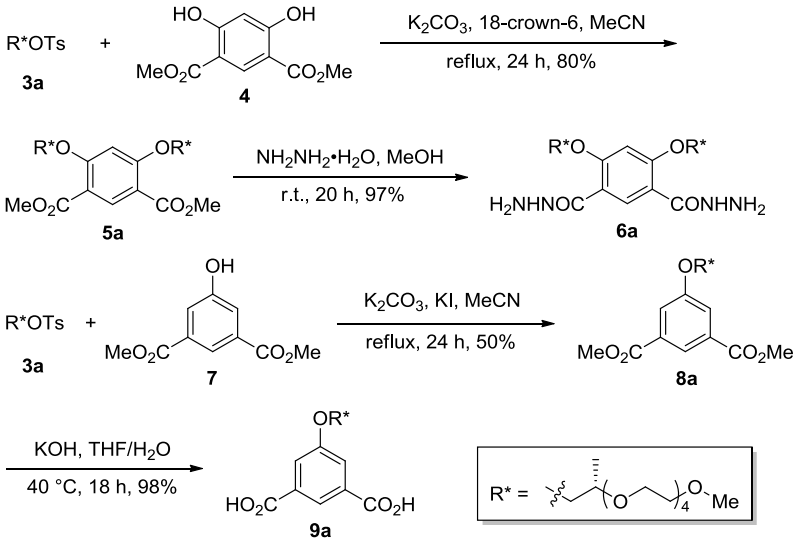
General methods. All reactions were carried out under a dry argon atmosphere. All solvents were dried before use following standard procedures. All reagents were obtained from commercial suppliers and used without further purification unless otherwise noted. Column chromatography was performed on silica gel (200-300 mesh), and thin-layer chromatography (TLC) was performed on precoated silica gel plates (0.4-0.5 mm thick, GF254, Huanghai, China) and observed under UV light. ^{1}H and ^{13}C NMR spectra were obtained with Bruker ARX400 spectrometer in the indicated solvents at 25 °C. Chemical shifts were referenced to the residual solvent peaks ($CHCl_3$ or $SiMe_4$). UV-vis spectra were recorded on a PerkinElmer Lambda 750S spectrometer. Circular dichroism (CD) spectra were recorded on a J810 CD spectrometer using a 1 cm path-length cell. Gel permeation chromatography (GPC) was performed on a Waters 1515 instrument with DMF containing lithium bromide (5 g/L) as the eluent with a flow rate of 1.0 mL/min at 60 ℃. The GPC is equipped with Waters 2414 Refractive Index detector, using TSK alpha-2500 and TSK alpha-3000 columns. The molecular weight was reported with polymethylmethacrylate (PMMA) standards.



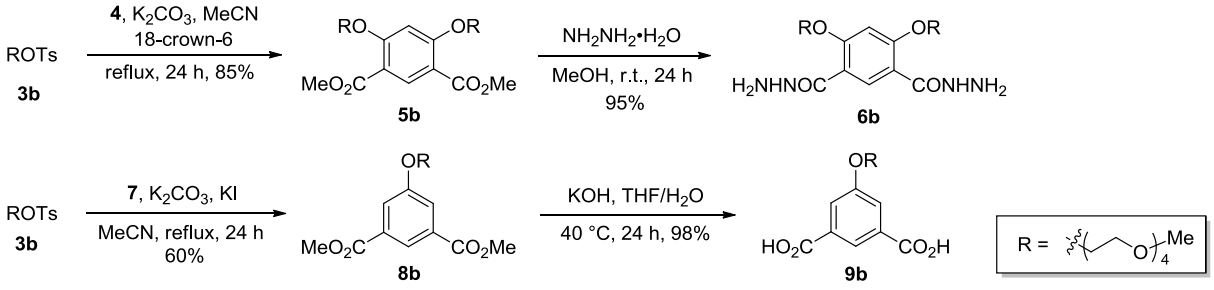
Compound 5a. A suspension of compounds **3a**[1] (0.92 g, 2.20 mmol), **4**[2] (0.22 g, 1.00 mmol), potassium carbonate (0.42 g, 3.00 mmol) and 18-crown-6 (52 mg, 0.2 mmol) in MeCN (20 mL) was heated under reflux for 24 h and then cooled to room temperature. The solid was filtrated off through Celite and the solution was concentrated with a rotavapor. The resulting residue was dissolved in dichloromethane (200 mL). The solution was washed with water (2 × 100 mL) and brine (100 mL), and dried over anhydrous sodium sulfate. After the solvent was evaporated with a rotavapor, the resulting slurry was subjected to column chromatography ($MeOH/CH_2Cl_2$ 1:20) to give compound **5a** as a colorless oil (0.58 g, 80%). ^{1}H NMR (400 MHz, $CDCl_3$): δ 8.46 (s, 1H), 6.44 (s, 1H), 4.13-4.09 (m, 2H), 3.97-3.89 (m, 4H), 3.84 (s, 6H), 3.80-3.77 (m, 4H), 3.65-3.61 (m, 24H), 3.54-3.52 (m, 4H), 3.36 (s, 6H), 1.33 (d, J = 6.0 Hz, 6H). ^{13}C NMR (100 MHz, $CDCl_3$): δ 165.3, 163.4, 137.3, 112.0, 97.7, 74.3, 72.9, 72.0, 71.0, 70.7, 69.2, 59.1, 51.9, 17.5. HRMS (ESI): Calcd. for $C_{34}H_{58}O_{16}Na$ $[M+Na]^+$: 745.3617. Found: 745.3598.

Compound 6a. Compound **5a** (0.29 g, 0.40 mmol) and hydrazide hydrate (98%, 2 mL) were

dissolved in methanol (10 mL). The solution was stirred at room temperature for 20 h and then concentrated with a rotavapor. The resulting slurry was suspended in water (10 mL) and the mixture was extracted with dichloromethane (3 × 20 mL). The organic layer was washed with brine (20 mL) and dried over anhydrous sodium sulfate. The solvent was evaporated under reduced pressure to give compound **6a** as a brown sticky oil (0.28 g, 97%). ^{1}H NMR (400 MHz, $CDCl_3$): δ 8.97 (s, 2H), 8.92 (s, 1H), 6.44 (s, 1H), 4.15-4.12 (m, 2H), 4.06-3.97 (m, 4H), 3.83-3.79 (m, 2H), 3.73-3.61 (m, 26H), 3.55-3.52 (m, 4H), 3.37 (s, 6H), 1.32 (d, *J* = 6.0 Hz, 6H). ^{13}C NMR (100 MHz, $CDCl_3$): δ 165.1, 160.0, 136.6, 114.8, 97.6, 73.7, 72.7, 72.0, 70.8, 70.7, 70.6, 68.4, 59.1, 16.5. HRMS (ESI): Calcd. for $C_{32}H_{59}N_4O_{14}$ $[M+H]^+$: 723.4022. Found: 723.3995.

Compound 8a. A suspension of **7** (0.30 g, 1.65 mmol), **3a** (0.63 g, 1.50 mmol) and potassium carbonate (0.62 g, 4.50 mmol) in MeCN (30 mL) was stirred under reflux for 24 h and then cooled to room temperature. The suspension was passed through Celite to remove potassium carbonate and then concentrated. The resulting residue was dissolved in DCM (100 mL). The organic solution was washed with water (2 × 50 mL) and brine (50 mL). Then it was dried over anhydrous sodium sulfate. After removing sodium sulfate, the solvent was evaporated and the resulting slurry was subjected to column chromatography (EtOAc/DCM 1:1) to give compound **8a** as a colorless oil (0.35 g 50%). ^{1}H NMR (400 MHz, $CDCl_3$): δ 8.25 (s, 1H), 7.73 (s, 2H), 4.06-4.03 (m, 1H), 3.97-3.93 (m, 1H), 3.92(s, 6H), 3.89-3.87 (m, 1H), 3.76-3.72 (m, 2H), 3.63-3.60 (m, 12H), 3.53-3.51 (m, 2H), 3.35 (s, 3H), 1.28 (d, *J* = 6.0 Hz, 3H). ^{13}C NMR (100 MHz, $CDCl_3$): δ 166.2, 159.0, 131.8, 123.2, 120.0, 74.3, 72.3, 72.0, 70.9, 70.7, 70.7, 70.6, 69.0, 59.1, 52.5, 17.3. HRMS (ESI): Calcd. for $C_{22}H_{34}O_{10}Na$ $[M+Na]^+$: 481.2044. Found: 481.2084.

Compound 9a. Compound **8a** (0.24 g, 0.52 mmol) and potassium hydroxide (0.6 g, 1.10 mol) were dissolved in THF (12 mL) and water (4 mL). The solution was stirred at 40 ℃ for 18 h and then concentrated with a rotavapor. The resulting slurry was treated with diluted hydrochloric acid (1 M, 20 mL) and then the mixture was extracted with dichloromethane (3 × 40 mL). The organic layer was washed with brine (30 mL) and then dried over anhydrous sodium sulfate. After the solvent was evaporated under reduced pressure, compound **9a** was obtained as a colorless sticky oil (0.22 g, 98%). ^{1}H NMR (400 MHz, $CDCl_3$): δ 8.06 (s, 1H), 7.61 (d, J = 1.2 Hz, 2H), 4.01-3.94 (m, 3H), 3.84-3.83 (m, 2H), 3.79-3.64 (m, 12H), 3.57-3.55 (m, 2H), 3.38 (s, 3H), 1.32 (d, *J* = 6.0 Hz, 3H). ^{13}C NMR (100 MHz, $CDCl_3$): δ 169.4, 158.8, 131.2, 124.0, 120.5, 74.5, 72.2, 72.0, 71.1, 70.6, 70.6, 70.5, 68.8, 59.1, 16.9. HRMS (ESI): Calcd. for $C_{20}H_{29}O_{10}$ $[M-H]^-$): 429.1766. Found: 429.1730.



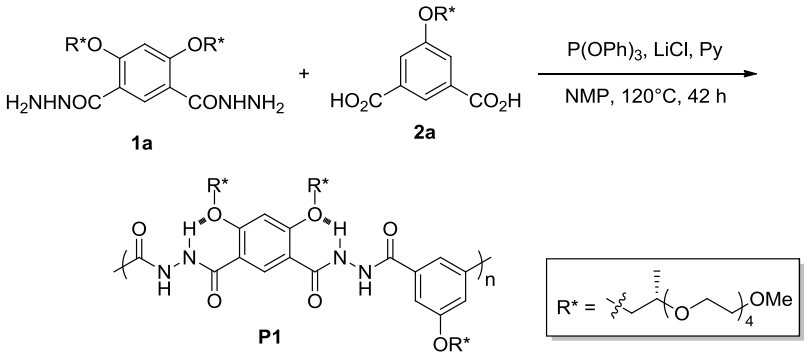
Compound 5b. This compound was prepared as a colorless oil (85%) from the reaction of

3b[3] and **4** according to the procedure described for the preparation of **5a**. ^{1}H NMR (400 MHz, $CDCl_3$): δ 8.43 (s, 1H), 6.55 (s, 1H), 4.23-4.20 (m, 4H), 3.83(s, 6H), 3.77-3.74 (m, 4H), 3.66-3.60 (m, 16H), 3.53-3.51 (m, 4H), 3.35 (s, 6H). ^{13}C NMR (100 MHz, $CDCl_3$): δ 165.2, 163.4, 137.1, 112.4, 98.7, 72.0, 71.2, 70.8, 70.7, 70.7, 70.6, 69.5, 69.2, 59.1, 51.9. HRMS (ESI): Calcd. for $C_{28}H_{47}O_{14}$ $[M+H]^+$: 607.2960. Found: 607.2959.

Compound 6b. This compound was prepared as a colorless oil (95%) from the reaction of **5b** and hydrazine according to the procedure described for the preparation of **6a**. ^{1}H NMR (400 MHz, $CDCl_3$): δ 8.93 (s, 2H), 8.85 (s, 1H), 6.43 (s, 1H), 4.26-4.23 (m, 4H), 3.90-3.88 (m, 4H), 3.73-3.70 (m, 8H), 3.64-3.58 (m, 12H), 3.51-3.48 (m, 4H), 3.33 (s, 6H). ^{13}C NMR (100 MHz, $CDCl_3$): δ 165.1, 159.9, 136.5, 114.8, 98.0, 72.0, 70.9, 70.7, 70.6, 70.6, 69.0, 68.7, 59.1. HRMS (ESI): Calcd. for $C_{26}H_{47}N_4O_{12}$ $[M+H]^+$: 607.3185. Found: 607.3183.

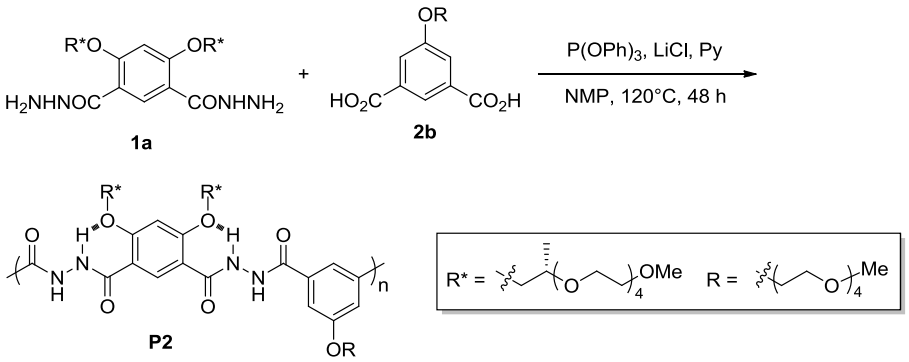
Compound 8b. This compound was prepared as a colorless oil (60%) from the reaction of **3b** and **7** according to the procedure described for the preparation of **8a**. ^{1}H NMR (400 MHz, $CDCl_3$): δ 8.24 (t, *J* = 1.4 Hz, 1H), 7.73 (d, *J* = 1.4 Hz, 2H), 4.19-4.17 (m, 2H), 3.90 (s, 6H), 3.87-3.84 (m, 2H), 3.71-3.69 (m, 2H), 3.66-3.60 (m, 8H), 3.52-3.50 (m, 2H), 3.34 (s, 3H). ^{13}C NMR (100 MHz, $CDCl_3$): δ 166.1, 158.9, 131.8, 123.2, 112.0, 72.0, 70.9, 70.7, 70.5, 69.6, 68.1, 59.0, 52.4. HRMS (ESI): Calcd. for $C_{19}H_{32}NO_9$ $[M+NH_4]^+$: 418.2072. Found: 418.2076.

Compound 9b. This compound was prepared as a colorless oil (98%) from the hydrolysis of **8b** with potassium hydroxide according to the procedure described for the preparation of **9a**. ^{1}H NMR (400 MHz, DMSO-d_6): δ 13.36 (brs, 2H), 8.07 (s, 1H), 7.64 (d, J = 1.2 Hz, 2H), 4.22-4.20 (m, 2H), 3.78-3.76 (m, 2H), 3.60-3.48 (m, 10H), 3.42-3.40 (m, 2H), 3.22 (s, 3H). ^{13}C NMR (100 MHz, DMSO-d_6): δ 166.5, 158.6, 132.9, 122.3, 119.0, 71.3, 70.0, 69.8, 69.8, 69.6, 68.8, 67.8, 58.0. HRMS (ESI): Calcd. for $C_{17}H_{23}O_9$ $[M-H]^-$: 371.1348. Found: 371.1321.

