

ESI to accompany:

## Environmental control in the assembly of metallomacrocycles and one-dimensional polymers with 4,2':6':4''-terpyridine linkers and zinc(II) nodes

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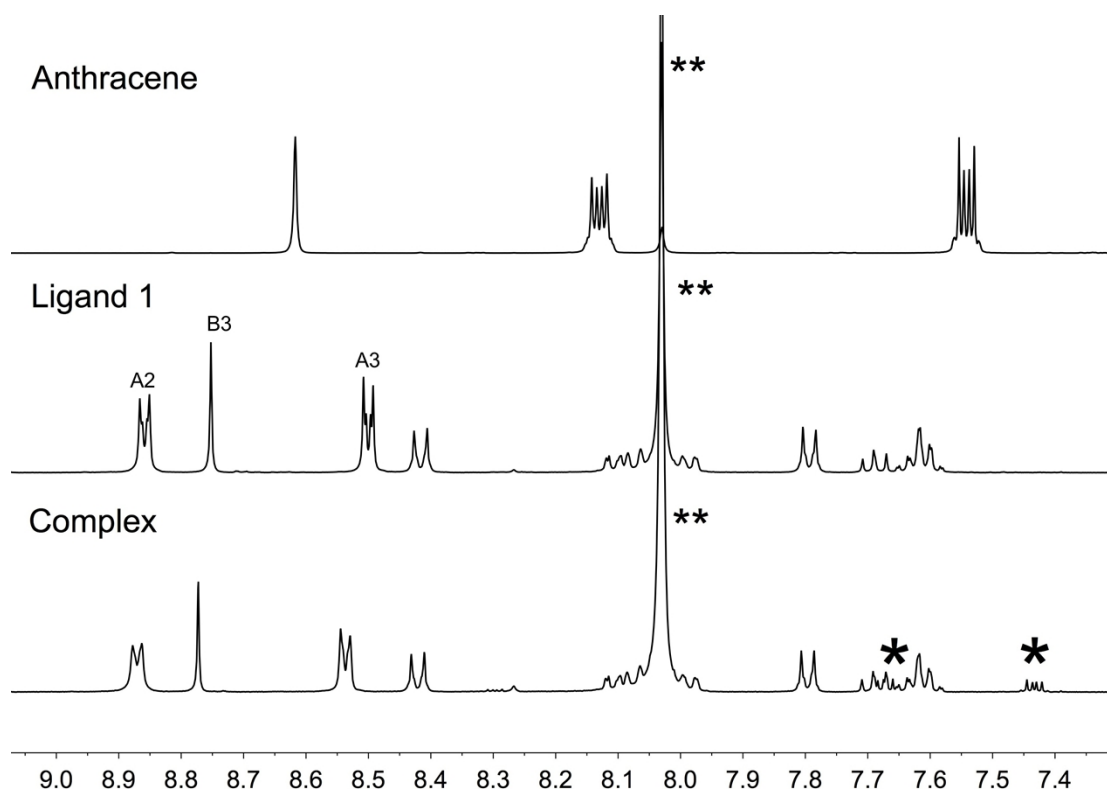


Fig. S1 400 MHz <sup>1</sup>H NMR spectra of DMF-d<sub>7</sub> solutions of anthracene, **1** and [ZnCl<sub>2</sub>(**1**)<sub>6</sub>]-A. \*\* = residual DMF; \* = 1,2-C<sub>6</sub>H<sub>4</sub>Cl<sub>2</sub>. Chemical shifts in  $\delta$  / ppm. See Scheme 1 for atom labelling.

