

**SUPPORTING INFORMATION DATA:**

**Benzyl 4-methoxydithiobenzoate:** red-colored oil; IR (neat) :  $\nu$  3028, 2837, 1595, 1501, 1453, 1417, 1309, 1243, 1170, 1045, 886,  $\text{cm}^{-1}$ ;  $^1\text{H}$  NMR: (500 MHz,  $\text{CDCl}_3$ ) :  $\delta$  3.85 (s, 3H), 4.70 (s, 2H), 6.92 (d,  $J = 8.0$  Hz, 2H), 7.30 – 7.50 (m, 5H), 8.25 (d,  $J = 8.0$  Hz, 2H);  $^{13}\text{C}$  NMR: (125 MHz,  $\text{CDCl}_3$ ):  $\delta$  42.3, 55.8, 113.9, 128.0, 129.0, 128.94, 129.5, 129.7, 136.0, 138.1, 164.0, 225.1 (C=S); MS (m/z % rel. intensity): 274 ( $\text{M}^+$ , 25), 241(15), 183 (10), 152 (12), 151 (100), 136 (10), 108 (10), 91 (35), 77 (10) and 65 (10).

**Benzyl 4-nitrodithiobenzoate:** red-colored oil; IR (neat):  $\nu$  3060, 3027, 2920, 1665, 1600, 1522, 1493, 1452, 1403, 1343, 1243, 1199, 1109, 1057, 1028, 1012, 916, 890, 844, 764, 697  $\text{cm}^{-1}$ ;  $^1\text{H}$  NMR: (500 MHz,  $\text{CDCl}_3$ ) :  $\delta$  4.62 (s, 2H), 7.25 – 7.4 (m, 5H), 8.05 (d,  $J = 7.2$  Hz, 2H), 8.2 (d,  $J = 7.2$  Hz, 2H);  $^{13}\text{C}$  NMR: (125 MHz,  $\text{CDCl}_3$ ) :  $\delta$  43.0, 123.8, 128.0, 128.4, 128.94, 128.98, 129.1, 129.6, 129.7, 134.4, 149.0, 149.8, 224.6 (C=S); MS (m/z % rel. intensity) : 289 ( $\text{M}^+$ , 12), 120(15), 108 (10), 91(100), 69 (12), 65 (25) and 45 (22).

**Benzyl 4-iododithiobenzoate:** red-colored oil;  $^1\text{H}$  NMR: (500 MHz,  $\text{CDCl}_3$ ) :  $\delta$  4.65 (s, 2H), 7.25 – 7.45 (m, 5H), 7.75 (s, 4H);  $^{13}\text{C}$  NMR: (125 MHz,  $\text{CDCl}_3$ ):  $\delta$  42.6, 100.5, 127.7, 128.2, 128.5, 128.8, 129.1, 129.3, 129.6, 129.7, 135.0, 137.8, 144.0, 226.0 (C=S); MS : m/z ( % rel. intensity): 370 ( $\text{M}^+$ , 8), 337 (8), 247 (28), 203 (5), 120 (20), 91 (100), 76 (15), 65 (25) and 50 (20).

**Benzyl 4-tert.butylidithiobenzoate:** red-colored oil;  $^1\text{H}$  NMR: (500 MHz,  $\text{CDCl}_3$ ) :  $\delta$  1.4 (s, 9H), 4.65 (s, 2H), 7.35 – 7.45 (m, 7H), 8.15 (d,  $J = 2.0$  Hz, 2H);  $^{13}\text{C}$  NMR: (125 MHz,  $\text{CDCl}_3$ ):  $\delta$  31.3, 42.3, 125.6, 127.1, 128.0, 29.0, 129.6, 135.5, 143.1, 156.6, 227.1 (C=S); MS m/z (% rel. intensity): 300 ( $\text{M}^+$ , 20), 267(10), 243 (52), 210 (5), 177 (100), 162 (20), 147(20), 105 (5), 91 (82), 77 (8) and 65 (10).

**Benzyl 4-fluorodithiobenzoate:** red-colored oil;  $^1\text{H}$  NMR: (500 MHz,  $\text{CDCl}_3$ ) :  $\delta$  3.85 (s, 3H), 7.05 – 7.15 (m, 4H), 7.45 – 7.60 (m, 2H), 8.20 (m, 2H);  $^{13}\text{C}$  NMR: (125 MHz,  $\text{CDCl}_3$ ):  $\delta$  56.3, 112.1, 115.4, 115.6, 119.8, 121.8, 129.7, 129.8, 133.0, 137.2, 160.1, 168.1, 225.1 (C=S); MS m/z (% rel. intensity): 278 ( $\text{M}^+$ , 5), 247(22), 139 (100), 95 (15), 75 (5), 65 (5) and 45 (5).

