Eur. J. Org. Chem. **2007** · © WILEY-VCH Verlag GmbH & Co. KGaA, 69451 Weinheim, 2007 · ISSN 1434–193X

SUPPORTING INFORMATION

Title: The (Porphyrin)ruthenium-Catalyzed Aziridination of Olefins Using Aryl Azides as Nitrogen Sources
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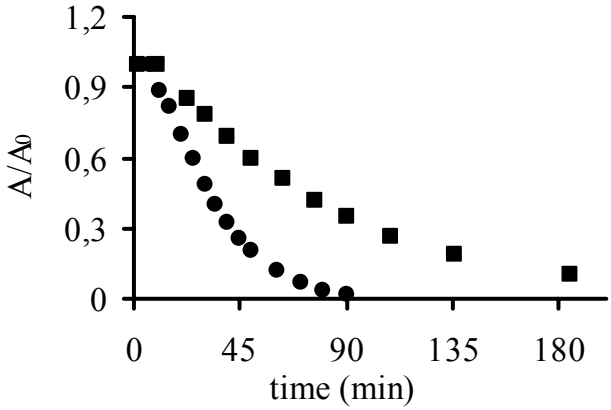
Ref. No.: O200700678

The A/A_0 *versus* time plots of Ru(TPP)CO-catalyzed reactions of *p*-nitrophenyl azide with α-methylstyrene in the presence (squares) and in absence (circles) of 4-methylanisole.



***N*-(4-Nitrophenyl)-2-phenylaziridine (14).**[1] ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 8.15 (d, J = 8.9 Hz, 2 H, Ar*H*), 7.39–7.35 (m, 5 H, Ar*H*), 7.10 (d, J = 8.9 Hz, 2 H, Ar*H*), 3.26–3.23 (m, 1 H, C(Ph)*H*), 2.58–2.54 (m, 2 H, CH_2). ^{1}H NMR (300 MHz, C_6D_6, 300 K): δ = 7.84 (d, J = 8.8 Hz, 2 H, Ar*H*), 7.19–7.15 (m, 5 H, Ar*H*), 6.37 (d, J = 8.8 Hz, 2 H, Ar*H*), 2.60 (dd, J = 6.3, 3.3 Hz, 1 H, C(Ph)*H*), 1.91 (dd, J = 3.3, 1.1 Hz, 1 H, CH_2), 1.78 (dd, J = 6.3, 1.1 Hz, 1 H, CH_2). ^{13}C NMR (75 MHz, C_6D_6, 300 K): δ = 160.5 (C), 143.3 (C), 138.8 (C), 129.0 (CH), 128.1 (CH), 126.5 (CH), 125.3 (CH), 120.6 (CH), 42.0 (CH), 37.9 (CH_2). Anal. Calcd (%) for $C_{14}H_{12}N_2O_2$ (240.1): C 69.99, H 5.03, N 11.66; found: C 70.12, H 4.88, N 11.33. IR (Nujol): ν (cm^{-1}) = 1592 (s) (NO_2), 1504 (s)

(NO_2), 1338 (s) (NO_2), 1321 (s) (NO_2). MS (EI): *m/z* 240 [M^+].

***N*-(4-Nitrophenyl)-2-methyl-2-phenylaziridine (15).** ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 8.19 (d, *J* = 9.0 Hz, 2 H, Ar*H*), 7.51 (d, *J* = 7.2 Hz, 2 H, Ar*H*), 7.40 (pst, *J* = 7.2 Hz, 2 H, Ar*H*), 7.34 (t, *J* = 7.2 Hz, 1 H, Ar*H*), 7.02 (d, *J* = 9.0 Hz, 2 H, Ar*H*), 2.69 (s, 1 H, CH_2), 2.42 (s, 1 H, CH_2), 1.50 (s, 3 H, CH_3). ^{1}H NMR (300 MHz, C_6D_6, 300 K): δ = 7.90 (d, *J* = 8.9 Hz, 2 H, Ar*H*), 7.29 (d, *J* = 7.7 Hz, 2 H, Ar*H*), 7.19 (pst, *J* = 7.7 Hz, 2 H, Ar*H*), 7.12 (t, *J* = 7.7 Hz, 1 H, Ar*H*), 6.31 (d, *J* = 8.9 Hz, 2 H, Ar*H*), 2.07 (s, 1 H, CH_2), 1.63 (s, 1 H, CH_2), 0.95 (s, 3 H, CH_3). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 157.3 (C), 142.9 (C), 142.2 (C), 128.9 (CH), 127.9 (CH), 126.6 (CH), 125.6 (CH), 120.8 (CH), 45.2 (C), 42.9 (CH_2), 20.7 (CH_3). Anal. Calcd (%) for $C_{15}H_{14}N_2O_2$ (254.1): C 70.58, H 5.55, N 11.02; found: C 70.69, H 5.66, N 11.35. IR (Nujol): ν (cm^{-1}) = 1590 (s) (NO_2), 1504 (s) (NO_2), 1329 (s) (NO_2). MS (EI): *m/z* 254 [M^+].

***N*-(4-Chlorophenyl)-2-methyl-2-phenylaziridine (17).** ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 7.51 (d, *J* = 7.6 Hz, 2 H, Ar*H*), 7.37 (dd, *J* = 7.6, 7.1 Hz, 2 H, Ar*H*), 7.30 (t, *J* = 7.1 Hz, 1 H, Ar*H*), 7.24 (d, *J* = 7.7 Hz, 2 H, Ar*H*), 6.90 (d, *J* = 7.7 Hz, 2 H, Ar*H*), 2.56 (s, 1 H, CH_2), 2.29 (s, 1 H, CH_2), 1.42 (s, 3 H, CH_3). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 149.3 (C), 143.4 (C), 129.3 (CH), 128.8 (CH), 127.5 (CH), 126.7 (CH), 122.4 (CH), 44.1 (C), 42.4 (CH_2), 20.2 (CH_3). Anal. Calcd (%) for $C_{15}H_{14}ClN$ (243.1): C 73.92, H 5.79, N 5.75; found: C 73.85, H 5.70, N 5.69. MS (EI): *m/z* 243 [M^+].