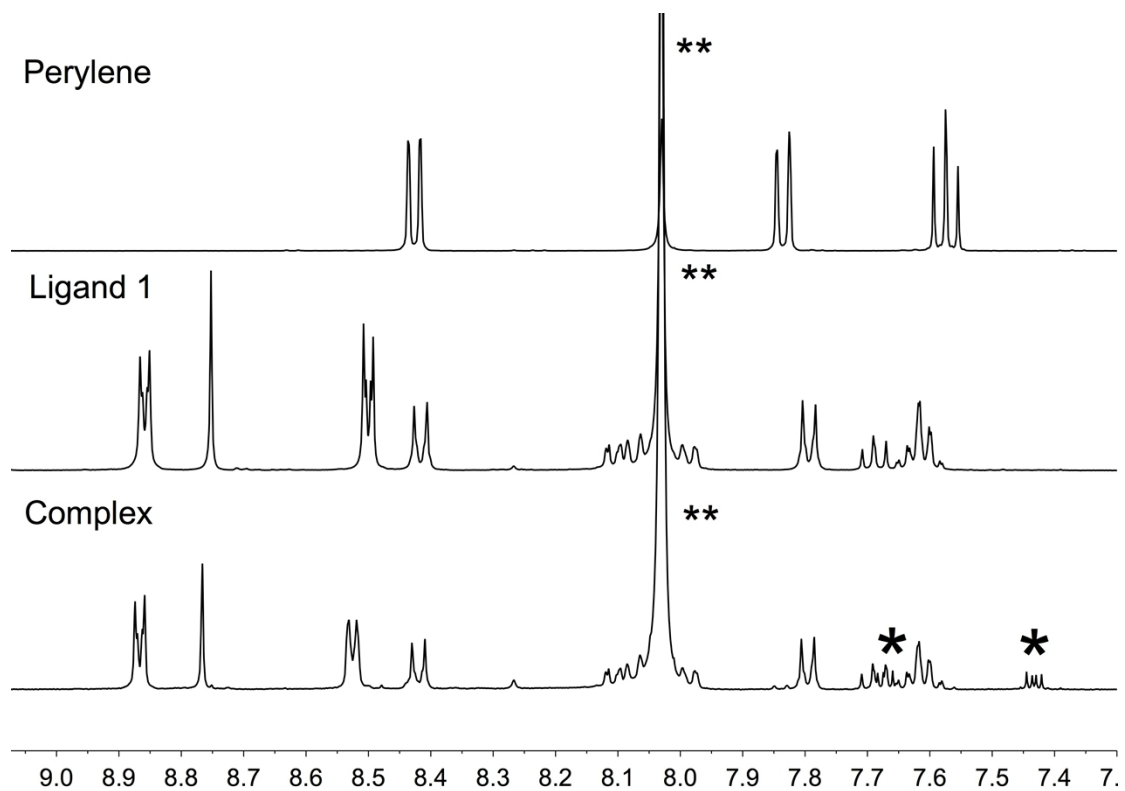


Fig. S2 400 MHz <sup>1</sup>H NMR spectra of DMF-d<sub>7</sub> solutions of perylene, **1** and [ZnCl<sub>2</sub>(**1**)<sub>6</sub>]-P. \*\* = residual DMF; \* = 1,2-C<sub>6</sub>H<sub>4</sub>Cl<sub>2</sub>. Chemical shifts in  $\delta$  / ppm.

