Supporting Information for:

Iron-catalyzed kinetic resolution of N-sulfonyl oxaziridines

Kevin S. Williamson, James W. Sawicki, and Tehshik P. Yoon*

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I. General Information

All oxaziridine substrates were stored at 0 °C and warmed to room temperature immediately prior to use. The syntheses of ligand 6g,¹ 2-((4-nitrophenyl)sulfonyl)-3-phenyl oxaziridine² N-(4-methylphenyl)sulfonyl-3-phenyl oxaziridine,³ N-phenylsulfonyl-3-phenyloxaziridine,⁴ N-phenylsulfonyl-3-(4-nitrophenyl) oxaziridine,⁵ N-tert-butylsulfonyl-3-phenyl oxaziridine,⁶ and 2-isopropyl-3-phenyloxaziridine⁷ were conducted as previously described, and all spectroscopic data were consistent with those previously reported for these compounds. Toluene, dichloromethane, acetonitrile, and tetrahydrofuran were purified by elution through alumina as described by Grubbs.⁸ Dichloroethane was distilled from calcium hydride immediately before use. Aldehydes were distilled prior to use when applicable. All other commercially available reagents were purchased from Aldrich and used without further purification. Flash chromatography was performed with Purasil 60 Å silica gel (230–400 mesh) using the method of Still.⁹ All glassware was oven-dried for at least 1 h prior to use.

¹H and ¹³C NMR data were obtained using Varian Inova-500 and Varian Unity-500 spectrometers. ¹H NMR spectra were internally referenced to TMS (0.00 ppm); ¹³C NMR spectra were internally referenced to CDCl₃ (77.23 ppm). The NMR facilities at UW-Madison are supported by the NSF (CHE-9629688, CHE-8813550, CHE-9629688) and NIH (1 S10 RR04981-10). IR spectral data were obtained using a Bruker ALPHA FT-IR spectrometer (Platinum ATR). Melting points were obtained using a Mel-Temp II (Laboratory Devices, Inc., USA) melting point apparatus. Mass spectrometry was performed with a Micromass LCT (electrospray ionization, time-of-flight analyzer). Mass spectrometry facilities are supported by the NSF (CHE-9304546 and CHE-9974839) and the University of Wisconsin. Enantiomeric ratios were determined by supercritical fluid (SFC) chromatography on a TharSFC investigator instrument equipped with a Waters 2996 photodiode array detector, using chiral columns and methods as noted. Optical rotations were obtained using a Rudolph Autopol III polarimeter. Selectivity factors (s) were calculated as described by Kagan.¹⁰ The absolute configurations of
N-(4-methylphenyl)sulfonyl-3-phenyl oxaziridine and N-phenylsulfonyl-3-phenyloxaziridine were assigned by correlation to known optical rotations reported by Jørgensen\textsuperscript{11} and Torre\textsuperscript{12} respectively. All other absolute configurations were assigned by analogy.

II. Racemic Oxaziridine Syntheses

General Procedure 1: Based upon a modification of the procedure originally reported by Davis.\textsuperscript{13} Aldehyde (1.2 equiv) and sulfonamide (1 equiv) were dissolved in 1,2-dichloroethane (0.16 M) in a round-bottomed flask containing a stir bar. The flask was fitted with a septum, flushed with N\textsubscript{2}, and the solution cooled to 0 °C (ice bath). TiCl\textsubscript{4} (1.45 equiv) was then added dropwise over 15 min. The flask was fitted with a reflux condenser, charged with N\textsubscript{2} and heated at reflux for 12 h. The reaction was then cooled to 0 °C, and 10% K\textsubscript{2}CO\textsubscript{3} (80% reaction volume) was added with rapid stirring. The solution was transferred to an Erlenmeyer flask. CH\textsubscript{2}Cl\textsubscript{2} (60% reaction volume) and water (reaction volume) were then added, and the solution was stirred vigorously to produce a fine white suspension. The mixture was filtered through Celite\textsuperscript{®}, and the layers were separated. The organic layer was washed once with saturated NaHCO\textsubscript{3} (40% reaction volume) and the combined aqueous layers were extracted twice with CH\textsubscript{2}Cl\textsubscript{2} (40% reaction volume). The organic layer was dried over Na\textsubscript{2}SO\textsubscript{4} and concentrated. The resulting solid was recrystallized from EtOAc/hexanes or purified by flash column chromatography to yield the title compound.

In an Erlenmeyer flask equipped with a mechanical stirrer, a solution of the unpurified imine (1.0 equiv, 0.1 M) in toluene was combined with an aqueous solution of K\textsubscript{2}CO\textsubscript{3} (7.0 equiv, 1.4 M). An aqueous solution of Oxone\textsuperscript{®} (1.9 equiv, 0.2 M) was then added with vigorous stirring. If after 1 h the reaction had not reached completion, the aqueous layer was removed by siphon and a fresh solution of K\textsubscript{2}CO\textsubscript{3} (8.5 equiv, 1.0 M) was added to the Erlenmeyer flask along with a solution of Oxone\textsuperscript{®} (1.6 equiv, 0.2 M). Upon completion of the reaction, the organic and aqueous layers were separated. The aqueous layer was extracted twice with toluene. The combined organic layers were washed with a 5% solution of Na\textsubscript{2}SO\textsubscript{3}. The organic layer was dried over Na\textsubscript{2}SO\textsubscript{4} and concentrated. The resulting solid was recrystallized from EtOAc/hexanes or purified by flash column chromatography to yield the title compound.

General Procedure 2: Based upon a modification of the procedure originally reported by Davis.\textsuperscript{13} Aldehyde (1.3 equiv) and sulfonamide (1 equiv) were dissolved in toluene (0.5 M) in a round-bottomed flask containing flame-dried molecular sieves (4Å, 1 equiv. by weight), Amberlyst\textsuperscript{®} 15 exchange resin (0.016 equiv. by weight), stir bar. The flask was fitted with a Dean–Stark trap and a reflux condenser, flushed with N\textsubscript{2} and heated at reflux for 16 h. The reaction was then cooled to room temperature, and the mixture was filtered through Celite\textsuperscript{®}. The mixture was concentrated on a rotary evaporator to give the crude imine, which was used without further purification.

In an Erlenmeyer flask equipped with a mechanical stirrer; a solution of the unpurified imine (1.0 equiv, 0.1 M) in toluene was combined with an aqueous solution of K\textsubscript{2}CO\textsubscript{3} (7.0 equiv, 1.4 M). An aqueous solution of Oxone\textsuperscript{®} (1.9 equiv, 0.2 M) was then added with vigorous stirring. If after 1 h the reaction had not reached completion, the aqueous layer was removed by siphon and a fresh solution of K\textsubscript{2}CO\textsubscript{3} (8.5 equiv, 1.0 M) was added to the Erlenmeyer flask along with a solution of Oxone\textsuperscript{®} (1.6 equiv, 0.2 M). Upon completion of the reaction, the organic and aqueous layers were separated. The aqueous layer was extracted twice with toluene. The combined organic layers were washed with a 5% solution of Na\textsubscript{2}SO\textsubscript{3}.
The organic layer was dried over Na₂SO₄ and concentrated. The resulting solid was recrystallized from EtOAc/hexanes or purified by flash column chromatography to yield the title compound.

