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CO_2CH_2Ph, J = 8.6 Hz), 7.39 (d, 2H, Ar*H* *meta* to $CH=CH_2$, J = 8.4 Hz). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.0 (CH_3), 22.6 (CH_2CH_3), 25.6-29.5 ($(CH_2)_{14}$), 31.8 ($CH_2CH_2CH_3$), 66.2 (CO_2CH_2OPh), 67.8 (CH_2CH_2OPh), 70.9-74.5 ($PhCH_2OPh$), 109.3 (*ortho* to CO_2CH_2Ph), 114.0 ($CH=CH_2$), 114.3 (*meta* to CH_2OPh), 124.8 (*ipso* to CO_2CH_2Ph), 126.2 (*ortho* to $CH=CH_2$), 128.2 (*meta* to $CH=CH_2$), 128.5 (*ipso* to CH_2OPh), 130.0 (*ortho* to CH_2OPh), , 135.5 (*C*H=CH2), 136.2 (*para* to $CH=CH_2$), 137.3 (*ipso* to $CH=CH_2$), 143.1 (*para* to CO_2CH_2Ph), 152.5 (*meta* to CO_2CH_2Ph), 158.9 (*para* to CH_2OPh), 165.7 (CO_2CH_2Ph). Anal. Calcd for $C_{91}H_{140}O_8$: C, 80.24 ; H, 10.36. Found : C, 80.20 ; H, 10.31.

4-Vinylbenzyl {3',4'-Bis[3'',4''-Bis(n-dodecan-1-yloxy)benzyl oxy]} benzoate [(*3,4-3,4*)12G2-CO_2CH_2S]. Compound **(*3,4-3,4*)12G1-CO_2CH_2S** was synthesized by the procedure presented for **(*4-3,4*)12G1-CO_2CH_2S**. Starting from 1.0 g (0.93 mmol) of **(*3,4-3,4*)12G1-COOH**, 0.33 mL (2.32 mmol) of 4-chloromethyl styrene, 0.4 g (2.8 mmol) of K_2CO_3 and 0.03 g (0.09 mmol) of TBAH in 25 mL DMF at 60 °C for 6 h, 0.7 g (63.2 %) of white crystals were obtained after recrystallization from a $CHCl_3$/MeOH = 1/2 mixture. Purity (HPLC), 99+%; mp 76-77 °C; TLC (20/1 hexane/EtOAc): R_f = 0.22. ^1H NMR ($CDCl_3$, δ, ppm, TMS): 0.88 (t, 12H, CH_3, J = 6.0 Hz), 1.17-1.42 (m, 72H, $CH_3(CH_2)_9$), 1.75 (m, 8H, CH_2CH_2OPh), 3.91-4.01 (m, 8H, CH_2OPh), 5.09 (d, 4H, CH_2OPh, J = 5.8 Hz), 5.25 (d, 1H, $CH=CH_2$, *trans* to CO_2CH_2Ph, J = 10.9 Hz), 5.31(s, 2H, CO_2CH_2Ph), 5.73 (d, 1H, $CH=CH_2$, *cis* to CO_2CH_2Ph, J = 17.6 Hz), 6.72 (q, 1H, $CH=CH_2$, *vicinal* to CO_2CH_2Ph), 6.84 (d, 1H, Ar*H* *meta* to CO_2CH_2Ph, 5' position, J = 8.1 Hz), 6.91-7.01 (m, 6H, Ar*H*), 7.36 (d, 2H, Ar*H* *ortho* to $CH=CH_2$), 7.39 (d, 2H, Ar*H* *meta* to $CH=CH_2$), 7.70 (d, 1H, Ar*H* *ortho* to CO_2CH_2Ph, 6' position, J = 1.9 Hz), 7.73 (s, 1H, Ar*H* *ortho* to CO_2CH_2Ph, 2' position). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.1 (CH_3), 22.7 (CH_2CH_3), 25.8-29.8 ($(CH_2)_8$), 32.0 ($CH_2CH_2CH_3$), 66.1(CO2*C*H2Ph), 69.4 (CH_2CH_2OPh), 71.0-71.5 ($PhCH_2OPh$), 113.7 (*ortho* to CH_2OPh), 113.9 ($CH=CH_2$), 114.0 (*meta* to CO_2CH_2Ph, 5' position), 116.2

(*meta* to CH_2OPh, 5'' position), 120.2 (*ortho* to CO_2CH_2Ph, 2' position), 120.3 (*ortho* to CH_2OPh, 6'' position), 123.2 (*ortho* to CO_2CH_2Ph, 6' position), 124.2 (*ipso* to CO_2CH_2Ph), 126.4 (*ortho* to $CH=CH_2$), 128.3 (*meta* to $CH=CH_2$), 129.4 (*ipso* to CH_2OPh, 3' position), 129.8 (*ipso* to CH_2OPh, 4' position), 136.0 ($CH=CH_2$), 136.5 (*para* to $CH=CH_2$), 138.2 (*ipso* to $CH=CH_2$), 148.7 (*meta* to CO_2CH_2Ph, 3' position), 149.3 (*para* to CH_2OPh), 149.6 (*meta* to CH_2OPh, 3'' position), 152.8 (*para* to CO_2CH_2Ph), 165.9 (CO_2CH_2Ph). Anal. Calcd for $C_{78}H_{122}O_8$: C, 78.87; H, 10.31. Found: C, 78.64; H, 9.98.

4-Vinylbenzyl {3',5'-Bis[3'',4''-Bis(n-dodecan-1-yloxy)benzyl oxy]} benzoate [(*3,4-3,5*)12G2-CO_2CH_2S]. **(*3,4-3,5*)12G2-CO_2CH_2S** was synthesized by the procedure used for **(*4-3,4*)12G1-CO_2CH_2S**. Starting from 1.7 g (1.6 mmol) of **(*3,4-3,5*)12G2-COOH**, 0.56 mL (3.9 mmol) of 4-chloromethyl styrene, 3.2 g (4.8 mmol) of K_2CO_3 and 0.05 g (0.16 mmol) of TBAH in 40 mL DMF at 60 °C for 6 h, 1.3 g (65.4 %) of white crystals were obtained after recrystallization from an acetone/MeOH = 1:1 mixture. Purity (HPLC), 99+%; mp 76 °C; TLC (10/1 hexane/EtOAc): R_f = 0.32. ^{1}H NMR ($CDCl_3$, δ, ppm, TMS): 0.88 (t, 12H, CH_3, J = 6.8 Hz), 1.29-1.57 (m, 72H, $CH_3(CH_2)_9$), 1.75 (m, 8H, CH_2CH_2OPh), 3.96 (m, 8H, CH_2OPh), 4.95 (s, 4H, CH_2OPh), 5.24 (d, 1H, $CH=CH_2$, *trans* to CO_2CH_2Ph, J = 10.9 Hz), 5.33 (s, 2H, CO_2CH_2Ph), 5.72 (d, 1H, $CH=CH_2$, *cis* to CO_2CH_2Ph, J = 17.6 Hz), 6.74 (q, 1H, $CH=CH_2$ *vicinal* to CO_2CH_2Ph), 6.79 (t, 1H, Ar*H para* to CO_2CH_2Ph, J = 2.4 Hz), 6.84 (d, 2H, Ar*H meta* to CH_2OPh, 5' position, J = 8.2 Hz), 6.92 (d, 2H, Ar*H ortho* to CH_2OPh, 6'' position, J = 8.2 Hz), 6.96 (s, 2H, Ar*H ortho* to CH_2OPh, 2'' position), 7.28 (d, 2H, Ar*H ortho* to CO_2CH_2Ph, J = 2.4 Hz), 7.36 (d, 2H, Ar*H ortho* to $CH=CH_2$), 7.39 (d, 2H, Ar*H meta* to $CH=CH_2$). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.1 (CH_3), 22.6 (CH_2CH_3), 26.0-29.6 ($(CH_2)_8$), 31.9 ($CH_2CH_2CH_3$), 66.5 (CO_2CH_2Ph), 69.3 (CH_2CH_2OPh), 70.4 ($PhCH_2OPh$), 107.2 (*para* to CO_2CH_2Ph), 108.5 (*ortho* to CO_2CH_2Ph), 113.8 (*ortho* to CH_2OPh, 2' position), 113.9 ($CH=CH_2$), 114.2 (*meta* to

CH_2OPh, 5' position), 120.5 (*ortho* to CH_2OPh, 6' position), 126.3 (*ortho* to $CH=CH_2$), 128.3 (*meta* to $CH=CH_2$), 129.0 (*ipso* to CH_2OPh), 131.9 (*ipso* to CO_2CH_2Ph), 135.4 ($CH=CH_2$), 136.3 (*para* to $CH=CH_2$), 137.3 (*ipso* to $CH=CH_2$), 149.2 (*para* to CH_2OPh), 149.4 (*meta* to CH_2OPh, 3' position), 159.8 (*meta* to CO_2CH_2Ph, 5 position), 166.0 (CO_2CH_2Ph). Anal. Calcd for $C_{78}H_{122}O_8$: C, 78.87; H, 10.31. Found: C, 78.63; H, 9.99.

