

Electronic Supporting Informations

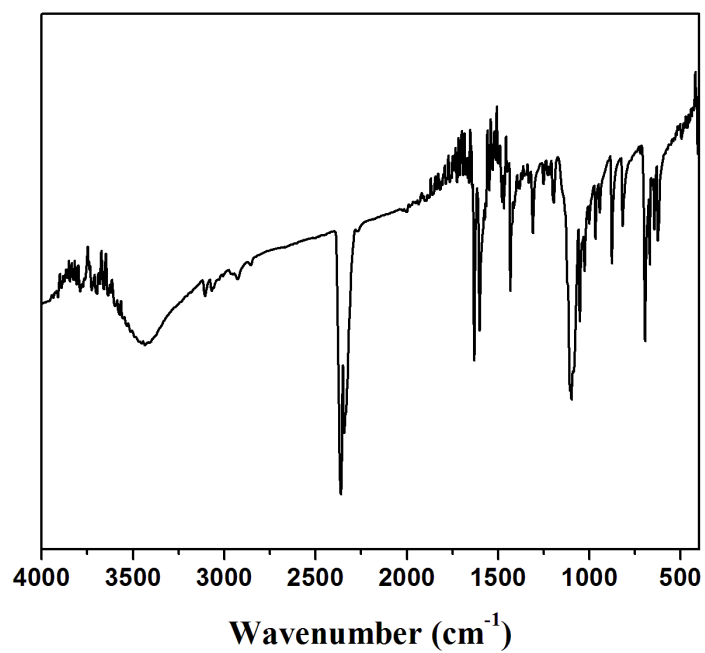


Fig. S1: IR spectrum for compound 1.

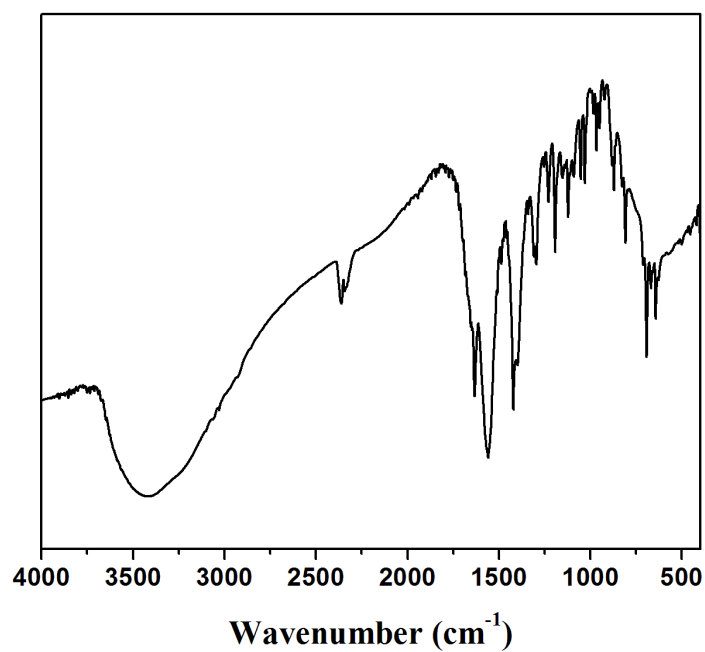


Fig. S2: IR spectrum for compound 2.

