(thin film), ν/cm^{-1}: 1672 (C=O). ^1H NMR ($CDCl_3$), δ: 2.48—3.50 (m, 4 H, 2 CH_2); 3.30 (br.t, 2 H, 2 β-H, $^3J_{H,F}$ = 9.8 Hz); 3.96 (d, 2 H, 2 α-H, $J_{\alpha\text{-}H,\beta\text{-}H}$ = 2.50 Hz); 6.12 (tt, 2 H, 2 HCF_2, $^2J_{H,F}$ = 52.2 Hz, $^3J_{H,F}$ = 5.1 Hz); 7.30—8.01 (m, 10 H, 2 Ph).

***N,N'*-Ethylenedi(2-benzoyl-3-perfluorohexylaziridine) (3b)** was obtained analogously from 1-benzoyl-2-perfluorohexylethylene (10 g, 22 mmol), Br_2 (3.52 g, 22 mmol), Et_3N (5.06 g, 50 mmol), and EDA (1.5 g, 22 mmol). After recrystallization from hexane, the yield of compound **3b** was 7.79 g (74%), colorless crystals, m.p. 102.5—103.0 °C. Found (%): C, 39.79; H, 2.00; F, 51.53; N, 3.01. $C_{32}H_{18}F_{26}N_2O_2$. Calculated (%): C, 40.18; H, 1.90; F, 51.64; N, 2.93. IR (Vaseline oil), ν/cm^{-1}: 1660 (C=O). ^1H NMR ($CDCl_3$), δ: 2.71—3.26 (m, 6 H, 2 CH_2, 2 β-H); 3.79 (d, 2 H, 2 α-H, $^3J_{\alpha\text{-}H,\beta\text{-}H}$ = 2.58 Hz); 7.39—8.09 (m, 10 H, 2 Ph).

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Synthesis and optical activation of dimethyl 1-(2,4-dinitrophenyloxy)aziridine-2,2-dicarboxylate

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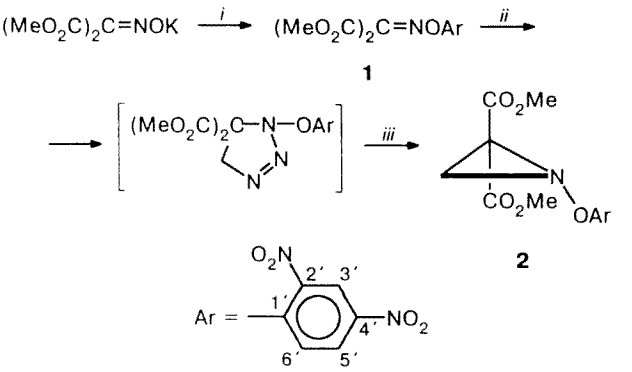
1-Alkoxyaziridine-2,2-dicarboxylates[1] proved to be ideal objects for developing a general procedure for complete resolution into antipodes[2—6] that can be used for various classes of compounds with an asymmetrical nitrogen atom.[7]

In this work, the first representative of 1-aryloxyaziridines, namely, dimethyl 1-(2,4-dinitrophenoxy)aziridine-2,2-dicarboxylate **2**, was synthesized by the reaction of diazomethane with dimethyl mesoxalate *O*-(2,4-dinitrophenyl)oxime (**1**) (Scheme 1). We succeeded in obtaining both enantiomerically enriched forms of **2** by crystallization from an optically active solvent. Unlike 1-alkoxyaziridines, an increase in the inversion barrier should be expected for compound **2** because the electronegativity of the sp^2 carbon atom is higher than that of the sp^3 carbon atom. Moreover, aziridine **2** is a promising synthon for preparing 1-hydroxyaziridine-2,2-dicarboxylates.