4-Vinylbenzyl {3',4',5'-Tris[3'',4''-Bis(n-dodecan-1-yloxy) benzyloxy]} benzoate [(*3,4-3,4,5*)12G2-CO_2CH_2S]. **(*3,4-3,4,5*)12G2-CO_2CH_2S** was prepared as described for **(*4-3,4*)12G1-CO_2CH_2S**. Starting from 1.5 g (0.95 mmol) of **(*3,4-3,4,5*)12G2-COOH**, 0.34 mL (2.4 mmol) of 4-chloromethyl styrene, 0.4 g (2.8 mmol) of K_2CO_3 and 0.03 g (0.09 mmol) of TBAH in 25 mL DMF at 25 °C for 6 h, 0.9 g (55.8 %) of white crystals were obtained after recrystallization from an acetone/MeOH = 2/1 mixture. Purity (HPLC), 99+%; mp 72-73 °C; TLC (10/1 hexane/EtOAc): R_f = 0.34. ^1H NMR ($CDCl_3$, δ, ppm, TMS): 0.88 (t, 18H, CH_3, J = 6.7 Hz), 1.17-1.37 (m, 108H, $CH_3(CH_2)_9$), 1.74 (m, 12H, CH_2CH_2OPh), 3.88 (t, 2H, CH_2OPh, 4-(3') position, J = 6.4 Hz), 3.98 (m, 10H, CH_2OPh, 3,5-(3',4') and 4-(4') position), 5.02 (d, 6H, CH_2OPh, J = 4.1 Hz), 5.26(d, 1H, $CH=CH_2$, *trans* to CO_2CH_2Ph, J= 10.9 Hz), 5.31 (s, 2H, CO_2CH_2Ph), 5.71 (d, 1H, $CH=CH_2$, *cis* to CO_2CH_2Ph, J = 17.6 Hz), 6.69 (d, 1H, Ar*H*, 4-(5') position, J= 8.2 Hz), 6.73 (q, 1H, $CH=CH_2$ *vicinal* to CO_2CH_2Ph), 6.82-6.99 (m, 8H, Ar*H*), 7.37 (s, 2H, *ortho* to CO_2CH_2Ph), 7.39 (d, 2H, Ar*H ortho* to $CH=CH_2$), 7.41 (d, 2H, Ar*H meta* to $CH=CH_2$). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.0 (CH_3), 22.6 (CH_2CH_3), 26.0-29.6 ($(CH_2)_8$), 31.6-31.8 ($CH_2CH_2CH_3$), 66.3 (CO_2CH_2Ph), 68.4 (CH_2CH_2OPh), 69.1-74.8 ($PhCH_2OPh$), 109.5 (*ortho* to CO_2CH_2Ph), 113.3 (*ortho* to CH_2OPh, 2'' position), 113.5 ($CH=CH_2$), 114.1 (*meta* to CH_2OPh, 5'' position), 120.1-120.9 (*ortho* to CH_2OPh, 6'' position), 124.9 (*ipso* to CO_2CH_2Ph), 126.3 (*ortho* to $CH=CH_2$), 128.2 (*meta* to $CH=CH_2$), 129.2 (*ipso* to CH_2OPh), 130.1 (*para* to CO_2CH_2Ph), 135.5 ($CH=CH_2$), 136.2 (*para* to

$CH=CH_2$), 148.9 (*meta* to CO_2CH_2Ph), 149.2 (*para* to CH_2OPh), 152.5 (*meta* to CH_2OPh, 3'' position), 165.8 (CO_2CH_2Ph). Anal. Calcd for $C_{109}H_{176}O_{11}$: C, 78.74; H, 10.60. Found: C, 78.64; H, 9.99.

4-Vinylbenzyl {3',4'-Bis[3'',4'',5''-Tris(n-dodecan-1-yloxy) benzyloxy]} benzoate [(*3,4,5-3,4*)12G2-CO_2CH_2S]. **(*3,4,5-3,4*)12G2-CO_2CH_2S** was synthesized by the method presented for **(*4-3,4*)12G1-CO_2CH_2S**. Starting from 2.0 g (1.4 mmol) of **(*3,4,5-3,4*)12G2-COOH** and 0.53 mL (3.5 mmol) of 4-chloromethyl styrene, 0.6 g (4.2 mmol) of K_2CO_3 and 0.05 g (0.14 mmol) of TBAH in 30 mL DMF at 60 °C for 6 h, 1.3 g (60.1 %) of white crystals were obtained after recrystallization from an acetone/MeOH = 5/1 mixture. Purity (HPLC), 99+%; mp 60-61 °C; TLC (20/1 hexane/EtOAc): R_f = 0.24. ^{1}H NMR ($CDCl_3$, δ, ppm, TMS): 0.88 (t, 18H, CH_3, *J*= 6.4 Hz), 1.27-1.45 (m, 108H, $CH_3(CH_2)_9$), 1.73 (m, 12H, CH_2CH_2OPh), 3.93-4.01 (m, 12H, CH_2OPh), 5.14 (d, 4H, CH_2OPh, *J* = 4.4 Hz), 5.25 (d, 1H, $CH=CH_2$ *trans* to CO_2CH_2Ph, *J* = 9.8 Hz), 5.32 (s, 2H, CO_2CH_2Ph), 5.73 (d, 1H, $CH=CH_2$ *cis* to CO_2CH_2Ph, *J* = 17.6 Hz), 6.63 (s, 2H, Ar*H ortho* to CH_2OPh, 4' position), 6.68 (s, 2H, Ar*H ortho* to CH_2OPh, 3' position), 6.73 (q, 1H, $CH=CH_2$ *vicinal* to CO_2CH_2Ph), 6.93 (d, 1H, Ar*H meta* to CO_2CH_2Ph, 5 position, *J* = 8.9 Hz), 7.34 (d, 2H, *ortho* to $CH=CH_2$, *J* = 8.3 Hz), 7.39 (d, 2H, *meta* to $CH=CH_2$, *J* = 8.4 Hz), 7.43 (m, 2H, Ar*H ortho* to CO_2CH_2Ph). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.0 (CH_3), 22.6 (CH_2CH_3), 26.1-30.3 ($(CH_2)_8$), 31.9 ($CH_2CH_2CH_3$), 66.1 (CO_2CH_2OPh), 69.0 (CH_2CH_2OPh), 71.1-73.2 ($PhCH_2OPh$), 105.7 (*ortho* to CH_2OPh), 113.3 (*meta* to CO_2CH_2Ph, 5 position), 114.1 ($CH=CH_2$), 115.8 (*ortho* to CO_2CH_2Ph, 2 position), 123.0 (*ortho* to CO_2CH_2Ph, 6 position), 124.2 (*ipso* to CO_2CH_2Ph), 126.3 (*ortho* to $CH=CH_2$), 128.2 (*meta* to $CH=CH_2$), 131.4 (*ipso* to CH_2OPh), 131.7 (*para* to CH_2OPh), , 136.1 (CH=CH2), 136.3 (*para* to $CH=CH_2$), 137.7 (*ipso* to $CH=CH_2$), 137.9 (*meta* to CO_2CH_2Ph, 3 position), 148.3 (*meta* to CO_2CH_2Ph, 4 position), 153.2 (*meta* to CH_2OPh), 165.8 (CO_2CH_2Ph). Anal. Calcd for $C_{102}H_{170}O_{10}$: C, 78.71; H, 11.01. Found: C, 78.66; H, 11.00.