***N*-(4-Bromophenyl)-2-phenylaziridine (18).**[2] ^{1}H NMR (400 MHz, $CDCl_3$, 300 K): δ = 7.42–7.32 (m, 5 H, Ar*H*), 7.39 (d, *J* = 8.7 Hz, 2 H, Ar*H*), 6.96 (d, *J* = 8.7 Hz, 2 H, Ar*H*), 3.12 (dd, *J* = 6.4, 3.4 Hz, 1 H, C(Ph)*H*), 2.48 (dd, *J* = 6.4, 1.0 Hz, 1 H, CH_2), 2.46 (dd, *J* = 3.4, 1.0 Hz, 1 H, CH_2). ^{13}C NMR (100 MHz, $CDCl_3$, 300 K): δ = 153.7 (C), 138.9 (C), 131.9 (CH), 128.6 (CH), 127.5 (CH), 126.2 (CH), 122.4 (CH), 115.0 (C), 41.8 (CH), 37.1 (CH_2). Anal. Calcd (%) for $C_{14}H_{12}BrN$ (273.0): C 61.33, H 4.41, N 5.11; found: C 61.68, H 4.65, N 4.99. MS (EI): *m/z* 273 [M^+].

***N*-(4-Bromophenyl)-2-methyl-2-phenylaziridine (19).** ^{1}H NMR (400 MHz, $CDCl_3$, 300 K): δ = 7.53–7.50 (m, 2 H, Ar*H*), 7.40 (d, *J* = 8.4 Hz, 2 H, Ar*H*), 7.39–7.36 (m, 2 H, Ar*H*), 7.33–7.31 (m, 1 H, Ar*H*), 6.86 (d, *J* = 8.4 Hz, 2 H, Ar*H*), 2.55 (s, 1 H, CH_2), 2.28 (s, 1 H, CH_2), 1.41 (s, 3 H, CH_3). ^{13}C NMR (100 MHz, $CDCl_3$, 300 K): δ = 149.8 (C), 143.4 (C), 132.2 (CH), 128.8 (CH), 127.5 (CH), 126.7 (CH), 122.9 (CH), 115.0 (C), 44.1 (C), 42.4 (CH_2), 20.2 (CH_3). Anal. Calcd (%) for $C_{15}H_{14}BrN$ (287.0): C 62.52, H 4.90, N 4.86; found: C 62.80, H 5.05, N 4.62. MS (EI): *m/z* 287 [M^+].

***N*-(4-Cyanophenyl)-2-methyl-2-phenylaziridine (21).** ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 7.56 (d, *J* = 8.5 Hz, 2 H, Ar*H*), 7.50 (d, *J* = 7.2 Hz, 2 H, Ar*H*), 7.40 (pst, *J* = 7.2 Hz, 2 H, Ar*H*), 7.33 (t, *J* = 7.2 Hz, 1 H, Ar*H*), 7.01 (d, *J* = 8.5 Hz, 2 H, Ar*H*), 2.63 (s, 1 H, CH_2), 2.35 (s, 1 H, CH_2), 1.46 (s, 3 H, CH_3). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 155.2 (C), 142.5 (C), 133.6 (CH), 128.9 (CH), 127.8 (CH), 126.6 (CH), 121.5 (CH), 119.9 (C, *C*N), 105.2 (C), 44.9 (C), 42.6 (CH_2), 20.6 (CH_3). Anal. Calcd (%) for $C_{16}H_{14}N_2$ (234.3): C 82.02, H 6.02, N 11.96; found: C 82.20, H 6.17, N 11.60. IR (Nujol): ν (cm^{-1}) = 2221 (s) (CN). IR (CH_2Cl_2): ν (cm^{-1}) = 2224 (CN). MS (EI): *m/z* 234 [M^+].

***N*-(4-Methoxyphenyl)-2-phenylaziridine (22).**[3] ^{1}H NMR (400 MHz, $CDCl_3$, 300 K): δ = 7.41–7.35 (m, 5 H, Ar*H*), 7.02 (d, *J* = 8.9 Hz, 2 H, Ar*H*), 6.84 (d, *J* = 8.9 Hz, 2 H, Ar*H*), 3.80 (s, 3 H, OCH_3), 3.06 (dd, *J* = 6.5, 3.4 Hz, 1 H, C(Ph)*H*), 2.44 (dd, *J* = 6.5, 1.0 Hz, 1 H, CH_2), 2.40 (dd, *J* = 3.4, 1.0 Hz, 1 H, CH_2). ^{13}C NMR (100 MHz, $CDCl_3$, 300 K): δ = 155.7 (C), 147.5 (C), 140.0 (C), 128.9 (CH), 127.7 (CH), 126.6 (CH), 121.7 (CH), 114.8 (CH), 56.0 (OCH_3), 42.3 (CH), 38.2 (CH_2). Anal. Calcd (%) for $C_{15}H_{15}NO$ (225.1): C 79.97, H 6.71, N 6.22; found: C 80.12, H 6.95, N 6.00. MS (EI): *m/z* 225 [M^+].

***N*-(4-Methoxyphenyl)-2-methyl-2-phenylaziridine (23).** ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 7.50 (d, *J* = 6.6 Hz, 2 H, Ar*H*), 7.34 (pst, *J* = 6.6 Hz, 2 H, Ar*H*), 7.28 (t, *J* = 6.6 Hz, 1 H, Ar*H*), 6.88 (d, *J* = 8.8 Hz, 2 H, Ar*H*), 6.82 (d, *J* = 8.8 Hz, 2 H, Ar*H*), 3.78 (s, 3 H, OCH_3), 2.47 (s, 1 H, CH_2), 2.24 (s, 1 H, CH_2), 1.34 (s, 3 H, CH_3). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 155.4 (C), 144.1 (C), 143.8 (C), 128.7 (CH), 127.2 (CH), 126.8 (CH), 121.9 (CH), 114.6 (CH), 55.9 (OCH_3), 43.8 (C), 42.2 (CH_2), 20.0 (CH_3). Anal. Calcd (%) for $C_{16}H_{17}NO$ (239.1): C 80.30, H 7.16, N 5.85; found: C 80.46, H 7.37, N 5.60. MS (EI): *m/z* 239 [M^+].

***N*-(4-Methylphenyl)-2-phenylaziridine (24).**[1,4] ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 7.84–7.81 (m, 2 H, Ar*H*), 7.41–7.29 (m, 7 H, Ar*H*), 3.06 (dd, *J* = 6.6, 2.9 Hz, 1 H, C(Ph)*H*), 2.43 (d, *J* = 6.6 Hz, 1 H, CH_2), 2.39 (d, *J* = 2.9 Hz, 1 H, CH_2), 2.30 (s, 3 H, CH_3). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 152.5 (C), 140.0 (C), 132.2 (C), 130.0 (CH), 128.8 (CH), 127.7 (CH), 126.6 (CH), 120.8 (CH), 42.1 (CH), 38.0 (CH_2), 21.1 (CH_3). Anal. Calcd (%) for $C_{15}H_{15}N$ (209.3): C 86.08, H 7.22, N 6.69, found: C 86.45, H 7.02, N 6.30. MS (EI): *m/z* 209 [M^+].

