

# Systematic Structure Modification of Low Bandgap Conjugated Polymer Improves Thin Film Morphology and Photovoltaic Performance by Incorporating Naphthalene in Side Chains

Ying Sun, Chao Zhang, Qizan Huang, Bin Dai, Baoping Lin\*, Hong Yang, Xueqin Zhang, Lingxiang Guo, Yurong Liu

*School of Chemistry and Chemical Engineering, Southeast University, Jiangning District, Nanjing 211189, Jiangsu Province, P.R. China.*

Fax: 86-25-52090616; Tel: 86-25-52090616; E-mail: [lbp@seu.edu.cn](mailto:lbp@seu.edu.cn)

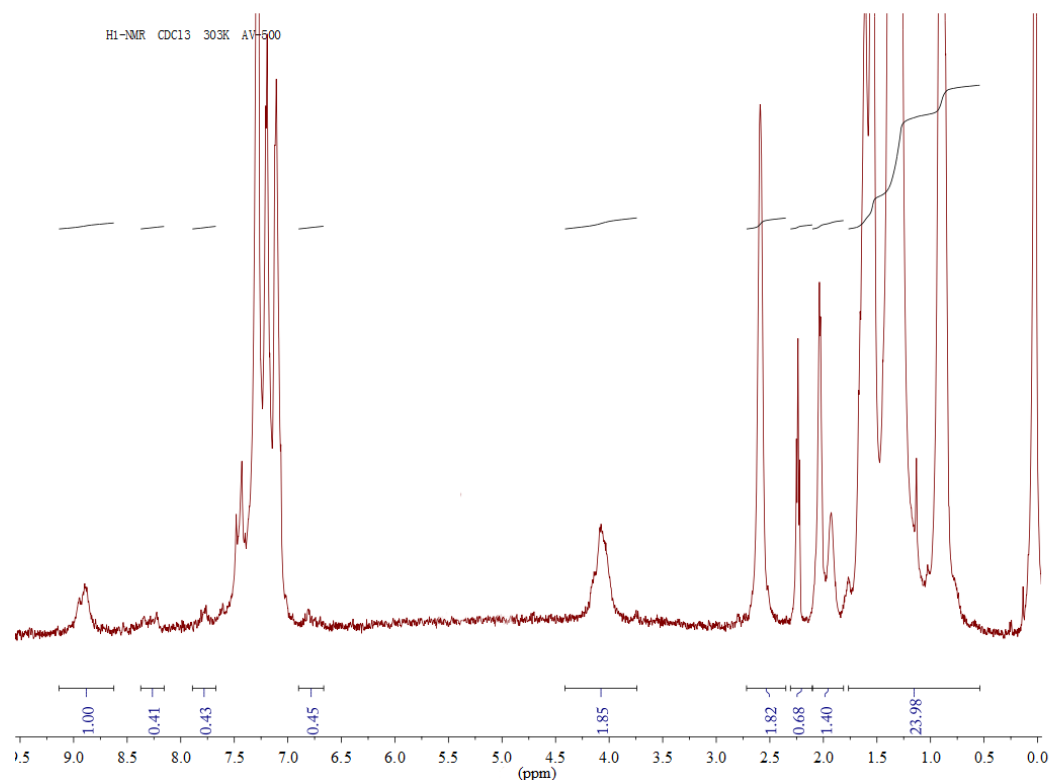


Figure S1. <sup>1</sup>H NMR spectra of polymer P2