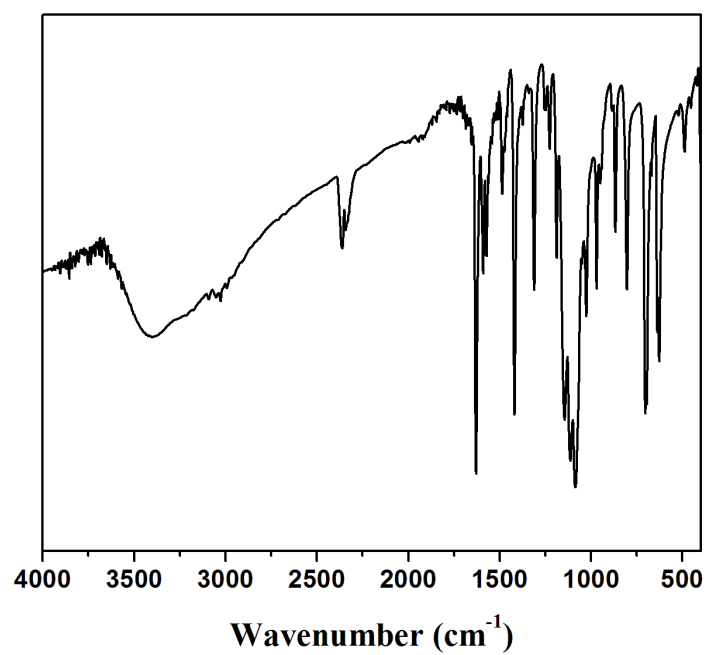


Fig. S3: IR spectrum for compound **3**.

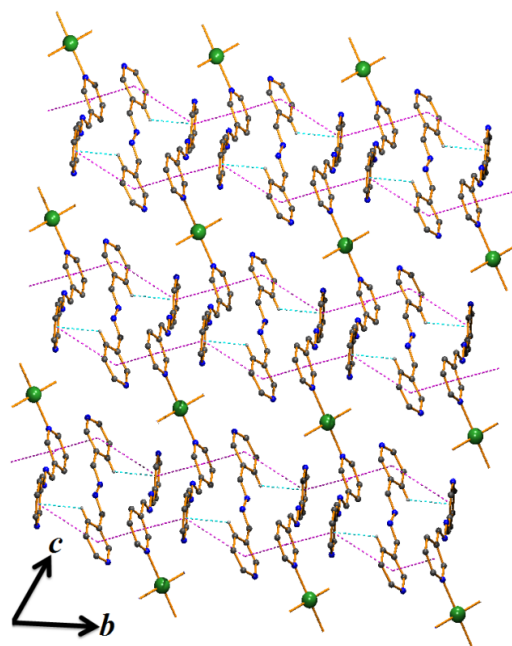
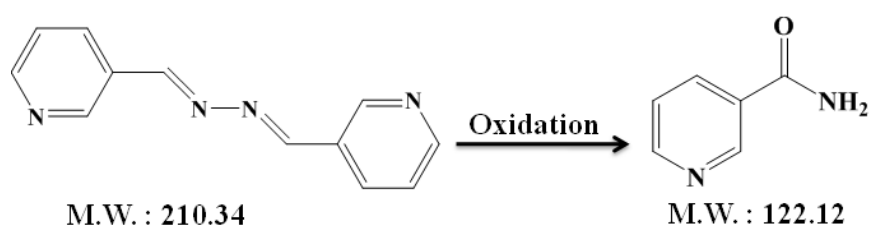


Fig. S4: Supramolecular 2D arrangement in **2** (π - π interactions: pink dotted lines, C-H... π interactions: cyan dotted lines; bridging 3-bpdb ligands are omitted for clarity).

Preparation of sample for FT-IR, GC-MS and ESI-MS. An aqueous solution (15 ml) of $\text{Cd}(\text{ClO}_4)_2 \cdot 6\text{H}_2\text{O}$ (1 mmol, 0.419 g) was mixed to a methanolic solution (15 ml) of 1,4-bis(3-pyridyl)-2,3-diaza-1,3-butadiene (3-bdpd) (1 mmol, 0.210 g) and stirred for 10 min. Then aqueous solution (15 mL) of disodium succinate (1 mmol, 0.162 g) was slowly poured into the above reaction mixture and the stirring continued for another 24 h. A yellowish white compound was separated out on filtration. Then the filtrate evaporated to dryness and a yellow residue was obtained. The resulting yellow residue was characterized by FTIR and then redissolved in methanol for GC/MS and water for high resolution ESI-MS.



Scheme S1. Oxidation of imine to amide.