**N-(2-Nitrophenyl)sulfonyl-3-(phenyl)oxaziridine.** Prepared according to general procedure 1 using 2.5 g 2-nitrobenzenesulfonamide (12.4 mmol) and 1.93 g benzaldehyde (1.85 mL, 16.1 mmol). The title compound was obtained after purification of the crude on silica gel using 30% EtOAc/hexanes as eluent. Yield: 2.62 g (8.6 mmol, 69% yield over two steps). IR (ATR) 3100, 1537, 1361, 1169; ¹H NMR: (500 MHz, CDCl₃) δ 8.30 (2-NsH, d, J = 7.5 Hz, 1H), 7.83-7.90 (2-NsH, m, 3H), 7.53 (PhH, d, J = 7.7 Hz, 2H), 7.49 (PhH, t, J = 7.5 Hz, 1H), 7.43 (PhH, s, 1H); ¹³C NMR: (126 MHz, CDCl₃) δ 149.2, 136.1, 133.1, 132.7, 131.6, 129.9, 128.8, 128.3, 128.3, 125.0, 78.9; HRMS (ESI+) calcd for [C₁₃H₁₁N₂O₃S⁺] requires m/z 307.0384, found 307.0383. Isolated as a yellow solid (m.p. 71–75 ºC, decomp). *(Note: This compound was found to have a limited shelf life. Decomposition occurred within days of storage at 0 ºC)*

**2-(Mesylsulfonyl)-3-(phenyl)oxaziridine.** Prepared according to general procedure 2 using 4.98 g 2,4,6-trimethylbenzenesulfonylamide (25.0 mmol) and 3.18 g benzaldehyde (3.06 mL, 30.0 mmol). The title compound was obtained after recrystallization of the crude with EtOAc/hexanes (1:5). Yield: 2.34 g (7.7 mmol, 31% yield over two steps). IR (ATR) 2981, 1602, 1458, 1336, 1161; ¹H NMR: (500 MHz, CDCl₃) δ 7.39-7.48 (PhH, m, 5H), 7.04 (MesH, s, 2H), 5.50 (S-N-C-H, s, 1H), 2.74 (Mes-CH, s, 6H), 2.35 (Mes-CH, s, 3H); ¹³C NMR: (126 MHz, CDCl₃) δ 144.8, 142.0, 132.1, 131.3, 130.9, 129.5, 128.7, 128.3, 75.4, 23.2, 21.2; HRMS (ESI+) calcd for [C₁₆H₁₇N₁O₃S⁺] requires m/z 321.1268, found 321.1259. Isolated as a white solid (m.p. 106–107 ºC).

**N-(4-Nitrophenyl)sulfonyl-3-(4-bromophenyl)oxaziridine.** Prepared according to general procedure 1 using 5.0 g 4-nitrobenzenesulfonamide (24.7 mmol) and 5.95 g 4-bromobenzaldehyde (32.1 mmol). The title compound was obtained after recrystallization of the crude with EtOAc/hexanes (1:4). Yield: 5.6 g (14.5 mmol, 59% yield after two steps). IR (ATR) 3105, 1541, 1347, 1168, 1008; ¹H NMR: (500 MHz, CDCl₃) δ 8.49 (ーNsH, AA'BB', J = 8.8 Hz, 2H), 8.26 (ーNsH, AA'BB', J = 8.8 Hz, 2H), 7.58 (4-BrPhH, AA'BB', J = 8.5 Hz, 2H), 7.32 (4-BrPhH, AA'BB', J = 8.5 Hz, 2H), 5.57 (Ns-N-C-H, s, 1H); ¹³C NMR: (126 MHz, CDCl₃) δ 151.6, 140.4, 132.2, 130.8, 129.8, 128.8, 126.5, 124.6, 76.1; HRMS (ESI–) calcd for [C₁₃H₉BrN₂O₃S–] requires m/z 382.9342, found 382.9362. Isolated as a yellow solid (m.p. 112 ºC, decomp).

**N-(4-Nitrophenyl)-sulfonyl-3-(3-bromobenzyl)oxaziridine.** Prepared according to general procedure 1 using 2.5 g 4-nitrobenzenesulfonamide (12.4 mmol) and 3.00 g 3-bromobenzaldehyde (1.9 mL, 16.2 mmol). The title compound was obtained after recrystallization of the crude with EtOAc/hexanes (1:4). Yield: 3.10 g (8.1 mmol, 65% yield over two steps). IR (ATR) 3100, 1528, 1347, 1165; ¹H NMR: (500 MHz, CDCl₃) δ 8.49 (ーNsH, AA'BB', J = 8.7 Hz, 2H), 8.26 (ーNsH, AA'BB', J = 8.7 Hz, 2H), 7.63 (3-BrPhH, d, J = 7.8 Hz, 1H), 7.56 (3-BrPhH, s, 1H), 7.42 (3-BrPhH, d, J = 7.8 Hz, 1H), 7.31 (3-BrPhH, t, J = 7.8 Hz, 1H), 5.56 (Ns-N-C-H, s, 1H); ¹³C NMR: (126 MHz, CDCl₃) δ 151.6, 140.4, 134.9, 132.0, 131.1, 130.8, 130.4, 127.1, 124.6, 123.0, 75.6; HRMS (ESI–) calcd for [C₁₃H₉BrN₂O₃S–] requires m/z 382.9342, found 382.9346. Isolated as a yellow solid (m.p. 114–116 ºC, decomp).
**N-(4-Nitrophenyl)sulfonyl-3-(2-bromophenyl)oxaziridine.** Prepared according to general 1 procedure using 2.5 g 4-nitrobenzenesulfonylamide (12.4 mmol) and 3.00 g 2-bromobenzaldehyde (1.9 mL, 16.2 mmol). The title compound was obtained after recrystallization of the crude with EtOAc/hexanes (1:4). Yield: 2.91 g (7.6 mmol, 61% yield over two steps). IR(ATR) 3108, 1532, 1354, 1178; ¹H NMR: (500 MHz, CDCl₃) δ 8.48 (-NsH, AA'BB', J = 8.4 Hz, 2H), 8.28 (-NsH, AA'BB', J = 8.4 Hz, 2H), 7.61-7.65 (2-BrPhH, m, 1H), 7.32-7.36 (2-BrPhH, m, 2H), 7.22-7.27 (2-BrPhH, m, 1H), 5.98 (Ns-N-C-H, s, 1H); ¹³C NMR: (126 MHz, CDCl₃) δ 151.6, 140.2, 133.0, 132.6, 130.9, 129.5, 128.6, 127.9, 124.5, 124.1, 76.4; HRMS (ESI–) calcd for [C₁₃H₈BrN₂O₃S–] requires m/z 382.9342, found 382.9345. Isolated as a yellow solid (m.p. 118–119 °C, decomp).

