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Supporting Information

1-(2-Propenyloxy)decane (1a). ^{1}H NMR (200 MHz, $CDCl_3$): δ 6.02-5.82 (m, 1H), 5.35-5.10 (m, 2H), 4.00-3.92 (m, 2H), 3.41 (t, 2H), 1.65-1.50 (m, 2H), 1.45-1.08 (m, 14H), 0.87 (t, 3H).

1-(1-Propenyloxy)decane (1b). ^{1}H NMR (200 MHz, $CDCl_3$): δ 6.21 (dd, *E* isomer), 5.93 (dd, *Z* isomer), 4.84-4.65 (m, *E* isomer), 4.44-4.28 (m, *Z* isomer), 3.70 (t, *Z* isomer), 3.60 (t, *E* isomer), 1.65-1.48 (m, 5H), 1.45-1.08 (m, 14H), 0.87 (t, 3H).

1,6-Bis(2-Propenyloxy)hexane (2a). ^{1}H NMR (200 MHz, $CDCl_3$): δ 6.02-5.82 (m, 2H), 5.35-5.10 (m, 4H), 4.00-3.89 (m, 4H), 3.43 (m, 4H), 1.70-1.48 (m, 4H), 1.42-1.30 (m, 4H).

1,6-Bis(1-Propenyloxy)hexane (2b). ^{1}H NMR (200 MHz, $CDCl_3$): δ 6.21 (dd, *E* isomer), 5.94 (dd, *Z* isomer), 4.85-4.67 (m, *E* isomer), 4.45-4.30 (m, *Z* isomer), 3.72 (t, *Z* isomer), 3.62 (t, *E* isomer), 1.75-1.48 (m, 10H), 1.47-1.30 (m, 4H).

1-(2-Propenyloxy)-2,2-bis[(2-propenyloxy)methyl]butane (3a). ^{1}H NMR (200 MHz, $CDCl_3$): δ 5.99-5.78 (m, 3H), 5.32-5.08 (m, 6H), 3.97-3.89 (m, 6H), 3.32 (s, 6H), 1.43 (q, 2H), 0.85 (t, 3H).

1-(1-Propenyloxy)-2,2-bis[(1-propenyloxy)methyl]butane (3b). ^{1}H NMR (200 MHz, $CDCl_3$): δ 6.21 (dd, *E* isomer), 5.92 (dd, *Z* isomer), 4.86-4.65 (m, *E* isomer), 4.43-4.21 (m, *Z* isomer), 3.65 (t, *Z* isomer), 3.53 (t, *E* isomer), 1.70-1.30 (m, 11H), 1.00-0.80 (m, 3H).

1-(2-Butenyloxy)decane (4a). ^{1}H NMR (200 MHz, $CDCl_3$): δ 5.81-5.50 (m, 2H), 3.89 (d, 2H), 3.39 (t, 2H), 1.71 (d, 3H), 1.65-1.58 (m, 3H), 1.45-1.20 (m, 14H), 0.88 (t, 3H).

1-(1-Butenyloxy)decane (4b). ^{1}H NMR (200 MHz, $CDCl_3$): δ 6.22 (dd, *E* isomer), 5.89 (dd, *Z* isomer), 4.88-4.72 (m, *E* isomer), 4.32 (q, *Z* isomer), 3.40 (t, *Z* isomer), 3.31 (t, *E* isomer), 2.18-1.83 (m, 2H), 1.70-1.50 (m, 2H), 1.50-1.10 (m, 14H), 1.03-0.80 (m, 6H).

1,4-Dibutoxy-2-butene (5a). ^{1}H NMR (200 MHz, $CDCl_3$): δ 5.80 (m, 2H), 4.02 (d, 4H), 3.40 (t, 4H), 1.65-1.44 (m, 4H), 1.44-1.15 (m, 4H), 0.90 (t, 6H).

1,4-Dibutoxy-1-butene (5b). ^{1}H NMR (200 MHz, $CDCl_3$): δ 6.28 (d, *E* isomer), 5.98 (d, *Z* isomer), 4.84-4.63 (m, *E* isomer), 4.43-4.25 (q, *Z* isomer), 3.70 (t, *Z* isomer), 3.62 (t, *E* isomer), 3.51-3.25 (m, 4H), 2.35 (q, *E* isomer), 2.17 (q, *Z* isomer), 1.70-1.45 (m, 2H), 1.45-1.18 (m, 2H), 0.90 (m, 6H).

(2-Propenyloxy)methyloxirane (6a). ^{1}H NMR (200 MHz, $CDCl_3$): δ 6.03-5.77 (m, 1H), 5.40-5.08 (m, 2H), 4.03 (dd, 2H), 3.72 (dd, 1H), 3.37 (dd, 1H), 3.21-3.02 (m, 1H), 2.78 (t, 1H), 2.60 (q, 1H).

(1-Propenyloxy)methyloxirane (6b). ^{1}H NMR (200 MHz, $CDCl_3$): δ 6.21 (d, *E* isomer), 5.95 (dd, *Z* isomer), 4.85-4.65 (m, *E* isomer), 4.50-4.30 (m, *Z* isomer), 4.05-3.75 (m, 1H), 3.75-3.48 (m, 1H), 3.25-3.02 (m, 1H), 2.78 (t, 1H), 2.60 (m, 1H), 1.52 (m, 3H).

