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SUPPORTING INFORMATION

Amphiphilic carbosilane dendrons as novel synthetic platform toward micelles formation

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Supporting Information

S.1. General information

All solvents were dried and freshly distilled under argon prior to use, unless otherwise stated. Reagents were obtained from commercial sources and used as received. Dendron precursors BrG_nA_m, BrG_nV_m (n=1, m=2 (**G_1**); n=2, m=4 (**G_2**); n=3, m=8 (**G_3**) were obtained as described elsewhere.[1]

Oligonucleotides: Oligonucleotides were synthesized using the solid-phase phosphoramidite method on an ASM-800 automated synthesizer (Biosset, Novosibirsk, Russia) from commercially available phosphoramidites (Glen Research, US) according to the protocols optimized for the given equipment. The sequences of model siRNA Mcl-1 strands are as follows: 5'-GGACUUUUAUACCUGUUAUtt-3' (sense), 5'-AUAACAGGUAUAAAAGUCCtg-3' (antisense). Oligoribonucleotides bear two deoxyribonucleotides on the 3'-terminus to increase their stability towards exonuclease hydrolysis.

S.2. Analytical and spectroscopic techniques

C, H analysis: They were carried out with a Perkin-Elmer 240 C microanalyzer.

Mass Spectrometry: Matrix-assisted laser desorption/ionization-time-of-flight (MALDI-TOF) mass spectra were obtained using a Bruker Ultraflex-III mass spectrometer. For MALDI-TOF samples, 1,8,9-trihydroxyanthracene (dithranol) was used as matrix.

NMR spectroscopy: ^{1}H and ^{13}C and spectra were recorded on Varian Unity VXR-300 and Varian 500 Plus Instruments. Chemical shifts (δ, ppm) were measured relative to residual ^{1}H and ^{13}C resonances for $CDCl_3$, D_2O, DMSO-d_6 and CD_3OD used as solvents.

UV-Vis analysis: Spectrophotometric studies were performed using a UVIKON 941 Plus dual-beam spectrophotometer. Measurements were performed at 25 ° C using quartz cells of 1 cm thick.

Surface tension: The surface tension of aqueous dendron solutions was determined as a function of the concentration using the ring method with a LAUDA TE-1C tensiometer. All measurements were carried out at 25.0±0.1 ºC. The surface tension measurements have been determined with a standard deviation lower than 0.1 mN/m. The surface tension data below and above CMC were fitted to straight lines by least-squares method.

The CMC values were determined from the sharp break point in the surface tension against the logarithm of concentration curves.

Specific conductivity: Specific conductivities were measured with a 712 conductomer from Methrom. The conductivity cell (cell constant 0.8 cm^{-1}) was maintained at 25.0±0.1 ºC by water bath.

Dynamic light scattering (DLS): The hydrodynamic diameter of the supramolecular aggregates obtained was determined using a Zetasizer Nano ZS (Instruments Malvern Ltd. UK), which is equipped with NBS. The measurements were made at room temperature (25 ° C) and the solutions were prepared using mili-Q water.

Zeta potential measurements: siRNA (1 μM) and cationic dendrons **31-36** were mixed in 10 mM Na phosphate buffer in different charge ratios. Zeta potential values were measured in plastic disposable cells DTS 1061 using Malvern Instruments Nanosizer ZS particle analyzer.

Agarose gel electrophoresis: siRNA (4 μM) pre-complexed with ethidium bromide (40 μM) was mixed with cationic dendrons **31-36** in 10 mM phosphate-buffered saline in different charge ratios. Samples were analysed by 1% agarose gel electrophoresis using BioRad electrophoresis cell and power supply. Gels were photographed using Helicon gel documentation system upon transillumination at 254 nm and processed with BioRad Quantity One software.

S.3. Synthesis of compounds

S.3.1. Allyl-terminated carbosilane dendrons with palmitic acid residue in the focal point

S.3.1.1. $CH_3(CH_2)_{14}CO_2G_1A_2$ ***(1)***. BrG_1A_2 (0.50 g, 1.91 mmol), K_2CO_3 (0.52 g, 3.83 mmol), crown ether 18-C-6 (0.05 g, 0.19 mmol) and palmitic acid (0.49, 0.19 mmol) were stirred in acetone (50 ml) at 90°C in a sealed ampule for 24 h under vacuum. Afterward, acetone was evaporated from the crude mixture and the product was extracted using Et_2O and NaCl-saturated water. The organic phase was dried over $MgSO_4$ and for an extra 10 min. also with SiO_2. The solution was filtered through Celite and the volatile were removed under vacuum to give the fatty acid modified dendrons at the focal point as an orange oil in high yield (0.80g, 96%). Data for **1** are as follows.

NMR ($CDCl_3$): ^1H NMR δ -0.03 (s, 3H, Si*Me*), 0.54 (t, 2H, $OCH_2CH_2CH_2\mathit{CH_2}Si$), 0.85 (t, 3H, $\mathit{CH_3}(CH_2)_{14}CO_2$), 1.23 (s, 24H, $CH_3\mathit{(CH_2)_{12}}(CH_2)_2CO_2$), 1.37 (m, 2H, $OCH_2CH_2\mathit{CH_2}CH_2Si$), 1.51 (d, 4H, $Si\mathit{CH_2}CH{=}CH_2$), 1.61 (m, 4H, $OCH_2\mathit{CH_2}CH_2CH_2Si$, $CH_3(CH_2)_{12}\mathit{CH_2}CH_2CO_2$), 2.26 (t, 2H, $CH_3(CH_2)_{12}CH_2\mathit{CH_2}CO_2$), 4.04(t, 2H, $O\mathit{CH_2}CH_2CH_2CH_2Si$), 4.85 (m, 4H, $SiCH_2CH{=}\mathit{CH_2}$), 5.75 (m, 2H, $SiCH_2\mathit{CH}{=}CH_2$). ^{13}C NMR ($CDCl_3$) δ -5.29 (Si*Me*), 12.5 ($OCH_2CH_2CH_2\mathit{CH_2}Si$), 14.1 ($\mathit{CH_3}CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 20.7 ($OCH_2CH_2\mathit{CH_2}CH_2Si$), 21.2 ($Si\mathit{CH_2}CH{=}CH_2$), 22.6 ($CH_3\mathit{CH_2}CH_2(CH_2)_{10}CH_2CH_2CO_2$), 24.6 ($CH_3CH_2CH_2(CH_2)_{10}\mathit{CH_2}CH_2CO_2$), 29.42 ($CH_3CH_2CH_2$ $\mathit{(CH_2)_{10}}CH_2CH_2CO_2$), 31.9 ($CH_3CH_2\mathit{CH_2}(CH_2)_{10}CH_2CH_2CO_2$), 32.3 ($OCH_2\mathit{CH_2}CH_2CH_2Si$), 34.3 ($CH_3CH_2\mathit{CH_2}(CH_2)_{10}CH_2\mathit{CH_2}CO_2$), 63.8 ($O\mathit{CH_2}CH_2CH_2CH_2Si$), 113.2 ($SiCH_2CH{=}\mathit{CH_2}$), 134.6 ($SiCH_2\mathit{CH}{=}CH_2$), 173.9 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2\mathit{C}O_2$). MS: $[M+H]^+$ = 437.43 Da. Anal. Calculated for $C_{27}H_{52}O_2Si$ (436.78 g/mol) %: C, 74.24, H, 12.00. Exp. %: C, 74.13, H, 11.86.

S.3.1.2. $CH_3(CH_2)_{14}CO_2G_2A_4$ ***(2)***. Following the procedure described for compound **1**, compound **2** was obtained from BrG_2A_4 (1.80 g, 3.50 mmol), K_2CO_3 (0.96 g, 7.00 mmol), crown ether 18-C-6 (0.09 g, 0.35 mmol) and palmitic acid (0.89 g, 3.50 mmol) as an orange oil in high yield (2.0 g, 83%). Data for **2** are as follows. NMR ($CDCl_3$): ^1H NMR δ -0.03 (s, 6H, $\mathit{Me}SiCH_2CHCH_2$), -0.10 (s, 3H, Si*Me*), 0.54 (m, 10H, $OCH_2CH_2CH_2\mathit{CH_2}Si$, $Si\mathit{CH_2}CH_2CH_2Si$, $SiCH_2CH_2\mathit{CH_2}Si$), 0.85 (t, 3H, $\mathit{CH_3}(CH_2)_{14}CO_2$), 1.23 (s, 24H, $CH_3\mathit{(CH_2)_{12}}(CH_2)_2CO_2$), 1.37 (m, 6H, $OCH_2CH_2\mathit{CH_2}CH_2Si$, $SiCH_2\mathit{CH_2}CH_2Si$), 1.51 (d, 8H, $Si\mathit{CH_2}CHCH_2$), 1.61 (m, 4H, $OCH_2\mathit{CH_2}CH_2CH_2Si$, $CH_3(CH_2)_{12}\mathit{CH_2}CH_2CO_2$), 2.26 (t, 2H, $CH_3(CH_2)_{12}CH_2\mathit{CH_2}CO_2$), 4.04(t, 2H, $O\mathit{CH_2}CH_2CH_2CH_2Si$), 4.85 (m, 8H, $SiCH_2CH\mathit{CH_2}$), 5.75 (m, 4H, $SiCH_2\mathit{CH}CH_2$). ^{13}C NMR ($CDCl_3$) δ -5.16 ($Si\mathit{Me}CH_2CH_2CH_2Si$), -5.76 ($\mathit{Me}SiCH_2CHCH_2$), 13,6 ($OCH_2CH_2CH_2\mathit{CH_2}Si$), 14.1 ($\mathit{CH_3}CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 17.9 ($SiCH_2\mathit{CH_2}CH_2Si$), 18.6-18.2 ($Si\mathit{CH_2}CH_2\mathit{CH_2}Si$), 20.3 ($OCH_2CH_2\mathit{CH_2}CH_2Si$), 21.4 ($Si\mathit{CH_2}CHCH_2$), 22.7 ($CH_3\mathit{CH_2}CH_2(CH_2)_{10}CH_2CH_2CO_2$), 25.0 ($CH_3CH_2CH_2(CH_2)_{10}\mathit{CH_2}CH_2CO_2$), 29.42 ($CH_3CH_2CH_2\mathit{(CH_2)_{10}}CH_2CH_2CO_2$), 31.9 ($CH_3CH_2\mathit{CH_2}$ $(CH2)_{10}CH_2CH_2CO_2$), 32.5 ($OCH_2\mathit{CH_2}CH_2CH_2Si$), 34.3 ($CH_3CH_2CH_2(CH_2)_{10}CH_2\mathit{CH_2}CO_2$), 63.9 ($O\mathit{CH_2}CH_2CH_2CH_2Si$), 113.0 ($SiCH_2CH\mathit{CH_2}$), 134.7 ($SiCH_2\mathit{CH}CH_2$), 173.9 ($CH_3CH_2CH_2$ $(CH_2)_{10}CH_2CH_2\mathit{C}O_2$). Anal. Calcd for $C_{41}H_{80}O_2Si_3$ (689.32 g/mol) %: C, 71.44, H, 11.70. Exp. %: C, 71.15, H, 11.48.

S.3.1.3. $CH_3(CH_2)_{14}CO_2G_3A_8$ ***(3).*** Following the procedure described for compound **1**, compound **3** was obtained from BrG_3A_4 (2.0 g, 1.96 mmol), K_2CO_3 (0.54 g, 3.29 mmol), crown ether 18-C-6 (0.05 g, 0.19 mmol) and palmitic acid (0.50 g, 1.96 mmol) as an orange oil in high yield (2.1 g, 89%). Data for **3** are as follows. NMR ($CDCl_3$): ^{1}H NMR δ -0.03 (s, 12H, *Me*$SiCH_2CHCH_2$), -0.10 (s, 9H, Si*Me*), 0.58 (m, 26H, $OCH_2CH_2CH_2CH_2Si$, $SiCH_2CH_2CH_2Si$, $SiCH_2CH_2CH_2Si$), 0.85 (t, 3H, $CH_3(CH_2)_{14}CO_2$), 1.23 (s, 24H, $CH_3(CH_2)_{12}(CH_2)_2CO_2$), 1.37 (m, 14H, $OCH_2CH_2CH_2CH_2Si$, $SiCH_2CH_2CH_2Si$), 1.51 (d, 16H, $SiCH_2CHCH_2$), 1.61 (m, 4H, $OCH_2CH_2CH_2CH_2Si$, $CH_3(CH_2)_{12}CH_2CH_2CO_2$), 2.26 (t, 2H, $CH_3(CH_2)_{12}CH_2CH_2CO_2$), 4.04(t, 2H, $OCH_2CH_2CH_2CH_2Si$), 4.85 (m, 16H, $SiCH_2CHCH_2$), 5.75 (m, 8H, $SiCH_2CHCH_2$). ^{13}C NMR ($CDCl_3$) δ -5.14 ($SiMeCH_2CH_2CH_2Si$), -5.76 (*Me*$SiCH_2CHCH_2$), 13,6 ($OCH_2CH_2CH_2CH_2Si$), 14.1 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 17.9 ($SiCH_2CH_2CH_2Si$), 18.9-18.2 ($SiCH_2CH_2CH_2Si$), 20.4 ($OCH_2CH_2CH_2CH_2Si$), 21.4 ($SiCH_2CHCH_2$), 22.7 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 25.0 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 29.1-29.7 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 31.9 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 32.5 ($OCH_2CH_2CH_2CH_2Si$), 34.4 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 63.9 ($OCH_2CH_2CH_2CH_2Si$), 113.0 ($SiCH_2CHCH_2$), 134.7 ($SiCH_2CHCH_2$), 173.9 ($CH_3CH_2CH_2$ $(CH_2)_{10}CH_2CH_2CO_2$). MS: $[M+H]^+$ = 1195.56 Da. Anal. Calcd for $C_{69}H_{136}O_2Si_7$ (1194.42 g/mol) %: C, 69.38, H, 11.48. Exp. %: C, 69.25, H, 11.31.

S.3.2. Vinyl-terminated carbosilane dendrons with palmitic acid residue in the focal point

S.3.2.1. $CH_3(CH_2)_{14}CO_2G_1V_2$ ***(4).*** Following the procedure described for compound **1**, compound **4** was obtained from BrG_1V_2 (1.0 g, 4.29 mmol), K_2CO_3 (1.18 g, 8.58 mmol), crown ether 18-C-6 (0.11 g, 0.42 mmol) and palmitic acid (1.10 g, 4.29 mmol) as an orange oil in high yield (1.5 g, 86%). Data for **4** are as follows. NMR ($CDCl_3$): ^{1}H NMR δ 0.09 (s, 3H, Si*Me*), 0.60 (t, 2H, $OCH_2CH_2CH_2CH_2Si$), 0.81 (t, 3H, $CH_3(CH_2)_{14}CO_2$), 1.21 (s, 24H, $CH_3(CH_2)_{12}(CH_2)_2CO_2$), 1.36 (m, 2H, $OCH_2CH_2CH_2CH_2Si$), 1.58 (m, 4H, $OCH_2CH_2CH_2CH_2Si$, $CH_3(CH_2)_{12}CH_2CH_2CO_2$), 2.22 (t, 2H, $CH_3(CH_2)_{12}CH_2CH_2CO_2$), 4.00 (t, 2H, $OCH_2CH_2CH_2CH_2Si$), 5.66 (m, 2H, $SiCHCH_2$), 5.97 (m, 4H, $SiCHCH_2$). ^{13}C NMR ($CDCl_3$) δ -5.5 (Si*Me*), 13.4

($OCH_2CH_2CH_2\mathit{CH_2}Si$), 14.0 ($\mathit{CH_3}CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 20.0 ($OCH_2CH_2\mathit{CH_2}CH_2Si$), 22.6 ($CH_3\mathit{CH_2}CH_2(CH_2)_{10}CH_2CH_2CO_2$), 24.9 ($CH_3CH_2CH_2(CH_2)_{10}\mathit{CH_2}CH_2CO_2$), 29.0-29.6 ($CH_3CH_2CH_2$ $\mathit{(CH_2)_{10}}CH_2CH_2CO_2$), 31.8 ($CH_3CH_2\mathit{CH_2}(CH_2)_{10}CH_2CH_2CO_2$), 32.2 ($OCH_2\mathit{CH_2}CH_2CH_2Si$), 34.2 ($CH_3CH_2CH_2$ $(CH_2)_{10}CH_2\mathit{CH_2}CO_2$), 63.7 ($O\mathit{CH_2}CH_2CH_2CH_2Si$), 132.8 ($SiCH\mathit{CH_2}$), 136.5 ($Si\mathit{CH}CH_2$), 173.7 ($CH_3CH_2CH_2$ $(CH_2)_{10}CH_2CH_2\mathit{C}O_2$). MS: $[M+H]^+$ = 409.35 Da. Anal. Calculated for $C_{25}H_{48}O_2Si$ (408.78 g/mol) %: C, 73.46, H, 11.84. Exp. %: C, 73.25, H, 11.67.