**Benzyl 4-cyanodithiobenzoate:** red-colored oil;  $^1\text{H}$  NMR: (500 MHz,  $\text{CDCl}_3$ ) :  $\delta$  4.59 (s, 2H), 7.20 – 7.40(m, 5H), 7.65 (d, J= 6Hz 2H), 8.05 (d, J= 6Hz, 2H);  $^{13}\text{C}$  NMR: (125 MHz,  $\text{CDCl}_3$ ):  $\delta$  42.8, 115.5, 119.2, 127.5, 128.3, 129.1, 129.5, 132.4, 146.0, 226.4 (C=S); MS m/z (% rel. intensity): 269 ( $\text{M}^+$ , 5), 146 (10), 121 (5), 102 (8), 91 (100), 75 (8), 65 (25) and 45 (22).

**Benzyl 4-trifluoromethyldithiobenzoate:** red-colored oil;  $^1\text{H}$  NMR: (500 MHz,  $\text{CDCl}_3$ ) : 4.86(s, 2H), 7.32-7.50 (m, 5H), 7.65 (d, J = 6Hz, 2H), 8.15 (d, J = 6Hz, 2H) ;  $^{13}\text{C}$  NMR: (125 MHz,  $\text{CDCl}_3$ ):  $\delta$  42.3, 125.6, 125.7, 128.1, 128.8, 129.0, 129.3, 129.5, 129.6, 129.8, 133.5, 133.8, 134.8, 147.4, 225.8 (C=S); MS m/z (% rel. intensity): 312 ( $\text{M}^+$ , 10), 279(5), 189 (16), 145 (6), 123 (4), 91 (100), 65 (12) and 45 (8).

**2-Thienyl dithiobenzoate:** red-colored oil;  $^1\text{H}$  NMR: (500 MHz,  $\text{CDCl}_3$ ) :  $\delta$  4.85 (s, 2H), 6.96 – 7.60(m, 6H), 8.03 (d, J= 4Hz, 2H);  $^{13}\text{C}$  NMR: (125 MHz,  $\text{CDCl}_3$ ):  $\delta$  36.6, 125.8, 127.1, 127.2, 127.4, 127.8, 128.6, 132.7, 132.8, 137.5, 144.8, 226.8(C=S); MS m/z (% rel. intensity): 250 ( $\text{M}^+$ , 12), 121 (20), 97 (100), 77 (19), 63 (5) and 45 (20).

**n-Propyl dithiobenzoate:** red-colored oil;  $^1\text{H}$  NMR: (500 MHz,  $\text{CDCl}_3$ ) :  $\delta$  1.09 (t, J = 6Hz, 3H), 1.85 (m, 2H), 3.36 (t, J = 6Hz, 2H), 7.39 – 7.55(m, 3H), 8.00 (d, J= 3Hz 2H);  $^{13}\text{C}$  NMR: (125 MHz,

CDCl<sub>3</sub>): δ 13.9, 21.1, 39.4, 127.0, 128.5, 132.4, 145.6, 229.0 (C=S); MS m/z (% rel. intensity): 196 (M<sup>+</sup>, 15), 154 (16), 121 (100), 77 (26) and 51 (9).

**4-Chlorophenyl dithiobenzoate:** red-colored oil; <sup>1</sup>H NMR: (500 MHz, CDCl<sub>3</sub>) : δ 7.35 – 7.50(m, 7H), 8.10 (d, J= 6Hz, 2H); <sup>13</sup>C NMR: (125 MHz, CDCl<sub>3</sub>): δ 127.3, 127.7, 128.7, 129.1, 129.5, 129.7, 130.2, 133.0, 136.5, 136.9, 137.1, 144.5, 227.5 (C=S); MS m/z (% rel. intensity): 264 (M<sup>+</sup>, 5), 143 (5), 121 (100), 108 (10), 93 (6), 77(55), 63 (8) and 51 (30).

**tert.Butyl dithiobenzoate:** red-colored oil; <sup>1</sup>H NMR: (500 MHz, CDCl<sub>3</sub>) : δ 1.70 (s, 9H), 7.25 – 7.60(m, 3H), 7.85 (d, J= 6Hz, 2H); <sup>13</sup>C NMR: (125 MHz, CDCl<sub>3</sub>): δ 30.5, 52.3, 126.9, 127.4, 128.5, 129.1, 132.5, 147.3, 230.2 (C=S); MS m/z (% rel. intensity): 210 (M<sup>+</sup>, 5), 154 (10), 121 (52), 77 (45), 57 (100) and 41 (55).

**Benzyl 2-thiophenedithiocarboxylate:** red-colored oil; <sup>1</sup>H NMR: (500 MHz, CDCl<sub>3</sub>) : 4.69(s, 2H), 7.10 (m, 1H), 7.30-7.45 (m, 5H), 7.60(d, J = 4Hz, 2H), 7.90 (d, J = 4Hz, 2H) ; <sup>13</sup>C NMR: (125 MHz, CDCl<sub>3</sub>): δ 41.4, 127.3, 127.4, 127.8, 128.9, 129.0, 129.4, 129.8, 129.9, 135.5, 213.3 (C=S); MS m/z (% rel. intensity): 250 (M<sup>+</sup>, 40), 217(12), 185 (5), 127 (95), 115 (10), 91 (100), 65 (35) and 45 (40).