**Methyl 4-(2-(phenylsulfonyl)-1,2-oxaziridin-3-yl)benzoate.** Prepared according to general procedure 2 using 1.97 g benzenesulfonamide (12.5 mmol) and 2.46 g methyl-4-formylnitrobenzoate (15.0 mmol). The title compound was obtained after recrystallization of the crude with EtOAc/hexanes (1:8). Yield: 1.43 g (4.4 mmol, 35% yield over two steps). IR(ATR) 3071, 2952, 1712, 1354, 1287; ¹H NMR: (500 MHz, CDCl₃) δ 8.06 (MeO₂CPhH, t, J = 7.6 Hz, 4H), 7.78 (-BsH, t, J = 7.6 Hz, 1H), 7.65 (2-BsH, t, J = 7.7 Hz, 2H), 7.53 (2-BsH, d, J = 7.7 Hz, 2H), 5.54 (Bs-N-C-H, s, 1H), 3.93 (CO₂CH, s, 3H); ¹³C NMR: (126 MHz, CDCl₃) δ 161.2, 135.2, 135.0, 134.5, 132.9, 129.5, 129.4, 128.3, 75.5, 52.4; HRMS (ESI+) calcd for [C₁₅H₁₃N₂O₅S₂N₁H₄+] requires m/z 337.0853, found 337.0863. Isolated as a white solid (m.p. 121–122 °C).

**N-Tosyl-3-(4-(trifluoromethyl)phenyl)oxaziridine.** Prepared according to general procedure 2 using 5.0 g p-toluenesulfonylamide (27.1 mmol) and 4.75 g 4-(trifluoromethyl)benzaldehyde (3.8 mL, 27.3 mmol). The title compound was obtained after recrystallization of the crude with EtOAc/hexanes (1:4). Yield: 5.50 g (16.0 mmol, 59% yield over two steps). IR(ATR) 3089, 1593, 1321, 1127, 1064; ¹H NMR: (500 MHz, CDCl₃) δ 7.93 (-CF₃PhH, AA'BB', J = 8.2 Hz, 2H), 7.66 (TsH, AA'BB', J = 8.2 Hz, 2H), 7.56 (TsH, AA'BB', J = 8.2 Hz, 2H), 7.43 (CF₃PhH, AA'BB', J = 8.1 Hz, 2H), 5.51 (Ts-N-C-H, s, 1H), 2.49 (Ts-CH, s, 3H); ¹³C NMR: (126 MHz, CDCl₃) δ 146.7, 134.5, 133.3 (F₂-C-C, q, J = 32.7 Hz), 131.2, 130.2, 129.5, 128.7, 125.7 (F₃-C-C-C, q, J = 3.7 Hz), 123.6 (F₃-C, q, J = 272.6 Hz), 75.3, 21.9; ¹⁹F NMR (471 MHz, CDCl₃) δ -63.1; HRMS (ESI–) calcd for [C₁₅H₁₁F₃N₁O₃S–] requires m/z 342.0417, found 342.0420. Isolated as a white solid (m.p. 104–107 °C).

**2-((4-Nitrophenyl)sulfonyl)-3-(m-tolyl)-1,2-oxaziridine.** Prepared according to general procedure 1 using 2.5 g 4-nitrobenzenesulfonylamide (12.4 mmol) and 1.95 g m-tolualdehyde (1.9 mL, 16.3 mmol). The title compound was obtained after recrystallization of the crude with EtOAc/hexanes (1:10). Yield: 2.81 g (8.8 mmol, 71% yield over two steps). IR(ATR) 3108, 1608, 1521, 1348, 1165; ¹H NMR: (500 MHz, CDCl₃) δ 8.46-8.48 (-NsH, m, 2H), 8.25-8.27 (-NsH, m, 2H), 7.22-7.33 (3-MePhH, m, 4H), 5.56 (Ns-N-C-H, s, 1H), 2.36 (Ph-CH, s, 1H); ¹³C NMR: (126 MHz, CDCl₃) δ 151.5, 140.6, 138.9, 132.6, 130.7, 129.6, 128.8, 128.6, 125.1, 124.5, 76.6, 21.2; HRMS (ESI+) calcd for [C₁₄H₁₂N₂O₃S₂N₁H₄+] requires m/z 338.0806, found 338.0801. Isolated as a yellow solid (m.p. 92 °C, decomp).
3-(2-(Phenylsulfonyl)-1,2-oxaziridin-3-yl)phenyl acetate. Prepared according to general procedure 2 using 2.6 g benzenesulfonamide (16.7 mmol) and 3.29 g 3-formylphenyl acetate (20.0 mmol). The title compound was obtained after recrystallization of the crude with EtOAc/hexanes (1:8). Yield: 3.30 g (10.3 mmol, 62% yield over two steps). IR(ATR) 3099, 3062, 1736, 1348, 1191; $^1$H NMR: (500 MHz, CDCl$_3$) δ 8.04 (-BsH, app d, J = 7.3 Hz, 2H), 7.75 (-AcOPhH, tt, J = 7.5,1.2 Hz, 1H), 7.63 (-BsH, app t, J = 7.9 Hz, 2H), 7.42 (-BsH, t, J = 7.9 Hz, 1H), 7.34 (-AcOPhH, dt, J = 7.8, 1.2 Hz, 1H), 7.20 (-AcOPhH, ddd, J = 8.0, 2.4, 1.1 Hz, 1H), 7.17 (-AcOPhH, t, J = 1.9 Hz, 1H), 5.48 (Bs-N-C-3H, s, 1H), 2.28 (-OAc-H, s, 3H); $^{13}$C NMR: (126 MHz, CDCl$_3$) δ 169.1, 150.9, 135.1, 134.5, 132.2, 129.9, 129.4, 129.4, 125.8, 124.8, 121.3, 75.6, 21.0; HRMS (ESI+) calcd for [C$_{13}$H$_{13}$N$_2$O$_5$S$_3$N$_1$H$_4^+$] requires m/z 337.0853, found 337.0858. Isolated as a yellow solid (m.p. 77–79 ºC).