S.3.2.2. $\mathit{CH_3(CH_2)_{14}CO_2G_2V_4}$ ***(5).*** Following the procedure described for compound **1**, compound **5** was obtained from BrG_2V_4 (1.5 g, 3.28 mmol), K_2CO_3 (0.9 g, 6.57 mmol), crown ether 18-C-6 (0.08 g, 0.32 mmol) and palmitic acid (0.84 g, 3.28 mmol) as an orange oil in high yield (1.8 g, 90%). Data for **5** are as follows. NMR ($CDCl_3$): ^{1}H NMR δ 0.108 (s, 6H, $\mathit{Me}SiCHCH_2$), -0.1 (s, 3H, $Si\mathit{Me}CH_2CH_2CH_2Si$), 0.49 (m, 6H, $OCH_2CH_2CH_2\mathit{CH_2}Si$, $Si\mathit{CH_2}CH_2CH_2Si$), 0.69 (t, 4H, $SiCH_2CH_2\mathit{CH_2}Si$), 0.85 (t, 3H, $\mathit{CH_3}(CH_2)_{14}CO_2$), 1.23 (s, 24H, $CH_3\mathit{(CH_2)_{12}}(CH_2)_2CO_2$), 1.33 (m, 6H, $OCH_2CH_2\mathit{CH_2}CH_2Si$, $SiCH_2\mathit{CH_2}CH_2Si$), 1.60 (m, 4H, $OCH_2\mathit{CH_2}CH_2CH_2Si$, $CH_3(CH_2)_{12}\mathit{CH_2}CH_2CO_2$), 2.26 (t, 2H, $CH_3(CH_2)_{12}CH_2\mathit{CH_2}CO_2$), 4.04 (t, 2H, $O\mathit{CH_2}CH_2CH_2CH_2Si$), 5.69 (m, 4H, $Si\mathit{CH}CH_2$), 6.06 (m, 8H, $SiCH\mathit{CH_2}$). ^{13}C NMR ($CDCl_3$) δ -5.1 ($Si\mathit{Me}$), -5.2 ($\mathit{Me}SiCHCH_2$), 13,6 ($OCH_2CH_2CH_2\mathit{CH_2}Si$), 14.1 ($\mathit{CH_3}CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 18.2 ($SiCH_2\mathit{CH_2}CH_2Si$), 18.6-18.4 ($Si\mathit{CH_2}CH_2\mathit{CH_2}Si$), 20.3 ($OCH_2CH_2\mathit{CH_2}CH_2Si$), 22.7 ($CH_3\mathit{CH_2}CH_2(CH_2)_{10}CH_2CH_2CO_2$), 25.0 ($CH_3CH_2CH_2(CH_2)_{10}\mathit{CH_2}CH_2CO_2$), 29.14-29.6 ($CH_3CH_2CH_2\mathit{(CH_2)_{10}}CH_2CH_2CO_2$), 31.9 ($CH_3CH_2\mathit{CH_2}(CH_2)_{10}CH_2CH_2CO_2$), 32.5 ($OCH_2\mathit{CH_2}CH_2CH_2Si$), 34.3 ($CH_3CH_2CH_2(CH_2)_{10}CH_2\mathit{CH_2}CO_2$), 63.9 ($O\mathit{CH_2}CH_2CH_2CH_2Si$), 132.6 ($SiCH\mathit{CH_2}$), 137.1 ($Si\mathit{CH}CH_2$), 173.9 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2\mathit{C}O_2$). MS: $[M+H]^+$ = 633.49 Da. Anal. Calcd for $C_{37}H_{72}O_2Si_3$ (632.22 g/mol) %: C, 70.18, H, 11.46. Exp. %: C, 70.08, H, 11.28.

S.3.2.3. $\mathit{CH_3(CH_2)_{14}CO_2G_3V_8}$ ***(6).*** Following the procedure described for compound **1**, compound **6** was obtained from BrG_3V_8 (2.0 g, 2.20 mmol), K_2CO_3 (0.61 g, 4.40 mmol), crown ether 18-C-6 (0.06 g, 0.22 mmol) and palmitic acid (0.56 g, 2.20 mmol) as an orange oil in high yield (2.0 g, 83%). Data for **6** are as follows. NMR ($CDCl_3$): ^{1}H NMR δ -0.1 (s, 9H, $Si\mathit{Me}CH_2CH_2CH_2Si$), 0.10 (s, 12H, $\mathit{Me}SiCHCH_2$), 0.58 (m, 18H,

$OCH_2CH_2CH_2\mathit{CH_2}Si$, $Si\mathit{CH_2}CH_2CH_2Si$), 0.68 (t, 8H $SiCH_2CH_2\mathit{CH_2}Si$), 0.85 (t, 3H, $\mathit{CH_3}(CH_2)_{14}CO_2$), 1.23 (s, 24H, $CH_3\mathit{(CH_2)_{12}}(CH_2)_2CO_2$), 1.35 (m, 14H, $OCH_2CH_2\mathit{CH_2}CH_2Si$, $SiCH_2\mathit{CH_2}CH_2Si$), 1.70 (m, 4H, $OCH_2\mathit{CH_2}CH_2CH_2Si$, $CH_3(CH_2)_{12}\mathit{CH_2}CH_2CO_2$), 2.26 (t, 2H, $CH_3(CH_2)_{12}CH_2\mathit{CH_2}CO_2$), 4.04(t, 2H, $O\mathit{CH_2}CH_2CH_2CH_2Si$), 5.68 (m, 16H, $Si\mathit{CH}CH_2$), 6.09 (m, 8H, $SiCH\mathit{CH_2}$). ^{13}C NMR ($CDCl_3$) δ -4.9 (Si*Me*), -5.2 (*Me*$SiCHCH_2$), 13,6 ($OCH_2CH_2CH_2\mathit{CH_2}Si$), 14.1 ($\mathit{CH_3}CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 17.9 ($SiCH_2\mathit{CH_2}CH_2Si$), 18.9-18.3 ($Si\mathit{CH_2}CH_2\mathit{CH_2}Si$), 21.4 ($OCH_2CH_2\mathit{CH_2}CH_2Si$), 22.7 ($CH_3\mathit{CH_2}CH_2(CH_2)_{10}CH_2CH_2CO_2$), 25.0 ($CH_3CH_2CH_2(CH_2)_{10}\mathit{CH_2}CH_2CO_2$), 29.1-29.7 ($CH_3CH_2CH_2\mathit{(CH_2)_{10}}CH_2CH_2CO_2$), 31.9 ($CH_3CH_2\mathit{CH_2}(CH_2)_{10}CH_2CH_2CO_2$), 32.5 ($OCH_2\mathit{CH_2}CH_2CH_2Si$), 34.4 ($CH_3CH_2CH_2(CH_2)_{10}CH_2\mathit{CH_2}CO_2$), 63.9 ($O\mathit{CH_2}CH_2CH_2CH_2Si$), 132.6 ($SiCH\mathit{CH_2}$), 137.1 ($Si\mathit{CH}CH_2$), 173.9 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2\mathit{C}O_2$). MS: $[M+H]^+$ = 1083.6 Da. Anal. Calcd for $C_{61}H_{120}O_2Si_7$ (1082.20 g/mol) %: C, 67.70, H, 11.18. Exp. %: C, 67.52, H, 11.10.

S.3.3. Allyl-terminated carbosilane dendrons with hexanoic acid residue in the focal point

S.3.3.1. $\mathit{CH_3(CH_2)_4CO_2G_1A_2}$ ***(7).*** This compound was prepared using the procedure analogue to that used for **1** from BrG_1A_2 (0.50 g, 1.91 mmol), K_2CO_3 (0.52 g, 3.83 mmol), crown ether 18-C-6 (0.05 g, 0.19 mmol), changing the fatty acid by hexanoic acid (0.22 g, 1.91 mmol) to get **7** as an orange oil in high yield (0.80g, 96%). Data for **7** are as follows. NMR ($CDCl_3$): ^1H-NMR δ -0.05 (s, 3H, Si*Me*), 0.54 (t, 2H, $OCH_2CH_2CH_2\mathit{CH_2}Si$), 0.85 (t, 3H, $\mathit{CH_3}(CH_2)_4CO_2$), 1.23 (m, 6H, $CH_3\mathit{(CH_2)_2}(CH_2)_2CO_2$), 1.37 (m, 2H, $OCH_2CH_2\mathit{CH_2}CH_2Si$), 1.49 (d, 4H, $Si\mathit{CH_2}CHCH_2$), 1.57 (m, 4H, $OCH_2\mathit{CH_2}CH_2CH_2Si$, $CH_3(CH_2)_2\mathit{CH_2}CH_2CO_2$), 2.24 (t, 2H, $CH_3(CH_2)_2CH_2\mathit{CH_2}CO_2$), 4.04(t, 2H, $O\mathit{CH_2}CH_2CH_2CH_2Si$), 4.85 (m, 4H, $SiCH_2CH\mathit{CH_2}$), 5.75 (m, 2H, $SiCH_2\mathit{CH}CH_2$). ^{13}C NMR ($CDCl_3$) δ -5.58 (Si*Me*), 12.9 ($OCH_2CH_2CH_2\mathit{CH_2}Si$), 14.2 ($\mathit{CH_3}(CH_2)_4CO_2$), 20.4 ($OCH_2CH_2\mathit{CH_2}CH_2Si$), 21.5 ($Si\mathit{CH_2}CHCH_2$), 22.6 ($CH_3\mathit{CH_2}(CH_2)_3CO_2$), 25.0 ($CH_3(CH_2)_2\mathit{CH_2}CH_2CO_2$), 31,6 ($CH_3CH_2\mathit{CH_2}CH_2CH_2CO_2$), 32.6 ($OCH_2\mathit{CH_2}CH_2CH_2Si$), 34.6 ($CH_3(CH_2)_4\mathit{CH_2}CO_2$), 64.1 ($O\mathit{CH_2}CH_2CH_2CH_2Si$), 113.2 ($SiCH_2CH\mathit{CH_2}$), 134.6 ($SiCH_2\mathit{CH}CH_2$), 173.9 ($CH_3(CH_2)_4\mathit{C}O_2$). MS: $[M+H]^+$ = 297.22 Da. Anal. Calculated for $C_{17}H_{32}O_2Si$ (296.52 g/mol) %: C, 68.86, H, 10.88. Exp. %: C, 68.79, H, 10.85.

S.3.3.2 $CH_3(CH_2)_4CO_2G_2A_4$ ***(8).*** Following the procedure described for compound **7**, compound **8** was obtained from BrG_2A_4 (1.80 g, 3.50 mmol), K_2CO_3 (0.96 g, 7.00 mmol), crown ether 18-C-6 (0.09 g, 0.35 mmol) and hexanoic acid (0.40 g, 3.50 mmol) as an orange oil in high yield (1.85 g, 96%). Data for **8** are as follows. NMR ($CDCl_3$): ^{1}H NMR δ -0.03 (s, 6H, *Me*$SiCH_2CHCH_2$), -0.10 (s, 3H, Si*Me*), 0.54 (m, 10H, Si*CH*$_2$$CH_2CH_2Si$, $SiCH_2CH_2$*CH*$_2$Si), 0.85 (t, 3H, *CH*$_3$$(CH_2)_4CO_2$), 1.37 (m, 10H, CH_3*(CH*$_2$*)*$_2$$(CH_2)_2CO_2$,, OCH_2CH_2*CH*$_2$$CH_2Si$, $SiCH_2$*CH*$_2$$CH_2Si$), 1.51 (d, 8H, Si*CH*$_2$$CHCH_2$), 1.61 (m, 4H, OCH_2*CH*$_2$$CH_2CH_2Si$, $CH_3(CH_2)_2$*CH*$_2$$CH_2CO_2$), 2.26 (t, 2H, $CH_3(CH_2)_2CH_2$*CH*$_2$$CO_2$), 4.04(t, 2H, O*CH*$_2$$CH_2CH_2CH_2Si$), 4.85 (m, 8H, $SiCH_2CH$*CH*$_2$), 5.75 (m, 4H, $SiCH_2$*CH*CH_2). ^{13}C NMR ($CDCl_3$) δ -4.73 (Si*Me*$CH_2CH_2CH_2Si$), -5.32 (*Me*$SiCH_2CHCH_2$), 14.0 ($OCH_2CH_2CH_2$*CH*$_2$Si), 14.3 (*CH*$_3$$(CH_2)_4CO_2$), 18.3 ($SiCH_2$*CH*$_2$$CH_2Si$), 18.6-19.0 (Si*CH*$_2$$CH_2$*CH*$_2$Si), 20.8 ($OCH_2CH_2$*CH*$_2$$CH_2Si$), 21.8 (Si*CH*$_2$$CHCH_2$), 22.7 ($CH_3$*CH*$_2$$(CH_2)_3CO_2$), 25.1 ($CH_3(CH_2)_2$*CH*$_2$$CH_2CO_2$), 31.7 ($CH_3CH_2$*CH*$_2$$CH_2CH_2CO_2$), 32.9 ($OCH_2$*CH*$_2$$CH_2CH_2Si$), 34.7 ($CH_3(CH_2)_4$*CH*$_2$$CO_2$), 64.4 (O*CH*$_2$$CH_2CH_2CH_2Si$), 113.4 ($SiCH_2CH$*CH*$_2$), 135.2 ($SiCH_2$*CH*$CH_2$), 174.4 ($CH_3(CH_2)_4$*C*$O_2$). MS: $[M+H]^+$ = 549.4 Da. Anal. Calcd for $C_{31}H_{60}O_2Si_3$ (548.06 g/mol) %: C, 67.81, H, 11.01. Exp. %: C, 67.79, H, 10.95.

S.3.3.3. $CH_3(CH_2)_4CO_2G_3A_8$ ***(9).*** Following the procedure described for compound **7**, compound **9** was obtained from BrG_3A_4 (2.0 g, 1.96 mmol), K_2CO_3 (0.54 g, 3.29 mmol), crown ether 18-C-6 (0.05 g, 0.19 mmol) and hexanoic acid (0.22 g, 1.96 mmol) as an orange oil in high yield (1.8 g, 90%). Data for **9** are as follows. NMR ($CDCl_3$): ^{1}H NMR δ -0.03 (s, 12H, *Me*$SiCH_2CHCH_2$), -0.10 (s, 9H, Si*Me*), 0.58 (m, 26H, $OCH_2CH_2CH_2$*CH*$_2$Si, Si*CH*$_2$$CH_2CH_2Si$, $SiCH_2CH_2$*CH*$_2$Si), 0.85 (t, 3H, *CH*$_3$$(CH_2)_4CO_2$), 1.37 (m, 18H, CH_3*(CH*$_2$*)*$_2$$(CH_2)_2CO_2$, OCH_2CH_2*CH*$_2$$CH_2Si$, $SiCH_2$*CH*$_2$$CH_2Si$), 1.51 (d, 16H, Si*CH*$_2$$CHCH_2$), 1.61 (m, 4H, OCH_2*CH*$_2$$CH_2CH_2Si$, $CH_3(CH_2)_2$*CH*$_2$$CH_2CO_2$), 2.26 (t, 2H, $CH_3(CH_2)_2CH_2$*CH*$_2$$CO_2$), 4.04(t, 2H, O*CH*$_2$$CH_2CH_2CH_2Si$), 4.85 (m, 16H, $SiCH_2CH$*CH*$_2$), 5.75 (m, 8H, $SiCH_2$*CH*CH_2). ^{13}C NMR ($CDCl_3$) δ -4.74 (Si*Me*$CH_2CH_2CH_2Si$), -5.31 (*Me*$SiCH_2CHCH_2$), 14.0 ($OCH_2CH_2CH_2$*CH*$_2$Si), 14.3 (*CH*$_3$$(CH_2)_4CO_2$), 17.9 ($SiCH_2$*CH*$_2$$CH_2Si$), 19.2-18.3 (Si*CH*$_2$$CH_2$*CH*$_2$Si), 20.7 ($OCH_2CH_2$*CH*$_2$$CH_2Si$), 21.5 (Si*CH*$_2$$CHCH_2$), 22.7 ($CH_3$*CH*$_2$$(CH_2)_3CO_2$), 25.1 ($CH_3(CH_2)_2$*CH*$_2$$CH_2CO_2$), 31.7 ($CH_3CH_2$*CH*$_2$$CH_2CH_2CO_2$),

32.9 ($OCH_2\mathit{CH_2}CH_2CH_2Si$), 34.7 ($CH_3(CH_2)_4\mathit{CH_2}CO_2$), 64.4 ($O\mathit{CH_2}CH_2CH_2CH_2Si$), 113.4 ($SiCH_2CH\mathit{CH_2}$), 132.2 ($SiCH_2\mathit{CH}CH_2$), 174.3 ($CH_3(CH_2)_4\mathit{C}O_2$). MS: $[M+H]^+$ = 1053.74 Da. Anal. Calcd for $C_{59}H_{116}O_2Si_7$ (1052.15 g/mol) %: C, 67.22, H, 11.09. Exp. %: C, 67.15, H, 10.99.

