Supplementary Material for Organic & Biomolecular Chemistry This journal is © The Royal Society of Chemistry 2004 Supplementary data

N-(p-nosylsufonyl)-2-(p-chlorophenyl)aziridine

The general procedure was followed using CuHY (0.3 g)/ Cu(OTf)₂ (0.015 g, 0.15 mmol) was added to the chiral bis(oxazoline) (0.039 g, 0.07 mmol) in dry acetonitrile (2.5 cm³) at 25°C and stirred for 15 minutes to preform the catalyst prior to the addition of the Cl styrene and nitrene donor. Cl styrene (0.135 g, 1.0 mmol) and the PhI=NNs nitrene donor (0.5881 g, 1.0 mmol), were then added and the mixture stirred. Reaction time: 12 h at room temperature. Flash column chromatography $(1.5 \times 20 \text{ cm silica}, 10:1.5 \text{ petroleum ether} (40/60)$ -ethyl acetate) afforded 0.16 g (54%) of the aziridine as acrystalline solid: mp 101-102 0 C; δ_{H} (400 MHz, CDCl₃) 8.35 (d, 2H, J = 8.02 Hz, Ar-*H*), 8.15 (d, 2H, J = 8.04 Hz, Ar-*H*), 7.25 (d, 2H, J = 8.2 Hz, Ar-*H*), 7.15 (d, 2H, J = 8.2 Hz, Ar-*H*), 3.82 (dd, 1H, $J_{cis} = 7.23$ Hz, $J_{\text{trans}} = 4.5 \text{ Hz}, CHPh-aziridine}$, 3.06 (d, 1H, J = 7.3 Hz), 2.41 (d, 1H, J = 4.5 Hz); Anal. calcd. for $C_{14}H_{11}Cl(NO_2)_2S$: C, 49.7; H, 3.3; N, 8.3; Cl, 10.4.

N-(p-nosylsufonyl)-2-(p-methylphenyl)aziridine

The general procedure was followed using CuHY (0.3 g)/ Cu(OTf)₂ (0.015 g, 0.15 mmol) was added to the chiral bis(oxazoline) (0.039 g, 0.07 mmol) in dry acetonitrile (2.5 cm³) at 25⁰C and stirred for 15 minutes to preform the catalyst prior to the addition of the CH₃ styrene and nitrene donor. CH₃ styrene (0.115 g, 1.0 mmol) and the PhI=NNs nitrene donor (0.5881 g, 1.0 mmol), were then added and the mixture stirred. Reaction time: 12 h at room temperature. Flash column chromatography (1.5 x 20 cm silica, 10:1.5 petroleum ether (40/60)-ethyl acetate) afforded 0.18 g (61%) of the aziridine as acrystalline solid: mp 137-138 ⁰C; $\delta_{\rm H}$ (400 MHz, CDCl₃) 8.32 (d, 2H, *J* = 8.02 Hz, Ar-*H*), 8.10 (d, 2H, *J* = 8.01 Hz, Ar-*H*), 7.05 (s, 4H, Ar-*H*), 3.82 (dd, 1H, $J_{\rm cis}$ = 7.2 Hz, $J_{\rm trans}$ = 4.5 Hz, *CH*Ph-aziridine), 3.05 (d, 1H, Ar-*H*, *J* = 7.2 Hz) 2.42 (s, 3H, Ar-CH₃), 2.25 (s, 1H, *J* = 4.5 Hz); Anal. calcd. for C₁₅H₁₄(NO₂)₂S: C, 56.60; H, 4.40; N, 8.81.