3-(Naphthalen-2-yl)-2-(phenylsulfonyl)-1,2-oxaziridine. Prepared according to general procedure 2 using 5.0 g benzenesulfonamide (31.8 mmol) and 6.0 g 2-naphthaldehyde (38.4 mmol). The title compound was obtained after recrystallization of the crude with EtOAc/hexanes (1:4). Yield: 7.82 g (25.1 mmol, 79% yield over two steps). IR(ATR) 3066, 1449, 1348, 1173; $^1$H NMR: (500 MHz, CDCl$_3$) δ 8.09 (-BsH, d, J = 7.8 Hz, 2H), 8.03 (-NaphthH, s, 1H), 7.86 (-NaphthH, t, J = 9.0 Hz, 2H), 7.76 (-BsH, t, J = 7.5 Hz, 1H), 7.65 (-BsH, t, J = 7.8 Hz, 2H), 7.54 (-NaphthH, app p, J = 6.2 Hz, 2H), 7.39 (app d, J = 9.0 Hz, 1H), 5.66 (Bs-N-C-3H, s, 1H); $^{13}$C NMR: (126 MHz, CDCl$_3$) δ 135.0, 134.8, 134.7, 132.6, 129.8, 129.4, 129.4, 128.9, 128.3, 127.8, 127.7, 126.8, 123.4, 76.6; HRMS (ESI–) calcd for [C$_{17}$H$_{13}$N$_2$O$_5$S$_3$N$_1$H$_4^+$] requires m/z 330.0955, found 330.0960. Isolated as a white solid (m.p. 90–91 ºC, decomp).

3-(Perfluorophenyl)-2-tosyl-1,2-oxaziridine. Prepared according to general procedure 2 using 5 g p-toluensulfonamide (27.1 mmol) and 5.4 g pentafluorobenzaldehyde (3.4 mL, 27.3 mmol). The title compound was obtained after recrystallization of the crude with EtOAc/hexanes (1:4). Yield: 6.12 g (16.8 mmol, 63% yield over two steps). IR(ATR) 3047, 2920, 1656, 1592, 1509, 1352; $^1$H NMR: (500 MHz, CDCl$_3$) δ 7.91 (-TsH, AA'BB', J = 8.4 Hz, 2H), 7.44 (-TsH, AA'BB', J = 8.0 Hz, 2H), 5.75 (Ts-N-C-3H, s, 1H), 2.50 (Ts-CH$_3$, s, 1H); $^{13}$C NMR: (126 MHz, CDCl$_3$) δ 147.3-147.5 (m), 147.1, 145.2-145.4 (m), 144.0-144.3 (m), 142.2-141.9 (m), 138.5-138.9 (m), 136.5-136.8 (m), 130.7, 130.3, 129.6, 124.3, 69.6, 21.9; $^{19}$F NMR (471 MHz, CDCl$_3$) δ –141.5–141.5 (m), –148.2 (tt, J = 20.8, 3.9 Hz), –160.2–160.3 (m); HRMS (ESI–) calcd for [C$_{13}$H$_5$BrN$_2$O$_5$S–] requires m/z 364.0072, found 364.0077. Isolated as a white solid (m.p. 91–93 ºC).

3-Cyclohexyl-2-tosyl-1,2-oxaziridine. Prepared according to general procedure 2 using 5 g p-toluensulfonamide (27.1 mmol) and 3.9 g cyclohexanecarboxaldehyde (4.2 mL, 41.0 mmol). The title compound was obtained after recrystallization of the crude with EtOAc/hexanes (1:4). Yield: 2.25 g (8.1 mmol, 30% yield over two steps). Isolated as a white solid. All spectral data were in accord with previously reported values.\(^{11}\)

III. Kinetic Resolution of Oxaziridines

**General Procedure for oxaziridine resolution.** In a nitrogen-atmosphere glovebox, iron(II) chloride (6.1 mg, 0.05 mmol) and ligand 6g (21.4 mg, 0.06 mmol) were placed in a 1.5 dram vial with a stir bar. The vial was capped with a septum and transferred out of the glove box.
The vessel was then charged with THF (2 mL, 0.5 M) and stirred under nitrogen atmosphere for 1 h. The reaction was then cooled to −78 °C, the septum was removed, and the oxaziridine (1 mmol) was quickly added. The vessel was sealed, placed under a positive pressure of nitrogen, and stirred for the reported reaction time at 0 °C. After the allotted time passed, the reaction mixture was immediately passed through a plug of silica using 10% EtOAc/hexanes. The solvent was then removed by rotary evaporation, and the crude residue was purified by flash column chromatography to recover the remaining oxaziridine.

(S,S)-N-(4-Nitrophenyl)sulfonyl-3-phenyl oxaziridine (3). Prepared according to the general procedure using 310.5 mg (1.01 mmol) N-(4-nitrophenyl)sulfonyl-3-phenyl oxaziridine. The reaction mixture was stirred 5 min at 0 °C, filtered through a silica plug, and purified on silica gel using 10% EtOAc/hexanes. Yield: 118 mg (0.39 mmol, 38% yield), 98% ee, s = 17. [Daicel CHIRALCEL®OD-H, 30% MeOH, 3 mL/min, 220 nm; t1 = 3.18 min, t2 = 5.02 min], [α]D22 −99.6° (c1.00, CH2Cl2). Other spectral data were in agreement with reported values.

(S,S)-N-(4-Methylphenyl)sulfonyl-3-phenyl oxaziridine (7). Prepared according to the general procedure using 274.1 mg (1.0 mmol) N-(4-methylphenyl)sulfonyl-3-phenyl oxaziridine. The reaction mixture was stirred 7 min at 0 °C, filtered through a silica plug, and purified on silica gel using 10% EtOAc/hexanes. Yield: 112 mg (0.41 mmol, 41% yield), 93% ee, s = 16. [Daicel CHIRALCEL®OD-H, 5% MeOH, 3 mL/min, 220 nm; t1 = 6.18 min, t2 = 7.16 min], [α]D22 −106.4° (c1.00, CH2Cl2); [lit. [α]D −49.8 (c0.58, CH3Cl), 92% ee (S,S)]. Other spectral data were in agreement with reported values.

(S,S)-N-Phenylsulfonyl-3-phenyloxaziridine (8). Prepared according to the general procedure using 260.2 mg (1.00 mmol) N-phenylsulfonyl-3-phenyl oxaziridine. The reaction mixture was stirred 6 min at 0 °C, filtered through a silica plug, and purified on silica gel using 10% EtOAc/hexanes. Yield: 110 mg (0.42 mmol, 42% yield), 91% ee, s = 15. [Daicel CHIRALCEL®OD-H, 5% MeOH, 3 mL/min, 220 nm; t1 = 5.58 min, t2 = 6.12 min], [α]D22 −130.2° (c1.00, CH2Cl2); [lit. [α]D −130.8 (c1–2, CHCl3), (S,S)]. Other spectral data were in agreement with reported values.

