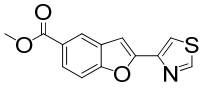
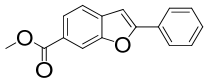
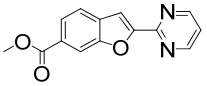
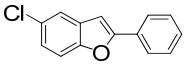
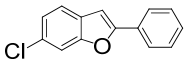
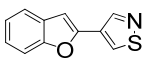
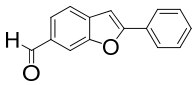
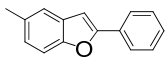
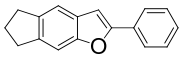
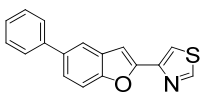
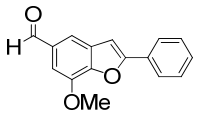
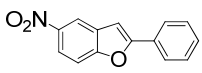
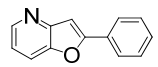
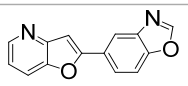
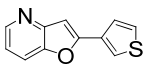
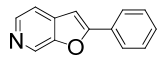
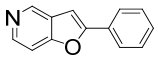
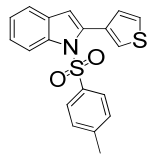
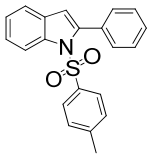
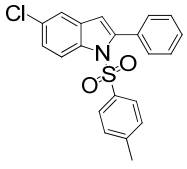
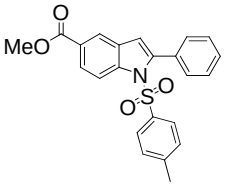
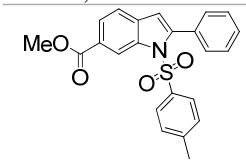
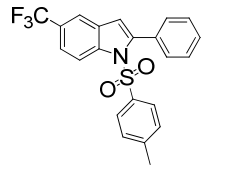
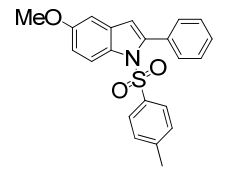
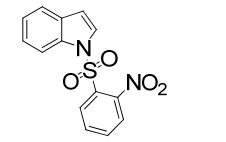
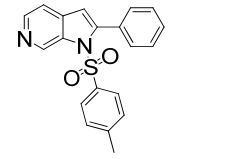
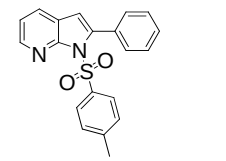
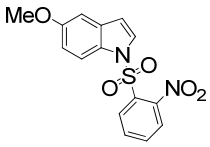
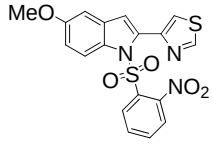
Structure mp; Recry. Sol.; Form	^{1}H-NMR (CDCl$_3$) δ	Anal (%) (C H N) HRMS	IR (cm-1)
 mp 141-143 ℃ EtOH, pale yellow cotton	3.95 (s, 3H), 7.28 (d, J=0.5Hz, 1H), 7.52-7.56 (m, 1H), 8.04 (dd, J=1.5Hz, 8.5Hz, 1H), 8.37 (dd, J=0.5Hz, 1.5Hz, 1H), 8.91 (d, J=2.0Hz, 1H)	$C_{13}H_9NO_3S$ calcd (60.22 3.55 5.40) found (60.20 3.56 5.43) calcd [M+H] 260.0376 found 260.0376 (⊿ 0.02)	1739, 1716, 1441, 1373, 1290, 1261, 1234, 1163, 1136, 1120, 1080, 1038
 mp 153-155 ℃ EtOH, white flakes	3.96 (s, 3H), 7.07 (d, J=1.0Hz, 1H), 7.38-7.43 (m, 1H), 7.45-7.51 (m, 2H), 7.61 (dd, J=0.5Hz, 8.0Hz, 1H), 7.87-7.91 (m, 2H), 7.96 (dd, J=1.5Hz, 8.0Hz, 1H), 8.20-8.22 (m, 1H)	$C_{16}H_{12}O_3$ calcd (76.18 4.79 0.00) found (76.47 4.68 0.00) calcd [M+H] 253.0859 found 253.0859 (⊿ 0.03)	1739, 1707, 1614, 1560, 1481, 1437, 1363, 1249, 1228, 1200, 1122, 1080, 1020
