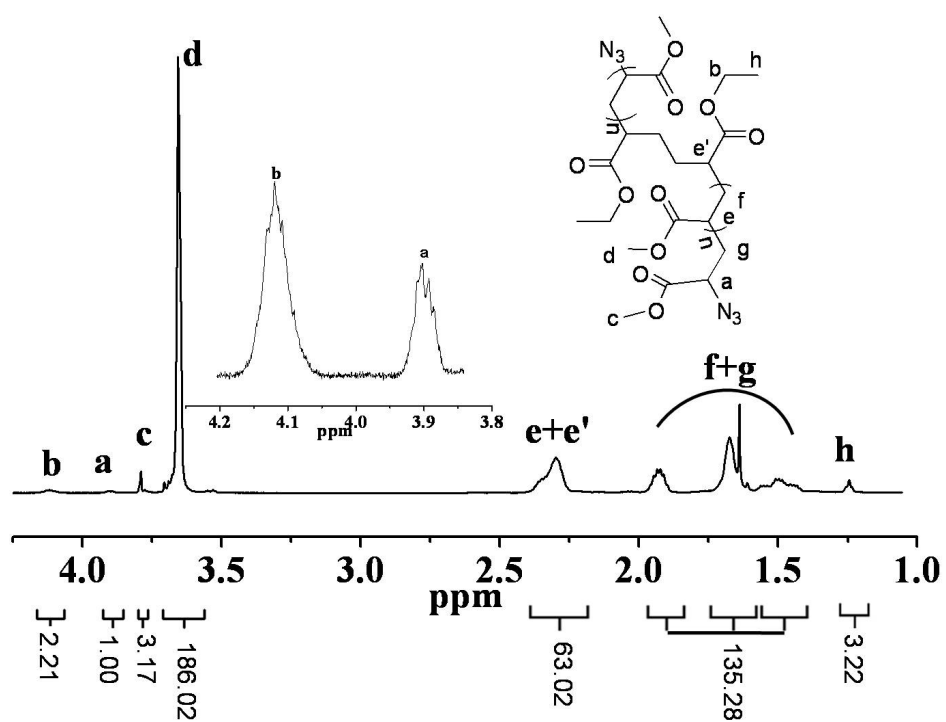


Figure S2. The HNMR spectrum of N_3 -PMA- N_3 (CDCl_3)

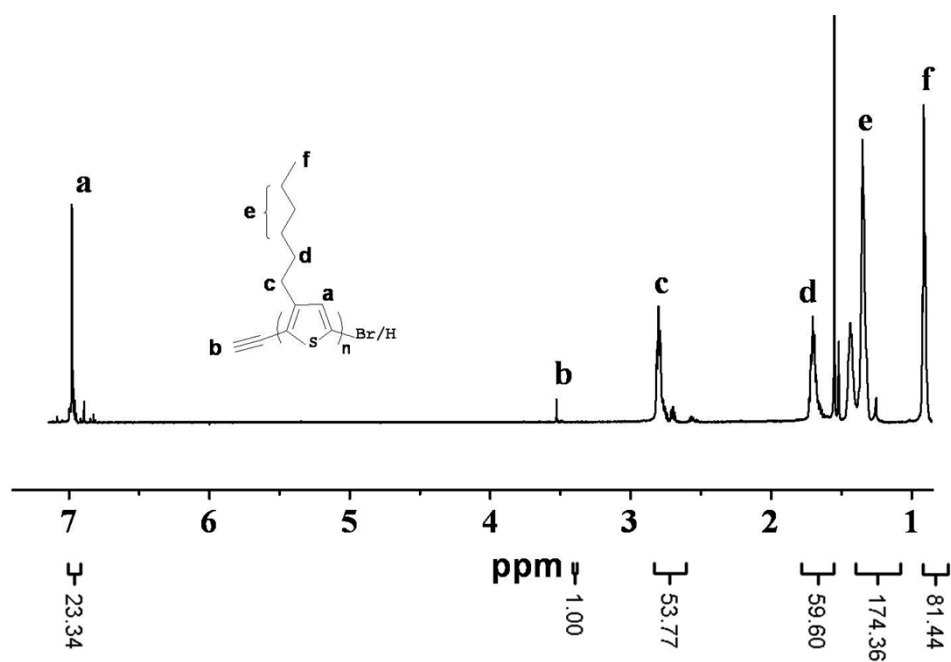


Figure S3. The ^1H NMR spectrum of ethynyl-terminated poly(3-hexylthiophene) (CDCl_3)