(S,S)-N-(2-Nitrophenyl)sulphonyl-3-(phenyloxaziridine (9). Prepared according to the general procedure using 307.2 mg (1.00 mmol) N-(2-nitrophenyl)sulfonyl-3-phenyl oxaziridine. The reaction mixture was stirred 2 min at 0 °C, filtered through a silica plug, and purified on silica gel using 20% EtOAc/hexanes → 30% EtOAc/hexanes. Yield: 123 mg (0.40 mmol, 40% yield), 96% ee, s = 17. [Daicel CHIRALPAK®AD-H, 20% MeOH, 3 mL/min, 220 nm; t1 = 6.85 min, t2 = 7.13 min], [α]D22 +24.5° (c2.00, CH2Cl2). Other spectral data were in agreement with those reported above.

(S,S)-2-(Mesitylsulfonyl)-3-phenyl-1,2-oxaziridine (10). Prepared according to the general procedure using 302.7 mg (1.00 mmol) 2-(mesitylsulfonyl)-3-phenyl-1,2-oxaziridine. The reaction mixture was stirred 13 min at 0 °C, filtered through a silica plug, and purified on silica gel using 9% EtOAc/hexanes. Yield: 136 mg (0.45 mmol, 45% yield), 89% ee, s = 18. [Daicel CHIRALCEL®OJ-H, 5% MeOH, 3 mL/min, 220 nm; t1 = 5.66 min, t2 = 6.82 min], [α]D22 −96.0° (c1.00, CH2Cl2). m.p. 107–109°C, decomp. Other spectral data were in agreement with those reported above.
(S,S)-N-tert-Butylsulfonyl-3-phenyl oxaziridine (11). Prepared according to the general procedure using 255.3 mg (1.00 mmol) N-tert-butylsulfonyl-3-phenyl oxaziridine. The reaction mixture was stirred 5 min at 0 °C, filtered through a silica plug, and purified on silica gel using 9% EtOAc/hexanes. Yield: 140. mg (0.55 mmol, 55% yield), 58% ee, s = 10. [Daicel CHIRALCEL®OJ-H, 5% MeOH, 3 mL/min, 220 nm; t1= 2.42 min, t2 = 2.78 min], [α]D22 =89.6º (c0.95, CH2Cl2). Other spectral data were in agreement with those previously reported.6

(S,S)-2-Isopropyl-3-phenyloxaziridine (12). Prepared according to the general procedure using 137.3 mg (0.84 mmol) 2-Isopropyl-3-phenyloxaziridine. The reaction mixture was stirred 5 min at 0 °C, filtered through a silica plug, and purified on silica gel using 97:3:1 EtOAc/hexanes. Yield: 35 mg (0.21 mmol, 25% yield), 53% ee, s = 2. [Daicel CHIRALCEL®OD-H, 5% i-PrOH, 3 mL/min, 220 nm; t1= 2.27 min, t2 = 4.36 min], [α]D22 =53.9º (c0.86, CH2Cl2). Other spectral data were in agreement with those previously reported.7

(S,S)-N-(4-Nitrophenyl)sulfonyl-3-(4-bromophenyl)oxaziridine (13). Prepared according to a modified general procedure using 387.1 mg (1.01 mmol) N-(4-nitrophenyl)sulfonyl-3-(4-bromophenyl) oxaziridine and 4 mL THF (0.25 M). The reaction mixture was stirred 8 min at 0 °C, and flashed directly on silica gel using 10% EtOAc/hexanes → 30% EtOAc/hexanes. (Note: This reaction mixture was flashed directly due to the highly crystalline nature of the amide byproduct). Yield: 185 mg (0.48 mmol, 48% yield), 87% ee, s = 26. [Daicel CHIRALCEL®OD-H, 30% MeOH, 3 mL/min, 220 nm; t1= 4.38 min, t2 =4.95 min], [α]D22 =-49.4º (c1.00, CH2Cl2). Other spectral data were in agreement with those reported above.

(S,S)-N-(4-Nitrophenyl)sulfonyl-3-(3-bromophenyl)oxaziridine (14). Prepared according to the general procedure using 385.3 mg (1.00 mmol) N-(4-nitrophenyl)sulfonyl-3-(3-bromophenyl) oxaziridine. The reaction mixture was stirred 10 min at 0 °C, filtered through a silica plug, and purified on silica gel using 20% EtOAc/hexanes. Yield: 155 mg (0.40 mmol, 40% yield), 98% ee, s = 21. [Daicel CHIRALCEL®OD-H, 30% MeOH, 3 mL/min, 220 nm; t1= 4.32 min, t2 =5.23 min], [α]D22 =-77.0º (c1.00, CH2Cl2). Other spectral data were in agreement with those reported above.

(S,S)-N-(4-Nitrophenyl)sulfonyl-3-(2-bromophenyl)oxaziridine (15). Prepared according to a modified general procedure using iron(II) chloride (12.1 mg, 0.1 mmol), ligand 6g (42.8 mg, 0.12 mmol), and 385.8 mg (1.00 mmol) N-(4-nitrophenyl)sulfonyl-3-(2-bromophenyl) oxaziridine. The reaction mixture was stirred 10 min at 0 °C, filtered through a silica plug, and purified on silica gel using 5% EtOAc/hexanes → 20% EtOAc/hexanes. Yield: 180 mg (0.47 mmol, 47% yield), 76% ee, s = 12. [Daicel CHIRALCEL®OD-H, 40% MeOH, 3 mL/min, 220 nm; t1= 3.96 min, t2 =6.52 min], [α]D22 =-31.0º (c1.00, CH2Cl2). Other spectral data were in agreement with those reported above.

(S,S)-N-Phenylsulfonyl-3-(4-nitrophenyl) oxaziridine (16). Prepared according to a modified general procedure using 305.4 mg (1.0 mmol) N-phenylsulfonyl-3-(4-nitrophenyl) oxaziridine. The oxaziridine addition was performed at 0 °C, the reaction mixture stirred 5 min at room temperature, filtered through a silica plug, and purified on silica gel using 25% EtOAc/hexanes. Yield: 146
mg (0.48 mmol, 48% yield), 89% ee, s = 30. [Daicel CHIRALCEL® OD-H, 5% MeOH, 3 mL/min, 220 nm; t1= 3.40 min, t2= 3.90 min], [α]_D^{22} = −87.8° (c 1.00, CH₂Cl₂). Other spectral data were in agreement with reported values.⁵

(S,S)-Methyl 4-(2-(phenylsulfonyl)-1,2-oxaziridin-3-yl)benzoate (17). Prepared according general procedure using 317.9 mg (1.00 mmol) methyl 4-(2-(phenylsulfonyl)-1,2-oxaziridin-3-yl)benzoate. The reaction mixture was stirred 3.5 min at 0°C, filtered through a silica plug, and purified on silica gel using 13% EtOAc/hexanes. Yield: 123 mg (0.39 mmol, 39% yield), 97% ee, s = 16. [Daicel CHIRALPAK® AS-H, 20% i-PrOH, 3 mL/min, 220 nm; t1= 2.8 min, t2= 3.51 min], [α]_D^{22} = −94.6° (c 1.00, CH₂Cl₂). m.p. 99–100°C. Other spectral data were in agreement with those reported above.