4-Vinylbenzyl {3',5'-Bis[3'',4'',5''-Tris(n-dodecan-1-yloxy) benzyloxy]} benzoate [(*3,4,5-3,5*)12G2-CO_2CH_2S]. **(*3,4,5-3,5*)12G2-CO_2CH_2S** was synthesized by the general procedure described for **(*4-3,4*)12G1-CO_2CH_2S**. Starting from starting from 2.0 g (1.4 mmol) of **(*3,4,5-3,5*)12G2-COOH,** 0.53 mL (3.5 mmol) of 4-chloromethyl styrene, 0.6 g (4.2 mmol) of K_2CO_3 and 0.05 g (0.14 mmol) of TBAH in 30 mL DMF at 60 °C for 6 h, 1.2 g (55.2 %) of white crystals were obtained after recrystallization from an acetone/MeOH = 3/2 mixture. Purity (HPLC), 99+%; mp 54-55 °C; TLC (10/1 hexane/EtOAc): R_f = 0.34. ^{1}H NMR ($CDCl_3$, δ, ppm, TMS): 0.89 (t, 18H, C*H*$_3$, *J* = 6.4 Hz), 1.24-1.43 (m, 108H, $CH_3(CH_2)_9$), 1.73 (m, 12H, C*H*$_2$CH$_2$OPh), 3.92-3.96 (m, 12H, C*H*$_2$OPh), 5.02 (s, 4H, C*H*$_2$OPh), 5.25 (d, CH=C*H*$_2$ *trans* to CO_2CH_2Ph, *J* = 9.8 Hz), 5.32 (s, 2H, CO_2CH_2Ph), 5.73 (d, 1H,1H, CH=C*H*$_2$ *cis* to CO_2CH_2Ph, *J* = 17.6 Hz), 6.64 (s, 4H, Ar*H ortho* to CH_2OPh, 3',4' position), 6.73 (q, 1H, C*H*=CH$_2$ *vicinal* to CO_2CH_2Ph), 6.86 (t, 1H, Ar*H para* to CO_2CH_2Ph, *J* = 1.9 Hz), 7.34 (d, 2H, Ar*H ortho* to CH=CH$_2$, *J* = 8.3 Hz), 7.39 (d, 2H, Ar*H meta* to CH=CH$_2$, *J* = 8.4 Hz), 7.41 (d, 2H, Ar*H ortho* to CO_2CH_2Ph, *J* = 2.4 Hz). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.0 (*C*H$_3$), 22.6 (*C*H$_2$CH$_3$), 26.1-30.7 ((CH$_2$)$_8$), 31.9 (*C*H$_2$CH$_2$CH$_3$), 66.5 (CO_2*C*H$_2$OPh), 69.1 (CH$_2$*C*H$_2$OPh), 70.7-73.4 (Ph*C*H$_2$OPh), 106.3 (*ortho* to CH_2OPh), 107.2 (*para* to CO_2CH_2Ph), 108.5 (*ortho* to CO_2CH_2Ph), 114.2 (CH=*C*H$_2$), 126.4 (*ortho* to CH=CH$_2$), 128.3 (*meta* to CH=CH$_2$), 131.2 (*ipso* to CH_2OPh), 132.0 (*ipso* to CO_2CH_2Ph), 135.1 (*C*H=CH2), 136.3 (*para* to CH=CH$_2$), 137.7 (*ipso* to CH=CH$_2$), 138.1 (*para* to CH_2OPh), 153.3 (*meta* to CH_2OPh), 159.8 (*meta* to CO_2CH_2Ph), 166.0 (*C*O$_2$CH$_2$Ph). Anal. Calcd for $C_{102}H_{170}O_{10}$: C, 78.71; H, 11.01. Found: C, 78.65; H, 10.99.

3,5-Bis[3',4',5'-Tris(n-dodecan-1-yloxy)benzyloxy] benzyl methacrylate [(*3,4,5-3,5*)12G2-CH_2MA]. A mixture of **(*3,4,5-3,5*)12G2-CH_2OH** (5.0 g, 3.5 mmol) and pyridine (2.5 mL, 31.6 mmol) in 70 mL of dry CH_2Cl_2 was purged with N_2 at 0 °C. Freshly distilled methacryloyl chloride (0.4 mL, 4.2 mmol)

was added dropwise and the reaction mixture was allowed to warm up to 20 °C. The reaction was complete after 5 h (NMR). The solvent was distilled in a rotary-evaporator at 20 °C and the product was purified by column chromatography (SiO_2, hexane/EtOAc = 2/1) to yield 4.7 g (89.9 %) of white crystals. Purity (HPLC), 99+%; mp 61-62 °C; TLC (2/1 hexane/EtOAc): R_f = 0.54. ^{1}H NMR ($CDCl_3$, δ, ppm, TMS): 0.88 (t, 18H, C*H*$_3$, J = 6.4 Hz), 1.28-1.43 (m, 108H, $CH_3(CH_2)_9$), 1.71 (m, 12H, C*H*$_2$CH$_2$OPh), 1.95 (s, 3H, COC(C*H*$_3$)CH$_2$), 3.91-3.96 (m, 12H, C*H*$_2$OPh), 4.94 (s, 2H, PhC*H*$_2$OCO), 5.00 (s, 4H, C*H*$_2$OPh), 5.53 (s, 1H, COC(CH$_3$)C*H*$_2$), 6.10 (s, 1H, COC(CH$_3$) C*H*$_2$), 6.62 (s, 4H, Ar*H ortho* to CH$_2$OPh, 3',4' position), 6.85 (t, 1H, Ar*H para* to CH$_2$OCO, J = 1.9 Hz), 6.92 (d, 2H, Ar*H ortho* to CH$_2$OCO, J = 2.4 Hz). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.0 (*C*H$_3$), 18.2 (COC(*C*H$_3$)CH$_2$), 22.6 (*C*H$_2$CH$_3$), 25.7-30.3 ((*C*H$_2$)$_8$), 31.9 (*C*H$_2$CH$_2$CH$_3$), 63.7 (*C*H$_2$OCOC(CH$_3$)), 69.2 (CH$_2$*C*H$_2$OPh), 70.7-73.4 (PhCH$_2$OPh), 106.3 (*ortho* to CH$_2$OPh), 107.2 (*para* to CH$_2$OCO), 108.4 (*ortho* to CH$_2$OCO), 125.7 (*C*H$_2$=C(CH$_3$)CO), 131.0 (CH$_2$=*C*(CH$_3$)CO), 131.3 (*ipso* to CH$_2$OPh), 132.0 (*ipso* to CH$_2$OCO), 138.2 (*para* to CH$_2$OPh), 153.3 (*meta* to CH$_2$OPh), 159.8 (*meta* to CH$_2$OCO) 176.1 (CH$_2$=C(CH$_3$)*C*O). Anal. Calcd for $C_{97}H_{168}O_{10}$: C, 78.01; H, 11.33. Found: C, 77.89; H, 11.40.

4-Vinylbenzyl {3',4',5'-Tris[3'',4'',5''-Tris(n-dodecan-1-yloxy) benzyloxy]} benzoate [(*3,4,5-3,4,5*)12G2-CO$_2$CH$_2$S]. Compound **(*3,4,5-3,4,5*)12G2-CO$_2$CH$_2$S** was synthesized as was briefly described previously[13] by a procedure similar to that used for **(*4-3,4*)12G1-CO$_2$CH$_2$S** .. Starting from starting from 5.0 g (2.4 mmol) of **(*3,4,5-3,4,5*)12G2-COOH**, 0.85 mL (6.0 mmol) of 4-chloromethyl styrene, 1.0 g (7.2 mmol) of K_2CO_3 and 0.08 g (0.24 mmol) of TBAH in 50 mL DMF at 60 °C for 6 h, 3.9 g (73.3 %) of white crystals were obtained after recrystallization from acetone. Purity (HPLC), 99+%; mp 53-54 °C; TLC (10/1 hexane/EtOAc): R_f = 0.33. ^{1}H NMR ($CDCl_3$, δ, ppm, TMS): 0.88 (t, 27H, C*H*$_3$, J = 6.4 Hz), 1.26-1.43 (m, 162H, $CH_3(CH_2)_9$), 1.72 (m, 18H, C*H*$_2$CH$_2$OPh), 3.76 (t, 4H,