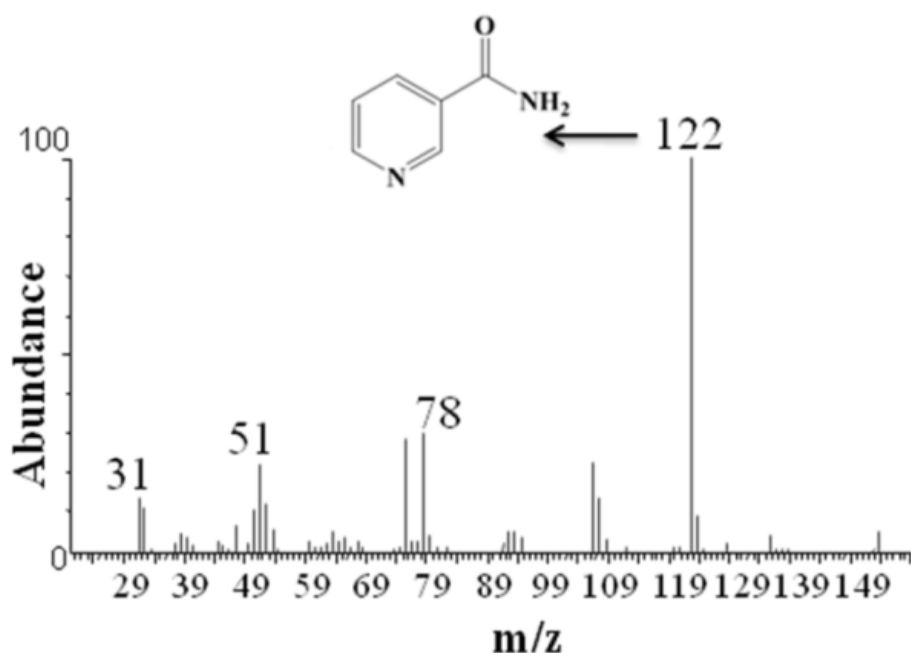


Fig. S5: Mass spectra of the peak at 10.37 min. from the GC trace of the resulting amide from the oxidation of imine in reaction medium.

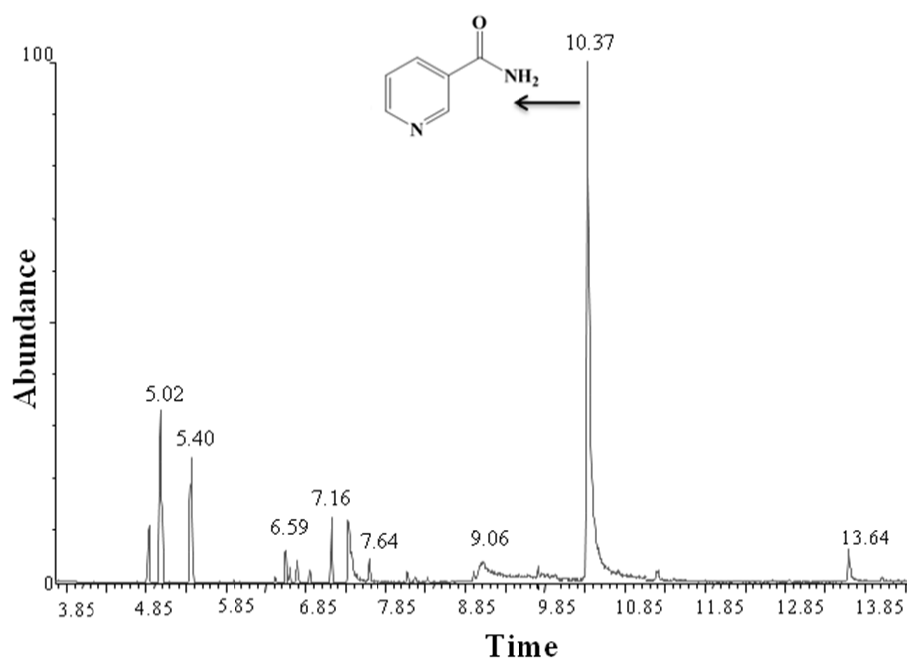


Fig. S6: GC trace of the amide resulting from the oxidation of the 3-bdpd ligand in reaction medium. The peak indicated above was identified by mass spectra (see below).