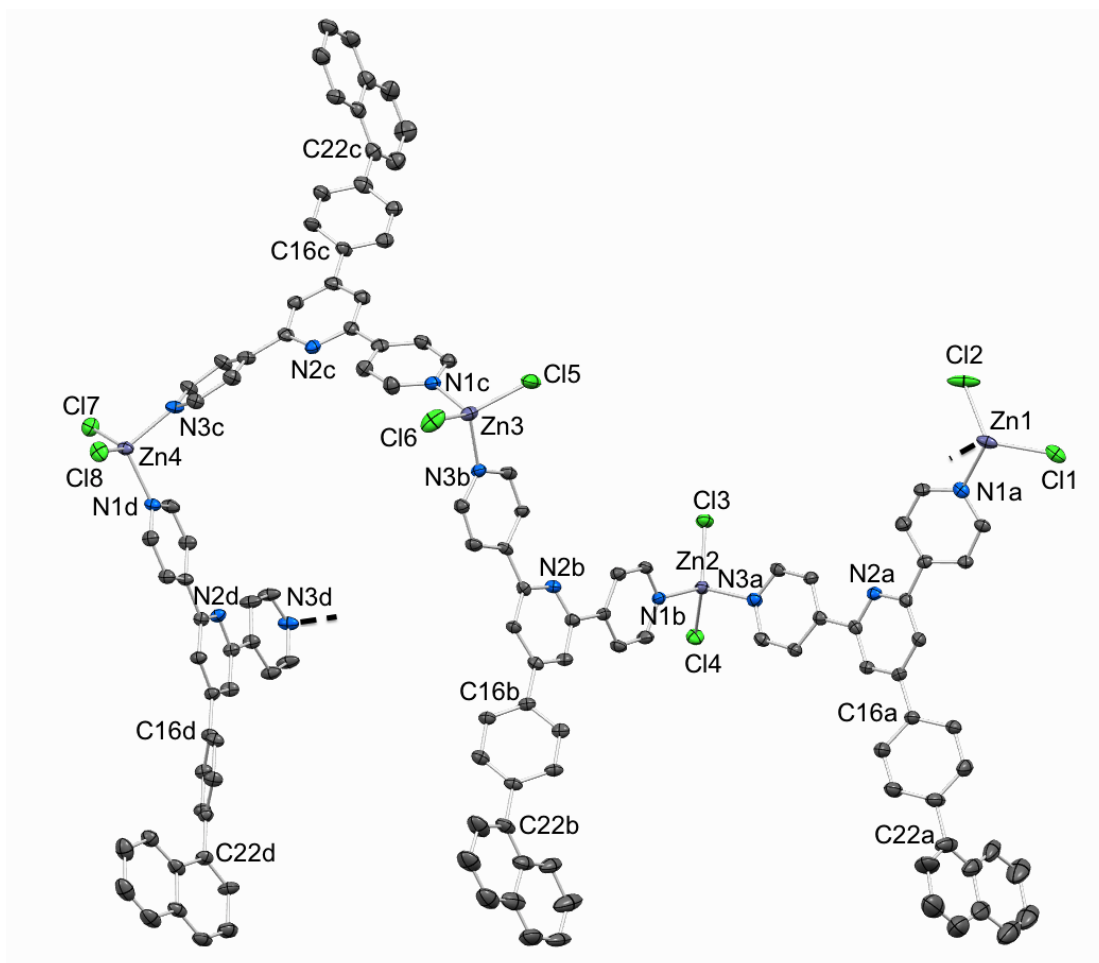


Fig. S3 ORTEP diagram of the asymmetric unit in  $[\text{ZnCl}_2(\mathbf{1})]_n$  (ellipsoids plotted at 30% probability level and H atoms omitted for clarity). Selected bond lengths: Zn1–N1a = 2.049(3), Zn1–N3d<sup>i</sup> = 2.069(3), Zn1–Cl2 = 2.1952(14), Zn1–Cl1 = 2.2303(15), Zn2–N1b = 2.026(3), Zn2–N3a = 2.061(3), Zn2–Cl3 = 2.2065(11), Zn2–Cl4 = 2.2354(11), Zn3–N1c = 2.028(4), Zn3–N3b = 2.062(3), Zn3–Cl6 = 2.2056(16), Zn3–Cl5 = 2.2279(15), Zn4–N3c = 2.063(4), Zn4–N1d = 2.071(3), Zn4–Cl8 = 2.1964(12), Zn4–Cl7 = 2.2140(13) Å. Symmetry code  $i = x, y, 1+z$ .