***N*-(4-Methylphenyl)-2-methyl-2-phenylaziridine (25).** ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 7.83–7.80 (m, 1 H, Ar*H*), 7.53–7.50 (m, 2 H, Ar*H*), 7.38–7.28 (m, 6 H, Ar*H*), 2.48 (s, 1 H, CH_2), 2.31 (s, 3 H, C_{Ar}–CH_3), 2.25 (s, 1 H, CH_2), 1.37 (s, 3 H, CH_3). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 147.9 (C), 144.1 (C), 131.6 (C), 129.8 (CH), 128.7 (CH), 127.2 (CH), 126.8 (CH), 121.0 (CH),

43.7 (C), 42.0 (CH_2), 21.1 (CH_3), 20.0 (CH_3). Anal. Calcd (%) for $C_{16}H_{17}N$ (223.3): C 86.05, H 7.67, N, 6.27; found: C 86.40, H 7.44, N 6.03. MS (EI): *m/z* 223 [M^+].

***N*-(4-(*tert*-Butyl)phenyl)-2-phenylaziridine (26).** ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 7.42–7.35 (m, 4 H, Ar*H*), 7.33–7.28 (m, 3 H, Ar*H*), 7.02–6.99 (m, 2 H, Ar*H*), 3.09 (dd, *J* = 6.6, 2.9 Hz, 1 H, C(Ph)*H*), 2.45 (d, *J* = 6.6 Hz, 1 H, CH_2), 2.38 (d, *J* = 2.9 Hz, 1 H, CH_2), 1.31 (s, 9 H, C(CH_3)$_3$). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 152.3 (C), 145.7 (C), 140.1 (C), 128.8 (CH), 127.6 (CH), 126.6 (CH), 126.2 (CH), 120.5 (CH), 41.9 (CH), 38.0 (CH_2), 34.6 (C), 31.9 (CH_3). Anal. Calcd (%) for $C_{18}H_{21}N$ (251.4): C 86.01, H 8.42, N 5.57; found: C 86.35, H 8.30, N 5.35. MS (EI): *m/z* 251 [M^+].

***N*-(4-(*tert*-Butyl)phenyl)-2-methyl-2-phenylaziridine (27).** ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 7.56–7.53 (m, 2 H, Ar*H*), 7.40–7.35 (m, 2 H, Ar*H*), 7.31–7.25 (m, 3 H, Ar*H*), 6.92–6.88 (m, 2 H, Ar*H*), 2.46 (s, 1 H, CH_2), 2.25 (s, 1 H, CH_2), 1.38 (s, 3 H, CH_3), 1.31 (s, 9 H, C(CH_3)$_3$). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 147.8 (C), 145.1 (C), 144.3 (C), 128.7 (CH), 127.2 (CH), 126.8 (CH), 126.0 (CH), 120.6 (CH), 43.6 (C), 42.2 (CH_2), 34.6 (C), 31.9 (CH_3), 20.0 (CH_3). Anal. Calcd (%) for $C_{19}H_{23}N$ (265.4): C 85.99, H 8.74, N 5.28; found: C 86.12, H 8.84, N 5.00. MS (EI): *m/z* 265 [M^+].

***N*-(2-Nitrophenyl)-2-phenylaziridine (28).** ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 7.96–7.93 (m, 1 H, Ar*H*), 7.51–7.46 (m, 1 H, Ar*H*), 7.40–7.31 (m, 5 H, Ar*H*), 7.21–7.18 (m, 1 H, Ar*H*), 7.11–7.06 (m, 1 H, Ar*H*), 3.34 (dd, *J* = 5.9, 3.7 Hz, 1 H, C(Ph)*H*), 2.67 (d, *J* = 3.7 Hz, 1 H, CH_2), 2.49 (d, *J* = 5.9 Hz, 1 H, CH_2). ^{1}H NMR (300 MHz, C_6D_6, 300 K): δ = 7.62–7.59 (m, 1 H, Ar*H*), 7.24–7.19 (m, 2 H, Ar*H*), 7.17–7.08 (m, 3 H, Ar*H*), 6.79–6.76 (m, 1 H, Ar*H*), 6.56–6.54 (m, 1 H, Ar*H*), 6.42–6.38 (m, 1 H, Ar*H*), 2.69 (dd, *J* = 6.6, 2.9 Hz, 1 H, C(Ph)*H*), 2.23 (d, *J* = 2.9 Hz, 1 H, CH_2), 1.79 (d, *J* = 6.6 Hz, 1 H, CH_2). ^{13}C NMR (75 MHz, C_6D_6, 300 K): δ = 148.9 (C), 138.7 (C), 133.4 (CH), 128.8 (CH), 128.0 (CH), 126.6 (CH), 125.7 (CH), 123.6 (CH), 122.0 (CH), 43.9 (CH), 39.3 (CH_2). Anal. Calcd (%) for $C_{14}H_{12}N_2O_2$ (240.3): C 69.99, H 5.03, N 11.66; found: C 70.17, H 5.30, N 11.40. IR (Nujol): ν (cm^{-1}) = 1568 (s) (NO_2), 1495 (s) (NO_2), 1337 (s) (NO_2). MS (EI): *m/z* 240 [M^+].

***N*-(2-Nitrophenyl)-2-methyl-2-phenylaziridine (29).** ^{1}H NMR (300 MHz, C_6D_6, 300 K): δ = 7.66–7.62 (m, 1 H, Ar*H*), 7.41–7.37 (m, 2 H, Ar*H*), 7.20–7.09 (m, 3 H, Ar*H*), 6.81–6.78 (m, 1 H, Ar*H*), 6.48–6.46 (m, 1 H, Ar*H*), 6.44–6.39 (m, 1 H, Ar*H*), 2.29 (s, 1 H, CH_2), 1.70 (s, 1 H, CH_2), 1.12 (s, 3 H, CH_3). ^{13}C NMR (75 MHz, C_6D_6, 300 K): δ = 145.8 (C), 142.0 (C), 133.1 (CH), 128.6 (CH), 127.5 (CH), 126.5 (CH), 126.0 (CH), 123.6 (CH), 121.4 (CH), 46.6 (C), 43.6 (CH_2), 19.1 (*C*H_3). Anal. Calcd (%) for $C_{15}H_{14}N_2O_2$ (254.1): C 70.58, H 5.55, N 11.02; found: C 70.35 H 5.39,

N 11.12. IR (Nujol): ν (cm^{-1}) = 1570 (s) (NO_2), 1490 (s) (NO_2), 1340 (s) (NO_2). MS (EI): *m/z* 254 [M^+].

