

Supplementary Material (ESI) for Chemical Communications
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TITLE: Separation of stereoisomers of dinuclear metal complexes by binding affinity chromatography using non-duplex DNA

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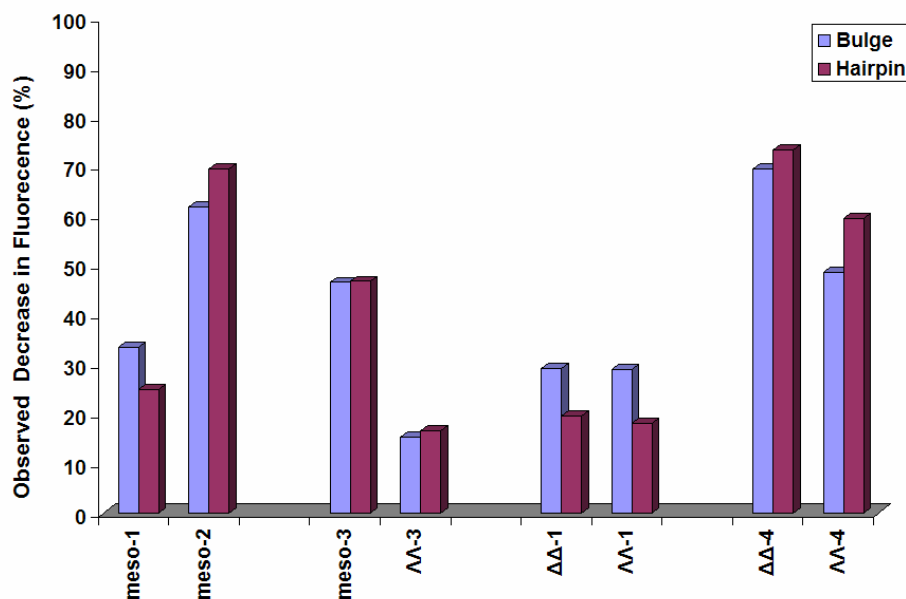


Fig. S1 Observed Fluorescent Intercalator Displacement (FID) induced by various metal complexes upon binding to bulge- and hairpin-containing oligonucleotides. **1** – $[\{\text{Ru}(\text{Me}_2\text{bpy})_2\}_2(\mu\text{-bpm})]^{4+}$; **2** – $[\{\text{Ru}(\text{phen})_2\}_2(\mu\text{-HAT})]^{4+}$; **3** – $[\{\text{Ru}(\text{bpy})_2\}_2(\mu\text{-HAT})]^{4+}$; **4** – $[\{\text{Ru}(\text{phen})_2\}_2(\mu\text{-2,3-dpp})]^{4+}$. As adapted from the method of Boger *et al.*, 20 μL of oligonucleotide (12 μM (base pairs) in 0.1 M Tris / 0.1 M NaCl buffer solution, pH 7.8) and 88 μL of ethidium bromide (6 μM in the same Tris buffer solution) were loaded in each cell of a 96-well plate. Using a plate reader, ten readings were taken on each cell ($\lambda_{\text{ex}} = 545 \text{ nm}$, $\lambda_{\text{em}} = 595 \text{ nm}$) at 25 $^\circ\text{C}$ to provide a 100% emission. The wells were subsequently loaded with an aliquot of the metal complex of interest (10 μL of a 1 mM solution in H_2O) and an additional 10 emission readings performed after 10 minutes incubation. Each system was measured in quadruplicate. The data was averaged and reported here as the extent of emission decrease observed upon addition of the metal complex.