(S,S)-N-Tosyl-3-(4-(trifluoromethyl)phenyl)oxaziridine (18). Prepared according to the general procedure using 343.7 mg (1.00 mmol) N-tosyl-3-(4-(trifluoromethyl)phenyl)oxaziridine. The reaction mixture was stirred 2 min at 0°C, filtered through a silica plug, and purified on silica gel using 10% EtOAc/hexanes. Yield: 129 mg (0.38 mmol, 38% yield), 96% ee, s = 14. [Daicel CHIRALPAK® AD-H, 40% MeOH, 3 mL/min, 220 nm; t1= 2.8 min, t2= 3.51 min], [α]_D^{22} = −87.6° (c 1.00, CH₂Cl₂). m.p. 87–90°C. Other spectral data were in agreement with those reported above.

(S,S)-3-(2-(Phenylsulfonyl)-1,2-oxaziridin-3-yl)phenyl acetate (19). Prepared according general procedure using 317.9 mg (1.00 mmol) 3-(2-(phenylsulfonyl)-1,2-oxaziridin-3-yl)phenyl acetate. The reaction mixture was stirred 7 min at 0°C, filtered through a silica plug, and purified on silica gel using 20% EtOAc/hexanes. Yield: 102 mg (0.32 mmol, 32% yield), 93% ee, s = 8. [Daicel CHIRALCEL® OJ-H, 25% MeOH, 3 mL/min, 220 nm; t1= 2.82 min, t2= 3.28 min], [α]_D^{22} = −109.8° (c 1.00, CH₂Cl₂). Other spectral data were in agreement with those reported above.

(S,S)-2-((4-Nitrophenyl)sulfonyl)-3-(m-tolyl)-1,2-oxaziridine (20). Prepared according to the general procedure using 322.0 mg (1.01 mmol) 2-((4-nitrophenyl)sulfonyl)-3-(m-tolyl)-1,2-oxaziridine. The reaction mixture was stirred 5 min at 0°C, filtered through a silica plug, and purified on silica gel using 9% EtOAc/hexanes. Yield: 91 mg (0.28 mmol, 28% yield), 97% ee, s = 8. [Daicel CHIRALCEL® OD-H, 30% MeOH, 3 mL/min, 220 nm; t1= 3.31 min, t2= 5.96 min], [α]_D^{22} = −81.5° (c 1.00, CH₂Cl₂). Other spectral data were in agreement with those reported above.

(S,S)-3-(Perfluorophenyl)-2-tosyl-1,2-oxaziridine (21). Prepared according to the general procedure using 369.1 mg (1.01 mmol) 3-(perfluorophenyl)-2-tosyl-1,2-oxaziridine. The reaction mixture was stirred 4 min at 0 °C, filtered through a silica plug, and purified on silica gel using 9% EtOAc/hexanes. Yield: 147 mg (0.40 mmol, 40% yield), 85% ee, s = 9. [Daicel CHIRALPAK® AD-H, 10–40% gradient (465 sec) MeOH, 3 mL/min, 220 nm; t1= 7.8 min, t2= 8.43 min], [α]_D^{22} = −77.4° (c 1.00, CH₂Cl₂). m.p. 69–70°C. Other spectral data were in agreement with those reported above.

(S,S)-3-(Naphthalen-2-yl)-2-(phenylsulfonyl)-1,2-oxaziridine (22). Prepared according to the general procedure using 317.5 mg (1.02 mmol) 3-(naphthalen-2-yl)-2-(phenylsulfonyl)-1,2-oxaziridine. The reaction mixture was stirred 7
min at 0 °C, filtered through a silica plug, and purified on silica gel using 10% EtOAc/hexanes. Yield: 119 mg (0.38 mmol, 37% yield), 87% ee, s = 9. [Daicel CHIRALCEL®OJ-H, 30% MeOH, 3 mL/min, 220 nm; t_1 = 6.57 min, t_2 = 7.75 min], [α]_D^{22} -72.0° (c1.00, CH_2Cl_2). Other spectral data were in agreement with those reported above.

(Y,S)-3-(Cyclohexyl)-2-tosyl-1,2-oxaziridine (23). Prepared according to the general procedure using 295.4 mg (1.1 mmol) 3-(cyclohexyl)-2-tosyl-1,2-oxaziridine. The reaction mixture was stirred 15 min at 0 °C, filtered through a silica plug, and purified on silica gel using 9% EtOAc/hexanes. Yield: 209 mg (0.74 mmol, 71% yield), 15% ee, s = 2. [Daicel CHIRALCEL®OJ-H, 5% MeOH, 3 mL/min, 220 nm; t_1 = 3.33 min, t_2 = 3.64 min], [α]_D^{22} -11.7° (c1.04, CH_2Cl_2). m.p. 75–78 ºC. Other spectral data were in agreement with those reported above.

IV. Gram-scale resolutions

Gram-scale resolution of N-phenylsulfonyl-3-phenyloxaziridine (Scheme 1) In a nitrogen-atmosphere glovebox, iron(II) chloride (36.3 mg, 0.3 mmol) and ligand 6g (128.2 mg, 0.36 mmol) were placed in a 100 mL flask with a stir bar. The flask was capped with a septum and transferred out of the glove box. The vessel was then charged with THF (24 mL, 0.5 M) and stirred under nitrogen atmosphere for 1 h. The reaction was then cooled to 0 °C, the septum was removed, and N-phenylsulfonyl-3-phenyloxaziridine (3.12 g, 12 mmol) was added in portions with rapid stirring. The vessel was sealed, placed under a positive pressure of nitrogen, and stirred for 25 min at room temperature. The reaction mixture was then immediately passed through a plug of silica washing with EtOAc. The solvent was removed by rotary evaporation, and the crude residue purified on silica gel using 10% EtOAc/hexanes as eluent to recover the remaining N-phenylsulfonyl-3-phenyloxaziridine. Yield: 1.18 g (4.5 mmol, 38% yield), 98% ee. s = 17. [Daicel Chiracel OD-H, 5% MeOH, 3 mL/min, 220 nm; t_1 = 5.58 min, t_2 = 6.12 min]. Other spectral data were in agreement with reported values.4

