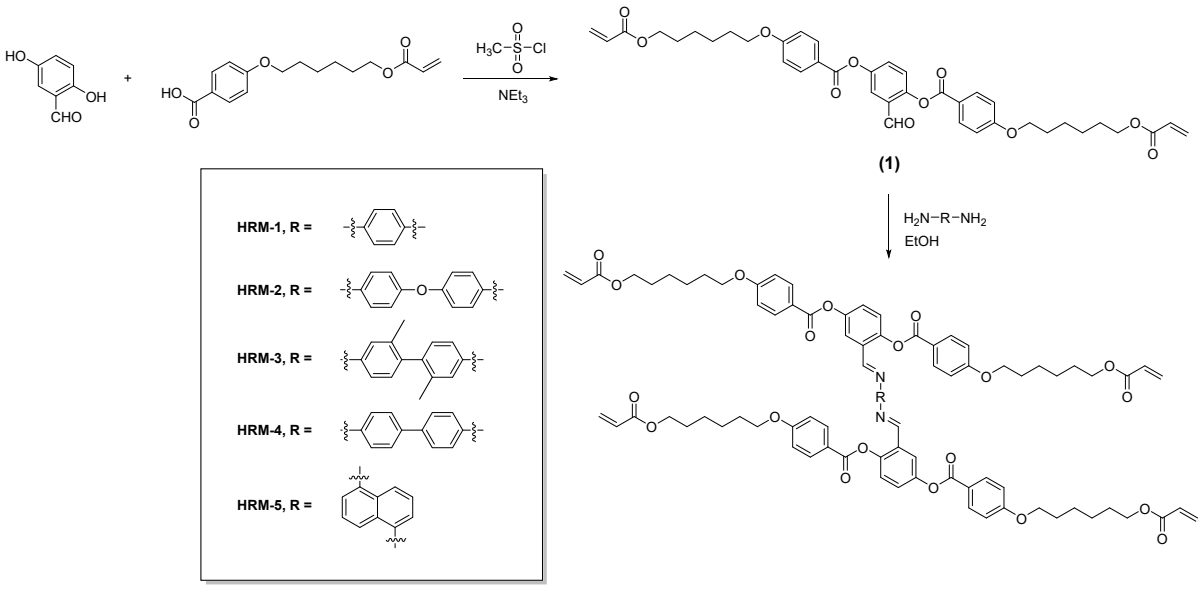

2-Formyl-1,4-phenylene bis[4-(6-acryloyloxyhexyloxy)]benzoate (1)

To a solution of 4-(6-acryloyloxyhexyloxy)benzoic acid (9.35 g, 31.86 mmol) in THF (60 mL) was added triethylamine (14.1 mL, 101.36 mmol) and methanesulfonyl chloride (3.4 mL, 43.44 mmol) at 0°C. The reaction mixture was stirred for 3 h. To the reaction mixture was added 2,5-dihydroxybenzaldehyde (2.00 g, 14.48 mmol) in THF (10 mL) The reaction mixture was further stirred for 18 h at 65°C. The reaction was quenched by water and mixture was extracted by ethyl acetate. Organic solvent was removed under reduced pressure and residue was purified by washing with ethanol to give the product as a pale brown solid (7.1 g, 71%). ^{1}H NMR (400 MHz, $CDCl_3$) δ 10.21 (s, 1H), 8.16 (dd, *J* = 12.3, 8.9 Hz, 4H), 7.79 (d, *J* = 2.8 Hz, 1H), 7.54 (dd, *J* = 8.8, 2.9 Hz, 1H), 7.39 (d, *J* = 8.8 Hz, 1H), 6.99 (d, 4H), 6.41 (dd, *J* = 17.3, 1.3 Hz, 2H), 6.13 (dd, *J* = 17.3, 10.4 Hz, 2H), 5.83 (dd, *J* = 10.4, 1.2 Hz, 2H), 4.19 (t, *J* = 6.6 Hz, 4H), 4.07 (td, *J* = 6.3, 3.6 Hz, 4H), 1.86 (m, 4H), 1.77 – 1.71 (m, 4H), 1.60 – 1.45 (m, 8H); FAB-MS m/z: calcd for $C_{39}H_{42}O_{11}$ 686.27, found: 687 $[M+H]^+$; UV-Vis (CH_2Cl_2, nm) 269 nm.

