Supporting Information

Nanoparticles of low optical band gap conjugated polymers

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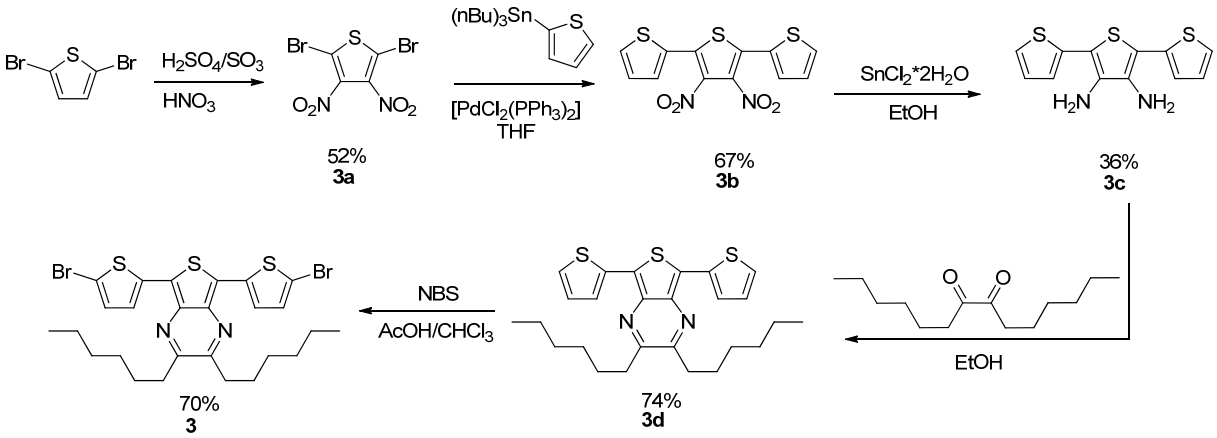
Scheme S1. Overview of the synthesis of monomer **3.**



2,5-Dibromo-3,4-dinitrothiophene.[1] **(3a)** 220 g concentrated sulfuric acid were put in a rounded flask equipped with a thermometer. 50 g fuming sulfuric acid and 80 g concentrated nitric acid were added while constantly cooling the mixture with an ice bath. 50 g 2,5-dibromothiophene (207 mmol) were added over the course of 60 minutes with a syringe pump. The temperature was kept between 20 and 30°C. The mixture was stirred for 2 h at room temperature and was then poured slowly onto 1.6 kg of ice. The precipitating solid was filtered off, taken up in diethyl ether and was filtered over a silica gel plug. The solvent was then removed and the crude product was recrystallized from methanol to afford 35.8 g (52%) of a white solid.

^{13}C NMR (100 MHz, $CDCl_3$): δ = 113.4, 99.9 ppm

2,5-Bis(2-thienyl)-3,4-dinitrothiophene.[2] (**3b)** 30.0 g (90.4 mmol) 2,5-Dibromo-3,4-dinitrothiophene were dissolved in 450 mL of dry THF under argon atmosphere and 85 g (228 mmol) tributyl(thiophen-2-yl)stannane and 150 mg [$PdCl_2(PPh_3)_2$] were added. The mixture was degassed an additional time and was then refluxed for 8 h. The solvent was then removed in vacuo. 1.8 L of cold hexane was added to the oily residue to precipitate solid material which was filtered off and washed with hexane. The solvent of the mother liquor was removed and 100 mL of hexane was added to the residue again, leading to the formation of more solid material. The combined solids were dissolved in hot ethanol and filtered over celite. The solution was then concentrated until crystal formation could be observed and was then cooled slowly to 4°C. The precipitate was filtered off and dried to afford 22.6 g (67%) of pale yellow crystals.

^{1}H NMR (400 MHz, $CDCl_3$): δ = 7.61 (dd, J=5.1Hz, and J=9.7Hz, 2H), 7.55 (dd, J=3.9Hz and J=0.9Hz, 2H), 7.18 (dd, J=4.8Hz and J=3.9Hz, 2H)

^{13}C NMR (100 MHz, $CDCl_3$): δ = 135.9, 133.9, 131.3, 131.2, 128.4, 128.0

2,5-Bis(2-thienyl)-3,4-diaminothiophene.[3] **(3c)** 13.0 g 3',4'-dinitro-2,2':5',2''-terthiophene (38.4 mmol) were dissolved in a mixture of 135 mL ethanol and 270 mL concentrated HCl and a solution of 330 g (1.46 mol) $SnCl_2*2H_2O$ in 135 mL ethanol were added drop wise within 30 minutes. The mixture was stirred for 18 h at room temperature and was then neutralized with 25% aqueous NaOH solution under cooling below 20°C. The mixture was extracted with 1 L of toluene, filtered over celite and the phases were then separated. The aqueous layer was washed twice with toluene and the combined organic phases were dried over $MgSO_4$. The solvent was removed in vacuum and the crude product was purified by column chromatography over silica gel with petroleum ether / ethyl acetate (1:1) to afford 2.94 g (36%) of a slightly brownish solid.

^{1}H NMR (400 MHz, $CDCl_3$): δ = 7.27 (dd, J=4.9Hz and J=1.4Hz, 2H), 7.12-7.07 (m, 4H), 3.74 (s, 4H) ppm

^{13}C NMR (100 MHz, $CDCl_3$) δ = 135.9, 133.6, 127.7, 134.0, 123.9, 110.1 ppm

2,3-Dihexyl-5,7-di(thiophen-2-yl)thieno[3,4-b]pyrazine.[1] **(3d)** 696 mg (2.50 mmol) [2,2':5',2''-Terthiophene]-3',4'-diamine were dissolved in 30 mL of ethanol under argon atmosphere and a solution of 792 mg (3.50 mmol) tetradecane-7,8-dione in 10 mL of ethanol was added. The mixture was heated to 70°C for one hour and was then refluxed over night. The solvent was then removed and the residue was purified by column chromatography on silica gel with petroleum ether / chloroform (9:1) as eluent to yield 872 mg (74%) red needles.