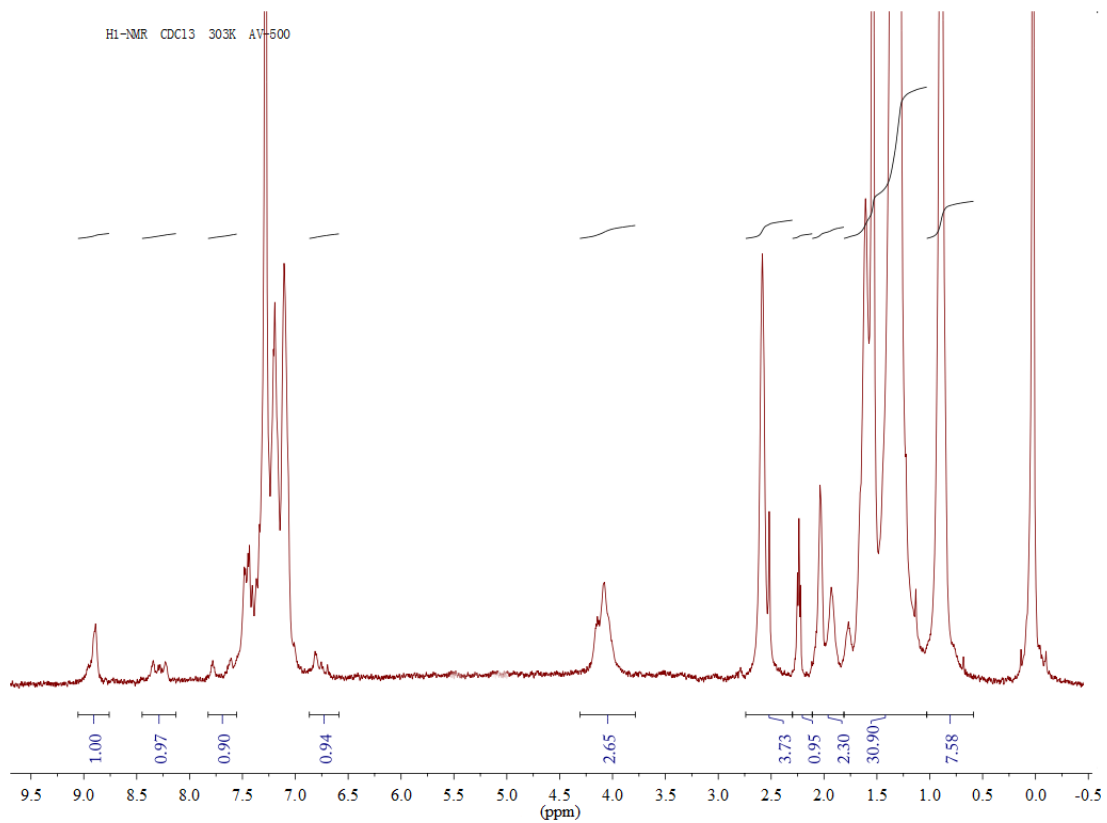


Figure S2. <sup>1</sup>H NMR spectra of polymer P3

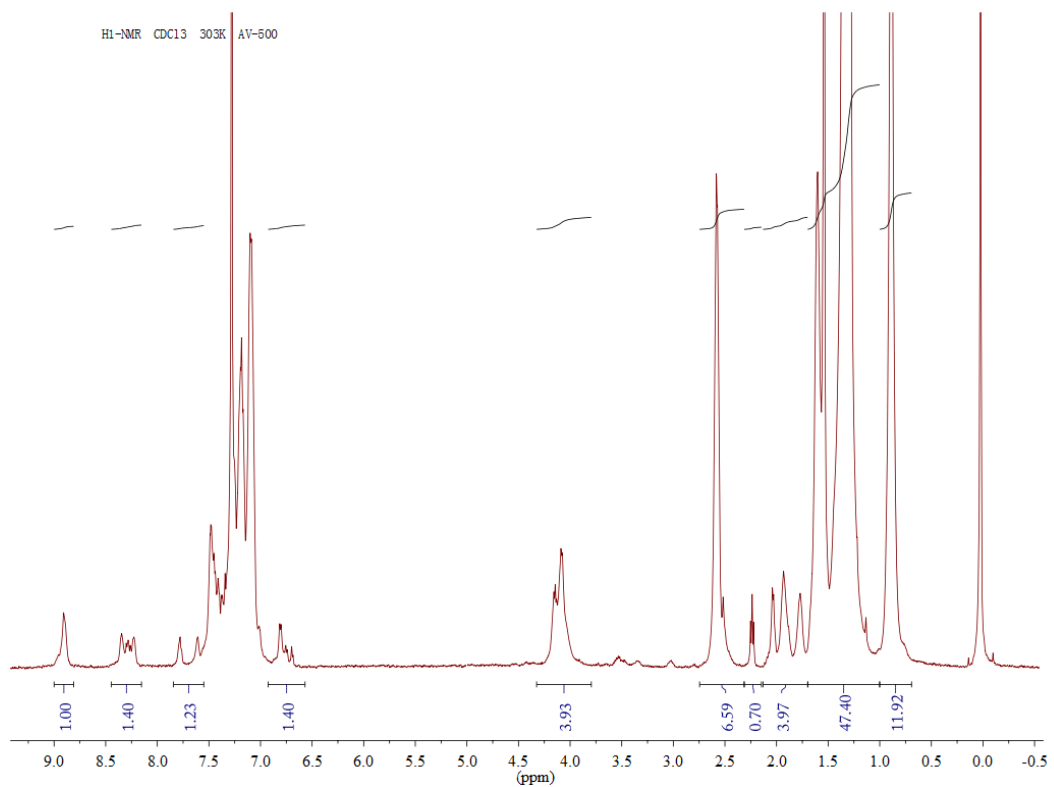


Figure S3. <sup>1</sup>H NMR spectra of polymer P4

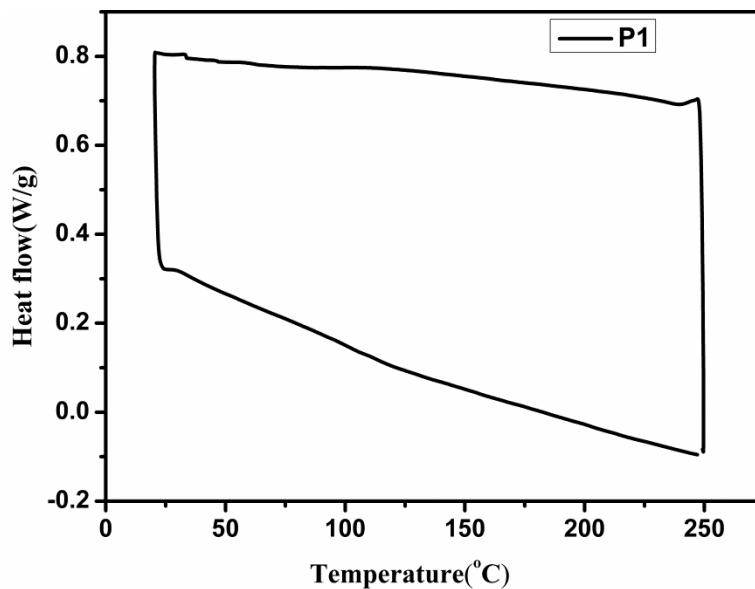


Figure S4. DSC scans at 10 °C/min for P1 second heating scan.

