

Supporting Information

to the paper entitled

Effect of a methyl group on the spontaneous resolution of a square-pyramidal coordination compound: crystal packing and conglomerate formation

Apurba Biswas,^a Carolina Estarella,^b Antonio Frontera,^b Pablo Ballester,^{c,d} Michael G. B. Drew,^e Patrick Gamez^{*d,f} and Ashutosh Ghosh^{*a}

Table of contents

| | |
|---|-----------|
| Table S1. Summary of the crystallographic data for 1 (Δ enantiomer) | S2 |
| Table S2. Coordination bonds (Å) and angles (°) for 1 (Δ enantiomer) | S2 |
| Figure S1. Δ enantiomer of [CuL ¹ (pic)] (1) | S3 |
| Figure S2. UV-Vis spectrum of 1-Δ in solution | S3 |
| Figure S3. Solid-state CD spectrum of the other enantiomer of 1-Δ | S3 |
| Figure S4. Solution CD spectrum of 1 | S4 |
| Figure S5. Solution CD spectrum of 2 | S4 |
| Figure S6. Solid-state and solution UV-Vis spectra of 2 | S5 |

Table S1 Summary of the crystallographic data for **1** (Δ enantiomer)

| | |
|--|---|
| Formula | C ₁₇ H ₂₁ CuN ₃ O ₃ |
| Formula weight | 378.91 |
| Temperature | 100(2) K |
| Crystal system | orthorhombic |
| Space group | <i>P</i> 2 ₁ 2 ₁ 2 ₁ |
| <i>a</i> /Å | 7.3456(5) |
| <i>b</i> /Å | 11.2047(8) |
| <i>c</i> /Å | 20.0815(15) |
| α /° | 90 |
| β /° | 90 |
| γ /° | 90 |
| <i>V</i> /Å ³ | 1652.8(2) |
| <i>Z</i> | 4 |
| <i>D</i> _{calc} /g cm ⁻³ | 1.523 |
| μ /mm ⁻¹ | 1.342 |
| <i>F</i> (000) | 788 |
| <i>R</i> (int) | 0.0321 |
| Total Reflections | 8722 |
| Flack parameter | 0.005(11) |
| Unique reflections | 3607 |
| <i>I</i> > 2 σ (<i>I</i>) | 3474 |
| <i>R</i> 1, <i>wR</i> 2 | 0.0281, 0.0727 |

Table S2 Coordination bonds (Å) and angles (°) for **1** (Δ enantiomer)

| | |
|-------------|-----------|
| Cu1–O11 | 1.909(1) |
| Cu1–N19 | 1.983(2) |
| Cu1–O38 | 1.998(2) |
| Cu1–N31 | 1.982(2) |
| Cu1–N22 | 2.325(2) |
| O11–Cu1–N19 | 95.21(7) |
| N19–Cu1–O38 | 90.53(7) |
| O38–Cu1–N31 | 82.08(7) |
| N31–Cu1–O11 | 93.03(7) |
| O11–Cu1–N22 | 107.50(7) |
| N19–Cu1–N22 | 83.30(8) |
| O38–Cu1–N22 | 98.08(7) |
| N31–Cu1–N22 | 94.08(7) |