CH_2OPh, 4-(3',5') position, J = 6.4 Hz), 3.89 (t, 8H, CH_2OPh, 3,5-(3',5') position, J = 6.4 Hz), 3.94 (t, 6H, CH_2OPh, 3,4,5-(4') position, J = 6.5 Hz), 5.04 (s, 6H, CH_2OPh), 5.25 (d, 1H, CH=CH_2 *trans* to CO_2CH_2Ph, J = 9.8 Hz), 5.32 (s, 2H, CO_2CH_2Ph), 5.73 (d, 1H, CH=CH_2 *cis* to CO_2CH_2Ph, J = 17.6 Hz), 6.60 (s, 2H, Ar*H ortho* to CH_2OPh, 4' position), 6.64 (s, 4H, Ar*H ortho* to CH_2OPh, 3',5' position), 6.73 (q, 1H, CH=CH_2 *vicinal* to CO_2CH_2Ph), 7.34 (d, 2H, Ar*H ortho* to CH=CH_2, J = 8.3 Hz), 7.39 (d, 2H, Ar*H meta* to CH=CH_2, J = 8.4 Hz), 7.45 (s, 2H, Ar*H ortho* to CO_2H). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.0 (CH_3), 22.6 (CH_2CH_3), 26.1-30.8 ((CH_2)$_8$), 31.9 ($CH_2CH_2CH_3$), 66.3 (CO_2CH_2Ph), 68.8 (CH_2CH_2OPh), 71.6-73.2 ($PhCH_2OPh$), 105.7 (*ortho* to CH_2OPh, 3,5 position), 106.3 (*ortho* to CH_2OPh, 4 position), 110.1 (*ortho* to CO_2CH_2Ph), 114.1 (CH=CH_2), 125.1 (*ipso* to CO_2CH_2Ph), 126.3 (*ortho* to CH=CH_2), 128.1 (*meta* to CH=CH_2), 131.6 (*para* to CH_2OPh, 3,5 position), 132.3 (*para* to CH_2OPh, 4 position), 135.5 (CH=CH_2), 136.2 (*para* to CH=CH_2), 137.9 (*ipso* to CH_2OPh), 138.3 (*ipso* to CH=CH_2), 144.1 (*para* to CO_2CH_2Ph), 152.5 (*meta* to CO_2CH_2Ph), 153.0 (*meta* to CH_2OPh, 4 position), 153.4 (*meta* to CH_2OPh, 3,5 position), 165.9 (CO_2CH_2Ph). Anal. Calcd for $C_{145}H_{248}O_{14}$: C, 78.61; H, 11.28. Found: C, 78.87; H, 11.10.

3,4,5-Tris [3',4',5'-Tris(n-dodecan-1-yloxy)benzyloxy]benzyl methacrylate [(*3,4,5-3,4,5*)12G2-CH_2MA][13] A mixture of **(*3,4,5-3,4,5*)12G2-CH_2OH** (15.0 g, 7.2 mmol) and pyridine (2.9 mL, 35.9 mmol) in 120 mL of dry CH_2Cl_2 was purged with N_2 at 0 °C. Freshly distilled methacryloyl chloride (0.8 mL, 8.6 mmol) was slowly added and the reaction mixture was warmed up to 20 °C. The reaction was complete after 5 h (NMR). The solvent was distilled in a rotary-evaporator at 20 °C and 13.8 g (89.2 %) of white crystals were obtained after purification of column chromatography (SiO_2, hexane/EtOAc = 2/1). Purity (HPLC), 99+%; mp 57-58 °C; TLC (2/1 hexane/EtOAc): R_f = 0.55. ^1H NMR ($CDCl_3$, δ, ppm, TMS): 0.88 (t, 27H, CH_3, J = 6.2 Hz), 1.26-1.43 (m, 162H, $CH_3(CH_2)_9$), 1.72 (m, 18H, CH_2CH_2OPh), 1.95 (s, 3H, $COC(CH_3)CH_2$), 3.75 (t, 4H, CH_2OPh, 4-(3',5') position, J = 6.3 Hz), 3.87 (t, 8H,

CH_2OPh, 3,5-(3',5') position, J = 6.4 Hz), 3.91 (t, 6H, CH_2OPh, 3,4,5-(4') position, J = 6.3 Hz), 5.04 (s, 6H, CH_2OPh), 5.51 (s, 1H, $COC(CH_3)CH_2$), 6.09 (s, 1H, $COC(CH_3)CH_2$), 6.58 (s, 2H, Ar*H ortho* to CH_2OPh, 4' position), 6.61 (s, 4H, Ar*H ortho* to CH_2OPh, 3',5' position), 7.42 (s, 2H, Ar*H ortho* to CH_2OCO, J = 8.7). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 13.9 (CH_3), 18.2 ($COC(CH_3)CH_2$), 22.6 (CH_2CH_3), 26.1-30.8 ($(CH_2)_8$), 31.9 ($CH_2CH_2CH_3$), 63.7 ($CH_2OCOC(CH_3)$), 68.8 (CH_2CH_2OPh), 71.6-73.2 ($PhCH_2OPh$), 105.7 (*ortho* to CH_2OPh, 3,5 position), 106.3 (*ortho* to CH_2OPh, 4 position), 110.1 (*ortho* to CO_2CH_2Ph), 125.1 (*ipso* to CO_2CH_2Ph), 125.7 ($CH_2=C(CH_3)CO$), 131.0 ($CH_2=C(CH_3)CO$), 131.6 (*para* to CH_2OPh, 3,5 position), 132.3 (*para* to CH_2OPh, 4 position), 137.9 (*ipso* to CH_2OPh), 144.1 (*para* to CO_2CH_2Ph), 152.5 (*meta* to CO_2CH_2Ph), 153.0 (*meta* to CH_2OPh, 4 position), 153.4 (*meta* to CH_2OPh, 3,5 position), 176.1 ($CH_2=C(CH_3)CO$). Anal. Calcd for $C_{140}H_{246}O_{14}$: C, 78.10; H, 11.52. Found: C, 78.01; H, 11.65.

Poly(4-ethylbenzyl{3',4'-Bis[4''-(n-dodecan-1-yloxy)benzyloxy]}benzoate) [(*4-3,4*)12G1-CO_2CH_2PS]. ^1H NMR ($CDCl_3$, δ, ppm, TMS): 0.89 (t, CH_3, J = 6.6 Hz), 1.27 (m, $CH_3(CH_2)_9$), 1.74 (m, CH_2CH_2OPh and –CH-CH_2- *para* to CO_2CH_2Ph), 3.88 (bs, CH_2OPh), 4.82-5.29 (overlapped peaks, $PhCH_2OPh$ and CO_2CH_2Ph), 6.98 (bs, Ar*H meta* to CH_2OPh and Ar*H meta* to CO_2CH_2Ph, 5 position), 7.27 (bs, Ar*H ortho* to –CH-CH_2-, Ar*H ortho* to CO_2CH_2Ph, 6 position, Ar*H ortho* and *meta* to -CH-CH_2- and Ar*H ortho* to CO_2CH_2Ph, 1 position), 7.64 (bs, Ar*H ortho* to CH_2OPh). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.0 (CH_3), 22.5 (CH_2CH_3), 25.9-29.5 ($(CH_2)_8$), 31.8 ($CH_2CH_2CH_3$), 65.9 (CO_2CH_2Ph), 67.7 (CH_2CH_2OPh), 70.4-70.8 ($PhCH_2OPh$), 113.1 (*meta* to CO_2CH_2Ph, 5 position), 114.2 (*meta* to CH_2OPh), 115.7 (*ortho* to CO_2CH_2Ph, 2 position), 122.7 (*ipso* to CO_2CH_2Ph), 123.8 (*ortho* to CO_2CH_2Ph, 6 position), 126.1 (*ortho* to -CH-CH_2-), 128.0 (*meta* to -CH-CH_2-), 128.7 (*ipso* to CH_2OPh), 128.9 (*ortho* to CH_2OPh), 136.2 (*para* to -CH-CH_2-), 137.2 (*ipso* to -CH-CH_2-), 148.3 (*meta* to CO_2CH_2Ph, 3 position), 153.0 (*para* to

CO_2CH_2Ph), 158.8 (*para* to CH_2OPh), 165.6 (CO_2CH_2Ph). Anal. Calcd for $C_{54}H_{74}O_6$: C, 79.18; H, 9.10. Found: C,79.32; H,9.03.

Poly(4-ethylbenzyl{3',5'-Bis[4''-(n-dodecan-1-yloxy)benzyloxy]}benzoate) [(*4-3,5*)12G1-CO_2CH_2PS]. ^1H NMR ($CDCl_3$, δ, ppm, TMS): 0.87 (t, CH_3, J = 6.7 Hz), 1.26 (m, $CH_3(CH_2)_9$), 1.72 (m, 4H, CH_2CH_2OPh and $-CH-CH_2-$ *para* to CO_2CH_2Ph), 3.83 (bs, CH_2OPh), 4.92 (bs, $PhCH_2OPh$), 5.21 (bs, CO_2CH_2Ph), 6.69 (bs, Ar*H para* to CO_2CH_2Ph,), 6.99 (bs, Ar*H meta* to CH_2OPh), 7.20 (Ar*H ortho* to CO_2CH_2Ph, Ar*H ortho* to $-CH-CH_2-$ Ar*H ortho* to CH_2OPh and Ar*H meta* to $-CH-CH_2-$). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.0 (CH_3), 22.6 (CH_2CH_3), 26.0-29.5 ($(CH_2)_8$), 31.8 ($CH_2CH_2CH_3$), 67.9 (CH_2CH_2OPh), 70.0 ($PhCH_2OPh$), 107.1 (*para* to CO_2CH_2Ph), 108.4 (*ortho* to CO_2CH_2Ph), 114.5 (*meta* to CH_2OPh), 125.1 (*ortho* to $-CH-CH_2-$), 126.3 (*meta* to $-CH-CH_2-$), 128.2 (*ipso* to CH_2OPh), 129.1 (*ortho* to CH_2OPh), 131.8 (*ipso* to CO_2CH_2Ph), 136.3 (*para* to $-CH-CH_2-$), 137.5 (*ipso* to $-CH-CH_2-$), 159.0 (*para* to CH_2OPh), 159.8 (*meta* to CO_2CH_2Ph), 165.9 (CO_2CH_2Ph). Anal. Calcd for $C_{54}H_{74}O_6$: C, 79.18; H, 9.10. Found: C, 79.08; H, 9.14.

