

Supporting Informations

1-Acetoxy-3-bromo-1-propene (3). Flame-dried ZnCl_2 (0.068 g, 0.5 mmol) was added at $-20\text{ }^\circ\text{C}$ to a mixture of freshly distilled acrolein (3.32 mL, 50 mmol) and acetyl bromide (3.73 mL, 50 mmol) in anhydrous CH_2Cl_2 (40 mL). The reaction was stirred for 2 h at $0\text{ }^\circ\text{C}$ and quenched at $0\text{ }^\circ\text{C}$ by addition of aq. NaHCO_3 . The aqueous layer was extracted with CH_2Cl_2 (3 X 10 mL), the combined organic phases were dried (Na_2SO_4) and CH_2Cl_2 was removed by distillation at atmospheric pressure. Further purification of the residue by distillation (bp = $69\text{--}71\text{ }^\circ\text{C}$, P = 22 torr) afforded 5.44 g (30.5 mmol, 61 %) of **3** as a 35:65 mixture of *Z/E* isomers.

(Z)-3. ^1H NMR (300 MHz, CDCl_3) δ 2.22 (s, 3H), 4.09 (dd, $J = 0.3/8.1\text{ Hz}$, 2H), 5.24 (dt, $J = 6.3/8.1\text{ Hz}$, 1H), 7.19 (dt, $J = 0.3/6.3\text{ Hz}$, 1H); ^{13}C NMR (75 MHz, CDCl_3) δ 20.5, 23.5, 109.3, 136.9, 166.9.

(E)-3. ^1H NMR (300 MHz, CDCl_3) δ 2.16 (s, 3H), 3.99 (dd, $J = 0.3/8.1\text{ Hz}$, 2H), 5.70 (dt, $J = 8.1/12.3\text{ Hz}$, 1H), 7.19 (dt, $J = 0.3/12.3\text{ Hz}$, 1H); ^{13}C NMR (75 MHz, CDCl_3) δ 20.5, 28.4, 111.1, 139.0, 167.2.

Syn-1-Phenyl-but-3-en-1,2-diol (Syn-6a). ^1H NMR (300 MHz, CDCl_3) δ 2.42 (d, $J = 1.8\text{ Hz}$, 1H), 2.78 (d, $J = 1.2\text{ Hz}$, 1H), 4.25 (broad m, 1H), 4.52 (dd, $J = 1.8/6.9\text{ Hz}$, 1H), 5.17 (dt, $J = 1.5/10.5\text{ Hz}$, 1H), 5.28 (dt, $J = 1.5/16.8\text{ Hz}$, 1H), 5.75 (ddd, $J = 5.1/10.5/16.8\text{ Hz}$, 1H), 7.28-7.42 (m, 5 H); ^{13}C NMR (75 MHz, CDCl_3) δ 76.8, 77.5, 116.8, 127.0, 127.9, 128.2, 136.1, 140.1.

Anti-1-Phenyl-but-3-en-1,2-diol (Anti-6a). ^1H NMR (300 MHz, CDCl_3) δ 2.02 (d, $J = 3.9\text{ Hz}$, 1H), 2.40 (d, $J = 2.0\text{ Hz}$, 1H), 4.34 (broad m, 1H), 4.78 (t, $J = 3.9\text{ Hz}$, 1H), 5.24 (dt, $J = 1.4/10.5\text{ Hz}$, 1H), 5.30 (dt, $J = 1.4/17.5\text{ Hz}$, 1H), 5.75 (ddd, $J = 6.3/10.5/17.5\text{ Hz}$, 1H), 7.27-7.40 (m, 5 H); ^{13}C NMR (75 MHz, CDCl_3) δ 76.3, 76.5, 117.5, 126.5, 127.6, 128.1, 135.4, 139.7.

Syn-1-Cyclohexyl-but-3-en-1,2-diol (Syn-6b). ^1H NMR (300 MHz, CDCl_3) δ 0.95-1.48 (m, 5H), 1.56-1.88 (m, 4H), 1.89-2.18 (m, 2H), 3.21-3.28 (m, 1H), 4.15-4.21 (m, 1H), 5.26 (dt, $J = 1.3/10.5\text{ Hz}$, 1H), 5.37 (dt, $J = 1.3/17.5\text{ Hz}$, 1H), 5.90 (ddd, $J = 6.3/10.5/17.5\text{ Hz}$, 1H); ^{13}C NMR (75 MHz, CDCl_3) δ 26.0, 26.2, 26.3, 27.1, 29.6, 29.9, 39.4, 73.0, 78.3.

