

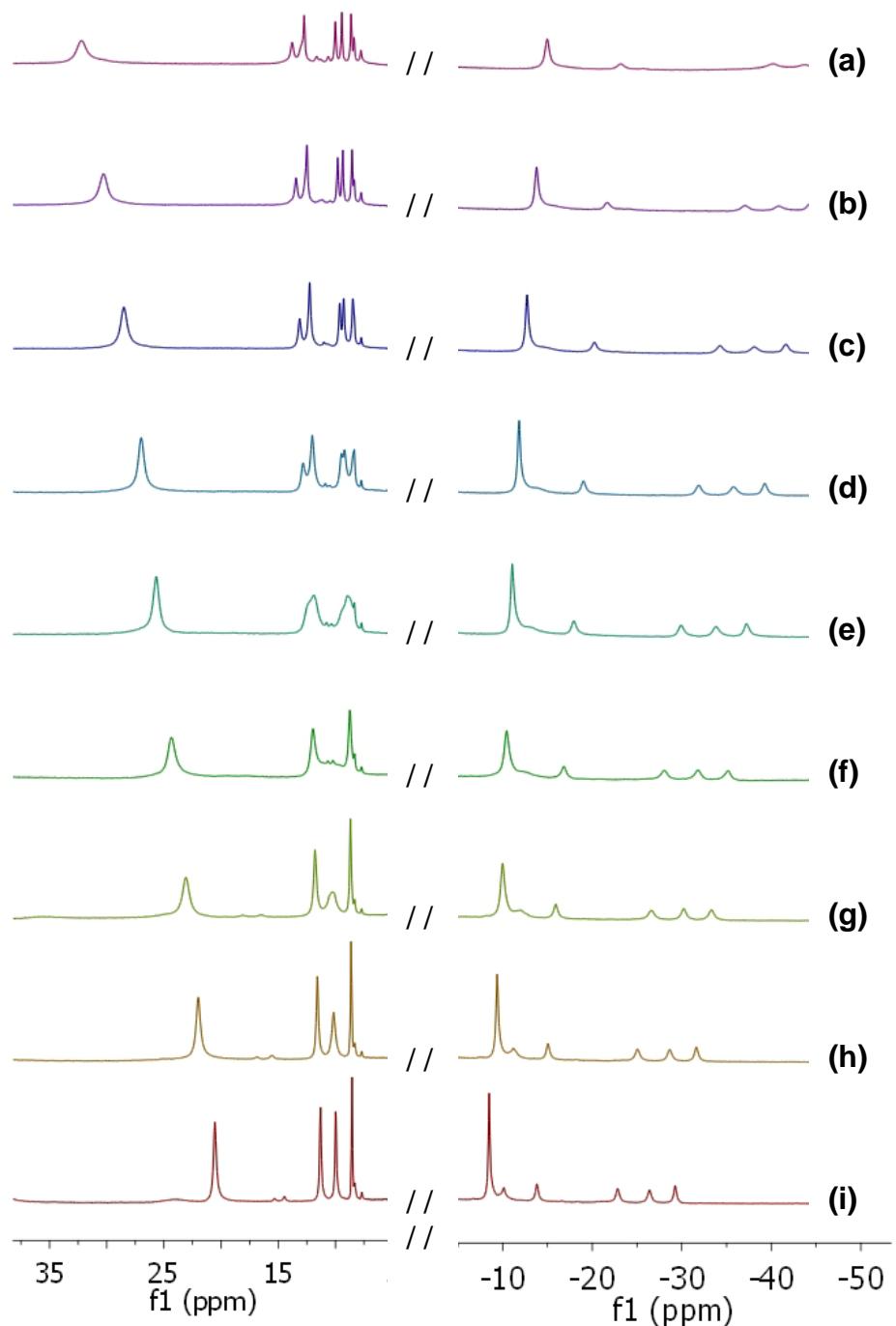
## Supplementary Information

### Mono- and bidentate imidates of five-coordinate nickel(II) with macrocyclic ligands: spectroscopic and photophysical properties

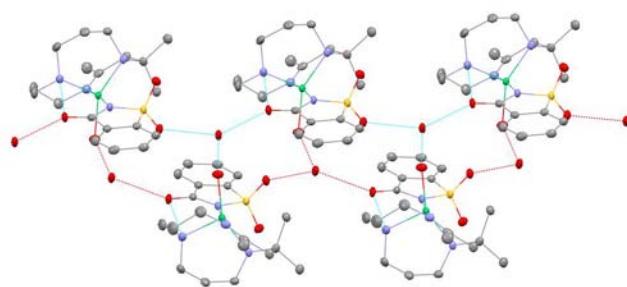
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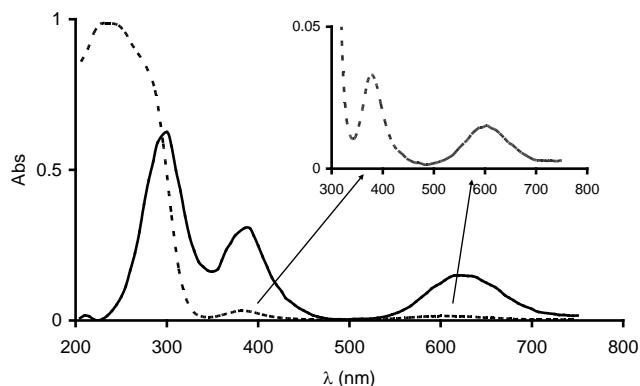
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**Figure S1.** <sup>1</sup>H NMR spectra of **4b** at different temperatures: (a) 213 K, (b) 223, (c) 233, (d) 243, (e) 253, (f) 263, (g) 273, (h) 283, (i) 298. Only the region relevant to the assignment of imide resonances is shown.



**Figure S2.** Schematic drawing of structure of compound **3a** showing the inter chains hydrogen bonds (dashed line) to yield a 2D-network. Carbon, gray; nitrogen, blue; oxygen, red; nickel, green, sulphur, yellow; hydrogen bonds, red.



**Figure S3.** UV-visible absorption spectra for complex **3b** in  $10^{-4}$  mol dm $^{-3}$  acetonitrile solution (dotted line) and diffuse-reflectance ultraviolet spectra (DRUV, solid line).