SUPPORTING INFORMATIONS

Direct (Hetero)Arylation Polymerization of a Spirobifluorene and a Dithienyl-Diketopyrrolopyrrole Derivative: New Donor Polymers for Organic Solar Cells

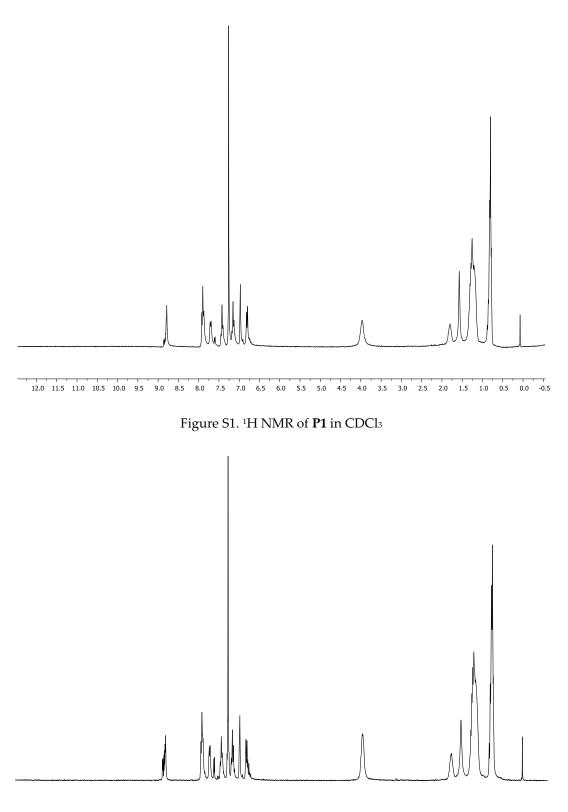
Pierre Josse,¹ Sergey Dayneko,² Sylvie Dabos-Seignon, ¹ Shiming Zhang,³ Philippe Blanchard,¹ Gregory C. Welch,² Clément Cabanetos^{1*}

¹CNRS UMR 6200, MOLTECH-Anjou, University of Angers, 2 Bd Lavoisier, 49045 Angers, France

²Department of Chemistry, University of Calgary, 2500 University Drive N.W., Calgary, Alberta T2N 1N4, Canada

³Key Laboratory of Flexible Electronics (KLOFE) & Institute of Advanced Materials (IAM), Jiangsu National Synergetic Innovation Center for Advanced Materials (SICAM), Nanjing Tech University, 30 South Puzhu Road, Nanjing 211816, Jiangsu, P. R. China

Corresponding author: clement.cabanetos@univ-angers.fr



^{12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5} Figure S2. ¹H NMR of P2 in CDCl³

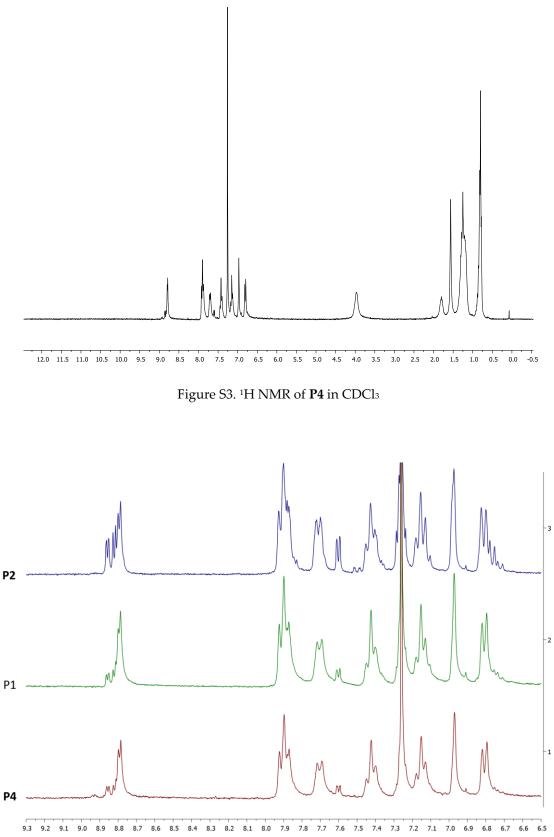
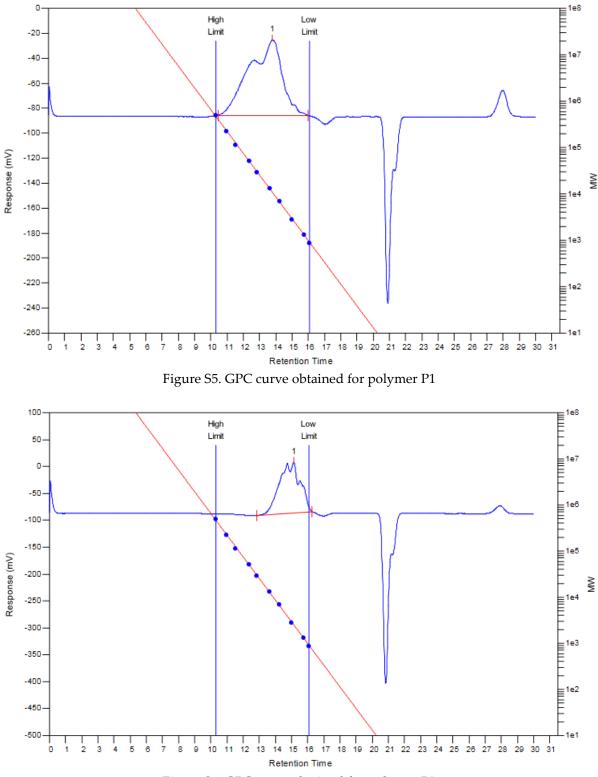
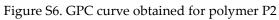