 mp 185-188 ℃ EtOH, pale yellow powder	3.97 (s, 3H), 7.28 (dd, J=5.0Hz, 5.0Hz, 1H), 7.72-7.77 (m, 2H), 8.01 (dd, J=1.5Hz, 8.0Hz, 1H), 8.32 (brs, 1H), 8.88 (d, J=5.0Hz, 2H)	$C_{14}H_{10}N_2O_3 \cdot 1/8H_2O$ calcd (65.56 4.03 10.92) found (65.75 3.72 10.47) calcd [M+H] 255.0764 found 255.0764 (⊿ 0.00)	1749, 1709, 1550, 1412, 1292, 1248, 1192, 1120, 1082
 mp 151-153 ℃ EtOH, white flakes	6.96 (d, J=0.5Hz, 1H), 7.23 (dd, J=2.0Hz, 8.5Hz, 1H), 7.34-7.40 (m, 1H), 7.41-7.49 (m, 3H), 7.54 (d, J=2.0Hz, 1H), 7.82-7.87 (m, 2H)	$C_{14}H_9ClO$ calcd (73.53 3.97 0.00) found (73.49 3.71 0.00) calcd [M] 228.0336 found 228.0336 (⊿ 0.01)	1739, 1564, 1437, 1373, 1223, 1275, 1161, 1115, 1063, 1020
 mp 131-133 ℃ EtOH, pale yellow flakes	6.99 (d, J=1.0Hz, 1H), 7.22 (dd, J=2.0Hz, 8.5Hz, 1H), 7.34-7.40 (m, 1H), 7.42-7.50 (m, 3H), 7.52-7.54 (m, 1H), 7.82-7.86 (m, 2H)	$C_{14}H_9ClO$ calcd (73.53 3.97 0.00) found (73.35 3.73 0.00) calcd [M] 228.0336 found 228.0337 (⊿ 0.10)	1734, 1653, 1608, 1560, 1448, 1417, 1346, 1273, 1217, 1055, 1020
 mp. 80-83 ℃ hexane, pale yellow powder	6.97 (d, J=1.0Hz, 1H), 7.23-7.28 (m, 1H), 7.29-7.34 (m, 1H), 7.50-754 (m, 1H), 7.58-7.61 (m, 1H), 8.89 (s, 1H), 8.93 (s, 1H)	$C_{11}H_7NOS$ calcd (65.65 3.51 6.96) found (66.04 3.43 6.75) calcd [M+H] 202.0321 found 202.0321 (⊿ 0.02)	1600, 1510, 1475, 1452, 1369, 1321, 1265, 1180, 1043
 mp 110-112 ℃ EtOH, pale yellow powder	7.10 (d, J=1.0Hz, 1H), 7.40-7.45 (m, 1H), 7.47-7.52 (m, 2H), 7.70 (d, J=8.0Hz, 1H), 7.79 (dd, J=1.5Hz, 8.0Hz, 1H), 7.89-7.94 (m, 2H), 8.03 (brs, 1H), 10.08 (s, 1H)	$C_{15}H_{10}O_2$ calcd (81.07 4.54 0.00) found (80.98 4.43 0.00) calcd [M+H] 223.0753 found 223.0751 (⊿ 0.27)	1685, 1610, 1483, 1450, 1272, 1211, 1097, 1022
 mp 128-129 ℃ EtOH, white flakes	2.45 (s, 3H), 6.96 (d, J=1.0Hz, 1H), 7.09 (dd, J=1.5Hz, 8.5Hz, 1H), 7.31-7.47 (m, 5H), 7.82-7.88 (m, 2H)	$C_{15}H_{12}O$ calcd (86.51 5.81 0.00) found(86.39 5.76 0.00) calcd [M+H] 209.0961 found 209.0959 (⊿ 0.21)	1739, 1558, 1491, 1464, 1375, 1338, 1265, 1230, 1200, 1132, 1072, 1039, 1020
