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Effect of Fluorination Pattern and Extent on the Properties of PCDTBT Derivatives

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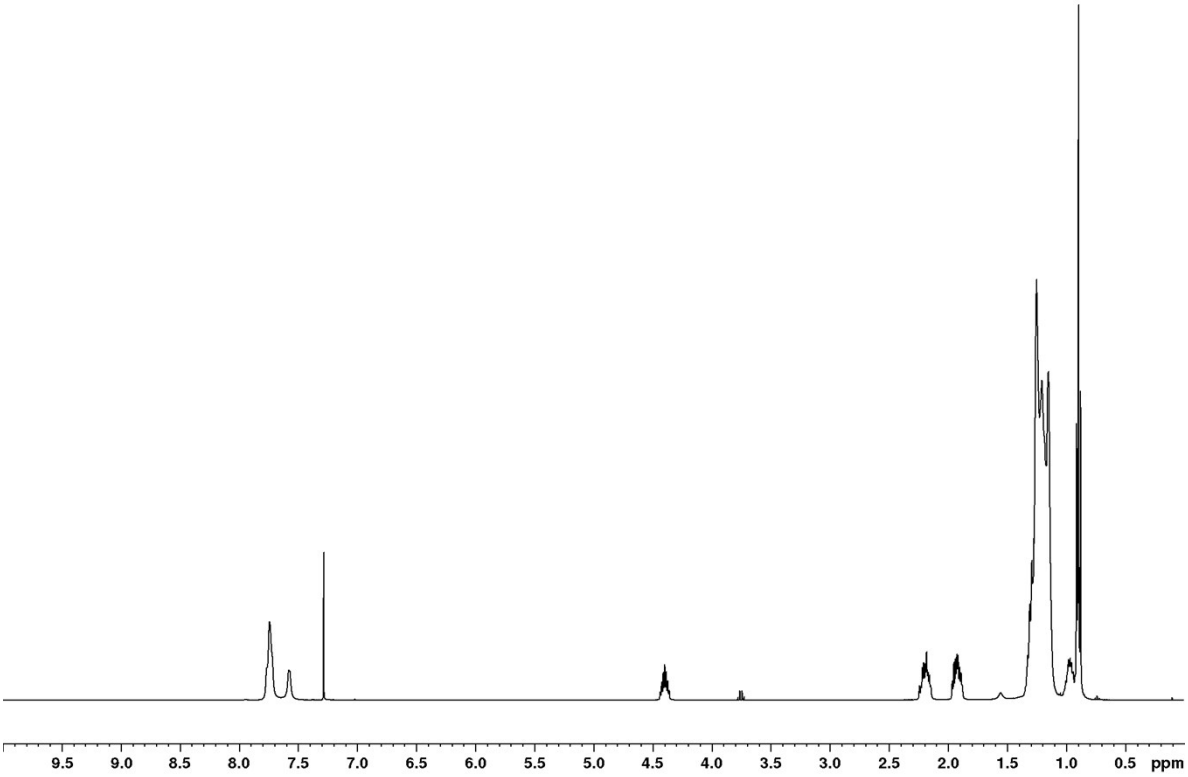

Figure S1. ^{1}H NMR of 3,6-Difluoro-2,7-dibromo-9-(pentacosan-13-yl)-*9H*-carbazole (**M1**).

