

## Supplementary Material

# Metalloporphyrin Dimers Bridged by a Peptoid Helix: Host-Guest Interaction and Chiral Recognition

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**Figure S1.** LC-MS chromatograms of compound 1–3 with UV detection at 220 nm.

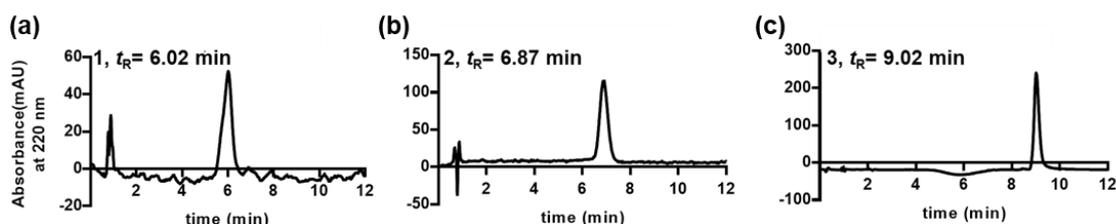
**Figure S2.** Temperature dependent CD spectra (a) and UV-vis spectra (b) of 2 (0.27  $\mu\text{M}$ ) in  $\text{CH}_2\text{Cl}_2$ .

**Figure S3.** CD and UV-vis spectroscopic titration of 2 with dinitrogen guests.

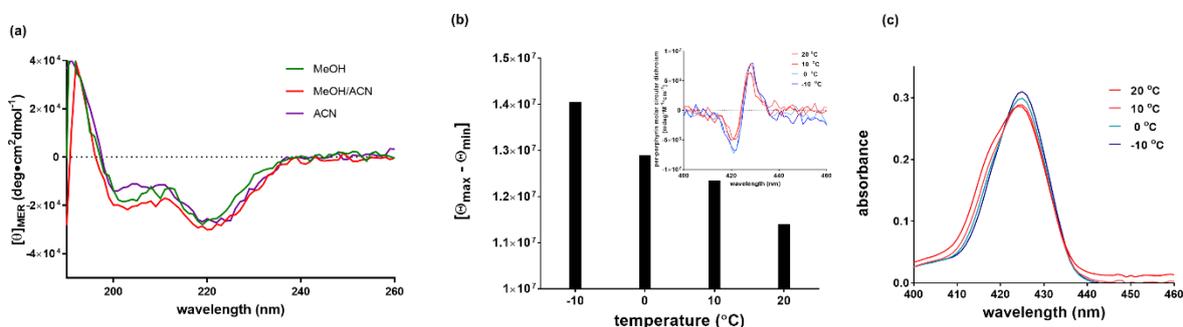
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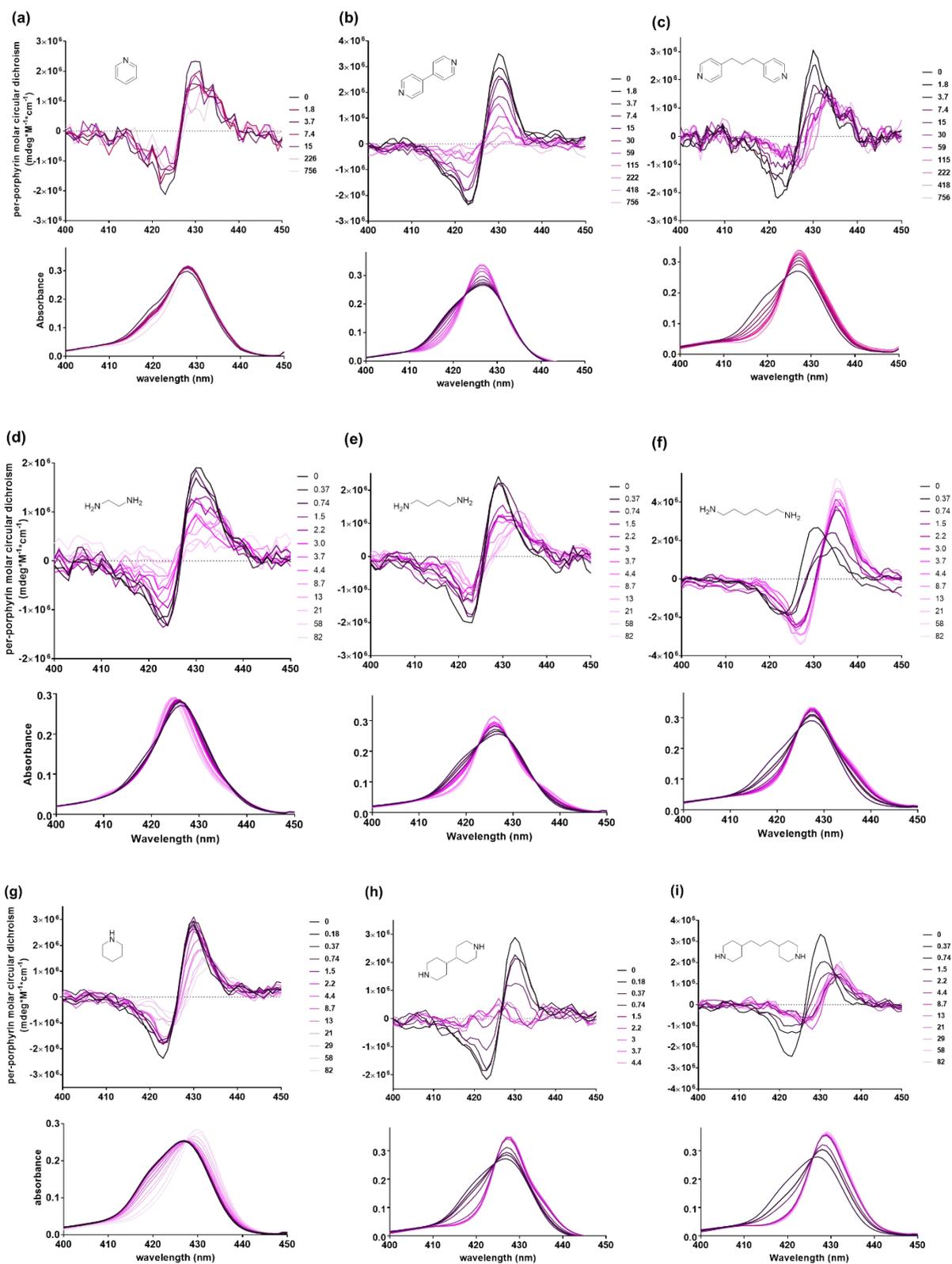
**Table S1.** MS data of metalloporphyrin-peptoid conjugates.