Poly(4-ethylbenzyl{3',4',5'-Tris[4''-(n-decan-1-yloxy)benzyloxy]}benzoate) [(*4-3,4,5*)10G1-CO_2CH_2PS]. ^1H NMR ($CDCl_3$, δ, ppm, TMS): 0.89 (t, 9H, CH_3, J = 6.8 Hz), 1.27 (m, $CH_3(CH_2)_7$), 1.67 (m, CH_2CH_2OPh and $-CH-CH_2-$ *para* to CO_2CH_2Ph), 3.75 (bs, CH_2OPh), 4.75 (bs, $PhCH_2OPh$), 5.32 (bs, CO_2CH_2Ph), 6.70 (overlapped peaks, Ar*H ortho* to CH_2OPh and *para* to CO_2CH_2Ph and Ar*H ortho* to CH_2OPh and *meta* to CO_2CH_2Ph), 7.26 (bs, Ar*H meta* to CH_2OPh and *para* to CO_2CH_2Ph, Ar*H ortho* to CO_2CH_2Ph, Ar*H ortho* to $-CH-CH_2-$, Ar*H meta* to CH_2OPh, *meta* to CO_2CH_2Ph and Ar*H meta* to $-CH-CH_2-$, J = 8.4 Hz). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.1 (CH_3), 22.7 (CH_2CH_3), 26.2-30.8 ($(CH_2)_8$), 32.0 ($CH_2CH_2CH_3$), 66.5 (CO_2CH_2OPh), 67.9 (CH_2CH_2OPh), 70.5-74.7 ($PhCH_2OPh$), 109.0 (*ortho* to CO_2CH_2Ph), 114.7 (*meta* to CH_2OPh), 124.9 (*ipso* to CO_2CH_2Ph), 126.6

(*ortho* to –CH-CH_2-), 128.5 (*meta* to –CH-CH_2-), 130.5 (*ipso* to CH_2OPh), 130.7 (*ortho* to CH_2OPh), 135.5 (*para* to –CH-CH_2-), 137.3 (*ipso* to –CH-CH_2-), 145.9 (*para* to CO_2CH_2Ph), 152.6 (*meta* to CO_2CH_2Ph), 158.9 (*para* to CH_2OPh), 165.7 (CO_2CH_2Ph). Anal. Calcd for $C_{67}H_{92}O_8$ C, 78.48; H, 9.04. Found: C, 78.40; H, 9.04.

Poly(4-ethylbenzyl{3',4',5'-Tris[4''-(n-dodecan-1-yloxy)benzyloxy]}benzoate) [(*4-3,4,5*)12G1-CO_2CH_2PS]. ^{1}H NMR ($CDCl_3$, δ, ppm, TMS): 0.89 (t, 9H, CH_3, J = 6.8 Hz), 1.27 (m, $CH_3(CH_2)_7$), 1.67 (m, CH_2CH_2OPh and –CH-CH_2- *para* to CO_2CH_2Ph), 3.75 (bs, CH_2OPh), 4.75 (bs, $PhCH_2OPh$), 5.32 (bs, CO_2CH_2Ph), 6.70 (overlapped peaks, Ar*H ortho* to CH_2OPh and *para* to CO_2CH_2Ph and Ar*H ortho* to CH_2OPh and *meta* to CO_2CH_2Ph), 7.26 (bs, Ar*H meta* to CH_2OPh and *para* to CO_2CH_2Ph, Ar*H ortho* to CO_2CH_2Ph, Ar*H ortho* to –CH-CH_2-, Ar*H meta* to CH_2OPh, *meta* to CO_2CH_2Ph and Ar*H meta* to –CH-CH_2-, J = 8.4 Hz). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.1 (CH_3), 22.7 (CH_2CH_3), 26.2-30.8 ($(CH_2)_8$), 32.0 ($CH_2CH_2CH_3$), 66.5 (CO_2CH_2OPh), 67.9 (CH_2CH_2OPh), 70.5-74.7 ($PhCH_2OPh$), 109.0 (*ortho* to CO_2CH_2Ph), 114.7 (*meta* to CH_2OPh), 124.9 (*ipso* to CO_2CH_2Ph), 126.6 (*ortho* to –CH-CH_2-), 128.5 (*meta* to –CH-CH_2-), 130.5 (*ipso* to CH_2OPh), 130.7 (*ortho* to CH_2OPh), 135.5 (*para* to –CH-CH_2-), 137.3 (*ipso* to –CH-CH_2-), 145.9 (*para* to CO_2CH_2Ph), 152.6 (*meta* to CO_2CH_2Ph), 158.9 (*para* to CH_2OPh), 165.7 (CO_2CH_2Ph). Anal. Calcd for $C_{73}H_{104}O_8$: C, 79.02; H, 9.45. Found: C, 79.09; H, 9.56.

Poly(3,4,5-Tris[4-(n-dodecyl-1-oxy)benzyloxy]benzyl methacrylate) [(*4-3,4,5*)12G1-CH_2PMA]. ^{1}H NMR ($CDCl_3$, δ, ppm, TMS): 0.88 (t, CH_3, J = 6.8 Hz), 1.25-1.49 (m, $(CH_2)_9$), 1.79 (bs, CH_2CH_2OPh and $CH_2C(CH_3)CO$, $CH_2C(CH_3)CO$), 3.80 (bs, CH_2OPh), 4.72 (bs, $PhCH_2OCO$, $PhCH_2OPh$ *meta* to CH_2OCO, $PhCH_2OPh$ *para* to CH_2OCO), 6.64 (overlapped peaks, Ar*H ortho* to CH_2OCO, Ar*H ortho* to CH_2O, *para* to CH_2OCO, Ar*H ortho* to CH_2O- and Ar*H meta* to CH_2OCO), 7.04 (overlapped peaks, Ar*H ortho* to CH_2OPh, *para* to CH_2OCO and Ar*H ortho* to -CH_2OPh, *meta* to CH_2OCO, J = 8.7). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.1 (CH_3), 22.7

(CH_2CH_3), 26.0-29.8 (($CH_2)_8$), 32.0 ($CH_2CH_2CH_3$), 67.7 (PhCH_2OCO), 69.1 (CH_2OPh), 70.4 (ArCH_2OAr, *meta* to CH_2OCO), 76.1 (ArCH_2OAr, *para* to CH_2OCO), 103.6 (Ar*C ortho* to CH_2OCO), 114.0-114.8 (Ar*C ortho* to OCH_2CH_2), 129.2-130.5 (Ar*C para* to CH_2OCO, Ar*C para* to OCH_2CH_2, Ar*C meta* to OCH_2CH_2), 136.1 (Ar*C ipso* to CH_2OCO), 152.9 (Ar*C meta* to CH_2OCO), 158.9 (Ar*C ipso* to OCH_2CH_2), 178.5 ($CH_2C(CH_3)CO$). Anal. Calcd for $C_{68}H_{102}O_8$: C, 77.96; H, 9.81. Found: C, 77.87; H, 9.99.

