Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A


# Supporting Information

## Conjugated Polymers Consisting of Quinacridone and Quinoxaline as Donor Materials for Organic Photovoltaics: Orientation and Charge Transfer Properties of Polymers Formed by Phenyl Structures with a Quinoxaline Derivative

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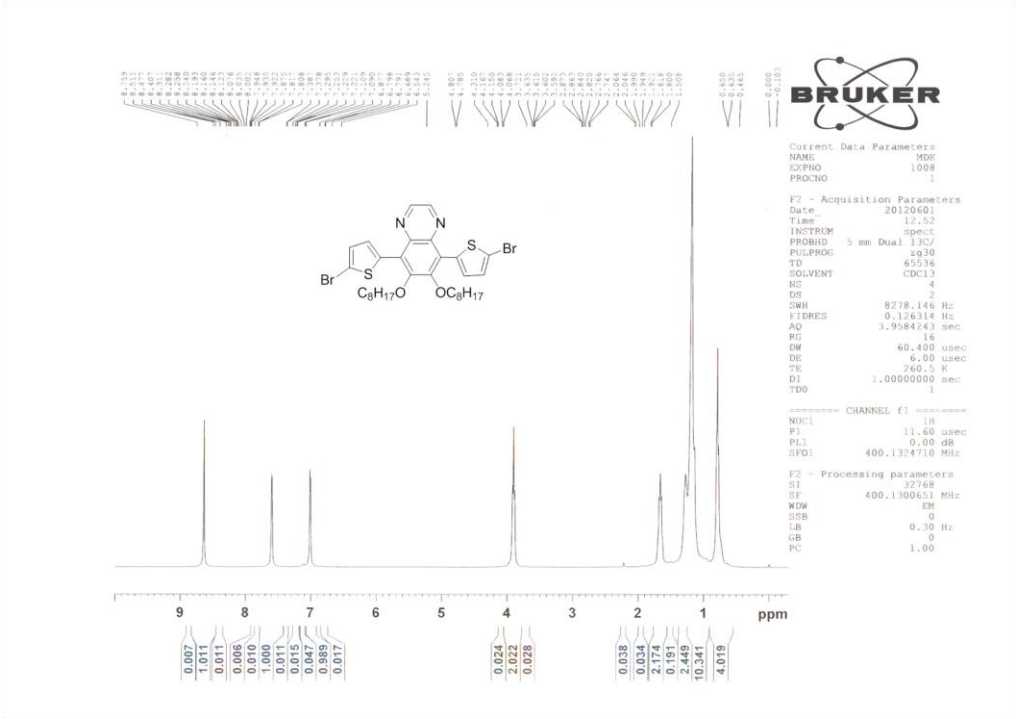