 mp 143-146 ℃ EtOH, yellow powder	2.14 (quin, J=7.5Hz, 2H), 2.97 (t, J=7.5Hz, 2H), 3.01 (t, J=7.5Hz, 2H), 6.95 (d, J=1.0Hz, 1H), 7.29-7.39 (m, 3H), 7.40-7.46 (m, 2H), 7.44-7.48 (m, 3H), 7.81-7.86 (m, 2H)	$C_{17}H_{14}O$ calcd (87.15 6.02 0.00) found (87.03 6.00 0.00) calcd [M+H] 235.1117 found 235.1116 (⊿ 0.18)	1739, 1558, 1489, 1454, 1435, 1346, 1269, 1209, 1186, 1068, 1036, 1020
 mp 118-119 ℃ EtOH, pale yellow powder	7.27 (d, J=0.5Hz, 1H), 7.32-7.37 (m, 1H), 7.43-7.48 (m, 2H), 7.54 (dd, J=1.5Hz, 8.5Hz, 1H), 7.56-7.59 (m, 1H), 7.61-7.65 (m, 2H), 7.78 (d, J=2.0Hz, 1H), 7.82 (dd, J=0.5Hz, 1.5Hz, 1H), 8.91 (d, J=2.0Hz, 1H)	$C_{17}H_{11}NOS$ calcd (73.62 4.00 5.05) found (73.59 3.97 4.81) calcd [M+H] 278.0634 found 278.0634 (⊿ 0.03)	1739, 1441, 1373, 1308, 1230, 1140, 1047

 mp 143-144 ℃ EtOH, white flakes	4.10 (s, 3H), 7.12 (s, 1H), 7.36-7.42 (m, 2H), 7.44-7.50 (m, 1H), 7.73 (d, J=1.5Hz, 1H), 7.88-7.92 (m, 2H), 10.01 (s, 1H)	$C_{16}H_{12}O_3$ calcd (76.18 4.78 0.00) found (76.30 4.48 0.00) calcd [M+H] 253.0859 found 253.0858 (⊿ 0.18)	1739, 1684, 1612, 1591, 1473, 1450, 1340, 1217, 1138, 1109, 1038, 1018
 mp 153-156 ℃ EtOH, pale brown powder	7.14 (d, J=1.0Hz, 1H), 7.40-7.45 (m, 1H), 7.47-7.52 (m, 2H), 7.60 (brd, J=9.0Hz, 1H), 7.86-7.91 (m, 2H), 8.22 (dd, J=2.5Hz, 9.0Hz, 1H), 8.52 (d, J=2.5Hz, 1H)	$C_{14}H_9NO_3$ calcd.(70.29 3.79 5.86) found (70.23 3.43 5.78) calcd [M] 239.0575 found 239.0573 (⊿ -0.20)	1739, 1512, 1439, 1348, 1267, 1211, 1119, 1066, 1016
 mp 83-85 ℃ Hexane, white powder	7.18-7.23 (m, 2H), 7.39-7.44 (m, 1H), 7.46-7.52 (m, 2H), 7.75-7.79 (m, 1H), 7.88-7.94 (m, 2H), 8.53 (dd, J=1.5Hz, 5.0Hz, 1H)	$C_{13}H_9NO$ calcd (79.98 4.65 7.17) found (79.81 4.63 7.07) calcd [M+H] 196.0757 found 196.0756 (⊿ 0.16)	1739, 1589, 1570, 1491, 1448, 1404, 1252, 1232, 1198, 1161, 1105, 1074, 1020