^{1}H NMR (400 MHz, $CDCl_3$): δ = 7.52 (dd, J=3.6Hz and J=1.0Hz, 2H), 7.27 (dd, J=5.1Hz and J=1.1Hz, 2H), 7.01 (dd, J=5.3Hz and J=3.6Hz, 2H), 2.82 (t, J=7.7 Hz, 4H), 1.8 (quint, J=7.5Hz, 4H), 1.48-1.24 (m, 12H), 0.85 (t, J=7.0 Hz, 6H) ppm

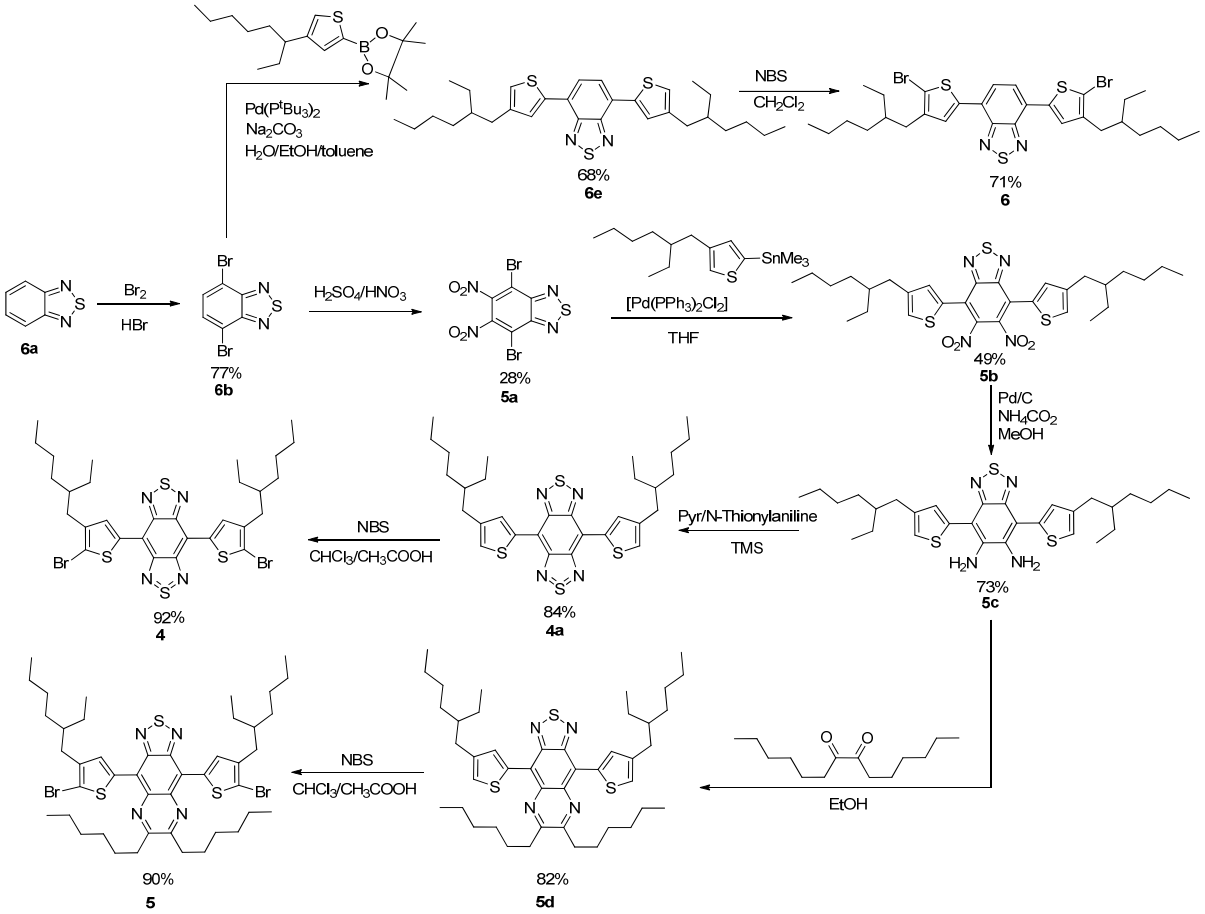
^{13}C NMR (100 MHz, $CDCl_3$): δ = 156.3, 137.6, 135.0, 127.0, 126.0, 123.9, 123.6, 35.0, 31.9, 29.1, 26.7, 22.7, 14.2 ppm

5,7-Bis(5-bromothiophen-2-yl)-2,3-dihexylthieno[3,4-b]pyrazine. (3) 973 mg (2.0 mmol) 2,3-dihexyl-5,7-di(thiophen-2-yl)thieno[3,4-b]pyrazine were dissolved under argon in a mixture of 400 mL acetic acid and 400 mL chloroform. The mixture was cooled to -5°C and a solution of 783 mg (4.4 mmol) NBS in a mixture of 75 mL acetic acid and 75 mL chloroform was added drop wise over the course of 30 minutes under exclusion of light. The mixture was then stirred for 2 h at room temperature. After completed reaction the mixture was concentrated to 100 mL and cooled close to the freezing point to precipitate a solid which was filtered off and washed with cold ethanol. The crude product was purified by column chromatography on silica gel with petroleum ether / chloroform (9:1) as eluent to afford 876 mg (70%) of dark red needles.