1,2-*trans*-*N*-(2,6-Dinitrophenyl)-2-phenylaziridine (30a). ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 7.78–7.75 (m, 1 H, Ar*H*), 7.55–7.45 (m, 1 H, Ar*H*), 7.40–7.15 (m, 6 H, Ar*H*), 3.36 (dd, *J* = 6.6, 3.7 Hz, 1 H, C(Ph)*H*), 2.66 (d, *J* = 6.6, 1 H, CH_2), 2.58 (d, *J* = 3.7 Hz, 1 H, CH_2). ^{1}H NMR (300 MHz, C_6D_6, 300 K): δ = 7.15–7.02 (m, 5 H, Ar*H*), 6.98–6.96 (m, 1 H, Ar*H*), 6.40–6.30 (m, 2 H, Ar*H*), 2.64 (dd, *J* = 5.9, 3.7 Hz, 1 H, C(Ph)*H*), 1.96 (d, *J* = 3.7, 1 H, CH_2), 1.85 (d, *J* = 5.9 Hz, 1 H, CH_2). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 147.3 (C), 141.5 (C), 137.1 (C), 131.2 (CH), 129.0 (CH), 128.6 (CH), 128.0 (CH), 126.3 (CH), 119.0 (CH), 43.2 (CH), 38.5 (CH_2). ^{13}C NMR (75 MHz, C_6D_6, 300 K): δ = 147.0 (C), 144.8 (C), 137.5 (C), 130.5 (CH), 128.9 (CH), 128.4 (CH), 127.3 (CH), 126.4 (CH), 118.5 (CH), 42.7 (CH), 38.1 (CH_2). Anal. Calcd (%) for $C_{14}H_{11}N_3O_4$ (285.3): C 58.95, H 3.89, N 14.73; found: C 59.39, H 4.06, N 14.52. IR (Nujol): ν (cm^{-1}) = 1538 (s) (NO_2), 1464 (s) (NO_2), 1345 (s) (NO_2). MS (EI): *m/z* 285 [M^+].

1,2-*cis*-*N*-(2,6-Dinitrophenyl)-2-phenylaziridine (30b). ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 7.91–7.89 (m, 1 H, Ar*H*), 7.40–7.15 (m, 6 H, Ar*H*), 7.17–7.14 (m, 1 H, Ar*H*), 3.45 (dd, *J* = 6.6, 3.7 Hz, 1 H, C(Ph)*H*), 2.68 (d, *J* = 6.6, 1 H, CH_2), 2.47 (d, *J* = 3.7 Hz, 1 H, CH_2).

1,2-*trans*-*N*-(2,6-Dinitrophenyl)-2-methyl-2-phenylaziridine (31). ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 7.75–7.71 (m, 1H, Ar*H*), 7.53–7.47 (m, 1H, Ar*H*), 7.41–7.26 (m, 6H, Ar*H*), 2.66 (s, 1 H, CH_2), 2.49 (s, 1 H, CH_2), 1.58 (s, 3 H, CH_3). ^{1}H NMR (300 MHz, C_6D_6, 300 K): δ = 7.26–7.24 (m, 2H, Ar*H*), 7.15–7.06 (m, 3H, Ar*H*), 6.96 (d, *J* = 8.1 Hz, 1 H, Ar*H*), 6.39 (pst, *J* = 8.1 Hz, 1 H, Ar*H*), 6.28 (d, *J* = 8.1 Hz, 1 H, Ar*H*), 2.09 (s, 1 H, CH_2), 1.75 (s, 1 H, CH_2), 1.07 (s, 3 H, CH_3). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 144.5 (C), 142.1 (C), 140.7 (C), 130.9 (CH), 128.9 (CH), 128.1 (CH), 126.2 (CH), 118.6 (CH), 47.9 (C), 42.2 (CH_2), 19.9 (CH_3).^{13}C NMR (75 MHz, C_6D_6, 300 K): δ = 144.1 (C), 142.1 (C), 141.0 (C), 130.2 (CH), 128.8 (CH), 128.0 (CH), 127.4 (CH), 126.2 (CH), 118.1 (CH), 47.4 (C), 41.8 (CH_2), 19.3 (CH_3). Anal. Calcd (%) for $C_{15}H_{13}N_3O_4$ (299.3): C 60.20, H 4.38, N 14.04; found: C 60.35, H 4.39, N 14.12. IR (Nujol): ν (cm^{-1}) = 1541 (s) (NO_2), 1464 (s) (NO_2), 1357 (s) (NO_2). MS (EI): *m/z* 299 [M^+].

***N*-(3,5-*bis*(Trifluoromethyl)phenyl)-2-phenylaziridine (32).** ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 7.53–7.37 (m, 8 H, Ar*H*), 3.28 (dd, *J* = 6.4, 3.3 Hz, 1 H, C(Ph)*H*), 2.60 (d, *J* = 6.4, 1 H, CH_2), 2.58 (d, *J* = 3.3 Hz, 1 H, CH_2). ^{1}H NMR (300 MHz, C_6D_6, 300 K): δ = 7.54 (s, 1 H, Ar*H*), 7.27–7.20 (m, 7 H, Ar*H*), 2.60 (dd, *J* = 6.6, 3.0 Hz, 1 H, C(Ph)*H*), 1.95 (d, *J* = 3.0, 1 H, CH_2), 1.74 (d, *J* = 6.6 Hz, 1 H, CH_2). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 156.2 (C), 138.3 (C), 132.9 (q, C, $^2J_{C-F}$ = 33.3 Hz), 129.1 (CH), 128.3 (CH), 126.5 (CH), 123.6 (q, C, J_{C-F} = 271.1 Hz, CF_3), 121.0

(CH), 116.4 (hept, CH, $^3J_{C-F}$ = 3.8 Hz), 42.4 (CH), 38.4 (CH_2). ^{13}C NMR (75 MHz, C_6D_6, 300 K): δ = 156.5 (C), 138.6 (C), 132.8 (q, C, $^2J_{C-F}$ = 32.9 Hz), 129.0 (CH), 128.2 (CH), 126.4 (CH), 124.0 (q, C, J_{C-F} = 271.0 Hz, CF_3), 121.0 (CH), 116.0 (hept, CH, $^3J_{C-F}$ = 3.8 Hz), 42.0 (CH), 38.0 (CH_2). ^{19}F NMR (282 MHz, $CDCl_3$, 300 K): δ = –63.31; ^{19}F NMR (282 MHz, C_6D_6, 300 K): δ – 62.91. Anal. Calcd (%) for $C_{16}H_{11}F_6N$ (331.3): C 58.01, H 3.35, N 4.23; found: C 58.36, H 3.60, N 4.50. IR (Nujol): ν (cm^{-1}) = 1140 (s) (CF_3), 1110 (s) (CF_3). MS (EI): *m/z* 330 [M^+].