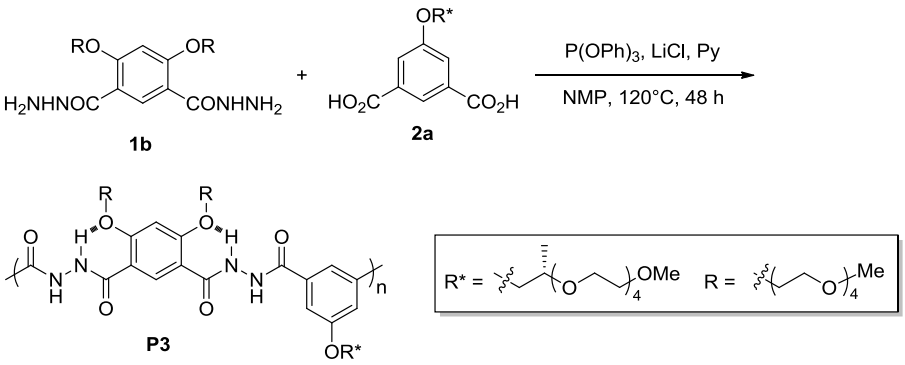


Polymer P1. Compounds **1a** (0.15 g, 0.20 mmol) and **2a** (86 mg, 0.20 mmol) and lithium chloride (21 mg, 0.5 mmol) were added into a Schlenk tube. Then *N*-methyl pyrrolidone (0.8 mL), pyridine (0.2 mL) and triphenylphosphite (0.13 mL) were added into the Schlenk tube in turn. The mixture was stirred at 120 ℃ for 42 h and then cooled to room temperature. To the solution was added ether (25 mL). Then the formed precipitate was filtrated and dissolved in sodium carbonate solution (1 M, 30 mL) at 80 ℃. After cooling to room temperature, the mixture was extracted with dichloromethane (4 × 50 mL). The organic layer was then dried over anhydrous sodium sulfate. After the solution was concentrated to about 5 mL with a rotavapor, ether (30 mL) was added dropwise. The precipitate formed was filtrated and dried in vacuo at 70 ℃ for 24 h to give **P1** as a pale brown solid (88 mg, 38%).

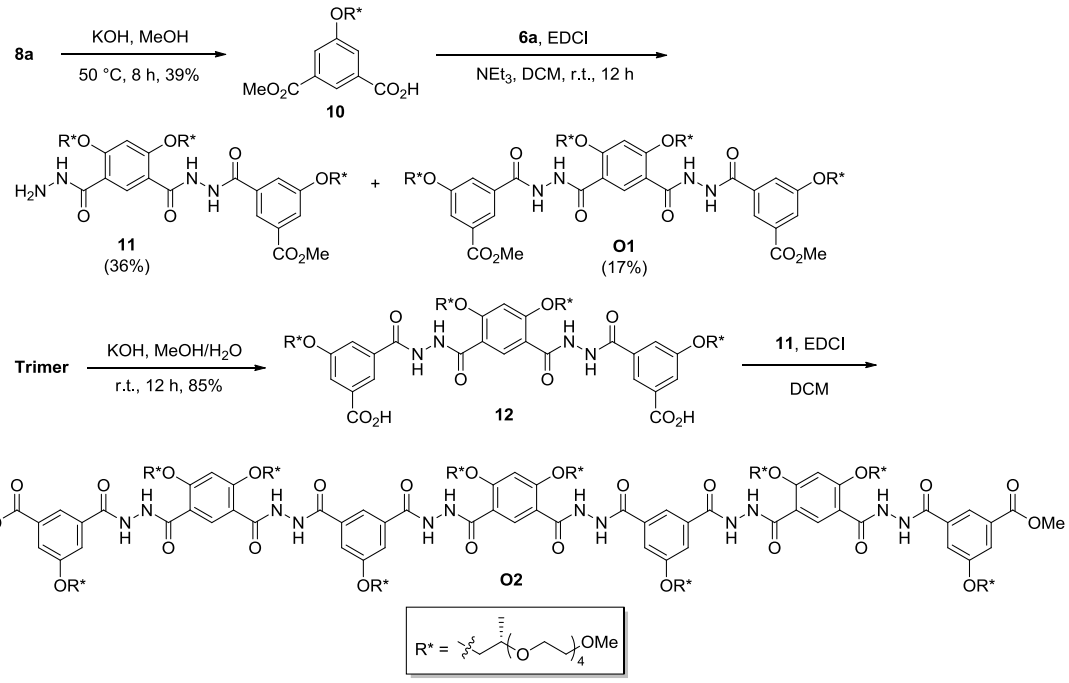
M_n = 14365, M_w = 31200.



Polymer P2. This polymer was prepared as a pale brown solid (78%) from the reaction of **1a** and **2b** according to the procedure described for the preparation of **P2**. M_n = 12209, M_w = 31087.



Polymer P3. This polymer was prepared as a pale brown solid (42%) from the reaction of **1b** and **2a** according to the procedure described for the preparation of **P3**. M_n = 7201, M_w = 21495.



Compound 10. Compound **8a** (0.37 g, 0.81 mmol) and potassium hydroxide (45 mg, 0.80

mmol) were dissolved in methanol (10 mL). The solution was stirred at 50 ℃ for 8 h and then concentrated with a rotavapor. The resulting slurry was treated with diluted hydrochloric acid (1 M, 10 mL) and the mixture was extracted with dichloromethane (3 × 20 mL). The organic layer was washed with brine (20 mL) and dried over sodium sulfate. After the solvent was evaporated under reduced pressure, the resulting slurry was subjected to column chromatography (MeOH/CH_2Cl_2 1:40) to give compound **10** as a colorless oil (0.14 g, 39%). ^{1}H NMR (400 MHz, $CDCl_3$): δ 8.31 (s, 1H), 7.80-7.77 (m, 2H), 4.10-3.97 (m, 2H), 3.93 (s, 3H), 3.93-3.89 (m, 1H), 3.78-3.73 (m, 2H), 3.67-3.63 (m, 9H), 3.57-3.55 (m, 2H), 3.38 (s, 3H), 1.29 (d, *J* = 6.4 Hz, 3H). ^{13}C NMR (100 MHz, $CDCl_3$): δ 169.2, 166.2, 159.2, 132.0, 131.4, 123.8, 120.6, 120.5, 74.5, 72.4, 72.1, 71.0, 70.7, 70.7, 70.5, 69.1, 59.1, 52.6, 17.2. HRMS (ESI): Calcd. for $C_{21}H_{31}O_{10}$ $[M-H]^-$: 443.1923. Found: 443.1894.

Compounds 11 and O1. 1-(3-Dimethylaminopropyl)-3-ethylcarbodiimide (EDCI, 45 mg, 0.24 mmol) was added into a solution of compounds **6a** (0.16 mg, 0.21 mmol) and **10** (96 mg, 0.21 mmol) in dichloromethane (30 mL). The solution was stirred at room temperature for 12 h and then concentrated with a rotavapor. The resulting slurry was subjected to column chromatography (MeOH/CH_2Cl_2 1:20) to give compounds **11** as a colorless oil (87 mg, 36%) and **O1** as a colorless oil (57 mg, 17%). Compound **11**: ^{1}H NMR (400 MHz, $CDCl_3$): δ 10.35 (br, 1H), 9.83 (br, 1H), 9.01 (s, 1H), 8.95 (s, 1H), 8.13 (s, 1H), 7.72-7.69 (m, 2H), 6.49 (s, 1H), 4.19-4.05 (m, 6H), 4.01-3.96 (m, 2H), 3.93 (s, 3H), 3.89-3.88 (m, 1H), 3.80-3.52 (m, 46H), 3.48-3.45 (m, 2H), 3.36 (s, 6H), 3.30 (s, 3H), 1.37-1.24 (m, 12H). ^{13}C NMR (100 MHz, $CDCl_3$): δ 166.2, 165.0, 163.1, 161.2, 160.6, 160.4, 159.3, 137.0, 134.0, 132.0, 120.7, 119.2, 118.4, 114.9, 113.6, 97.4, 74.4, 73.8, 73.7, 73.4, 72.8, 72.4, 72.0, 71.0, 70.8, 70.7, 69.1, 68.4, 59.1, 59.0, 52.5, 17.3, 16.5. HRMS (ESI): Calcd. for $C_{53}H_{89}N_4O_{23}$ $[M+H]^+$: 1149.5912. Found: 1149.5996. **O1**: ^{1}H NMR (400 MHz, $CDCl_3$): δ 10.30 (s, 2H), 9.82 (brs, 2H), 8.97 (s, 1H), 8.13 (s, 2H), 7.71-7.69 (m, 4H), 6.53 (s, 1H), 4.21-4.16 (m, 6H), 4.10-4.06 (m, 2H), 3.98-3.95 (m, 2H), 3.92 (s, 6H), 3.89-3.85 (m, 2H), 3.77-3.70 (m, 8H), 3.64-3.51 (m, 52H), 3.46-3.44 (m, 4H), 3.35 (s, 6H), 3.28 (s, 6H), 1.37-1.35 (m, 6H), 1.28 (d, *J* = 6.4 Hz, 6H). ^{13}C NMR (100 MHz, $CDCl_3$): δ 166.2, 163.3, 161.3, 160.9, 159.3, 137.3, 134.0, 132.0, 120.7, 119.2, 118.4, 113.7, 97.3, 74.4, 73.8, 73.4, 72.3, 72.0, 72.0, 71.0, 70.8, 70.7, 70.7, 70.6, 70.5, 69.1, 68.4, 59.1, 59.0, 52.5, 17.3, 16.5. HRMS (ESI): Calcd. for $C_{74}H_{118}N_4O_{32}Na$ $[M+Na]^+$: 1597.7621. Found: 1597.7638.

Compound 12. Compound **O1** (49 mg, 0.03 mmol) and potassium hydroxide (10 mg, 0.17 mmol) were dissolved in methanol (5 mL) and water (1 mL). The solution was stirred at room temperature for 12 h and then concentrated with a rotavapor. The resulting slurry was treated with diluted hydrochloric acid (1 M, 5 mL) and the mixture was extracted with dichloromethane (3 × 20 mL). The organic layer was washed with brine (20 mL) and dried over anhydrous sodium sulfate. After the solvent was evaporated under reduced pressure, compound **12** was obtained as a colorless oil (41 mg, 85%). ^{1}H NMR (400 MHz, $CDCl_3$): δ 11.32 (s, 2H), 10.90 (s, 2H), 9.06 (s, 1H), 8.60 (s, 2H), 7.80 (s, 4H), 6.67 (s, 1H), 4.29-4.08 (m, 8H), 3.93-3.98 (m, 2H), 3.89-3.88 (m, 2H), 3.80-3.74 (m, 8H), 3.64-3.49 (m, 56H), 3.34 (s, 6H), 3.32 (s, 6H), 1.29-1.12 (m, 12H). ^{13}C NMR (100 MHz, $CDCl_3$): δ 168.8, 163.0, 161.4, 161.0, 159.3, 133.2, 132.0, 121.0, 119.8, 119.5, 113.0, 74.4, 73.8, 72.3, 72.0, 70.9, 70.8, 70.6, 70.6, 70.5, 70.5, 69.1, 68.4, 59.1, 59.0, 17.3, 16.7. HRMS (ESI): Calcd. for $C_{72}H_{115}N_4O_{32}$ $[M+H]^+$: 1547.7489. Found: 1547.7489.

Compound O2. EDCI (12 mg, 0.06 mmol) was added into a solution of compounds **11** (29 mg, 0.03 mmol) and **12** (14 mg, 0.01 mmol) in dichloromethane (5 mL). The solution was stirred at room temperature for 20 h and then concentrated with a rotavapor. The resulting slurry was subjected to column chromatography (MeOH/CH_2Cl_2 1:10) to give **O2** as a light brown oil (19 mg, 57%). ^{1}H NMR (400 MHz, $CDCl_3$): δ 10.35 (s, 1H), 10.34 (s, 1H), 10.23 (s, 4H), 10.15 (s, 4H), 9.74 (s, 1H), 9.73 (s, 1H), 9.01 (s, 2H), 9.00 (s, 1H), 8.36 (s, 2H), 8.13 (s, 2H), 7.75-7.69 (m, 8H), 6.54 (s, 3H), 4.21-4.08 (m, 20H), 4.00-3.98 (m, 5H), 3.93 (s, 6H), 3.93-3.88 (m, 5H), 3.78-3.46 (m, 160H), 3.36-3.20 (m, 30H), 1.33-1.28 (m, 30H). ^{13}C NMR (100 MHz, $CDCl_3$): δ 166.2, 163.8, 163.1, 161.8, 161.7, 161.2, 160.9, 160.8, 159.5, 159.4, 137.4, 134.1, 133.9, 132.0, 130.1, 124.5, 124.1, 123.6, 120.7, 119.2, 118.5, 118.2, 117.9, 114.4, 114.3, 113.6, 97.3, 74.4, 73.7, 73.4, 72.4, 72.1, 72.0, 71.9, 71.0, 70.9, 70.8, 70.6, 70.6, 70.5, 69.1, 68.4, 59.1, 58.8, 52.5, 32.1, 31.6, 31.6, 30.5, 30.4, 30.3, 29.5, 27.4, 22.8, 17.5, 17.4, 16.6, 16.5, 14.2. HRMS (ESI): Calcd. for $C_{178}H_{286}N_{12}O_{76}$ $[M]^+$: 3807.8884. Found: 1927.9372 $[M+2Na]^{2+}$ and 1292.9558 $[M+3Na]^{3+}$.

Calculation methods. The MM calculations were performed using the Compass force field as contained in the MS Modeling software (version 7.0, Accelrys, Inc., San Diego, CA).[4,5] The polymer models contained 4 turns with 24 aromatic subunits and were constructed by Polymer Builder module in the MS Modeling software. The two side chains of polymer **P1** and **P2** were replaced with shorter (*S*)-(2-methoxy)propoxyl and 2-methoxyethoxyl groups, respectively.

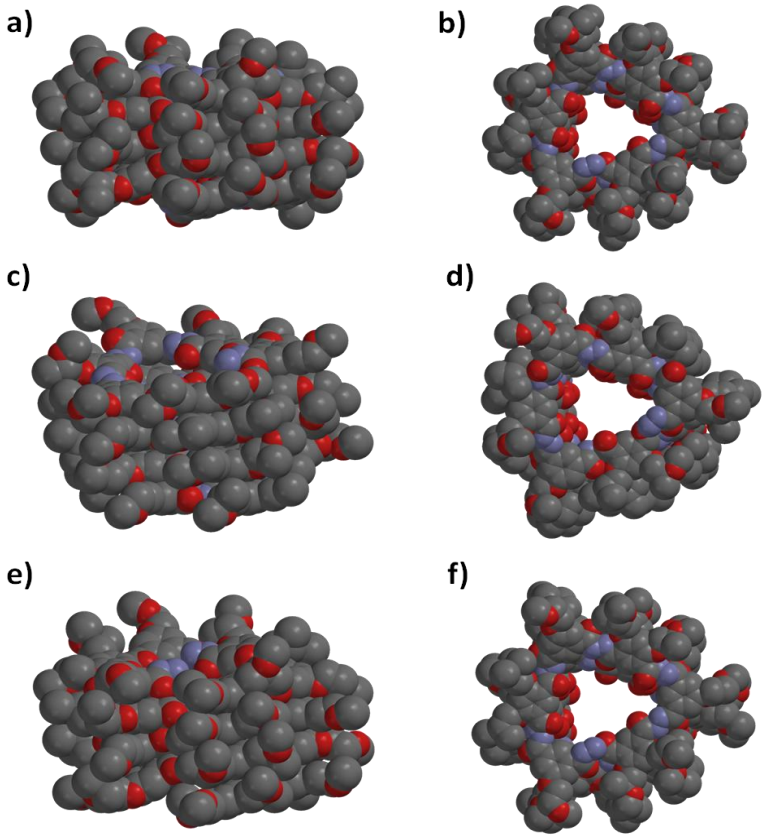


Fig. S1 Optimized helical conformers: a,b) side- and top-view of P conformer of **P1**, c,d) side- and top-view of M conformer of **P2**, and, e,f) side- and top-view of P conformer of **P3** (C, grey; N, blue; O, red). Hydrogen atoms are omitted for clarity.