Poly(4-ethylbenzyl{3',4',5'-Tris[4''-(n-tetradecan-1-yloxy)benzyloxy]}benzoate) [(*4-3,4,5*)14G1-CO_2CH_2PS]. ^{1}H NMR ($CDCl_3$, δ, ppm, TMS): 0.89 (t, 9H, CH_3, J = 6.8 Hz), 1.27 (m, $CH_3(CH_2)_7$), 1.67 (m, CH_2CH_2OPh and –CH-CH_2- *para* to CO_2CH_2Ph), 3.75 (bs, CH_2OPh), 4.75 (bs, PhCH_2OPh), 5.32 (bs, CO_2CH_2Ph), 6.70 (overlapped peaks, Ar*H ortho* to CH_2OPh and *para* to CO_2CH_2Ph and Ar*H ortho* to CH_2OPh and *meta* to CO_2CH_2Ph), 7.26 (bs, Ar*H meta* to CH_2OPh and *para* to CO_2CH_2Ph, Ar*H ortho* to CO_2CH_2Ph, Ar*H ortho* to –CH-CH_2-, Ar*H meta* to CH_2OPh, *meta* to CO_2CH_2Ph and Ar*H meta* to –CH-CH_2-, J = 8.4 Hz). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.1 (CH_3), 22.7 (CH_2CH_3), 26.2-30.8 (($CH_2)_8$), 32.0 ($CH_2CH_2CH_3$), 66.5 (CO_2CH_2OPh), 67.9 (CH_2CH_2OPh), 70.5-74.7 (PhCH_2OPh), 109.0 (*ortho* to CO_2CH_2Ph), 114.7 (*meta* to CH_2OPh), 124.9 (*ipso* to CO_2CH_2Ph), 126.6 (*ortho* to –CH-CH_2-), 128.5 (*meta* to –CH-CH_2-), 130.5 (*ipso* to CH_2OPh), 130.7 (*ortho* to CH_2OPh), 135.5 (*para* to –CH-CH_2-), 137.3 (*ipso* to –CH-CH_2-), 145.9 (*para* to CO_2CH_2Ph), 152.6 (*meta* to CO_2CH_2Ph), 158.9 (*para* to CH_2OPh), 165.7 (CO_2CH_2Ph). Anal. Calcd for $C_{79}H_{116}O_8$: C, 79.49 ; H, 9.79. Found: C, 79.46 ; H, 9.85.

Poly(4-ethylbenzyl{3',4',5'-Tris[4''-(n-hexadecan-1-yloxy)benzyloxy]}benzoate) [(*4-3,4,5*)16G1-CO_2CH_2PS]. ^{1}H NMR ($CDCl_3$, δ, ppm, TMS): 0.89 (t, 9H, CH_3, J = 6.8 Hz), 1.27 (m, $CH_3(CH_2)_7$), 1.67 (m, CH_2CH_2OPh and –CH-CH_2- *para* to CO_2CH_2Ph), 3.75 (bs, CH_2OPh), 4.75 (bs, PhCH_2OPh), 5.32 (bs, CO_2CH_2Ph), 6.70 (overlapped peaks, Ar*H ortho* to CH_2OPh and

para to CO_2CH_2Ph and Ar*H ortho* to CH_2OPh and *meta* to CO_2CH_2Ph), 7.26 (bs, Ar*H* *meta* to CH_2OPh and *para* to CO_2CH_2Ph, Ar*H ortho* to CO_2CH_2Ph, Ar*H ortho* to –CH-CH_2-, Ar*H meta* to CH_2OPh, *meta* to CO_2CH_2Ph and Ar*H meta* to –CH-CH_2-, J = 8.4 Hz). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.1 (CH_3), 22.7 (CH_2CH_3), 26.2-30.8 ($(CH_2)_8$), 32.0 ($CH_2CH_2CH_3$), 66.5 (CO_2CH_2OPh), 67.9 (CH_2CH_2OPh), 70.5-74.7 ($PhCH_2OPh$), 109.0 (*ortho* to CO_2CH_2Ph), 114.7 (*meta* to CH_2OPh), 124.9 (*ipso* to CO_2CH_2Ph), 126.6 (*ortho* to –CH-CH_2-), 128.5 (*meta* to –CH-CH_2-), 130.5 (*ipso* to CH_2OPh), 130.7 (*ortho* to CH_2OPh), 135.5 (*para* to –CH-CH_2-), 137.3 (*ipso* to –CH-CH_2-), 145.9 (*para* to CO_2CH_2Ph), 152.6 (*meta* to CO_2CH_2Ph), 158.9 (*para* to CH_2OPh), 165.7 (CO_2CH_2Ph). Anal. Calcd for $C_{85}H_{128}O_8$: C, 79.89 ; H, 10.09. Found : C, 79.76 ; H, 10.21.

Poly(4-ethylbenzyl{3',4',5'-Tris[4''-(n-octadecan-1-yloxy)benzyloxy]}benzoate) [(*4-3,4,5*)18G1-CO_2CH_2PS]. ^1H NMR ($CDCl_3$, δ, ppm, TMS): 0.89 (t, 9H, CH_3, J = 6.8 Hz), 1.27 (m, $CH_3(CH_2)_7$), 1.67 (m, CH_2CH_2OPh and –CH-CH_2- *para* to CO_2CH_2Ph), 3.75 (bs, CH_2OPh), 4.75 (bs, $PhCH_2OPh$), 5.32 (bs, CO_2CH_2Ph), 6.70 (overlapped peaks, Ar*H ortho* to CH_2OPh and *para* to CO_2CH_2Ph and Ar*H ortho* to CH_2OPh and *meta* to CO_2CH_2Ph), 7.26 (bs, Ar*H* *meta* to CH_2OPh and *para* to CO_2CH_2Ph, Ar*H ortho* to CO_2CH_2Ph, Ar*H ortho* to –CH-CH_2-, Ar*H meta* to CH_2OPh, *meta* to CO_2CH_2Ph and Ar*H meta* to –CH-CH_2-, J = 8.4 Hz). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.1 (CH_3), 22.7 (CH_2CH_3), 26.2-30.8 ($(CH_2)_8$), 32.0 ($CH_2CH_2CH_3$), 66.5 (CO_2CH_2OPh), 67.9 (CH_2CH_2OPh), 70.5-74.7 ($PhCH_2OPh$), 109.0 (*ortho* to CO_2CH_2Ph), 114.7 (*meta* to CH_2OPh), 124.9 (*ipso* to CO_2CH_2Ph), 126.6 (*ortho* to –CH-CH_2-), 128.5 (*meta* to –CH-CH_2-), 130.5 (*ipso* to CH_2OPh), 130.7 (*ortho* to CH_2OPh), 135.5 (*para* to –CH-CH_2-), 137.3 (*ipso* to –CH-CH_2-), 145.9 (*para* to CO_2CH_2Ph), 152.6 (*meta* to CO_2CH_2Ph), 158.9 (*para* to CH_2OPh), 165.7 (CO_2CH_2Ph). Anal. Calcd for $C_{91}H_{140}O_8$: C, 80.24 ; H, 10.36. Found : C, 80.26 ; H, 10.31.

Poly(4-ethylbenzyl{3',4'-Bis[3'',4''-Bis(n-dodecan-1-yloxy)benzyloxy]}benzoate) [(*3,4-3,4*)12G2-CO_2CH_2PS]. ^1H NMR ($CDCl_3$,

δ, ppm, TMS): 0.87 (t, 12H, CH_3, J = 6.1 Hz), 1.25 (m, $CH_3(CH_2)_9$), 1.60 (bs, CH_2CH_2OPh and –CH-CH_2- *para* to CO_2CH_2Ph), 3.89 (overlapped peaks, CH_2OPh), 4.86 (bs, PhH_2OPh), 5.31(bs, CO_2CH_2Ph), 6.56-6.99 (Ar*H meta* to CO_2CH_2Ph, 5' position and Ar*H*), 7.36 (s, 2H, Ar*H ortho* to –CH-CH_2- and Ar*H meta* to –CH-CH_2-), 7.59 (bs, Ar*H ortho* to CO_2CH_2Ph, 6' position, Ar*H ortho* to CO_2CH_2Ph, 2' position). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.1 (CH_3), 22.7 (CH_2CH_3), 26.2-29.8 ($(CH_2)_8$), 31.9 ($CH_2CH_2CH_3$), 68.6 (CO_2CH_2Ph), 68.9 (CH_2CH_2OPh), 69.1-70.8 ($PhCH_2OPh$), 113.1 (*ortho* to CH_2OPh), 114.6 (*meta* to CO_2CH_2Ph, 5' position), 114.7 (*meta* to CH_2OPh, 5'' position), 120.2 (*ortho* to CO_2CH_2Ph, 2' position), 120.3 (*ortho* to CH_2OPh, 6'' position), 123.2 (*ortho* to CO_2CH_2Ph, 6' position), 124.2 (*ipso* to CO_2CH_2Ph), 126.4 (*ortho* to –CH-CH_2-), 128.3 (*meta* to –CH-CH_2-), 129.4 (*ipso* to CH_2OPh, 3' position), 129.8 (*ipso* to CH_2OPh, 4' position), 136.5 (*para* to –CH-CH_2-), 138.2 (*ipso* to –CH-CH_2-), 148.7 (*meta* to CO_2CH_2Ph, 3' position), 149.3 (*para* to CH_2OPh), 149.6 (*meta* to CH_2OPh, 3'' position), 152.8 (*para* to CO_2CH_2Ph), 165.9 (CO_2CH_2Ph). Anal. Calcd for $C_{78}H_{122}O_8$: C, 78.87; H, 10.31. Found: C, 78.76; H, 10.51.