***N*-(3,5-*bis*(Trifluoromethyl)phenyl)-2-methyl-2-phenylaziridine (33).** ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 7.55–7.51 (m, 3 H, Ar*H*), 7.44–7.38 (m, 5 H, Ar*H*), 2.70 (s, 1 H, CH_2), 2.42 (s, 1 H, CH_2), 1.50 (s, 3 H, CH_3). ^{1}H NMR (300 MHz, C_6D_6, 300 K): δ = 7.57 (s, 1 H, Ar*H*), 7.37–7.34 (m, 2 H, Ar*H*), 7.25–7.19 (m, 5 H, Ar*H*), 2.14 (s, 1 H, CH_2), 1.65 (s, 1 H, CH_2), 0.99 (s, 3 H, CH_3). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 152.4 (C), 142.2 (C), 132.5 (q, C, $^2J_{C-F}$ = 33.0 Hz), 128.9 (CH), 127.9 (CH), 126.6 (CH), 123.7 (q, C, J_{C-F} = 271.0 Hz), 120.9 (CH, C_c), 115.8 (hept, CH, $^3J_{C-F}$ = 3.9 Hz), 44.9 (C), 43.0 (CH_2), 20.3 (CH_3). ^{13}C NMR (75 MHz, C_6D_6, 300 K): δ = 152.9 (C), 142.3 (C), 132.7 (q, C, $^2J_{C-F}$ = 32.9 Hz), 128.8 (CH), 127.7 (CH), 126.5 (CH), 124.1 (q, C, J_{C-F} = 271.3 Hz), 120.9 (broad), 115.4 (hept, CH, $^3J_{C-F}$ = 3.8 Hz), 44.4 (C), 42.6 (CH_2), 19.4 (CH_3). ^{19}F NMR (282 MHz, $CDCl_3$, 300 K): δ = –63.31. ^{19}F NMR (282 MHz, C_6D_6, 300 K): δ –62.95. Anal. Calcd (%) for $C_{17}H_{13}F_6N$ (345.1): C 59.13, H 3.79, N 4.06, found: C 59.20, H 3.91, N 4.00. IR (Nujol): ν (cm^{-1}) = 1169 (s) (CF_3), 1123 (s) (CF_3). MS (EI): *m/z* 345 [M^+], 329 [M^+–CH_3], 240 [M^+–C(CH_3)(Ph)], 227 [$NC_6H_3(CF_3)_2$].

***N*-(3,5-Dichlorophenyl)-2-phenylaziridine (34).** ^{1}H NMR (300 MHz, C_6D_6, 300 K): δ = 7.15–7.07 (m, 5 H, Ar*H*), 6.85 (t, *J* = 2.2 Hz, 1 H, Ar*H*), 6.68 (d, *J* = 2.2 Hz, 2 H, Ar*H*), 2.47 (dd, *J* = 7.4, 3.3 Hz, 1 H, C(Ph)*H*), 1.79 (d, *J* = 3.3 Hz, 1 H, CH_2), 1.64 (d, *J* = 7.4 Hz, 1 H, CH_2). ^{13}C NMR (75 MHz, C_6D_6, 300 K): δ = 157.2 (C), 139.1 (C), 135.6 (C), 128.9 (CH), 127.9 (CH), 126.5 (CH), 123.0 (CH), 119.7 (CH), 41.9 (C), 37.8 (CH_2). Anal. Calcd (%) for $C_{14}H_{11}Cl_2N$ (264.1): C 63.66, H 4.20, N 5.30; found: C 63.90, H 4.40, N 5.05. MS (EI): *m/z* 264 [M^+].

***N*-(3,5-Dichlorophenyl)-2-methyl-2-phenylaziridine (35).** ^{1}H NMR (300 MHz, C_6D_6, 300 K): δ = 7.27–7.23 (m, 2 H, Ar*H*), 7.17–7.10 (m, 3 H, Ar*H*), 6.89 (t, *J* = 1.5 Hz, 1 H, Ar*H*), 6.66 (d, *J* = 1.5 Hz, 2 H, Ar*H*), 1.96 (s, 1 H, CH_2), 1.50 (s, 1 H, CH_2), 0.90 (s, 3 H, CH_3). ^{13}C NMR (75 MHz, C_6D_6, 300 K): δ = 153.4 (C), 142.9 (C), 135.6 (C), 128.7 (CH), 127.5 (CH), 126.6 (CH), 122.4 (CH), 119.7 (CH), 44.2 (C), 42.3 (CH_2), 19.3 (CH_3). Anal. Calcd (%) for $C_{15}H_{13}Cl_2N$ (278.2): C 64.76, H 4.71, N 5.04; found: C 65.00, H 4.78, N 5.10. MS (EI): *m/z* 278 [M^+].

***N*-(3,4,5-Trimethoxyphenyl)-2-phenylaziridine (36).** ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 7.38–7.30 (m, 5 H, Ar*H*), 6.29 (s, 2 H, Ar*H*), 3.83 (s, 6 H, OCH_3), 3.80 (s, 3 H, OCH_3), 3.12 (dd, *J*

= 6.6, 3.7 Hz, 1 H, C(Ph)*H*), 2.47 (dd, *J* = 6.6, 1.5 Hz, 1 H, CH_2), 2.35 (dd, *J* = 3.7, 1.5 Hz, 1 H, CH_2). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 153.9 (C), 151.1 (C), 139.8 (C), 134.1 (C), 128.9 (CH), 127.8 (CH), 126.5 (CH), 98.1 (CH), 61.4 (OCH_3), 56.5 (OCH_3), 43.2 (CH), 38.4 (CH_2). Anal. Calcd (%) for $C_{17}H_{19}NO_3$ (285.3): C 71.56, H 6.71, N 4.91; found: C 71.90, H 6.80, N 4.56. MS (EI): *m/z* 285 [M^+].