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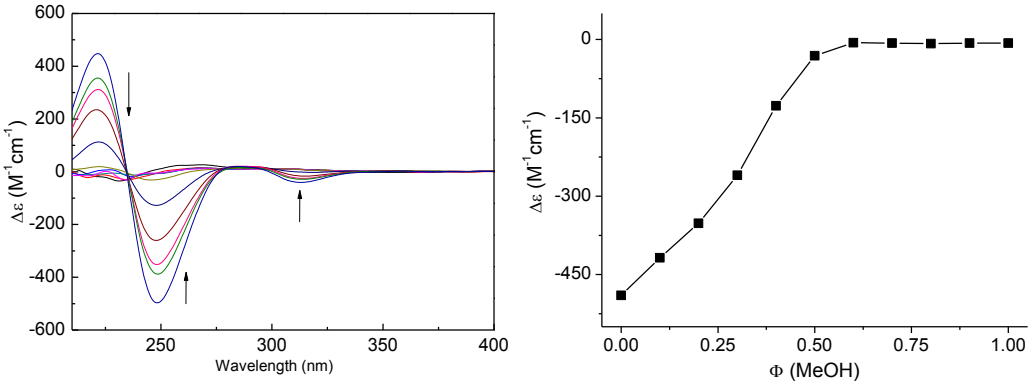

Fig. S2 Left: CD spectra of **P2** in binary methanol/water mixtures at 25°C. Right: The negative maximum Cotton effect versus Φ. The concentration of the repeat aromatic subunits was 50 μM.

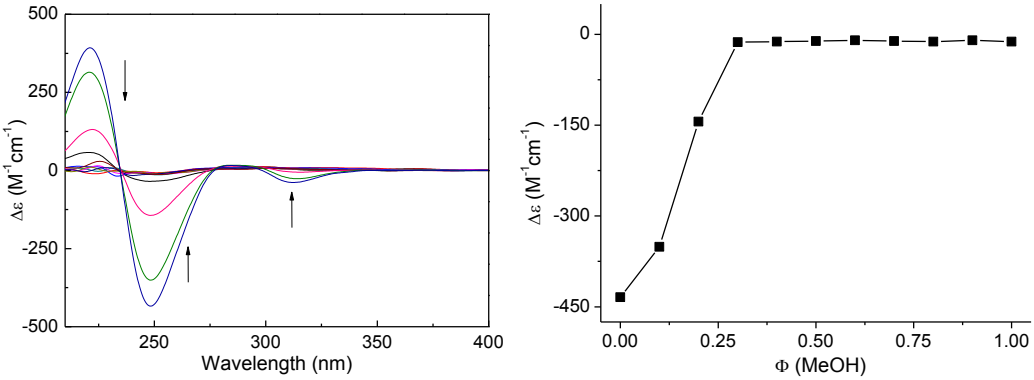

Fig. S3 Left: CD spectra of **P2** in binary acetonitrile/water mixtures at 25°C. Right: The negative maximum Cotton effect versus Φ. The concentration of the repeat aromatic subunits was 50 μM.

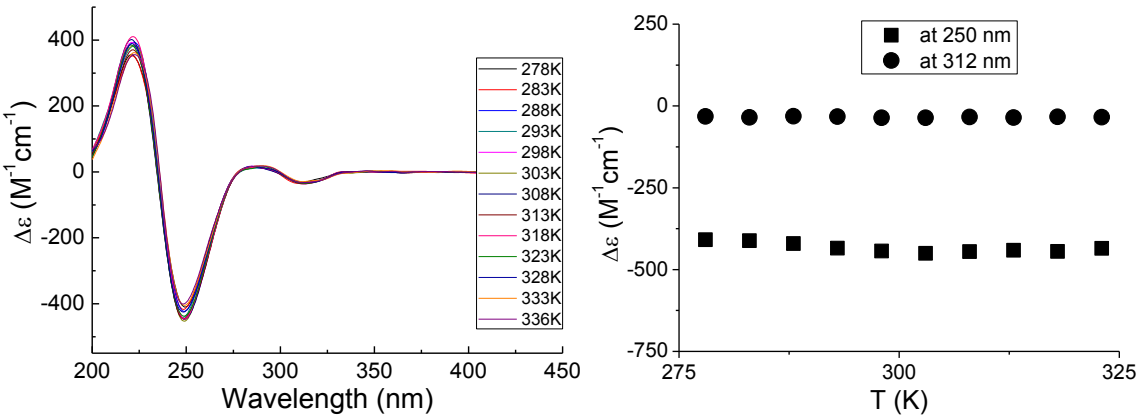

Fig. S4 Left: CD spectra of **P1** in water at different temperatures. The concentration of the repeat aromatic subunits was 50 μM. Right: The plot of Δε versus the temperature at 250 nm and 312 nm.

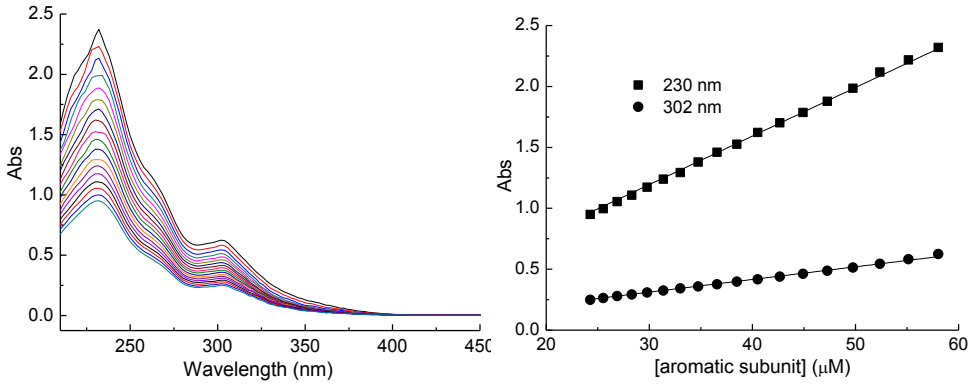

Fig. S5 Left: UV-vis dilution spectra of **P1** in water at 25 °C. Right: Absorbance versus the concentration of the repeat aromatic subunits.

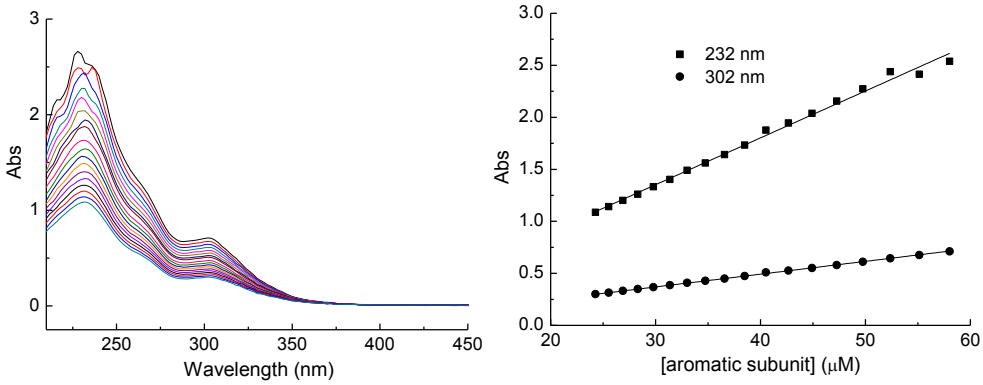

Fig. S6 Left: UV-vis dilution spectra of **P2** in water at 25 °C. Right: Absorbance versus the concentration of the repeat aromatic subunits.

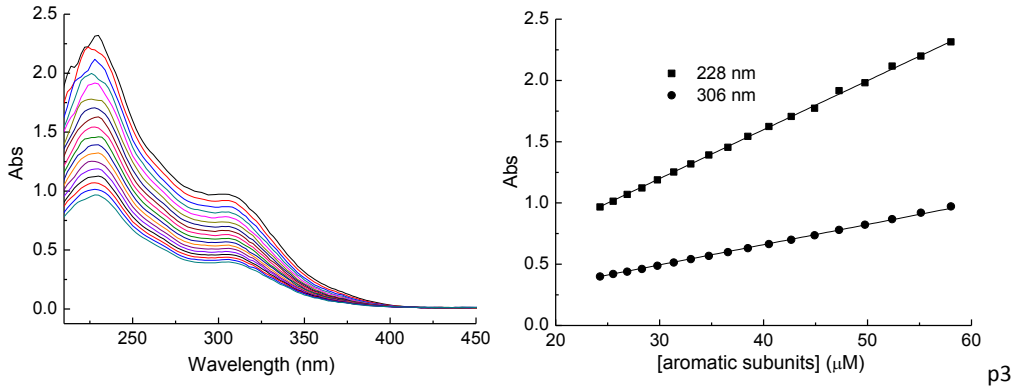

Fig. S7 Left: UV-vis dilution spectra of **P3** in water at 25 °C. Right: Absorbance versus the concentration of the repeat aromatic subunits.

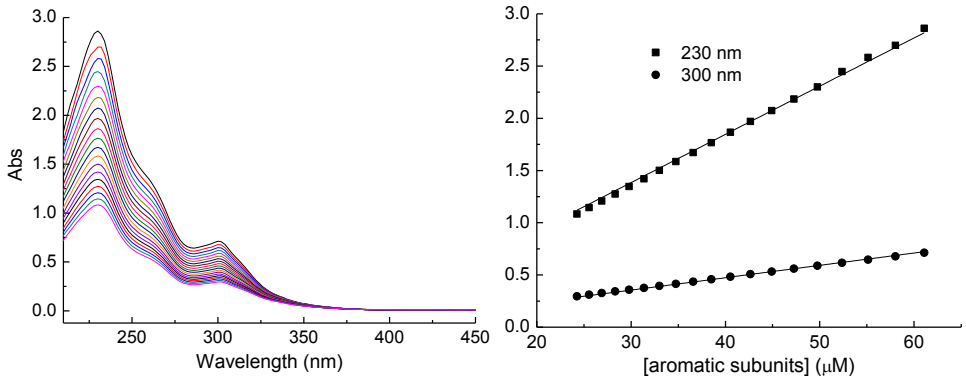

Fig. S8 Left: UV-vis dilution spectra of **P1** in methanol at 25 °C. Right: Absorbance versus the concentration of the repeat aromatic subunits.

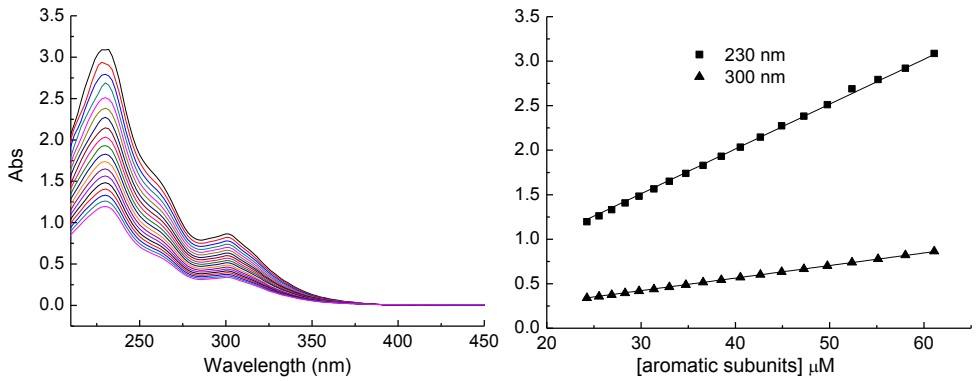

Fig. S9 Left: UV-vis dilution spectra of **P2** in methanol at 25 °C. Right: Absorbance versus the concentration of the repeat aromatic subunits.

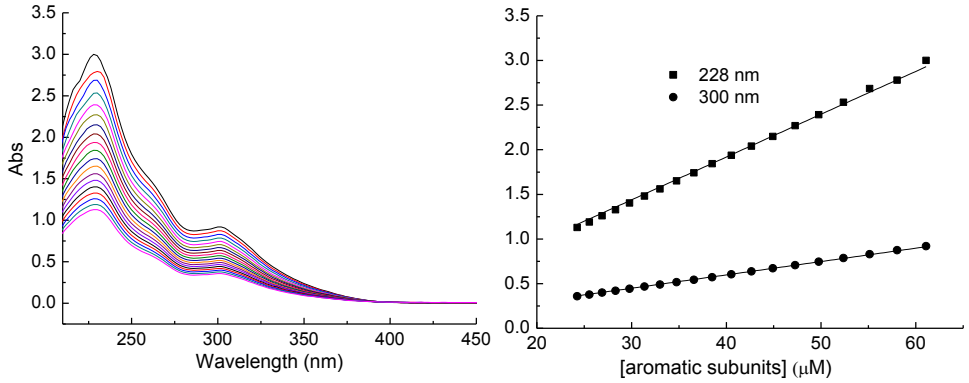

Fig. S10 Left: UV-vis dilution spectra of **P3** in methanol at 25 °C. Right: Absorbance versus the concentration of the repeat aromatic subunits.

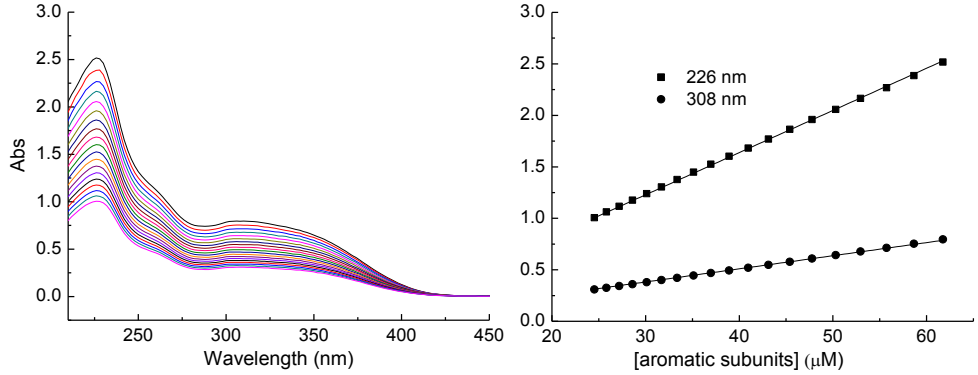

Fig. S11 Left: UV-vis dilution spectra of **P1** in acetonitrile at 25 °C. Right: Absorbance versus the concentration of the repeat aromatic subunits.

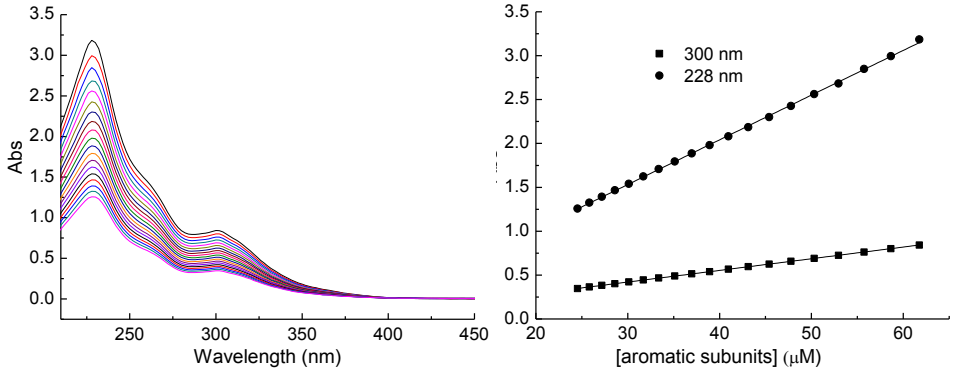

Fig. S12 Left: UV-vis dilution spectra of **P2** in acetonitrile at 25 °C. Right: Absorbance versus the concentration of the repeat aromatic subunits.

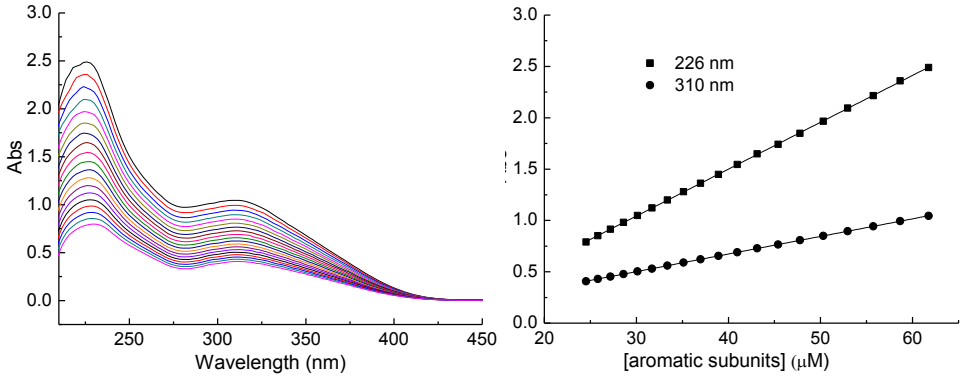

Fig. S13 Left: UV-vis dilution spectra of **P3** in acetonitrile at 25 °C. Right: Absorbance versus the concentration of the repeat aromatic subunits.