Poly(4-ethylbenzyl{3',5'-Bis[3'',4''-Bis(n-dodecan-1-yloxy)benzyloxy]}benzoate) [*(3,4-3,5)*12G2-CO_2CH_2S]. ^1H NMR ($CDCl_3$, δ, ppm, TMS): 0.88 (t, CH_3, J = 6.8 Hz), 1.24-1.57 (m, $CH_3(CH_2)_9$), 1.69 (m, CH_2CH_2OPh and –CH-CH_2- *para* to CO_2CH_2Ph), 3.82 (bs, CH_2OPh), 4.74 (bs, $PhCH_2OPh$), 5.33 (s, 2H, CO_2CH_2Ph), 6.64-7.00 (overlapped peaks, Ar*H para* to CO_2CH_2Ph, Ar*H meta* to CH_2OPh, 5' position, Ar*H ortho* to CH_2OPh, 6'' position and Ar*H ortho* to CH_2OPh, 2'' position), 7.29 (bs, Ar*H ortho* to CO_2CH_2Ph, Ar*H ortho* to –CH-CH_2- and Ar*H meta* to –CH-CH_2-). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.1 (CH_3), 22.6 (CH_2CH_3), 26.0-29.6 ($(CH_2)_8$), 31.9 ($CH_2CH_2CH_3$), 66.5 (CO_2CH_2Ph), 69.3 (CH_2CH_2OPh), 70.4 ($PhCH_2OPh$), 107.2 (*para* to CO_2CH_2Ph), 108.5 (*ortho* to CO_2CH_2Ph), 113.8 (*ortho* to CH_2OPh, 2' position), 114.2 (*meta* to CH_2OPh, 5' position), 120.5 (*ortho* to CH_2OPh, 6' position), 126.3 (*ortho* to –CH-CH_2-), 128.3 (*meta* to –CH-

CH_2-), 129.0 (*ipso* to CH_2OPh), 131.9 (*ipso* to CO_2CH_2Ph), 136.3 (*para* to $CH{=}CH_2$), 137.3 (*ipso* to –CH-CH_2-), 149.2 (*para* to CH_2OPh), 149.4 (*meta* to CH_2OPh, 3' position), 159.8 (*meta* to CO_2CH_2Ph, 5 position), 166.0 (CO_2CH_2Ph). Anal. Calcd for $C_{78}H_{122}O_8$: C, 78.87; H, 10.31. Found: C, 78.63; H, 10.41.

Poly(4-ethylbenzyl{3',4',5'-Tris[3'',4''-Bis(n-dodecan-1-yloxy)benzyloxy]}benzoate) [(*3,4-3,4,5*)12G2-CO_2CH_2PS]. ^1H NMR ($CDCl_3$, δ, ppm, TMS): 0.88 (t, CH_3, J = 6.6 Hz), 1.26-1.56 (m, $CH_3(CH_2)_9$), 1.70 (bs, CH_2CH_2OPh and –CH-CH_2- *para* to CO_2CH_2Ph), 3.87 (bs, CH_2OPh, 4-(3') position, CH_2OPh and 3,5-(3',4') and 4-(4') position), 4.92 (bs, $PhCH_2OPh$), 5.31(s, 2H, CO_2CH_2Ph), 6.57 (s, Ar*H*, 4-(5') position), 6.79 (bs, Ar*H*), 7.35 (bs, Ar*H ortho* to CO_2CH_2Ph, Ar*H ortho* to –CH-CH_2-, Ar*H meta* to –CH-CH_2-). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.0 (CH_3), 22.6 (CH_2CH_3), 26.0-29.6 ($(CH_2)_8$), 31.6-31.8 ($CH_2CH_2CH_3$), 66.3 (CO_2CH_2Ph), 68.4 (CH_2CH_2OPh), 69.1-74.8 ($PhCH_2OPh$), 109.5 (*ortho* to CO_2CH_2Ph), 113.3 (*ortho* to CH_2OPh, 2" position), 114.1 (*meta* to CH_2OPh, 5" position), 120.1-120.9 (*ortho* to CH_2OPh, 6" position), 124.9 (*ipso* to CO_2CH_2Ph), 126.3 (*ortho* to –CH-CH_2-), 128.2 (*meta* to –CH-CH_2-), 129.2 (*ipso* to CH_2OPh), 130.1 (*para* to CO_2CH_2Ph), 136.2 (*para* to $CH{=}CH_2$), 148.9 (*meta* to CO_2CH_2Ph), 149.2 (*para* to CH_2OPh), 152.5 (*meta* to CH_2OPh, 3" position), 165.8 (CO_2CH_2Ph). Anal. Calcd for $C_{109}H_{176}O_{11}$: C, 78.74; H, 10.60. Found: C, 78.62; H, 10.62.

Poly(4-ethylbenzyl{3',4'-Bis[3'',4'',5''-Tris(n-dodecan-1-yloxy)benzyloxy]}benzoate) [(*3,4,5-3,4*)12G2-CO_2CH_2PS]. ^1H NMR ($CDCl_3$, δ, ppm, TMS): 0.88 (t, CH_3, J = 6.6 Hz), 1.26-1.56 (m, $CH_3(CH_2)_9$), 1.70 (bs, CH_2CH_2OPh and –CH-CH_2- *para* to CO_2CH_2Ph), 3.87 (overlapped peaks, CH_2OPh), 4.92 (bs, $PhCH_2OPh$), 5.32 (s, 2H, CO_2CH_2Ph), 6.59 (bs, Ar*H ortho* to CH_2OPh, 4' position, Ar*H ortho* to CH_2OPh, 3' position, Ar*H meta* to CO_2CH_2Ph, 5 position), 7.71 (bs, Ar*H ortho* to –CH-CH_2-, Ar*H meta* to to –CH-CH_2- and Ar*H ortho* to CO_2CH_2Ph). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.0 (CH_3), 22.6 (CH_2CH_3), 26.1-30.3 ($(CH_2)_8$), 31.9

($CH_2CH_2CH_3$), 66.1 (CO_2CH_2OPh), 69.0 (CH_2CH_2OPh), 71.1-73.2 ($PhCH_2OPh$), 105.7 (*ortho* to CH_2OPh), 113.3 (*meta* to CO_2CH_2Ph, 5 position), 115.8 (*ortho* to CO_2CH_2Ph, 2 position), 123.0 (*ortho* to CO_2CH_2Ph, 6 position), 124.2 (*ipso* to CO_2CH_2Ph), 126.3 (*ortho* to –CH-CH_2-), 128.2 (*meta* to –CH-CH_2-), 131.4 (*ipso* to CH_2OPh), 131.7 (*para* to CH_2OPh), 136.3 (*para* to –CH-CH_2-), 137.7 (*ipso* to –CH-CH_2-), 137.9 (*meta* to CO_2CH_2Ph, 3 position), 148.3 (*meta* to CO_2CH_2Ph, 4 position), 153.2 (*meta* to CH_2OPh), 165.8 (CO_2CH_2Ph). Anal. Calcd for $C_{102}H_{170}O_{10}$: C, 78.71; H, 11.01. Found: C, 78.68; H, 10.96.