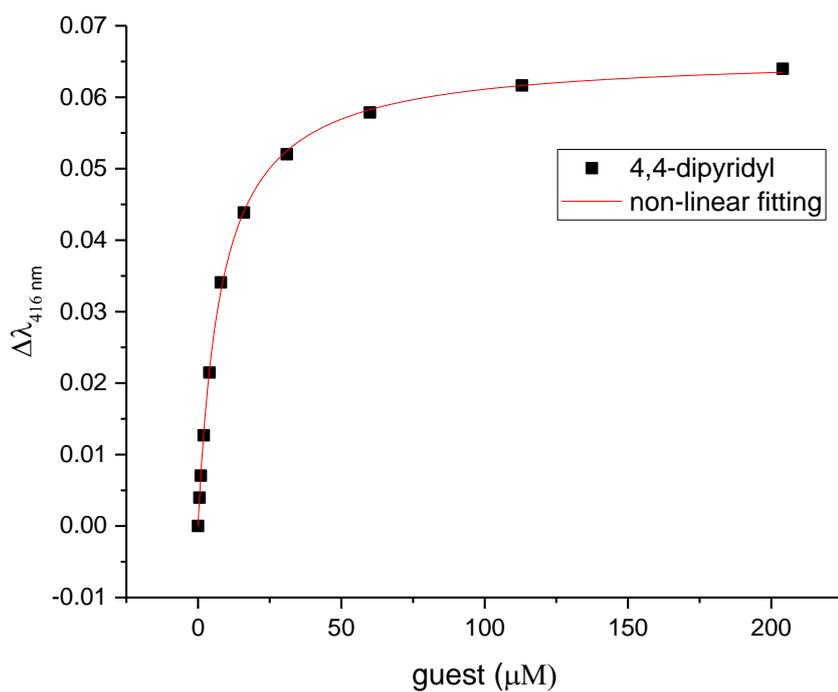
**Figure S1.** LC-MS chromatograms of compound 1–3 with UV detection at 220 nm. (a) And (b) isocratic elution of MeOH (0.1% TFA) was used at 30 °C. (c) Two solvents of isopropyl alcohol (A, 0.1% TFA) and water (B, 0.1% TFA) were used, and the concentration of A was raised from 50% to 100% for 3 minutes and maintained for 15 minutes at 30 °C.