^{1}H NMR (400 MHz, $CDCl_3$): δ = 7.17 (d, J=4.0 Hz, 2H), 6.99 (d, J=3.9 Hz, 2H), 2.84 (t, J=7.3 Hz, 4H), 1.92 (quint, J=7.4 Hz, 4H), 1.63-1.33 (m, 16H), 0.94 (t, J=6.9 Hz, 6H) ppm

^{13}C NMR (100 MHz, $CDCl_3$): δ = 156.8, 137.5, 136.3, 129.5, 123.2, 123.0, 114.1, 35.0, 32.0, 29.1, 26.7, 22.8, 14.3 ppm

Scheme S2. Overview of the syntheses of monomers **4** to **6.**



4,7-Dibromo-5,6-dinitrobenzothiadiazole.[4] (5a) 4,7-Dibromobenzothiadiazole (80 g, 272 mmol) was added in small portions to a mixture of 400 mL H_2SO_4 (100%) and 400 mL HNO_3 (100%) cooled by an ice bath so that the reaction temperature did not exceed 5°C. The mixture was then shaken for 30 min at 0°C, one day at room temperature and was then left standing at room temperature for one week. During this time the flask was shaken once a day. The mixture was then carefully poured onto ice, the precipitated solid was filtered off and washed thoroughly with water and dried in vacuum. The crude product was purified by column chromatography on

silica gel with petroleum ether / ethyl acetate (4:1) as eluent. Due to the limited solubility, the eluent solvent mixture was saturated with the product under reflux and put on the column while still hot. Repetition of this process with the residual crude product afforded 29.6 g (28%) of a pale yellow solid.

^{13}C NMR (100 MHz, $CDCl_3$) δ = 151.4, 145.0, 110.3 ppm

4,7-Bis(4-(2-ethylhexyl)thiophen-2-yl)-5,6-dinitrobenzothiadiazole.[5] **(5b)** 28.0 g of (72.9 mmol) 4,7-Dibromo-5,6-dinitrobenzothiadiazole **(5a)** and 39.4 g (80.2 mmol, 1.1 eq.) tributyl(4-(2-ethylhexyl)thiophen-2-yl)stannane were dissolved in 300 mL of dry THF under argon atmosphere. 2.55 g [$Pd(PPh_3)_2Cl_2$] (3.63 mmol, 5 mol%) were then added. The mixture was refluxed over night and the solvent was then removed in vacuum. The crude product was purified by column chromatography with petroleum ether / ethyl acetate (9:1) on silica gel and subsequently crystallized from pentane at -80°C to yield 22.1 g (49%) of an orange solid.

^{1}H NMR (400 MHz, $CDCl_3$): δ = 7.31-7.29 (m, 4H), 2.62 (d, J=6.9 Hz, 4H), 1.58 (sept, J=6.0 Hz, 2H), 1.37-1.24 (m, 16H), 0.93-0.88 (m, 12H) ppm

^{13}C NMR (100 MHz, $CDCl_3$): δ = 152.2, 143.0, 141.7, 132.6, 129.1, 127.3, 121.3, 40.4, 34.2, 32.5, 29.0, 25.6, 23.0, 14.1, 10.9 ppm

4,7-Bis(4-(2-ethylhexyl)thiophen-2-yl)benzothiadiazole-5,6-diamine.[6] **(5c)** 1 L of dry methanol was cooled to 0°C and 20.0 g (32.5 mmol) 4,7-Bis(4-(2-ethylhexyl)thiophen-2-yl) -5,6-dinitrobenzothiadiazole **(5b)** and 10.0 g palladium/charcoal activated (10% Pd) were added under stirring. The mixture was stirred for 5 min and 150 g (2.38 mol) ammonium formate was added. After 2 h of stirring at room temperature, additional 5 g palladium/charcoal activated were added to the mixture and the reaction was stirred over night. The catalyst was then filtered off and was washed with toluene until the washing solution became clear. The filtrate was then

evaporated to dryness and the residue was purified by column chromatography with petroleum ether / ethyl acetate (9:1) on silica gel. The product was lyophilized for three days to afford 13.1 g (73%) of a red viscous oil.

^{1}H NMR (400 MHz, $CDCl_3$) δ = 7.17 (d, J=1.5 Hz, 2H), 7.11 (m, 2H), 4.40 (s, 4H), 2.64 (d, J=6.8 Hz, 4H), 1.63 (sept, J=5.9 Hz, 2H), 1.42-1.25 (m, 16H), 0.94-0.84 (m, 12H) ppm

^{13}C NMR (100 MHz, $CDCl_3$) δ = 150.9,142.2, 139.0, 134.7, 130.4, 122.6, 107.6, 40.4, 34.6, 32.7, 29.0, 25.8, 23.1, 14.1, 10.9 ppm

4,9-Bis(4-(2-ethylhexyl)thiophen-2-yl)-6,7-dihexyl-thiadiazolo[3,4-g]quinoxaline.[1] **(5d)** 3.00 g (5.41 mmol) 4,7-bis(4-(2-ethylhexyl)thiophen-2-yl)benzothiadiazole-5,6-diamine **(5c)** and 1.22 g (5.41 mmol) tetradecane-7,8-dione were dissolved in 50 mL absolute ethanol under argon atmosphere stirred for 1 h at 70°C. The mixture was then refluxed over night and the solvent was then removed in vacuum. The residue was purified by column chromatography on silica gel with petroleum ether / ethyl acetate (25:1). The product was then recrystallized from a mixture of ethanol / toluene (9:1) to afford 3.29 g (82%) of a deep blue solid.

^{1}H NMR (400 MHz, $CDCl_3$): δ = 8.83 (d, J=1.3Hz, 2H), 7.22 (m, 2H), 3.12 (t, J=7.78Hz, 4H), 2.72 (d, J=6.7Hz, 4H), 2.07 (quint, J=7.5Hz, 4), 1.73 (m, 2H), 1.58-1.28 (m, 28H), 1.00-0.88 (m, 18H) ppm

^{13}C NMR (100 MHz, $CDCl_3$): δ = 157.0, 151.4, 141.4, 135.5, 135.2, 134.9, 126.9, 120.8, 40.5, 35.4, 34.7, 32.6, 31.8, 29.4, 29.0, 28.0, 25.7, 23.1,22.714.214.110.9 ppm

4,9-Bis(5-bromo-4-(2-ethylhexyl)thiophen-2-yl)-6,7-dihexyl-thiadiazolo[3,4-g]quinoxaline. (5) 3.00 g (4.03 mmol) of 4,9-Bis(4-(2-ethylhexyl)thiophen-2-yl)-6,7-dihexyl-thiadiazolo[3,4-g]quinoxaline **(5d)** were dissolved in a mixture of 450 mL chloroform and 450 mL acetic acid and a solution of 1.58 g (8.85 mmol, 2.2 eq.) NBS in 100 mL chloroform/acetic acid (1:1) was

added drop wise over the course of one hour under stirring and exclusion of light at room temperature. The mixture was then concentrated to a volume of 20 ml; 100 mL ethanol were added and the solution was cooled to -20°C. The precipitate was collected by filtration, dried and purified by column chromatography with petroleum ether / chloroform (9:1) on silica gel. The product was suspended in cold ethanol in an ultrasound bath for 30 min, filtered and dried to afford 3.27 g (90%) of a deep blue solid.