Gram-scale resolution of N-tert-butylsulfonyl-3-phenyloxaziridine (Scheme 1) In a nitrogen-atmosphere glovebox, iron(II) chloride (18.2 mg, 0.15 mmol) and ligand 6g (69.5 mg, 0.18 mmol) were placed in a 50 mL flask with a stir bar. The flask was capped with a septum and transferred out of the glove box. The vessel was then charged with THF (12 mL, 0.5 M) and stirred under nitrogen atmosphere for 1 h. The reaction was then cooled to 0 °C, the septum was removed, and N-tert-butylsulfonyl-3-phenyloxaziridine (1.44 g, 6.0 mmol) was added in portions with rapid stirring. The vessel was sealed, placed under a positive pressure of nitrogen, and stirred for 25 minutes at room temperature. The reaction mixture was immediately passed through a plug of silica washing with EtOAc. The solvent was removed by rotary evaporation, and the crude residue purified on silica gel using 10% EtOAc/hexanes as eluent to recover the remaining N-phenylsulfonyl-3-phenyloxaziridine. Yield: 0.45 g (1.9 mmol, 31% yield), >99% ee. s = 12. [Daicel Chiracel OJ-H, 5% MeOH, 3 mL/min, 220 nm; t_1 = 2.71 min]. Other spectral data were in agreement with reported values.6
References


NMR spectra and SFC Chromatograms
(S,S)-N-(4-nitrophenyl)sulfonyl-3-phenyl oxaziridine (3)
Racemic: (SFC, CHIRALCEL® OD-H, 30% MeOH/CO₂, 3 mL/min, 220nm)

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(S,S)-N-(4-methylphenyl)sulfonyl-3-phenyl oxaziridine (7)
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Scalemic: (SFC, CHIRALCEL® OD-H, 5% MeOH/CO₂, 3 mL/min, 220nm)

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(S,S)-N-phenylsulfonyl-3-phenyl oxaziridine (8)

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(S,S)-N-(2-nitrophenyl)sulfonyl-3-phenyl oxaziridine (9)
Racemic: (SFC, CHIRALPAK® AD-H, 20% MeOH/CO₂, 3 mL/min, 220nm)

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Total:   100     9825.814

Sclaremic: (SFC, CHIRALPAK® AD-H, 20% MeOH/CO₂, 3 mL/min, 220nm)

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(S,S)-N-(mesitylsulfonyl)-3-phenyl oxaziridine (10)
Racemic: (SFC, CHIRALCEL® OJ-H, 5% MeOH/CO₂, 3 mL/min, 220nm)

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(S,S)-N-tert-butylsulfonyl-3-phenyl oxaziridine (11)
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(S,S)-2-Isopropyl-3-phenyloxaziridine (12)
Racemic: (SFC, CHIRALCEL® OD-H, 5% i-PrOH/CO₂, 3 mL/min, 220nm)

Peak Info
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1  | 52.0849 | 1545.5049 | 2.27 | 93.1993
2  | 47.9151 | 1421.7776 | 4 | 90.516
Total: | 100 | 2967.2825 |

Scalemic: (SFC, CHIRALCEL® OD-H, 5% i-PrOH/CO₂, 3 mL/min, 220nm)

Peak Info
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2  | 23.6731 | 676.2374 | 4.36 | 44.5541
Total: | 100 | 2856.5627 |
(S,S)-N-(4-nitrophenyl)sulfonyl-3-(4-bromophenyl)oxaziridine (13)
Racemic: (SFC, CHIRALCEL® OD-H, 30% MeOH/CO₂, 3 mL/min, 220nm)

Peak Info
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Scalemic: (SFC, CHIRALCEL® OD-H, 30% MeOH/CO₂, 3 mL/min, 220nm)

Peak Info
Peak No | % Area | Area | RT (min) | Height (mV)
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1 | 6.726 | 41.687 | 4.38 | 5.5641
2 | 93.274 | 578.104 | 4.95 | 67.8426
Total: | 100 | 619.791 |
(S,S)-N-(4-nitrophenyl)sulfonyl-3-(3-bromophenyl)oxaziridine (14)
Racemic: (SFC, CHIRALCEL® OD-H, 30% MeOH/CO₂, 3 mL/min, 220nm)

Peak Info
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2  | 52.0398 | 2080.425  | 5.2      | 232.5002 |
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Scalemic: (SFC, CHIRALCEL® OD-H, 30% MeOH/CO₂, 3 mL/min, 220nm)

Peak Info
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(S,S)-N-(4-nosyl)-3-(2-bromophenyl)oxaziridine (15)
Racemic: (SFC, CHIRALCEL® OD-H, 40% MeOH/CO₂, 3 mL/min, 220nm)

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Scalemic: (SFC, CHIRALCEL® OD-H, 40% MeOH/CO₂, 3 mL/min, 220nm)

**Peak Info**

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<th>RT (min)</th>
<th>Height (mV)</th>
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(S,S)-N-phenylsulfonyl-3-(4-nitrophenyl) oxaziridine (16)
Racemic: (SFC, CHIRALCEL® OD-H, 30% MeOH/CO2, 3 mL/min, 220nm)

Peak Info
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<th>RT (min)</th>
<th>Height (mV)</th>
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Scalemic: (SFC, CHIRALCEL® OD-H, 30% MeOH/CO2, 3 mL/min, 220nm)

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(S,S)-methyl 4-(2-(phenylsulfonyl)-1,2-oxaziridin-3-yl)benzoate (17)
Racemic: (SFC, CHIRALPAK® AS-H, 20% i-PrOH/CO2, 3 mL/min, 220nm)

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<th>RT (min)</th>
<th>Height (mV)</th>
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Scalemic: (SFC, CHIRALPAK® AS-H, 20% i-PrOH/CO2, 3 mL/min, 220nm)

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<th>% Area</th>
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<th>RT (min)</th>
<th>Height (mV)</th>
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(S,S)-N-(4-tosyl)-3-(4-(trifluoromethyl)phenyl)oxaziridine (18)

Racemic: (SFC, CHIRALPAK® AD-H, 40% MeOH/CO₂, 3 mL/min, 220nm)

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Scalemic: (SFC, CHIRALPAK® AD-H, 40% MeOH/CO₂, 3 mL/min, 220nm)

<table>
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<th>% Area</th>
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<th>RT (min)</th>
<th>Height (mV)</th>
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(S,S)-3-(2-(phenylsulfonyl)-1,2-oxaziridin-3-yl)phenyl acetate (19)
Racemic: (SFC, CHIRALCEL® OJ-H, 25% MeOH/CO₂, 3 mL/min, 220nm)

<table>
<thead>
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<th>Peak No</th>
<th>% Area</th>
<th>Area</th>
<th>RT (min)</th>
<th>Height (mV)</th>
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Scalemic: (SFC, CHIRALCEL® OJ-H, 25% MeOH/CO₂, 3 mL/min, 220nm)

<table>
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<tr>
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<tr>
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<td>Total:</td>
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(S,S)-N-((4-nitrophenyl)sulfonyl)-3-(m-tolyl)oxaziridine (20)
Racemic: (SFC, CHIRALCEL® OD-H, 30% MeOH/CO₂, 3 mL/min, 220nm)

Peak Info
Peak No | % Area | Area     | RT (min) | Height (mV)
--------|--------|----------|----------|-------------
1        | 48.6624| 1309.5671| 3.31     | 203.8318    
2        | 51.3376| 1381.5609| 6.1      | 121.724     
Total:   | 100    | 2691.128 |          |             