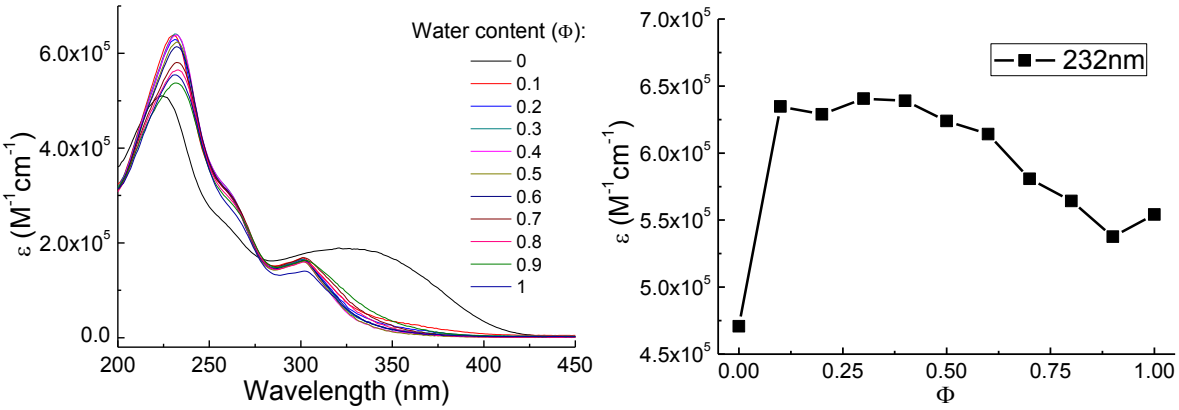

Fig. S14 Left: UV-vis spectra of polymer **P1** in binary mixtures of acetonitrile and water of increasing content at 25 °C. The concentration of the repeat aromatic subunits was 25 μM. Right: The absorbance at 232 nm versus the content of water Φ (Φ represents the relative volume content of water).

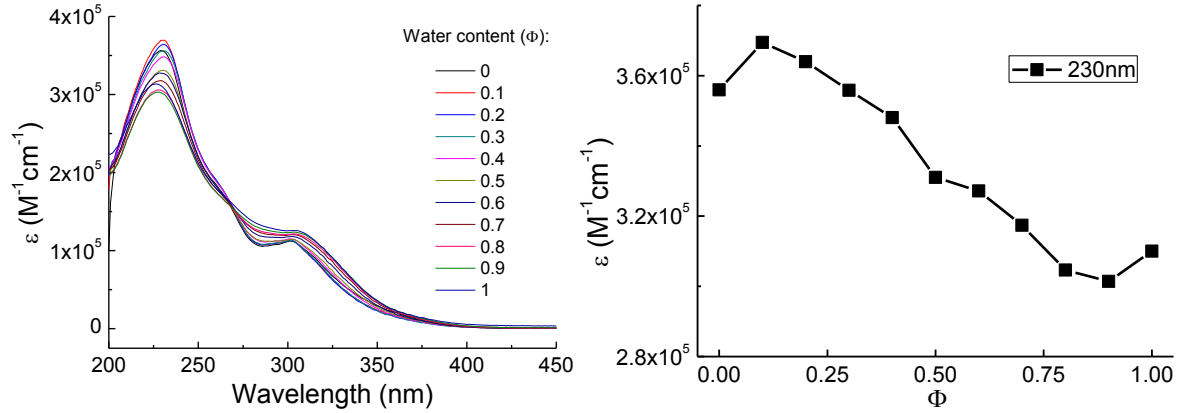

Fig. S15 Left: UV-vis spectra of polymer **P3** in binary mixtures of methanol and water of increasing content at 25 °C. The concentration of the repeat aromatic subunits was 25 μM. Right: The absorbance at 230 nm versus the content of water Φ (Φ represents the relative volume content of water).

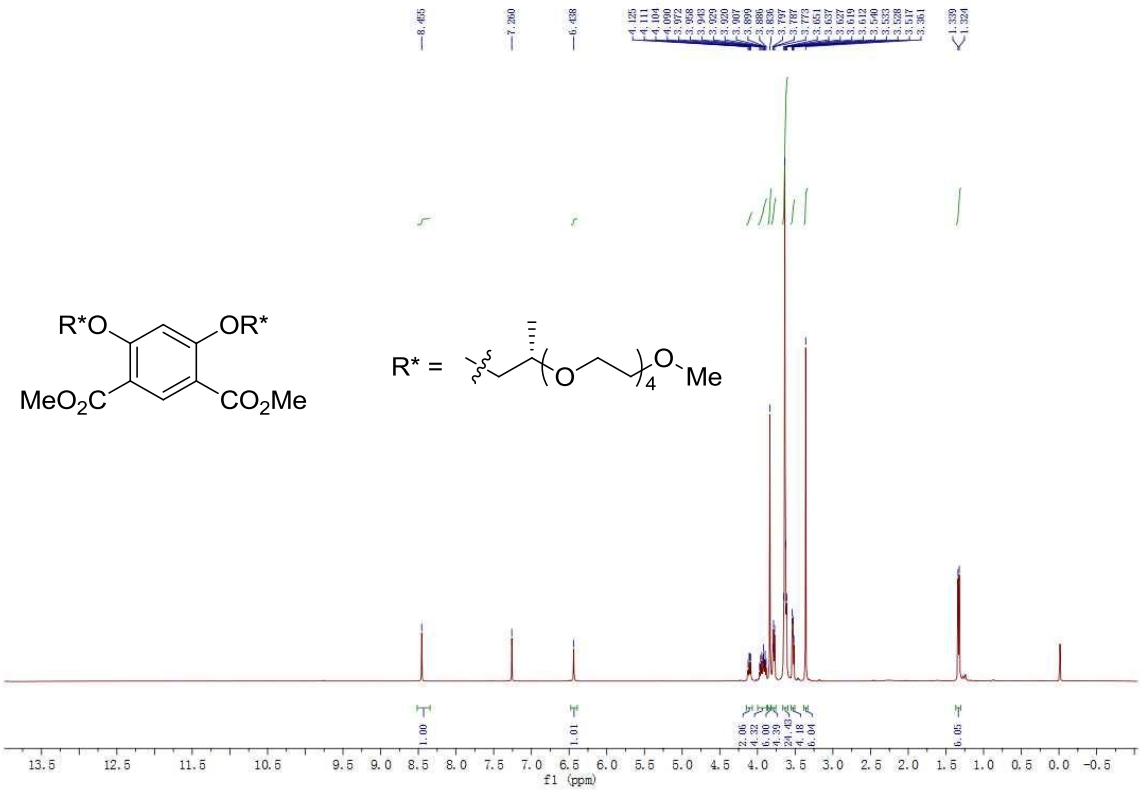

Fig. S16 ^{1}H NMR spectrum (400 MHz, 298 K) of compound **5a** in $CDCl_3$.

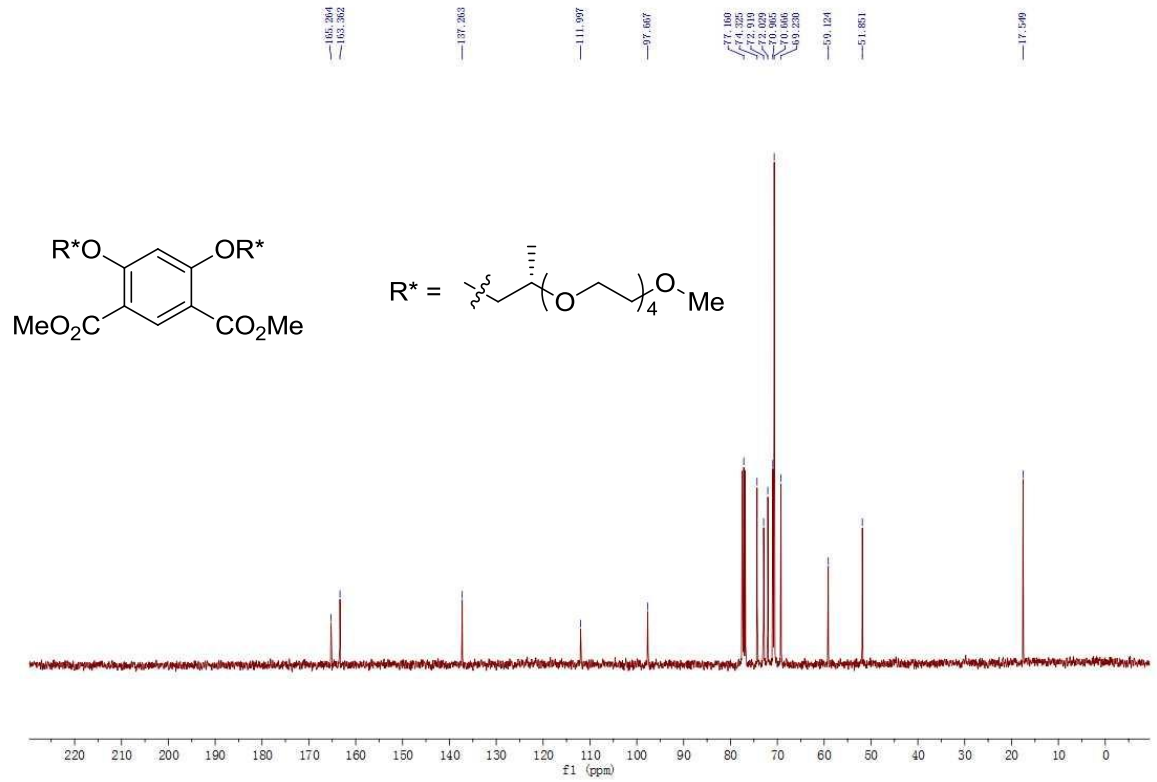

Fig. S17 ^{13}C NMR spectrum (100 MHz, 298 K) of compound **5a** in $CDCl_3$.

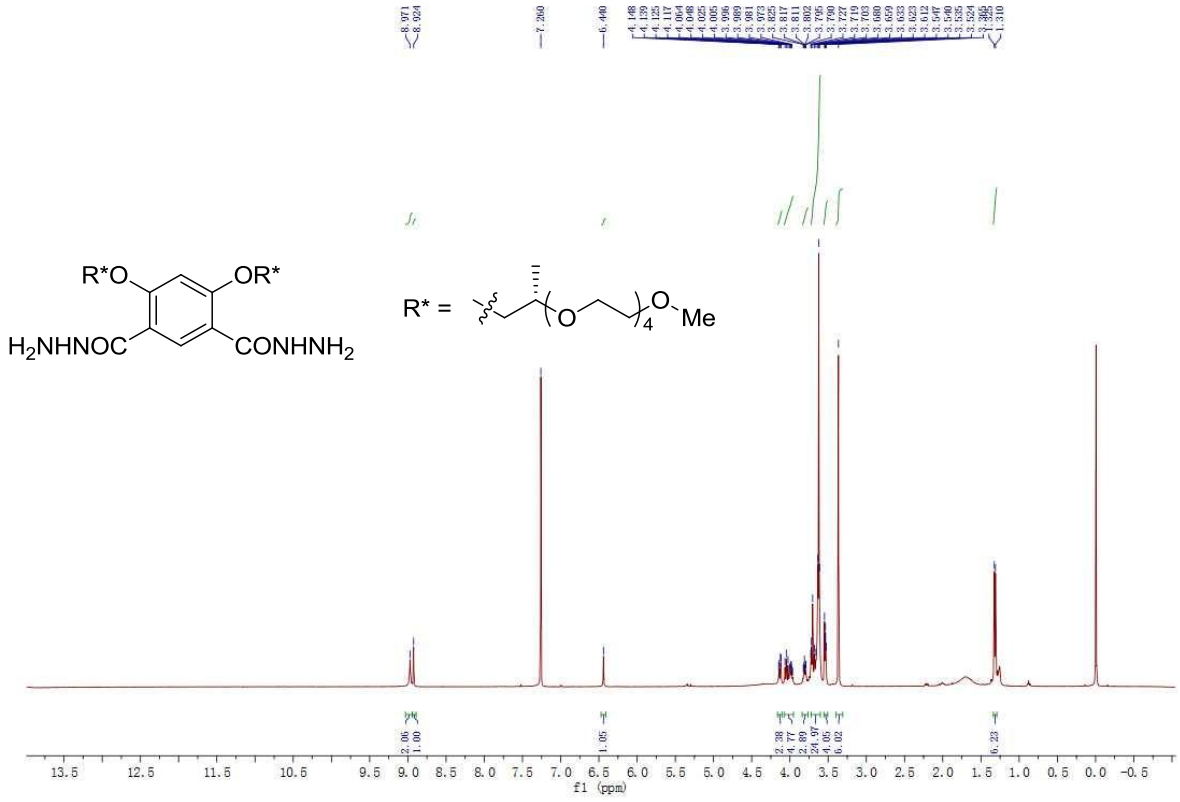

Fig. S18 ^{1}H NMR spectrum (400 MHz, 298 K) of compound **6a** in $CDCl_3$.

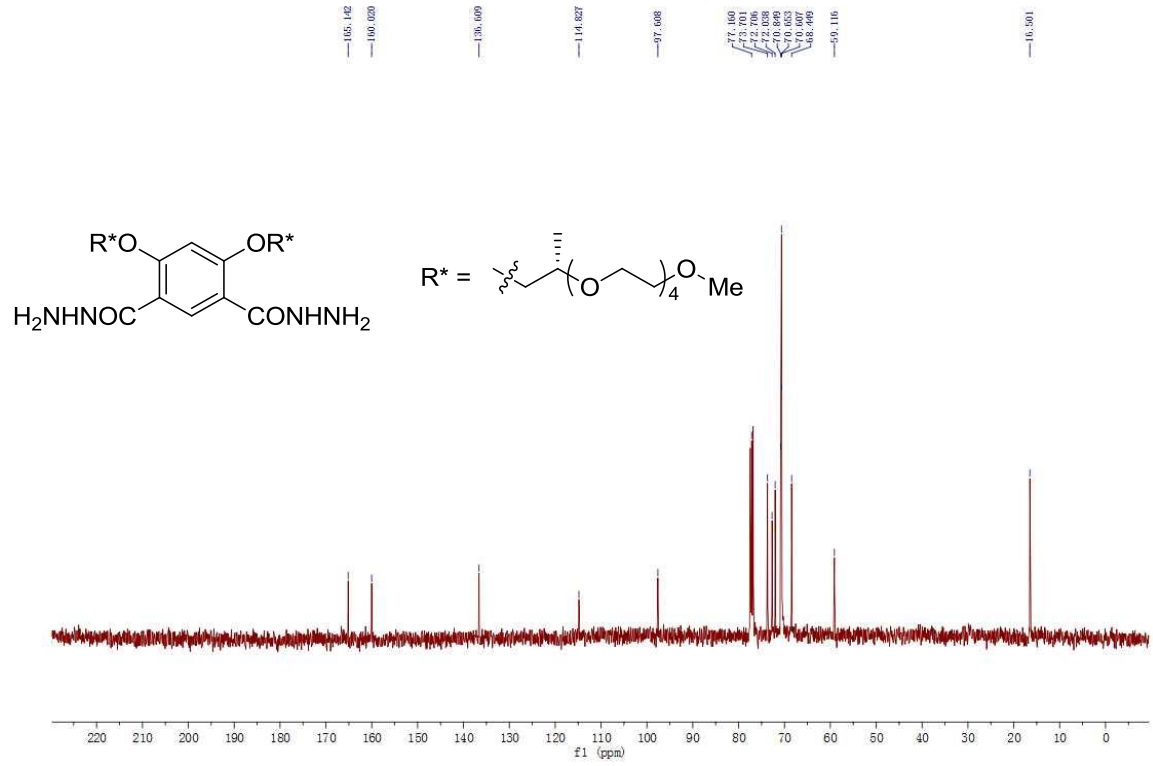

Fig. S19 ^{13}C NMR spectrum (100 MHz, 298 K) of compound **6a** in $CDCl_3$.