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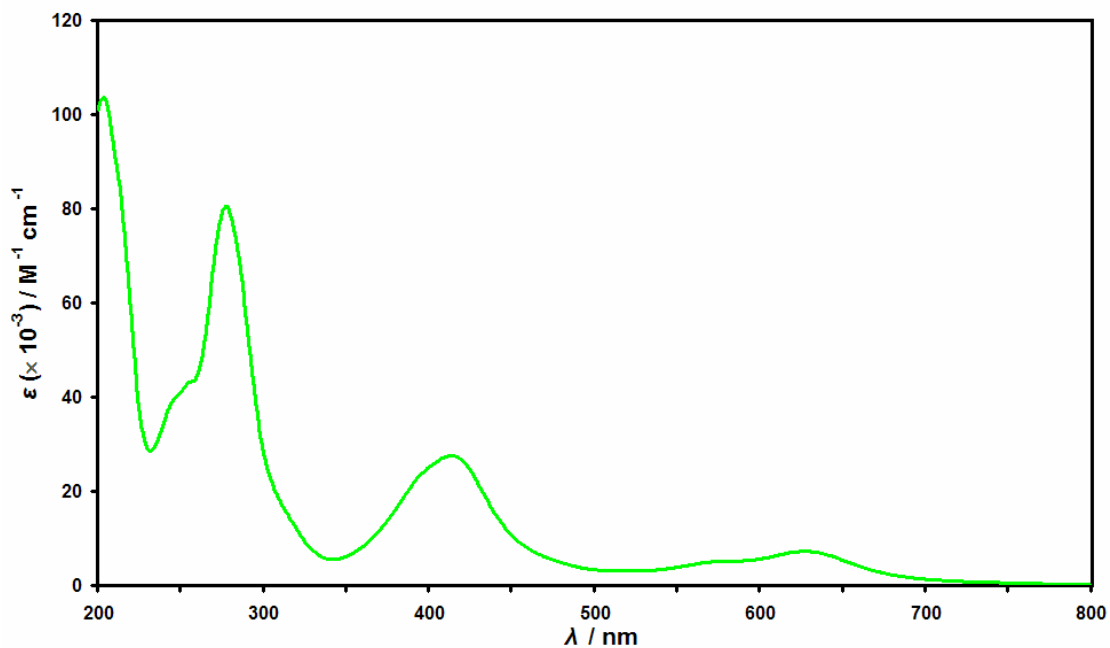


Fig. S2 UV/Visible absorption spectrum of $[\{\text{Ru}(\text{Me}_2\text{bpy})_2\}_2(\mu\text{-bpm})]\text{Cl}_4$ in 10 mM $\text{Na}_3\text{PO}_4/0.075 \text{ M}$ NaCl (pH 7.5) aqueous buffer solution.