^{1}H NMR (400 MHz, $CDCl_3$): δ = 8.74 (s, 2H), 2.98 (t, J=7.78, 4H), 2.65 (d, J=7.15Hz, 4H), 1,99 (quint, J=4.13Hz, 4H), 1.78 (m, 2H), 1.60-1.29 (m, 28H), 1.01-0-89 (m, 18H) ppm

^{13}C NMR (100 MHz, $CDCl_3$): δ = 157.3, 150.8, 140.7, 135.5, 134.6, 134.5, 119.7, 118.4, 40.3, 35.8, 34.2, 32.9, 32.1, 29.7, 29.1, 28.3, 26.1, 23.5, 22.9, 14.5, 14.4, 11.2 ppm

4,7-Bis(4-(2-ethylhexyl)thiophen-2-yl)bisbenzothiadiazole.[5] **(4a)** 5.00 g (9.18 mmol) of **5c** were dissolved in 50 mL dry pyridine under argon. 2.56 g N-thionylanilin (18.4 mmol) were added followed by 1.79 g TMS-Cl (16.5 mmol). The mixture was stirred for 36 h at 80°C and was then evaporated to dryness. The residue was dissolved in 200 mL hot toluene and filtered through a silica gel plug. The solvent was removed and the residue was recrystallized from a mixture of ethanol and toluene (2:1) to yield 4.47 g (84%) of a dark green powder.

^{1}H NMR (400 MHz, $CDCl_3$): δ = 8.74 (d, 1.1 Hz, 2H), 7.25 (m, 2H), 2.71 (d, J=6.9 Hz, 4H), 1.73 (m, 2H), 1.49-1.29 (m, 16H), 1.00-0.89 (m, 12H) ppm

^{13}C NMR (100 MHz, $CDCl_3$) δ = 151.0, 142.8, 137.1, 134.6, 127.1, 113.5, 40.4, 34.6, 32.6, 29.0, 25.8, 23.1, 14.2, 10.9 ppm

4,7-Bis(5-bromo-4-(2-ethylhexyl)thiophen-2-yl)bisbenzothiadiazole. (4) 2.00 g (3.43mmol) **4a** were dissolved in a mixture of 950 mL $CHCl_3$ and 950 mL acetic acid under argon atmosphere. 1.34 g NBS (7.55 mmol, 2.2 eq) were added slowly over the course of 30 minutes in

a mixture of 50 mL $CHCl_3$ and 50 mL acetic acid at room temperature under exclusion of light. The mixture was stirred for one hour at room temperature and was then concentrated to 200 mL in vacuum. After addition of 200 mL ethanol, the mixture was cooled to -20°C and the precipitate was filtered off and washed with cold ethanol. The crude product was purified by column chromatography on silica with petroleum ether / toluene (8:2) to afford 2.35 g (92%) of a turquoise solid.

^{1}H NMR (400 MHz, $CDCl_3$): δ = 8.50 (s, 2H), 2.62 (d, J=7.3Hz, 4H), 1.78 (m, 2H), 1.49-1.30 (m, 16H), 1.03-0.87 (m, 12H) ppm

^{13}C NMR (100 MHz, $CDCl_3$): δ = 150.4, 142.2, 137.0, 134.0, 118.0, 112.3, 40.0, 33.9, 32.6, 28.8, 25.8, 23.2, 14.2, 10.9 ppm

Benzothiadiazole.[7] (**6a**) *o*-Phenylene diamine (50.0 g, 0.46 mol) was dissolved in a mixture of 600 mL of dichloromethane and 200 mL of triethyl amine. 60.5 g (0.51 mol) of $SOCl_2$ were added dropwise, and after complete addition the mixture was refluxed over night. After cooling to room temperature, the organic solution was washed with water and the solvent was removed in vacuum. 600 mL of water were added to the crude product which was purified by steam distillation to afford 22.5 g (0.165mol, 36%) of a white solid.

^{1}H-NMR (400 MHz, $CDCl_3$). δ = 7.99 (dd, J = 3.2 Hz und J = 5.7 Hz, 2 H), 7.57 (dd, J = 3.2 Hz und J = 5.7 Hz, 2 H) ppm

4,7-Dibromobenzothiadiazole.[7] (**6b**) Benzothiadiazole (22.5 g, 0.165 mol) was dissolved in 800 mL of 47% aqueous HBr solution. 79.1 g (0.495 mol) of bromine were dissolved in 250 mL of 47% aqueous HBr solution, and this solution was added slowly to the starting material. The mixture was refluxed for 6 h and, and cooled to room temperature. The formed precipitate was filtered off using a fritted disc funnel. The crude product was washed thoroughly with water,

saturated $Na_2S_2O_3$ solution, water, and ice cold diethyl ether. Recrystallization from acetone afforded 43.2 g (0.146 mol, 89 %) of pale yellow needles.