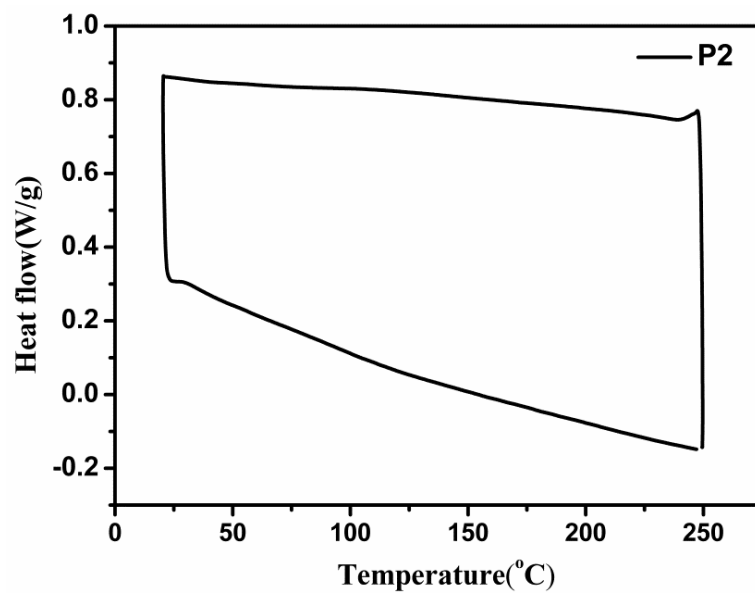


Figure S5. DSC scans at 10 °C/min for P2 second heating scan.

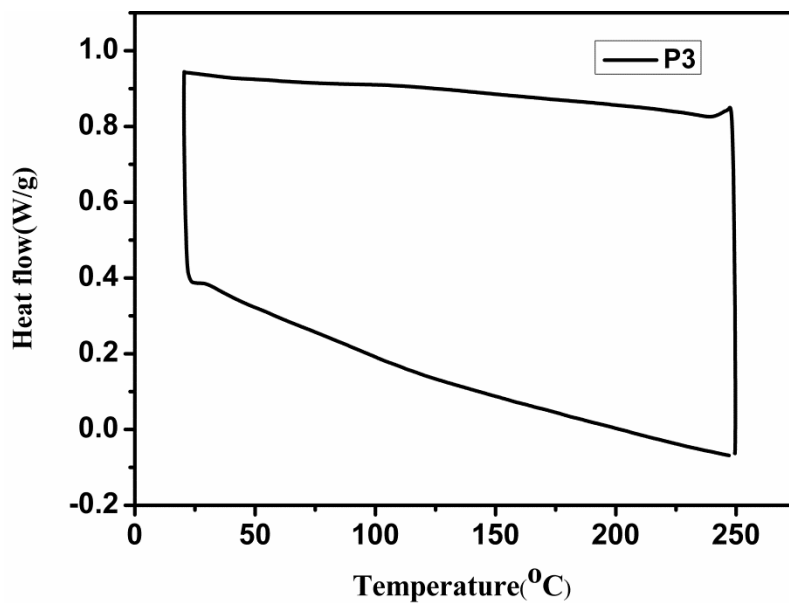


Figure S6. DSC scans at 10 °C/min for P3 second heating scan.

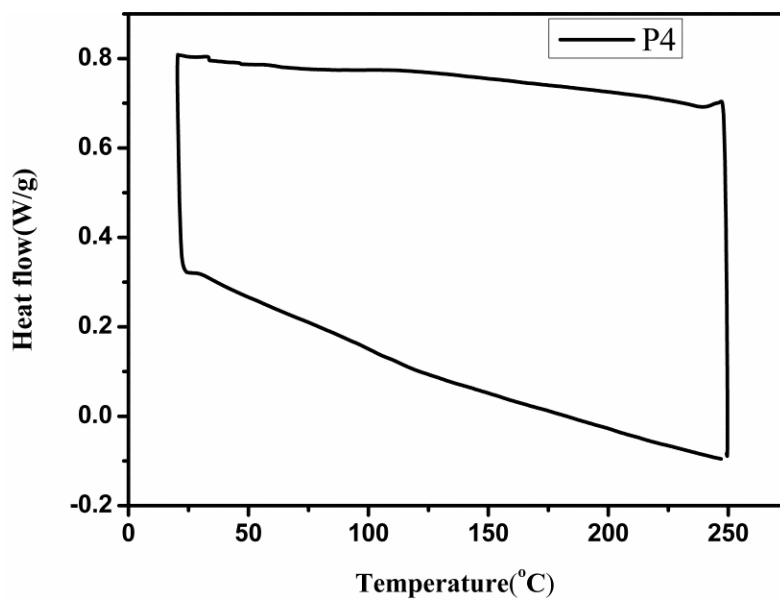


Figure S7. DSC scans at 10 °C/min for P4 second heating scan.