ELECTRONIC SUPPORTING INFORMATION

Resin-assisted Solvothermal Synthesis of Metal-Organic Frameworks

Yi Du [a], Amber L.Thompson [a] and Dermot O'Hare[a]

The powder XRD patterns of a bulk sample of **1**, **2** and **3** were identical to the powder patterns generated by the solution to the single crystal structure solutions. Comparison reactions were carried out by replacing the Fe^{2+}/Co^{2+}/Ni^{2+}-resin precursors by same molar amount of the appropriate metal nitrate salts. None of XRDs matched with the single crystal data for compound **1**, **2** and **3**.

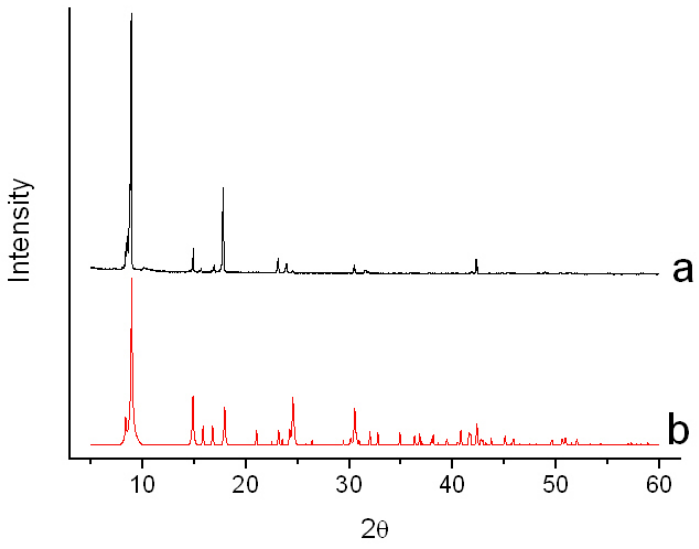

Figure S1. (a) Powder XRD for single crystal compound **1**; (b) simulated powder pattern from single crystal analysis.

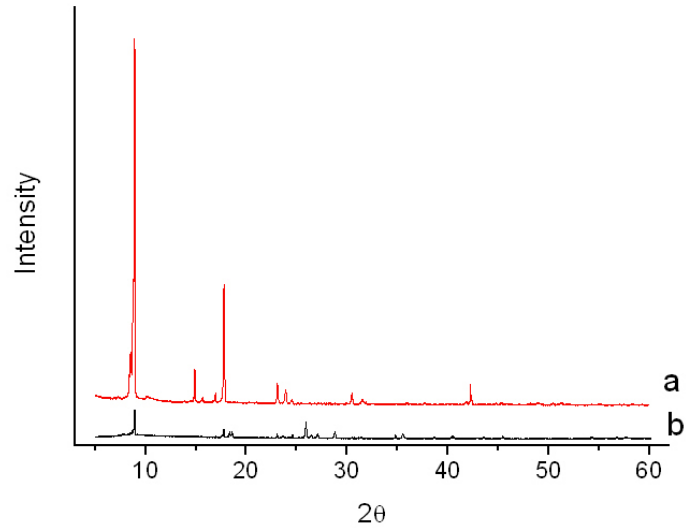

Figure S2. Powder XRD for (a) single crystal compound **1** using Fe^{2+}-resin as metal precursors; (b) powder product using $Fe(NO_3)_2$ as metal precursors.

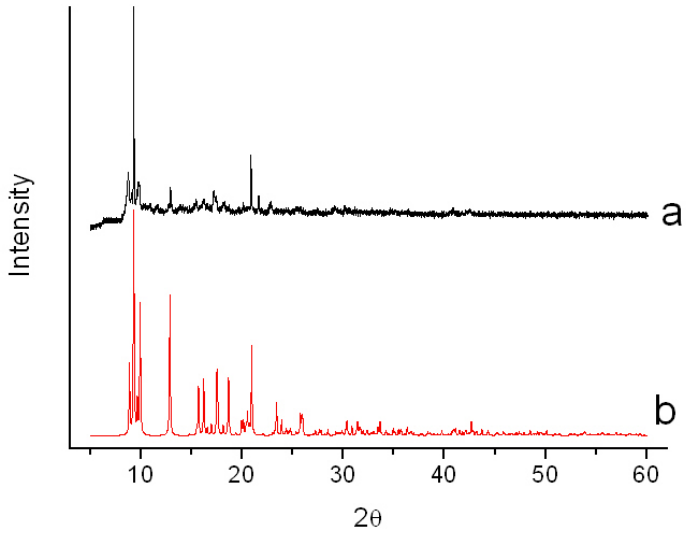

Figure S3. (a) Powder XRD for single crystal compound **2**; (b) simulated powder pattern from single crystal analysis.