Poly(4-ethylbenzyl{3',5'-Bis[3'',4'',5''-Tris(n-dodecan-1-yloxy)benzyloxy]}benzoate) [(*3,4,5-3,5*)12G2-CO_2CH_2PS]. ^1H NMR ($CDCl_3$, δ, ppm, TMS): 0.88 (t, CH_3, J = 6.4 Hz), 1.23-1.55 (m, $CH_3(CH_2)_9$), 1.84 (bs, 12H, CH_2CH_2OPh and –CH-CH_2- *para* to CO_2CH_2Ph), 3.96 (bs, CH_2OPh), 4.82 (bs, $PhCH_2OPh$), 5.32 (s, 2H, CO_2CH_2Ph), 6.43 (bs, Ar*H ortho* to CH_2OPh, 3',4' position and Ar*H para* to CO_2CH_2Ph), 7.28 (bs, Ar*H ortho* to –CH-CH_2-, Ar*H meta* to –CH-CH_2- and Ar*H ortho* to CO_2CH_2Ph). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.0 (CH_3), 22.6 (CH_2CH_3), 26.1-30.7 ($(CH_2)_8$), 31.9 ($CH_2CH_2CH_3$), 66.5 (CO_2CH_2OPh), 69.1 (CH_2CH_2OPh), 70.7-73.4 ($PhCH_2OPh$), 106.3 (*ortho* to CH_2OPh), 107.2 (*para* to CO_2CH_2Ph), 108.5 (*ortho* to CO_2CH_2Ph), 126.4 (*ortho* to –CH-CH_2-), 128.3 (*meta* to –CH-CH_2-), 131.2 (*ipso* to CH_2OPh), 132.0 (*ipso* to CO_2CH_2Ph), 136.3 (*para* to –CH-CH_2-), 137.7 (*ipso* to –CH-CH_2-), 138.1 (*para* to CH_2OPh), 153.3 (*meta* to CH_2OPh), 159.8 (*meta* to CO_2CH_2Ph), 166.0 (CO_2CH_2Ph). Anal. Calcd for $C_{102}H_{170}O_{10}$: C, 78.71; H, 11.01. Found: C, 78.82; H, 10.89.

Poly(3,5-Bis[3',4',5'-Tris(n-dodecan-1-yloxy)benzyloxy]benzyl methacrylate) [(*3,4,5-3,5*)12G2-CH_2PMA]. ^1H NMR ($CDCl_3$, δ, ppm, TMS): 0.88 (t, CH_3, J = 6.3 Hz), 1.28-1.56 (m, $CH_3(CH_2)_9$), 1.71 (m, CH_2CH_2OPh and $COC(CH_3)CH_2$), 3.95 (bs, CH_2OPh), 4.92 (bs, $PhCH_2OCO$ and CH_2OPh), 5.53 (s, $COC(CH_3)CH_2$), 6.59 (s, Ar*H ortho* to CH_2OPh, 3',4' position), 6.85 (s, 1H, Ar*H para*

to CH_2OCO and Ar*H ortho* to CH_2OCO). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.0 (CH_3), 18.2 ($COC(CH_3)CH_2$), 22.6 (CH_2CH_3), 25.7-30.3 ($(CH_2)_8$), 31.9 ($CH_2CH_2CH_3$), 63.7 ($CH_2OCOC(CH_3)$), 69.2 (CH_2CH_2OPh), 70.7-73.4 ($PhCH_2OPh$), 106.3 (*ortho* to CH_2OPh), 107.2 (*para* to CH_2OCO), 108.4 (*ortho* to CH_2OCO), 131.3 (*ipso* to CH_2OPh), 132.0 (*ipso* to CH_2OCO), 138.2 (*para* to CH_2OPh), 153.3 (*meta* to CH_2OPh), 159.8 (*meta* to CH_2OCO). Anal. Calcd for $C_{97}H_{168}O_{10}$: C, 78.01; H, 11.33. Found: C, 78.21; H, 11.31.

Poly(4-ethylbenzyl{3',4',5'-Tris[3'',4'',5''-Tris(n-dodecan-1-yloxy) benzyloxy]} benzoate) [(*3,4,5-3,4,5*)12G2-CO_2CH_2PS]. ^1H NMR ($CDCl_3$, δ, ppm, TMS): 0.88 (s, CH_3, J = 6.6 Hz), 1.25-1.54 (bs, $CH_3(CH_2)_9$), 1.65 (bs, CH_2CH_2OPh and –CH-CH_2- *para* to CO_2CH_2Ph), 3.81 (overlapped peaks, CH_2OPh), 4.94 (bs, $PhCH_2OPh$), 5.31 (s, CO_2CH_2Ph), 6.59 (bs, Ar*H ortho* to CH_2OPh), 7.45 (bs, Ar*H ortho* to CO_2H and Ar*H ortho* and *meta* to -CH-CH_2-). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 14.0 (CH_3), 22.6 (CH_2CH_3), 26.1-30.8 ($(CH_2)_8$), 31.9 ($CH_2CH_2CH_3$), 66.3 (CO_2CH_2Ph), 68.8 (CH_2CH_2OPh), 71.6-73.2 ($PhCH_2OPh$), 105.7 (*ortho* to CH_2OPh, 3,5 position), 106.3 (*ortho* to CH_2OPh, 4 position), 110.1 (*ortho* to CO_2CH_2Ph), 125.1 (*ipso* to CO_2CH_2Ph), 126.3 (*ortho* to –CH-CH_2-), 128.1 (*meta* to –CH-CH_2-), 131.6 (*para* to CH_2OPh, 3,5 position), 132.3 (*para* to CH_2OPh, 4 position), 136.2 (*para* to –CH-CH_2-), 137.9 (*ipso* to CH_2OPh), 138.3 (*ipso* to –CH-CH_2-), 144.1 (*para* to CO_2CH_2Ph), 152.5 (*meta* to CO_2CH_2Ph), 153.0 (*meta* to CH_2OPh, 4 position), 153.4 (*meta* to CH_2OPh, 3,5 position), 165.9 (CO_2CH_2Ph). Anal. Calcd for $C_{145}H_{248}O_{14}$: C, 78.61; H, 11.28. Found: C, 78.65; H, 11.14.

Poly(3,4,5-Tris[3',4',5'-Tris(n-dodecan-1-yloxy)benzyloxy]benzyl methacrylate) [(*3,4,5-3,4,5*)12G2-CH_2PMA]. ^1H NMR ($CDCl_3$, δ, ppm, TMS): 0.88 (s, CH_3, J = 6.6 Hz), 1.26-1.55 (bs, $CH_3(CH_2)_9$), 1.66 (bs, CH_2CH_2OPh and $COC(CH_3)CH_2$), 3.79 (bs, CH_2OPh), 4.95 (bs, $PhCH_2OPh$), 6.59 (bs, Ar*H ortho* to CH_2OPh), 7.42 (s, Ar*H ortho* to CH_2OCO). ^{13}C NMR ($CDCl_3$, δ, ppm, TMS): 13.9

(CH_3), 18.2 ($COC(CH_3)CH_2$), 22.6 (CH_2CH_3), 26.1-30.8 ($(CH_2)_8$), 31.9 ($CH_2CH_2CH_3$), 63.7 ($CH_2OCOC(CH_3)$), 68.8 (CH_2CH_2OPh), 71.6-73.2 ($PhCH_2OPh$), 105.7 (*ortho* to CH_2OPh, 3,5 position), 106.3 (*ortho* to CH_2OPh, 4 position), 110.1 (*ortho* to CO_2CH_2Ph), 125.1 (*ipso* to CO_2CH_2Ph), 131.6 (*para* to CH_2OPh, 3,5 position), 132.3 (*para* to CH_2OPh, 4 position), 137.9 (*ipso* to CH_2OPh), 144.1 (*para* to CO_2CH_2Ph), 152.5 (*meta* to CO_2CH_2Ph), 153.0 (*meta* to CH_2OPh, 4 position), 153.4 (*meta* to CH_2OPh, 3,5 position). Anal. Calcd for $C_{140}H_{246}O_{14}$: C, 78.10; H, 11.52. Found: C, 78.11; H, 11.57.

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Supplemental Scheme Captions

Supplemental Scheme 1. Synthesis of **5-m-CH_2Cl** and of the First Generation Monodendrons (***3,4*)12G1-CH_2Cl** and (***3,4,5*)12G1-CH_2Cl**.

Supplemental Scheme 2. Synthesis of the First Generation Monodendritic Monomers with one Alkyl Chain End in the Terminal Unit (***4-3,4*)12G1-CO_2CH_2S**, (***4-3,5*)12G1-CO_2CH_2S**, (***4-3,4,5*)mG1-CO_2CH_2S** with **m** = 10, 12, 14, 16, 18 and (***4-3,4,5*)12G1-CH_2MA**.

Supplemental Scheme 3. Synthesis of the Second Generation Monodendritic Monomers with two Alkyl Chains in their Terminal Units (***3,4-3,4*)12G2-CO_2CH_2S**, (***3,4-3,5*)12G2-CO_2CH_2S**, and (***3,4-3,4,5*)12G2-CO_2CH_2S**.

Supplemental Scheme 4. Synthesis of the Second Generation Monodendritic Monomers with three Alkyl Chains in their Terminal Units (***3,4,5-3,4*)12G2-CO_2CH_2S**, (***3,4,5-3,5*)12G2-CO_2CH_2S**, (***3,4,5-3,5*)12G2-CH_2MA**, (***3,4,5-3,4,5*)12G2-CO_2CH_2S** and (***3,4,5-3,4,5*)12G2-CH_2MA**.