Sclaremic: (SFC, CHIRALCEL® OD-H, 30% MeOH/CO₂, 3 mL/min, 220nm)

Peak Info
Peak No | % Area | Area     | RT (min) | Height (mV)
--------|--------|----------|----------|-------------
1        | 1.7384 | 58.673   | 3.31     | 9.5486      
2        | 98.2616| 3316.4382| 5.96     | 310.8549    
Total:   | 100    | 3375.1112|          |             

(S,S)-3-(perfluorophenyl)-2-tosyl-1,2-oxaziridine (21)
Racemic: (SFC, CHIRALPAK® AD-H, 10–40% gradient (465 sec) MeOH/CO₂, 3 mL/min, 220nm)

Peak Info
<table>
<thead>
<tr>
<th>Peak No</th>
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<th>RT (min)</th>
<th>Height (mV)</th>
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<tbody>
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<td>2973.0716</td>
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<td>192.4302</td>
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<tr>
<td>2</td>
<td>49.9715</td>
<td>2969.6842</td>
<td>8.96</td>
<td>168.8506</td>
</tr>
<tr>
<td>Total:</td>
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<td>5942.7558</td>
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Scalemic: (SFC, CHIRALPAK® AD-H, 10–40% gradient (465 sec) MeOH/CO₂, 3 mL/min, 220nm)

Peak Info
<table>
<thead>
<tr>
<th>Peak No</th>
<th>% Area</th>
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<tbody>
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<td>256.4473</td>
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<tr>
<td>Total:</td>
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</table>
(S,S)-3-(naphthalen-2-yl)-2-(phenylsulfonfyl)oxaziridine (22)
Racemic: (SFC, CHIRALCEL® OJ-H, 30% MeOH/CO₂, 3 mL/min, 220nm)

Peak Info
Peak No | % Area | Area     | RT (min) | Height (mV)
--- | --- | --- | --- | ---
1   | 49.7551 | 14042.0072 | 6.54 | 988.5571
2   | 50.2449 | 14180.2294 | 7.76 | 852.6082
Total: | 100 | 28222.2366 |

Sclaremic: (SFC, CHIRALCEL® OJ-H, 30% MeOH/CO₂, 3 mL/min, 220nm)

Peak Info
Peak No | % Area | Area     | RT (min) | Height (mV)
--- | --- | --- | --- | ---
1   | 6.4998 | 2186.3662 | 6.57 | 167.7388
2   | 93.5002 | 31451.1649 | 7.75 | 1920.184
Total: | 100 | 33637.5311 |
(S,S)-3-(cyclohexyl)-2-tosyl-1,2-oxaziridine (23)

Racemic: (SFC, CHIRALCEL®OJ-H, 5% i-PrOH/CO₂, 3 mL/min, 220nm)

Peak Info

<table>
<thead>
<tr>
<th>Peak No</th>
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<th>Height (mV)</th>
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S,Scalemic: (SFC, CHIRALCEL®OJ-H, 5% i-PrOH/CO₂, 3 mL/min, 220nm)

Peak Info

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<th>RT (min)</th>
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<td>Total:</td>
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$N$-(2-nitrophenyl)sulfonyl-3-(phenyl)oxaziridine

$^1$H NMR (500 MHz, CDCl$_3$)
$N\text{-}(2\text{-nitrophenyl})\text{sulfonyl-3-(phenyl)oxaziridine}$

$\text{C NMR (126 MHz, CDCl}_3\text{)}$
2-(mesitylsulfonyl)-3-phenyl-1,2-oxaziridine

$^1$H NMR (500 MHz, CDCl$_3$)
2-(mesitylsulfonyl)-3-phenyl-1,2-oxaziridine

$^{13}$C NMR (126 MHz, CDCl$_3$)
$N$-(4-nitrophenyl)-sulfonyl-3-(2-bromophenyl)oxaziridine

$^1$H NMR (500 MHz, CDCl$_3$)
$N$-(4-nitrophenyl)-sulfonyl-3-(2-bromophenyl)oxaziridine

$^{13}$C NMR (126 MHz, CDCl$_3$)
$N$-(4-nitrophenyl)-sulfonyl-3-(4-bromophenyl)oxaziridine

$^1$H NMR (500 MHz, CDCl$_3$)
$N$-(4-nitrophenyl)-sulfonyl-3-(4-bromophenyl)oxaziridine

$^{13}$C NMR (126 MHz, CDCl$_3$)
N-(4-nitrophenyl)sulfonyl-3-(3-bromophenyl)oxaziridine

$^1$H NMR (500 MHz, CDCl$_3$)
$N$-(4-nitrophenyl)-sulfonyl-3-(3-bromophenyl)oxaziridine

$^{13}$C NMR (126 MHz, CDCl$_3$)
methyl 4-(2-(phenylsulfonyl)-1,2-oxaziridin-3-yl)benzoate

$^1$H NMR (500 MHz, CDCl$_3$)
methyl 4-(2-(phenylsulfonyl)-1,2-oxaziridin-3-yl)benzoate

$^{13}$C NMR (126 MHz, CDCl$_3$)
2-((4-nitrophenyl)sulfonyl)-3-((m-toly)l)-1,2-oxaziridine

$^1$H NMR (500 MHz, CDCl$_3$)
2-((4-nitrophenyl)sulfonyl)-3-(m-tolyl)-1,2-oxaziridine

$^{13}$C NMR (126 MHz, CDCl$_3$)
$N$-(4-tosyl)-3-(4-(trifluoromethyl)phenyl)oxaziridine

$^1$H NMR (500 MHz, CDCl$_3$)
$N$-(4-tosyl)-3-(4-(trifluoromethyl)phenyl)oxaziridine

$^{13}$C NMR (126 MHz, CDCl$_3$)
$^{19}F$ NMR (471 MHz, CDCl$_3$)
3-(2-phenylsulfonyl)-1,2-oxaziridin-3-ylphenyl acetate

$^1$H NMR (500 MHz, CDCl$_3$)
3-(2-(phenylsulfonyl)-1,2-oxaziridin-3-yl)phenyl acetate

$^1$H NMR (126 MHz, CDCl$_3$)
3-(naphthalen-2-yl)-2-(phenylsulfonyl)-1,2-oxaziridine

$^1$H NMR (500 MHz, CDCl$_3$)
3-(naphthalen-2-yl)-2-(phenylsulfonyl)-1,2-oxaziridine

$^{13}$C NMR (126 MHz, CDCl$_3$)
3-(perfluorophenyl)-2-tosyl-1,2-oxaziridine

H NMR (500 MHz, CDCl₃)
3-(perfluorophenyl)-2-tosyl-1,2-oxaziridine

$^{13}$C NMR (126 MHz, CDCl$_3$)
$^{19}$F NMR (471 MHz, CDCl$_3$)