

Harnessing the enantiomeric recognition ability of hydrophobic polymers of intrinsic microporosity (PIM) toward amino acids by converting them into hydrophilic polymer dots

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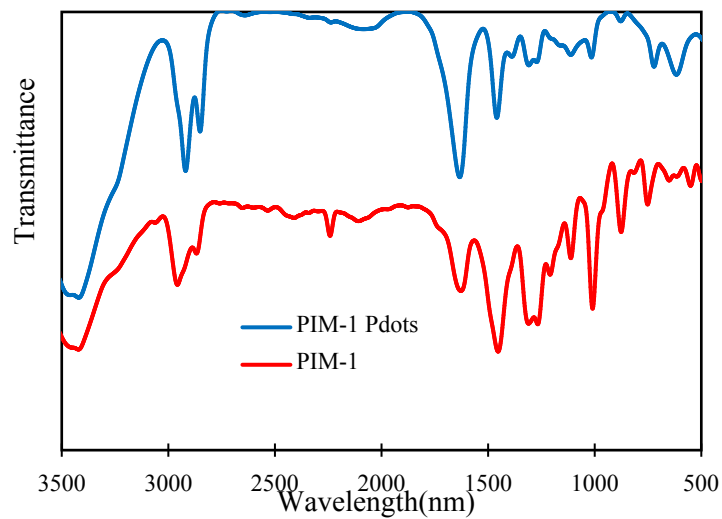


Fig. S1. FTIR spectra of PIM-1 and Pdots prepared from PIM-1.

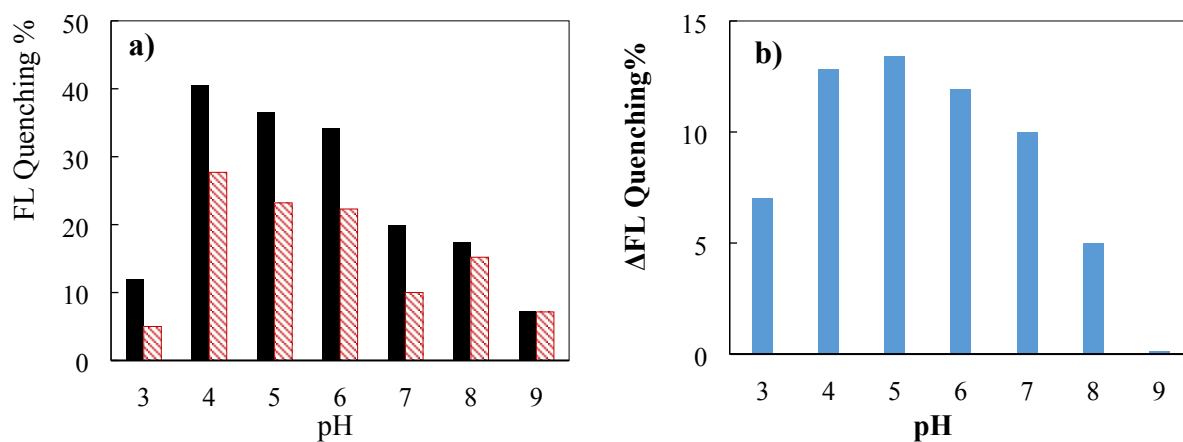


Fig. S2. a) Fluorescence quenching percentages of Pdots (4.0×10^{-4} mg ml⁻¹) in the presence of 100 μM D-Tyr (solid lines) and L-Tyr (dashed lines) enantiomers (in 10 mM general buffer solution). b) Difference between the fluorescence quenching percentages for L- and D-enantiomers.

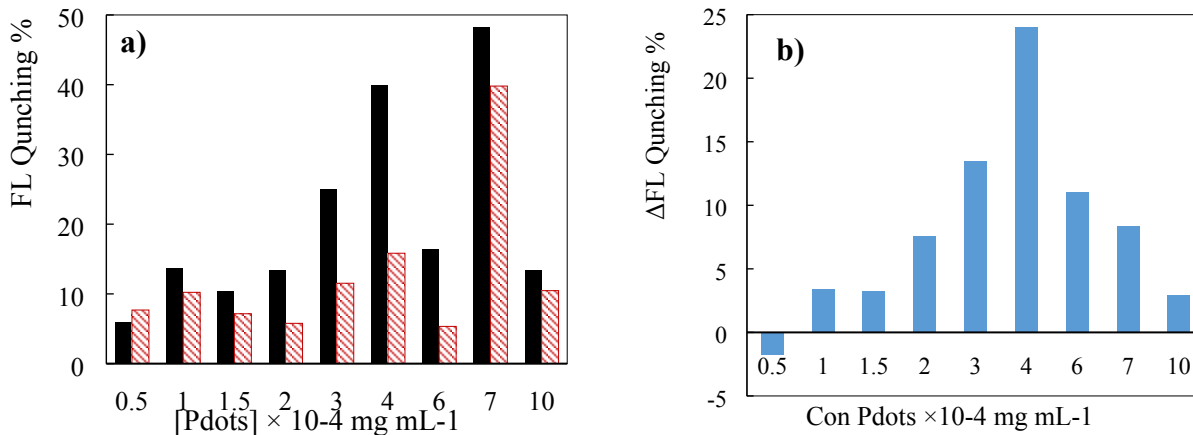


Fig. S3. a) Fluorescence quenching percentages of Pdots at concentrations 0.5, 1, 1.5, 2, 3, 4, 6, 7, and 10 × 10⁻⁴ mg mL⁻¹ in 10 mM general buffer solution with pH=5 in the presence of 100 μM D-Tyr (solid lines) and L-Tyr (dashed line) enantiomers. b) Difference between the fluorescence quenching percentages for different concentrations of Pdots.