^{1}H NMR (400 MHz, $CDCl_3$). δ = 7.69 (s, 2H) ppm

2-Isopropoxy-4,4,5,5-tetramethyl-1,3,2-dioxaborolane.[8] (**6c**) 30.57 g (0.258 mmol) of pinacol and 48.65 g (0.258 mol) of triisopropyl borate were dissolved in 350 mL n-hexane in a 500 mL rounded flask with a distillation apparatus. The mixture was heated at atmospheric pressure and an azeotropic mixture of hexane and isopropanol was removed at 70 °C. Residual hexane was removed in vacuo and the residue was distilled at 73°C and 20 mbar to afford 41.8 g (0.225 mol, 87 %) of a colorless liquid.

^{1}H NMR (400 MHz, $CDCl_3$). δ = 4.27 (m, 1H), 1.20-1.16 (m, 12H), 1.16-1.1 (m, 6H) ppm

Pinacol ester of 4-hexylthiophene-2-boronic acid.[9] (**6d**) 25.4 g (0.129 mol) of degassed 3-ethylhexylthiophene were dissolved in 400 mL dry THF. 8.97 g of n-butyllithium (87.5 mL of a 1.6 M solution in hexane) were added at -78°C and stirred for two hours. 41.8 g (0.225 mol; 1.7 eq) of 2-isopropoxy-4,4,5,5-tetramethyl-1,3,2-dioxoborolane were added dropwise. The mixture was then allowed to warm to room temperature, and stirred over night. The solvent was removed in vacuo, and the residue was taken up in diethyl ether. The organic phase was washed three times with 0.3 M HCl and water, dried over $MgSO_4$ and evaporated to dryness. Vacuum distillation at 120°C and 0.4 mbar afforded 30.0 g (0.093 mol, 72%) of a colorless oil.

^{1}H NMR (400 MHz, CD_2Cl_2). δ= 7.46 (s, 1H), 7.24 (s, 1H), 2.62 (d, 2H, J3=6.9 Hz), 1.69-1.53 (m, 1H), 1.36 (s, 12H), 1.43-1.23 (m, 8H), 1.00-0.88 (m, 6H) ppm

4,7-Di(4-ethylhexylthiophene-2-yl)benzothiadiazole. (6e) 12.4 g (42.3 mmol) Pinacol ester of 4-hexylthiophene-2-boronic acid, 30.0 g (93 mmol 2.2 eq) 4,7-dibromobenzothiadiazole und 9.4 g (88.8 mmol; 2.1 eq) Na_2CO_3 were degassed and dissolved in a mixture of 80 mL of water,

80 mL ethanol and 250 toluene (all solvents oxygen free). 200 mg (0.4 mmol; 1 mol%) [$Pd(PtBu_3)_2$] were dissolved in 10 mL toluene, added to the mixture and stirred over night at 90°C. After cooling to room temperature, additional toluene and water were added, the phases were separated and the organic phase was washed several times with water. The aqueous layer was extracted with toluene, the combined organic phases were dried over $MgSO_4$ and the solvent was removed in vacuo. The residual red oil was recrystallized from ethanol/methanol (1:20 v/v) to afford 15.2 g (28.96 mmol, 68%) of orange-red crystals.

^{1}H-NMR (400 MHz, $CDCl_3$). δ = 7.93 (s, 2H), 7.82 (s, 2H), 7.00 (s, 2H), 2.62 (d, 4H, ^3J = 6.9 Hz), 1.69-1.58 (m, 2H), 1.40-1.23 (m, 16H), 0.96-0.84 (m, 12H) ppm

4,7-Bis(5-bromo-4-(2-ethylhexyl)thiophene-2-yl)benzothiadiazole) (**6**). 15.2 g (28.69 mmol) of 4,7-di(4-ethylhexylthiophene-2-yl)benzothiadiazole were dissolved in 0.5 L of dichloromethane, and cooled to 0°C with an ice bath. 10.6 g (59.4 mmol) of N-bromosuccinimide (NBS) were added slowly in the dark and the mixture was stirred over night while allowing to warm to room temperature. 0.5 L of water were added, and the phases were separated. The organic phase was washed several times with water, dried over $MgSO_4$, and the solvent was removed in vacuum. The crude product was recrystallized from ethanol, affording 9.2 g (13.5 mmol) of orange crystals. The mother liquor was the further purified by column chromatography with pentane on silica gel to afford 4.9 g (7.0 mmol) of a red solid. Total yield: 71%

^{1}H NMR (400 MHz, $CDCl_3$): δ = 7.73 (s, 2H), 7.72 (s, 2H), 2.56 (d, 4H, J3 = 7.2 Hz), 1.72-1.62 (m, 2H), 1.40-1.25 (m, 16H), 0.94-0.85 (m, 12H) ppm

^{13}C NMR (100 MHz, $CDCl_3$): δ = 152.49, 142.48, 138.54, 128.84, 125.56, 125.09, 112.50, 40.23, 34.13, 32.72, 29.01, 25.94, 23.30, 14.37, 11.09 ppm.

Table S1. Miniemulsion polymerization with different portions of monomer **4**.

entry	**2** [µmol]	**4** [µmol] (mol%)	Particle size [nm][a]	$\lambda_{max,abs}$ [nm]
S1-1	980	20 (1%)	74	421
S1-2	900	100 (5%)	78	845
S1-3	800	200 (10%)	67	850
S1-4	600	400 (20%)	66	845
S1-5	0	1000 (50%)	87	808

1.000 mmol **1**, 2 wt.-% (relative to water) aqueous SDS solution (total volume 25 mL), 1.0 g of toluene, 0.5 g of $(iPr)_2NH$, 1 mol% (relative to the total amount of monomer) of $[Pd(PPh_3)_4]$, 100 of µg CuI, 2 min ultrasonication, 72h polymerization at 50°C. [a] volume average particle size determined by DLS.