**Figure S1.** $^1$H-NMR of M2

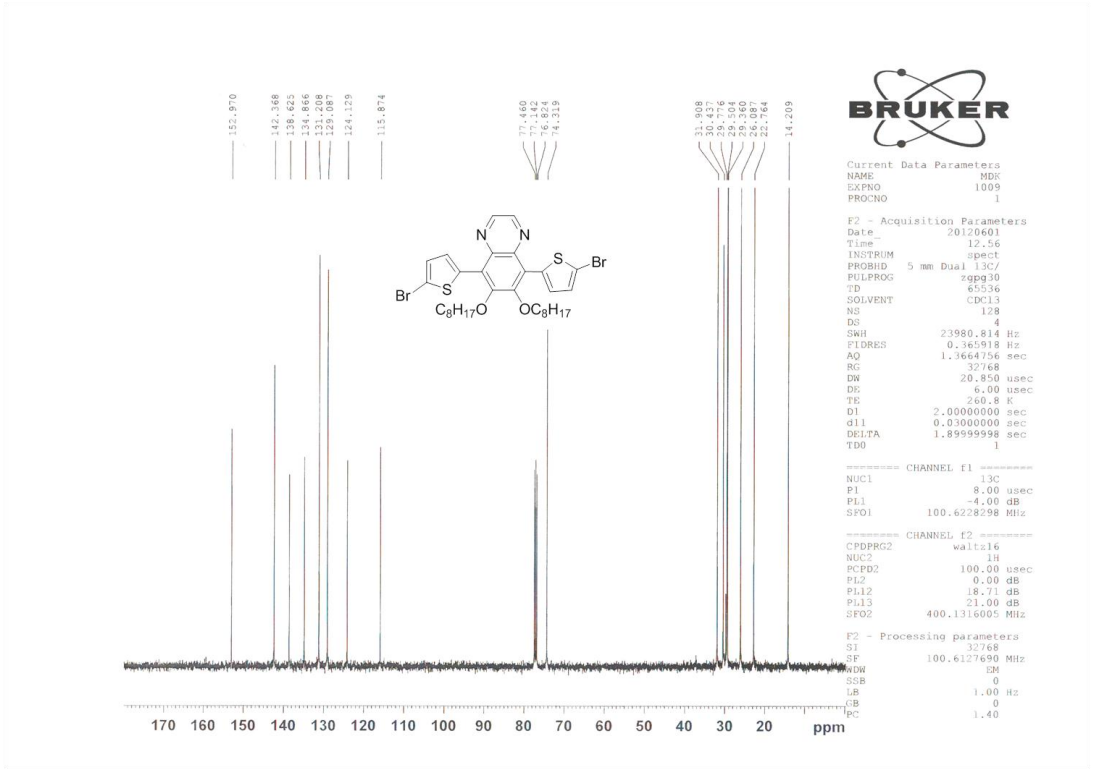


**Figure S2.** $^{13}$C-NMR of M2

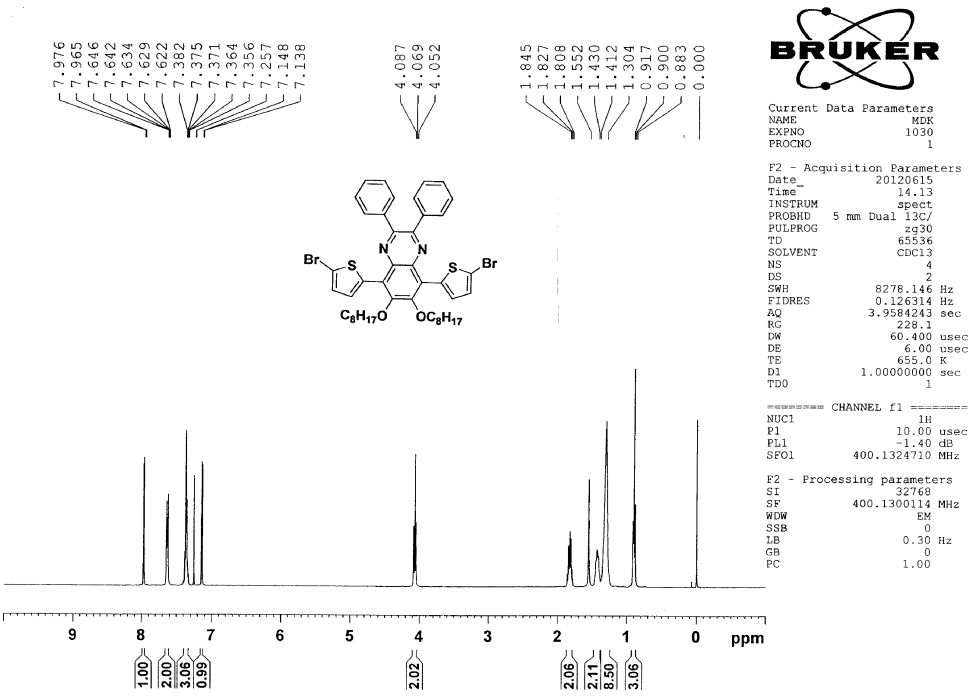