***N*-(3,4,5-Trimethoxyphenyl)-2-methyl-2-phenylaziridine (37).** ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ= 7.51 (d, *J* = 7.4 Hz, 2 H, Ar*H*), 7.37 (pst, *J* = 7.4 Hz, 2 H, Ar*H*), 7.29 (t, *J* = 7.4 Hz, 1 H, Ar*H*), 6.16 (s, 2 H, Ar*H*), 3.84 (s, 6 H, OCH_3), 3.81 (s, 3 H, OCH_3), 2.46 (s, 1 H, CH_2), 2.28 (s, 1 H, CH_2), 1.44 (s, 3 H, CH_3). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 153.9 (C), 146.8 (C), 143.8 (C), 133.9 (C), 128.7 (CH), 127.3 (CH), 126.6 (CH), 98.5 (CH), 61.4 (OCH_3), 56.5 (OCH_3), 43.6 (C), 42.7 (CH_2), 19.7 (CH_3). Anal. Calcd (%) for $C_{18}H_{21}NO_3$ (299.4): C 72.22, H 7.07, N 4.68; found: C 72.50, H 6.97, N 4.55. MS (EI): *m/z* 299 [M^+].

***N*-(4-Nitrophenyl)-2-(4-(methyl)phenyl)aziridine (38).** ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ= 8.14 (d, *J* = 8.8 Hz, 2 H, Ar*H*), 7.26 (d, *J* = 8.1 Hz, 2 H, Ar*H*), 7.19 (d, *J* = 8.1 Hz, 2 H, Ar*H*), 7.09 (d, *J* = 8.8 Hz, 2 H, Ar*H*), 3.24–3.20 (m, 1 H, C(Ph)*H*), 2.57–2.52 (m, 2 H, CH_2), 2.37 (s, 3 H, CH_3). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 161.0 (C), 143.2 (C), 138.1 (C), 135.2 (C), 129.7 (CH), 126.5 (CH), 125.6 (CH), 121.0 (CH), 42.3 (CH), 38.1 (CH_2), 21.6 (CH_3). Anal. Calcd (%) for $C_{15}H_{14}N_2O_2$ (254.1): C 70.58, H 5.55, N 11.02; found: C 70.63, H 5.44, N 10.98. IR (Nujol): ν (cm^{-1}) = 1594 (s) (NO_2), 1507 (s) (NO_2), 1340 (s) (NO_2). MS (EI): *m/z* 254 [M^+].

***N*-(4-Nitrophenyl)-2-(3-chlorophenyl)aziridine (39).** ^{1}H NMR (300 MHz, C_6D_6, 300 K): δ= 7.96 (d, *J* = 9.1 Hz, 2 H, Ar*H*), 7.38–7.36 (m, 1 H, Ar*H*), 7.21–7.18 (m, 1 H, Ar*H*), 7.05–6.97 (m, 2 H, Ar*H*), 6.47 (d, *J* = 9.1 Hz, 2 H, Ar*H*), 2.60 (dd, *J* = 6.3, 3.2 Hz, 1 H, C(Ph)*H*), 1.90 (dd, *J* = 3.2, 1.1 Hz, 1 H, CH_2), 1.87 (dd, *J* = 6.3, 1.1 Hz, 1 H, CH_2). ^{13}C NMR (75 MHz, C_6D_6, 300 K): δ = 160.1 (C), 143.4 (C), 141.1 (C), 135.1 (C), 130.3 (CH), 128.3 (CH), 126.7 (CH), 125.3 (CH), 124.7 (CH), 120.6 (CH), 41.2 (CH), 37.9 (CH_2). Anal. Calcd (%) for $C_{14}H_{11}ClN_2O_2$ (274.1): C 61.21, H 4.04, N 10.20; found: C 61.55, H 3.89, N 9.95. IR (Nujol): ν (cm^{-1}) = 1589 (s) (NO_2), 1504 (s) (NO_2), 1335 (s) (NO_2). MS (EI): m/z 273 [M^+].

***N*-(4-Nitrophenyl)-2-(4-chlorophenyl)aziridine (40).**[5] ^{1}H NMR (300 MHz, C_6D_6, 300 K): δ= 7.95 (d, *J* = 8.9 Hz, 2 H, Ar*H*), 7.25 (d, *J* = 8.4 Hz, 2 H, Ar*H*), 7.03 (d, *J* = 8.4 Hz, 2 H, Ar*H*), 6.50 (d, *J* = 8.9 Hz, 2 H, Ar*H*), 2.63 (dd, *J* = 6.3, 3.2 Hz, 1 H, C(Ph)*H*), 1.93 (d, *J* = 3.2 Hz, 1 H, CH_2), 1.90 (d, *J* = 6.3 Hz, 1 H, CH_2). ^{13}C NMR (75 MHz, C_6D_6, 300 K): δ = 160.1 (C), 143.5 (C), 137.3 (C), 134.0 (C), 129.1 (CH), 127.4 (CH), 125.3 (CH), 120.5 (CH), 41.2 (CH), 37.9 (CH_2). Anal.

Calcd (%) for $C_{14}H_{11}ClN_2O_2$ (274.1): C 61.21, H 4.04, N 10.20; found: C 61.40, H 4.40, N 9.95. IR (Nujol): ν (cm^{-1}) = 1591 (s) (NO_2), 1507 (s) (NO_2), 1338 (s) (NO_2). MS (EI): m/z 273 [M^+].

***N*-(4-Nitrophenyl)-2-(4-chlorophenyl)-2-methylaziridine (41).** ^{1}H NMR (300 MHz, C_6D_6, 300 K): δ = 8.02 (d, *J* = 8.5 Hz, 2 H, Ar*H*), 7.27 (d, *J* = 7.9 Hz, 2 H, Ar*H*), 7.13 (d, *J* = 7.9 Hz, 2 H, Ar*H*), 6.41 (d, *J* = 8.5 Hz, 2 H, Ar*H*), 2.07 (s, 1 H, CH_2), 1.73 (s, 1 H, CH_2), 0.99 (s, 3 H, CH_3). ^{13}C NMR (75 MHz, C_6D_6, 300 K): δ = 156.5 (C), 143.2 (C), 141.2 (C), 133.6 (C), 128.9 (CH), 128.0 (CH), 125.3 (CH), 120.5 (CH), 43.8 (C), 42.6 (CH_2), 19.3 (CH_3). Anal. Calcd (%) for $C_{15}H_{13}ClN_2O_2$ (288.1): C 62.40, H 4.54, N 9.70; found: C 62.57, H 4.17, N 9.38. IR (Nujol): ν (cm^{-1}) = 1593 (s) (NO_2), 1501 (s) (NO_2), 1347 (s) (NO_2). MS (EI): *m/z* 288 [M^+].