Table S2. Miniemulsion polymerization with different portions of monomer **5**.

entry	**2** [µmol]	**5** [µmol] (mol%)	Particle size [nm][a]	$\lambda_{max,abs}$ [nm]
S2-1	980	20 (1)	72	425
S2-2	900	100 (5)	77	705
S2-3	800	200 (10)	77	694
S2-4	600	400 (20)	77	698
S2-5	0	1000 (50)	113	700

1.000 mmol **1**, 2 wt.-% (relative to water) aqueous SDS solution (total volume 25 mL), 1.0 g of toluene, 0.5 g of $(iPr)_2NH$, 1 mol% (relative to the total amount of monomer) of $[Pd(PPh_3)_4]$, 100 µg of CuI, 2 min ultrasonication, 72 h polymerization at 50°C. [a] volume average particle sizes determined by DLS.

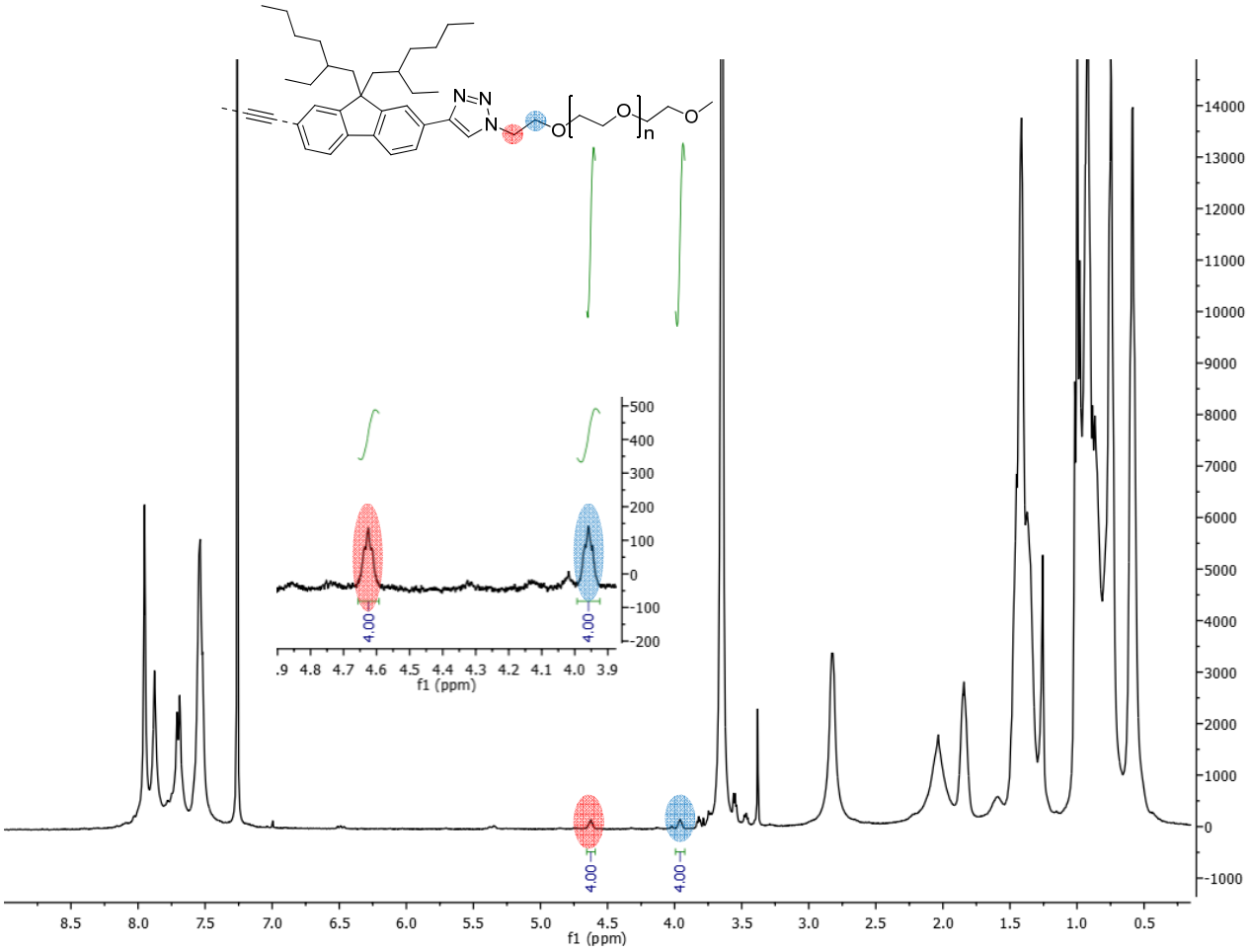


Figure S3. ^{1}H NMR spectrum of PEG-*block*-poly(**1**-*alt*-**6**)-*block*-PEG (solvent: $CDCl_3$).