Anti-1-Cyclohexyl-but-3-en-1,2-diol (Anti-6b). ^1H NMR (300 MHz, CDCl_3) δ 0.93-1.48 (m, 5H), 1.58-1.86 (m, 4H), 1.88-2.20 (m, 2H), 3.39-3.48 (m, 1H), 4.20-4.29 (m, 1H), 5.31 (dt, $J = 1.4/10.5\text{ Hz}$, 1H), 5.38 (dt, $J = 1.4/17.5\text{ Hz}$, 1H), 5.99 (ddd, $J = 6.6/10.5/17.5\text{ Hz}$, 1H); ^{13}C NMR (75 MHz, CDCl_3) δ 25.7, 25.8, 26.3, 28.7, 29.0, 39.7, 73.3, 78.0.

Syn-Tridec-1-en-3,4-diol (Syn-6c). ^1H NMR (300 MHz, CDCl_3) δ 0.86 (t, $J = 6.7\text{ Hz}$, 3H), 1.18-1.75 (m, 16H), 3.42-3.51 (m, 1H), 3.90-4.00 (m, 1H), 5.24 (dt, $J = 1.4/10.5\text{ Hz}$, 1H), 5.38 (dt, $J = 1.4/17.5\text{ Hz}$, 1H), 5.94 (ddd, $J = 6.3/10.5/17.5\text{ Hz}$, 1H); ^{13}C NMR (50 MHz, CDCl_3) δ 14.2, 22.7, 25.7, 29.3, 29.6, 29.6, 29.7, 32.9, 32.9, 74.3, 76.2, 117.3, 137.6.

Anti-Tridec-1-en-3,4-diol (Anti-6c). ^1H NMR (300 MHz, CDCl_3) δ 0.88 (t, $J = 6.7\text{ Hz}$, 3H), 1.20-1.80 (m, 16H), 3.66-3.78 (m, 1H), 4.06-4.15 (m, 1H), 5.27 (dt, $J = 1.4/10.5\text{ Hz}$, 1H), 5.36 (dt, $J = 1.4/17.5\text{ Hz}$, 1H), 5.86 (ddd, $J = 6.5/10.5/17.5\text{ Hz}$, 1H); ^{13}C NMR (50 MHz, CDCl_3) δ 14.2, 22.7, 25.9, 29.3, 29.6, 29.66, 29.74, 31.9, 32.9, 74.1, 75.9, 117.6, 135.9.

Syn-6-Methyl-hept-1-en-3,4-diol (Syn-6d). ^1H NMR (200 MHz, CDCl_3) δ 0.92 (d, $J = 6.6\text{ Hz}$, 3H), 0.96 (d, $J = 7.2\text{ Hz}$, 3H), 1.12-1.37 (m, 2H), 1.72-1.95 (m, 1H), 2.14 (d, $J = 3.6\text{ Hz}$, 1H), 2.23 (d, $J = 3.6\text{ Hz}$, 1H), 5.20-5.43 (m, 2H), 5.88 (ddd, $J = 6.0/10.5/17.5\text{ Hz}$, 1H); ^{13}C NMR (50 MHz, CDCl_3) δ 21.5, 23.7, 24.4, 41.8, 72.4, 76.7, 117.0, 137.5.

Anti-6-Methyl-hept-1-en-3,4-diol (Syn-6d). ^1H NMR (200 MHz, CDCl_3) δ 0.91 (d, $J = 7.2\text{ Hz}$, 3H), 0.95 (d, $J = 7.0\text{ Hz}$, 3H), 1.36-1.53 (m, 2H), 1.75-1.91 (m, 1H), 1.90 (d, $J = 6.0\text{ Hz}$, 1H), 2.07

(d, $J = 5.0$ Hz, 1H), 5.23-5.41 (m, 2H), 5.93 (ddd, $J = 6.4/10.5/17.5$ Hz, 1H); ^{13}C NMR (50 MHz, CDCl_3) δ 21.8, 23.5, 24.4, 40.7, 72.1, 76.2, 117.2, 135.9.