 mp 193-196 ℃ EtOH, pale red powder	7.23 (dd, J=5.0Hz, 8.5Hz, 1H), 7.27 (d, J=1.0Hz, 1H), 7.70 (dd, J=0.5Hz, 8.5Hz, 1H), 7.78-7.82 (m, 1H), 7.97 (dd, J=1.5Hz, 8.5Hz, 1H), 8.17 (s, 1H), 8.35 (d, J=1.5Hz, 1H), 8.55 (dd, J=1.5Hz, 5.0Hz, 1H)	$C_{14}H_8N_2O_2$ calcd (71.18 3.41 11.86) found (71.31 3.51 11.76) calcd [M+H] 237.0659 found 237.0658 (⊿ 0.20)	1740, 1608, 1585, 1516, 1464, 1412, 1373, 1265, 1214, 1120, 1047, 1022
 mp 100-102 ℃ Et_2O, yellow powder	7.03 (d, J=1.0Hz, 1H), 7.19 (dd, J=5.0Hz, 8.0Hz, 1H), 7.44 (dd, J=3.0Hz, 5.0Hz, 1H), 7.51 (d, J=1.5Hz, 5.0Hz, 1H), 7.72-7.75 (m, 1H), 7.83 (dd, J=1.5Hz, 3.0Hz, 1H), 8.51 (dd, J=1.5Hz, 5.0Hz, 1H)	$C_{11}H_7NOS$ calcd (65.65 3.51 6.96) found (65.53 3.32 6.90) calcd [M+H] 202.0321 found 202.0320 (⊿ 0.10)	1739, 1716, 1606, 1560, 1417, 1292, 1252, 1205, 1163, 1107, 1092, 1034
 mp 130-132 ℃ EtOH, pale yellow powder	7.04 (d, J=1.0Hz, 1H), 7.41-7.54 (m, 4H), 7.89-7.94 (m, 2H), 8.42 (d, J=5.0Hz, 1H), 8.91 (brs, 1H)	$C_{13}H_9NO \cdot 1/8\ H_2O$ calcd (79.07 4.72 7.09) found (79.39 4.56 7.20) calcd [M+H] 196.0757 found 196.0757 (⊿ 0.01)	1739, 1603, 1576, 1558, 1466, 1448, 1421, 1373, 1263, 1200, 1182, 1161, 1074, 1032
 mp 120-121 ℃ AcOEt-hexane, white powder	7.08 (d, J=1.0Hz, 1H), 7.38-7.43 (m, 1H), 7.45-7.52 (m, 3H), 7.86-7.90 (m, 2H), 8.49 (d, J=5.5Hz, 1H), 8.93 (d, J=1.0Hz, 1H)	$C_{13}H_9NO$ calcd (79.98 4.65 7.17) found (79.90 4.26 7.23) calcd [M+H] 196.0757 found 196.0755 (⊿ 0.25)	1737, 1560, 1462, 1444, 1429, 1373, 1265, 1217, 1163, 1016
 mp 133-136 ℃ EtOH, white powder	2.29 (s, 3H), 6.56 (d, J=0.5Hz, 1H), 7.05 (d, J=8.0Hz, 2H), 7.23-7.30 (m, 5H), 7.32-7.37 (m, 3H), 7.42-7.45 (m, 1H), 8.31 (dd, J=0.5Hz, 8.5Hz, 1H)	$C_{19}H_{15}NO_2S_2 \cdot 1/4\ H_2O$ calcd (63.75 4.36 3.91) found (63.68 3.85 3.88) calcd [M+H] 354.0617 found 354.0617 (⊿ 0.08)	1737, 1597, 1448, 1373, 1173, 1144, 1115, 1092, 1055, 1003
 mp 145-147 ℃ EtOH, white powder	2.28 (s, 3H), 6.54 (d, J=0.5Hz, 1H), 7.04 (d, J=8.0Hz, 2H), 7.23-7.28 (m, 3H), 7.32-7.37 (m, 1H), 7.39-7.46 (m, 4H), 7.47-7.52 (m, 2H), 8.31 (dd, J=0.5Hz, 8.5Hz, 1H)	$C_{21}H_{17}NO_2S$ calcd (72.60 4.93 4.03) found (72.40 4.75 4.19) calcd [M+H] 348.1053 found 348.1054 (⊿ 0.19)	1595, 1489, 1441, 1358, 1296, 1184, 1165, 1111, 1090, 1051, 1024
