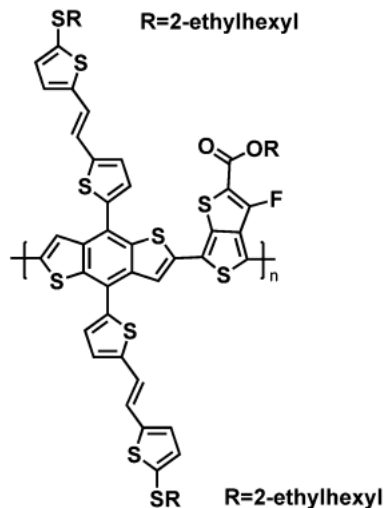


Certificate of Analysis

1M Material: PTB-TVT, medium band gap (MBG) polymer
 Common Name: PTB-TVT, 2d-PTB7
 CAS No.: 1778643-96-1
 Chemical Structure:

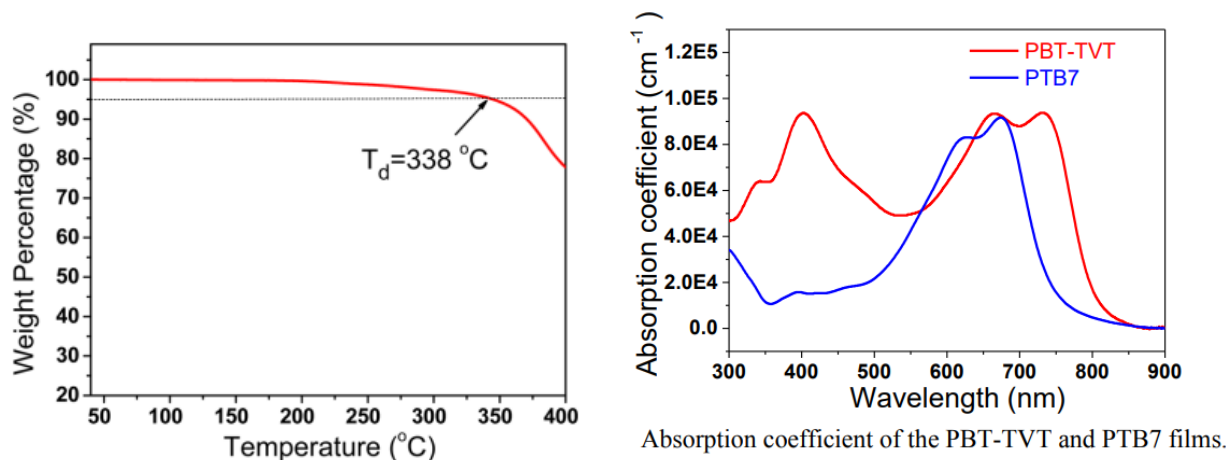


Lot No.: YY9228
 Appearance: Deep brown to black solid
 Solubility: Soluble in CHCl₃, and other selected solvents
 Molecular weight: Mw ~50K. PDI~2.0
 Structure confirmation: NMR of monomers
 Purity: 99+% (basing on NMR of monomers)
 Energy level (Reference): E_g^{opt} =1.53eV, HOMO = -5.29eV

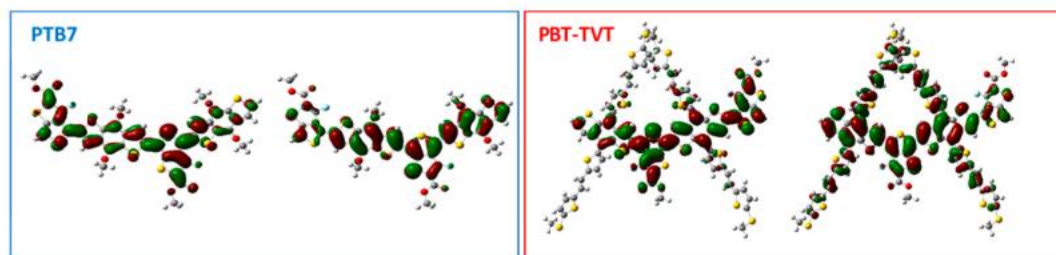
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Reference data:

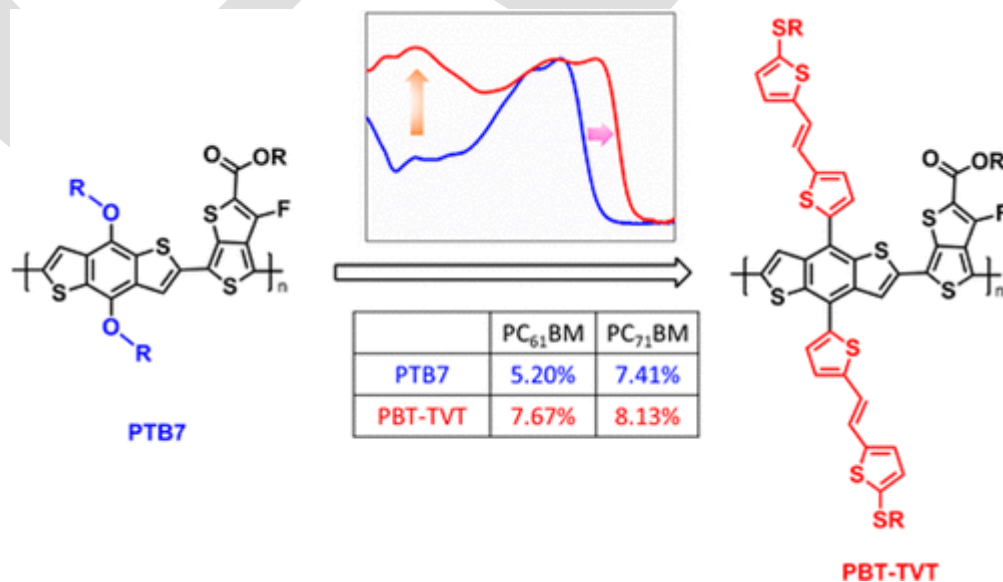
1: <https://doi.org/10.1021/acs.macromol.5b00649>



Absorption coefficient of the PBT-TVT and PTB7 films.



Simulated HOMO (right) and LUMO (left) electron density distributions of the two polymers by DFT with the B3LYP/6-31G** basis



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