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# **Electronic Supporting information for**

## Fabrication of circular polarized luminescent helical fibers from

### chiral phennanthro[9,10]imidazole derivatives

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#### **Experimental Section**



Scheme S1 The synthesis route of PPI-Ala.



Fig. S1 <sup>1</sup>H NMR spectrum of 3 in DMSO-d<sub>6</sub>.



Fig. S2  $^{\rm 13}{\rm C}$  NMR spectrum of PIM-COOH in DMSO-d\_6. The solvent peaks are marked with

asterisk



Fig. S3 <sup>1</sup>H NMR spectrum of 2 in CDCl<sub>3</sub>.



Fig. S4 <sup>13</sup>C NMR spectrum of 2 in CDCl<sub>3</sub>. The solvent peaks are marked with asterisk.



Fig. S5 <sup>1</sup>H NMR spectrum of PIM-L-Ala in DMSO-d<sub>6</sub>. The solvent peaks are marked with

asterisk.



Fig. S6 <sup>13</sup>C NMR spectrum of PIM-L-Ala in DMSO-d<sub>6</sub>. The solvent peaks are marked with

asterisk.



Fig. S7 <sup>1</sup>H NMR spectrum of PIM-D-Ala in DMSO-d<sub>6</sub>. The solvent and water peaks are marked with asterisks.



Fig. S8  $^{13}$ C NMR spectrum of PIM-D-Ala in DMSO-d<sub>6</sub>. The solvent peaks are marked with

asterisk.



Fig. S9 DSC thermolgram of PIM-Ala at a scan rate of 10 °C/min recorded with DSC-200F3 (NETZSCH, Germany) under nitrogen.