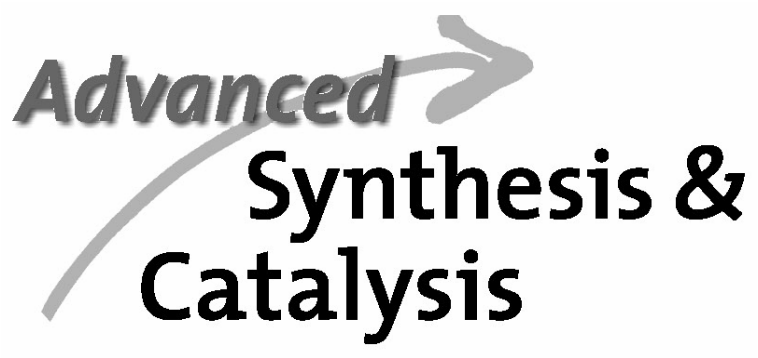

Supporting Information

SUPPORTING INFORMATION

Novel aqueous phase supramolecular synthesis of 3-pyrrolyl-indolin-2-ones and pyrrolyl-indeno [1,2-*b*] quinoxalines

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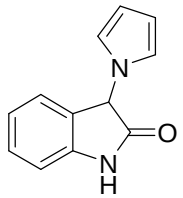
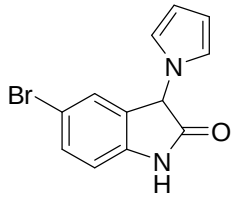


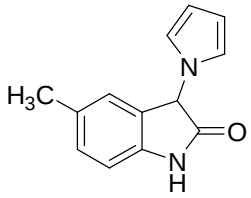
3-(1H-pyrrol-1-yl)indolin-2-one (3a): [1]

mp: 140-142 ^{o}C; IR: 3306, 3194, 1717, 1618, 1466 cm^{-1}; ^{1}H NMR ($CDCl_3$, 200MHz): d 5.46 (s, 1H), 6.17 (t, 2H, *J* = 2.21 Hz), 6.63 (t, 2H, *J* = 2.21 Hz), 6.85-7.09 (m, 2H), 7.20-7.33 (m, 2H), 9.5 (brs, 1H); MS *m/z* (EI):198 [M^+]; Anal. Calcd for $C_{12}H_{10}N_2O$: C, 72.71; H, 5.08; N, 14.13. Found: C, 72.43; H, 5.19; N, 14.22.



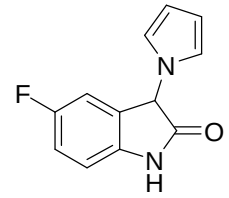
5-bromo-3-(1H-pyrrol-1-yl)indolin-2-one (3b): [1]

mp: 170-172 ^{o}C; IR: 3248, 2922, 1719, 1613,1470 cm^{-1}; ^{1}H NMR ($CDCl_3$, 300MHz): d 5.50 (s, 1H), 6.26 (t, 2H, *J* = 2.66 Hz), 6.67 (t, 2H, *J* = 2.66 Hz), 6.81 (d, 1H, *J* = 8.31 Hz), 7.37-7.47 (m, 2H), 8.90 (brs, 1H); MS *m/z* (EI): 278 [M^{+}+2]; Anal. Calcd for $C_{12}H_9BrN_2O$: C, 52.01; H, 3.27; N, 10.11. Found: C, 52.32; H, 3.39; N, 10.19.



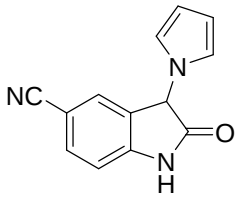
5-methyl-3-(1H-pyrrol-1-yl)indolin-2-one (3c): [1]

mp: 162-163 ^{o}C; IR: 3235, 2921, 1722, 1625,1490 cm^{-1}; ^{1}H NMR ($CDCl_3$, 200MHz): d 2.28 (s, 3H), 5.47 (s, 1H), 6.25 (t, 2H, *J* = 1.96 Hz), 6.71 (t, 2H, *J* = 1.96 Hz), 6.69-6.82 (m, 1H), 7.07-7.11 (m, 2H), 8.02 (brs, 1H); MS *m/z* (EI): 212 [M^{+}]; Anal. Calcd for $C_{13}H_{12}N_2O$: C, 73.56; H, 5.70; N, 13.20. Found: 73.86; H, 5.80; N, 13.28.



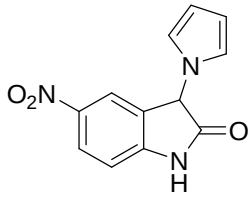
5-fluoro-3-(1H-pyrrol-1-yl)indolin-2-one (3d): [1]

mp: 170-172 ^{o}C; IR: 3256, 2923, 1726, 1630,1487 cm^{-1}; ^{1}H NMR ($CDCl_3$, 200MHz): d 5.45 (s, 1H), 6.19 (t, 2H, *J* = 2.17 Hz), 6.62 (t, 2H, *J* = 2.17 Hz), 6.78-6.87 (m, 1H), 6.93-7.05 (m, 2H), 9.45 (brs, 1H); MS *m/z* (EI): 216 [M^+]; Anal. Calcd for $C_{12}H_9FN_2O$: C, 66.66; H, 4.20; N, 12.96. Found: C, 66.98; H, 4.21; N, 13.04.