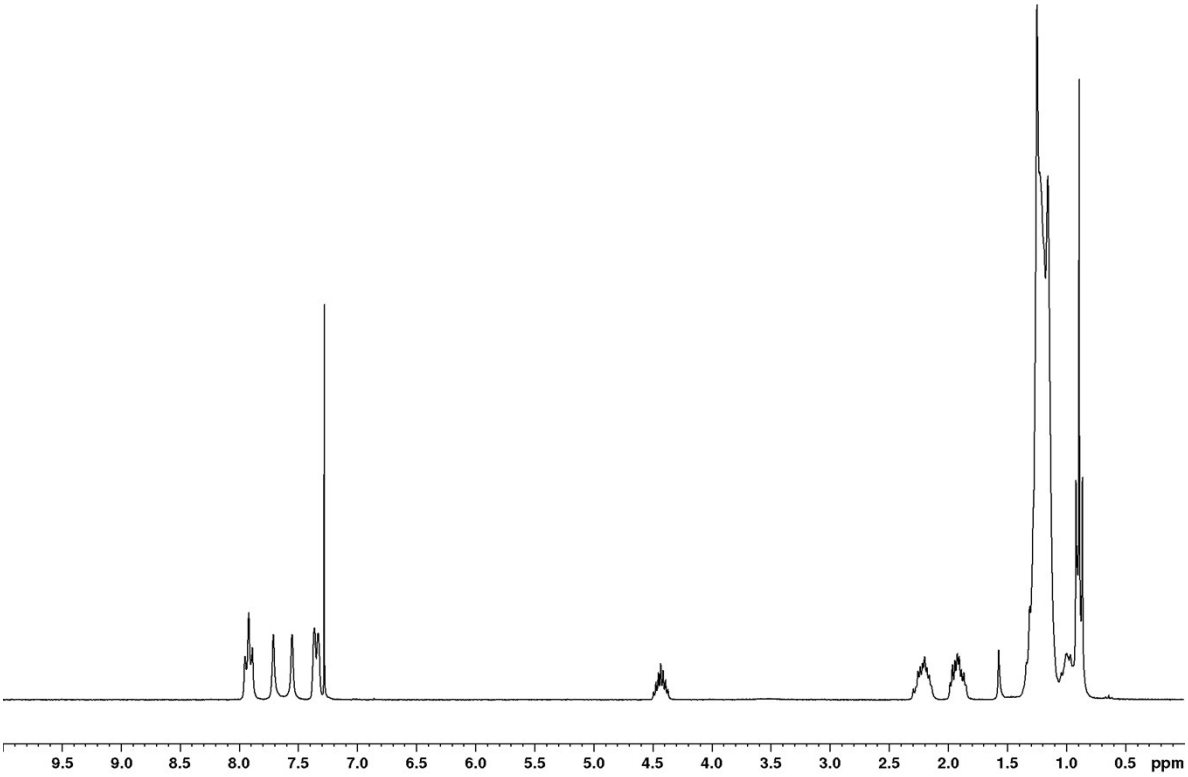

Figure S2. ^{1}H NMR of 2,7-Dibromo-9-(pentacosan-13-yl)-*9H*-carbazole (**M2**).