Syn-6-Phenyl-hex-1-en-3,4-diol (Syn-6e). ^1H NMR (300 MHz, CDCl_3) δ 1.73-1.86 (m, 2H), 2.08-2.17 (broad s, 1H), 2.19-2.27 (broad s, 1H), 2.62-2.70 (m, 1H), 2.80-2.89 (m, 1H), 3.41-3.54 (m, 1H), 3.90-3.99 (m, 1H), 5.23 (dt, $J = 1.5/10.5$ Hz, 1H), 5.34 (dt, $J = 1.5/17.5$ Hz, 1H), 5.83 (ddd, $J = 6.3/10.5/17.5$ Hz, 1H), 7.28-7.40 (m, 5H); ^{13}C NMR (50 MHz, CDCl_3) δ 31.8, 34.5, 73.6, 76.4, 117.5, 125.7, 128.2, 128.3, 137.3, 141.7.

Anti-6-Phenyl-hex-1-en-3,4-diol (Anti-6e). ^1H NMR (300 MHz, CDCl_3) δ 1.67-1.80 (m, 2H), 1.92-2.03 (broad s, 2H), 2.60-2.75 (m, 1H), 2.79-2.91 (m, 1H), 3.65-3.75 (m, 1H), 4.04-4.14 (m, 1H), 5.26 (m, 1H), 5.32 (dt, $J = 1.5/17.5$ Hz, 1H), 5.90 (ddd, $J = 6.3/10.5/17.5$ Hz, 1H), 7.28-7.42 (m, 5H); ^{13}C NMR (50 MHz, CDCl_3) δ 32.1, 33.6, 73.3, 76.0, 117.5, 128.8, 128.2, 128.3, 135.8, 141.8.

Syn-(1E)-1-Phenyl-hexa-1,5-dien-3,4-diol (Syn-6f). ^1H NMR (300 MHz, CDCl_3) δ 2.18 (d, $J = 3.0$ Hz, 1H), 2.21 (d, $J = 3.0$ Hz, 1H), 4.04-4.08 (m, 1H), 4.09-4.12 (m, 1H), 5.28 (dt, $J = 1.5/10.5$ Hz, 1H), 5.42 (dt, $J = 1.5/17.5$ Hz, 1H), 5.94 (ddd, $J = 5.7/10.5/17.5$ Hz, 1H), 6.21 (dd, $J = 6.3/15.9$ Hz, 1H), 6.70 (d, $J = 15.9$ Hz, 1H), 7.21-7.42 (m, 5H); ^{13}C NMR (50 MHz, CDCl_3) δ 75.6, 75.9, 117.4, 126.5, 127.9, 128.3, 132.6, 135.9, 136.5.

Anti-(1E)-1-Phenyl-hexa-1,5-dien-3,4-diol (Anti-6f). ^1H NMR (300 MHz, CDCl_3) δ 2.07 (d, $J = 3.2$ Hz, 1H), 2.10 (d, $J = 3.0$ Hz, 1H), 4.12-4.16 (m, 1H), 4.18-4.21 (m, 1H), 5.31 (dt, $J = 1.5/10.5$ Hz, 1H), 5.40 (dt, $J = 1.5/17.5$ Hz, 1H), 5.95 (ddd, $J = 6.3/10.5/17.5$ Hz, 1H), 6.24 (dd, $J = 6.3/15.9$ Hz, 1H), 6.68 (d, $J = 15.9$ Hz, 1H), 7.20-7.40 (m, 5H); ^{13}C NMR (50 MHz, CDCl_3) δ 75.3, 75.7, 117.7, 126.9, 127.3, 127.5, 132.8, 135.6, 136.3.

Syn-2-Methyl-hexa-1,5-dien-3,4-diol (Syn-6g). ^1H NMR (300 MHz, CDCl_3) δ 1.78 (s, 3H), 2.25 (d, $J = 3.1$ Hz, 1H), 2.34 (d, $J = 3.1$ Hz, 1H), 3.91-3.99 (m, 1H), 4.10-4.21 (m, 1H), 4.99-5.05 (m, 1H), 5.06-5.07 (m, 1H), 5.25 (dt, $J = 1.4/10.5$ Hz, 1H), 5.39 (dq, $J = 1.4/17.1$ Hz, 1H), 5.87 (ddd, $J = 5.7/10.5/17.1$ Hz, 1H); ^{13}C NMR (50 MHz, CDCl_3) δ 18.6, 73.7, 78.4, 113.8, 116.8, 136.7, 143.7.