***N*-(4-Nitrophenyl)-2,2-diphenylaziridine (42).** ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 7.96 (d, *J* = 9.1 Hz, 2 H, Ar*H*), 7.29–7.26 (m, 10 H, Ar*H*), 6.85 (d, *J* = 9.1 Hz, 2 H, Ar*H*), 3.09 (s, 2 H, CH_2). ^{1}H NMR (400 MHz, C_6D_6, 300 K): δ = 7.73 (d, *J* = 8.9 Hz, 2 H, Ar*H*), 7.11–7.07 (m, 4H, Ar*H*), 7.02–6.99 (m, 6H, Ar*H*), 6.32 (d, *J* = 8.9 Hz, 2H, Ar*H*), 2.49 (s, 2H, CH_2). ^{13}C NMR (100 MHz, C_6D_6, 300 K): δ = 156.0 (C), 143.0 (C), 139.2 (C), 129.2 (CH), 128.7 (CH), 128.5 (CH), 124.6 (CH), 121.2 (CH), 53.4 (C), 40.5 (CH_2). Anal. Calcd (%) for $C_{20}H_{16}N_2O_2$ (316.1): C 75.93, H 5.10, N 8.86; found: C 76.20, H 5.43, N 9.00. IR (Nujol): ν (cm^{-1}) = 1589 (s) (NO_2), 1497 (s) (NO_2), 1323 (s) (NO_2). MS (EI): *m/z* 316 [M^+].

***N*-(4-Nitrophenyl)-2-(naphthalen-2-yl)aziridine (43).** ^{1}H NMR (300 MHz, C_6D_6, 300 K): δ = 7.98 (d, *J* = 8.8 Hz, 2 H, Ar*H*), 7.81–7.75 (m, 4 H, Ar*H*), 7.42–7.36 (m, 3 H, Ar*H*), 6.53 (d, *J* = 8.8 Hz, 2 H, Ar*H*), 2.86 (dd, *J* = 6.2, 2.8 Hz, 1 H, C(Naphth)*H*), 2.11 (d, *J* = 2.8 Hz, 1 H, CH_2), 1.95 (d, *J* = 6.2 Hz, 1 H, CH_2). ^{13}C NMR (75 MHz, C_6D_6, 300 K): δ = 160.4 (C), 143.5 (C), 136.3 (C), 134.0 (C), 133.8 (C), 128.9 (CH), 128.3 (CH), 128.1 (CH), 126.9 (CH), 126.5 (CH), 125.8 (CH), 125.3 (CH), 124.1 (CH), 120.6 (CH), 42.2 (CH), 38.0 (CH_2). Anal. Calcd (%) for $C_{18}H_{14}N_2O_2$ (290.1): C 74.47, H 4.86, N 9.65; found: C 74.63, H 4.50, N 9.60. IR (Nujol): ν (cm^{-1}) = 1590 (s) (NO_2), 1507 (s) (NO_2), 1337 (s) (NO_2). MS (EI): *m/z* 290 [M^+].

***N*-(4-Nitrophenyl)-2-pentafluorophenylaziridine (44).** ^{1}H NMR (400 MHz, $CDCl_3$, 300 K): δ = 8.21 (d, *J* = 9.0 Hz, 2 H, Ar*H*), 7.24 (d, *J* = 9.0 Hz, 2 H, Ar*H*), 3.32 (dd, *J* = 6.4, 3.4 Hz, 1 H, C(Ph)*H*), 2.99 (d, *J* = 3.4 Hz, 1 H, CH_2), 2.64 (d, *J* = 6.4 Hz, 1 H, CH_2). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 159.6 (C), 146.5 (d, C, J_{C-F} = 251.6 Hz), 143.8 (C), 138.0 (d, C, J_{C-F} = 252.3 Hz), 133.5 (d, C, J_{C-F} = 201.5 Hz), 125.6 (CH), 121.1 (CH), 111.7 (broad, C), 34.3 (CH_2), 32.6 (CH). ^{19}F NMR (282 MHz, $CDCl_3$, 300 K): δ = –142.2, –153.0, –160.9. Anal. Calcd (%) for

$C_{14}H_7F_5N_2O_2$ (330.0): C 50.92, H 2.14, N 8.48, found: C 51.00, H 2.18, N 8.43. IR (Nujol): ν (cm^{-1}) = 1586 (s) (NO_2), 1504 (s) (NO_2), 1335 (s) (NO_2). MS (EI): *m/z* 330 [M^+].

2,3-*trans*-*N*-(4-Nitrophenyl)-2-methyl-3-phenylaziridine (45). ^{1}H NMR (300 MHz, C_6D_6, 300 K): δ = 7.99 (d, *J* = 9.0 Hz, 2 H, Ar*H*), 7.27–7.23 (m, 5 H, Ar*H*), 6.46 (d, *J* = 9.0 Hz, 2 H, Ar*H*), 2.65 (d, *J* = 2.8 Hz, 1 H, C(Ph)*H*), 2.30 (dq, *J* = 5.7, 2.8 Hz, 1 H, C(CH_3)*H*), 0.83 (d, *J* = 5.7 Hz, 3 H, CH_3). ^{13}C NMR (75 MHz, C_6D_6, 300 K): δ = 156.2 (C), 143.0 (C), 138.2 (C), 128.9 (CH), 128.1 (CH), 126.8 (CH), 125.2 (CH), 120.6 (CH), 48.5 (CH), 44.5 (CH), 15.0 (CH_3). Anal. Calcd (%) for $C_{15}H_{14}N_2O_2$ (254.1): C 70.85, H 5.55, N 11.02; found: C 70.98, H 5.22, N 10.80. IR (Nujol): ν (cm^{-1}) = 1587 (s) (NO_2), 1505 (s) (NO_2), 1333 (s) (NO_2). MS (EI): *m/z* 254 [M^+].