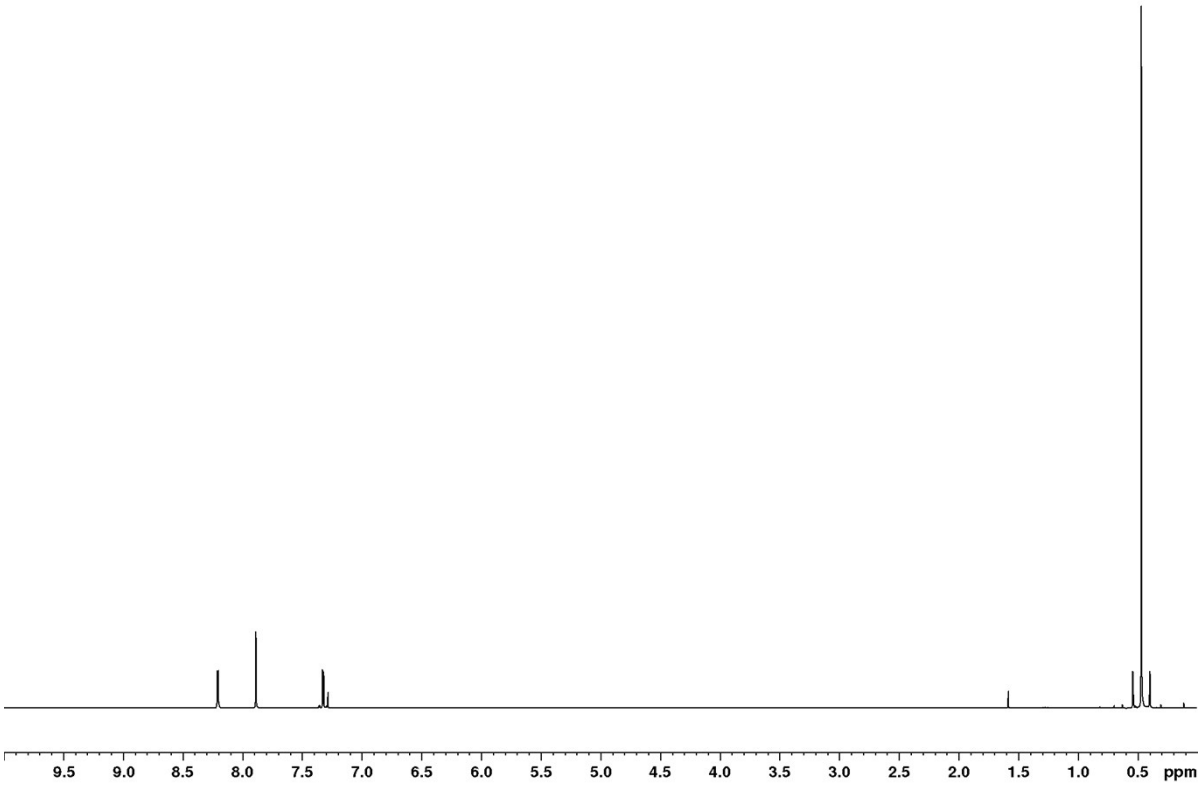

Figure S3. ^{1}H NMR of 4,7-Bis(5-(trimethylstannyl)thiophene-2-yl)benzo[*c*][1,2,5]thiadiazole (**M3**).