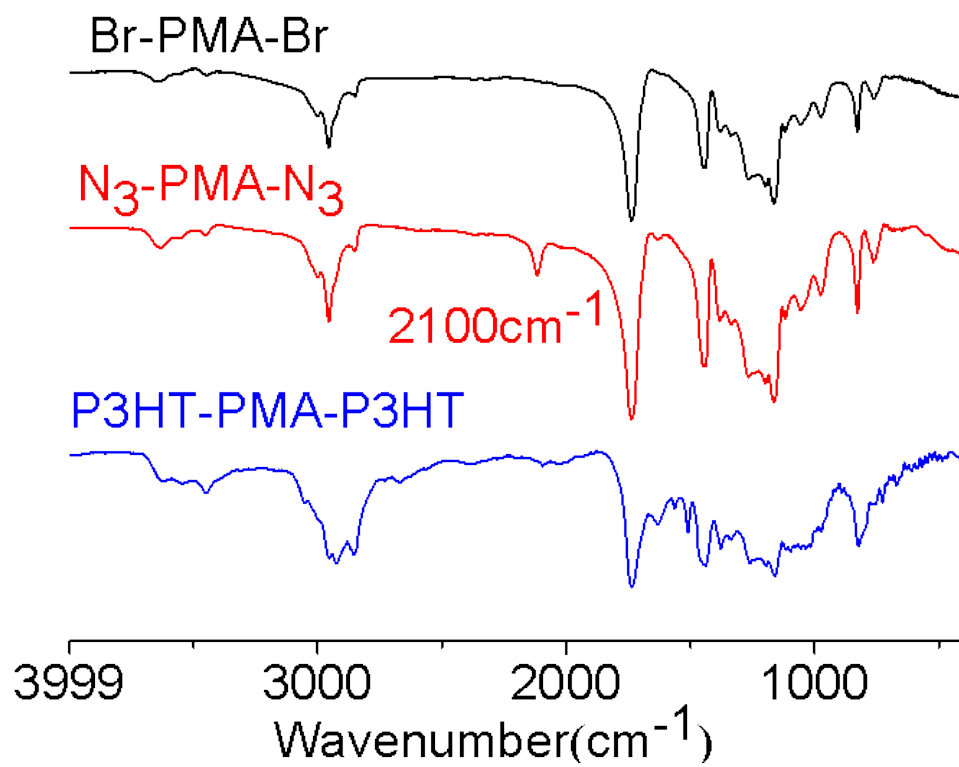


Figure S4. FT-IR spectra of Br-PMA-Br, N_3 -PMA- N_3 and P3HT-PMA-P3HT, the signal at 2100 cm^{-1} was attributed to the azide stretching frequency.

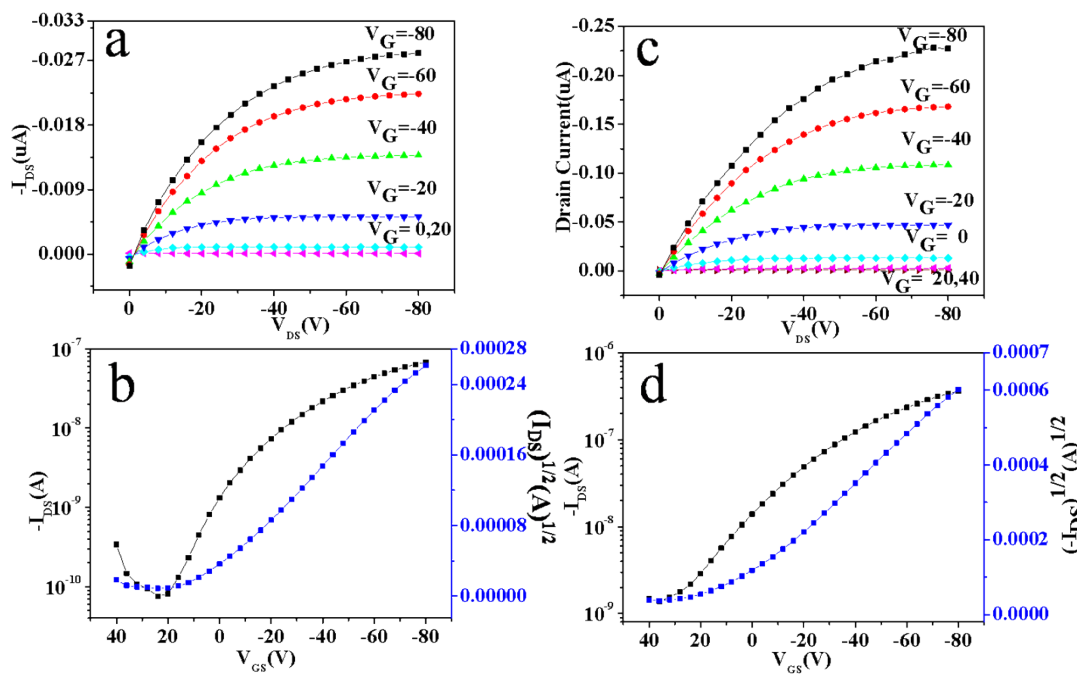


Figure S5. Output and transfer characteristics of a top-contact OTFT based on P3HT₁, (a, b, \overline{Mn} = 3800, HNMR, \overline{Mn} = 5200, GPC), P3HT₂ (c, d \overline{Mn} = 6600, HNMR, \overline{Mn} = 5600, GPC) at $V_D = -60$ V. The maximum field-effect mobilities of P3HT₁ and P3HT₂ were up to 4.2×10^{-4} and $4.5 \times 10^{-4} \text{ cm}^2/\text{V.s}$ respectively.