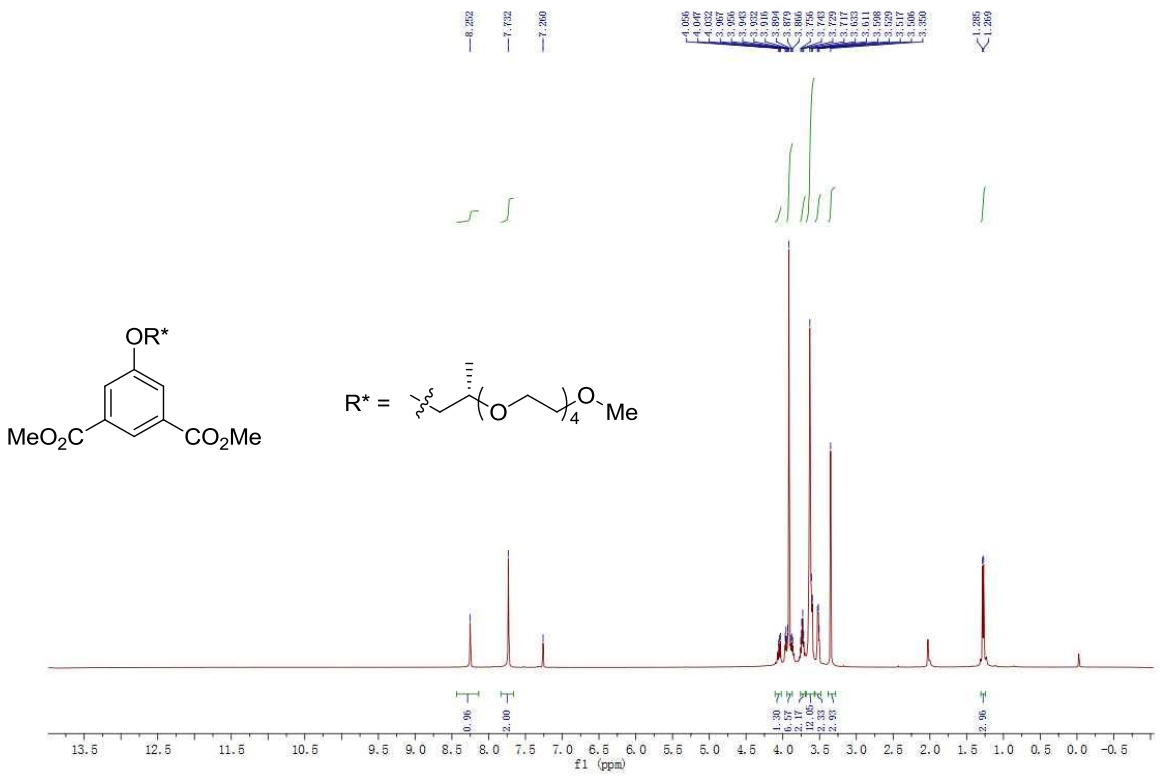

Fig. S20 ^{1}H NMR spectrum (400 MHz, 298 K) of compound **8a** in $CDCl_3$.

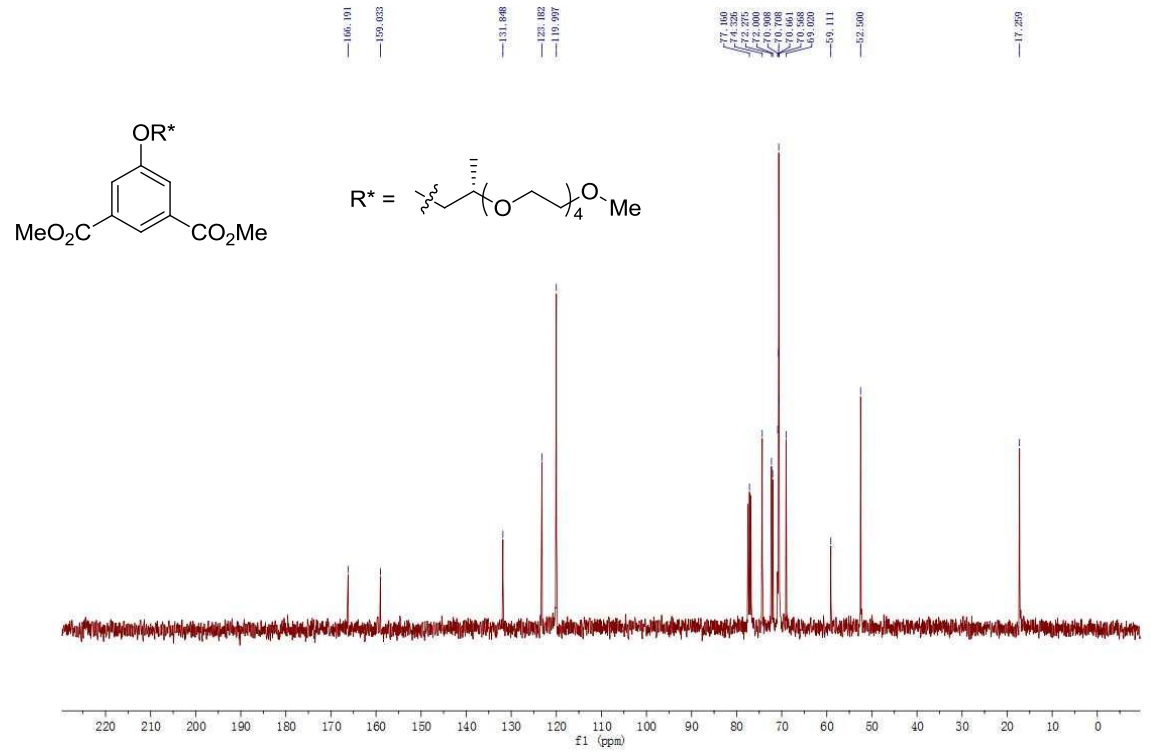

Fig. S21 ^{13}C NMR spectrum (100 MHz, 298 K) of compound **8a** in $CDCl_3$.

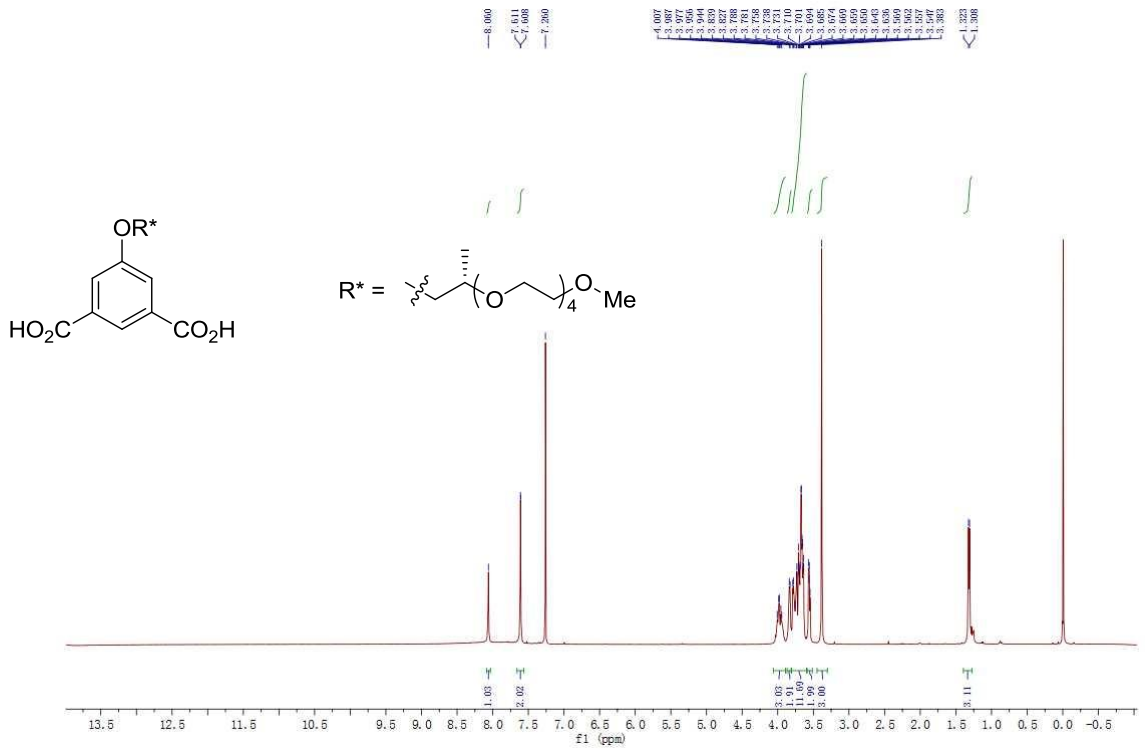

Fig. S22 ^{1}H NMR spectrum (400 MHz, 298 K) of compound **9a** in $CDCl_3$.

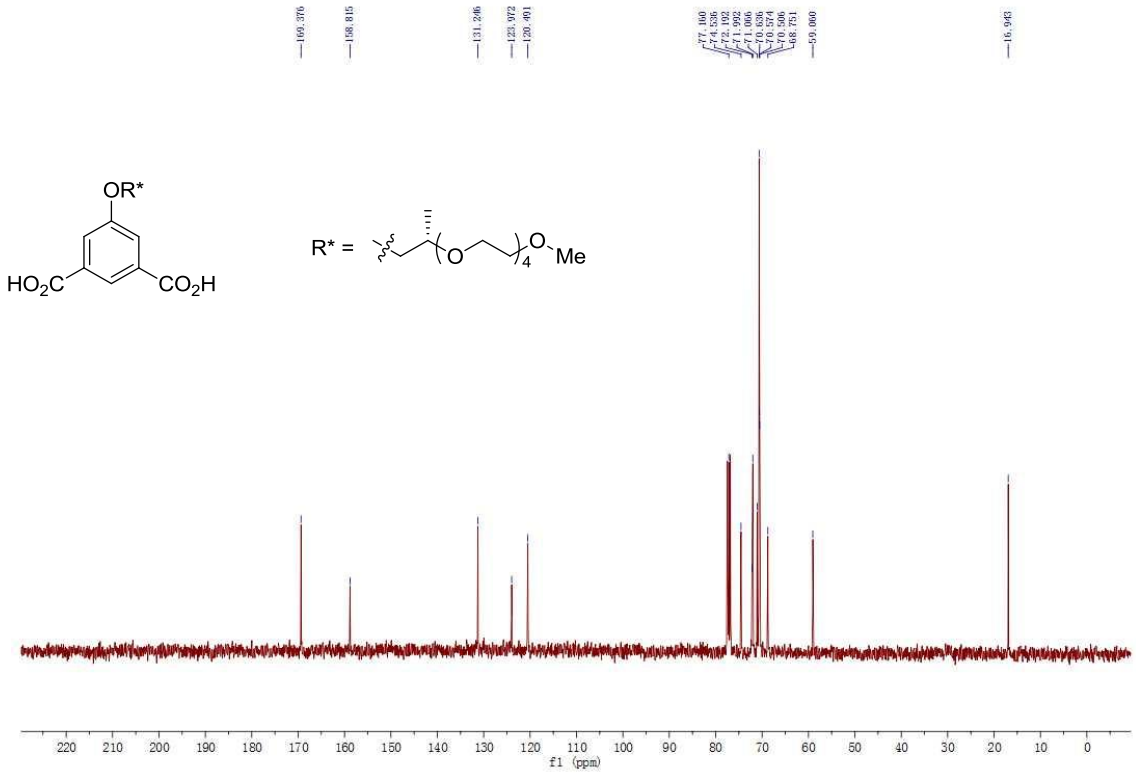

Fig. S23 ^{13}C NMR spectrum (100 MHz, 298 K) of compound **9a** in $CDCl_3$.

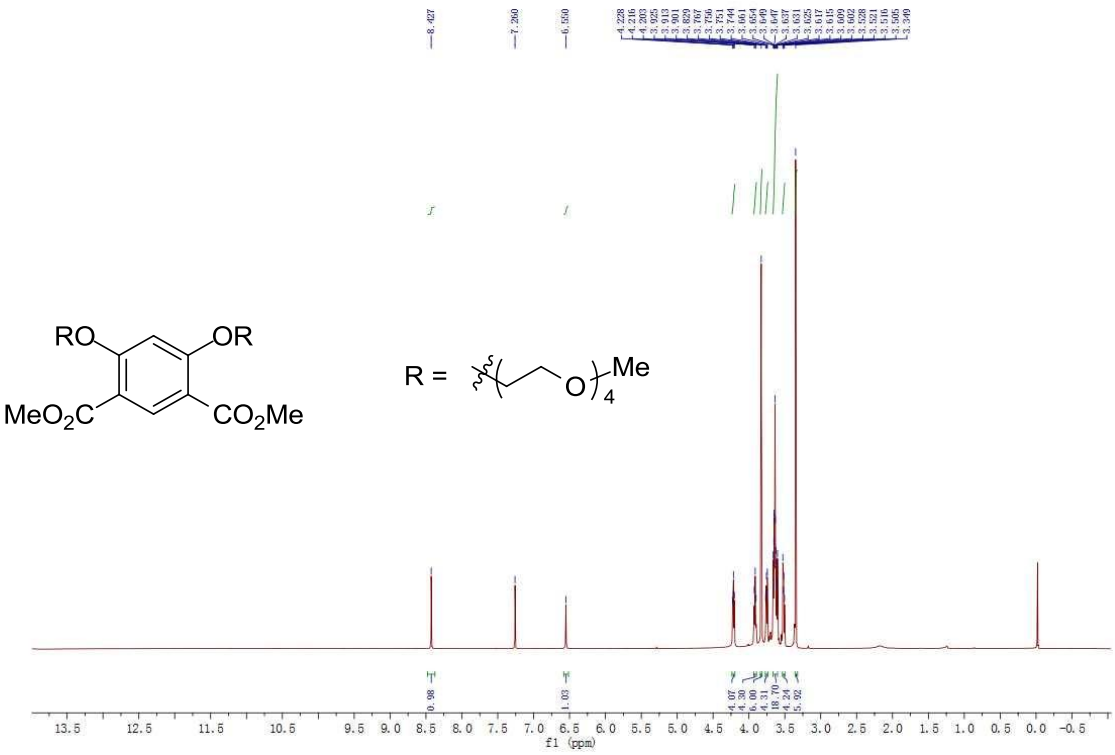

Fig. S24 ^{1}H NMR spectrum (400 MHz, 298 K) of compound **5b** in $CDCl_3$.

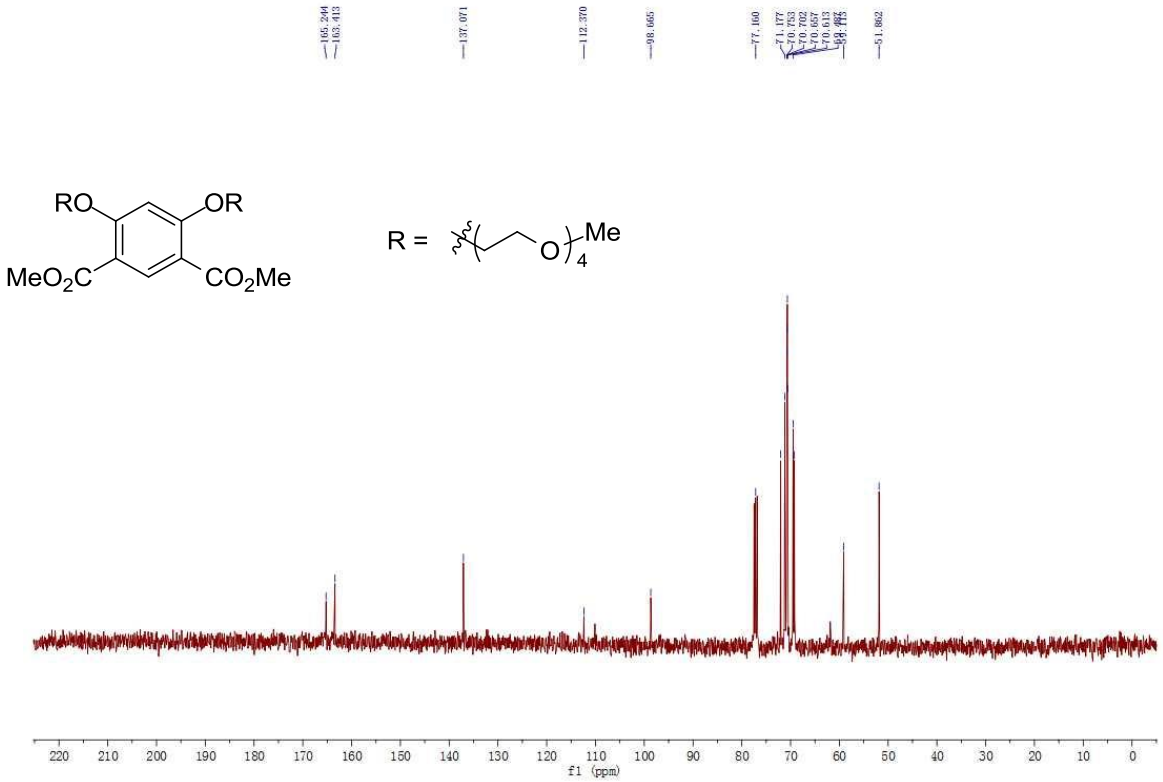

Fig. S25 ^{13}C NMR spectrum (100 MHz, 298 K) of compound **5b** in $CDCl_3$.