***O*-Aryloxime (1).** The yield was 42%, m.p. 108—110 °C (from Pr^iOH). Found (%): C, 40.39; H, 2.74; N, 12.86. $C_{11}H_9N_3O_9$. Calculated (%): C, 40.37; H, 2.77; N, 12.84. IR (KBr pellets), ν/cm^{-1}: 1740 (CO); 1600, 1542 (C=N, C_6H_3, NO_2). ^1H NMR ($CDCl_3$), δ: 4.02 (s, 3 H, MeO); 4.07 (s, 3 H, MeO); 8.03 (d, 1 H, 6′-H, ^3J = 9.2 Hz); 8.5 (dd,

Scheme 1



Reagents and conditions: *i.* Chloro-2,4-dinitrobenzene in MeCN in the presence of a catalytic amount of 18-crown-6, boiling for 6 h; *ii.* An ethereal solution of CH_2N_2 in CH_2Cl_2, −6 °C, 7 days; *iii.* A catalytic amount of CF_3COOH, −6 °C, 5 h.

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1 H, 5′-H, ^3J = 9.2 Hz, ^4J = 2.4 Hz); 8.92 (d, 1 H, 3′-H, ^4J = 2.4 Hz). ^{13}C NMR (DMSO-d_6), δ: 53.86 (q, MeO, ^1J = 149.7 Hz); 54.26 (q, MeO, ^1J = 149.7 Hz); 117.6 (d, 6′-C, ^1J = 174.1 Hz); 122.0 (dd, 5′-C, ^1J = 174.4 Hz, ^3J = 4.4 Hz); 130.3 (dd, 3′-C, ^1J = 172.9 Hz, ^3J = 4.4 Hz); 149.34 (s, C=N); 154.0 (m, 1′-C); 142.6 (m, 2′-C); 136.5 (m, 4′-C); 158.2 (q, CO, ^3J = 4.4 Hz); 158.9 (q, CO, ^3J = 4.4 Hz).

Aziridine (2). The yield was 21%, m.p. 110—112 °C (from Pr^iOH). Found (%): C, 42.26; H, 3.25; N, 12.33. $C_{12}H_{11}N_3O_9$. Calculated (%): C, 42.23; H, 3.25; N, 12.31. IR (KBr pellets), ν/cm^{-1}: 3100 (CH_2 cycle); 1600, 1536 (C_6H_3, NO_2). ^{1}H NMR ($CDCl_3$), δ: 2.95 (d, 1 H, CH_2 cycle, ^2J = −4.0 Hz); 3.46 (d, 1 H, CH_2 cycle, ^2J = −4.0 Hz); 3.81 (s, 3 H, MeO); 3.88 (s, 3 H, MeO); 8.13 (d, 1 H, 6′-H, ^3J = 9.2 Hz); 8.48 (dd, 1 H, 5′-H, ^3J = 9.2 Hz, ^4J = 2.1 Hz); 8.88 (d, 1 H, 3′-H, ^4J = 2.1 Hz). ^{13}C NMR (DMSO-d_6), δ: 41.64 (dd, 3-C, ^1J = 175.8 Hz, ^1J = 183.1 Hz); 50.67 (s, 2-C); 53.54 (q, MeO, ^1J = 148.2 Hz); 53.60 (q, MeO, ^1J = 148.2 Hz); 116.7 (d, 6′-C, ^1J = 174.4 Hz); 121.6 (dd, 5′-C, ^1J = 174.4 Hz, ^3J = 4.4 Hz); 130.2 (dd, 3′-C, ^1J = 172.9 Hz, ^3J = 5.8 Hz); 135.9 (t, 4′-C, ^2J = ^3J = 5.8 Hz); 141.0 (m, 2′-C); 155.8 (m, 1′-C); 162.1 (m, CO, ^3J = 4.4 Hz); 164.7 (m, CO, ^3J = 4.4 Hz).

Aziridine **2** (100 mg) was crystallized from *S*-(−)-2-methylbutan-1-ol (1 mL). After washing with Et_2O and drying *in vacuo*, aziridine (+)-**2** was obtained in a yield of 23 mg, m.p. 119—120 °C, $[\alpha]^{15}_D$ +1.2° (*c* 2.8, Me_2CO). After evaporation of the mother liquor *in vacuo*, washing with Et_2O, and drying, aziridine (−)-**2** was obtained in a yield of 65 mg, m.p. 114—115 °C, $[\alpha]^{15}_D$ −0.97° (*c* 7.6, Me_2CO). Previously,[4] an analogous enantiomeric enrichment was observed for 1-alkoxyaziridines upon crystallization from an optically active solvent.

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