S.3.4. Vinyl-terminated carbosilane dendrons with hexanoic acid residue in the focal point

S.3.4.1. $CH_3(CH_2)_4CO_2G_1V_2$ ***(10).*** Following the procedure described for compound **1**, compound **10** was obtained from BrG_1V_2 (1.0 g, 4.29 mmol), K_2CO_3 (1.18 g, 8.58 mmol), crown ether 18-C-6 (0.11 g, 0.42 mmol) and hexanoic acid (0.49 g, 4.29 mmol) as an orange oil in high yield (1.0 g, 87%). Data for **10** are as follows. NMR ($CDCl_3$): ^{1}H NMR δ 0.11 (s, 3H, Si*Me*), 0.65 (t, 2H, $OCH_2CH_2CH_2\mathit{CH_2}Si$), 0.86 (t, 3H, $\mathit{CH_3}(CH_2)_4CO_2$), 1.27 (s, 4H, $CH_3\mathit{(CH_2)_2}(CH_2)_2CO_2$), 1.35 (m, 2H, $OCH_2CH_2\mathit{CH_2}CH_2Si$), 1.58 (m, 4H, $OCH_2\mathit{CH_2}CH_2CH_2Si$, $CH_3(CH_2)_2\mathit{CH_2}CH_2CO_2$), 2.25 (t, 2H, $CH_3(CH_2)_2CH_2\mathit{CH_2}CO_2$), 4.03(t, 2H, $O\mathit{CH_2}CH_2CH_2CH_2Si$), 5.66 (m, 2H, $Si\mathit{CH}CH_2$), 5.97 (m, 4H, $SiCH\mathit{CH_2}$). ^{13}C NMR ($CDCl_3$) δ -5.02 (Si*Me*), 13.9 ($OCH_2CH_2CH_2\mathit{CH_2}Si$), 14.3 ($\mathit{CH_3}(CH_2)_4CO_2$), 20.5 ($OCH_2CH_2\mathit{CH_2}CH_2Si$), 22.7 ($CH_3\mathit{CH_2}(CH_2)_3CO_2$), 25.1 ($CH_3(CH_2)_2\mathit{CH_2}CH_2CO_2$), 31,7 ($CH_3CH_2\mathit{CH_2}CH_2CH_2CO_2$), 32.6 ($OCH_2\mathit{CH_2}CH_2CH_2Si$), 34.7 ($CH_3(CH_2)_4\mathit{CH_2}CO_2$), 64.3 ($O\mathit{CH_2}CH_2CH_2CH_2Si$), 133.3 ($SiCH\mathit{CH_2}$), 137.1 ($Si\mathit{CH}CH_2$), 174.3 ($CH_3(CH_2)_4\mathit{C}O_2$).MS: $[M+H]^+$ = 269.19 Da. Anal. Calculated for $C_{15}H_{28}O_2Si$ (268.47 g/mol) %: C, 67.11, H, 10.51. Exp. %: C, 67.05, H, 10.42.

S.3.4.2. $CH_3(CH_2)_4CO_2G_2V_4$ ***(11).*** Following the procedure described for compound **1**, compound **11** was obtained from BrG_2V_4 (1.5 g, 3.28 mmol), K_2CO_3 (0.9 g, 6.57 mmol), crown ether 18-C-6 (0.08 g, 0.32 mmol) and hexanoic acid (0.38 g, 3.28 mmol) as an orange oil in high yield (1.5 g, 92%). Data for **11** are as follows. NMR ($CDCl_3$): ^{1}H NMR δ 0.106 (s, 6H, *Me*$SiCH_2CHCH_2$), -0.10 (s, 3H, Si*Me*), 0.54 (m, 4H, $Si\mathit{CH_2}CH_2CH_2Si$, $OCH_2CH_2\mathit{CH_2}Si$), 0.68 (m, 4H, $SiCH_2CH_2\mathit{CH_2}Si$), 0.87 (t, 3H, $\mathit{CH_3}(CH_2)_4CO_2$), 1.29 (m, 10H, $CH_3\mathit{(CH_2)_2}(CH_2)_2CO_2$,, $OCH_2CH_2\mathit{CH_2}CH_2Si$, $SiCH_2\mathit{CH_2}CH_2Si$), 1.60 (m, 4H, $OCH_2\mathit{CH_2}CH_2CH_2Si$, $CH_3(CH_2)_2\mathit{CH_2}CH_2CO_2$), 2.26 (t, 2H, $CH_3(CH_2)_2CH_2\mathit{CH_2}CO_2$), 4.04(t, 2H, $O\mathit{CH_2}CH_2CH_2CH_2Si$), 5.70 (m, 4H, $Si\mathit{CH}CH_2$), 6.05 (m, 8H, $SiCH\mathit{CH_2}$). ^{13}C NMR ($CDCl_3$) δ -4.98 (Si*Me*$CH_2CH_2CH_2Si$), -

5.11 (*Me*SiCHCH$_2$), 13.6 (OCH$_2$CH$_2$CH$_2$*CH$_2$*Si), 14.0 (*CH$_3$*(CH$_2$)$_4$CO$_2$), 18.3 (SiCH$_2$*CH$_2$*CH$_2$Si), 18.4-18.7 (Si*CH$_2$*CH$_2$*CH$_2$*Si), 20.3 (OCH$_2$CH$_2$*CH$_2$*CH$_2$Si), 22.3 (CH$_3$*CH$_2$*(CH$_2$)$_3$CO$_2$), 24.7 (CH$_3$(CH$_2$)$_2$*CH$_2$*CH$_2$CO$_2$), 31.3 (CH$_3$CH$_2$*CH$_2$*CH$_2$CH$_2$CO$_2$), 32.5 (OCH$_2$*CH$_2$*CH$_2$CH$_2$Si), 34.4 (CH$_3$(CH$_2$)$_4$*CH$_2$*CO$_2$), 64.0 (O*CH$_2$*CH$_2$CH$_2$CH$_2$Si), 132.6 (SiCH*CH$_2$*), 137.1 (Si*CH*CH$_2$), 174.0 (CH$_3$(CH$_2$)$_4$*C*O$_2$). MS: $[M+H]^+$ = 493.3 Da. Anal. Calcd for $C_{27}H_{52}O_2Si_3$ (492.97 g/mol) %: C, 65.78, H, 10.63. Exp. %: C, 65.75, H, 10.46.

S.3.4.3. CH$_3$ (CH$_2$)$_4$CO$_2$G$_3$V$_8$ ***(12).*** Following the procedure described for compound **1**, compound **12** was obtained from BrG$_3$V$_8$ (2.0 g, 2.20 mmol), K$_2$CO$_3$ (0.61 g, 4.40 mmol), crown ether 18-C-6 (0.06 g, 0.22 mmol) and hexanoic acid (0.26 g, 2.20 mmol) as an orange oil in high yield (1.8 g, 90%). Data for **12** are as follows. NMR (CDCl$_3$): ^{1}H NMR δ 0.11 (s, 12H, *Me*SiCH$_2$CHCH$_2$), -0.11, -0.09 (s, 9H, Si*Me*), 0.53 (m, 18H, OCH$_2$CH$_2$CH$_2$*CH$_2$*Si, Si*CH$_2$*CH$_2$CH$_2$Si, SiCH$_2$CH$_2$*CH$_2$*Si), 0.69 (m, 8H, *CH$_2$*SiC$_2$H$_3$), 0.87 (t, 3H, *CH$_3$*(CH$_2$)$_4$CO$_2$), 1.30 (m, 18H, CH$_3$*(CH$_2$)$_2$*(CH$_2$)$_2$CO$_2$, OCH$_2$CH$_2$*CH$_2$*CH$_2$Si, SiCH$_2$*CH$_2$*CH$_2$Si), 1.61 (m, 4H, OCH$_2$*CH$_2$*CH$_2$CH$_2$Si, CH$_3$(CH$_2$)$_2$*CH$_2$*CH$_2$CO$_2$), 2.26 (t, 2H, CH$_3$(CH$_2$)$_2$CH$_2$*CH$_2$*CO$_2$), 4.04(t, 2H, O*CH$_2$*CH$_2$CH$_2$CH$_2$Si), 5.70 (m, 8H, Si*CH*CH$_2$), 6.05 (m, 16H, SiCH*CH$_2$*). ^{13}C NMR (CDCl$_3$) δ -5.22 (*Me*SiCHCH$_2$), -4.98 (Si*Me*CH$_2$CH$_2$CH$_2$Si), 13.6 (OCH$_2$CH$_2$CH$_2$*CH$_2$*Si), 14.0 (*CH$_3$*(CH$_2$)$_4$CO$_2$), 18.3 (SiCH$_2$*CH$_2$*CH$_2$Si), 19.0-18.4 (Si*CH$_2$*CH$_2$*CH$_2$*Si), 20.4 (OCH$_2$CH$_2$*CH$_2$*CH$_2$Si), 22.3 (CH$_3$*CH$_2$*(CH$_2$)$_3$CO$_2$), 24.7 (CH$_3$(CH$_2$)$_2$*CH$_2$*CH$_2$CO$_2$), 31.3 (CH$_3$CH$_2$*CH$_2$*CH$_2$CH$_2$CO$_2$), 32.5 (OCH$_2$*CH$_2$*CH$_2$CH$_2$Si), 34.4 (CH$_3$(CH$_2$)$_4$*CH$_2$*CO$_2$), 64.0 (O*CH$_2$*CH$_2$CH$_2$CH$_2$Si), 132.6 (SiCH*CH$_2$*), 137.1 (Si*CH*CH$_2$), 173.9 (CH$_3$(CH$_2$)$_4$*C*O$_2$). MS: $[M+H]^+$ = 942.85 Da. Anal. Calcd for $C_{51}H_{100}O_2Si_7$ (941.37 g/mol) %: C, 65.03, H, 10.70. Exp. %: C, 64.95, H, 10.62.

S.3.5. Anionic carbosilane dendrons with palmitic acid residue in the focal point

S.3.5.1. CH$_3$(CH$_2$)$_{14}$CO$_2$G$_1$(SSO$_3$Na)$_2$ ***(13).*** Compound **1** (0.50 g, 1.14 mmol), was dissolved in a THF/MeOH mixture (75:25) and a 0.5 mL aqueous solution containing sodium 3-mercapto-1-propanesulfonate (0.45 g, 2.51 mmol), was prepared. Over the dendron solution, a fourth of the aqueous solution and of photoinitiator 2,2 dimethoxy-2-phenylactenophenone, DMPA (0.06 g, 0.25 mmol), were added. The mixture was

deoxygenized and stirred under UV light for 1 h. The aqueous solution was added stepwise each 1 h with the photoinitiator. The total irradiation time was 4 h. Afterward, solvents were removed under vacuum and the products were dissolved in distilled water and purified by nanofiltration with cellulose membranes with a cutoff limit MWCO = 500−1000 Da. Finally, water was removed to get **13** as a white powder with high yield (0.82 g, 91%). Data for **13** are as follows. NMR (D_2O): ^{1}H NMR δ -0.13 (m, 3H, Si*Me*), 0.53 (m, 6H, $OCH_2CH_2CH_2\mathit{CH_2}Si$, $Si\mathit{CH_2}CH_2CH_2S$), 0.75 (m, 3H, $\mathit{CH_3}(CH_2)_{14}CO_2$), 1.15 (m, 26H, $CH_3\mathit{(CH_2)_{12}}(CH_2)_2CO_2$, $OCH_2CH_2\mathit{CH_2}CH_2Si$), 1.47 (m, 8H, $CH_3(CH_2)_{12}\mathit{CH_2}CH_2CO_2$, $OCH_2\mathit{CH_2}CH_2CH_2Si$, $SiCH_2\mathit{CH_2}CH_2S$), 1.89 (m, 4H, $SCH_2\mathit{CH_2}CH_2SO_3$,), 2.14 (m, 2H, $CH_3(CH_2)_{12}CH_2\mathit{CH_2}CO_2$), 2.44 (m, 4H, $SiCH_2CH_2\mathit{CH_2}S$), 2.52 (m, 4H, $S\mathit{CH_2}CH_2CH_2SO_3$), 2.85 (m, 4H, $SCH_2CH_2\mathit{CH_2}SO_3$), 3.92 (m, 2H, $O\mathit{CH_2}CH_2CH_2CH_2Si$). ^{13}C NMR ($D_2O$) δ -5.35 (Si*Me*), 12.8 ($Si\mathit{CH_2}CH_2CH_2S$), 13.2 ($OCH_2CH_2CH_2\mathit{CH_2}Si$), 13.92 ($\mathit{CH_3}$ $(CH_2)_{12}CH_2CH_2CO_2$), 20.1 ($OCH_2CH_2\mathit{CH_2}CH_2Si$), 23.9 ($SiCH_2\mathit{CH_2}CH_2S$), 24.5 ($SCH_2\mathit{CH_2}CH_2SO_3$), 24.9 ($CH_3(CH_2)_{10}\mathit{CH_2}CH_2CO_2$), 29.3-29-9 ($CH_3\mathit{(CH_2)_{12}}CH_2CH_2CO_2$), 30.29 ($S\mathit{CH_2}CH_2CH_2SO_3$), 32.3 ($OCH_2\mathit{CH_2}CH_2CH_2Si$), 34.1 ($CH_3(CH_2)_{12}CH_2\mathit{CH_2}CO_2$), 35.2 ($SiCH_2CH_2\mathit{CH_2}S$), 50.1 ($SCH_2CH_2\mathit{CH_2}SO_3$), 63.9 ($O\mathit{CH_2}CH_2CH_2CH_2Si$), 173.3 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2\mathit{C}O_2$). Anal. Calculated for $C_{33}H_{66}Na_2O_8S_4Si$ (793.20 g/mol) %: C, 49.97, H, 8.39. Exp. %: C, 49.95, H, 8.35.

S.3.5.2. $\mathit{CH_3(CH_2)_{14}CO_2G_2(SSO_3Na)_4}$ ***(14).*** Following the procedure described for compound **13**, compound **14** was obtained from **2** (2.0 g, 2.89 mmol), sodium 3-mercapto-1-propanesulfonate (2.16 g, 12.16 mmol) and DMPA (0.31 g, 1.21 mmol) as a white powder in high yield (3.8 g, 94%). Data for **14** are as follows. NMR (D_2O): ^{1}H NMR δ -0.11 (m, 9H, *Me*Si), 0.51 (m, 18H, $OCH_2CH_2CH_2\mathit{CH_2}Si$, $Si\mathit{CH_2}CH_2\mathit{CH_2}Si$, $Si\mathit{CH_2}CH_2CH_2S$), 0.76 (m, 3H, $\mathit{CH_3}(CH_2)_{14}CO_2$), 1.15 (m, 30H, $CH_3\mathit{(CH_2)_{12}}(CH_2)_2CO_2$, $OCH_2CH_2\mathit{CH_2}CH_2Si$, $SiCH_2\mathit{CH_2}CH_2Si$), 1.48 (m, 12H, $CH_3(CH_2)_{12}\mathit{CH_2}CH_2CO_2$, $OCH_2\mathit{CH_2}CH_2CH_2Si$, $SiCH_2\mathit{CH_2}CH_2S$), 1.89 (m, 8H, $SCH_2\mathit{CH_2}CH_2SO_3$), 2.14 (m, 2H, $CH_3(CH_2)_{12}CH_2\mathit{CH_2}CO_2$), 2.46 (m, 8H, $SiCH_2CH_2\mathit{CH_2}S$), 2.53 (m, 8H, $S\mathit{CH_2}CH_2CH_2SO_3$), 2.86(m, 8H, $SCH_2CH_2\mathit{CH_2}SO_3$), 3.92 (m, 2H, $O\mathit{CH_2}CH_2CH_2CH_2Si$). ^{13}C NMR ($D_2O$) δ -4.97 (Si*Me*), 13.1 ($Si\mathit{CH_2}$) 14.1 ($\mathit{CH_3}(CH_2)_{12}CH_2CH_2CO_2$), 18.5 ($SiCH_2\mathit{CH_2}CH_2Si$), 20.3 ($OCH_2CH_2\mathit{CH_2}CH_2Si$), 24.0 ($SiCH_2\mathit{CH_2}CH_2S$), 24.5 ($SCH_2\mathit{CH_2}CH_2SO_3$), 24.9 ($CH_3(CH_2)_{12}\mathit{CH_2}CH_2CO_2$), 29.4-29-8 ($CH_3\mathit{(CH_2)_{12}}CH_2CH_2CO_2$), 30.30 ($S\mathit{CH_2}CH_2CH_2SO_3$), 31.9 ($OCH_2\mathit{CH_2}CH_2CH_2Si$),

34.1 ($CH_3(CH_2)_{12}CH_2\mathit{CH_2}CO_2$), 35.3 ($SiCH_2CH_2\mathit{CH_2}S$), 50.1 ($SCH_2CH_2\mathit{CH_2}SO_3$), 63.9 ($O\mathit{CH_2}CH_2CH_2CH_2Si$), 173.5 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2\mathit{C}O_2$). Anal. Calculated for $C_{53}H_{108}Na_4O_{14}S_8Si_3$ (1402.15 g/mol) %: C, 45.40, H, 7.76. Exp. %: C, 45.35, H, 7.60.