1-(3-Butenyloxy)octane (7a). ^{1}H NMR (200 MHz, $CDCl_3$): δ 5.95-5.70 (m, 1H), 5.15-4.95 (m, 2H), 3.50-3.35 (m, 4H), 2.32 (q, 2H), 1.65-1.45 (m, 3H), 1.45-1.10 (m, 10H), 0.87 (t, 3H).

1-(1-Butenyloxy)octane (7b). ^{1}H NMR (200 MHz, $CDCl_3$): δ 6.21 (d, *E* isomer), 5.89 (dd, *Z* isomer), 4.88-4.70 (m, *E* isomer), 4.39-4.22 (q, *Z* isomer), 3.78-3.50 (m, 2H), 2.18-1.80 (m, 2H), 1.75-1.48 (m, 2H), 1.48-1.05 (m, 10H), 1.03-0.68 (m, 6H).

2-Propenylbenzene (8a). ^{1}H NMR (200 MHz, $CDCl_3$): δ 7.40-7.08 (m, 5H), 6.10-5.85 (m, 1H), 5.17-4.92 (m, 2H), 3.40 (d, 2H).

1-Propenylbenzene (8b). ^{1}H NMR (200 MHz, $CDCl_3$): δ 7.40-7.12 (m, 5H), 6.50-6.12 (m, 2H), 1.90 (dd, 3H).

1-Methoxy-4-(2-propenyl)benzene (9a). ^{1}H NMR (200 MHz, $CDCl_3$): δ 7.17-6.80 (m, 4H), 6.10-5.85 (m, 1H), 5.15-5.00 (m, 2H), 3.78 (s, 3H), 3.35 (d, 2H).

1-Methoxy-4-(1-propenyl)benzene (9b). ^{1}H NMR (200 MHz, $CDCl_3$): δ 7.32-6.80 (m, 4H), 6.36 (d, 1H), 6.20-6.00 (m, 1H), 3.82-3.78 (ss, 3H), 1.88 (dd, 3H).

(2-Propenyloxy)benzene (10a). ^{1}H NMR (200 MHz, $CDCl_3$): δ 7.40-6.80 (m, 5H), 6.20-5.90 (m, 1H), 5.52-5.18 (m, 2H), 4.53 (m, 2H).

(1-Propenyloxy)benzene (10b). ^{1}H NMR (200 MHz, $CDCl_3$): δ 7.40-6.80 (m, 5H), 6.50-6.30 (m, 1H), 5.48-5.25 (m, *E* isomer), 4.98-4.78 (m, *Z* isomer), 1.80-1.55 (m, 3H).

Anal. Calcd. for $C_9H_{10}O$: C, 80.55%, H, 7.52%. Found: C, 80.41%, H, 7.48%.

1-(2-Methyl-2-propenyloxy)octane (11a). ^{1}H NMR (200 MHz, $CDCl_3$): δ 5.00-4.82 (dd, 2H), 3.85 (s, 2H), 3.39 (t, 2H), 1.74 (s, 3H), 1.70-1.50 (m, 2H), 1.48-1.10 (m, 10H), 0.87 (t, 3H).

1-(2-Methyl-1-propenyloxy)octane (11b). ^{1}H NMR (200 MHz, $CDCl_3$): δ 5.78 (s, 1H), 3.62 (t, 2H), 1.59 (s, 3H), 1.52 (s, 3H), 1.70-1.50 (m, 2H), 1.45-1.05 (m, 10H), 0.87 (t, 3H).

Anal. Calcd. for $C_{12}H_{24}O$: C, 78.18%, H, 13.13%. Found: C, 77.99%, H, 12.99%.

1-(3-Butenyl-2-oxy)decane (12a). ^{1}H NMR (200 MHz, $CDCl_3$): δ 5.83-5.62 (m, 1H), 5.23-5.03 (m, 2H), 3.88-3.70 (m, 1H), 3.51-3.20 (m, 2H), 1.65-1.45 (m, 2H), 1.45-1.03 (m, 17H), 0.95-0.75 (t, 3H).

1-(2-Propynyloxy)decane (13a). ^{1}H NMR (200 MHz, $CDCl_3$): δ 4.11 (d, 2H), 3.49 (t, 2H), 2.39 (t, 1H), 1.65-1.48 (m, 2H), 1.45-1.05 (m, 14H), 0.87 (t, 3H).

1, 4-Dibutoxy-2-butyne (14a). ^{1}H NMR (200 MHz, $CDCl_3$): δ 4.15 (s, 4H), 3.48 (t, 4H), 1.65-1.25 (m, 8H), 0.90 (t, 6H).

4, 7-Dihydro-2-phenyl-1, 3-dioxepin (15a). ^{1}H NMR (200 MHz, $CDCl_3$): δ 7.60-7.30 (m, 5H), 5.86 (s, 1H), 5.78 (t, 2H), 4.50-4.10 (m, 4H).