Anti-2-Methyl-hexa-1,5-dien-3,4-diol (Anti-6g). ^1H NMR (300 MHz, CDCl_3) δ 1.63 (s, 3H), 2.05 (d, $J = 5.1$ Hz, 1H), 2.09 (d, $J = 5.1$ Hz, 1H), 4.01-4.05 (m, 1H), 4.18-4.27 (m, 1H), 5.29 (dt, $J = 1.7/10.5$ Hz, 1H), 5.40 (dt, $J = 1.7/17.5$ Hz, 1H), 5.91 (ddd, $J = 6.0/10.5/17.5$ Hz, 1H); ^{13}C NMR (50 MHz, CDCl_3) δ 18.8, 76.4, 77.8, 113.0, 117.6, 135.9, 143.6.

Syn-1-(2-Furyl)-but-3-en-1,2-diol (Syn-6h). ^1H NMR (200 MHz, CDCl_3) δ 2.54 (s, 1H), 2.75 (s, 1H), 4.43-4.51 (m, 1H), 4.56 (dd, $J = 5.0/7.0$ Hz, 1H), 5.22 (dt, $J = 1.8/10.5$ Hz, 1H), 5.35 (dt, $J = 1.8/17.2$ Hz, 1H), 5.80 (ddd, $J = 5.2/10.5/17.2$ Hz, 1H), 6.33-6.39 (m, 2H), 7.40-7.43 (m, 1H); ^{13}C NMR (50 MHz, CDCl_3) δ 70.9, 74.5, 108.0, 110.1, 117.1, 135.8, 142.1, 153.0.

Anti-1-(2-Furyl)-but-3-en-1,2-diol (Anti-6h). ^1H NMR (200 MHz, CDCl_3) δ 4.40-4.46 (m, 1H), 4.75 (t, $J = 5.4$ Hz, 1H), 5.23 (dt, $J = 1.4/10.5$ Hz, 1H), 5.39 (dt, $J = 1.4/17.2$ Hz, 1H), 5.87 (ddd, $J = 5.6/10.5/17.2$ Hz, 1H), 6.32-6.39 (m, 2H), 7.40-7.42 (m, 1H); ^{13}C NMR (50 MHz, CDCl_3) δ 70.7, 74.7, 107.7, 110.1, 117.4, 135.6, 117.4, 135.6, 141.9, 153.0.

4,5-Trans-2,2-Dimethyl-4-phenyl-5-ethenyl-1,3-dioxolane (Trans-7a): ^1H NMR (200 MHz, CDCl_3) δ 1.55 (s, 3H), 1.60 (s, 3H), 4.19 (t, $J = 8.4$ Hz, 1H), 4.67 (d, $J = 8.4$ Hz, 1H), 5.21-5.24 (m, 1H), 5.29-5.31 (m, 1H), 5.89 (ddd, $J = 6.8/9.8/17.6$ Hz, 1H), 7.25-7.42 (m, 5H); ^{13}C NMR (50 MHz, CDCl_3) δ 27.08, 27.13, 82.9, 84.7, 109.2, 119.3, 126.4, 128.1, 128.4, 133.8, 137.1.

4,5-Cis-2,2-Dimethyl-4-phenyl-5-ethenyl-1,3-dioxolane (Cis-7a): ^1H NMR (200 MHz, CDCl_3) δ 1.53 (s, 3H), 1.70 (s, 3H), 4.83 (t, $J = 7.0$ Hz, 1H), 5.00 (dd, $J = 2.2/7.0$ Hz, 1H), 5.22-5.25 (m,

1H), 5.28-5.34 (m, 1H), 5.89 (ddd, $J = 6.8/9.9/17.1$ Hz, 1H), 7.25-7.40 (m, 5H); ^{13}C NMR (50 MHz, CDCl_3) δ 25.1, 27.4, 80.2, 80.7, 108.8, 117.8, 126.8, 128.0, 128.1, 134.9, 137.3.