HRM-1

To a solution of compound **1** (0.5 g, 0.73 mmol) in ethanol (15 mL) was added p-phenylenediamine (39 mg, 0.36 mmol). The reaction mixture was stirred for 6 h at 60°C. After that, reaction mixture was cooled to room temperature and resulting solid was filtered. Crude mixture was washed with ethanol to give yellow solid (0.47 g, 89%). ^{1}H NMR (400 MHz, Methylene Chloride-d_2) δ 8.60 (s, 2H), 8.16 (dd, *J* = 8.9, 2.1 Hz, 8H), 8.05 (d, *J* = 2.8 Hz, 2H), 7.39 (dd, *J* = 8.8, 2.8 Hz, 2H), 7.32 (d, *J* = 8.8 Hz, 2H), 7.00 (dd, *J* = 8.9, 2.4 Hz, 8H), 6.39 – 6.33 (m, 4H), 6.12 (ddd, *J* = 17.3, 10.4, 3.6 Hz, 4H), 5.82 – 5.78 (m, 4H), 4.16 (dt, *J* = 6.7, 3.4 Hz, 8H), 4.07 (d, *J* = 4.7 Hz, 8H), 1.84 (s, 8H), 1.74 – 1.69 (m, 8H), 1.57

– 1.45 (m, 16H); ^{13}C NMR (126 MHz, CD_2Cl_2) δ 167.40, 166.04, 165.23, 165.05, 133.70, 133.56, 131.44, 131.05, 129.98, 129.97, 123.15, 122.32, 115.79, 115.67, 69.58, 65.74, 30.31, 30.29, 29.87, 27.03, 26.98, 26.96; FAB-MS m/z: calcd for $C_{84}H_{88}N_2O_{20}$ 1444.59, found: 1446 $[M+H]^+$; UV-Vis (CH_2Cl_2, nm) 269 nm, 365 nm.

HRM-2

To a solution of compound **1** (0.4 g, 0.58 mmol) in ethanol (25 mL) was added 4,4'-oxydianiline (58 mg, 0.29 mmol). The reaction mixture was stirred for 15 h at 45°C. After that, reaction mixture was cooled to room temperature and resulting solid was filtered. Crude mixture was washed with ethanol to give yellow solid (0.35 g, 78%). ^{1}H NMR (400 MHz, Methylene Chloride-d_2) δ 8.61 (s, 2H), 8.16 (dd, *J* = 8.8, 5.4 Hz, 8H), 8.05 (d, *J* = 2.8 Hz, 2H), 7.39 (dd, *J* = 8.8, 2.8 Hz, 2H), 7.32 (d, *J* = 8.8 Hz, 2H), 7.13 (d, *J* = 8.8 Hz, 4H), 7.01 (d, *J* = 8.9 Hz, 8H), 6.96 (d, *J* = 8.8 Hz, 4H), 6.36 (ddd, *J* = 17.3, 5.2, 1.5 Hz, 4H), 6.11 (ddd, *J* = 17.3, 10.4, 5.5 Hz, 4H), 5.80 (ddd, *J* = 10.4, 6.1, 1.5 Hz, 4H), 4.18 – 4.13 (m, 8H), 4.07 (q, *J* = 6.4 Hz, 8H), 1.87 – 1.81 (m, 8H), 1.74 – 1.68 (m, 8H). 1.55 – 1.44 (m, 16H); ^{13}C NMR (126 MHz, CD_2Cl_2) δ 166.05, 165.23, 165.04, 157.28, 154.30, 150.22, 149.76, 148.22, 133.69, 133.55, 131.44, 131.10, 129.97, 126.79, 125.52, 123.72, 122.56, 122.28, 122.10, 120.66, 115.80, 115.67, 69.63, 69.58, 65.73, 65.71, 30.30, 30.28, 29.87, 29.85, 27.03, 26.97, 26.95; FAB-MS m/z: calcd for $C_{90}H_{92}N_2O_{21}$ 1536.62, found: 1538 $[M+H]^+$; UV-Vis (CH_2Cl_2, nm) 269 nm, 346 nm.

HRM-3

To a solution of compound **1** (0.5 g, 0.73 mmol) in ethanol (20 mL) was added *m*-tolidine (77 mg, 0.36 mmol). The reaction mixture was stirred for 15 h at 50°C. After that, reaction mixture was cooled to room temperature and resulting solid was filtered. Crude mixture was washed with ethanol to give yellow solid (0.32 g, 57%). ^{1}H NMR (400 MHz, Methylene Chloride-d_2) δ 8.65 (s, 2H), 8.18 (t, *J* = 8.9 Hz, 8H), 8.08 (d, *J* = 2.8 Hz, 2H), 7.40 (dd, *J* = 8.8, 2.8 Hz, 2H), 7.33 (d, *J* = 8.8 Hz, 2H), 7.05 – 6.95 (m, 14H), 6.36 (ddd, *J* = 17.3, 5.9, 1.5 Hz, 4H), 6.12 (ddd, *J* = 17.2, 10.4, 6.3 Hz, 4H), 5.81 (ddd, *J* = 10.4, 6.9, 1.5 Hz, 4H), 4.15 (q, *J* = 6.5 Hz, 8H), 4.07 (q, *J* = 6.4 Hz, 8H), 2.01 (s, 6H), 1.88 – 1.80 (m, 8H), 1.72 (m, 8H), 1.53 – 1.41 (m, 16H); ^{13}C NMR (126 MHz, CD_2Cl_2) δ 166.08, 165.23, 165.06, 151.87, 150.24, 149.83, 140.77, 133.73, 133.57, 131.49, 131.43, 129.99, 129.97, 123.87, 122.17, 119.07, 115.80, 115.69, 69.63, 69.59, 65.74, 65.71, 30.31, 30.28, 29.86, 27.01, 26.98, 26.95, 20.96; FAB-MS m/z: calcd for $C_{92}H_{96}N_2O_{20}$ 1548.66, found: 1549 $[M+H]^+$; UV-Vis (CH_2Cl_2, nm) 269 nm, 340 nm.