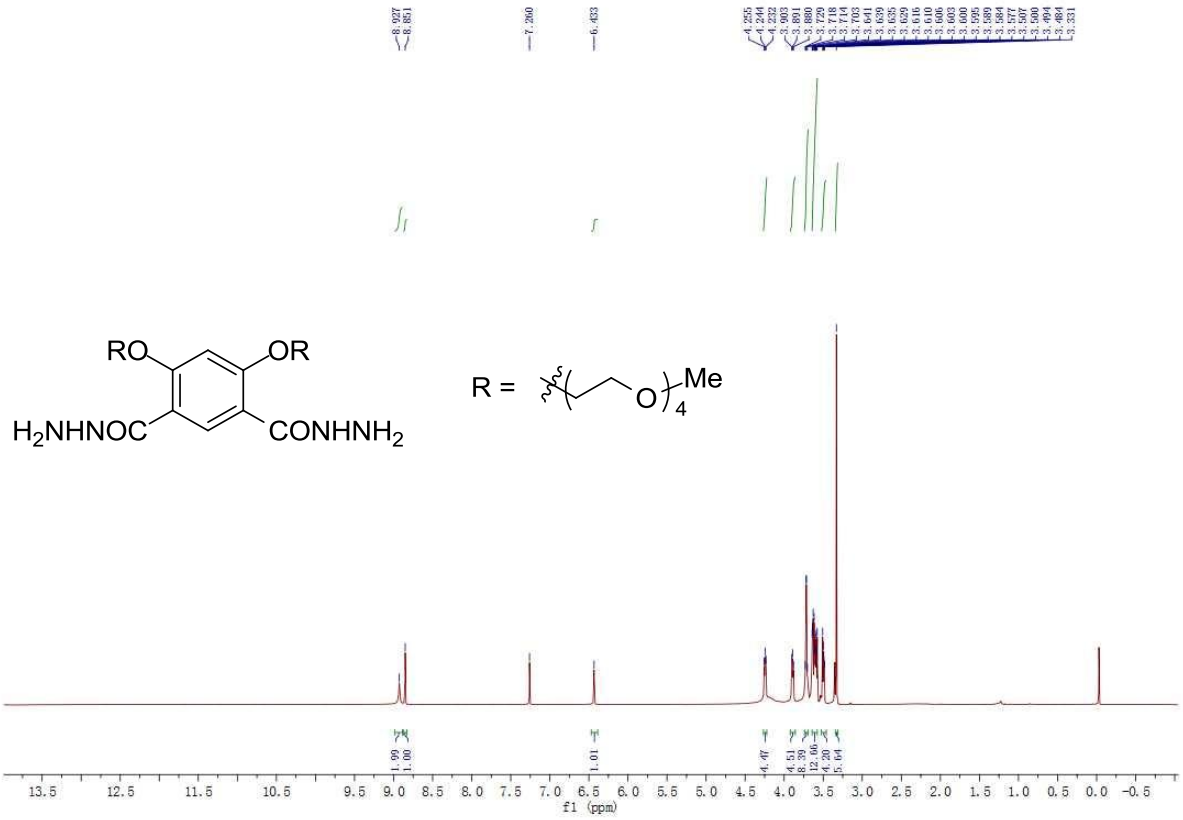

Fig. S26 ^{1}H NMR spectrum (400 MHz, 298 K) of compound **6b** in $CDCl_3$.

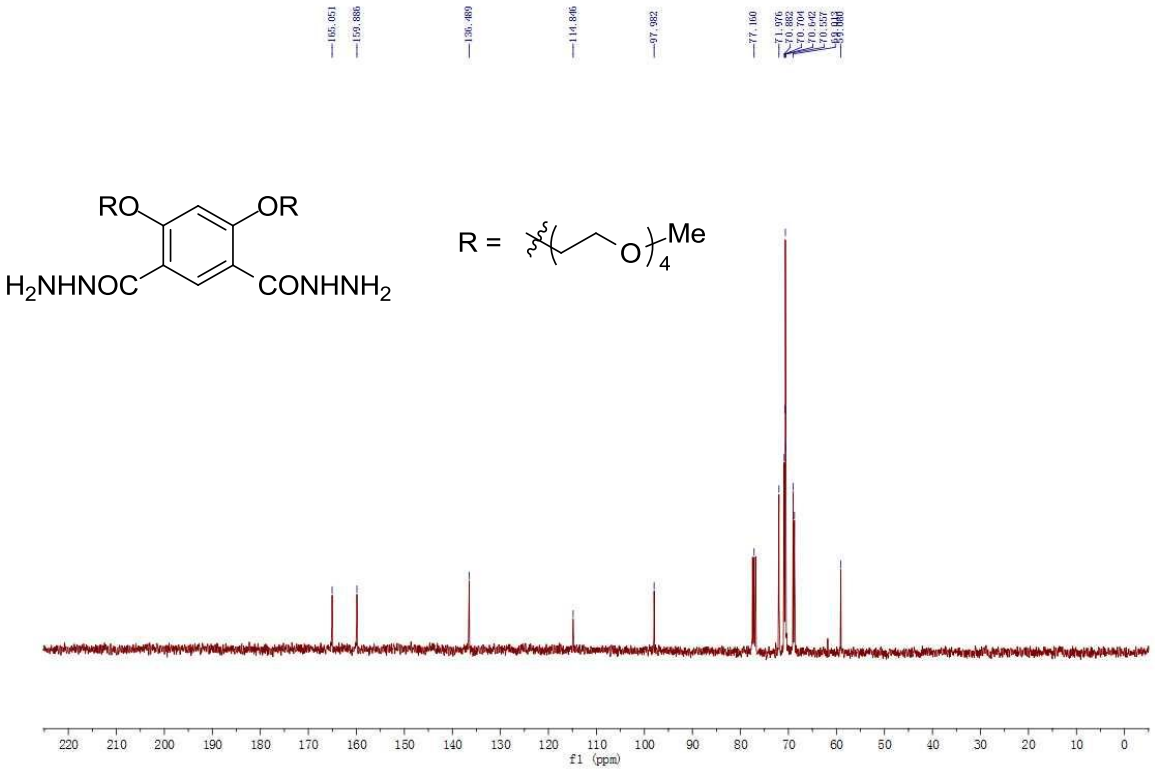

Fig. S27 ^{13}C NMR spectrum (100 MHz, 298 K) of compound **6b** in $CDCl_3$.

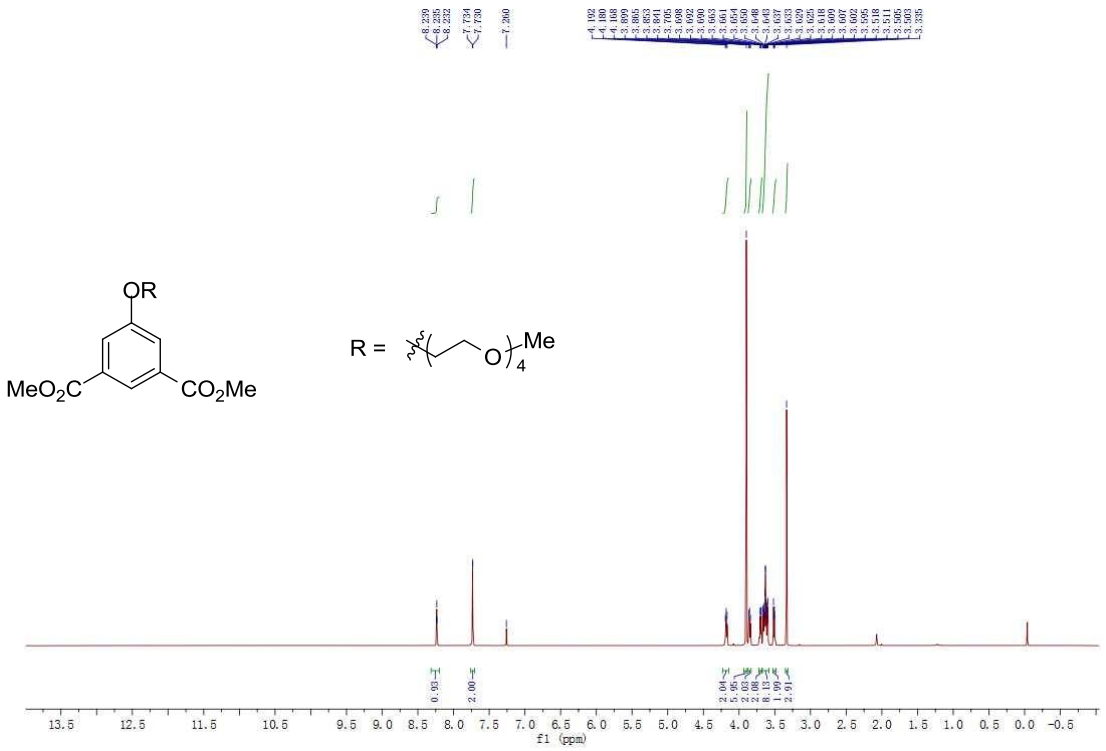

Fig. S28 ^{1}H NMR spectrum (400 MHz, 298 K) of compound **8b** in $CDCl_3$.

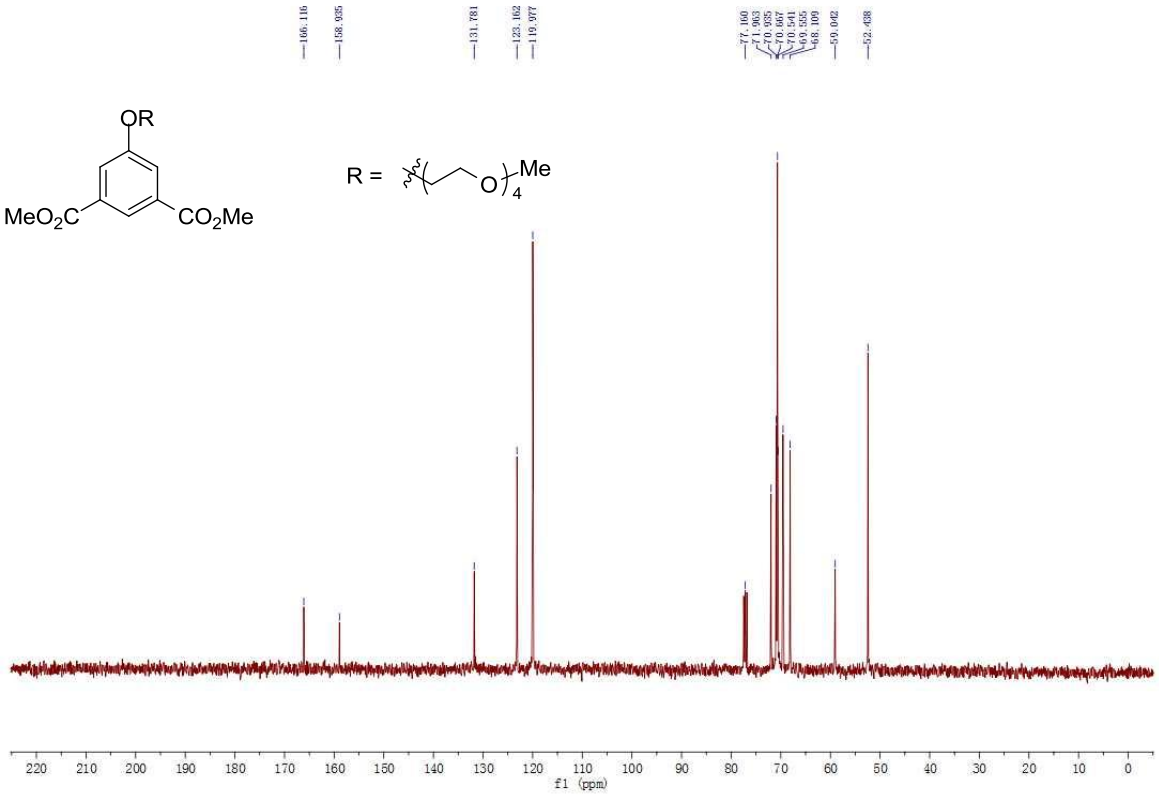

Fig. S29 ^{13}C NMR spectrum (100 MHz, 298 K) of compound **8b** in $CDCl_3$.

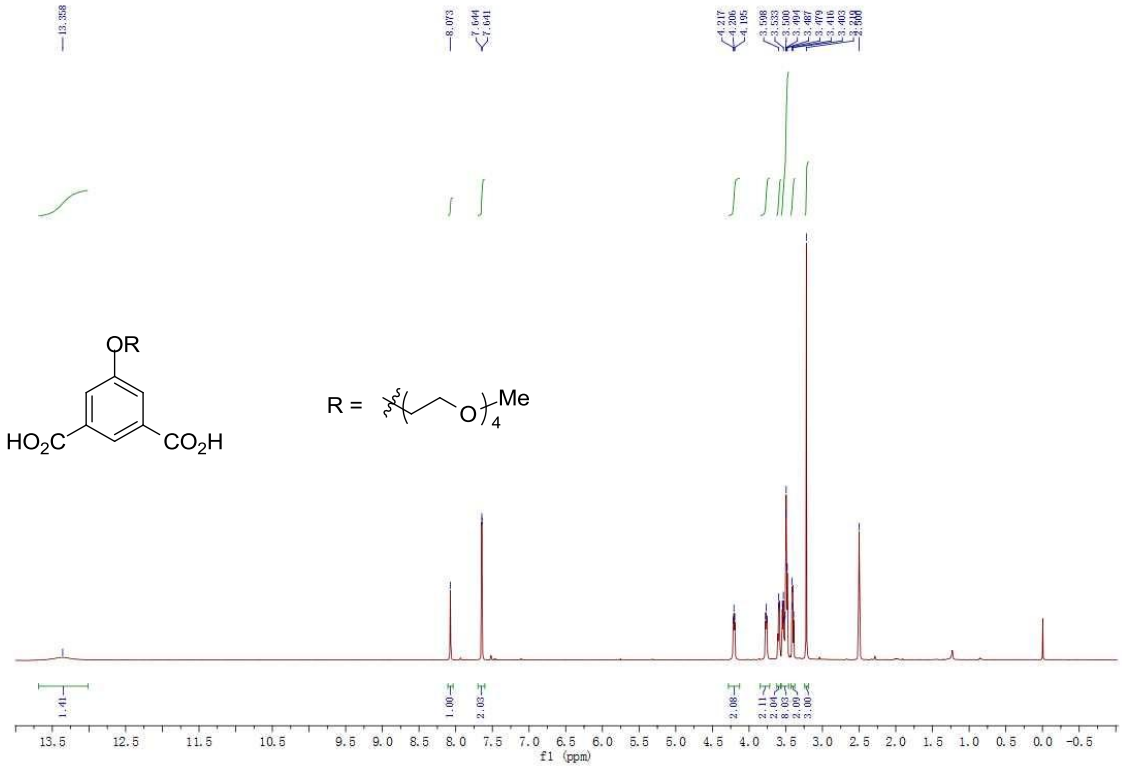

Fig. S30 ^{1}H NMR spectrum (400 MHz, 298 K) of compound **9b** in DMSO-d_6.