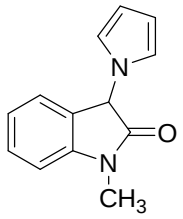
2-oxo-3-(1H-pyrrol-1-yl)indoline-5-carbonitrile (3e): [1]

mp: 160-161 ^{o}C; IR: 3256, 2395, 2923, 1726, 1630,1487 cm^{-1}; ^{1}H NMR ($CDCl_3$, 200MHz): d 5.40 (s, 1H), 6.17 (t, 2H, *J* = 2.16 Hz), 6.64 (t, 2H, *J* = 2.16 Hz), 6.79-6.84 (m, 1H), 6.93-7.02 (m, 2H), 9.40 (brs, 1H); MS *m/z* (EI): 223 [M^+]; Anal. Calcd for $C_{13}H_9N_3O$: C, 69.95; H, 4.06; N, 18.82. Found: C, 69.62; H, 4.17; N, 18.91.



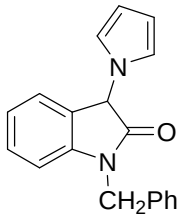
5-nitro-3-(1H-pyrrol-1-yl)indolin-2-one (3f): [1]

mp: 135-136 ^{o}C; IR: 3292, 2925, 1738, 1625, 1524, 1481, 1338 cm^{-1}; ^{1}H NMR ($CDCl_3$, 200MHz): d 5.60 (s, 1H), 6.25 (s, 2H), 6.66 (s, 2H), 6.97 (d, 1H, *J* = 8.59 Hz), 8.09-8.29 (m, 2H), 9.50 (brs, 1H); MS *m/z* (EI): 243 [M^+]; Anal. Calcd for $C_{12}H_9N_3O_3$: C, 59.26; H, 3.73; N, 17.28. Found: C, 59.56; H, 3.63; N, 17.36.



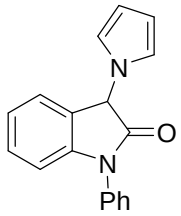
1-methyl-3-(1H-pyrrol-1-yl)indolin-2-one (3g): [1]

mp: 132-133 °C IR: 3090, 2924, 1720, 1615,1489 cm^{-1}; ^{1}H NMR ($CDCl_3$, 300MHz): d 3.27 (s, 3H), 5.45 (s, 1H), 6.18 (t, 2H, *J* = 2.26 Hz), 6.64 (t, 2H, *J* = 2.26 Hz), 6.89 (d, 1H, *J* = 8.30 Hz), 7.10 (t, 1H, *J* = 7.55 Hz), 7.27-7.42 (m, 2H); MS *m/z* (EI): 212 [M^+]; Anal. Calcd for $C_{13}H_{12}N_2O$: C, 73.56; H, 5.70; N, 13.20. Found: C, 73.86; H, 5.59; N, 13.29.



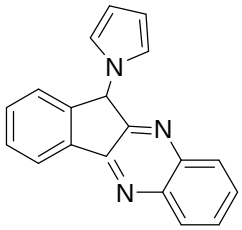
1-benzyl-3-(1*H*-pyrrol-1-yl)indolin-2-one (3h): [1]

mp: 124-125 °C, IR: 3091, 2922, 1721, 1612,1489 cm^{-1}; ^1H NMR ($CDCl_3$, 200MHz): d 4.90 (s, 2H), 5.56 (s, 1H), 6.24 (t, 2H, *J* = 2.20 Hz), 6.70 (t, 2H, *J* = 2.20 Hz), 6.76-6.82 (m, 1H), 7.00-7.09 (m, 1H), 7.25-7.32 (m, 7H); MS *m/z* (EI): 288 [M^+]; Anal. Calcd for $C_{19}H_{16}N_2O$: C, 79.14; H, 5.59; N, 9.72. Found: C, 79.35; H, 5.47; N, 9.81.



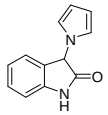
1-phenyl-3-(1H-pyrrol-1-yl)indolin-2-one (3i):

mp: 136-137 ^oC; IR: 3092, 2925, 1720,1478 cm^{-1}; ^1H NMR ($CDCl_3$, 300MHz): d 5.69 (s, 1H), 6.29 (t, 2H, *J* = 2.26Hz), 6.81 (t, 2H, *J* = 2.26 Hz), 6.92 (d, 1H, *J* = 7.55 Hz), 7.17 (t, 1H, *J* = 7.55 Hz), 7.32-7.60 (m, 7H); MS *m/z* (EI): 274 [M^+]; Anal. Calcd for $C_{18}H_{14}N_2O$: C, 78.81; H, 5.14; N, 10.31. Found: C, 78.51; H, 5.03; N, 10.39.

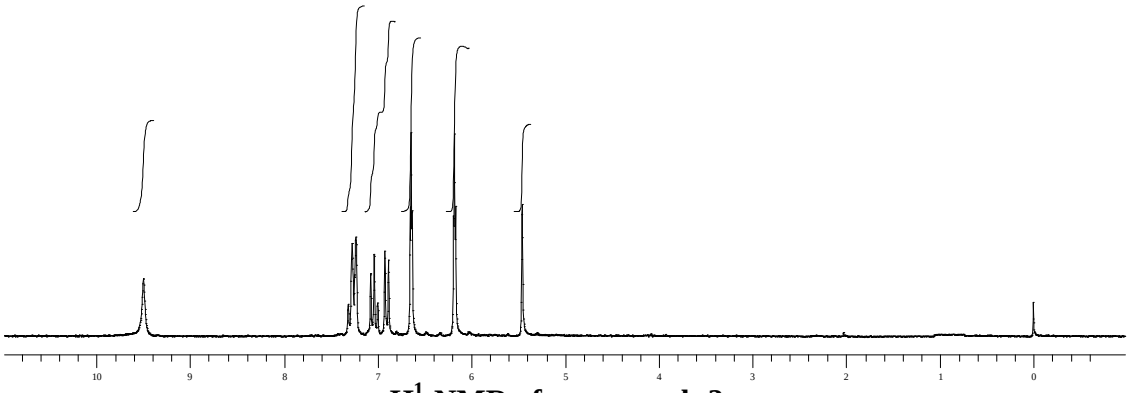


(6E,9Z)-N1-(1-(1H-pyrrol-1-yl)-1H-inden-2(3H)-ylidene)-N2-ethylidenebenzene-1,2-diamine (3j): [1]