 mp 140-142 ℃	2.30 (s, 3H), 6.48 (d, J=0.5Hz, 1H), 7.06 (d, J=8.0Hz, 2H), 7.21-7.25 (m, 2H), 7.31 (dd, J=2.0Hz, 9.0Hz, 1H), 7.39-7.49 (m, 6H), 8.23 (d, J=9.0Hz, 1H)	$C_{21}H_{16}ClNO_2S$ calcd (66.05 4.22 3.67) found (66.10 3.84 3.65) calcd [M+H] 382.0663 found 382.0661 (⊿ 0.26)	1739, 1601, 1444, 1375, 1215, 1176, 1155, 1122, 1090, 1070, 1049, 1024

EtOH, white powder			
 mp 152-154 ℃ EtOH, white cotton	2.29 (s, 3H), 3.93 (s, 3H), 6.58 (d, J=0.5Hz, 1H), 7.05 (d, J=8.0Hz, 2H), 7.24-7.28 (m, 2H), 7.39-7.50 (m, 5H), 8.04 (dd, J=1.5Hz, 9.0Hz, 1H), 8.17 (dd, J=0.5Hz, 1.5Hz, 1H), 8.35 (d, J=9.0Hz, 1H)	$C_{23}H_{19}NO_4S$ calcd (68.13 4.72 3.45) found (68.24 4.59 3.49) calcd [M+H] 406.1108 found 406.1105 (⊿ 0.34)	1743, 1705, 1597, 1435, 1381, 1311, 1292, 1248, 1219, 1173, 1126, 1086, 1053, 102
 mp 165-167 ℃ EtOH, white needles	2.29 (s, 3H), 4.00 (s, 3H), 6.58 (d, J=0.5Hz, 1H), 7.05 (brd, J=8.0Hz, 2H), 7.24-7.30 (m, 2H), 7.40-7.52 (m, 6H), 7.98 (dd, J=1.5Hz, 8.0Hz, 1H), 8.99-9.02 (m, 1H)	$C_{23}H_{19}NO_4S$ calcd (68.13 4.72 3.45) found (68.05 4.46 3.61) calcd [M+H] 406.1108 found 406.1108 (⊿ 0.01)	1739, 1707, 1599, 1435, 1379, 1292, 1238, 1165, 1122, 1088, 1047, 1024
 mp 124-125 ℃ EtOH, white needles	2.31 (s, 3H), 6.59 (d, J=0.5Hz, 1H), 7.07 (brd, J=8.0Hz, 21H), 7.24-7.28 (m, 2H), 7.40-7.49 (m, 5H), 7.60 (dd, J=1.5Hz, 9.0Hz, 1H), 7.73-7.76 (m, 1H), 8.42 (m, 2H), 8.03 (dd, J=0.5Hz, 8.5Hz, 1H)	$C_{22}H_{16}F_3NO_2S$ calcd (63.61 3.88 3.37) found (63.63 3.66 3.43) calcd [M+H] 416.0927 found 416.0927 (⊿ 0.08)	1739, 1601, 1448, 1375, 1333, 1217, 1163, 1128, 1113, 1088, 1049,1024
 mp 116-118 ℃ Hexane,white prisms	2.29 (s, 3H), 3.83 (s, 3H), 6.84 (d, J=0.5Hz, 1H), 6.88 (d, J=2.5Hz, 1H), 6.95 (dd, J=2.5Hz, 9.0Hz, 1H), 7.03 (d, J=8.0Hz, 2H), 7.21-7.25 (m, 2H), 7.40-7.44 (m, 3H), 7.48-7.52 (m, 2H), 8.19 (d, J=9.0Hz, 1H)	$C_{22}H_{19}NO_3S$ calcd (70.00 5.07 3.71) found (70.06 5.05 3.55) calcd [M+H] 378.1158 found 378.1152 (⊿ 0.64)	1739, 1597, 1466, 1433, 1363, 1219, 1171, 1146, 1088, 1057, 1026