HRM-4

To a solution of compound 1 (0.4 g, 0.58 mmol) in ethanol (20 mL) was added benzidine (54 mg, 0.29 mmol). The reaction mixture was stirred for 8 h at 50°C. After that, reaction mixture was cooled to room temperature and resulting solid was filtered. Crude mixture was washed with ethanol to give yellow solid (0.39 g, 88%). ^{1}H NMR (500 MHz, Methylene Chloride-d_2) δ 8.65 (s, 2H), 8.17 (t, *J* = 7.7 Hz, 8H), 8.08 (s, 2H), 7.57 (d, *J* = 8.0 Hz, 4H), 7.40 (d, *J* = 8.2 Hz, 2H), 7.34 (d, *J* = 8.9 Hz, 2H), 7.20 (d, *J* = 8.1 Hz, 4H), 7.01 (d, *J* = 8.6 Hz, 8H), 6.36 (dd, *J* = 17.3, 6.8 Hz, 4H), 6.12 (dd, *J* = 17.1, 10.1 Hz, 4H), 5.82 – 5.78 (m, 4H), 4.15 (q, *J* = 6.3 Hz, 8H), 4.10 – 4.05 (m, 8H), 1.86 – 1.82 (m, 8H), 1.74 – 1.69 (m, 8H), 1.51-1.42 (m, 16H); ^{13}C NMR (126 MHz, CD_2Cl_2) δ 167.39, 166.07, 165.24, 165.06, 150.23, 133.72, 133.57, 131.45, 131.06, 129.98, 128.84, 122.76, 122.56, 115.80, 115.68, 69.63, 69.58, 65.74, 65.71, 30.30, 30.28, 29.87, 27.03, 27.02, 26.98, 26.96; FAB-MS m/z: calcd for $C_{90}H_{92}N_2O_{20}$ 1520.62, found: 1522 $[M+H]^+$; UV-Vis (CH_2Cl_2, nm) 269 nm, 364 nm.

HRM-5

To a solution of compound **1** (0.40 g, 0.58 mmol) in ethanol (15 mL) was added 1,5-diaminonaphthalene (46 mg, 0.29 mmol). The reaction mixture was stirred for 15 h at 60°C. After that, reaction mixture was cooled to room temperature and resulting solid was filtered. Crude mixture was washed with ethanol to give yellow solid (0.33 g, 76%). ^{1}H NMR (500 MHz, Methylene Chloride-d_2) δ 8.69 (s, 2H), 8.22 (d, *J* = 2.8 Hz, 2H), 8.19 – 8.15 (m, 8H), 8.14 (d, *J* = 8.7 Hz, 2H), 7.43 (dd, *J* = 8.8, 2.8 Hz, 2H), 7.39 (d, *J* = 7.8 Hz, 2H), 7.36 (d, *J* = 8.8 Hz, 2H), 7.00 (dd, *J* = 9.2, 6.2 Hz, 10H), 6.38 – 6.33 (m, 4H), 6.14 – 6.08 (m, 4H), 5.82 – 5.78 (m, 4H), 4.15 (d, *J* = 7.8 Hz, 8H), 4.09 – 4.03 (m, 8H), 1.86 – 1.81 (m, 8H), 1.71 (d, *J* = 7.2 Hz, 8H), 1.56 – 1.43 (m, 16H); ^{13}C NMR (126 MHz, CD_2Cl_2) δ 167.39, 166.10, 165.07, 150.28, 149.98, 133.71, 133.59, 131.43, 130.50, 129.98, 127.25, 122.57, 115.78, 115.69, 114.65, 65.74, 65.71, 30.31, 30.26, 29.87, 29.85, 27.03, 27.01, 26.98, 26.94; FAB-MS m/z: calcd for $C_{88}H_{90}N_2O_{20}$ 1494.61, found: 1496 $[M+H]^+$; UV-Vis (CH_2Cl_2, nm) 269 nm, 374 nm.