2,3-*trans*-*N*-(4-Nitrophenyl)-2-(4-methoxyphenyl)-3-methylaziridine (46). ^{1}H NMR (400 MHz, $CDCl_3$, 300 K): δ = 8.13 (d, *J* = 9.0 Hz, 2 H, Ar*H*), 7.17 (d, *J* = 8.6 Hz, 2 H, Ar*H*), 6.94 (d, *J* = 9.0 Hz, 2 H, Ar*H*), 6.88 (d, *J* = 8.6 Hz, 2 H, Ar*H*), 3.84 (s, 3 H, OCH_3), 3.07 (d, *J* = 3.0 Hz, 1 H, C(Ph)*H*), 2,75 (dq, *J* = 5.6, 3.0 Hz, 1 H, C(CH_3)*H*), 1.33 (d, *J* = 5.6 Hz, 3 H, CH_3). ^{13}C NMR (100 MHz, C_6D_6, 300 K): δ = 162.2 (C), 156.9 (C), 142.7 (C), 129.2 (C), 128.1 (CH), 125.5 (CH), 121.0 (CH), 114.4 (CH), 55.7 (OCH_3), 48.7 (CH), 44.4 (CH), 16.0 (CH_3). Anal. Calcd (%) for $C_{16}H_{16}N_2O_3$ (284.1): C 67.59, H 5.67, N 9.85; found: C 67.77, H 5.90, N 9.60. IR (Nujol): ν (cm^{-1}) = 1596 (s) (NO_2), 1507 (s) (NO_2), 1345 (s) (NO_2). MS (EI): *m/z* 284 [M^+].

2,3-*cis*-*N*-(4-Nitrophenyl)-2,3-diphenylaziridine (47a): ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 8.23–8.19 (m, 2 H, Ar*H*), 7.31–7.20 (m, 12 H, Ar*H*), 3.80 (s, 2 H, C(Ph)*H*). ^{1}H NMR (300 MHz, C_6D_6, 300 K): δ = 8.03 (d, *J* = 8.9 Hz, 2 H, Ar*H*), 7.23 (d, J = 7.1 Hz, 4 H, ArH), 7.11 (pst, J = 7.1 Hz, 4 H, ArH), 7.04 (d, J = 7.1 Hz, 2 H, ArH), 6.56 (d, *J* = 8.9 Hz, 2 H, Ar*H*), 3.22 (s, 2 H, C(Ph)*H*). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 161.1 (C), 143.5 (C), 135.2 (C), 128.5 (CH), 128.0 (CH), 127.9 (CH), 125.8 (CH), 120.4 (CH), 49.9 (CH). Anal. Calcd (%) for $C_{20}H_{16}N_2O_2$ (316.4): C 75.93, H 5.10, N 8.86; found: C 76.27, H 5.39, N 8.58. IR (Nujol): ν (cm^{-1}) = 1590 (s) (NO_2), 1499 (s) (NO_2), 1325 (s) (NO_2). MS (EI): *m/z* 316 [M^+].

2,3-*trans*-*N*-(4-Nitrophenyl)-2,3-diphenylaziridine (47b): ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 8.03 (d, *J* = 9.2 Hz, 2 H, Ar*H*), 7.31–7.20 (m, 10 H, Ar*H*), 6.77 (d, *J* = 9.2 Hz, 2 H, Ar*H*), 3.74 (s, 2 H, C(Ph)*H*). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 161.1 (C), 143.5 (C), 135.1 (C), 128.8 (CH), 128.4 (CH), 127.3 (CH), 125.2 (CH), 120.6 (CH), 50.6 (CH). Anal. Calcd (%) for $C_{20}H_{16}N_2O_2$ (316.4): C 75.93, H 5.10, N 8.86; found: C 76.12, H 5.45, N 8.63. IR (Nujol): ν (cm^{-1}) = 1592 (s) (NO_2), 1498 (s) (NO_2), 1325 (s) (NO_2). MS (EI): *m/z* 316 [M^+].

***N*-(4-Nitrophenyl)-2-(2-pyridin)aziridine (48).** ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 8.60 (m, 1 H, Ar*H*), 8.15 (d, *J* = 9.0 Hz, 2 H, Ar*H*), 7.72 (m, 1 H, Ar*H*), 7.39 (m, 1 H, Ar*H*), 7.26 (m, 1 H, Ar*H*), 7.13 (d, *J* = 9.0 Hz, 2 H, Ar*H*), 3.44 (dd, *J* = 6.4, 3.3 Hz, 1 H, C(Py)*H*), 2.79 (dd, *J* = 3.3, 1.1 Hz, 1 H, CH_2), 2.63 (dd, *J* = 6.4, 1.1 Hz, 1 H, CH_2). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 160.3 (C), 157.4 (C), 150.0 (CH), 143.4 (C), 137.2 (CH), 125.6 (CH), 123.2 (CH), 121.2 (CH), 121.1 (CH), 43.1 (CH), 37.3 (CH_2). Anal. Calcd (%) for $C_{13}H_{11}N_3O_2$ (241.2): C 64.72, H 4.60, N 17.42; found: C 65.00, H 4.83, N 17.20. MS (EI): *m/z* 241 [M^+].

***N*-(4-Nitrophenyl)-10,11-dihydro-10,11aza-cyclopropa-5*H*-dibenzo[*a*,*d*]cyclohepten-5-one (49).** ^{1}H NMR (300 MHz, $CDCl_3$, 300 K): δ = 8.13 (d, *J* = 9.0 Hz, 2 H, Ar*H*), 7.68–7.65 (m, 2 H, Ar*H*), 7.58–7.55 (m, 4 H, Ar*H*), 7.49–7.46 (m, 2 H, Ar*H*), 7.05 (d, *J* = 9.0 Hz, 2 H, Ar*H*), 3.86 (s, 2 H, C*H*). ^{13}C NMR (75 MHz, $CDCl_3$, 300 K): δ = 198.8 (C=O), 158.8 (C), 144.2 (C), 139.9 (C), 135.8 (C), 131.9 (CH), 129.6 (CH), 129.2 (CH), 129.0 (CH), 125.6 (CH), 120.4 (CH), 51.0 (CH). Anal. Calcd (%) for $C_{21}H_{14}N_2O_3$ (342.3): C 73.68, H 4.12, N 8.18; found: C 73.95, H 4.30, N 8.02. IR (neat ATR cell): ν (cm^{-1}) = 1661 (s) (CO), 1588 (s) (NO_2), 1508 (s) (NO_2), 1336 (s) (NO_2). MS (EI): *m/z* 342 [M^+], 314 [M^+ –CO], 298 [M^+ –NO_2].

References

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