2-[(Phenylthio)carbonyl]-5-methyltetrahydrofuran (10b, less polar isomer): an oil; R_f 0.53 (hexane:Et_2O 3:1); IR (film) 2900, 1705, 1450, 975, 650 cm^{-1}; ^1H NMR (400 MHz, $CDCl_3$) δ 7.40 (s, 5 H) 4.65 (dd, 1 H, J = 5.6, 8.4 Hz), 4.42 (m, 1 H), 2.38 (m, 1 H), 2.13 (m, 2 H), 1.56 (m, 1 H), 1.33 (d, 3 H, J = 6 Hz); ^{13}C NMR (101 MHz, $CDCl_3$) δ 202.7, 134.7, 129.2, 129.1, 127.7, 83.6, 77.7, 32.8, 31.0, 20.9; mass spectrum (EI), m/e 222 ($M^{\cdot+}$), 194, 137, 110, 85, 67, 43. Anal. Calcd for $C_{12}H_{14}O_2S$: C, 64.83; H, 6.35. Found: 64.55; H, 6.09.

2-[(Phenylthio)carbonyl]-5-methyltetrahydrofuran (10b, more polar isomer): an oil; R_f 0.45 (hexane:Et_2O 3:1); IR (film) 2980, 1705, 1445, 750 cm^{-1}; ^1H NMR (400 MHz, $CDCl_3$) δ 7.40 (s, 5 H), 4.55 (dd, 1 H, J = 3.6, 8.8 Hz), 4.24 (m, 1 H), 2.30 (m, 1 H), 2.22 (m, 1 H), 2.04 (m, 1 H), 1.65 (m, 1 H), 1.48 (d, 3 H, J = 6 Hz); ^{13}C NMR (101 MHz, $CDCl_3$) δ 202.8, 134.6, 129.2, 129.1, 128.0, 83.7, 78.5, 32.2, 31.8, 20.7; mass spectrum (EI), m/e 222 ($M^{\cdot+}$), 194, 110, 85. Anal. Calcd for $C_{12}H_{14}O_2S$: C, 64.83; H, 6.35. Found: C, 64.64; H, 6.50.

2-[(Phenylthio)carbonyl]-5-phenyltetrahydrofuran (10c, less polar isomer): mp 52–53 °C (hexanes); R_f 0.40 (hexane:Et_2O 3:1); IR (KBr) 2885, 1700, 1445, 750 cm^{-1}; ^1H NMR (400 MHz, $CDCl_3$) δ 7.42 (s, 5 H), 7.38 (m, 5 H), 5.34 (dd, 1 H, J = 6, 7.6 Hz), 4.87 (dd, 1 H, J = 6, 7.6 Hz), 2.44 (m, 2 H), 2.25, (m, 1 H), 1.93 (m, 1 H); ^{13}C NMR (101 MHz, $CDCl_3$) 202.3, 141.6, 134.6, 129.2, 129.1, 128.4, 127.6, 127.5, 125.5, 84.1, 82.7, 34.1, 30.8; mass spectrum (EI), m/e 284 ($M^{\cdot+}$), 256, 147, 129, 91. Anal. Calcd for $C_{17}H_{16}O_2S$: C, 71.80; H, 5.67. Found: C, 71.50; H, 5.61.

2-[(Phenylthio)carbonyl]-5-phenyltetrahydrofuran (10c, more polar isomer): an oil; R_f 0.30 (hexane:Et_2O 3:1); IR (film) 3070, 2950, 1703, 1445, 750 cm^{-1}; ^1H NMR (400 MHz, $CDCl_3$) δ 7.60 (m, 2 H), 7.4 (m, 8 H), 5.05 (dd, 1 H, J = 5.2, 10 Hz), 4.73 (dd, 1 H, J = 4, 9.6 Hz), 2.47 (m, 1 H), 2.34 (m, 2 H), 1.97 (m, 1 H); ^{13}C NMR (101 MHz, $CDCl_3$) δ 201.6, 140.5, 134.7, 129.3, 129.1, 128.4, 127.8, 127.5, 126.3, 83.6, 83.5, 33.4, 31.7; mass spectrum (EI), m/e 284 ($M^{\cdot+}$), 147, 129, 109, 91. Anal. Calcd for $C_{17}H_{16}O_2S$: C, 71.80; H, 5.67. Found: C, 71.53; H, 5.71.

(2*R*(*S*),3*S*(*R*))-2-[(Phenylthio)carbonyl]-6-phenyltetrahydropyran (11b): mp 89–90 °C (hexanes); R_f 0.60 (hexane:Et_2O 3:1); IR (KBr) 2800, 1700, 1445, 750 cm^{-1}; ^1H NMR (400 MHz, $CDCl_3$) δ 7.4 (m, 10 H), 4.55 (dd, 1 H, J = 2, 11.2 Hz), 4.30 (dd, 1 H, J = 2.4, 11.6 Hz), 2.07 (m, 2 H), 1.95 (m, 1 H), 1.8 (m, 1 H), 1.6 (m, 2 H); ^{13}C NMR (101 MHz, $CDCl_3$) δ 200.0, 142.3, 134.9, 129.2, 129.1, 128.4, 127.4, 125.4, 82.9, 80.1, 33.7, 28.9, 23.4; mass spectrum (EI), m/e 298 ($M^{\cdot+}$), 270, 161, 117, 91, 77. Anal. Calcd for $C_{18}H_{18}O_2S$: C, 72.45; H, 6.08. Found: C, 72.10; H, 5.96.