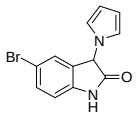
mp: 180-181 °C, IR 3092, 2924, 1479 cm^{-1}; ^{1}H NMR ($CDCl_3$, 300MHz): d 6.19 (s, 1H), 6.22 (t, 2H, *J* = 2.26 Hz), 6.73 (t, 2H, *J* = 2.26 Hz), 7.49-7.74 (m, 5H), 8.04-8.26 (m, 3H); MS *m/z* (EI): 283 [M^+]; Anal. Calcd for $C_{19}H_{13}N_3$: C, 80.54; H, 4.62; N, 14.83. Found: C, 80.88; H, 4.53; N, 14.91.



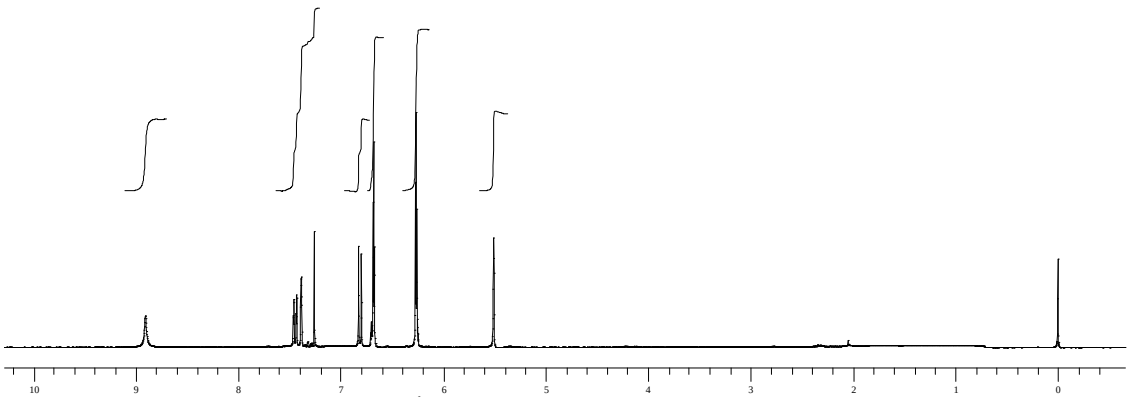
3a



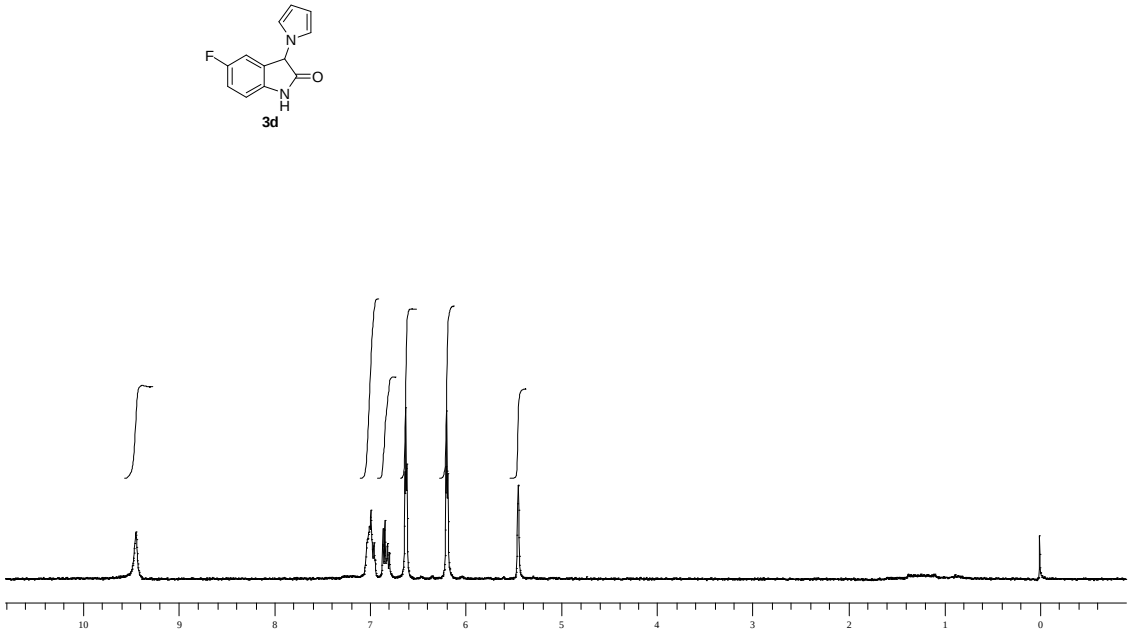
H^1-NMR of compound- 3a



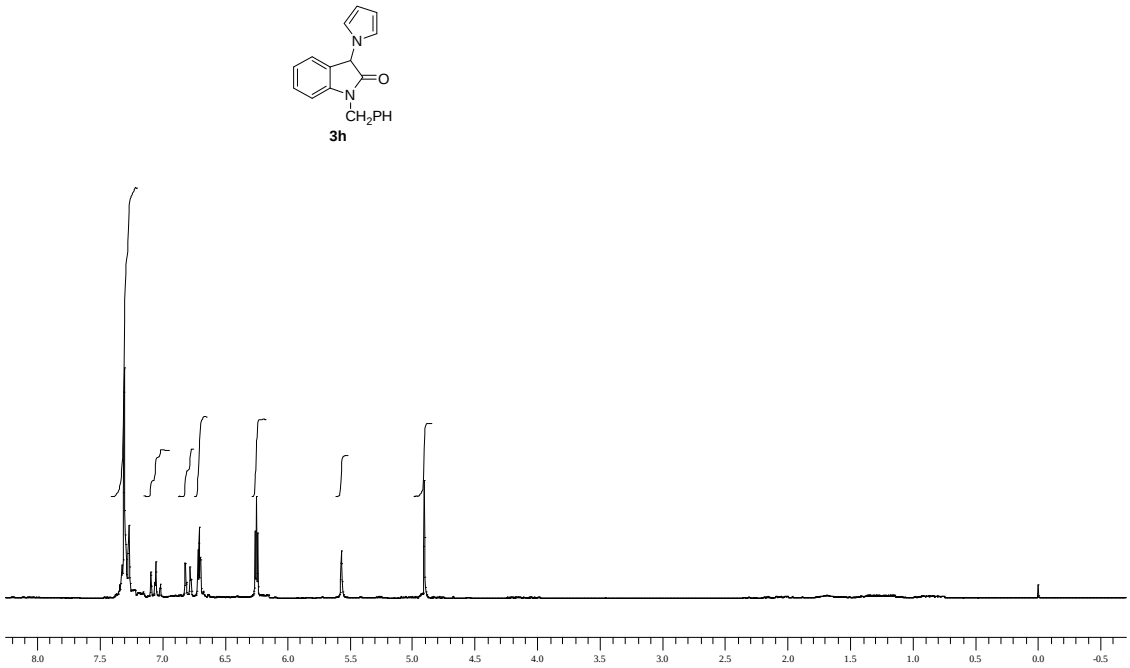
3b