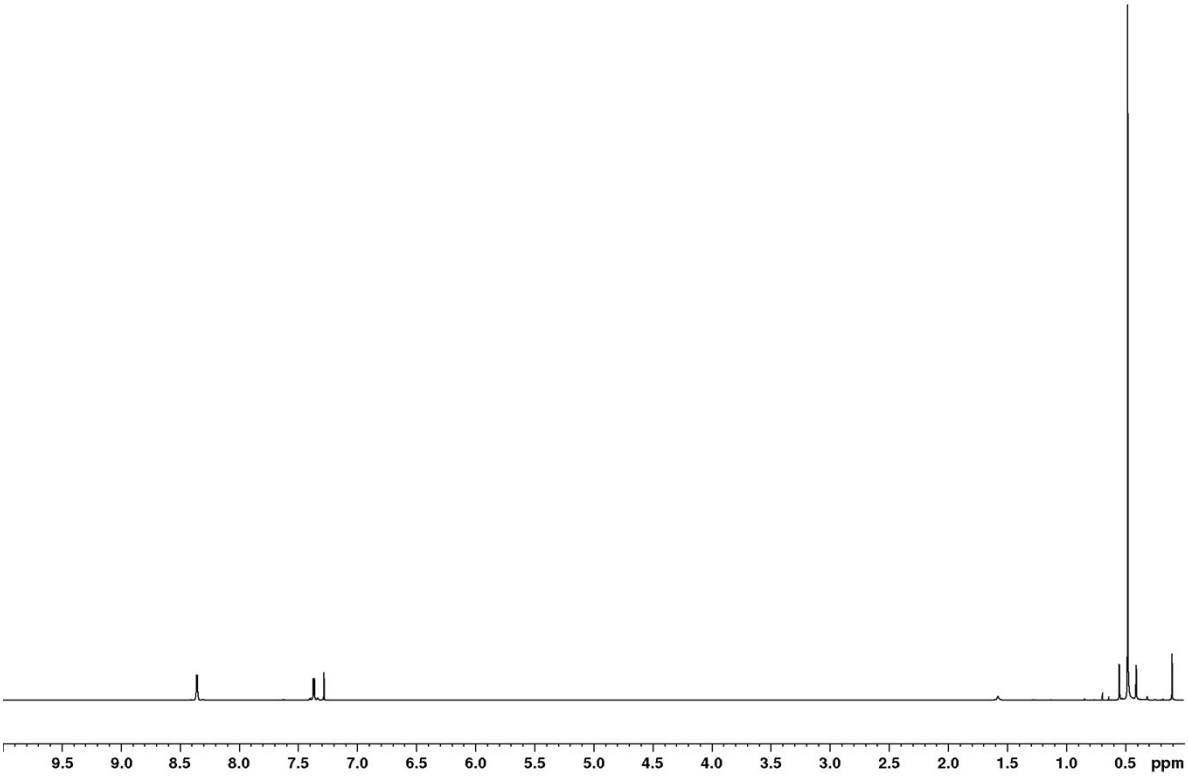

Figure S4. ^{1}H NMR of 5,6-Difluoro-4,7-bis(5-(trimethylstannyl)thiophene-2-yl)benzo[*c*][1,2,5]thiadiazole (**M4**).

