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SUPPORTING INFORMATION

(2Z, 10Z)-2, 11-Bis-(benzyloxycarbonyl)amino-dodeca-2, 10-dien-1,12-dioic acid dimethyl ester (22).

Compound **22** was prepared from octanedial and **9**. The crude product was crystallized from toluene to give **22** in 54% yield. mp 96-97°C.

^{1}H-NMR (400 MHz, $CDCl_3$) δ 1.22-1.33 (m, 4 H), 1.36-1.47 (m, 4 H), 2.17 (q, 4 H, J = 7.3Hz), 3.72 (s, 6 H), 5.12 (s, 4 H), 6.25 (s, 2 H), 6.60 (t, 2 H, J = 7.3Hz), 7.25-7.40 (m, 10 H).

^{13}C-NMR (100 MHz, $CDCl_3$) δ 27.95, 28.18, 28.93, 52.19, 67.21, 125.26, 128.02, 128.12, 128.28, 128.42, 136.01, 138.24, 154.08, 165.01.

Anal. Cacld for $C_{30}H_{36}N_2O_8$ (MW: 552.62): C, 65.20; H, 6.57; N, 5.07. Found: C, 65.0; H, 6.6; N, 4.9.

(2Z, 10Z)-2, 11-Bis-(*tert*-butyloxycarbonylamino)-dodec-2, 10-dien-1,12-dioic dimethyl ester (23).

Compound **23** was prepared from octanedial and **11**. The crude product was purified by chromatography (silica gel KG 60, eluent: ethyl acetate / petroleum ether = 3 / 1) to give **23** in 65% yield. The purified product solidified on standing. mp 107-109°C.

^{1}H-NMR (400 MHz, $CDCl_3$) δ 1.26-1.33 (m, 4 H), 1.37-1.57 (m, 22 H), 2.16 (q, 4 H, J = 7.2Hz), 3.73 (s, 6 H), 5.91 (s, 2 H), 6.51 (t, 2 H, J =7.2Hz).

^{13}C-NMR (100 MHz, $CDCl_3$) δ 28.10, 28.17, 28.25, 29.08, 52.17, 80.38, 125.67, 137.07, 153.29, 165.38.

Anal. Cacld for $C_{24}H_{40}N_2O_8$ (MW: 484.59): C, 59.49; H, 8.32; N, 5.78. Found: C, 59.2; H, 8.2; N, 5.6.

(2Z, 10Z)-2, 11-Diacetylamino-dodec-2, 10-dien-1,12-dioic acid dimethyl ester (24).

Compound **24** was prepared from octanedial and **10**. The crude product was crystallized from toluene to give **24** in 64% yield. mp 142-143°C.

^{1}H-NMR(400 MHz, $CDCl_3$) δ 1.27-1.34 (m, 4 H), 1.40-1.48 (m, 4 H), 1.52-1.62 (m, 4 H), 2.10 (s, 6 H), 2.09-2.18 (m, 4 H), 3.75 (s, 6 H), 6.66 (m, 2 H), 6.83 (s, 2 H).

^{13}C-NMR (100 MHz, $CDCl_3$) δ 23.39, 27.93, 28.76, 28.91, 52.33, 124.89, 139.08, 165.17, 168.46.

Anal. Cacld for $C_{18}H_{28}N_2O_6$ (MW: 368.43): C, 58.68; H, 7.66; N, 7.60. Found: C, 58.55; H, 7.55; N, 7.45.

(2Z, 14Z)-2,15-Di-acetylamino-hexadec-2,14-dien-1,16-dioic acid dimethylester (25).

Compound **25** was prepared from 1,12-dodecanedial and **10**. The crude product was crystallized from toluene to give **25** in 51% yield. mp 123-125°C.

^{1}H-NMR (400 MHz, $CDCl_3$) δ 1.20-1.32 (m, 12 H), 1.37-1.46 (m, 4 H), 2.08 (s, 6 H), 2.05-2.15 (m, 4 H), 3.74 (s, 6 H), 6.67 (m, 2 H), 6.88 (m, 2 H).

^{13}C-NMR ($CDCl_3$) δ 23.36, 28.13, 28.90, 29.25, 29.32, 29.35, 52.29, 124.74, 139.30, 165.18, 168.36.

Anal. Cacld for $C_{22}H_{36}N_2O_6$ (MW: 424.54): C, 62.24; H, 8.55; N, 6.60. Found: C, 62.3; H, 8.5; N, 6.5.

1,4-Bis-[2-(benzyloxycarbonylamino)2-methoxycarbonyl)ethenyl]benzene (26).

Compound **26** was prepared from *para*-phthalaldehyde and **9**. The crude product was crystallized from toluene to give **26** in 40% yield. mp 198-202°C.

^{1}H-NMR(400 MHz, d_6-DMSO) δ 3.70(s, 6 H), 5.09(s, 4 H), 7.25(s, 2 H), 7.26-7.38(m, 10 H), 7.66(s, 4 H), 9.20(s, 2 H).

^{13}C-NMR (100 MHz, d_6-DMSO) δ 52.42, 66.12, 126.70, 127.72, 128.02, 128.48, 130.15, 131.35, 134.30, 136.81, 154.67, 165.66.

Anal. Cacld for $C_{30}H_{26}N_2O_8$(MW: 542.54): C, 66.41; H, 4.83; N, 5.16. Found: C, 66.4; H, 5.1; N, 5.0.

(2S, 7S)-2,7-Bis-benzyoxycarbonylamino-octanedioic acid (31).

The crude product of the hydrogenation of **13** was dissolved in dioxane (25mL) and water (6.3mL). LiOH (9.25mL of 2N LiOH solution) was added and stirred over night at ambient temperature. The solvent was removed *in vacuo* and the residue was dissolved in water (100 mL) and acidified with 5% $KHSO_4$ solution (70mL) to precipitate the di-Z protected 2,7-diaminosuberic acid **31**. The precipitate was filtered and dried on an oil pump. The crude material (4.46g) was dissolved in hot acetonitrile (25mL) and allowed to crystallize at + 4°C in the refrigerator over night. Yield: 57.3% colorless crystals. Chiral analysis by CE: 99%de; 100%ee (no *D,D*-isomer dedectable). Melting point (152-154°C) and optical rotation ($[\alpha]^{20}_D$ = -9.8; 5 in DMF) were identical with material prepared by Kolbe electrolysis.[20]