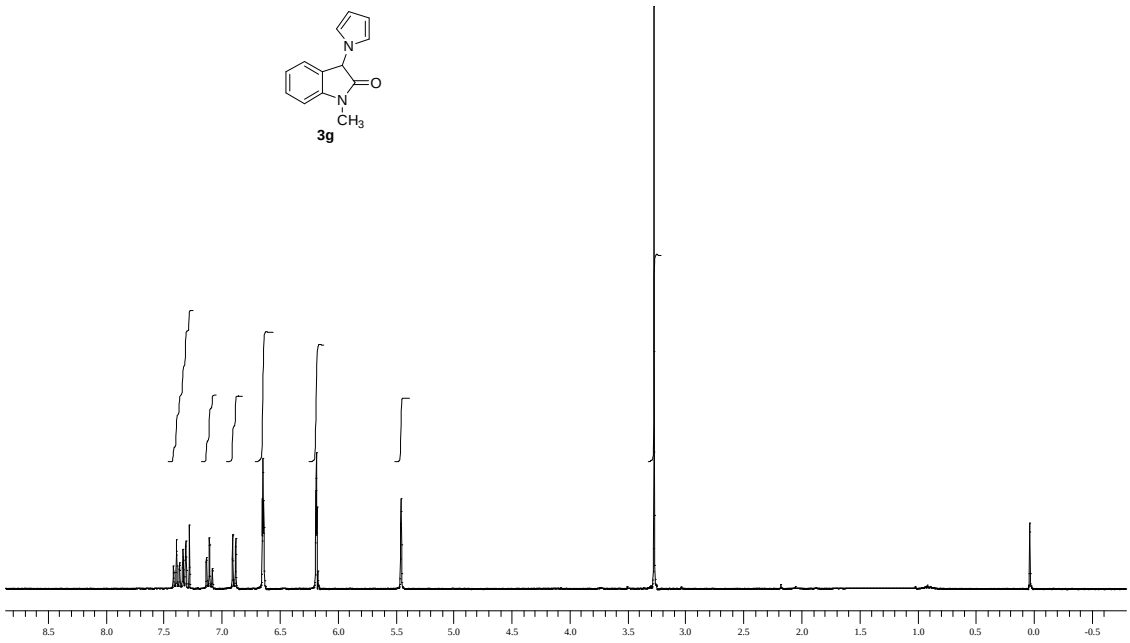
H^1-NMR of compound- 3b



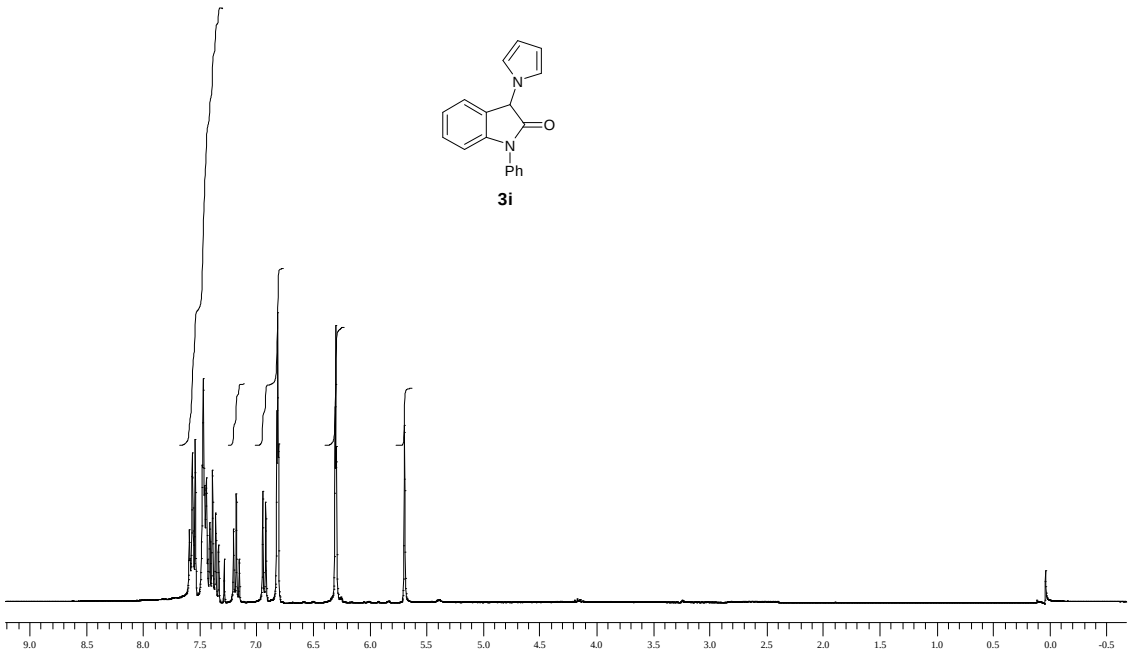
H^1-NMR of compound- 3d



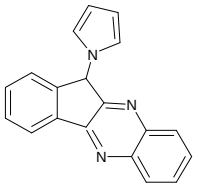
H^1-NMR of compound- 3h



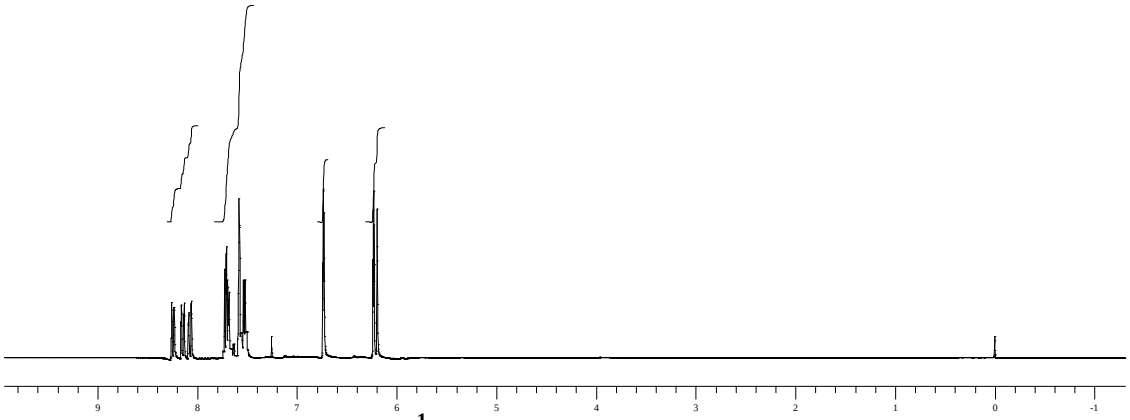
