Supporting Information:

Colour selective organic photodetectors utilizing ketocyanine-cored dendrimers

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Figure S1. ^{1}H NMR (400 MHz) spectrum of dendrimer **3** showing additional peaks arising due to the presence of a minor stereoisomer.

Figure S2. ^{1}H NMR (400 MHz) spectrum of dendrimer **4** showing additional peaks arising due to the presence of a minor stereoisomer.

Figure S3. ^{1}H NMR spectrum of **1** showing the olefinic and aromatic signals of the predominant *EEEE* stereoisomer and the minor stereoisomer.

Figure S4. Crystal structure of the ketocyanine chromophore **1**: (a) front-on view, showing *EEEE*-configuration of olefinic bonds, and (b) side-on view showing the flat structure. Displacement ellipsoids are drawn at the 50% probability level. H-atoms are shown as small spheres of arbitrary radius.

Figure S5. The packing of **1** in the bulk crystal structure, viewed down the *a*-axis. The dashed lines indicate hydrogen bonds with the water molecules. Crystallographic data (excluding structure factors) for the structure reported have been deposited with the Cambridge Crystallographic Data Centre as supplementary publication no. CCDC-827474.

Figure S6. TGA curves of **1** before drying (red dashed line) and after drying (red line) at 200 ^{o}C under reduced pressure (10^{-2} mbar).

Figure S7. Current density-voltage (J-V) characteristics of compounds 1-4 in 1:1 blends (by weight) with $PC_{60}BM$ under illumination (dotted line) and in dark (solid line).

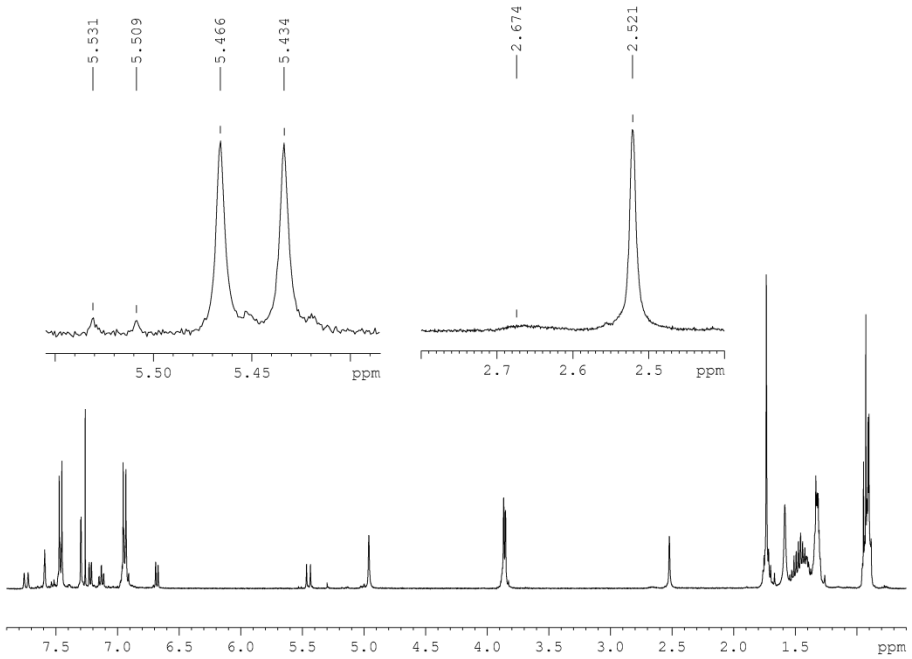


Figure S1. ^{1}H NMR (400 MHz) spectrum of dendrimer **3** showing additional peaks arising due to the presence of a minor stereoisomer.