S.3.5.3. $\mathit{CH_3(CH_2)_{14}CO_2G_3(SSO_3Na)_8}$ ***(15).*** Following the procedure described for compound **13**, compound **15** was obtained from **3** (2.0 g, 1.67 mmol), sodium 3-mercapto-1-propanesulfonate (2.44 g, 13.7 mmol) and DMPA (0.35 g, 1.37 mmol) as a white powder in high yield (4.0 g, 91%). Data for **15** are as follows. NMR (D_2O): ^{1}H-NMR δ -0.10 (m, 21H, *Me*Si), 0.51 (m, 42H, $OCH_2CH_2CH_2\mathit{CH_2}Si$, $Si\mathit{CH_2}CH_2\mathit{CH_2}Si$, $Si\mathit{CH_2}CH_2CH_2S$), 0.76 (m, 3H, $\mathit{CH_3}(CH_2)_{14}CO_2$), 1.16 (m, 38H, $CH_3\mathit{(CH_2)_{12}}(CH_2)_2CO_2$, $OCH_2CH_2\mathit{CH_2}CH_2Si$, $SiCH_2\mathit{CH_2}CH_2Si$), 1.48 (m, 20H, $CH_3(CH_2)_{12}\mathit{CH_2}CH_2CO_2$, $OCH_2\mathit{CH_2}CH_2CH_2Si$, $SiCH_2\mathit{CH_2}CH_2S$), 1.88 (m, 16H, $SCH_2\mathit{CH_2}CH_2SO_3$), 2.14 (m, 2H, $CH_3(CH_2)_{12}CH_2\mathit{CH_2}CO_2$), 2.46 (m, 16H, $SiCH_2CH_2\mathit{CH_2}S$), 2.53 (m, 16H, $S\mathit{CH_2}CH_2CH_2SO_3$), 2.85 (m, 16H, $SCH_2CH_2\mathit{CH_2}SO_3$), 3.92 (m, 2H, $O\mathit{CH_2}CH_2CH_2CH_2Si$). ^{13}C NMR ($D_2O$) δ -4.86 (Si*Me*), 13.2-13.5 ($Si\mathit{CH_2}$, $\mathit{CH_2}Si$) 14.1 ($\mathit{CH_3}(CH_2)_{12}CH_2CH_2CO_2$), 18.6 ($SiCH_2\mathit{CH_2}CH_2Si$), 20.3 ($OCH_2CH_2\mathit{CH_2}CH_2Si$), 24.1 ($SiCH_2\mathit{CH_2}CH_2S$), 24.5 ($SCH_2\mathit{CH_2}CH_2SO_3$), 24.9 ($CH_3(CH_2)_{10}\mathit{CH_2}CH_2CO_2$), 29.4-29-8 ($CH_3\mathit{(CH_2)_{12}}CH_2CH_2CO_2$), 30.30 ($S\mathit{CH_2}CH_2CH_2SO_3$), 31.9 ($OCH_2\mathit{CH_2}CH_2CH_2Si$), 34.1 ($CH_3(CH_2)_{12}CH_2\mathit{CH_2}CO_2$), 35.3 ($SiCH_2CH_2\mathit{CH_2}S$), 50.1 ($SCH_2CH_2\mathit{CH_2}SO_3$), 63.9 ($O\mathit{CH_2}CH_2CH_2CH_2Si$), 173.5 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2\mathit{C}O_2$). Anal. Calculated for $C_{93}H_{192}Na_8O_{26}S_{16}Si_7$ (2620.06 g/mol) %: C, 42.63, H, 7.39. Exp. %: C, 42.50, H, 7.25.

S.3.6. Anionic carbosilane dendrons with hexanoic acid residue in the focal point

S.3.6.1. $\mathit{CH_3(CH_2)_4CO_2G_1(SSO_3Na)_2}$ ***(16).*** Following the procedure described for compound **13**, compound **16** was obtained from **7** (1.0 g, 3.36 mmol), sodium 3-mercapto-1-propanesulfonate (1.31 g, 7.4 mmol) and DMPA (0.19 g, 0.74 mmol) as a white powder in high yield (2.0 g, 91%). Data for **16** are as follows. NMR (D_2O): ^{1}H NMR δ -0.05 (m, 3H, Si*Me*), 0.47 (m, 6H, $OCH_2CH_2CH_2\mathit{CH_2}Si$, $Si\mathit{CH_2}CH_2CH_2S$), 0.75 (m, 3H, $\mathit{CH_3}(CH_2)_4CO_2$), 1.16 (m, 6H, $CH_3\mathit{(CH_2)_2}(CH_2)_2CO_2$, $OCH_2CH_2\mathit{CH_2}CH_2Si$), 1.46 (m, 8H, $CH_3(CH_2)_2\mathit{CH_2}CH_2CO_2$, $OCH_2\mathit{CH_2}CH_2CH_2Si$, $SiCH_2\mathit{CH_2}CH_2S$), 1.87 (m, 4H, $SCH_2\mathit{CH_2}CH_2SO_3$), 2.13 (m, 2H, $CH_3(CH_2)_2CH_2\mathit{CH_2}CO_2$), 2.43 (m, 4H, $SiCH_2CH_2\mathit{CH_2}S$), 2.50 (m, 4H, $S\mathit{CH_2}CH_2CH_2SO_3$), 2.81 (m, 4H, $SCH_2CH_2\mathit{CH_2}SO_3$), 3.91 (m, 2H, $O\mathit{CH_2}CH_2CH_2CH_2Si$). ^{13}C NMR ($D_2O$) δ -5.37 (Si*Me*), 12.8

(Si*CH*$_2$CH$_2$CH$_2$S), 13.1 (OCH$_2$CH$_2$CH$_2$*CH*$_2$Si), 13.8 (*CH*$_3$(CH$_2$)$_2$CH$_2$CH$_2$CO$_2$), 22.1 (OCH$_2$CH$_2$*CH*$_2$CH$_2$Si), 23.9 (SiCH$_2$*CH*$_2$CH$_2$S), 24.5 (SCH$_2$*CH*$_2$CH$_2$SO$_3$), 24.7 (CH$_3$(CH$_2$)$_2$*CH*$_2$CH$_2$CO$_2$), 29.3-29-9 (CH$_3$*(CH*$_2$*)*$_2$CH$_2$CH$_2$CO$_2$), 30.3 (S*CH*$_2$CH$_2$CH$_2$SO$_3$), 32.2 (OCH$_2$*CH*$_2$CH$_2$CH$_2$Si), 34.1 (CH$_3$(CH$_2$)$_2$CH$_2$*CH*$_2$CO$_2$), 35.1 (SiCH$_2$CH$_2$*CH*$_2$S), 50.1 (SCH$_2$CH$_2$*CH*$_2$SO$_3$), 63.9 (O*CH*$_2$CH$_2$CH$_2$CH$_2$Si), 173.3 (CH$_3$CH$_2$CH$_2$(CH$_2$)$_{10}$CH$_2$CH$_2$*C*O$_2$). Anal. Calculated for $C_{23}H_{46}Na_2O_8S_4Si$ (652.16 g/mol) %: C, 42.31, H, 7.10. Exp. %: C, 42.15, H, 7.05.

S.3.6.2. CH$_3$*(CH*$_2$*)*$_4$*CO*$_2$*G*$_2$*(SSO*$_3$*Na)*$_4$ ***(17).*** Following the procedure described for compound **13**, compound **17** was obtained from **8** (1.0 g, 1.82 mmol), sodium 3-mercapto-1-propanesulfonate (1.36 g, 7.6 mmol) and DMPA (0.19 g, 0.76 mmol) as a white powder in high yield (2.03 g, 88%). Data for **17** are as follows. NMR (D$_2$O): ^{1}H NMR δ -0.11 (m, 9H, *Me*Si), 0.50 (m, 18H, OCH$_2$CH$_2$CH$_2$*CH*$_2$Si, Si*CH*$_2$CH$_2$*CH*$_2$Si, Si*CH*$_2$CH$_2$CH$_2$S), 0.77 (m, 3H, *CH*$_3$(CH$_2$)$_4$CO$_2$), 1.20 (m, 10H, CH$_3$*(CH*$_2$*)*$_2$(CH$_2$)$_2$CO$_2$, OCH$_2$CH$_2$*CH*$_2$CH$_2$Si, SiCH$_2$*CH*$_2$CH$_2$Si), 1.47 (m, 12H, CH$_3$(CH$_2$)$_2$*CH*$_2$CH$_2$CO$_2$, OCH$_2$*CH*$_2$CH$_2$CH$_2$Si, SiCH$_2$*CH*$_2$CH$_2$S), 1.88 (m, 8H, SCH$_2$*CH*$_2$CH$_2$SO$_3$), 2.18 (m, 2H, CH$_3$(CH$_2$)$_2$CH$_2$*CH*$_2$CO$_2$), 2.45 (m, 8H, SiCH$_2$CH$_2$*CH*$_2$S), 2.52 (m, 8H, S*CH*$_2$CH$_2$CH$_2$SO$_3$), 2.84(m, 8H, SCH$_2$CH$_2$*CH*$_2$SO$_3$), 3.93 (m, 2H, O*CH*$_2$CH$_2$CH$_2$CH$_2$Si). ^{13}C NMR (D$_2$O) δ -5.24 (Si*Me*), 13.7 (Si*CH*$_2$) 13.9 (*CH*$_3$ (CH$_2$)$_2$CH$_2$CH$_2$CO$_2$), 18.2 (SiCH$_2$*CH*$_2$CH$_2$Si), 20.0 (OCH$_2$CH$_2$*CH*$_2$CH$_2$Si), 24.0 (SiCH$_2$*CH*$_2$CH$_2$S), 24.4 (SCH$_2$*CH*$_2$CH$_2$SO$_3$), 24.9 (CH$_3$(CH$_2$)$_2$*CH*$_2$CH$_2$CO$_2$), 30.9 (S*CH*$_2$CH$_2$CH$_2$SO$_3$), 32.9 (OCH$_2$*CH*$_2$CH$_2$CH$_2$Si), 35.1 (CH$_3$(CH$_2$)$_2$CH$_2$*CH*$_2$CO$_2$), 35.8 (SiCH$_2$CH$_2$*CH*$_2$S), 50.0 (SCH$_2$CH$_2$*CH*$_2$SO$_3$), 61.5 (O*CH*$_2$CH$_2$CH$_2$CH$_2$Si), 173.5 (CH$_3$CH$_2$CH$_2$(CH$_2$)$_{10}$CH$_2$CH$_2$*C*O$_2$). Anal. Calculated for $C_{43}H_{88}Na_4O_{14}S_8Si_3$ (1261.98 g/mol) %: C, 40.93, H, 7.03. Exp. %: C, 40.70, H, 6.98.

S.3.6.3. CH$_3$*(CH*$_2$*)*$_4$*CO*$_2$*G*$_3$*(SSO*$_3$*Na)*$_8$ ***(18).*** Following the procedure described for compound **13**, compound **18** was obtained from **9** (1.0 g, 0.94 mmol), sodium 3-mercapto-1-propanesulfonate (1.38 g, 7.78 mmol) and DMPA (0.19 g, 0.78 mmol) as a white powder in high yield (1.9 g, 81%). Data for **18** are as follows. NMR (D$_2$O): ^{1}H-NMR δ -0.10 (m, 21H, *Me*Si), 0.50 (m, 42H, OCH$_2$CH$_2$CH$_2$*CH*$_2$Si, Si*CH*$_2$CH$_2$*CH*$_2$Si, Si*CH*$_2$CH$_2$CH$_2$S), 0.79 (m, 3H, *CH*$_3$(CH$_2$)$_4$CO$_2$), 1.21 (m, 18H, CH$_3$*(CH*$_2$*)*$_2$(CH$_2$)$_2$CO$_2$, OCH$_2$CH$_2$*CH*$_2$CH$_2$Si, SiCH$_2$*CH*$_2$CH$_2$Si), 1.48 (m, 20H, CH$_3$(CH$_2$)$_{12}$*CH*$_2$CH$_2$CO$_2$, OCH$_2$*CH*$_2$CH$_2$CH$_2$Si, SiCH$_2$*CH*$_2$CH$_2$S), 1.88 (m, 16H, SCH$_2$*CH*$_2$CH$_2$SO$_3$), 2.14 (m, 2H,

$CH_3(CH_2)_2CH_2CH_2CO_2$), 2.45 (m, 16H, $SiCH_2CH_2CH_2S$), 2.52 (m, 16H, $SCH_2CH_2CH_2SO_3$), 2.84 (m, 16H, $SCH_2CH_2CH_2SO_3$), 3.94 (m, 2H, $OCH_2CH_2CH_2CH_2Si$). ^{13}C NMR (D_2O) δ -4.99 (Si*Me*), 13.1-13.2 (Si*CH₂*, *CH₂*Si) 13.9 (*CH₃*$(CH_2)_2CH_2CH_2CO_2$), 18.6 ($SiCH_2CH_2CH_2Si$), 20.2 ($OCH_2CH_2CH_2CH_2Si$), 24.0 ($SiCH_2CH_2CH_2S$), 24.3 ($SCH_2CH_2CH_2SO_3$), 24.6 ($CH_3(CH_2)_2CH_2CH_2CO_2$), 30.30 ($SCH_2CH_2CH_2SO_3$), 31.1 ($OCH_2CH_2CH_2CH_2Si$), 34.0 ($CH_3(CH_2)_2CH_2CH_2CO_2$), 35.2 ($SiCH_2CH_2CH_2S$), 50.1 ($SCH_2CH_2CH_2SO_3$), 61.7 ($OCH_2CH_2CH_2CH_2Si$), 178.1 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$). Anal. Calculated for $C_{83}H_{172}Na_8O_{26}S_{16}Si_7$ (2479.79 g/mol) %: C, 40.20, H, 6.99. Exp. %: C, 40.16, H, 6.77.

S.3.7. NMe_2HCl-terminated carbosilane dendrons with palmitic acid residue in the focal point

S.3.7.1. $CH_3(CH_2)_{14}CO_2G_1(NMe_2HCl)_2$ ***(19).*** Compound **4** (1.0 g, 2.44 mmol), 2-(dimethylamino)ethanethiol hydrochloride (0.76 g, 5.38 mmol), 5 mol % of DMPA (0.07 g, 0.26 mmol), and a THF/MeOH (75:25) solution (5ml) were combined. The reaction mixture was deoxygenated and irradiated for 2 h. Another 5 % mol of DMPA was added, and the reaction mixture was was irradied for 2 h again and monitored by ^1H NMR. The products were dissolved in distilled water and purified by nanofiltration with cellulose membranes with a cutoff limit MWCO = 500−1000 Da. Finally, water was removed to get **19** as a white powder with hight yield (1.5 g, 88%). Data for **19** are as follows. NMR (D_2O): ^1H NMR δ 0.00 (s, 3H, Si*Me*), 0.54 (t, 2H, $OCH_2CH_2CH_2CH_2Si$), 0.84 (t, 3H, *CH₃*$(CH_2)_{14}CO_2$), 0.90, (t, 4H, Si*CH₂*CH_2S), 1.25 (s, 24H, CH_3*(CH₂)₁₂*$(CH_2)_2CO_2$), 1.30 (m, 2H, $OCH_2CH_2CH_2CH_2Si$), 1.58 (m, 4H, $OCH_2CH_2CH_2CH_2Si$, $CH_3(CH_2)_{12}CH_2CH_2CO_2$), 2.24 (t, 2H, $CH_3(CH_2)_{12}CH_2CH_2CO_2$), 2.62 (t, 4H, $SiCH_2CH_2S$), 2.87 (s, 12H, $SCH_2CH_2NMe_2HCl$), 3.0 (m, 4H, $SCH_2CH_2NMe_2HCl$), 3,27 (m, 4H, $SCH_2CH_2NMe_2HCl$), 4.00 (t, 2H, $OCH_2CH_2CH_2CH_2Si$). ^{13}C NMR (D_2O) δ -5.4 (Si*Me*), 12.5 ($OCH_2CH_2CH_2CH_2Si$), 13.4 (Si*CH₂*CH_2S), 14.0 (*CH₃*$CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 20.0 ($OCH_2CH_2CH_2CH_2Si$), 22.6 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 24.3 ($SCH_2CH_2NMe_2HCl$), 24.9 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 26.0 ($SiCH_2CH_2S$), 29.0-29.6 ($CH_3CH_2CH_2$*(CH₂)₁₀*$CH_2CH_2CO_2$), 31.8 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 32.2 ($OCH_2CH_2CH_2CH_2Si$), 34.2 ($CH_3CH_2CH_2$ $(CH_2)_{10}CH_2CH_2CO_2$), 41.4 ($SCH_2CH_2NMe_2HCl$), 55.3 ($SCH_2CH_2NMe_2HCl$), 63.7 ($OCH_2CH_2CH_2CH_2Si$), 173.7

($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$). Anal. Calculated for $C_{33}H_{72}Cl_2N_2O_2S_2Si$ (692.05 g/mol) %: C, 57.27, H, 10.49, N, 4.51. Exp. %: C, 57.15, H, 10.35, N, 4.39.

S.3.7.2. $CH_3(CH_2)_{14}CO_2G_2(NMe_2HCl)_4$ ***(20).*** Following the procedure described for compound **19**, compound **20** was obtained from **5** (1.0 g, 1.58 mmol), 2-(dimethylamino)ethanethiol hydrochloride (0.94 g, 6.64 mmol), 5 mol % of DMPA (0.09 g, 0.33 mmol) as a white powder with hight yield (1.7 g, 84%). Data for **20** are as follows. NMR (D_2O): ^{1}H NMR δ -0.11 (s, 6H, *Me*Si), -0.22 (s, 3H, Si*Me*$CH_2CH_2CH_2Si$), 0.43 (m, 10H, $OCH_2CH_2CH_2CH_2Si$, $SiCH_2CH_2CH_2Si$), 0.71 (t, 4H, $SiCH_2CH_2CH_2Si$), 0.73 (m, 11H, $CH_3(CH_2)_{14}CO_2$, $SiCH_2CH_2S$), 1.10 (s, 24H, $CH_3(CH_2)_{12}(CH_2)_2CO_2$), 1.20 (m, 6H, $OCH_2CH_2CH_2CH_2Si$, $SiCH_2CH_2CH_2Si$), 1.50 (m, 4H, $OCH_2CH_2CH_2CH_2Si$, $CH_3(CH_2)_{12}CH_2CH_2CO_2$), 2.11 (t, 2H, $CH_3(CH_2)_{12}CH_2CH_2CO_2$), 2.53 (t, 8H, $SiCH_2CH_2S$), 2.74 (s, 24H, $SCH_2CH_2NMe_2HCl$), 2.83 (m, 8H, $SCH_2CH_2NMe_2HCl$), 3,18 (m, 8H, $SCH_2CH_2NMe_2HCl$), 3.88 (t, 2H, $OCH_2CH_2CH_2CH_2Si$). ^{13}C NMR (D_2O) δ -5.4 (Si*Me*), 13.2 ($OCH_2CH_2CH_2CH_2Si$), 13,7 ($SiCH_2CH_2S$), 14.1 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 17.9 ($SiCH_2CH_2CH_2Si$), 18.3-18.2 ($SiCH_2CH_2CH_2Si$), 19.9 ($OCH_2CH_2CH_2CH_2Si$), 22.3 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 24.6 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 25.4 ($SCH_2CH_2NMe_2HCl$), 27.3 ($SiCH_2CH_2S$), 28.7-29.3 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 31.9 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 32.0 ($OCH_2CH_2CH_2CH_2Si$), 34.3 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 42.4 ($SCH_2CH_2NMe_2HCl$), 56.8 ($SCH_2CH_2NMe_2HCl$), 63.6 ($OCH_2CH_2CH_2CH_2Si$), 173.9 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$). Anal. Calculated for $C_{53}H_{120}Cl_4N_4O_2S_4Si_3$ (1199.87 g/mol) %: C, 53.05, H, 10.08, N, 5.30. Exp. %: C, 52.95, H, 10.02, N, 5.27.