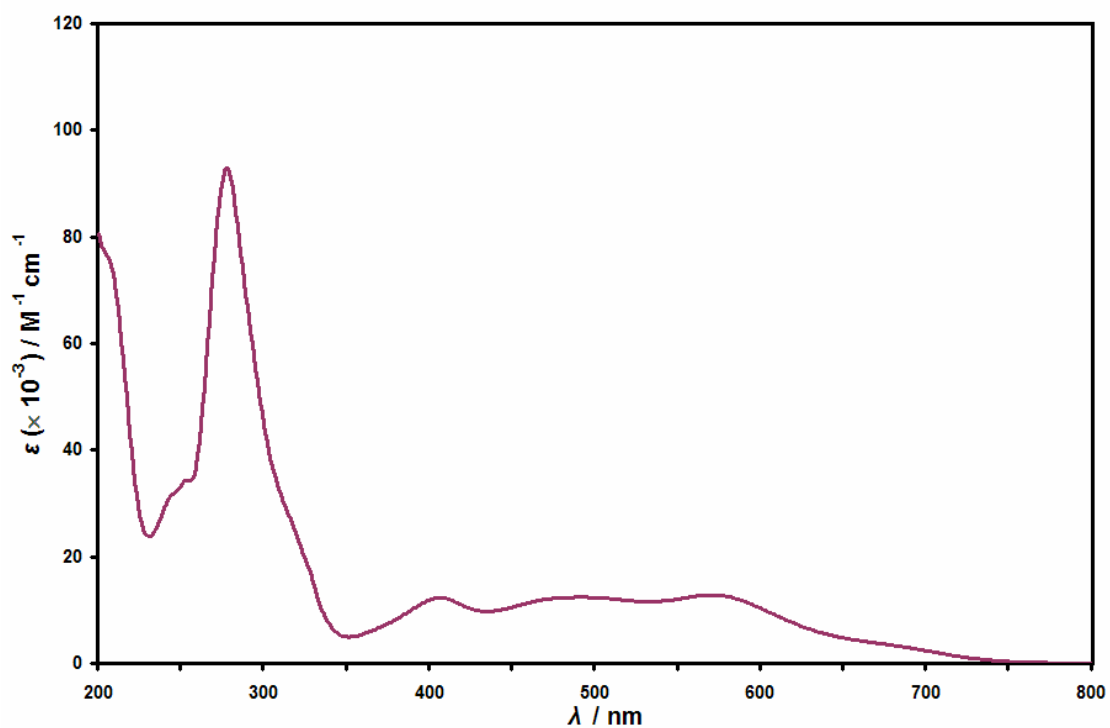


Fig. S3 UV/Visible absorption spectrum of $[\{\text{Ru}(\text{phen})_2\}_2(\mu\text{-HAT})]\text{Cl}_4$ in 10 mM $\text{Na}_3\text{PO}_4/0.075 \text{ M}$ NaCl (pH 7.5) aqueous buffer solution.