(2*R*(*S*),3*S*(*R*))-2-[(Phenylthio)carbonyl]-3-phenyltetrahydrofuran (10d): mp 33 °C (hexanes); R_f 0.45 (hexanes:Et_2O 4:1); IR (Nujol) 1715, 1470, 1060, 920, 910 cm^{-1}; ^1H NMR (400 MHz, $CDCl_3$) δ 7.42 (s, 5 H), 7.22–7.35 (m, 5 H), 4.63 (d, 1 H, J = 5.6 Hz), 4.28 (m, 2 H), 3.64 (dt, 1 H, J = 5.6, 7.6 Hz), 2.49 (m, 1 H), 2.16 (m, 1 H); ^{13}C NMR (101 MHz, $CDCl_3$) δ 201.3, 141.2, 134.6, 129.29, 129.26, 129.16, 128.8, 127.5, 127.3, 127.0, 89.7, 69.9, 50.0, 34.5; mass spectrum (EI), m/e 284 ($M^{\cdot+}$), 147, 91. Anal. Calcd for $C_{17}H_{16}O_2S$: C, 71.80; H, 5.67. Found: C, 71.66; H, 5.62.

(2*R*(*S*),3*S*(*R*))-2-[(Phenylthio)carbonyl]-3-phenyltetrahydropyran (11c): mp 92 °C (hexanes); R_f 0.49 (hexane:Et_2O 4:1); IR (Nujol) 3100, 2550, 1710, 1470, 1380, 1090 cm^{-1}; ^1H NMR (400 MHz, $CDCl_3$) δ 7.2–7.4 (m, 10 H), 4.40 (m, 1 H), 4.30 (d, 1 H, J = 9.6 Hz), 3.64 (m, 1 H), 3.0 (dt, 1 H, J = 4, 10.4 Hz), 2.1 (m, 1 H), 1.92 (m, 2 H), 1.77 (m, 1 H); ^{13}C NMR (101 MHz, $CDCl_3$) δ 195.9, 140.5, 134.6, 129.2, 129.0, 128.5, 127.9, 127.1, 127.0, 87.3, 68.2, 46.2, 31.3, 25.3; mass spectrum (FAB), m/e 299 (M^+ + H), 270, 256, 228, 214, 199. Anal. Calcd for $C_{18}H_{18}O_2S$: C, 72.45; H, 6.08. Found: C, 72.35; H, 6.17.

Acknowledgment. We thank the National Institutes of Health (AI-23034) and W.R. Grace and Co. for generous support of this program.

Additions and Corrections

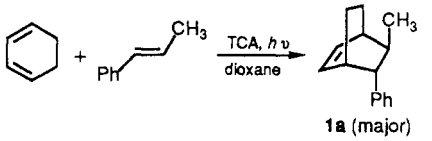
Vol. 54, 1989

Robert E. Gawley,* Georgina C. Hart, and Libero J. Bartolotti*. Chiral Dipole-Stabilized Anions: Experiment and Theory in Nonbenzylic Systems. 100% Stereoselective Deprotonation and Two-Electron vs Single-Electron Transfer in the Chemistry of Lithium and Copper Piperidinooxazolines.

Page 180, column 2, lines 52 and 53. The ^{13}C NMR data for compound **3** are incorrect and should be as follows. ^{13}C NMR: 160.91, 69.97, 69.84, 46.25, 33.05, 25.00, 23.96, 18.58, 17.53.

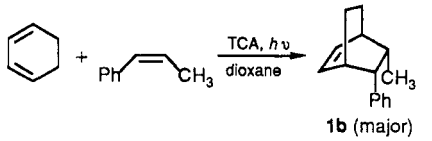
Nihat Akbulut, David Hartsough, Ji-In Kim, and Gary B. Schuster*. The Triplex Diels–Alder Reaction of 1,3-Dienes with Enol, Alkene, and Acetylenic Dienophiles: Scope and Utility.

Page 2551, column 1. The product structures in eq 1 and 2 are identified properly in the text, but drawn incorrectly. These structures should be replaced with those below.



(1)

1a (major)



(2)

1b (major)

Page 2554, column 2, lines 11 and 16. In the description of the spectral data for the bicyclic aldehydes, the descriptors exo and endo should be switched. In the description of the identification of the exo and endo trans stereoisomers (6th line from bottom of column 2), the first line of the second paragraph should read: The *exo*-phenyl stereochemistry....