**Figure S3.** $^{1}$H-NMR of M3

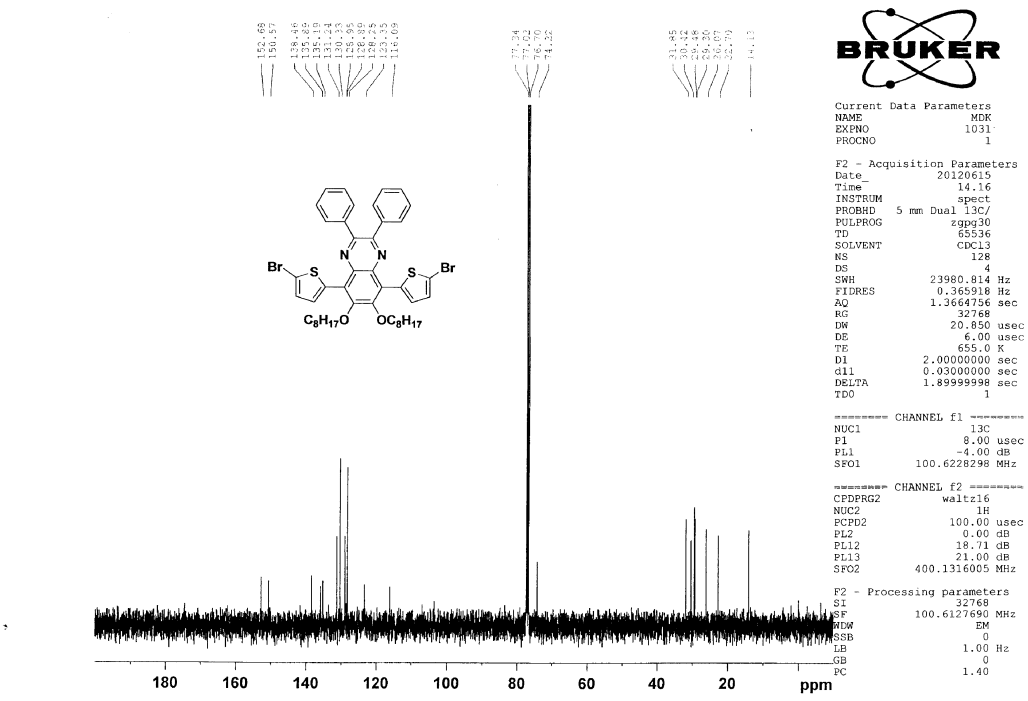


**Figure S4.** $^{13}$C-NMR of M3