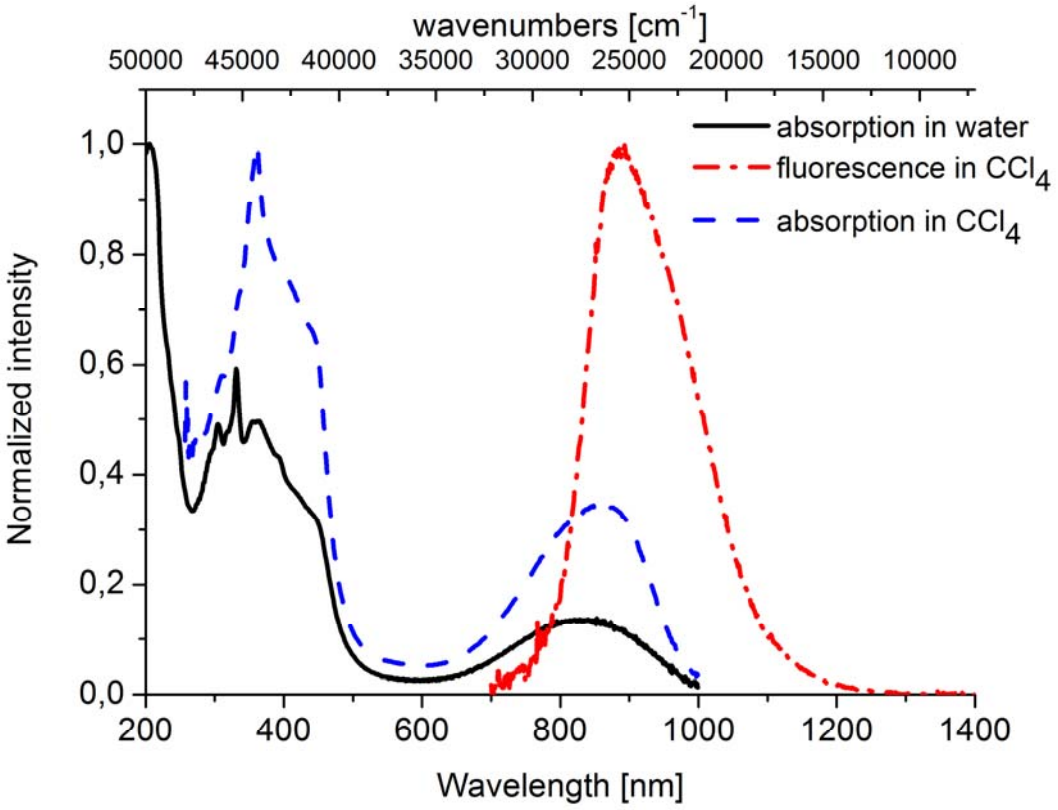


Figure S4. Absorption and emission spectra of poly(**1**-*alt*-**4**) (entry S1-5 in Table S1) in aqueous dispersion and in CCl_4-solution. No fluorescence could be detected in dispersion.

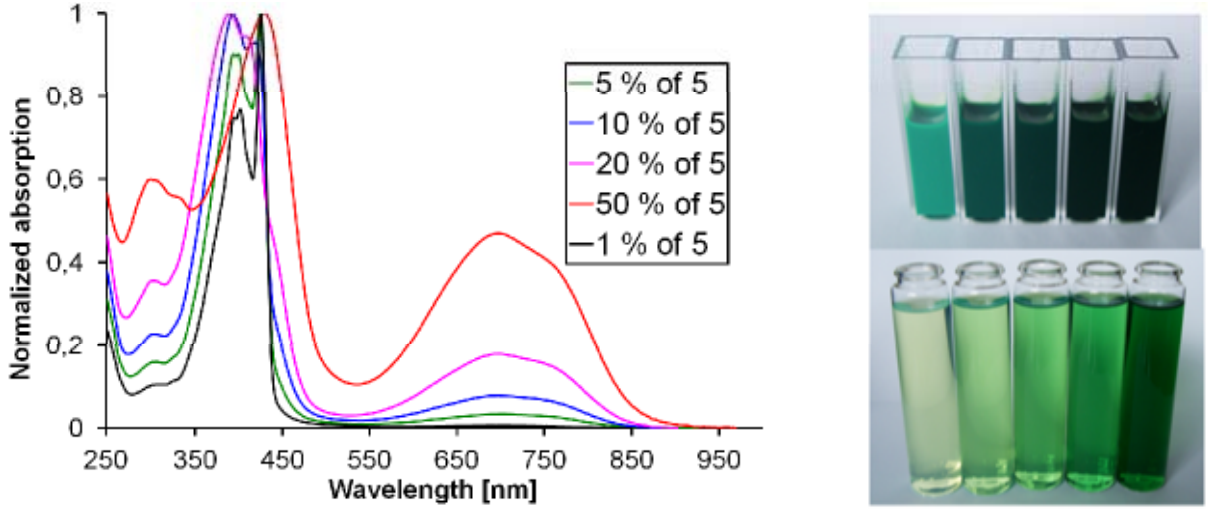


Figure S5. Absorption spectra of nanoparticles of poly[**1**-*alt*-(**2**-*co*-**5**)] with variable compositions, poly(**1**-*alt*-**5**), and poly(**1**-*alt*-**2**) for comparison (Table S2). Top right: Photograph of the undiluted dispersions (left to right: 0 to 50 mol-% **5**); Bottom right: Dispersions diluted 10^3-fold with water.

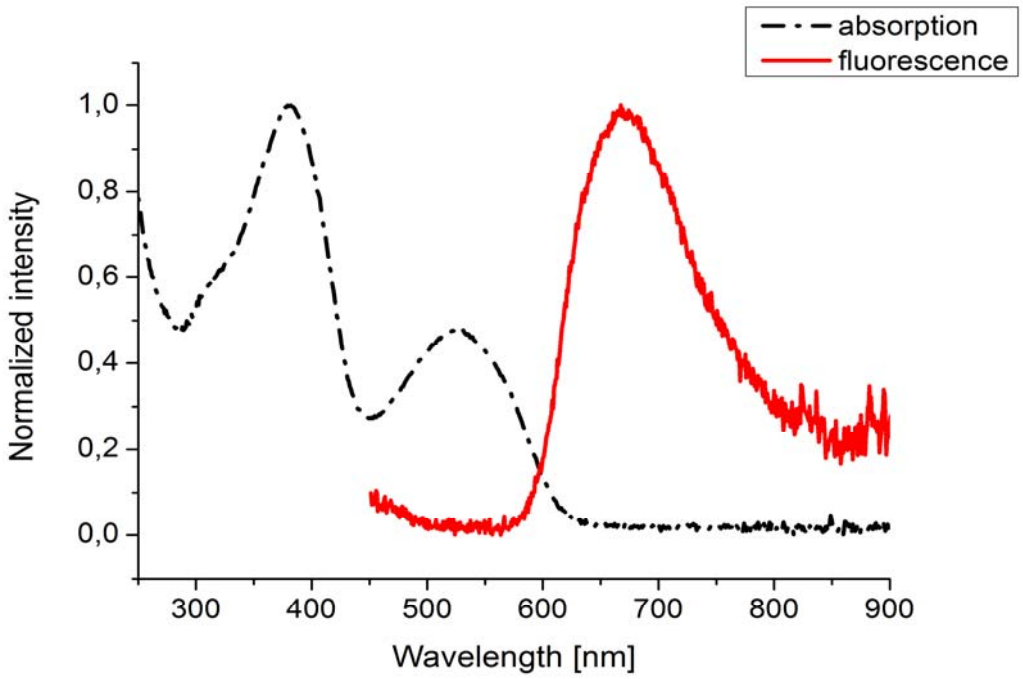


Figure S6. Absorption and emission spectra of aqueous dispersion generated by 'nanoprecipitation' of PEG-*block*-poly(**1**-*alt*-**6**)-*block*-PEG.