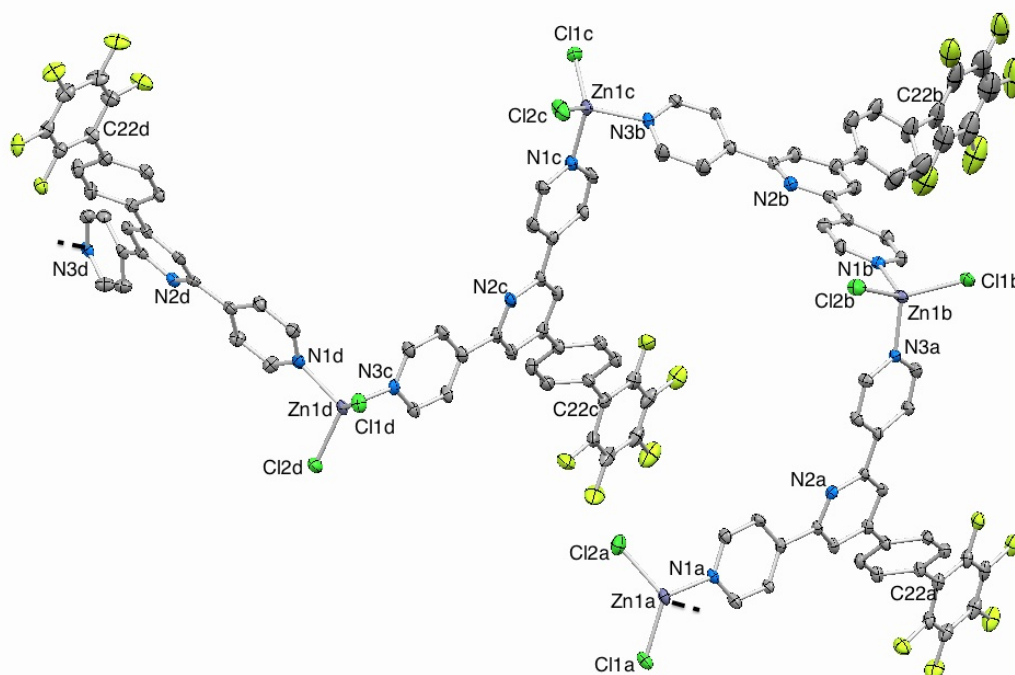


Fig. S4 ORTEP diagram of the asymmetric unit in  $[\text{ZnCl}_2(\mathbf{2})]_n$  (ellipsoids plotted at 30% probability level and H atoms omitted for clarity). Selected bond lengths: Zn1A–N1a = 2.043(3), Zn1a<sup>i</sup>–N3d = 2.068(4), Zn1a–Cl1a = 2.2133(14), Zn1a–Cl2a = 2.2221(16), N3a–Zn1b = 2.057(4), Zn1b–N1b = 2.068(4), Zn1b–Cl2b = 2.2125(13), Zn1b–Cl1b = 2.2187(13), N3b–Zn1c = 2.038(4), Zn1c–N1c = 2.076(4), Zn1c–Cl2c = 2.2114(15), Zn1c–Cl1c = 2.2115(14), N3c–Zn1d = 2.052(3), Zn1d–N1d = 2.077(4), Zn1d–Cl2d = 2.2049(14), Zn1d–Cl1d = 2.2082(14) Å. Symmetry code  $i = x, y, -1 + z$ .

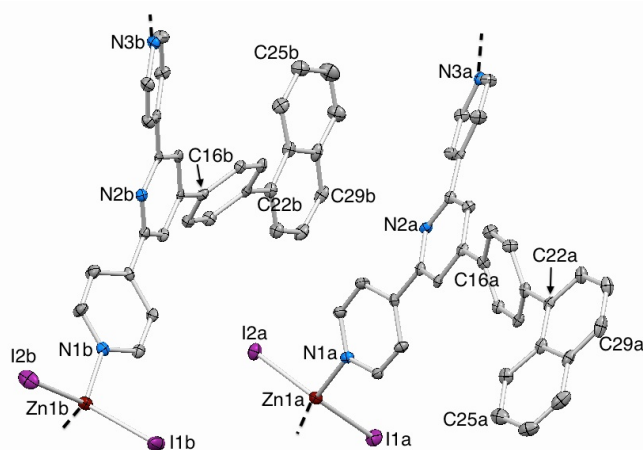


Fig. S5 ORTEP diagram of the two independent  $\{\text{ZnI}_2(\mathbf{1})\}$  units in the asymmetric unit in  $[2\{\text{ZnI}_2(\mathbf{1})\} \cdot \text{CHCl}_3]_n$  (ellipsoids plotted at 40% probability level and H atoms omitted for clarity). Selected bond lengths: Zn1a–N1a = 2.045(6), Zn1a–N3a<sup>i</sup> = 2.053(6), Zn1a–I1a = 2.5473(9), Zn1a–I2a = 2.5576(9), Zn1b–N1b = 2.048(6), Zn1b–N3b<sup>ii</sup> = 2.070(6), Zn1b–I1b = 2.5476(10), Zn1b–I2b = 2.5623(10) Å. Symmetry codes  $i = x, 1/2 - y, -1/2 + z$ ;  $ii = x, 3/2 - y, -1/2 + z$ .