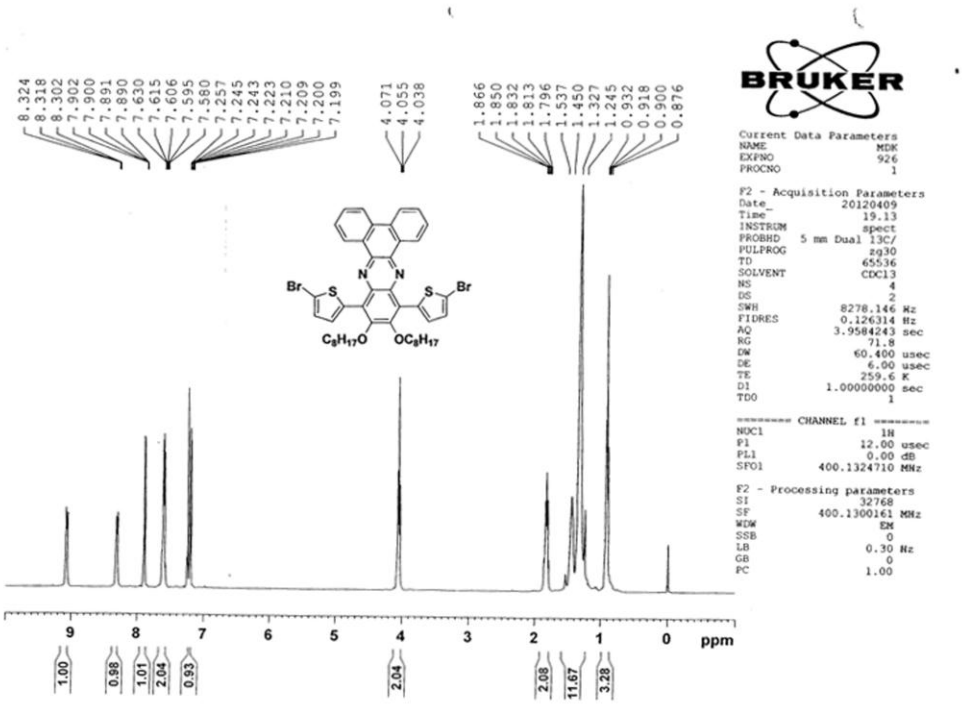


**Figure S5.** $^{1}$H-NMR of M4

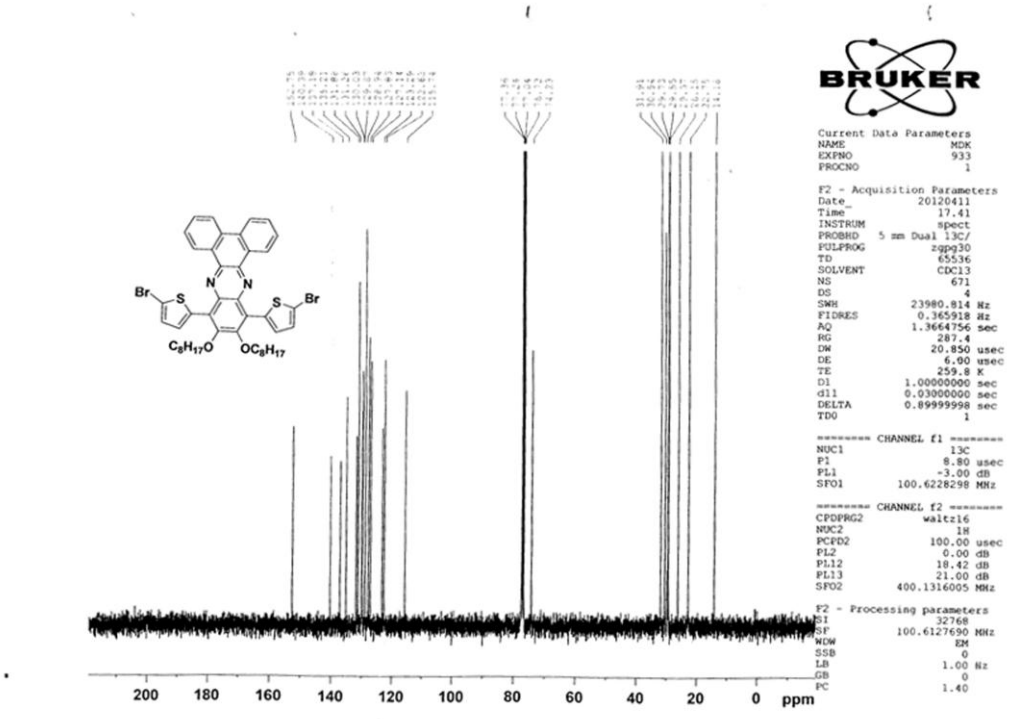


**Figure S6.** $^{13}$C-NMR of M4