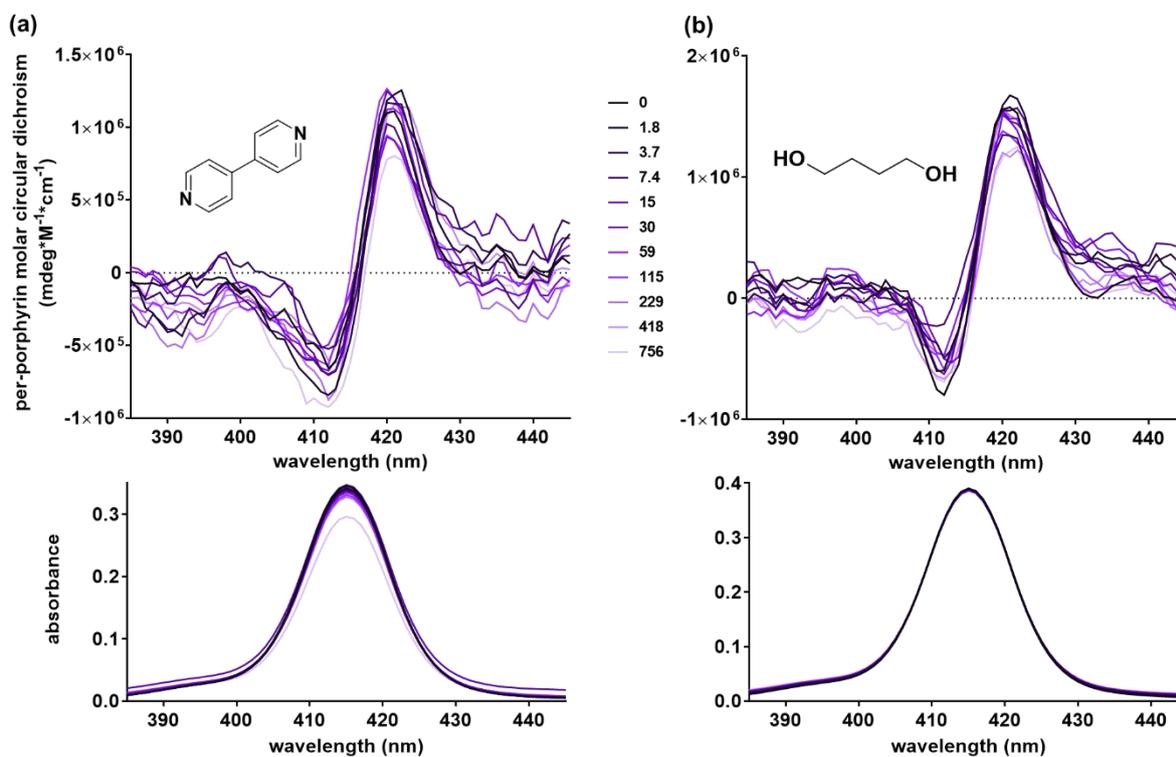
**Figure S2.** (a) CD spectra of 2 (50  $\mu\text{M}$ ) of 190–260 nm, in MeOH, ACN or MeOH/ACN=1/1 ( $v/v$ ), (b) Temperature dependent ECCD difference, inlet: CD spectra of 2 (0.27  $\mu\text{M}$ ) in  $\text{CH}_2\text{Cl}_2$ , (c) Temperature dependent UV-vis spectra of 2 (0.27  $\mu\text{M}$ ) in  $\text{CH}_2\text{Cl}_2$ .



**Figure S3.** CD and UV-vis spectroscopic of **2** with dinitrogen guests. Legend on right side of each graph means the added equivalents of guest toward host.



**Figure S4.** A representative non-linear fitting for the host-guest titration of **2** with 4,4'-dipyridyl.



**Figure S5.** The CD and UV-vis spectral change of **3** ( $0.27 \mu\text{M}$  in  $\text{CH}_2\text{Cl}_2$ ) with 4,4'-dipyridyl and 1,4-butanediol. Legend in graphs indicates the equivalents of added guest toward **3**.

**Table S1.** MS data of metalloporphyrin-peptoid conjugates

<b>Compound</b>	<b>Mass Calculated</b>	<b>Mass Observed (<math>m/z</math>)<sup>a</sup></b>
1	2748.99	1375.0 [M+2H] <sup>2+</sup>
2	2847.10	1424.7 [M+2H] <sup>2+</sup>
3	2845.10	1422.6 [M+2H] <sup>2+</sup>

<sup>a</sup> due to the mass detection limitation of 2000 ( $m/z$ ), doubly charged species were observed.