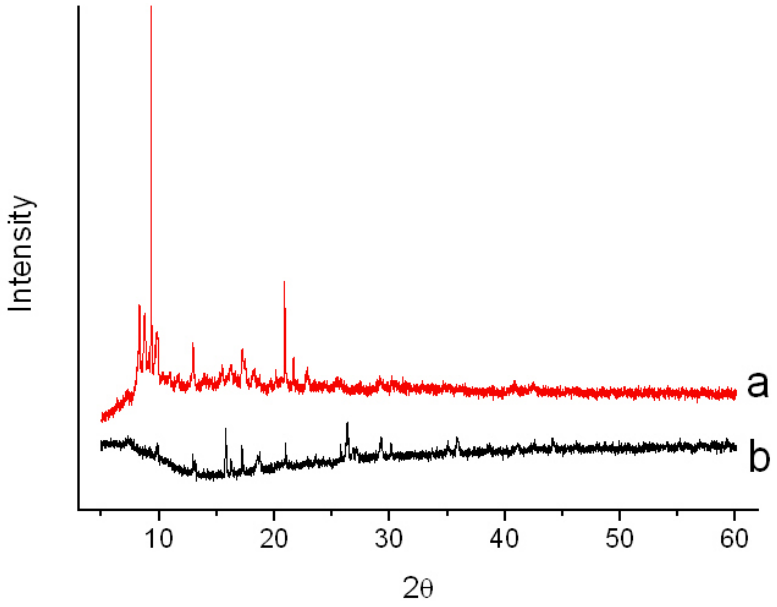

Figure S4. Powder XRD for (a) single crystal compound **2** using Co^{2+}-resin as metal precursors; (b) powder product using $Co(NO_3)_2$ as metal precursors.

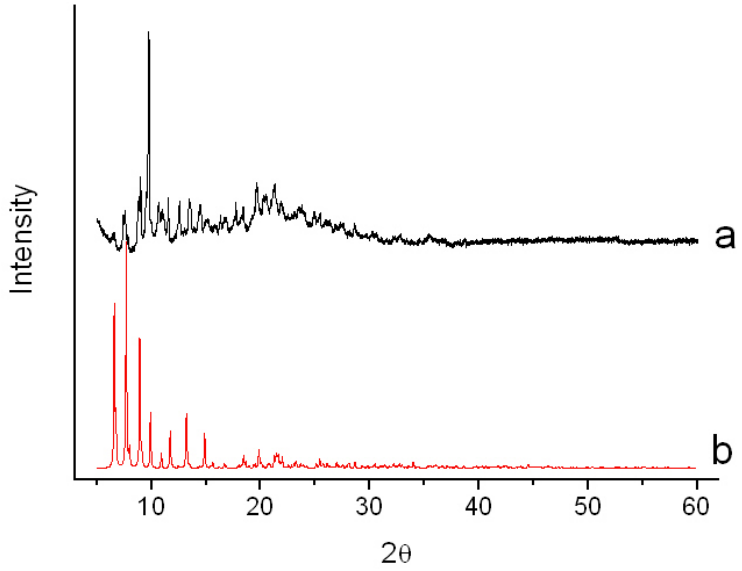

Figure S5. (a) Powder XRD for single crystal compound **3**; (b) simulated powder pattern from single crystal analysis.

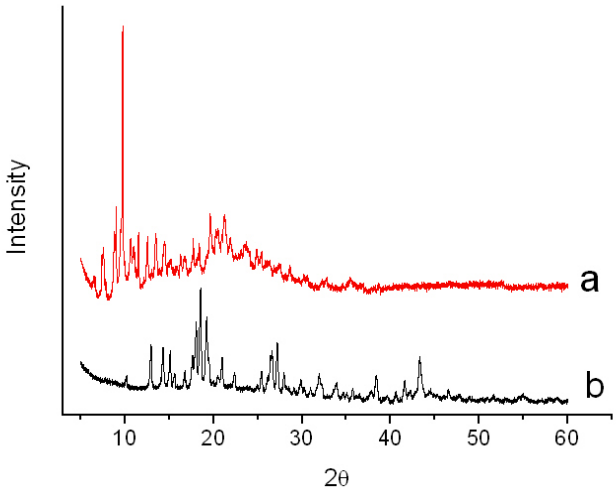

Figure S6. Powder XRD for (a) single crystal compound **3** using Ni^{2+}-resin as metal precursors; (b) powder product using $Ni(NO_3)_2$ as metal precursors.

Compound **1** is thermally stable until *ca.* 270 °C following two major weight losses corresponding to the structural coordinated 2,6-NDC ligands decomposition. Compound **2** is thermally stable until *ca.* 200 °C, then followed by two steady weight losses. The first weight loss corresponds to the two DMF molecules and the two $NHMe_2$ molecules. The second weight loss, between 440 °C and 590 °C, corresponds to the decomposition of the 2,6-NDC ligands. The TGA of **3** shows three weight loss events; the first weight loss (*ca.* 4%) corresponds to half of the unbound dmf molecules. The second and the third weight losses correspond to the decomposition of structural dmf, NMe_4^+ molecules and 1,3,5-BTC ligands.

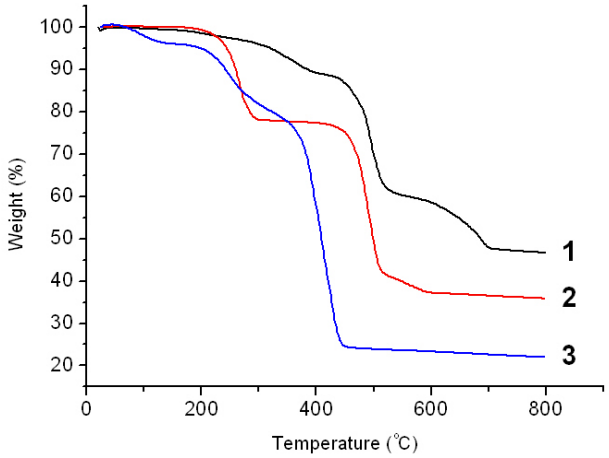

Figure S7. TGA for compound **1**, **2** and **3**.