4,5-*Trans*-2,2-Dimethyl-4-ethenyl-5-cyclohexyl-1,3-dioxolane (*Trans*-7b): ^1H NMR (300 MHz, CDCl_3) δ 0.80-1.80 (m, 10H), 1.41 (br s, 6H), 1.82-1.92 (m, 1H), 3.52 (dd, $J = 6.0/7.4$ Hz, 1H), 4.19 (t, $J = 7.4$ Hz, 1H), 5.24 (dt, $J = 1.2/10.2$, 1H), 5.37 (dt, $J = 1.2/16.5$, 1H), 5.88 (ddd, $J = 7.5/10.2/16.5$ Hz, 1H); ^{13}C NMR (75 MHz, CDCl_3) δ 26.0, 26.2, 27.2, 27.4, 29.3, 29.7, 30.0, 40.6, 80.6, 85.1, 108.8, 118.6, 136.9.

4,5-*Cis*-2,2-Dimethyl-4-ethenyl-5-cyclohexyl-1,3-dioxolane (*Cis*-7b): ^1H NMR (300 MHz, CDCl_3) δ 0.80-1.80 (m, 10H), 1.35 (s, 3H), 1.45 (s, 3H), 1.95-2.02 (m, 1H), 3.79 (dd, $J = 5.7/8.8$ Hz, 1H), 4.41 (dd, $J = 5.4/8.8$ Hz, 1H), 5.20-5.32 (m, 1H), 5.28-5.34 (m, 1H), 5.88 (ddd, $J = 8.4/10.2/18.3$ Hz, 1H); ^{13}C NMR (75 MHz, CDCl_3) δ 25.77, 25.80, 26.0, 26.7, 28.6, 29.0, 30.6, 37.4, 80.0, 82.7, 108.1, 118.4, 135.0.

4,5-*Trans*-2,2-Dimethyl-4-ethenyl-5-nonyl-1,3-dioxolane (*Trans*-7c): ^1H NMR (200 MHz, CDCl_3) δ 0.88 (t, $J = 7.0$ Hz, 3H), 1.20-1.36 (m, 16 H), 1.41 (s, 3H), 1.42 (s, 3H), 3.68 (dt, $J = 5.3/8.3$ Hz, 1H), 3.98 (dd, $J = 7.3/8.3$ Hz, 1H), 5.24 (ddd, $J = 1.0/2.0/10.3$ Hz, 1H), 5.36 (ddd, $J = 0.6/1.5/17.0$ Hz, 1H), 5.82 (ddd, $J = 7.3/10.3/17.0$ Hz, 1H); ^{13}C NMR (75 MHz, CDCl_3) δ 14.1, 22.7, 26.1, 27.0, 27.3, 29.3, 29.6 (broad s), 29.7, 31.9, 80.7, 82.8, 108.4, 118.6, 135.6.

4,5-*Cis*-2,2-Dimethyl-4-ethenyl-5-nonyl-1,3-dioxolane (*Cis*-7c): ^1H NMR (200 MHz, CDCl_3) δ 0.88 (t, $J = 7.0$ Hz, 3H), 1.20-1.35 (m, 16 H), 1.37 (s, 3H), 1.49 (s, 3H), 4.07-4.20 (m, 1H), 4.47 (dd, $J = 6.2/7.7$ Hz, 1H), 5.23 (ddd, $J = 0.7/1.8/10.2$), 5.29 (ddd, $J = 1.0/1.8/17.0$ Hz, 1H), 5.83 (ddd, $J = 8.1/10.2/17.0$ Hz, 1H); ^{13}C NMR (75 MHz, CDCl_3) δ 14.1, 22.7, 25.7, 26.2, 28.3, 29.3, 29.6 (broad s), 29.7, 31.9, 78.3, 79.9, 108.0, 118.0, 134.6.

4,5-*Trans*-2,2-Dimethyl-4-ethenyl-5-(2'-methyl-propyl)-1,3-dioxolane (*Trans*-7d): ^1H NMR (200 MHz, CDCl_3) δ 0.97 (d, $J = 6.6$ Hz, 6H), 1.25-1.60 (m, 2H), 1.44 (broad s, 6H), 1.65-1.85 (m, 1H), 3.76 (dt, $J = 3.9/8.3$ Hz, 1H), 3.96 (t, $J = 8.3$ Hz, 1H), 5.22-5.30 (m, 1H), 5.33-5.44 (m, 1H), 5.80 (ddd, $J = 8.3/10.2/17.3$ Hz, 1H); ^{13}C NMR (75 MHz, CDCl_3) δ 22.2, 25.4, 27.0, 27.4, 28.4, 29.7, 40.9, 78.9, 83.2, 108.4, 118.6, 135.3.