 mp 96-98 ℃ Hexane,pale brown	6.75 (dd、J=0.5Hz, 3.5Hz, 1H), 7.26-7.35 (m, 2H), 7.58-7.65 (m, 3H), 7.68-7.76 (m, 2H), 7.79 (dd, J=1.0Hz, 7.5Hz, 1H), 7.84-7.87 (m, 1H)	$C_{14}H_{10}N_2O_4S \cdot 1/6\ H_2O$ calcd (55.08 3.41 9.17) found (55.41 3.49 8.80) calcd [M+H] 303.0434 found 303.0434 (⊿ 0.04)	1739, 1531, 1441, 1375, 1356, 1259, 1228, 1203, 1171, 1132, 1119
 mp 156-159 ℃ EtOH, colorless prisms	2.31 (s, 3H), 6.54 (d, J=0.5Hz, 1H), 7.07 (d, J=8.0Hz, 2H), 7.26-7.30 (m, 2H), 7.39 (dd, J=1.0Hz, 5.0Hz, 1H), 7.41-7.52 (m, 5H), 8.45 (d, J=5.0Hz, 1H), 9.59 (s, 1H)	$C_{20}H_{16}N_2O_2S$ calcd (68.94 4.63 8.04) found (68.92 4.54 7.99) calcd [M+H] 349.1005 found 349.1004 (⊿ 0.15)	1739, 1593, 1487, 1421, 1371, 1171, 1084, 1051, 1026
 mp 112-114 ℃ Hexane-AcOEt, colorless flakes	2.33 (s, 3H), 6.49 (s, 1H), 7.16 (d, J=8.0Hz, 2H), 7.19 (dd, J=5.0Hz, 8.0Hz, 1H), 7.44-7.48 (m, 3H), 7.52-7.57 (m, 2H), 7.74-7.79 (m, 3H), 8.48 (dd, J=1.5Hz, 5.0Hz, 1H)	$C_{20}H_{16}N_2O_2S$ calcd (68.94 4.63 8.04) found (68.83 4.49 8.04) calcd [M+H] 349.1005 found 349.1007 (⊿ 0.21)	1739, 1583, 1558, 1398, 1365, 1253, 1169, 1120, 1066, 1028

 mp 112-115 ℃ Hexane, off white, powder	3.83 (s, 3H), 6.67 (dd, J=0.5Hz, 3.5Hz, 1H), 6.93 (dd, J=2.5Hz, 9.0Hz, 1H), 7.04 (d, J=2.5Hz, 1H), 7.54-7.63 (m, 2H), 7.66-7.78 (m, 4H)	$C_{15}H_{12}N_2O_5S \cdot 1/10H_2O$ calcd (53.92 3.68 8.38) found (54.21 3.83 7.96) calcd [M+H] 303.0434 found 303.0434 (⊿ 0.04)	1738, 1616, 1541, 1469, 1437, 1371, 1223, 1176, 1142, 1119, 1028
 mp 55-57 ℃ Hexane, pale brown	3.86 (s, 3H), 6.87 (d, J=0.5Hz, 1H), 6.98 (dd, J=2.5Hz, 9.0Hz, 1H), 7.03 (d, J=2.5Hz, 1H), 7.41 (dd, J=1.5Hz, 8.0Hz, 1H), 7.44-7.49 (m, 1H), 7.58-7.64 (m, 2H), 7.68 (dd, J=1.5Hz, 8.0Hz, 1H), 7.95 (d, J=9.0Hz, 1H), 8.70 (d, J=2.0Hz, 1H)	$C_{18}H_{13}N_3O_5S_2$ calcd (52.02 3.15 10.11) found (52.41 3.29 10.15) calcd [m+H] 416.0369 found 416.0369 (⊿ 0.07)	1739, 1610, 1539, 1466, 1435, 1373, 1213, 1165, 1142, 1124, 1079, 1028