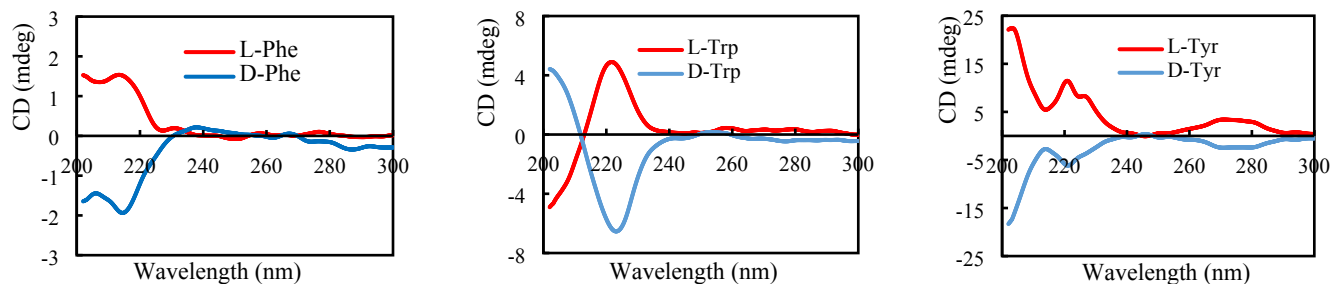


Fig. S4. CD spectra of 0.5 mM Phe, Trp, and Tyr enantiomers in water.

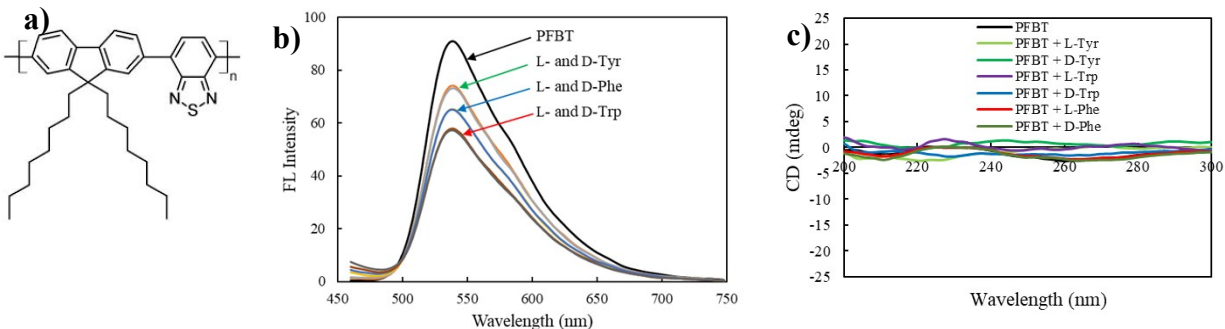


Fig. S5. a) Polymer structure of PFBT, b) fluorescence response of Pdots prepared from PFBT and PSMA to 100 μM of amino acid enantiomers, and c) CD spectra of Pdots prepared from PFBT and PSMA in the presence of 40 μM of amino acid enantiomers.

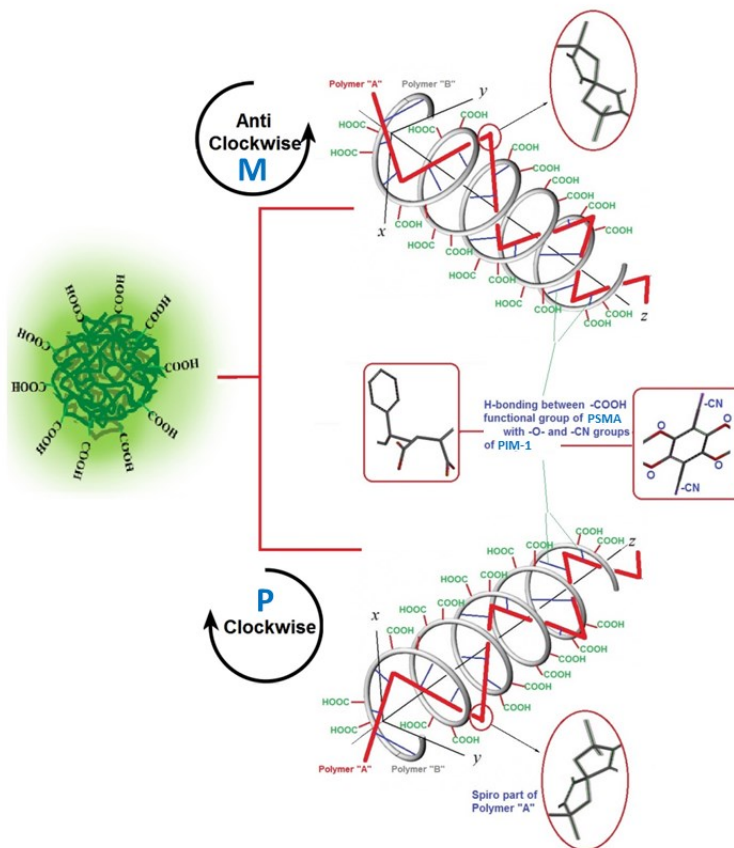


Fig. S6. Schematic presentation of the theoretically possible P (clockwise) and M (anticlockwise) helical structures from co-precipitation of achiral PSMA and racemic PIM-1.