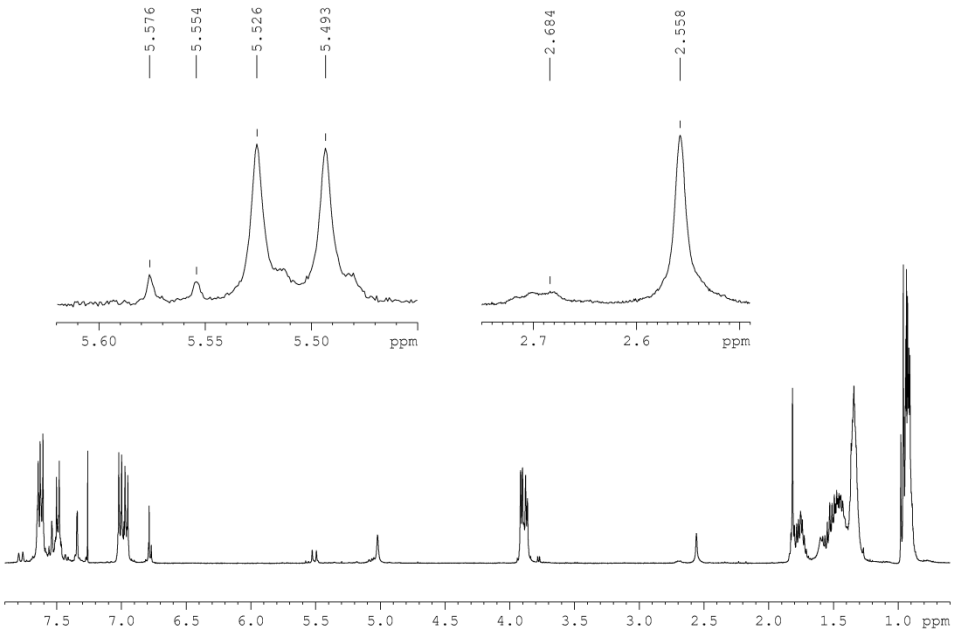


Figure S2. ^{1}H NMR (400 MHz) spectrum of dendrimer **4** showing additional peaks arising due to the presence of a minor stereoisomer.

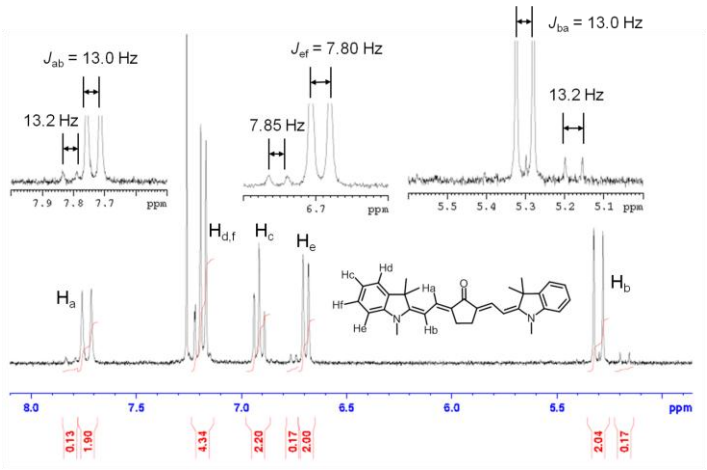
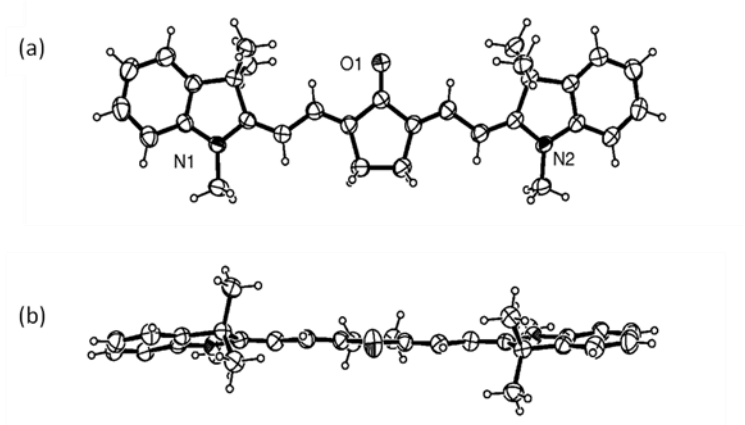


Figure S3. ^{1}H NMR spectrum of **1** showing the olefinic and aromatic signals of the predominant *EEEE* stereoisomer and the minor stereoisomer.