N-(p-nosylsufonyl)-2-(p-fluorophenyl)aziridine

The general procedure was followed using CuHY (0.3 g)/ Cu(OTf)₂ (0.015 g, 0.15 mmol) was added to the chiral bis(oxazoline) (0.039 g, 0.07 mmol) in dry acetonitrile (2.5 cm³) at 25°C and stirred for 15 minutes to preform the catalyst prior to the addition of the $\ensuremath{\text{CH}}_3$ styrene and nitrene donor. F styrene (0.119 g, 1.0 mmol) and the PhI=NNs nitrene donor (0.5881 g, 1.0 mmol), were then added and the mixture stirred. Reaction time: 12 h at room temperature. Flash column chromatography $(1.5 \times 20 \text{ cm silica}, 10:1.5 \text{ petroleum ether} (40/60)$ -ethyl acetate) afforded 0.19 g (64%) of the aziridine as acrystalline solid: mp 141-142 °C; $\delta_{\rm H}$ (400 MHz, CDCl₃) 8.35 (d, 2H, J = 8.0 Hz, Ar-H), 8.15 (d, 2H, J = 6.91 Hz, Ar-H), 7.21 (d, 2H, J = 7.9 Hz, Ar-*H*), 7.05 (d, 2H, J = 7.9 Hz, Ar-*H*), 3.82 (dd, 1H, $J_{cis} = 7.21$ Hz, $J_{\text{trans}} = 4.6 \text{ Hz}, \text{CHPh-aziridine}$, 3.05 (d, 1H, J = 7.6 Hz), 2.43 (d, 1H, J = 4.6 Hz); Anal. calcd. for $C_{14}H_{11}F(NO_2)_2S$: C, 52.17; H, 3.42; N, 8.70.

N-(*p*-nosylsufonyl)-2-(*p*-bromophenyl)aziridine

The general procedure was followed using CuHY (0.3 g)/Cu(OTf)₂ (0.015 g, 0.15 mmol) was added to the chiral bis(oxazoline) (0.039 g, 0.07 mmol) in dry acetonitrile (2.5 cm³) at 25^oC and stirred for 15 minutes to preform the catalyst prior to the addition of the Br styrene and nitrene donor. Fl styrene (0.119 g, 1.0 mmol) and the PhI=NNs nitrene donor (0.5881 g, 1.0 mmol), were then added and the mixture stirred. Reaction time: 12 h at room temperature.

Flash column chromatography (1.5 x 20 cm silica, 10:1.5 petroleum ether (40/60)-ethyl acetate) afforded 0.19 g (64%) of the aziridine as acrystalline solid: mp 144-145 0 C; δ_{H} (400 MHz, CDCl₃) 8.32 (d, 2H, *J* = 8.32 Hz, Ar-*H*), 8.12 (d, 2H, *J* = 8.07 Hz), 7.35 (d, 2H, *J* = 8.8 Hz, Ar-*H*), 7.05 (d, 2H, *J* = 8.6 Hz, Ar-*H*), 3.76 (dd, 1H, *J*_{cis} = 7.2 Hz, *J*_{trans} = 4.2 Hz, *CH*Ph-aziridine), 3.05 (d, 1H, *J* = 7.3 Hz), 2.41 (d, 1H, *J* = 4.5 Hz) Anal. calcd. for C₁₄H₁₁Br(NO₂)₂S: C,43.86 ; H, 2.87; N, 7.31.

N-(*p*-nosylsufonyl)-2-(*p*-α-methylphenyl)aziridine

The general procedure was followed using CuHY (0.3 g)/ Cu(OTf)₂ (0.015 g, 0.15 mmol) was added to the chiral bis(oxazoline) (0.039 g, 0.07 mmol) in dry acetonitrile (2.5 cm³) at 25^oC and stirred for 15 minutes to preform the catalyst prior to the addition of the CH₃ styrene and nitrene donor. CH₃ styrene (0.115 g, 1.0 mmol) and the PhI=NNs nitrene donor (0.5881 g, 1.0 mmol), were then added and the mixture stirred. Reaction time: 12 h at room temperature. Flash column chromatography (1.5 x 20 cm silica, 10:1.5 petroleum ether (40/60)-ethyl acetate) afforded 0.18 g (61%) of the aziridine as acrystalline solid: mp 81-83 °C; $\delta_{\rm H}$ (400 MHz, CDCl₃) 8.25 (d, 2H, *J* = 8.3 Hz, Ar-*H*), 8.05 (d, 2H, *J* = 8.07 Hz, Ar-*H*), 7.21 (s, 4H, Ar-*H*), 3.81 (dd, 1H, *J*_{cis} = 7.2 Hz, *J*_{trans} = 4.4 Hz, *CH*Ph-aziridine), 3.0 (d, 1H, Ar-*H*, *J* = 7.1 Hz) 2.40 (s, 3H, Ar-CH₃), 2.0 (S, 1H, *J* = 4.4Hz); Anal. calcd. for C₁₅H₁₄(NO₂)₂S: C, 56.60; H, 4.40; N, 8.81..