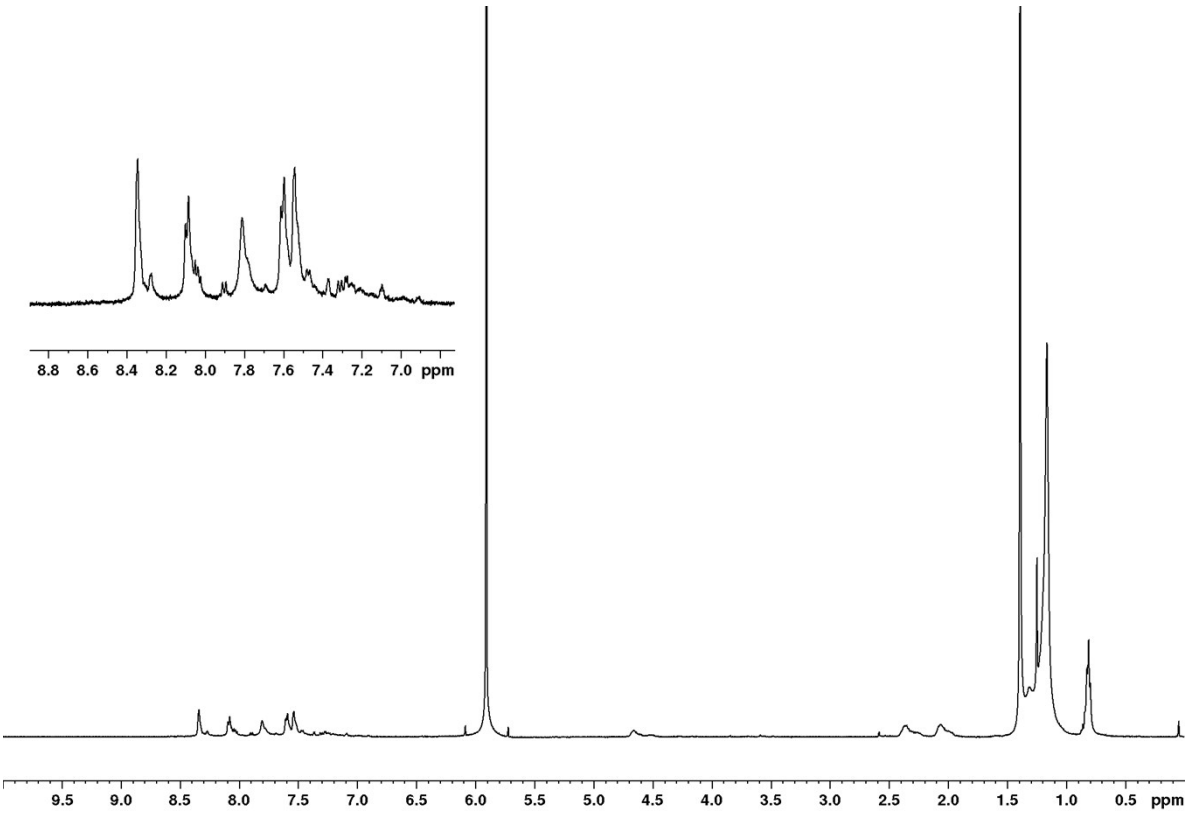

Figure S5. ^{1}H NMR of Poly[*N*-9′-pentacosanyl-2,7-carbazole-*alt*-5,5-(4′,7′-di-2-thienyl-5,6-difluoro-benzo[*c*][1,2,5]-thiadiazole)] (**PCDTffBT**) at 100°C in $C_2D_2Cl_4$.

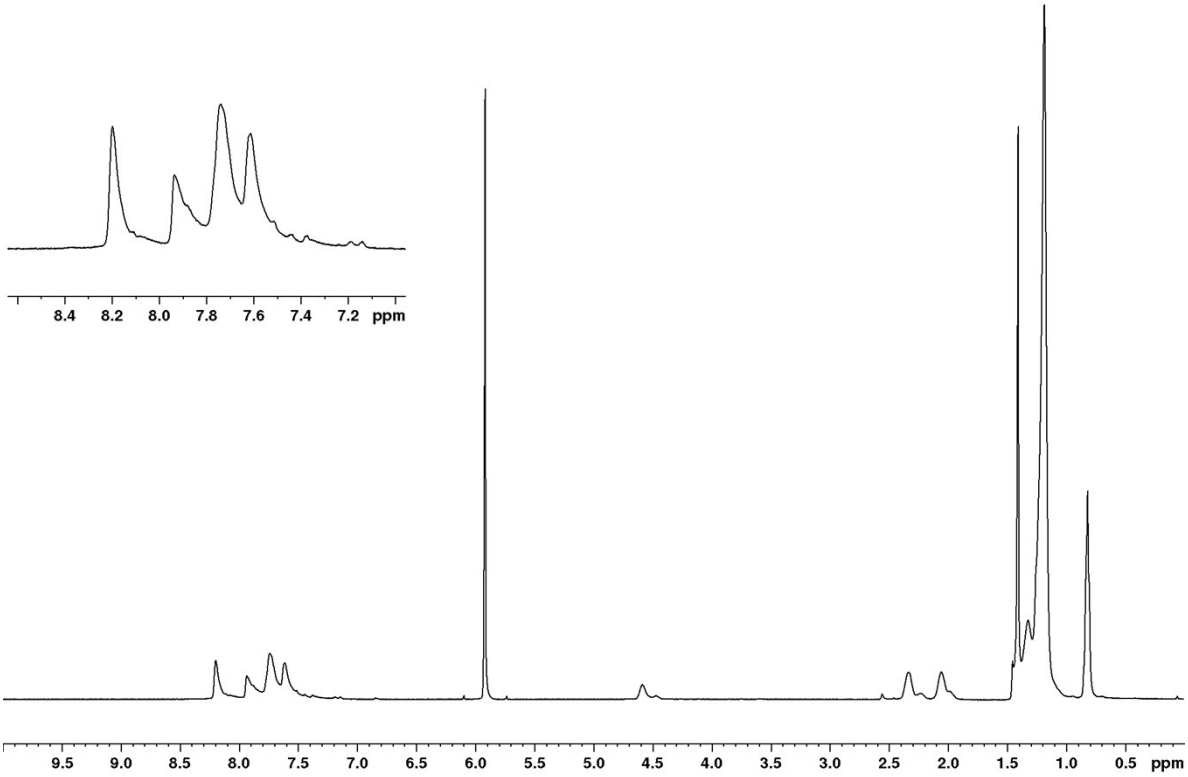

Figure S6. ^{1}H NMR of Poly[*N*-9′-pentacosanyl-3,6-difluoro-2,7-carbazole-*alt*-5,5-(4′,7′-di-2-thienyl-benzo[*c*][1,2,5]-thiadiazole)] (**PCffDTBT**) at 100°C in $C_2D_2Cl_4$.