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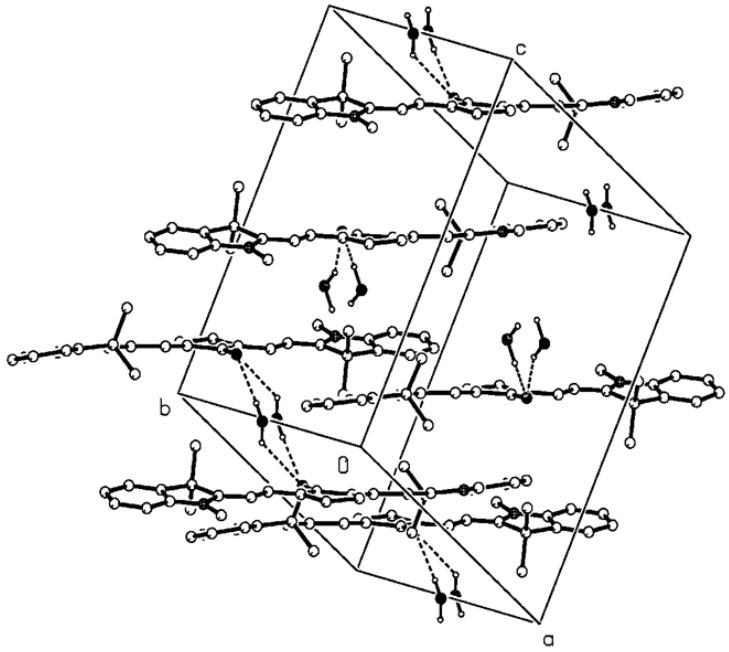

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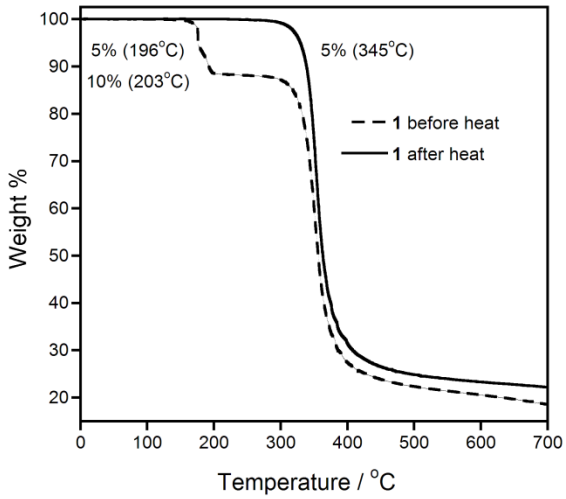

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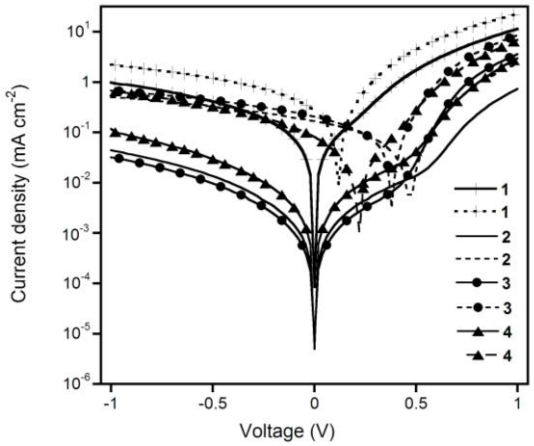

Figure S7. Current density-voltage (J-V) characteristics of compounds **1**-**4** in 1:1 blends (by weight) with $PC_{60}BM$ under illumination (dotted line) and in dark (solid line).