S.3.7.3. $CH_3(CH_2)_{14}CO_2G_3(NMe_2HCl)_8$ ***(21).*** Following the procedure described for compound **19**, compound **21** was obtained from **6** (1.0 g, 9.22 mmol), 2-(dimethylamino)ethanethiol hydrochloride (1.1 g, 7.56 mmol), 5 mol % of DMPA (0.1 g, 0.36 mmol) as a white powder with hight yield (1.8 g, 89%). Data for **21** are as follows. NMR (D_2O): ^{1}H NMR δ -0.05 (s, 9H, Si*Me*$CH_2CH_2CH_2Si$), 0.10 (s, 12H, *Me*Si), 0.53 (m, 26H, $OCH_2CH_2CH_2CH_2Si$, $SiCH_2CH_2CH_2Si$), 0.85 (m, 19H, $CH_3(CH_2)_{14}CO_2$, $SiCH_2CH_2S$), 1.29 (s, 24H, $CH_3(CH_2)_{12}(CH_2)_2CO_2$), 1.35 (m, 14H, $OCH_2CH_2CH_2CH_2Si$, $SiCH_2CH_2CH_2Si$), 1.70 (m, 4H, $OCH_2CH_2CH_2CH_2Si$, $CH_3(CH_2)_{12}CH_2CH_2CO_2$), 2.26 (t, 2H, $CH_3(CH_2)_{12}CH_2CH_2CO_2$), 2.56 (t, 8H,

SiCH$_2$*CH$_2$*S), 2.74 (s, 48H, SCH$_2$CH$_2$N*Me$_2$*HCl), 2.83 (m, 16H, S*CH$_2$*CH$_2$NMe$_2$HCl), 3,18 (m, 16H, SCH$_2$*CH$_2$*NMe$_2$HCl), 3.88 (t, 2H, O*CH$_2$*CH$_2$CH$_2$CH$_2$Si). ^{13}C NMR (D$_2$O) δ -5.7 (Si*Me*), -5.2 (*MeSi*), 12.9 (OCH$_2$CH$_2$CH$_2$*CH$_2$*Si), 13.7 (OCH$_2$CH$_2$CH$_2$*CH$_2$*Si), 14.1 (*CH$_3$*CH$_2$CH$_2$(CH$_2$)$_{10}$CH$_2$CH$_2$CO$_2$), 17.9 (SiCH$_2$*CH$_2$*CH$_2$Si), 18.3-18.2 (Si*CH$_2$*CH$_2$*CH$_2$*Si), 19.6 (OCH$_2$CH$_2$*CH$_2$*CH$_2$Si), 22.3 (CH$_3$*CH$_2$*CH$_2$(CH$_2$)$_{10}$CH$_2$CH$_2$CO$_2$), 24.3 (CH$_3$CH$_2$CH$_2$(CH$_2$)$_{10}$*CH$_2$*CH$_2$CO$_2$), 25.0 (S*CH$_2$*CH$_2$NMe$_2$HCl), 26.0 (SiCH$_2$*CH$_2$*S), 28.7-29.3 (CH$_3$CH$_2$CH$_2$*(CH$_2$)$_{10}$*CH$_2$CH$_2$CO$_2$), 31.9 (CH$_3$CH$_2$*CH$_2$*(CH$_2$)$_{10}$CH$_2$CH$_2$CO$_2$), 32.2 (OCH$_2$*CH$_2$*CH$_2$CH$_2$Si), 34.3 (CH$_3$CH$_2$CH$_2$(CH$_2$)$_{10}$CH$_2$*CH$_2$*CO$_2$), 41.4 (SCH$_2$CH$_2$N*Me$_2$*HCl), 55.8 (SCH$_2$*CH$_2$*NMe$_2$HCl), 63.6 (O*CH$_2$*CH$_2$CH$_2$CH$_2$Si), 173.9 (CH$_3$CH$_2$CH$_2$(CH$_2$)$_{10}$CH$_2$CH$_2$*C*O$_2$). Anal. Calculated for C$_{93}$H$_{216}$Cl$_8$N$_8$O$_2$S$_8$Si$_7$ (2215.50 g/mol) %: C, 50.42, H, 9.83, N, 5.80. Exp. %: C, 50.30, H, 9.75, N, 5.75.

S.3.8. NMe$_2$HCl-terminated carbosilane dendrons with hexanoic acid residue in the focal point

S.3.8.1. CH$_3$(CH$_2$)$_4$CO$_2$G$_1$(NMe$_2$HCl)$_2$ ***(22).*** Following the procedure described for compound **19**, compound **22** was obtained from **10** (1.0 g, 3.72 mmol), 2-(dimethylamino)ethanethiol hydrochloride (1.16 g, 8.19 mmol), 5 mol % of DMPA (0.21 g, 0.082 mmol) as a white powder with hight yield (1.8 g, 90%). Data for **22** are as follows. NMR (D$_2$O): ^{1}H NMR δ -0.07 (s, 3H, Si*Me*), 0.54 (m, 2H, OCH$_2$CH$_2$CH$_2$*CH$_2$*Si), 0.86 (m, 3H, *CH$_3$*(CH$_2$)$_4$CO$_2$), 0.90, (m, 4H, Si*CH$_2$*CH$_2$S), 1.26 (s, 6H, CH$_3$*(CH$_2$)$_2$*(CH$_2$)$_2$CO$_2$, OCH$_2$CH$_2$*CH$_2$*CH$_2$Si), 1.59 (m, 4H, OCH$_2$*CH$_2$*CH$_2$CH$_2$Si), 2.26 (t, 2H, CH$_3$(CH$_2$)$_2$*CH$_2$*CH$_2$CO$_2$), 2.62 (t, 2H, CH$_3$(CH$_2$)$_2$CH$_2$*CH$_2$*CO$_2$), 2.80 (m, 16H, SCH$_2$CH$_2$N*Me$_2$*HCl, SiCH$_2$*CH$_2$*S), 3.0 (m, 4H, S*CH$_2$*CH$_2$NMe$_2$HCl), 3,28 (m, 4H, SCH$_2$*CH$_2$*NMe$_2$HCl), 4.0 (t, 2H, O*CH$_2$*CH$_2$CH$_2$CH$_2$Si). ^{13}C NMR (D$_2$O) δ -5.4 (Si*Me*), 12.5 (OCH$_2$CH$_2$CH$_2$*CH$_2$*Si), 13.5 (Si*CH$_2$*CH$_2$S), 14.0 (*CH$_3$*(CH$_2$)$_2$CH$_2$CH$_2$CO$_2$), 20.0 (OCH$_2$CH$_2$*CH$_2$*CH$_2$Si), 24.3 (S*CH$_2$*CH$_2$NMe$_2$HCl), 24.9 (CH$_3$(CH$_2$)$_2$*CH$_2$*CH$_2$CO$_2$), 26.0 (SiCH$_2$*CH$_2$*S), 32.2 (OCH$_2$*CH$_2$*CH$_2$CH$_2$Si), 34.2 (CH$_3$(CH$_2$)$_2$CH$_2$*CH$_2$*CO$_2$), 41.4 (SCH$_2$CH$_2$N*Me$_2$*HCl), 55.3 (SCH$_2$*CH$_2$*NMe$_2$HCl), 63.7 (O*CH$_2$*CH$_2$CH$_2$CH$_2$Si), 173.7 (CH$_3$(CH$_2$)$_2$CH$_2$CH$_2$*C*O$_2$). Anal. Calculated for C$_{23}$H$_{52}$Cl$_2$N$_2$O$_2$S$_2$Si (551.79 g/mol) %: C, 50.06, H, 9.50, N, 5.83. Exp. %: C, 50.02, H, 9.45, N, 5.79.

S.3.8.2. $CH_3(CH_2)_4CO_2G_2(NMe_2HCl)_4$ ***(23).*** Following the procedure described for compound **19**, compound **23** was obtained from **11** (1.5 g, 3.04 mmol), 2-(dimethylamino)ethanethiol hydrochloride (1.81 g, 12.8 mmol), 5 mol % of DMPA (0.32 g, 1.28 mmol) as a white powder with hight yield (3.0 g, 93%). Data for **23** are as follows. NMR (D_2O): ^{1}H NMR δ 0.01 (s, 6H, *Me*Si), -0.07 (s, 3H, Si*Me*$CH_2CH_2CH_2Si$), 0.56 (m, 10H, $OCH_2CH_2CH_2$*CH_2*Si, Si*CH_2*CH_2*CH_2*Si), 0.73 (m, 4H, $SiCH_2$*CH_2*CH_2Si), 0.86 (m, 11H, *CH_3*$(CH_2)_4CO_2$, Si*CH_2*CH_2S), 1.10 (m, 24H, CH_3*$(CH_2)_2$*$(CH_2)_2CO_2$), 1.20 (m, 6H, OCH_2CH_2*CH_2*CH_2Si, $SiCH_2$*CH_2*CH_2Si), 1.50 (m, 4H, OCH_2*CH_2*CH_2CH_2Si, $CH_3(CH_2)_2$*CH_2*CH_2CO_2), 2.11 (m, 2H, $CH_3(CH_2)_2CH_2$*CH_2*CO_2), 2.59 (m, 8H, $SiCH_2$*CH_2*S), 2.74 (s, 24H, SCH_2CH_2N*Me_2*HCl), 2.83 (m, 8H, S*CH_2*CH_2NMe_2HCl), 3,18 (m, 8H, SCH_2*CH_2*NMe_2HCl), 3.88 (t, 2H, O*CH_2*$CH_2CH_2CH_2Si$). ^{13}C NMR (D_2O) δ -5.7 y -5.4 (Si*Me*), 13.2 ($OCH_2CH_2CH_2$*CH_2*Si), 13,7 (Si*CH_2*CH_2S), 14.1 (*CH_3*$(CH_2)_2CH_2CH_2CO_2$), 17.9 ($SiCH_2$*CH_2*CH_2Si), 18.3-18.2 (Si*CH_2*CH_2*CH_2*Si), 19.9 (OCH_2CH_2*CH_2*CH_2Si), 24.6 ($CH_3(CH_2)_2$*CH_2*CH_2CO_2), 25.4 (S*CH_2*CH_2NMe_2HCl), 27.3 ($SiCH_2$*CH_2*S), 32.0 (OCH_2*CH_2*CH_2CH_2Si), 34.3 ($CH_3(CH_2)_2CH_2$*CH_2*CO_2), 42.4 (SCH_2CH_2N*Me_2*HCl), 56.8 (SCH_2*CH_2*NMe_2HCl), 63.6 (O*CH_2*$CH_2CH_2CH_2Si$), 173.9 ($CH_3(CH_2)_2CH_2CH_2$*C*O_2). Anal. Calculated for $C_{43}H_{100}Cl_4N_4O_2S_4Si_3$ (1059.60 g/mol) %: C, 48.74, H, 9.51, N, 6.10. Exp. %: C, 48.60, H, 9.45, N, 6.08.

S.3.8.3. $CH_3(CH_2)_4CO_2G_3(NMe_2HCl)_8$ ***(24).*** Following the procedure described for compound **19**, compound **24** was obtained from **12** (1.5 g, 1.59 mmol), 2-(dimethylamino)ethanethiol hydrochloride (1.85 g, 13.0 mmol), 5 mol % of DMPA (0.33 g, 1.3 mmol) as a white powder with hight yield (2.9 g, 90%). Data for **24** are as follows. NMR (D_2O): ^{1}H NMR δ -0.05 (s, 9H, Si*Me*$CH_2CH_2CH_2Si$), 0.01 (s, 12H, *Me*Si), 0.53 (m, 26H, $OCH_2CH_2CH_2$*CH_2*Si, Si*CH_2*CH_2*CH_2*Si), 0.85 (m, 19H, *CH_3*$(CH_2)_{14}CO_2$, Si*CH_2*CH_2S), 1.29 (m, 12H, OCH_2CH_2*CH_2*CH_2Si, $SiCH_2$*CH_2*CH_2Si), 1.70 (m, 4H, OCH_2*CH_2*CH_2CH_2Si, $CH_3(CH_2)_2$*CH_2*CH_2CO_2), 2.26 (m, 2H, $CH_3(CH_2)_2CH_2$*CH_2*CO_2), 2.56 (m, 8H, $SiCH_2$*CH_2*S), 2.74 (s, 48H, SCH_2CH_2N*Me_2*HCl), 2.83 (m, 16H, S*CH_2*CH_2NMe_2HCl), 3,18 (m, 16H, SCH_2*CH_2*NMe_2HCl), 3.88 (t, 2H, O*CH_2*$CH_2CH_2CH_2Si$). ^{13}C NMR (D_2O) δ -5.7 (Si*Me*), -5.2 (*MeSi*), 12.9 ($OCH_2CH_2CH_2$*CH_2*Si), 13.7 ($OCH_2CH_2CH_2$*CH_2*Si), 14.1 (*CH_3*$(CH_2)_2CH_2CH_2CO_2$), 17.9 ($SiCH_2$*CH_2*CH_2Si), 18.3-18.2 (Si*CH_2*CH_2*CH_2*Si), 19.6 (OCH_2CH_2*CH_2*CH_2Si), 24.3 ($CH_3(CH_2)_2$*CH_2*CH_2CO_2), 25.0 (S*CH_2*CH_2NMe_2HCl), 26.0 ($SiCH_2$*CH_2*S),32.2 (OCH_2*CH_2*CH_2CH_2Si), 34.3 ($CH_3(CH_2)_2CH_2$*CH_2*CO_2), 41.4

($SCH_2CH_2NMe_2HCl$), 55.8 ($SCH_2CH_2NMe_2HCl$), 63.6 ($OCH_2CH_2CH_2CH_2Si$), 173.9 ($CH_3(CH_2)_2CH_2CH_2CO_2$). Anal. Calculated for $C_{83}H_{196}Cl_8N_8O_2S_8Si_7$ (2075.23 g/mol) %: C, 48.04, H, 9.52, N, 6.25. Exp. %: C, 48.00, H, 9.38, N, 6.23.

S.3.9. NMe_2-terminated carbosilane dendrons with palmitic acid residue in the focal point

S.3.9.1. $CH_3(CH_2)_{14}CO_2G_1(NMe_2)_2$ ***(25).*** The compound **19** (1.5 g, 2.16 mmol) was treated with a 1M solution of NaOH and extracted with ethyl ether (3x20 ml). The organic phase was dried with magnesium sulfate for 2 h, filtered and the solvent removed to vacuum leading to compound **25** as yellow oil (1.34 g, 99%). Data for **25** are as follows. NMR ($CDCl_3$): ^{1}H NMR δ -0.09 (s, 3H, Si*Me*), 0.43 (t, 2H, $OCH_2CH_2CH_2CH_2Si$), 0.84 (m, 7H, $CH_3(CH_2)_{14}CO_2$, $SiCH_2CH_2S$), 1.25 (s, 24H, $CH_3(CH_2)_{12}(CH_2)_2CO_2$), 1.30 (m, 2H, $OCH_2CH_2CH_2CH_2Si$), 1.58 (m, 4H, $OCH_2CH_2CH_2CH_2Si$, $CH_3(CH_2)_{12}CH_2CH_2CO_2$), 2.24 (s, 14H, $SCH_2CH_2NMe_2$, $CH_3(CH_2)_{12}CH_2CH_2CO_2$), 2.48 (m, 4H, $SCH_2CH_2NMe_2$), 2.57 (m, 4H, $SCH_2CH_2NMe_2$), 2.62 (m, 4H, $SiCH_2CH_2S$), 4.00 (t, 2H, $OCH_2CH_2CH_2CH_2Si$). ^{13}C NMR ($CDCl_3$) δ -5.6 (Si*Me*), 12.9 ($OCH_2CH_2CH_2CH_2Si$), 13.9 ($SiCH_2CH_2S$), 14.2 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 20.0 ($OCH_2CH_2CH_2CH_2Si$), 22.4 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 23.3 ($SCH_2CH_2NMe_2$), 24.7 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 29.4-28.9 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 29.4 ($SiCH_2CH_2S$), 31.6 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 33.0 ($OCH_2CH_2CH_2CH_2Si$), 34.2 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 45.0 ($SCH_2CH_2NMe_2$), 58.9 ($SCH_2CH_2NMe_2$), 63.7 ($OCH_2CH_2CH_2CH_2Si$), 173.7 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$). Anal. Calculated for $C_{33}H_{70}N_2O_2S_2Si$ (619.14 g/mol) %: C, 64.02, H, 11.40, N, 4.52. Exp. %: C, 63.95, H, 11.32, N, 4.50.