Figure S1 Molecular structure of the Δ enantiomer of compound **1**

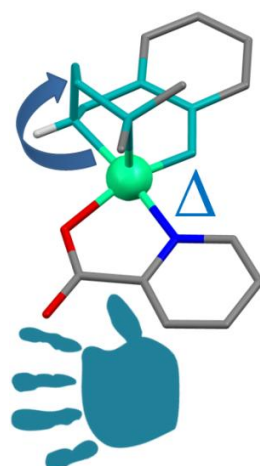


Figure S2 UV-Vis spectrum of a millimolar methanolic solution of **1**

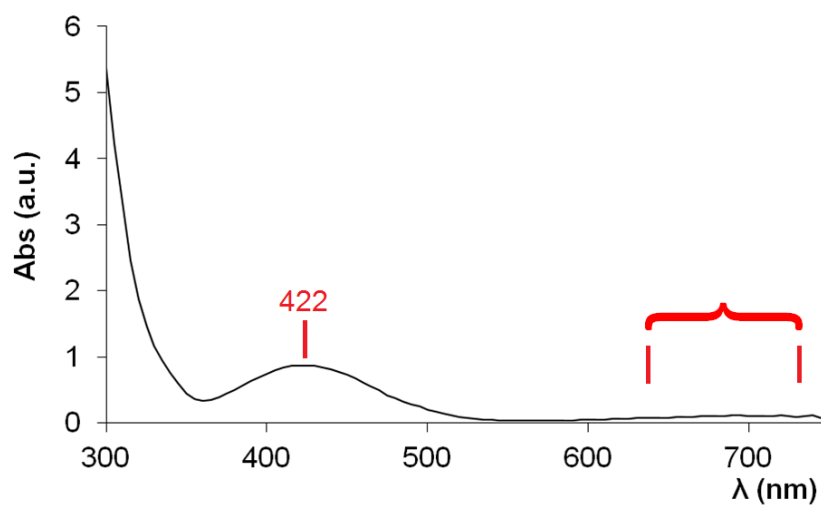


Figure S3. Solid-state CD spectrum of the other enantiomer of **1- Δ**

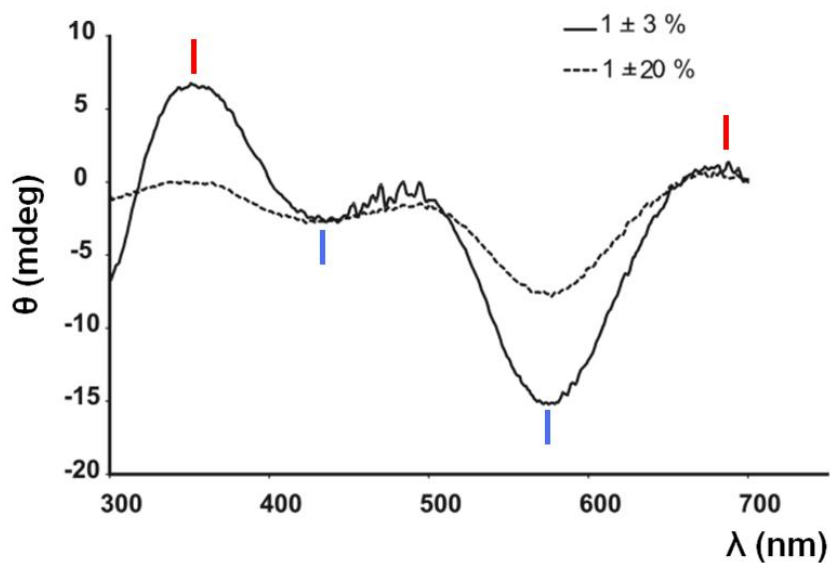


Figure S4 Solution CD spectrum of **1** (1×10^{-3} M in methanol)

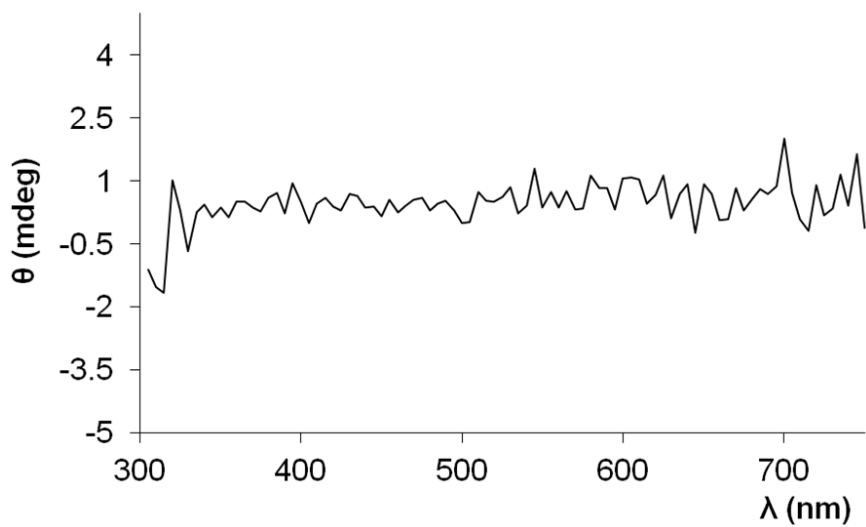


Figure S5. Solution CD spectrum of **2** (1×10^{-3} M in methanol)

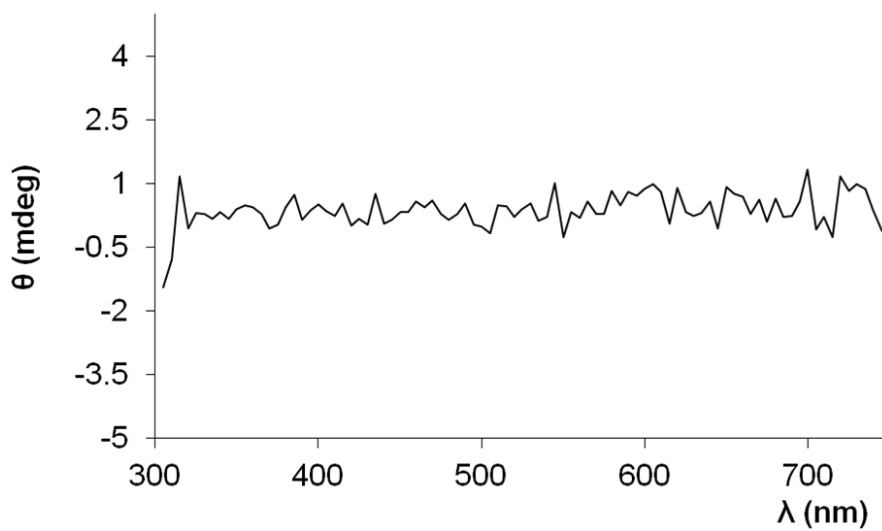


Figure S6. Solution (A) and solid-state (B) UV-Vis spectra of **2**