4,5-*Cis*-2,2-Dimethyl-4-ethenyl-5-(2'-methyl-propyl)-1,3-dioxolane (*Cis*-7d): ^1H NMR (200 MHz, CDCl_3) δ 0.96 (d, $J = 6.6$ Hz, 6H), 1.09-1.32 (m, 1H), 1.40 (s, 3H), 1.45-1.56 (m, 1H), 1.51 (s, 3H), 1.65-1.87 (m, 1H), 4.26 (ddd, $J = 4.3/6.2/9.6$ Hz, 1H), 4.49 (dd, $J = 6.2/7.3$ Hz, 1H), 5.20-5.27 (m, 1H), 5.28-5.36 (m, 1H), 5.84 (ddd, $J = 7.3/10.0/17.2$ Hz, 1H); ^{13}C NMR (75 MHz, CDCl_3) δ 22.0, 23.5, 25.1, 25.8, 28.4, 39.1, 76.3, 80.0, 107.9, 117.9, 134.6.

4,5-*Trans*-2,2-Dimethyl-4-ethenyl-5-(2'-phenyl-ethyl)-1,3-dioxolane (*Trans*-7e): ^1H NMR (300 MHz, CDCl_3) δ 1.44 (s, 3H), 1.46 (s, 3H), 1.82-1.96 (m, 2H), 2.62-2.75 (m, 1H), 2.78-2.84 (m, 1H), 3.72 (dt, $J = 5.7/8.0$ Hz, 1H), 4.07 (t, $J = 8.0$ Hz, 1H), 5.25 (dt, $J = 1.1/10.4$ Hz, 1H), 5.35 (dt, $J = 1.1/17.0$ Hz, 1H), 5.80 (ddd, $J = 7.3/10.4/17.0$ Hz, 1H); ^{13}C NMR (75 MHz, CDCl_3) δ 27.0, 27.3, 32.3, 33.6, 79.9, 82.7, 108.6, 118.9, 125.8, 128.3, 128.4, 135.3, 141.7.

4,5-*Cis*-2,2-Dimethyl-4-ethenyl-5-(2'-phenyl-ethyl)-1,3-dioxolane (*Cis*-7e): ^1H NMR (300 MHz, CDCl_3) δ 1.39 (s, 3H), 1.53 (s, 3H), 1.63-1.75 (m, 1H), 1.76-1.92 (m, 1H), 2.65 (ddd, $J = 6.9/9.8/13.7$ Hz, 1H), 2.82 (ddd, $J = 5.2/10.1/13.7$ Hz, 1H), 4.16 (ddd, $J = 4.6/6.3/10.7$ Hz, 1H), 4.50 (t, $J = 6.3$ Hz, 1H), 5.23 (ddd, $J = 0.8/1.6/10.3$ Hz, 1H), 5.31 (dt, $J = 1.5/17.1$ Hz, 1H), 5.83 (ddd, $J = 7.8/10.3/17.1$ Hz, 1H); ^{13}C NMR (75 MHz, CDCl_3) δ 25.7, 28.3, 32.4 (2C), 77.4, 79.7, 108.2, 118.2, 125.8, 128.3, 128.4, 134.3, 141.6.

4,5-*Trans*-2,2-Dimethyl-4-(2'-phenyl-ethenyl)-5-ethenyl-1,3-dioxolane (*Trans*-7f): ^1H NMR (300 MHz, CDCl_3) δ 1.48 (s, 3H), 1.50 (s, 3H), 4.18 (t, $J = 6.9$ Hz, 1H), 4.27 (dd, $J = 6.9/7.1$ Hz,

1H), 5.27 (dd, $J = 1.1/10.1$ Hz, 1H), 5.38 (dd, $J = 1.1/17.2$ Hz, 1H), 5.85 (ddd, $J = 6.9/10.1/17.2$ Hz, 1H), 6.15 (dd, $J = 7.1/15.6$ Hz, 1H), 6.67 (d, $J = 15.6$ Hz, 1H), 7.21-7.44 (m, 5H) ; ^{13}C NMR (75 MHz, CDCl_3) δ 27.07, 27.11, 82.1, 82.4, 109.2, 118.9, 125.0, 126.6, 127.9, 128.5, 133.9, 134.0, 136.2.