S.3.9.2. $CH_3(CH_2)_{14}CO_2G_2(NMe_2)_4$ ***(26).*** Following the procedure described for compound **25**, compound **26** was obtained from **20** (1.7 g, 1.41 mmol), as a white powder with hight yield (1.38 g, 99%). Data for **(26)** are as follows. NMR ($CDCl_3$): ^{1}H NMR δ -0.1 (s, 3H, Si*Me*), 0.0 (s, 6H, Si*Me*), 0.43 (m, 10H, $OCH_2CH_2CH_2CH_2Si$), 0.84 (m, 11H, $CH_3(CH_2)_{14}CO_2$, $SiCH_2CH_2S$), 1.25 (s, 30H, $CH_3(CH_2)_{12}(CH_2)_2CO_2$, $SiCH_2CH_2CH_2Si$, $OCH_2CH_2CH_2CH_2Si$), 1.62 (m, 4H, $OCH_2CH_2CH_2CH_2Si$, $CH_3(CH_2)_{12}CH_2CH_2CO_2$), 2.24 (s, 26H, $SCH_2CH_2NMe_2$, $CH_3(CH_2)_{12}CH_2CH_2CO_2$),

2.48 (m, 8H, $SCH_2\mathit{CH_2}NMe_2$), 2.57 (m, 8H, $S\mathit{CH_2}CH_2NMe_2$), 2.62 (m, 8H, $SiCH_2\mathit{CH_2}S$), 4.00 (t, 2H, $O\mathit{CH_2}CH_2CH_2CH_2Si$). ^{13}C NMR ($CDCl_3$) δ -5.2 (Si*Me*), 13.7 ($OCH_2CH_2CH_2\mathit{CH_2}Si$), 14.0 ($\mathit{CH_3}CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 14.5 ($Si\mathit{CH_2}CH_2S$), 18.2-18.3-18.5 ($Si\mathit{CH_2CH_2CH_2}Si$), 20.2 ($OCH_2CH_2\mathit{CH_2}CH_2Si$), 22.4 ($CH_3\mathit{CH_2}CH_2(CH_2)_{10}CH_2CH_2CO_2$), 24.7 ($CH_3CH_2CH_2(CH_2)_{10}\mathit{CH_2}CH_2CO_2$), 27.5 ($S\mathit{CH_2}CH_2NMe_2$), 29.5-28.9 ($CH_3CH_2CH_2\mathit{(CH_2)_{10}}CH_2CH_2CO_2$), 29.6 ($SiCH_2\mathit{CH_2}S$), 31.8 ($CH_3CH_2\mathit{CH_2}(CH_2)_{10}CH_2CH_2CO_2$), 32.4 ($OCH_2\mathit{CH_2}CH_2CH_2Si$), 34.2 ($CH_3CH_2CH_2\ (CH_2)_{10}CH_2\mathit{CH_2}CO_2$), 45.1 ($SCH_2CH_2N\mathit{Me_2}$), 59.1 ($SCH_2\mathit{CH_2}NMe_2$), 63.7 ($O\mathit{CH_2}CH_2CH_2CH_2Si$), 173.7 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2\mathit{C}O_2$). Anal. Calculated for $C_{53}H_{116}N_4O_2S_4Si_3$ (1054.03 g/mol) %: C, 60.39, H, 11.09, N, 5.32. Exp. %: C, 60,25, H, 11.00, N, 5.28.

S.3.9.3. $\mathit{CH_3\ (CH_2)_{14}CO_2G_3(NMe_2)_8}$ ***(27).*** Following the procedure described for compound **25**, compound **27** was obtained from **21** (2.0 g, 0.90 mmol), 2-(dimethylamino)ethanethiol hydrochloride (1.04 g, 7.40 mmol), 5 mol % of DMPA (0.09 g, 0.37 mmol) as a white powder with hight yield (1.5 g, 88%). Data for **27** are as follows. NMR ($CDCl_3$): ^1H NMR δ -0.15 (s, 9H, $Si\mathit{Me}CH_2CH_2CH_2Si$), -0.05 (s, 12H, *Me*Si), 0.48 (m, 2H, $OCH_2CH_2CH_2\mathit{CH_2}Si$), 0.54 (m, 24H, $Si\mathit{CH_2}CH_2\mathit{CH_2}Si$), 0.81 (m, 19H, $\mathit{CH_3}(CH_2)_{14}CO_2$, $Si\mathit{CH_2}CH_2S$), 1.17 (s, 24H, $CH_3\mathit{(CH_2)_{12}}(CH_2)_2CO_2$), 1.35 (m, 14H, $OCH_2CH_2\mathit{CH_2}CH_2Si$, $SiCH_2\mathit{CH_2}CH_2Si$), 1.56 (m, 4H, $OCH_2\mathit{CH_2}CH_2CH_2Si$, $CH_3(CH_2)_{12}\mathit{CH_2}CH_2CO_2$), 2.24 (s, 48H, $SCH_2CH_2N\mathit{Me_2}$, $CH_3(CH_2)_{12}CH_2\mathit{CH_2}CO_2$), 2.48 (m, 16H, $SCH_2\mathit{CH_2}NMe_2$), 2.57 (m, 16H, $S\mathit{CH_2}CH_2NMe_2$), 2.62 (m, 16H, $SiCH_2\mathit{CH_2}S$), 4.00 (t, 2H, $O\mathit{CH_2}CH_2CH_2CH_2Si$). ^{13}C NMR ($CDCl_3$) δ -5.4 (Si*Me*), 13.4 ($OCH_2CH_2CH_2\mathit{CH_2}Si$), 14.0 ($\mathit{CH_3}CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 14.5 ($Si\mathit{CH_2}CH_2S$), 18.2-18.3-18.7 ($Si\mathit{CH_2CH_2CH_2}Si$), 20.2 ($OCH_2CH_2\mathit{CH_2}CH_2Si$), 22.5 ($CH_3\mathit{CH_2}CH_2(CH_2)_{10}CH_2CH_2CO_2$), 24.8 ($CH_3CH_2CH_2(CH_2)_{10}\mathit{CH_2}CH_2CO_2$), 27.5 ($S\mathit{CH_2}CH_2NMe_2$), 29.5-28.9 ($CH_3CH_2CH_2\mathit{(CH_2)_{10}}CH_2CH_2CO_2$), 29.6 ($SiCH_2\mathit{CH_2}S$), 31.8 ($CH_3CH_2\mathit{CH_2}(CH_2)_{10}CH_2CH_2CO_2$), 32.4 ($OCH_2\mathit{CH_2}CH_2CH_2Si$), 34.2 ($CH_3CH_2CH_2\ (CH_2)_{10}CH_2\mathit{CH_2}CO_2$), 45.1 ($SCH_2CH_2N\mathit{Me_2}$), 59.1 ($SCH_2\mathit{CH_2}NMe_2$), 63.9 ($O\mathit{CH_2}CH_2CH_2CH_2Si$), 173.9 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2\mathit{C}O_2$). Anal. Calculated for $C_{93}H_{208}N_8O_2S_8Si_7$ (1923.81 g/mol) %: C, 58.06, H, 10.90, N, 5.82. Exp. %: C, 58.02, H, 10.85, N, 5.76.

S.3.10. NMe_2-terminated carbosilane dendrons with hexanoic acid residue in the focal point

S.3.10.1. $CH_3(CH_2)_4CO_2G_1(NMe_2)_2$ ***(28).*** Following the procedure described for compound **25**, compound **28** was obtained from **22** (1.7 g, 3.08 mmol), as a white powder with hight yield (1.39 g, 94%). Data for **28** are as follows. NMR ($CDCl_3$): ^{1}H NMR δ -0.00 (s, 3H, Si*Me*), 0.51 (t, 2H, $OCH_2CH_2CH_2CH_2Si$), 0.84 (m, 7H, $CH_3(CH_2)_{14}CO_2$, $SiCH_2CH_2S$), 1.28 (m, 6H, $CH_3(CH_2)_2(CH_2)_2CO_2$, $OCH_2CH_2CH_2CH_2Si$), 1.61 (m, 4H, $OCH_2CH_2CH_2CH_2Si$, $CH_3(CH_2)_2CH_2CH_2CO_2$), 2.24 (s, 14H, $SCH_2CH_2NMe_2$, $CH_3(CH_2)_2CH_2CH_2CO_2$), 2.48 (m, 4H, $SCH_2CH_2NMe_2$), 2.57 (m, 4H, $SCH_2CH_2NMe_2$), 2.62 (m, 4H, $SiCH_2CH_2S$), 4.00 (t, 2H, $OCH_2CH_2CH_2CH_2Si$). ^{13}C NMR ($CDCl_3$) δ -5.4 (Si*Me*), 13.2 ($OCH_2CH_2CH_2CH_2Si$), 13.8 ($SiCH_2CH_2S$), 14.4 ($CH_3(CH_2)_2CH_2CH_2CO_2$), 20.0 ($OCH_2CH_2CH_2CH_2Si$), 22.3 ($SCH_2CH_2NMe_2$), 24.6 ($CH_3(CH_2)_2CH_2CH_2CO_2$), 29.7 ($SiCH_2CH_2S$), 32.3 ($OCH_2CH_2CH_2CH_2Si$), 34.2 ($CH_3(CH_2)_2CH_2CH_2CO_2$), 45.0 ($SCH_2CH_2NMe_2$), 59.2 ($SCH_2CH_2NMe_2$), 63.7 ($OCH_2CH_2CH_2CH_2Si$), 173.8 ($CH_3(CH_2)_2CH_2CH_2CO_2$). Anal. Calculated for $C_{23}H_{50}N_2O_2S_2Si$ (478.87 g/mol) %: C, 57.69, H, 10.52, N, 5.85. Exp. %: C, 57.65, H, 10.40, N, 5.82.

S.3.10.2. $CH_3(CH_2)_4CO_2G_2(NMe_2)_4$ ***(29).*** Following the procedure described for compound **25**, compound **29** was obtained from **23** (2.5 g, 2.35 mmol), as a white powder with hight yield (1.95 g, 91%). Data for **29** are as follows. NMR ($CDCl_3$): ^{1}H NMR δ -0.16 (s, 3H, Si*Me*), -0.07 (s, 6H, Si*Me*), 0.45 (m, 10H, CH_2CH_2Si), 0.80 (m, 11H, $CH_3(CH_2)_4CO_2$, $SiCH_2CH_2S$), 1.20 (s, 10H, $CH_3(CH_2)_2(CH_2)_2CO_2$, $SiCH_2CH_2CH_2Si$, $OCH_2CH_2CH_2CH_2Si$), 1.52 (m, 4H, $OCH_2CH_2CH_2CH_2Si$, $CH_3(CH_2)_2CH_2CH_2CO_2$), 2.16 (s, 26H, $SCH_2CH_2NMe_2$, $CH_3(CH_2)_2CH_2CH_2CO_2$), 2.40 (m, 8H, $SCH_2CH_2NMe_2$), 2.50 (m, 8H, $SCH_2CH_2NMe_2HCl$), 2.60 (m, 8H, $SiCH_2CH_2S$), 3.96 (t, 2H, $OCH_2CH_2CH_2CH_2Si$). ^{13}C NMR ($CDCl_3$) δ -5.3 (Si*Me*), 13.5 ($OCH_2CH_2CH_2CH_2Si$), 13.9 ($CH_3(CH_2)_2CH_2CH_2CO_2$), 14.5 ($SiCH_2CH_2S$), 18.2-18.3-18.6 ($SiCH_2CH_2CH_2Si$), 20.2 ($OCH_2CH_2CH_2CH_2Si$), 24.7 ($CH_3(CH_2)_2CH_2CH_2CO_2$), 27.6 ($SCH_2CH_2NMe_2$), 29.5 ($SiCH_2CH_2S$), 32.4 ($OCH_2CH_2CH_2CH_2Si$), 34.3 ($CH_3(CH_2)_2CH_2CH_2CO_2$), 45.3 ($SCH_2CH_2NMe_2$), 59.2 ($SCH_2CH_2NMe_2$), 63.8 ($OCH_2CH_2CH_2CH_2Si$), 173.7 ($CH_3(CH_2)_2CH_2CH_2CO_2$). MS: $[M+H]^+$= 913.8 uma.

Anal. Calculated for $C_{43}H_{96}N_4O_2S_4Si_3$ (912.76 g/mol) %: C, 56.52, H, 10.59, N, 6.13. Exp. %: C, 56.45, H, 10.38, N, 6.09.

S.3.10.3. $CH_3(CH_2)_4CO_2G_3(NMe_2)_8$ ***(30).*** Following the procedure described for compound **25**, compound **30** was obtained from **24** (2.5 g, 1.20 mmol), as a white powder with hight yield (1.9 g, 90%). Data for **30** are as follows. NMR ($CDCl_3$): ^{1}H NMR δ -0.08 (s, 9H, Si*Me*$CH_2CH_2CH_2Si$), 0.01 (s, 12H, *Me*Si), 0.53 (m, 26H, $OCH_2CH_2CH_2CH_2Si$, $SiCH_2CH_2CH_2Si$), 0.86 (t, 19H, $CH_3(CH_2)_4CO_2$, $SiCH_2CH_2S$), 1.30 (m, 18H, $CH_3(CH_2)_2(CH_2)_2CO_2$, $OCH_2CH_2CH_2CH_2Si$, $SiCH_2CH_2CH_2Si$), 1.60 (m, 4H, $OCH_2CH_2CH_2CH_2Si$, $CH_3(CH_2)_2CH_2CH_2CO_2$), 2.25 (s, 50H, $SCH_2CH_2NMe_2$, $CH_3(CH_2)_2CH_2CH_2CO_2$), 2.48 (m, 16H, $SCH_2CH_2NMe_2$), 2.57 (m, 16H, $SCH_2CH_2NMe_2$), 2.62 (m, 16H, $SiCH_2CH_2S$), 4.00 (t, 2H, $OCH_2CH_2CH_2CH_2Si$). ^{13}C NMR ($CDCl_3$) δ -5.2 (Si*Me*), 14.6 ($CH_3(CH_2)_2CH_2CH_2CO_2$), 16.1 ($SiCH_2CH_2S$), 18.2-18.3-18.7 ($SiCH_2CH_2CH_2Si$), 27.5 ($SCH_2CH_2NMe_2$), 29.8 ($SiCH_2CH_2S$), 32.4 ($OCH_2CH_2CH_2CH_2Si$), 34.2 ($CH_3(CH_2)_2CH_2CH_2CO_2$), 45.3 ($SCH_2CH_2NMe_2$), 59.3 ($SCH_2CH_2NMe_2$), 63.9 ($OCH_2CH_2CH_2CH_2Si$), 173.9 ($CH_3(CH_2)_2CH_2CH_2CO_2$). MS: $[M+H]^+$= 1783.14 uma Anal. Calculated for $C_{83}H_{188}N_8O_2S_8Si_7$ (1782.55 g/mol) %: C, 55.89, H, 10.62, N, 6.28. Exp. %: C, 55.68, H, 10.55, N, 6.23.

S.3.11. NMe_3^+-terminated carbosilane dendrons with palmitic acid residue in the focal point

S.3.11.1. $CH_3(CH_2)_{14}CO_2G_1(NMe_3^+I)_2$ ***(31).*** To a diethyl ether solution of **25** (1.34 g, 2.16 mmol) an excess of MeI (0.54 ml, 8.64 mmol) was added. The resulting solution was stirred for 12 h at room temperature and then evaporated under reduced pressure to give **31** as a white solid (1.84, 95%). Data for **31** are as follows. NMR (D_2O): ^{1}H NMR δ 0.04 (s, 3H, Si*Me*), 0.60 (m, 2H, $OCH_2CH_2CH_2CH_2Si$), 0.84 (m, 7H, $CH_3(CH_2)_{14}CO_2$, $SiCH_2CH_2S$), 1.22 (s, 24H, $CH_3(CH_2)_{12}(CH_2)_2CO_2$), 1.30 (m, 2H, $OCH_2CH_2CH_2CH_2Si$), 1.67 (m, 4H, $OCH_2CH_2CH_2CH_2Si$, $CH_3(CH_2)_{12}CH_2CH_2CO_2$), 2.24 (m, 2H, $CH_3(CH_2)_{12}CH_2CH_2CO_2$), 2.62 (m, 4H, $SiCH_2CH_2S$), 2.86 (m, 4H, $SCH_2CH_2NMe_3^+$), 3.12 (m, 18, NMe_3^+), 3,58 (m, 4H,$CH_2CH_2NMe_3^+$), 3.85 (m, 2H, $OCH_2CH_2CH_2CH_2Si$). ^{13}C NMR (D_2O) δ -5.7 (Si*Me*), 12.9 ($OCH_2CH_2CH_2CH_2Si$), 13.9 ($SiCH_2CH_2S$), 14.2 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 20.0 ($OCH_2CH_2CH_2CH_2Si$), 22.4 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 23.3 ($SCH_2CH_2NMe_3^+$), 24.7

($CH_3CH_2CH_2(CH_2)_{10}\mathit{CH_2}CH_2CO_2$), 29.4-28.9 ($CH_3CH_2CH_2\mathit{(CH_2)_{10}}CH_2CH_2CO_2$), 29.4 ($SiCH_2\mathit{CH_2}S$), 31.6 ($CH_3CH_2\mathit{CH_2}(CH_2)_{10}CH_2CH_2CO_2$), 33.0 ($OCH_2\mathit{CH_2}CH_2CH_2Si$), 34.2 ($CH_3CH_2CH_2(CH_2)_{10}CH_2\mathit{CH_2}CO_2$), 53.6 ($SCH_2CH_2N\mathit{Me_3}^+$), 63.7 ($O\mathit{CH_2}CH_2CH_2CH_2Si$), 65.1 ($SCH_2\mathit{CH_2}NMe_3^+$), 173.7 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2\mathit{C}O_2$). Anal. Calculated for $C_{35}H_{76}I_2N_2O_2S_2Si$ (903.03 g/mol) %: C, 46.55, H, 8.48, N, 4.32. Exp. %: C, 46.43, H, 8.42, N, 4.28.