H^1-NMR of compound- 3g



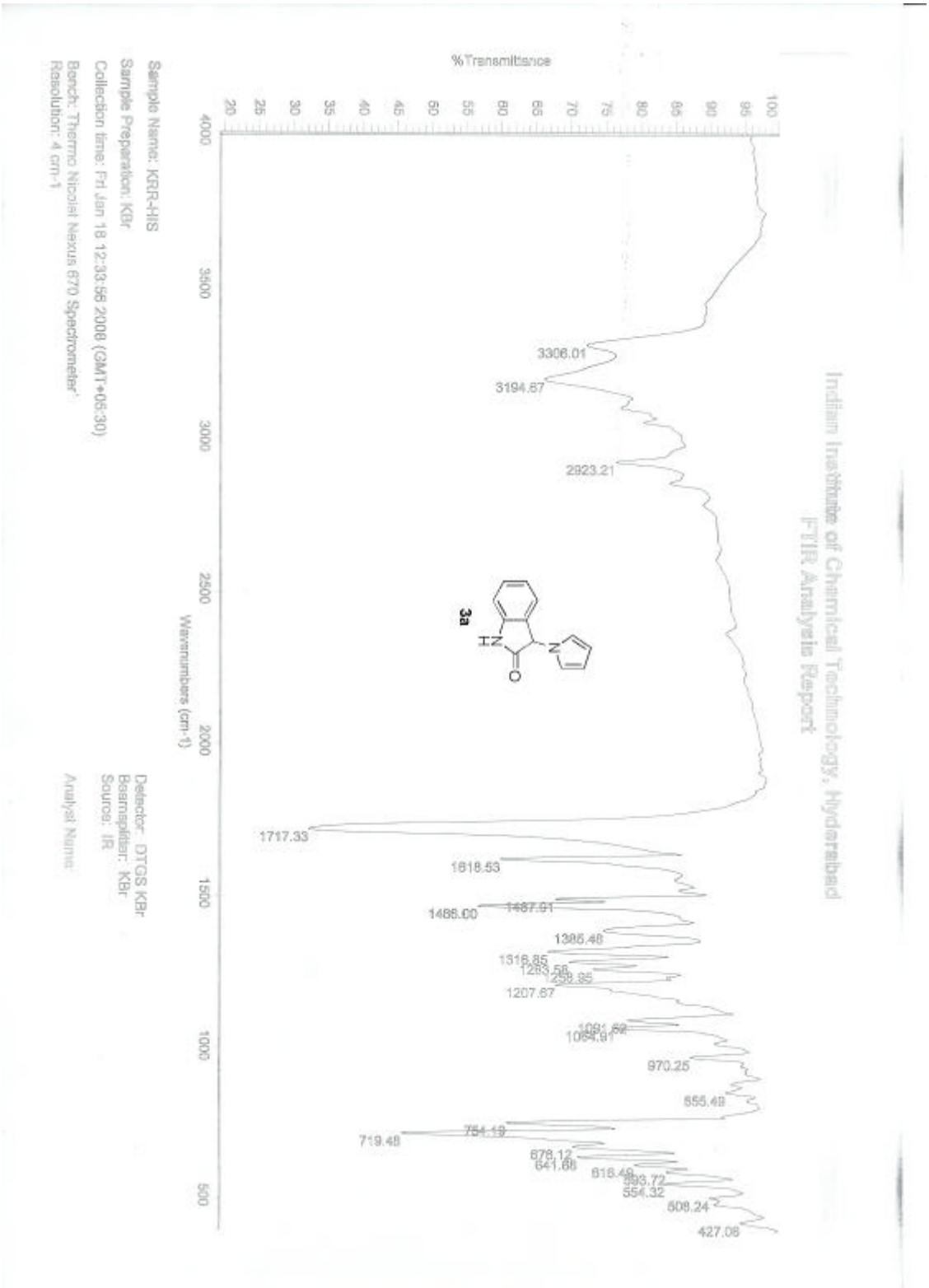
H^1-NMR of compound- 3i



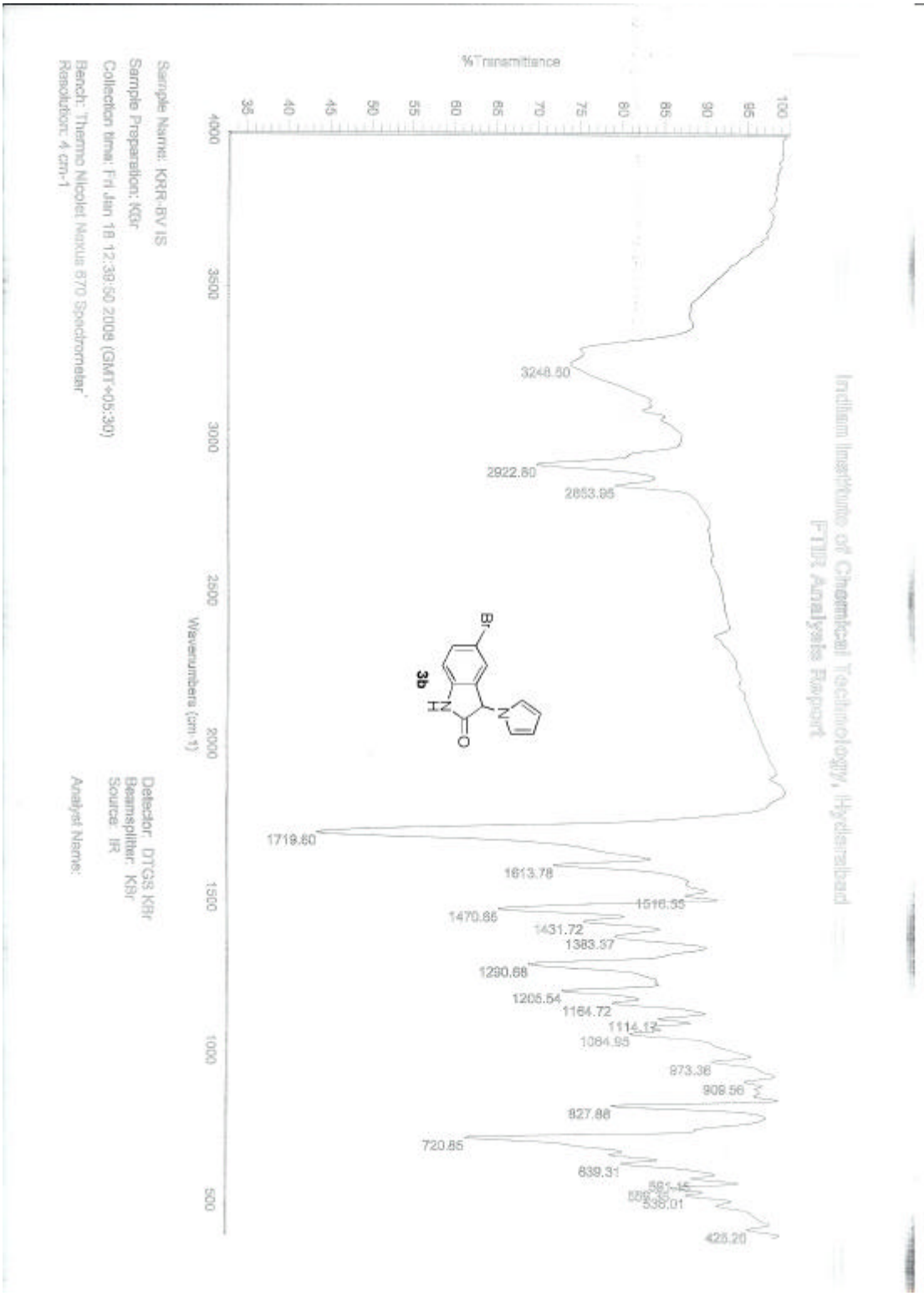
3j



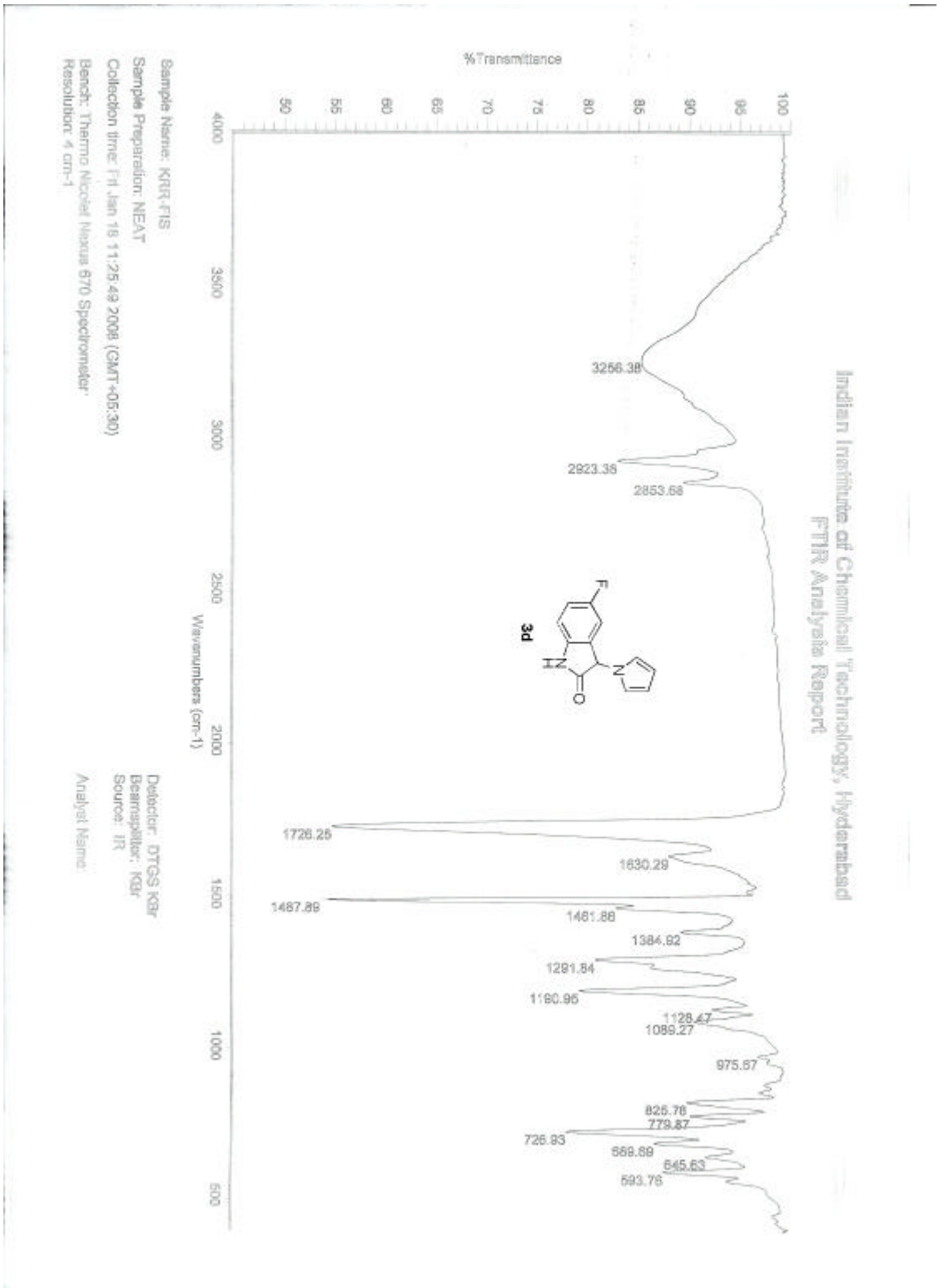
H^1-NMR of compound- 3j



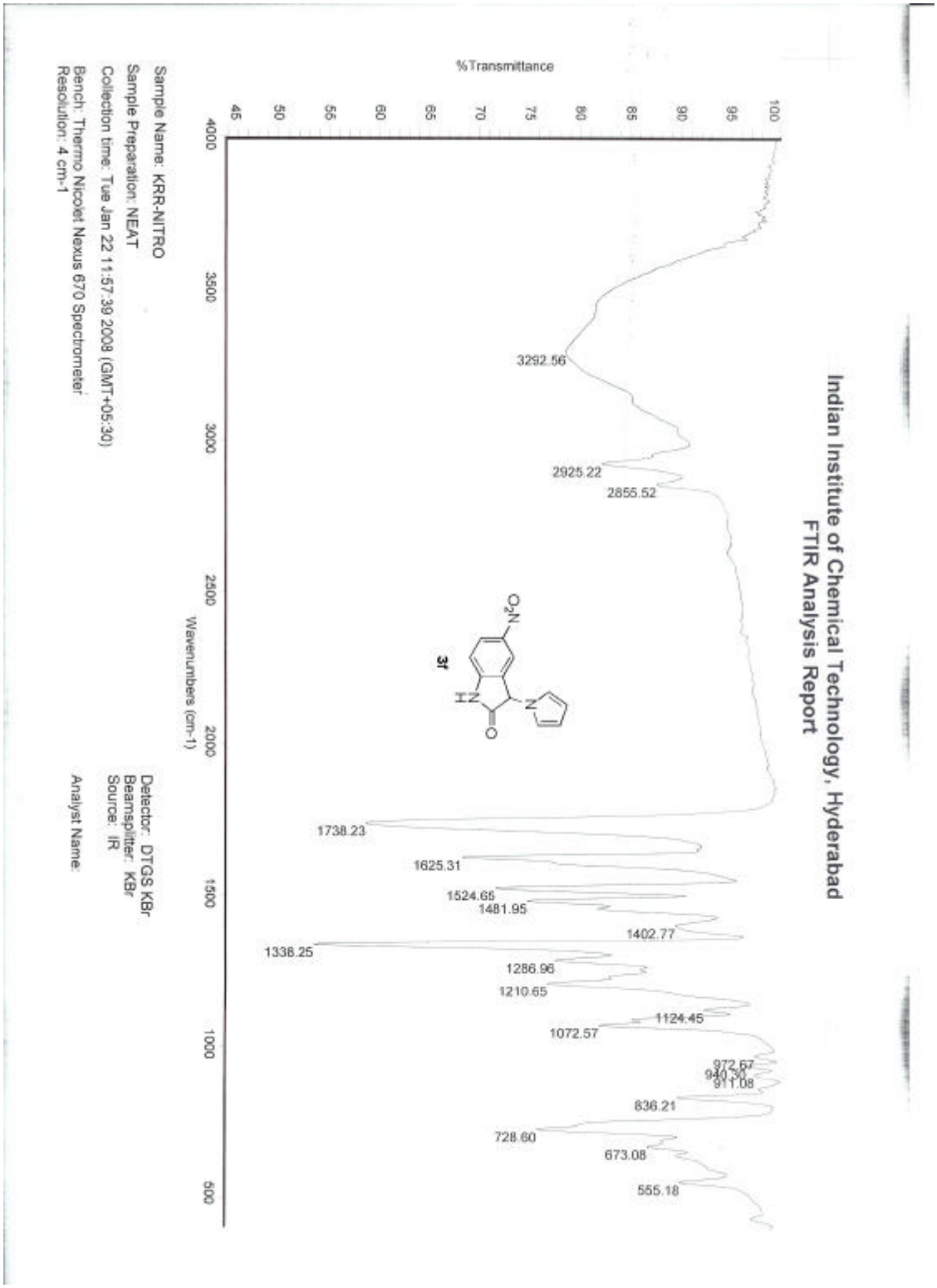
FT-IR spectra of compound- 3a