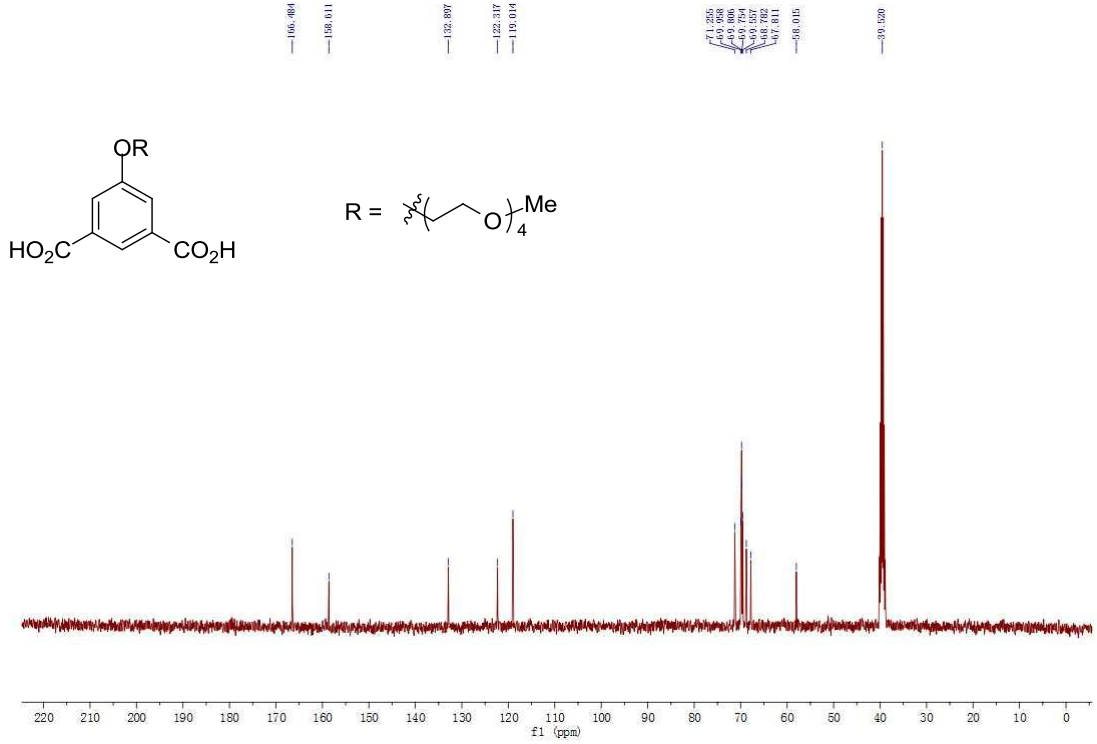

Fig. S31 ^{13}C NMR spectrum of compound **9b** in DMSO-d_6 (100 MHz, 298 K).

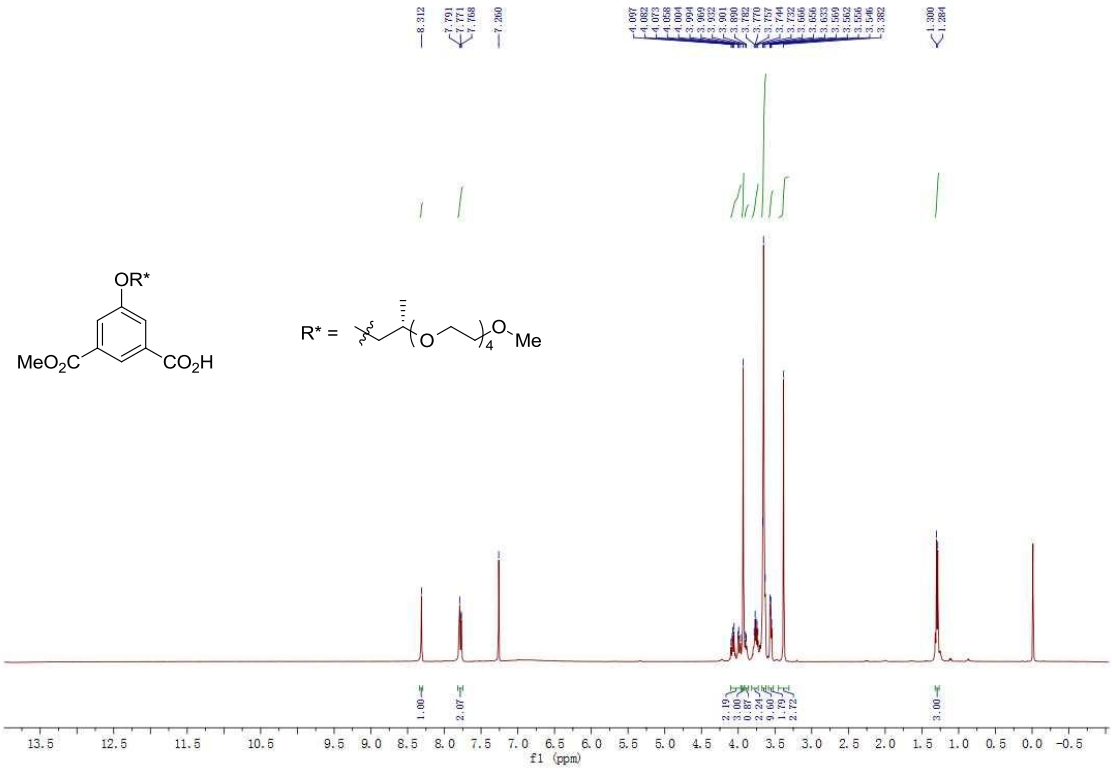

Fig. S32 ^{1}H NMR spectrum (400 MHz, 298 K) of compound **10** in $CDCl_3$.

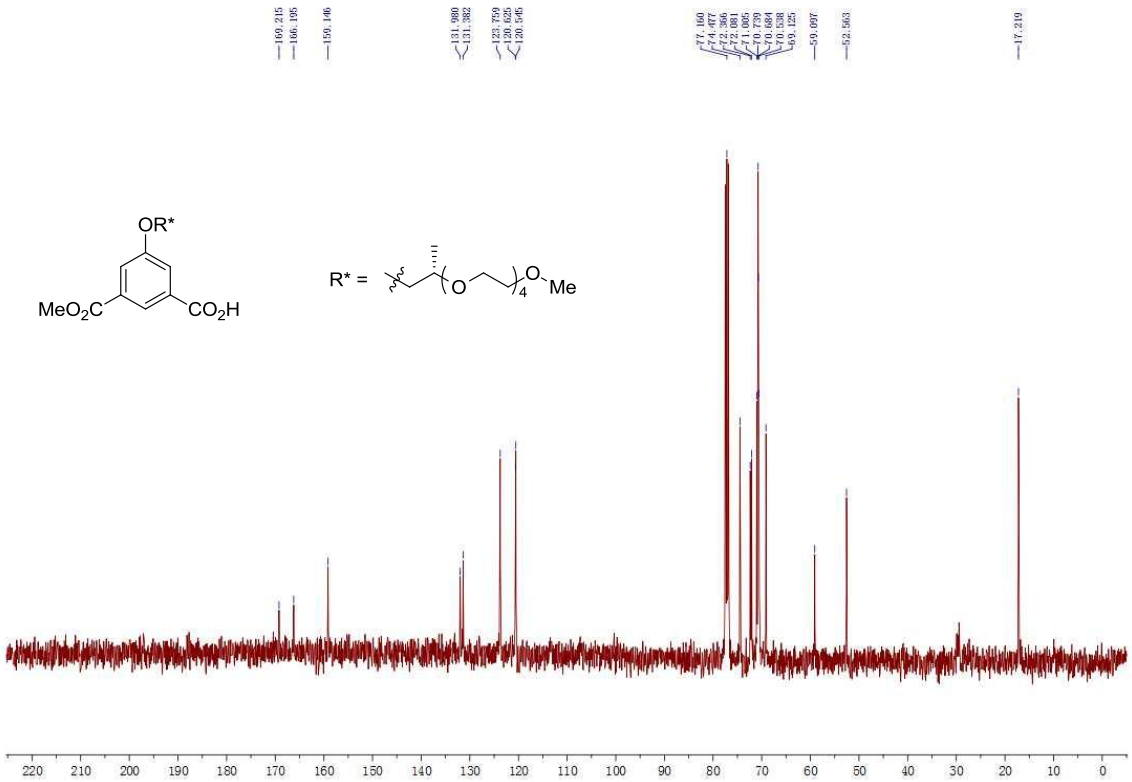

Fig. S33 ^{13}C NMR spectrum (100 MHz, 298 K) of compound **10** in $CDCl_3$.

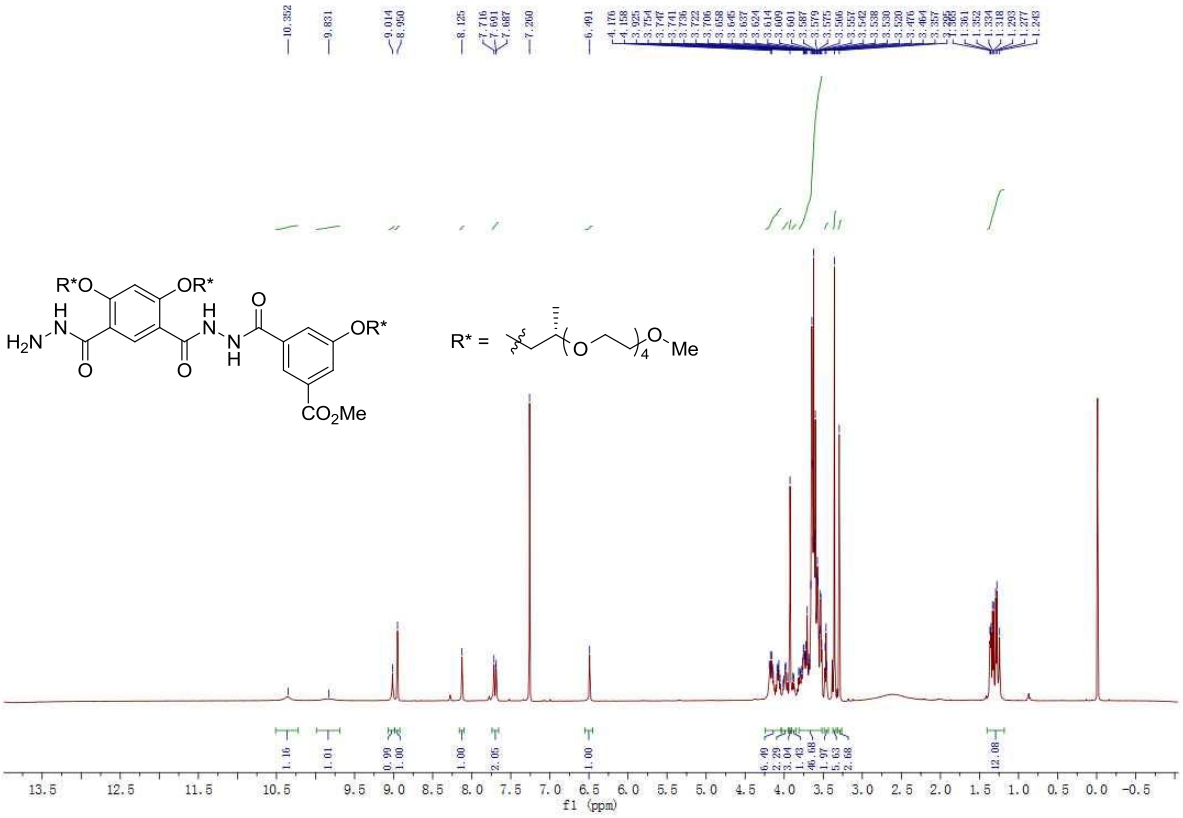

Fig. S34 ^{1}H NMR spectrum (400 MHz, 298 K) of compound **11** in $CDCl_3$.

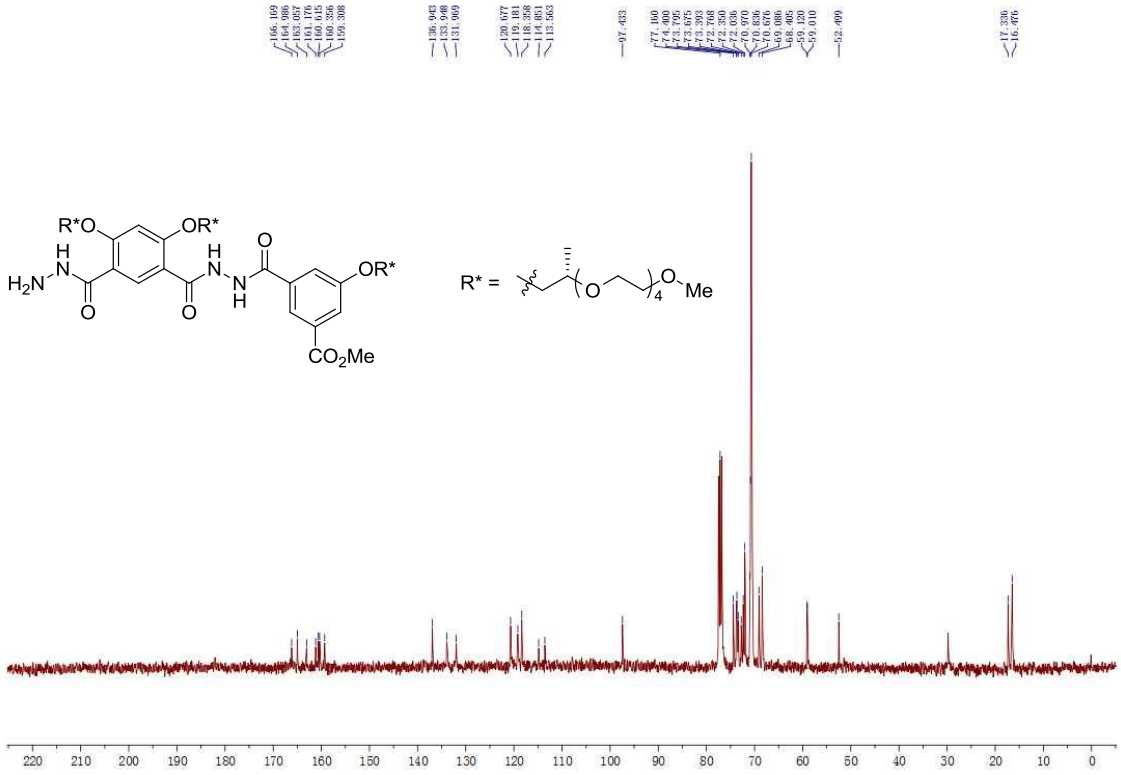

Fig. S35 ^{13}C NMR spectrum (100 MHz, 298 K) of compound **11** in $CDCl_3$.