S.3.11.2. $\mathit{CH_3(CH_2)_{14}CO_2G_2(NMe_3^+I)_4}$ ***(32).*** Following the procedure described for compound **31**, compound **32** was obtained from **26** (1.7 g, 1.61 mmol) and MeI (0.8 ml, 12.9 mmol) as a white powder with hight yield (2.5 g, 96%). Data for **32** are as follows. NMR (D_2O): ^1H NMR δ -0.1 (s, 3H, Si*Me*), 0.03 (s, 6H, Si*Me*), 0.53 (m, 10H, $OCH_2CH_2CH_2\mathit{CH_2}Si$), 0.84 (m, 11H, $\mathit{CH_3}(CH_2)_{14}CO_2$, $Si\mathit{CH_2}CH_2S$), 1.25 (s, 30H, $CH_3\mathit{(CH_2)_{12}}(CH_2)_2CO_2$, $SiCH_2\mathit{CH_2}CH_2Si$, $OCH_2CH_2\mathit{CH_2}CH_2Si$), 1.62 (m, 4H, $OCH_2\mathit{CH_2}CH_2CH_2Si$, $CH_3(CH_2)_{12}\mathit{CH_2}CH_2CO_2$), 2.24 (m, 2H, $CH_3(CH_2)_{12}CH_2\mathit{CH_2}CO_2$), 2.62 (m, 8H, $SiCH_2\mathit{CH_2}S$), 2.86 (m, 8H, $S\mathit{CH_2}CH_2NMe_3^+$), 3.12 (m, 36, $N\mathit{Me_3}^+$), 3,58 (m, 8H,$CH_2\mathit{CH_2}NMe_3^+$), 3.85 (m, 2H, $O\mathit{CH_2}CH_2CH_2CH_2Si$). ^{13}C NMR (D_2O) δ -5.4 (Si*Me*), 13.4 ($OCH_2CH_2CH_2\mathit{CH_2}Si$), 14.0 ($\mathit{CH_3}CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 14.5 ($Si\mathit{CH_2}CH_2S$), 17.2-17.6 ($Si\mathit{CH_2CH_2CH_2}Si$), 20.2 ($OCH_2CH_2\mathit{CH_2}CH_2Si$), 22.5 ($CH_3\mathit{CH_2}CH_2(CH_2)_{10}CH_2CH_2CO_2$), 24.8 ($CH_3CH_2CH_2(CH_2)_{10}\mathit{CH_2}CH_2CO_2$), 27.5 ($S\mathit{CH_2}CH_2NMe_3^+$), 29.5-28.9 ($CH_3CH_2CH_2\mathit{(CH_2)_{10}}CH_2CH_2CO_2$), 29.6 ($SiCH_2\mathit{CH_2}S$), 31.8 ($CH_3CH_2\mathit{CH_2}(CH_2)_{10}CH_2CH_2CO_2$), 32.4 ($OCH_2\mathit{CH_2}CH_2CH_2Si$), 34.2 ($CH_3CH_2CH_2(CH_2)_{10}CH_2\mathit{CH_2}CO_2$), 51.6 ($SCH_2CH_2N\mathit{Me_3}^+$), 63.7 ($O\mathit{CH_2}CH_2CH_2CH_2Si$), 65.1 ($SCH_2\mathit{CH_2}NMe_2$), 173.7 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2\mathit{C}O_2$). Anal. Calculated for $C_{57}H_{128}4_2N_4O_2S_4Si_3$ (1621.78 g/mol) %: C, 42.21, H, 7.96, N, 5.03. Exp. %: C, 42.18, H, 7.69, N, 4.96.

S.3.11.3. $\mathit{CH_3(CH_2)_{14}CO_2G_3(NMe_3^+I)_8}$ ***(33).*** Following the procedure described for compound **31**, compound **33** was obtained from **27** (1.5 g, 0.78 mmol) and MeI (0.7 ml, 12.5 mmol) as a white powder with hight yield (2.1 g, 88%). Data for **33** are as follows. NMR (D_2O): ^1H NMR δ -0.1 (s, 9H, $Si\mathit{Me}CH_2CH_2CH_2Si$), -0.04 (s, 12H, *Me*Si), 0.48 (m, 26H, $OCH_2CH_2CH_2\mathit{CH_2}Si$, $Si\mathit{CH_2}CH_2\mathit{CH_2}Si$), 0.81 (m, 19H, $\mathit{CH_3}(CH_2)_{14}CO_2$, $Si\mathit{CH_2}CH_2S$), 1.17 (s, 24H, $CH_3\mathit{(CH_2)_{12}}(CH_2)_2CO_2$), 1.35 (m, 14H, $OCH_2CH_2\mathit{CH_2}CH_2Si$, $SiCH_2\mathit{CH_2}CH_2Si$), 1.56 (m, 4H, $OCH_2\mathit{CH_2}CH_2CH_2Si$,

$CH_3(CH_2)_{12}CH_2CH_2CO_2$), 2.24 (m, 2H, $CH_3(CH_2)_{12}CH_2CH_2CO_2$), 2.62 (m, 16H, $SiCH_2CH_2S$), 2.90 (m, 16H, $SCH_2CH_2NMe_3$), 3.12 (m, 72, NMe_3^+), 3,58 (m, 16H,$CH_2CH_2NMe_3^+$), 3.85 (m, 2H, $OCH_2CH_2CH_2CH_2Si$). ^{13}C NMR (D_2O) δ -5.6 (Si*Me*), 14.0 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 14.5 ($SiCH_2CH_2S$), 18.1-18.6 ($SiCH_2CH_2CH_2Si$), 22.5 ($CH_3CH_2CH_2(CH2)_{10}CH_2CH_2CO_2$), 27.5 ($SCH_2CH_2NMe_3^+$), 29.5-28.9 ($CH_3CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 29.6 ($SiCH_2CH_2S$), 51.6 ($SCH_2CH_2NMe_3^+$),65.1 ($SCH_2CH_2NMe_2$). Anal. Calculated for $C_{101}H_{232}I_8N_8O_2S_8Si_7$ (3059.32 g/mol) %: C, 39.65, H, 7.64, N, 5.48. Exp. %: C, 39.61, H, 7.58, N, 5.42.

S.3.12. NMe_3^+-terminated carbosilane dendrons with hexanoic acid residue in the focal point

S.3.12.1. $CH_3(CH_2)_4CO_2G_1(NMe_3^+I)_2$ ***(34).*** Following the procedure described for compound **31**, compound **34** was obtained from **28** (1.0 g, 2.08 mmol) and MeI (0.52 ml, 8.35 mmol) as a white powder with hight yield (1.4 g, 88%). Data for **34** are as follows. NMR (D_2O): ^1H NMR δ 0.05 (s, 3H, Si*Me*), 0.58 (m, 2H, $OCH_2CH_2CH_2CH_2Si$), 0.78 (m, 3H, $CH_3(CH_2)_4CO_2$), 0.94 (m, 4H, $SiCH_2CH_2S$), 1.19 (m, 4H, $CH_3(CH_2)_2(CH_2)_2CO_2$), 1.30 (m, 2H, $OCH_2CH_2CH_2CH_2Si$), 1.56 (m, 4H, $OCH_2CH_2CH_2CH_2Si$, $CH_3(CH_2)_2CH_2CH_2CO_2$), 2.16 (m, 2H, $CH_3(CH_2)_2CH_2CH_2CO_2$), 2.74 (m, 4H, $SiCH_2CH_2S$), 3.00 (m, 4H, $SCH_2CH_2NMe_3^+$), 3.20 (m, 18, NMe_3^+), 3,68 (m, 4H,$CH_2CH_2NMe_3^+$), 3.96 (m, 2H, $OCH_2CH_2CH_2CH_2Si$). ^{13}C NMR (D_2O) δ -5.7 (Si*Me*), 12.9 ($OCH_2CH_2CH_2CH_2Si$), 13.9 ($SiCH_2CH_2S$), 14.2 ($CH_3(CH_2)_2CH_2CH_2CO_2$), 20.0 ($OCH_2CH_2CH_2CH_2Si$), 23.3 ($SCH_2CH_2NMe_3^+$), 24.7 ($CH_3(CH_2)_2CH_2CH_2CO_2$), 29.4 ($SiCH_2CH_2S$), 33.0 ($OCH_2CH_2CH_2CH_2Si$), 34.2 ($CH_3(CH_2)_2CH_2CH_2CO_2$), 53.6 ($SCH_2CH_2NMe_3^+$), 63.7 ($OCH_2CH_2CH_2CH_2Si$), 65.1 ($SCH_2CH_2NMe_3^+$), 173.7 ($CH_3(CH_2)_2CH_2CH_2CO_2$). Anal. Calculated for $C_{25}H_{56}I_2N_2O_2S_2Si$ (762.74g/mol) %: C, 39.37, H, 7.40, N, 5.50. Exp. %: C, 39.35, H, 7.36, N, 5.42.

S.3.12.2. $CH_3(CH_2)_4CO_2G_2(NMe_3^+I)_4$ ***(35).*** Following the procedure described for compound **31**, compound **35** was obtained from **29** (1.5 g, 1.64 mmol) and MeI (0.82 ml, 13.1 mmol) as a white powder with hight yield (2.1 g, 86%). Data for **35** are as follows. NMR (D_2O): ^1H NMR δ -0.13 (s, 3H, Si*Me*), 0.09 (s, 6H, Si*Me*), 0.54 (m, 10H, CH_2CH_2Si), 0.78 (m, 3H, $CH_3(CH_2)_4CO_2$), 0.93 (m, 8H, $SiCH_2CH_2S$), 1.20 (m, 10H, $CH_3(CH_2)_2(CH_2)_2CO_2$, $SiCH_2CH_2CH_2Si$, $OCH_2CH_2CH_2CH_2Si$), 1.47 (m, 4H,

$OCH_2\mathit{CH_2}CH_2CH_2Si$, $CH_3(CH_2)_2\mathit{CH_2}CH_2CO_2$), 2.14 (m, 2H, $CH_3(CH_2)_2CH_2\mathit{CH_2}CO_2$), 2.75 (m, 8H, $SiCH_2\mathit{CH_2}S$), 3.0 (m, 8H, $S\mathit{CH_2}CH_2NMe_3^+$), 3.21 (s, 36, $N\mathit{Me_3}^+$), 3,68 (m, 8H,$CH_2\mathit{CH_2}NMe_3^+$), 3.91 (m, 2H, $O\mathit{CH_2}CH_2CH_2CH_2Si$). ^{13}C NMR (D_2O) δ -5.4 y -5.7 ($Si\mathit{Me}$), 13.0 ($OCH_2CH_2CH_2\mathit{CH_2}Si$), 14.0 ($\mathit{CH_3}CH_2CH_2(CH_2)_{10}CH_2CH_2CO_2$), 14.3 ($Si\mathit{CH_2}CH_2S$), 17.2-17.4-17.6 ($Si\mathit{CH_2CH_2CH_2}Si$), 20.0 ($OCH_2CH_2\mathit{CH_2}CH_2Si$), 24.8 ($CH_3(CH_2)_2\mathit{CH_2}CH_2CO_2$), 25.5 ($S\mathit{CH_2}CH_2NMe_3^+$), 28.6 ($SiCH_2\mathit{CH_2}S$), 32.4 ($OCH_2\mathit{CH_2}CH_2CH_2Si$), 34.2 ($CH_3(CH_2)_2CH_2\mathit{CH_2}CO_2$), 51.6 ($SCH_2CH_2N\mathit{Me_3}^+$), 63.7 ($O\mathit{CH_2}CH_2CH_2CH_2Si$), 65.1 ($SCH_2\mathit{CH_2}NMe_3^+$), 173.7 ($CH_3(CH_2)_2CH_2CH_2\mathit{C}O_2$). Anal. Calculated for $C_{47}H_{108}I_4N_4O_2S_4Si_3$ (1481.51 g/mol) %: C, 38.10, H, 7.35, N, 5.75. Exp. %: C, 38.05, H, 7.20, N, 5.69.

S.3.12.3. $\mathit{CH_3(CH_2)_4CO_2G_3(NMe_3^+I)_8}$ ***(36).*** Following the procedure described for compound **31**, compound **36** was obtained from **30** (1.5 g, 0.84 mmol) and MeI (0.06 ml, 13.5 mmol) as a white powder with hight yield (1.4 g, 90%). Data for **36** are as follows. NMR (D_2O): ^1H NMR δ -0.1 (s, 9H, $Si\mathit{Me}CH_2CH_2CH_2Si$), 0.04 (s, 12H, $\mathit{Me}Si$), 0.50 (m, 18H, $OCH_2CH_2CH_2\mathit{CH_2}Si$, $Si\mathit{CH_2}CH_2\mathit{CH_2}Si$), 0.63 (m, 8H, $\mathit{CH_2}SiC_2H_4S$), 0.86 (m, 19H, $\mathit{CH_3}(CH_2)_4CO_2$, $Si\mathit{CH_2}CH_2S$), 1.17 (s, 24H, $CH_3\mathit{(CH_2)_2}(CH_2)_2CO_2$), 1.35 (m, 14H, $OCH_2CH_2\mathit{CH_2}CH_2Si$, $SiCH_2\mathit{CH_2}CH_2Si$), 1.56 (m, 4H, $OCH_2\mathit{CH_2}CH_2CH_2Si$, $CH_3(CH_2)_2\mathit{CH_2}CH_2CO_2$), 2.24 (m, 2H, $CH_3(CH_2)_2CH_2\mathit{CH_2}CO_2$), 2.62 (m, 16H, $SiCH_2\mathit{CH_2}S$), 2.90 (m, 16H, $S\mathit{CH_2}CH_2NMe_3^+$), 3.12 (m, 72, $N\mathit{Me_3}^+$), 3,54 (m, 16H,$CH_2\mathit{CH_2}NMe_3^+$), 3.85 (m, 2H, $O\mathit{CH_2}CH_2CH_2CH_2Si$). ^{13}C NMR (D_2O) δ -5.6 ($Si\mathit{Me}$), 14.0 ($\mathit{CH_3}(CH_2)_2CH_2CH_2CO_2$), 14.5 ($Si\mathit{CH_2}CH_2S$), 18.0-17.3 ($Si\mathit{CH_2CH_2CH_2}Si$), 27.5 ($S\mathit{CH_2}CH_2NMe_3^+$), 29.6 ($SiCH_2\mathit{CH_2}S$), 51.6 ($SCH_2CH_2N\mathit{Me_3}^+$), 65.1 ($SCH_2\mathit{CH_2}NMe_3^+$). Anal. Calculated for $C_{91}H_{212}I_8N_8O_2S_8Si_7$ (2919.05 g/mol) %: C, 37.40, H, 7.32, N, 5.89. Exp. %: C, 37.29, H, 7.25, N, 5,78.

S.4. Selected NMR spectra

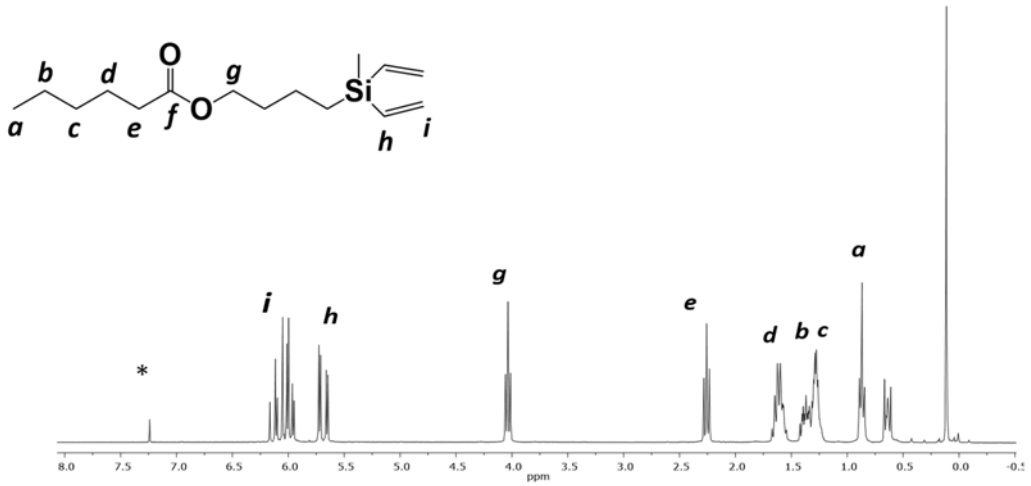

Figure S.4.1. ^{1}H NMR ($CDCl_3$) of compound $CH_3(CH_2)_4CO_2G_1V_2$ **(10)**.