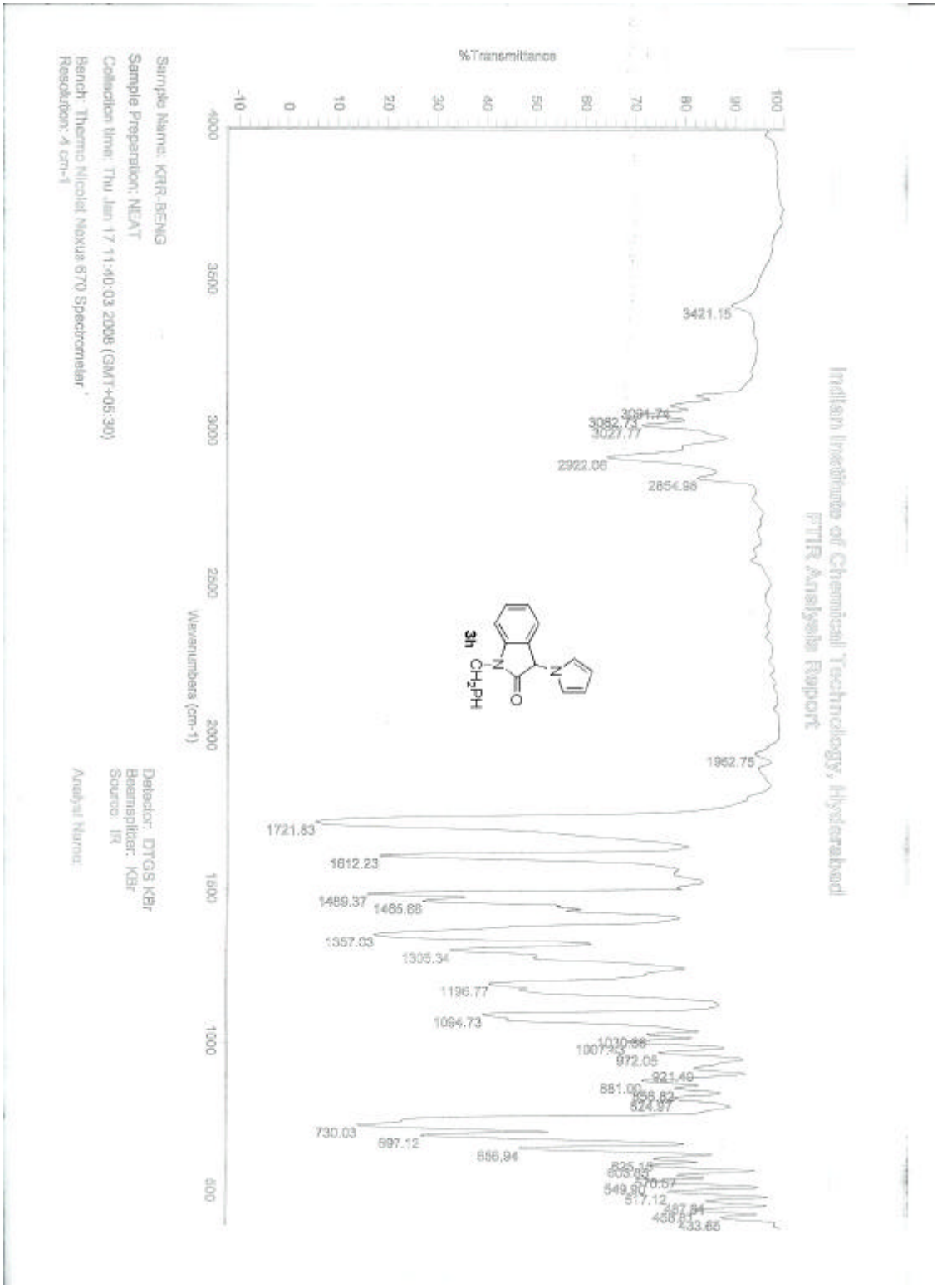
FT-IR spectra of compound- 3b



FT-IR spectra of compound- 3d



FT-IR spectra of compound- 3f



FT-IR spectra of compound- 3h

References and Notes:

1. (a) J. Azizian, A. R. Karimi, Z. Kazemizadeh, A. A. Mohammadi, M. R. Mohammadizadeh, *J. Org. Chem.*, **2005**, *70*, 1471; (b) B. K. Banik, M. Cardona, *Tetrahedron Lett*., **2006**, *47*, 7385; (c) J. S. Yadav, B. V. Subba Reddy, Ruchi Jain, Ch. Suresh Reddy, *Tetrahedron Lett*., **2007**, *48*, 3295.