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Supporting Information

## **Folded Discotic Dimers**

Kevin J. A. Bozek and Vance E. Williams Department of Chemistry Simon Fraser University



Figure S1:  $^{1}$ H-NMR spectra (400 MHz) in CDCl<sub>3</sub> of **2** (a) 0.002 M (b) 0.00141 M (c) 0.000141 M







Figure S4: <sup>1</sup>H-NMR spectra (400 MHz) in benzene-d6 of **2** 



Figure S6:  $^{\rm 13}\text{C-NMR}$  spectra (150 MHz) in CDCl3 of 4



Figure S8: <sup>1</sup>H-NMR spectra (400 MHz) in benzene-d6 of **4** 



Figure S9: <sup>1</sup>H-NMR spectra (400 MHz) in CDCl<sub>3</sub> of  $\bf{4}$ 



Figure S10: DSC Trace for **2** with a heating and cooling rate of 10 °C min<sup>-1</sup>



Figure S11: DSC Trace for **4** with a heating and cooling rate of 10 °C min<sup>-1</sup>



Figure S12: XRD trace of 4 at 178 °C



Figure S13: XRD trace of 4 at 170 °C



Figure S14: XRD trace of 2 at 166 °C



Figure S15: XRD trace of 2 at 190 °C

| Cmpd | Phase <sup>a</sup> | T/ °C $(\Delta H/J g^{-1})^b$ | Phase <sup>a</sup> |         |   |
|------|--------------------|-------------------------------|--------------------|---------|---|
| 2    | Cr                 | 96 (27)                       | Col <sub>h</sub>   | 205 (5) | Ι |
| 4    | Cr                 | 130 (72)                      | Col <sub>h</sub>   | 202 (9) | Ι |

Table S1: Phase behavior of **2** and **4**. <sup>a</sup> Cr = crystal,  $Col_h$  = hexagonal columnar, I = isotropic liquid. <sup>b</sup> Transition temperatures and enthalpies determined by DSC on first heating (scan rate = 10 °C min<sup>-1</sup>).

| Cmpd | Temp (°C) | d-spacings (Å) | Miller index (hkl)     | Phase (lattice constants) |
|------|-----------|----------------|------------------------|---------------------------|
| 2    | 166       | 17.1           | 100                    | Col <sub>h</sub>          |
|      |           | 3.55           | $\pi$ - $\pi$ stacking | (a = 19.7  Å)             |
| 4    | 178       | 17.5<br>3.55   | 100<br>π-π stacking    | $Col_h$<br>(a = 20.2 Å)   |

Table S2: X-ray diffraction data of 2 and 4