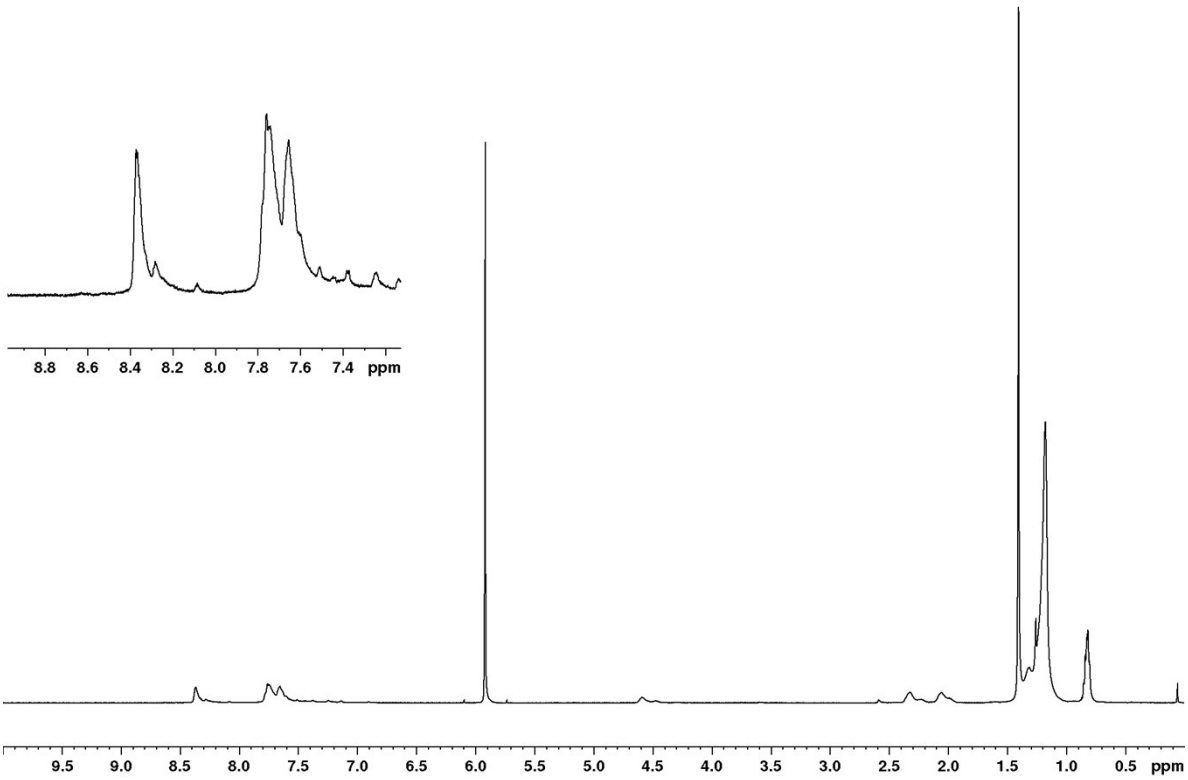

Figure S7. ^{1}H NMR of Poly[*N*-9′-pentacosanyl-3,6-difluoro-2,7-carbazole-*alt*-5,5-(4′,7′-di-2-thienyl-5,6-difluoro-benzo[*c*][1,2,5]-thiadiazole)] (**PCffDTffBT**) at 100°C in $C_2D_2Cl_4$.