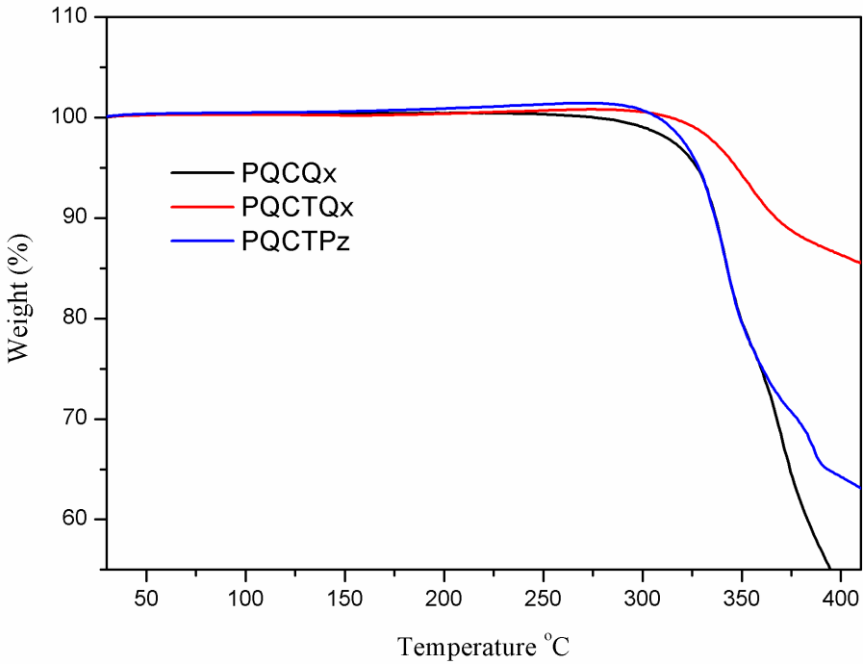


**Figure S7.** TGA data of polymers

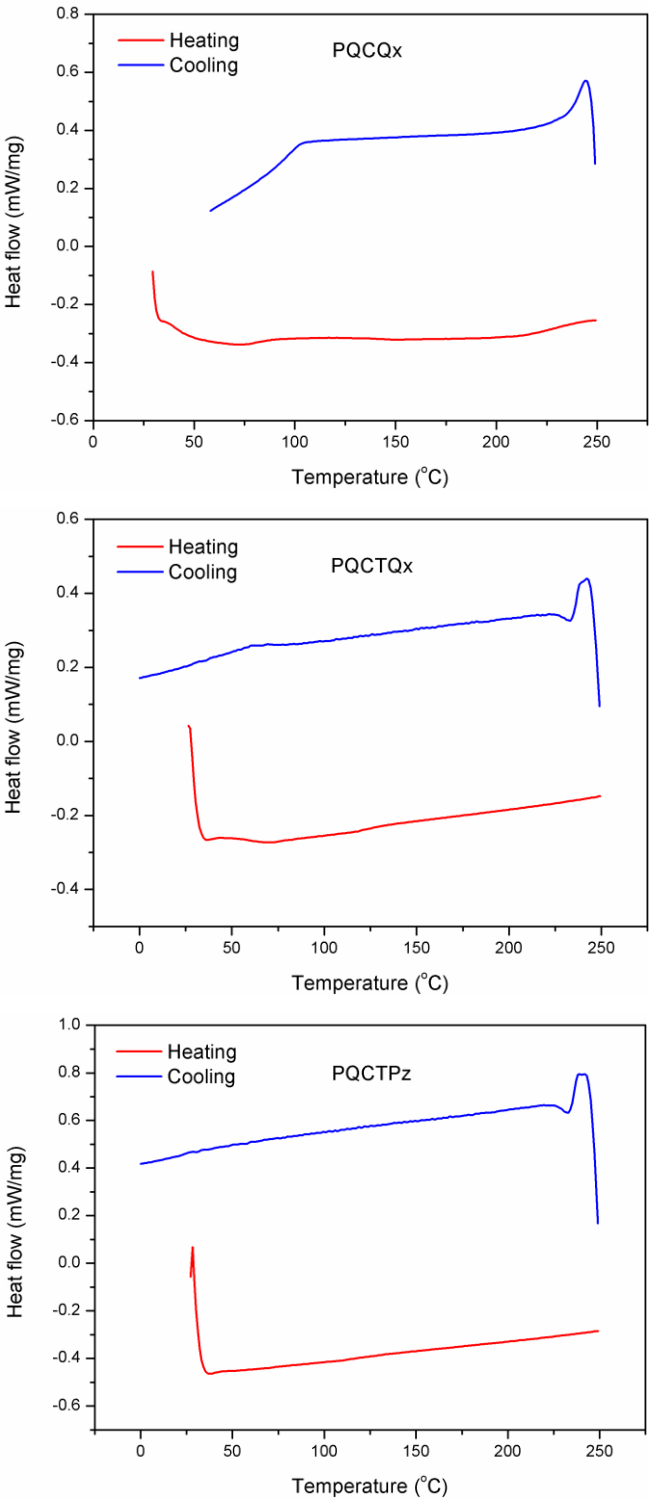


**Figure S8.