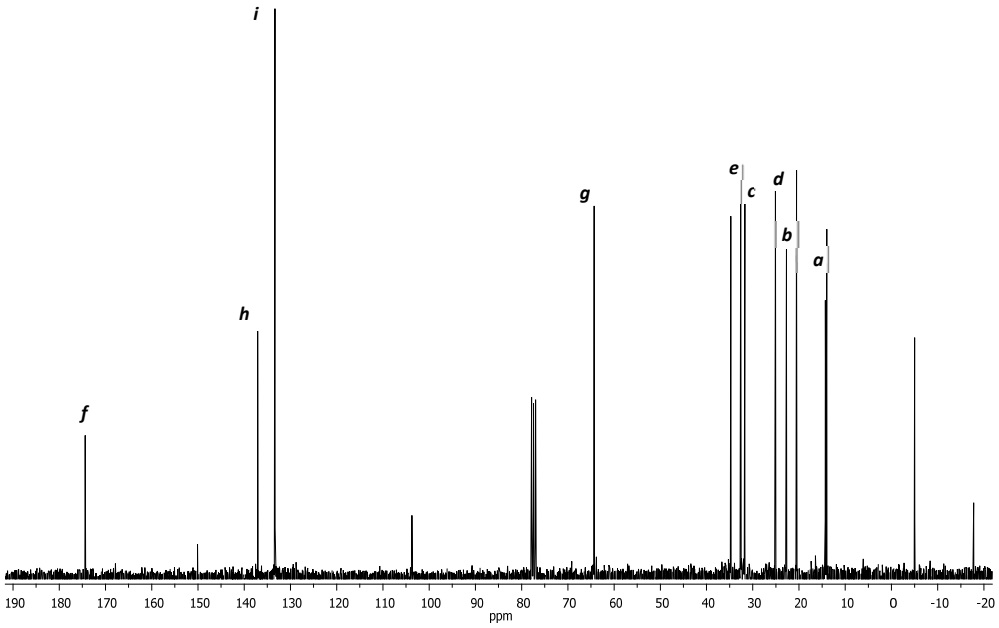

Figure S.4.2. ^{13}C NMR ($CDCl_3$) of compound $CH_3(CH_2)_4CO_2G_1A_2$ **(10)**.

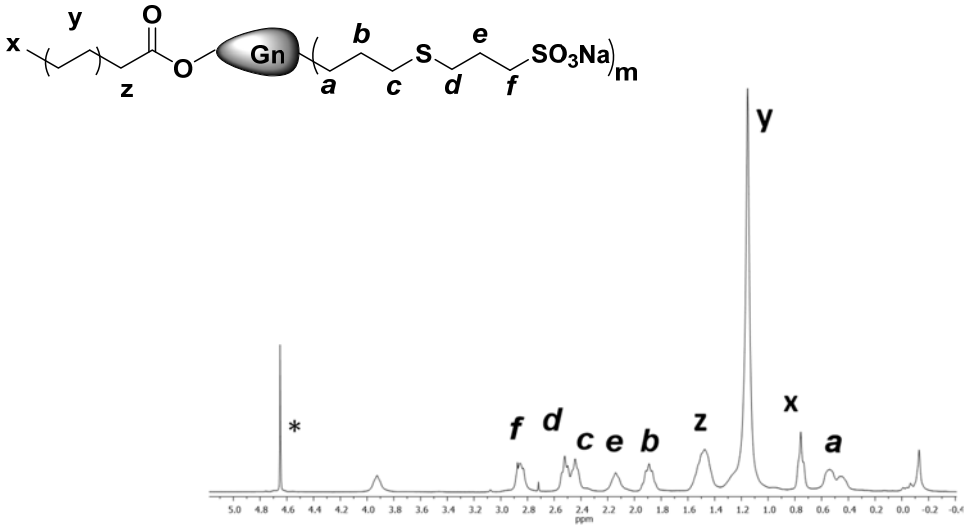

Figure S.4.3. ^{1}H NMR ($CDCl_3$) of compound $CH_3(CH_2)_4CO_2G_1(SSO_3Na)_2$ **(16)**.

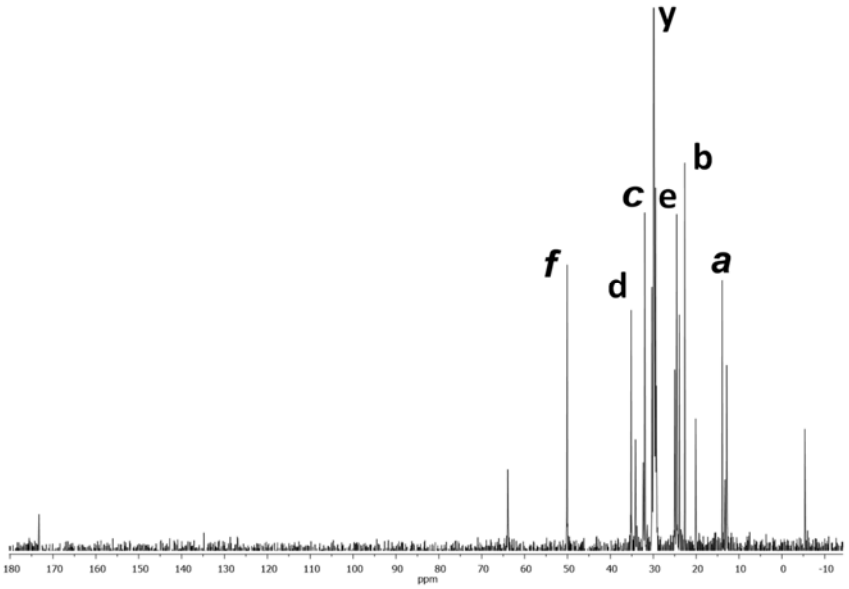

Figure S.4.4. ^{13}C NMR ($CDCl_3$) of compound $CH_3(CH_2)_4CO_2G_1(SSO_3Na)_2$ **(16)**.

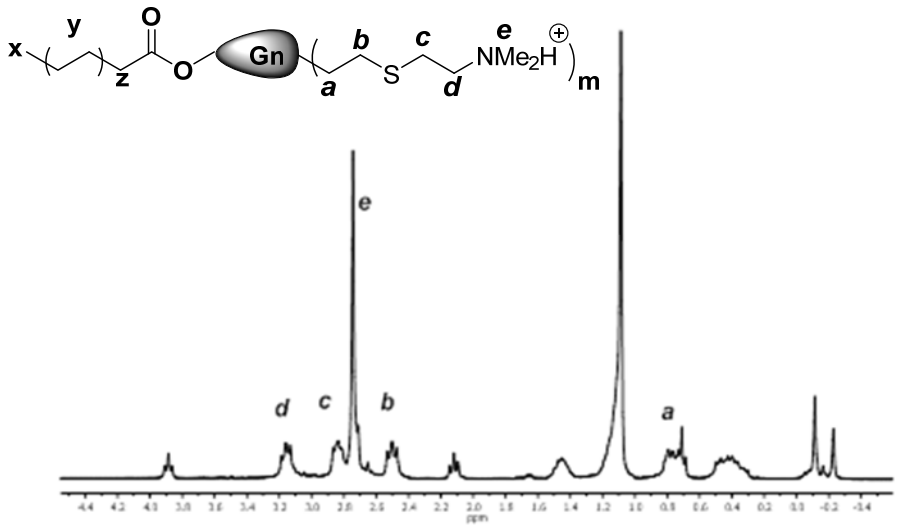

Figure S.4.5. ^{1}H NMR ($CDCl_3$) of compound $CH_3(CH_2)_{14}CO_2G_1(NMe_2HCl)_2$ **(19).**

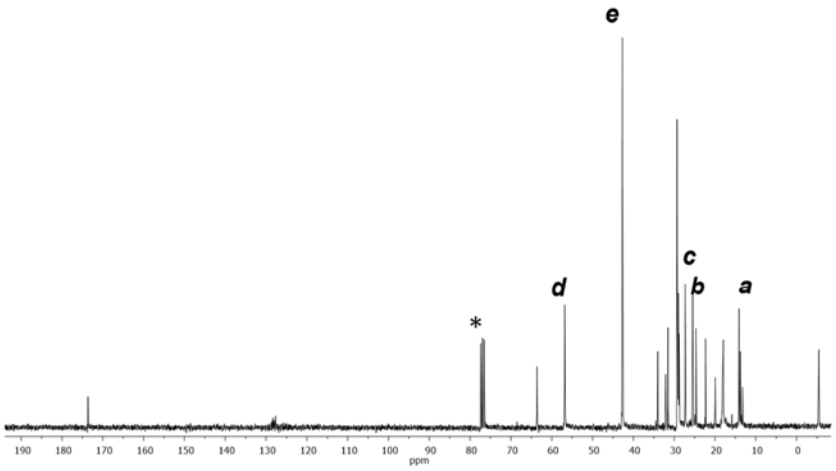

Figure S.4.6. ^{13}C NMR ($CDCl_3$) of compound $CH_3(CH_2)_{14}CO_2G_1(NMe_2HCl)_2$ **(19).**

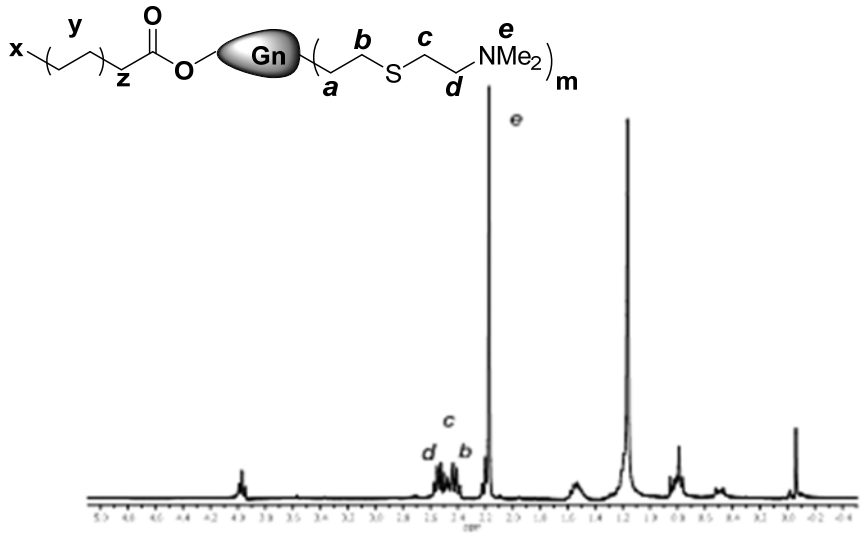

Figure S.4.7. ^{1}H NMR ($CDCl_3$) of compound $CH_3(CH_2)_{14}CO_2G_1(NMe_2)_2$ **(25).**

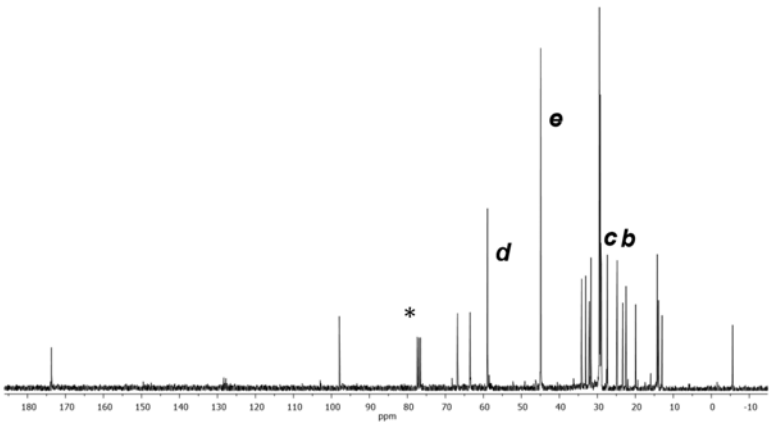

Figure S.4.8. ^{13}C NMR ($CDCl_3$) of compound $CH_3(CH_2)_{14}CO_2G_1(NMe_2)_2$ **(25).**

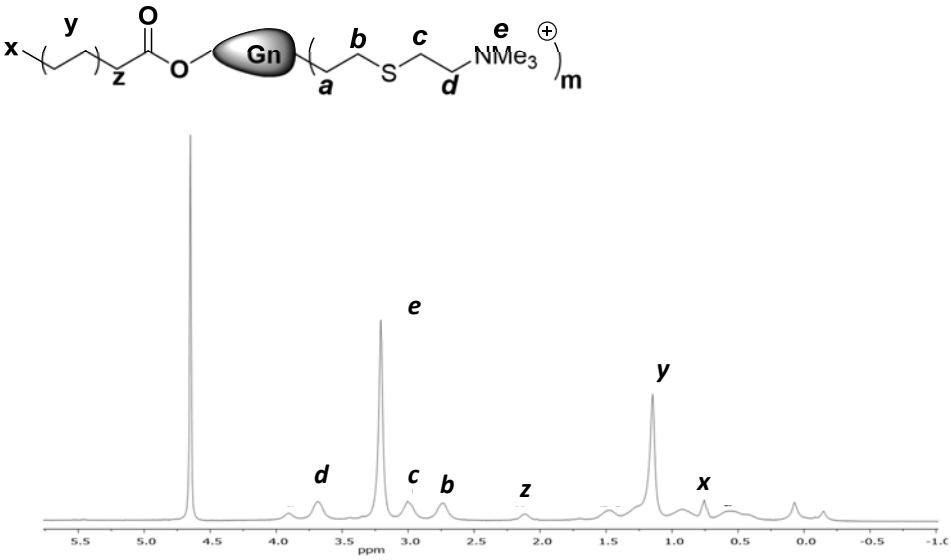

Figure S.4.9. ^{1}H NMR (D_2O) of compound $CH_3(CH_2)_{14}CO_2G_1(NMe_3^{+}I)_2$ **(34).**

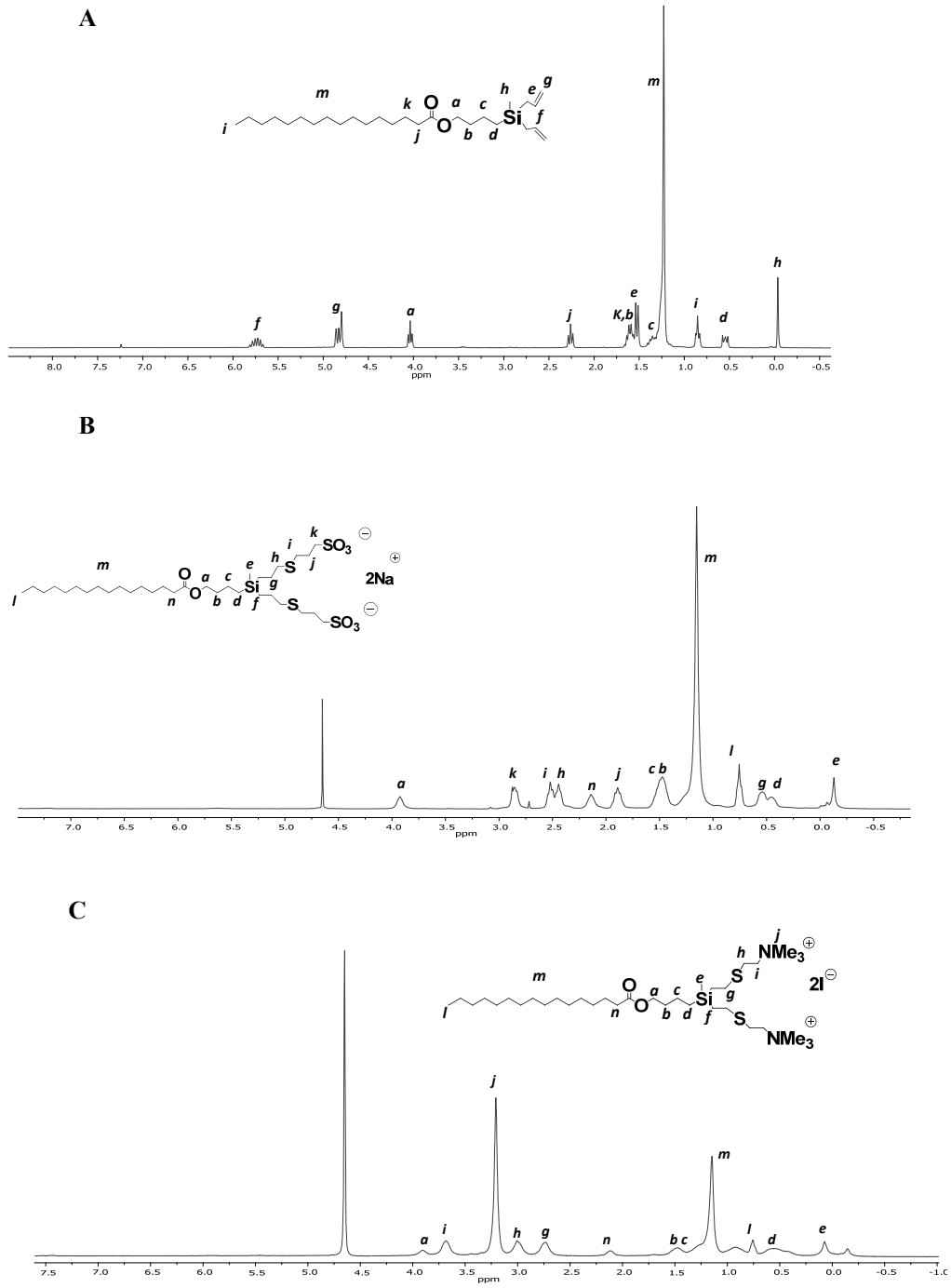

Figure S.4.10. ^{1}H NMR spectra of first generation (**A**) allyl-, (**B**) sulfonate- and (**C**) ammonium-terminated dendrons (**1**, **13** and **31**) with palmitic acid at the focal point. CDCl3 (**A**) and D_2O (**B** and **C**) were used.

S.5. References

[1] J. Sánchez-Nieves, P. Ortega, M. A. Muñoz-Fernández, R. Gómez and F. J. de la Mata. *Tetrahedron*, **2010**, *66*, 9203-9213.