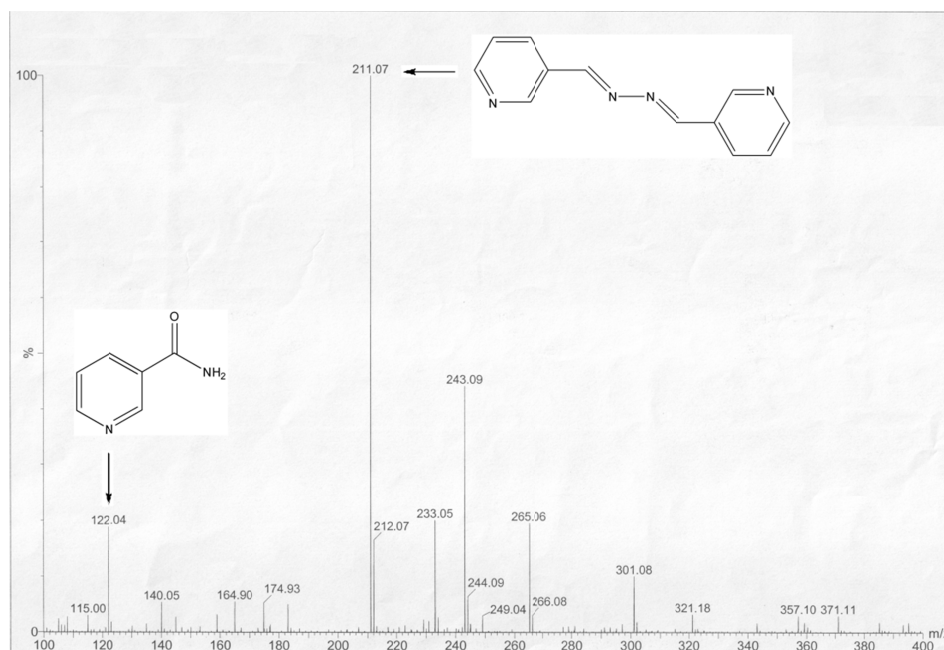


Fig. S7: ESI mass spectrum of the resulting yellow residue.

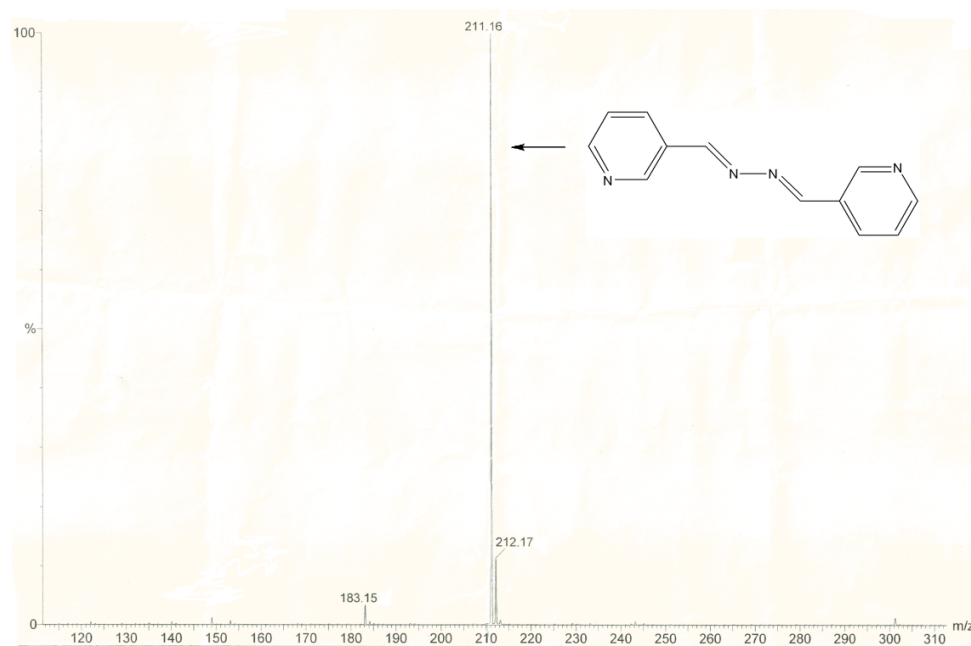


Fig. S8: ESI mass spectrum of pure 3-bdpd ligand.