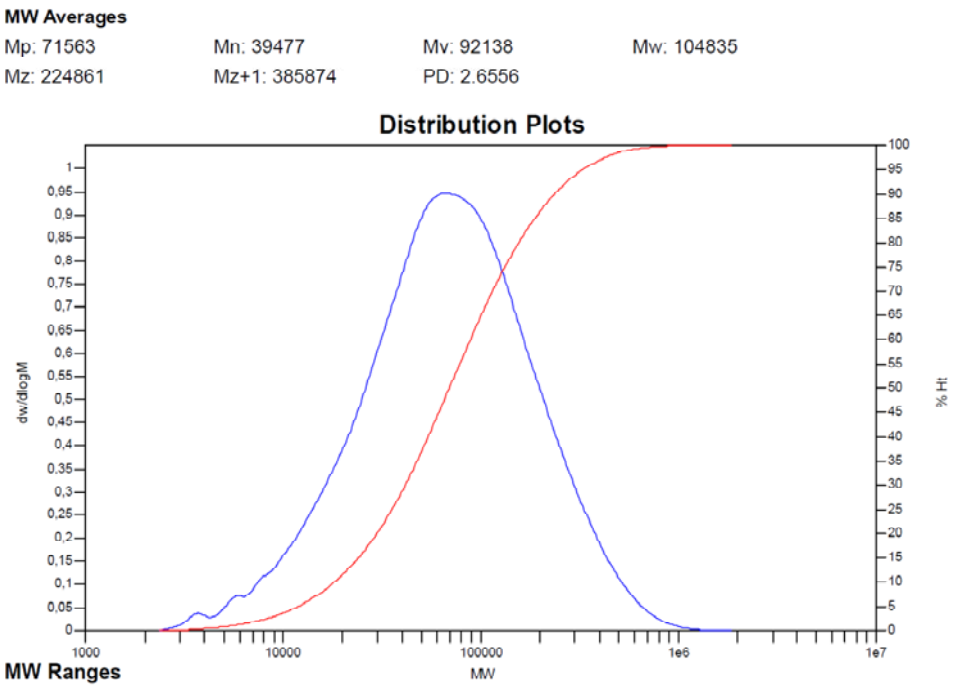


Figure S7. GPC trace of poly(**1**-*alt*-**6**) (THF solution, vs. polystyrene standards).

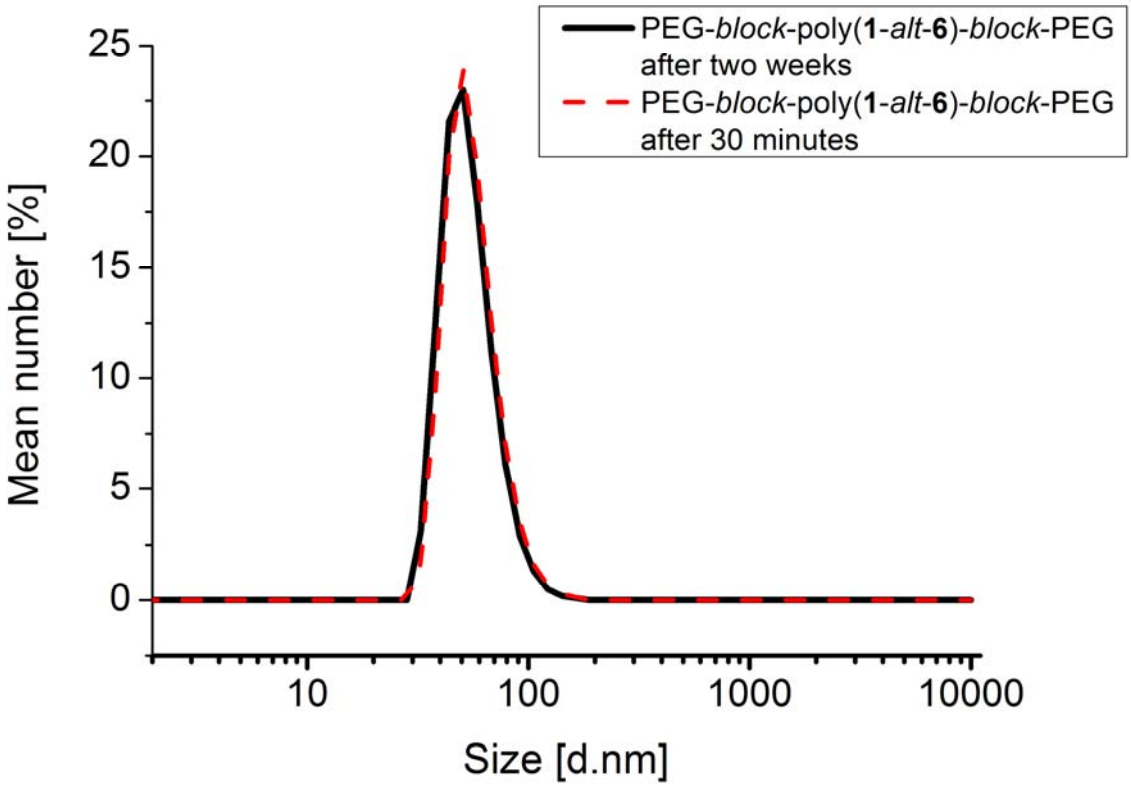


Figure S8. Size distribution of nanoparticles of PEG-*block*-poly(**1**-*alt*-**6**)-*block*-PEG after storage for two weeks.

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