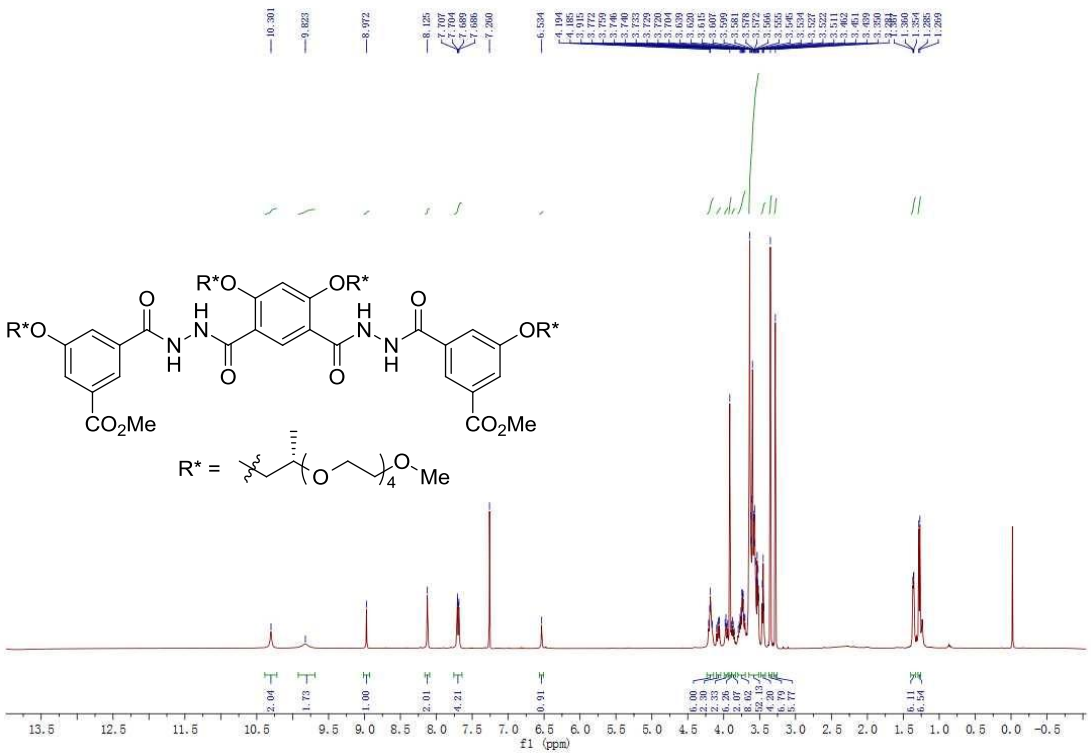

Fig. S36 ^{1}H NMR spectrum (400 MHz, 298 K) of compound **O1** in $CDCl_3$.

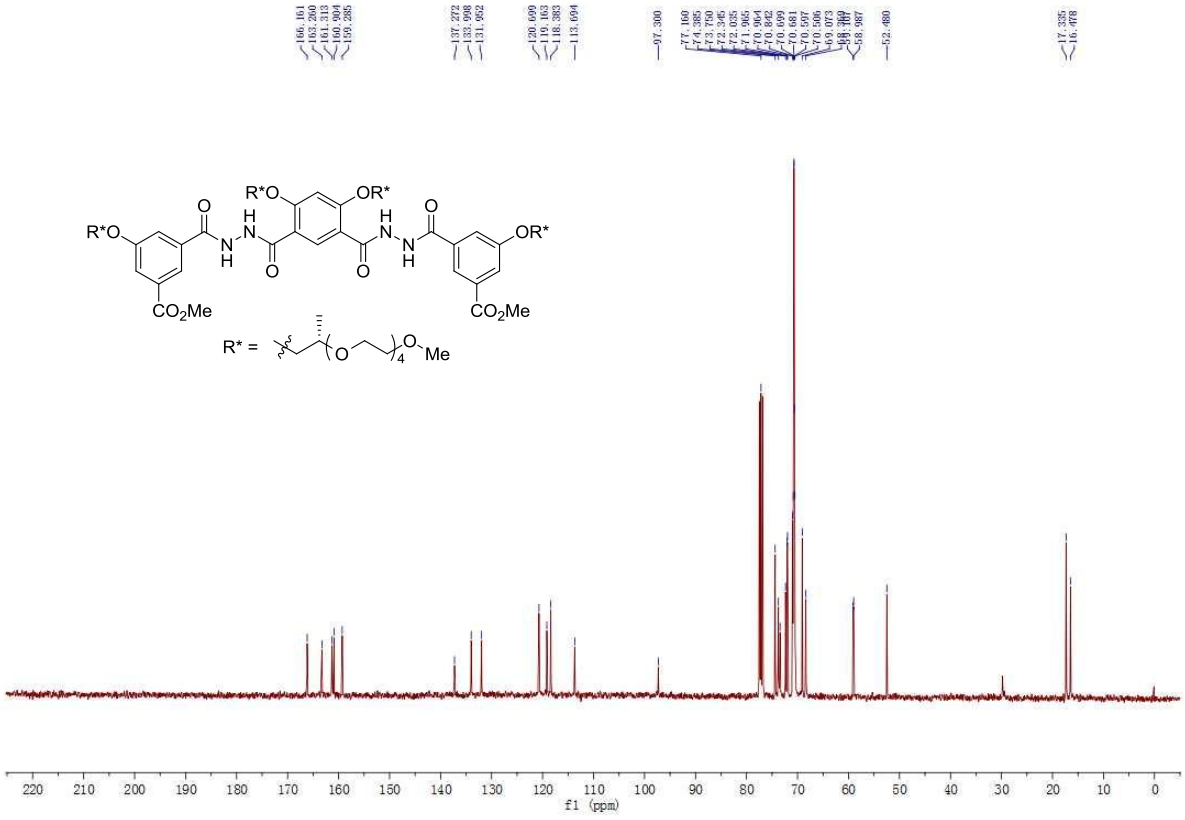

Fig. S37 ^{13}C NMR spectrum (100 MHz, 298 K) of compound **O1** in $CDCl_3$.

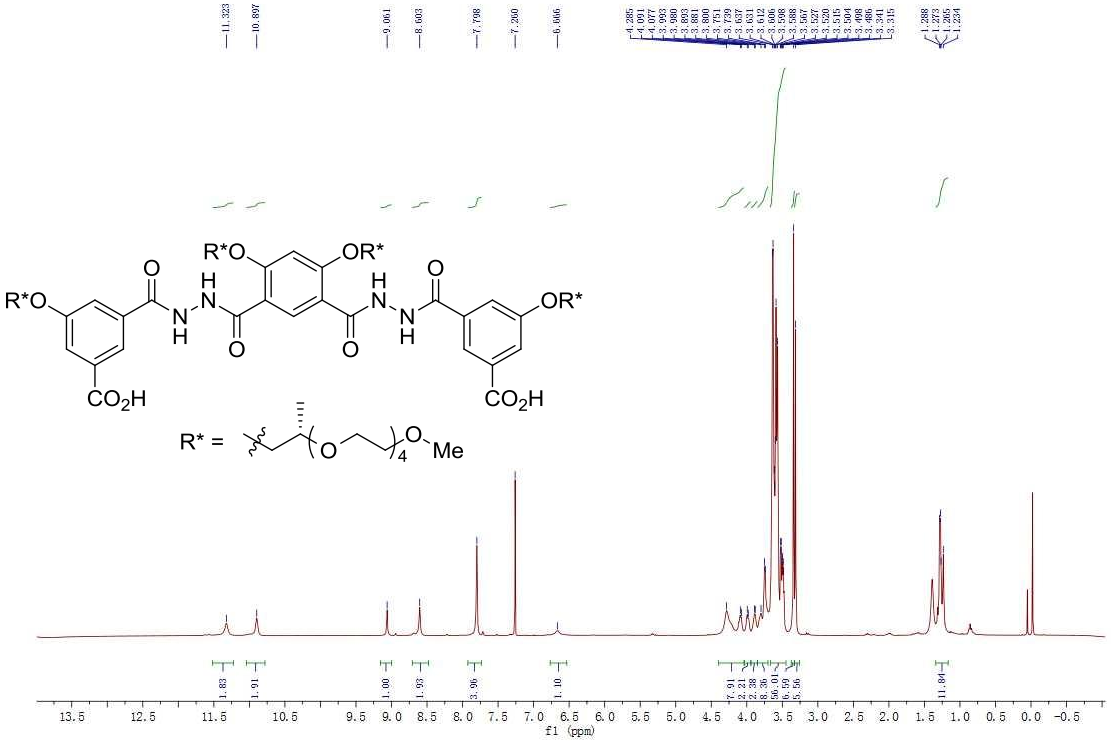

Fig. S38 ^{1}H NMR spectrum (400 MHz, 298 K) of compound **12** in $CDCl_3$.

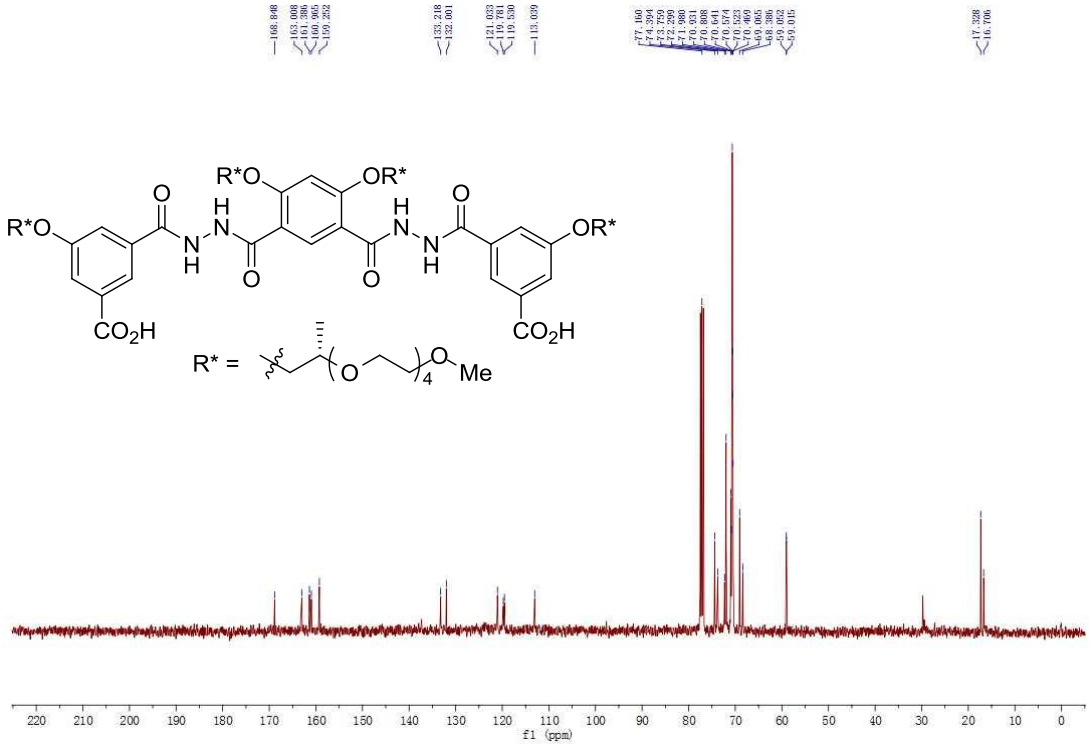

Fig. S39 ^{13}C NMR spectrum (100 MHz, 298 K) of compound **12** in $CDCl_3$.

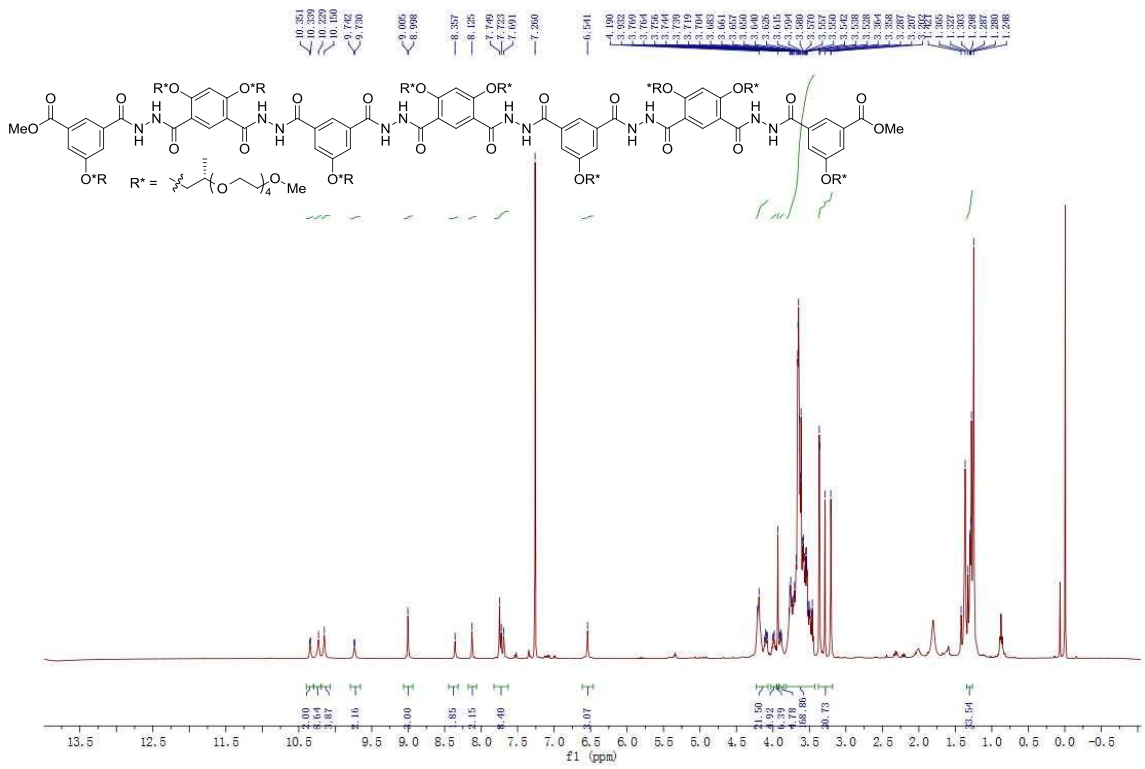

Fig. S40 ^{1}H NMR spectrum (400 MHz, 298 K) of compound **O2** in $CDCl_3$.

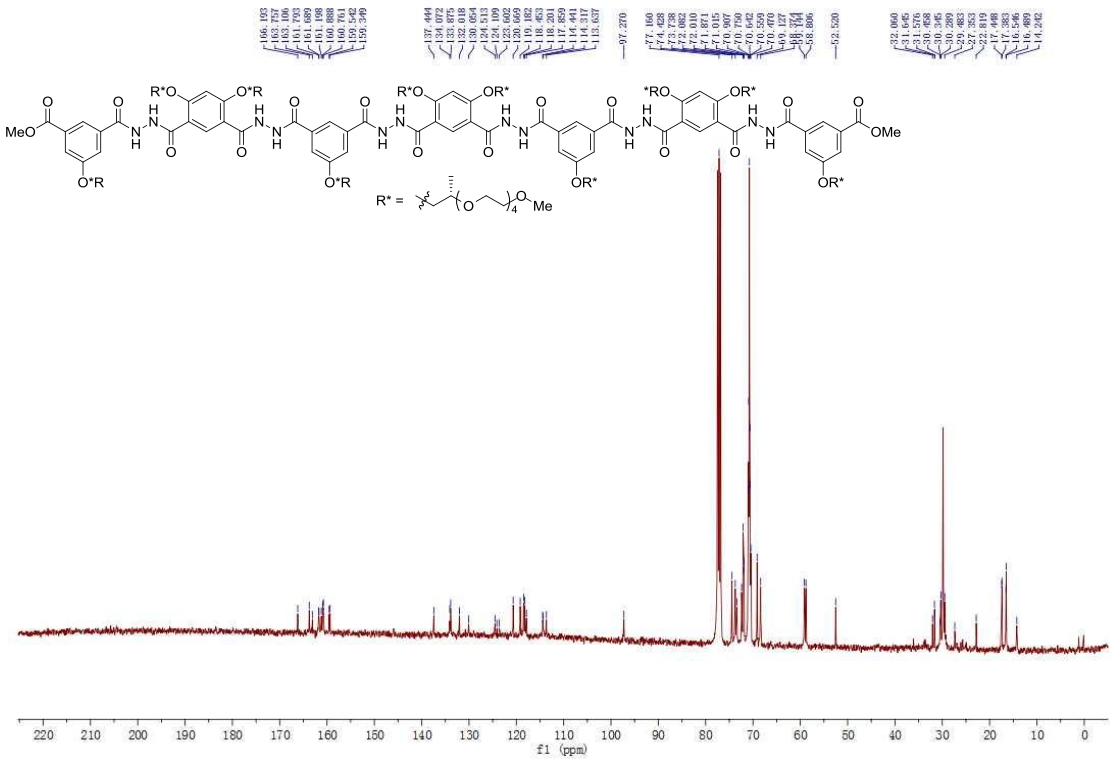

Fig. S41 ^{13}C NMR spectrum (100 MHz, 298 K) of compound **O2** in $CDCl_3$.