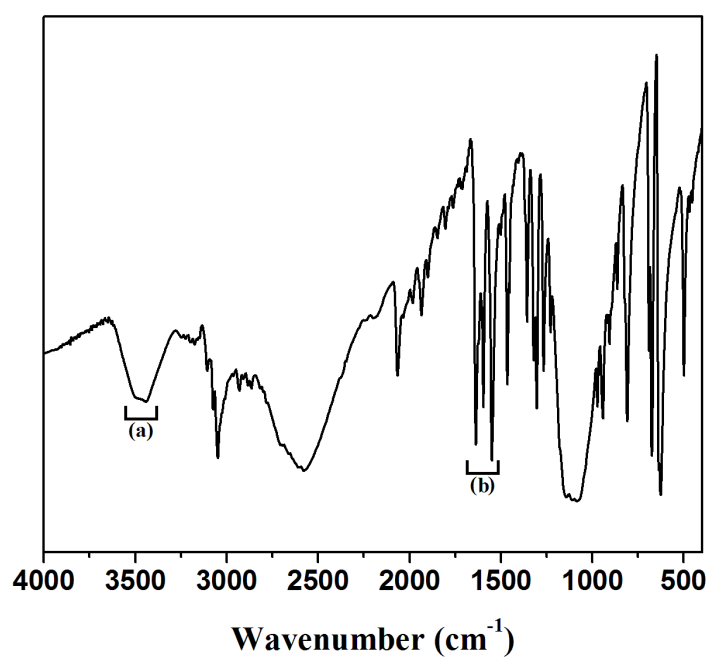


Fig. S9: IR spectrum for resulting yellow residue where (a) and (b) represents the characteristic absorption for -NH_2 , and -C=O of amide.

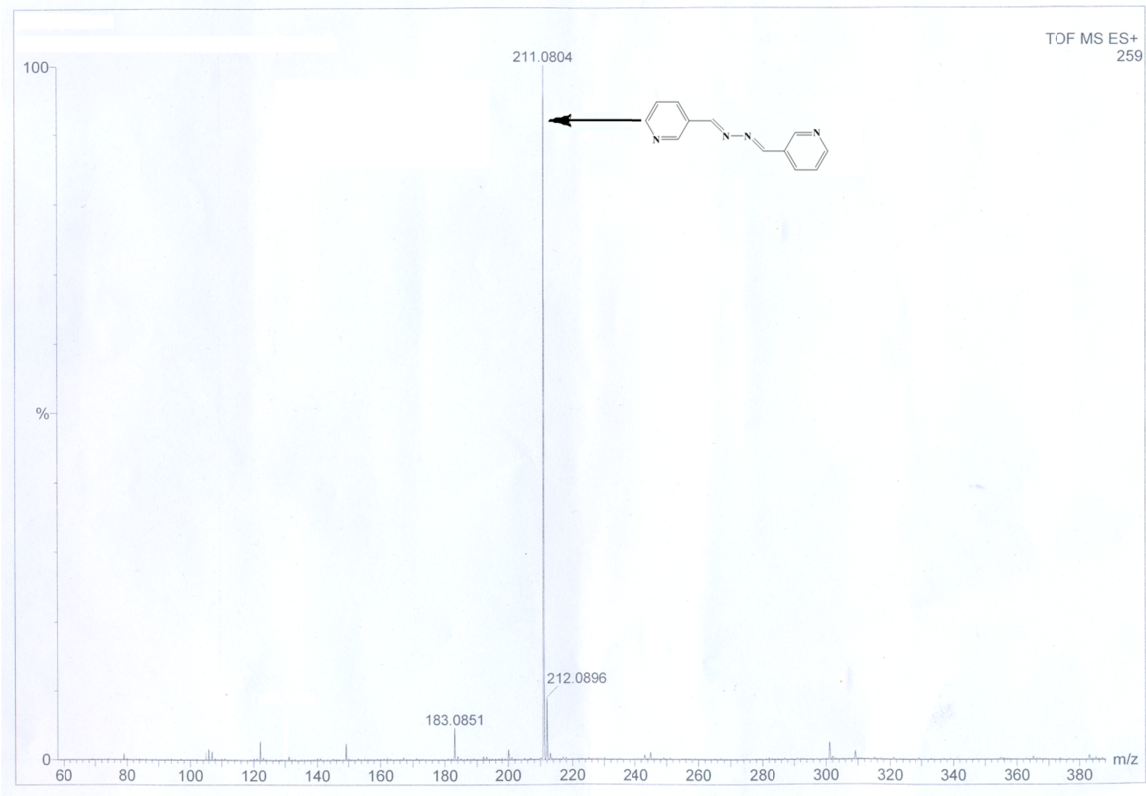


Fig. S10: ESI mass spectrum of the resulting yellow residue in reaction VII.