4,5-Cis-2,2-Dimethyl-4-(2'-phenyl-ethenyl)-5-ethenyl-1,3-dioxolane (Cis-7f): ^1H NMR (300 MHz, CDCl_3) δ 1.44 (s, 3H), 1.58 (s, 3H), 4.67 (ddt, $J = 1.1/6.5/7.2$ Hz, 1H), 4.79 (ddd, $J = 0.9/6.5/7.7$ Hz, 1H), 5.23 (ddd, $J = 0.8/1.7/10.5$ Hz, 1H), 5.34 (dd, $J = 1.1/1.7/17.0$ Hz, 1H), 5.81 (ddd, $J = 7.2/10.5/17.0$ Hz, 1H), 6.11 (dd, $J = 7.7/16.0$ Hz, 1H), 6.62 (d, $J = 16.0$ Hz, 1H), 7.21-7.44 (m, 5H) ; ^{13}C NMR (75 MHz, CDCl_3) δ 25.6, 28.1, 79.6, 80.1, 108.9, 118.2, 125.5, 126.6, 127.8, 128.5, 133.2, 134.3, 136.4.

4,5-Trans-2,2-Dimethyl-4-(1'-methyl-ethenyl)-5-ethenyl-1,3-dioxolane (Trans-7g): ^1H NMR (200 MHz, CDCl_3) δ 1.46 (s, 3H), 1.47 (s, 3H), 1.78 (t, $J = 0.8$ Hz, 3H), 4.08-4.22 (m, 2H), 4.95-4.99 (m, 1H), 5.04-5.09 (m, 1H), 5.23-5.30 (m, 1H), 5.31-5.42 (m, 1H), 5.84 (ddd, $J = 5.9/10.3/17.3$ Hz, 1H) ; ^{13}C NMR (50 MHz, CDCl_3) δ 17.8, 26.9, 27.1, 81.0, 84.5, 109.0, 113.8, 118.8, 134.9, 140.7.

4,5-Cis-2,2-Dimethyl-4-(1'-methyl-ethenyl)-5-ethenyl-1,3-dioxolane (Cis-7g): ^1H NMR (200 MHz, CDCl_3) δ 1.42 (s, 3H), 1.56 (s, 3H), 1.67 (t, $J = 1.2$ Hz, 3H), 4.58-4.67 (m, 2H), 4.91-4.96 (m, 1H), 5.06-5.12 (m, 1H), 5.15-5.23 (m, 1H), 5.28-5.34 (m, 1H), 5.84 (ddd, $J = 5.8/10.1/17.0$ Hz, 1H); ^{13}C NMR (50 MHz, CDCl_3) δ 15.3, 25.2, 27.5, 65.8, 79.6, 108.6, 112.0, 117.9, 134.3, 140.6.

4,5-Trans-2,2-Dimethyl-4-furyl-5-ethenyl-1,3-dioxolane (Trans-7h): ^1H NMR (200 MHz, CDCl_3) δ 1.51 (s, 3H), 1.55 (s, 3H), 4.59-4.72 (m, 2H), 5.26 (ddd, $J = 1.4/10.3$ Hz, 1H), 5.34 (ddd, $J = 1.4/17.2$ Hz, 1H), 5.87 (ddd, $J = 6.0/10.3/17.2$ Hz, 1H), 6.34-6.41 (m, 2H), 7.45 (d, $J = 1.8$ Hz, 1H); ^{13}C NMR (50 MHz, CDCl_3) δ 26.7, 27.0, 76.3, 80.5, 109.2, 109.6, 110.2, 119.0, 133.8, 143.2, 150.0.

4,5-Cis-2,2-Dimethyl-4-furyl-5-ethenyl-1,3-dioxolane (Cis-7h): ^1H NMR (200 MHz, CDCl_3) δ 1.47 (s, 3H), 1.64 (s, 3H), 4.62 (d, $J = 6.7$ Hz, 1H), 4.77 (t, $J = 6.7$ Hz, 1H), 5.15 (ddd, $J = 1.8/10.3$ Hz, 1H), 5.31 (ddd, $J = 1.8/17.2$ Hz, 1H), 5.82-5.86 (m, 1H), 6.26-6.35 (m, 2H), 7.40 (d, $J = 1.8$ Hz, 1H); ^{13}C NMR (50 MHz, CDCl_3) δ 25.3, 27.2, 74.6, 80.0, 108.6, 109.4, 110.0, 118.0, 133.3, 142.4, 149.8.