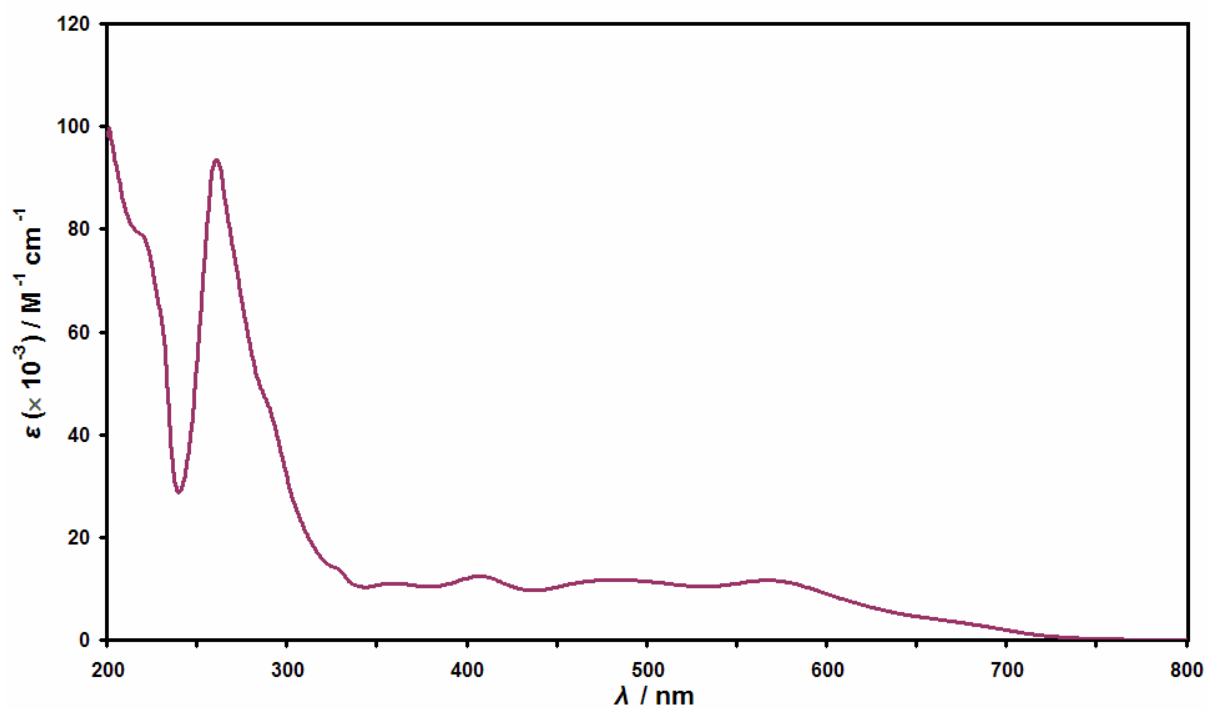


Fig. S4 UV/Visible absorption spectrum of $[\{\text{Ru}(\text{phen})_2\}_2(\mu\text{-HAT})]\text{Cl}_4$ in 10 mM $\text{Na}_3\text{PO}_4/0.075$ M NaCl (pH 7.5) aqueous buffer solution.

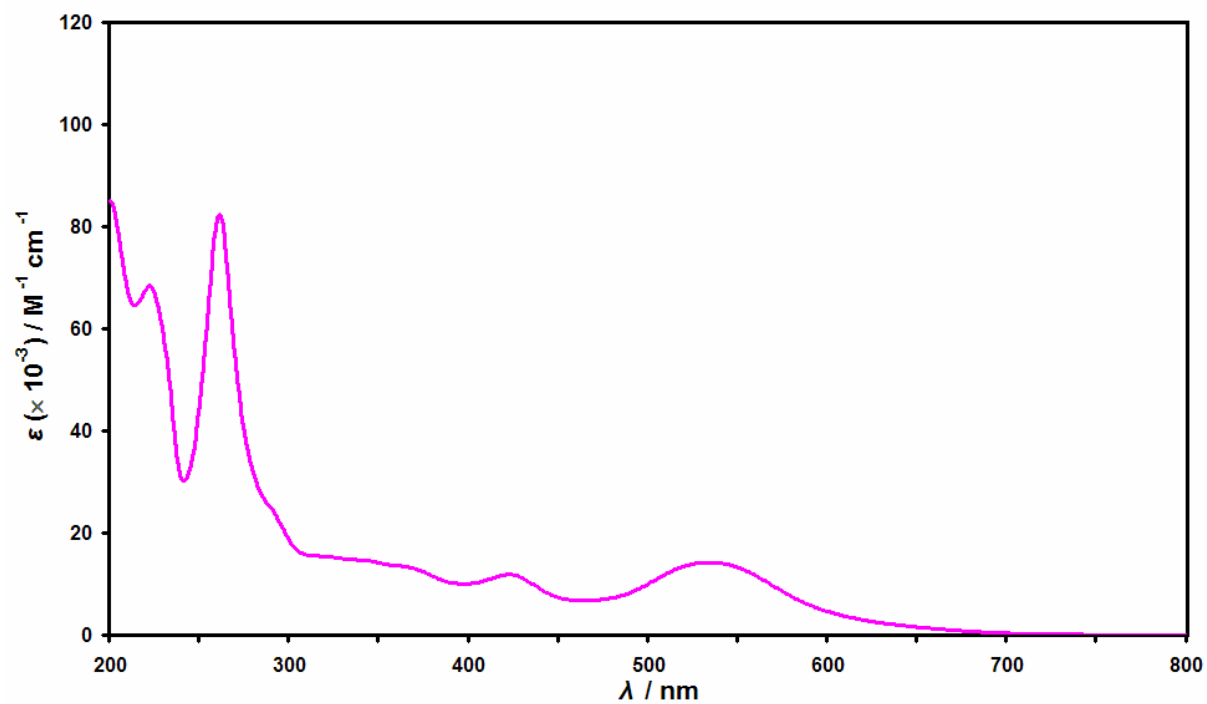


Fig. S5 UV/Visible absorption spectrum of $[\{\text{Ru}(\text{phen})_2\}_2(\mu\text{-2,3-dpp})]\text{Cl}_4$ in 10 mM $\text{Na}_3\text{PO}_4/0.075$ M NaCl (pH 7.5) aqueous buffer solution.