** DSC data of polymers

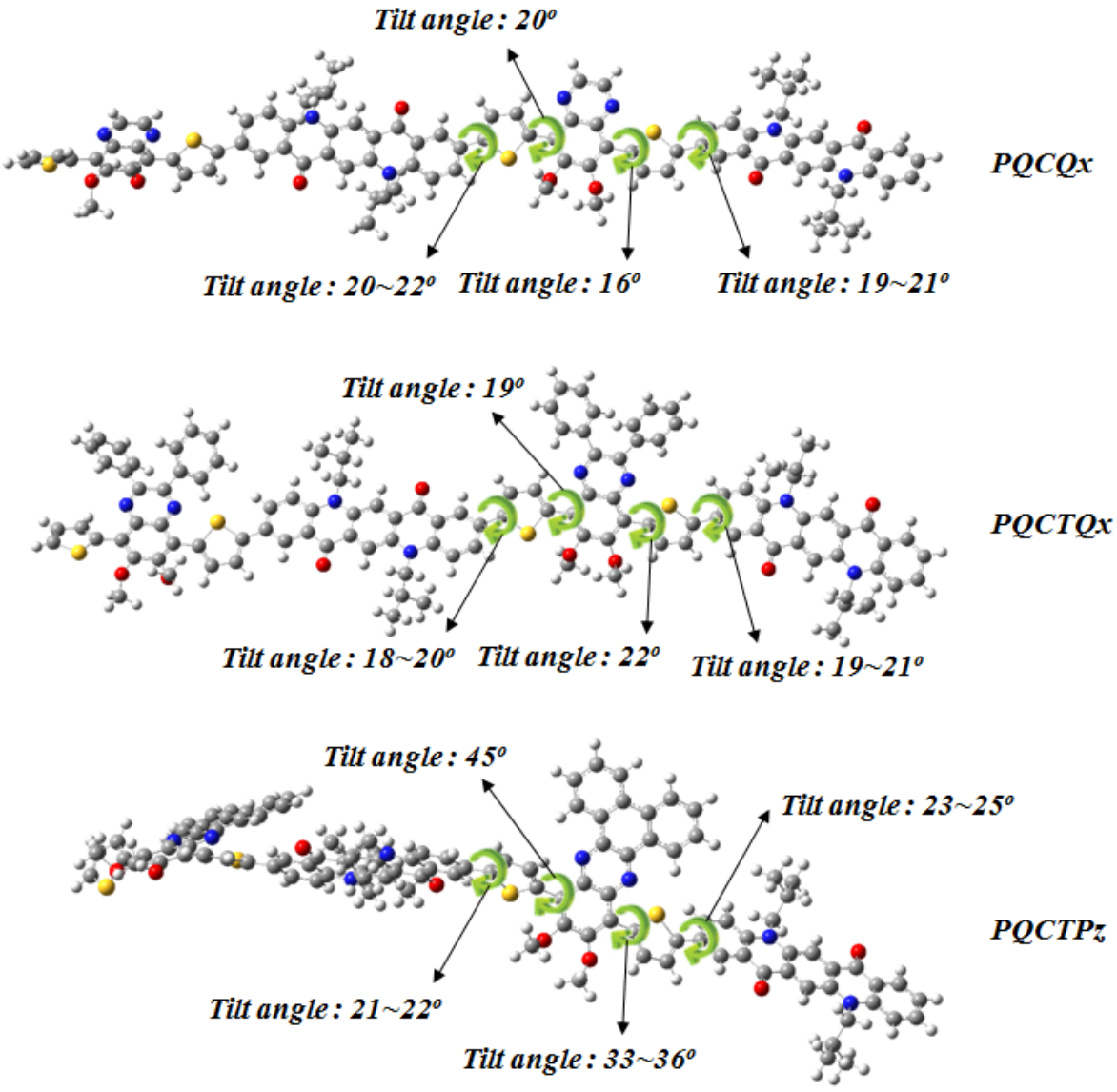


**Figure S9.** Dihedral angel of polymers through the 6-31G* basis set in Gaussian09