Figure S4. Comparative ¹H NMR of P1 (green); P2 (blue) and P4 (red) in CDCl₃





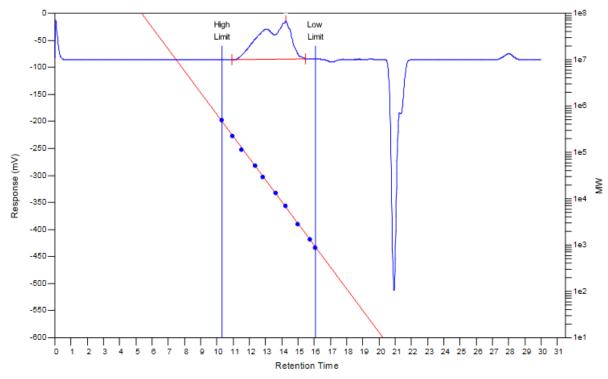


Figure S7. GPC curve obtained for polymer P4

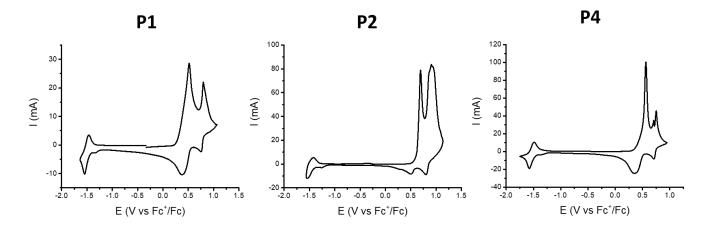


Figure S8. Cyclic voltammogram of **P1**, **P2** and **P4**. Films drop-cast from a CHCl₃ solution (5 mg.mL⁻¹) on a Pt WE ; Pt wire CE ; Ag wire pseudo ref ; Fc⁺/Fc ref ; 100 mV.s⁻¹ in acetonitrile/NBu₄PF₆ (0.1 M)

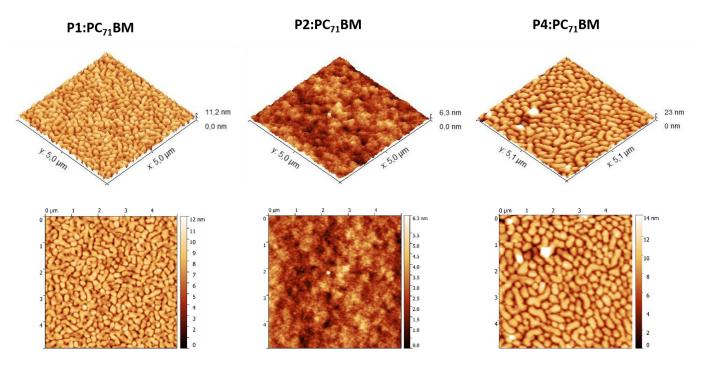


Figure S9. 3D AFM images of **P1**, **P2** and **P4 based** active layers