

Electronic Supplementary Information

Columnar discotic Pt(II) metallomesogens as luminescence multifunctional materials with chemo and thermosensor abilities

Cristián Cuerva^a, José A. Campo^a, Paloma Ovejero^a, M. Rosario Torres^b, Elisabete Oliveira^{c,d}, Sérgio M. Santos^e, Carlos Lodeiro^{*c,d} and Mercedes Cano^{*a}

^a Departamento de Química Inorgánica I, Facultad de Ciencias Químicas, Universidad Complutense, E-28040 Madrid, Spain. ^b Laboratorio de Difracción de Rayos-X, Facultad de Ciencias Químicas, Universidad Complutense, E-28040 Madrid, Spain. ^c BIOSCOPE Group, REQUIMTE, Chemistry Department, Faculty of Science and Technology, University NOVA of Lisbon 2829-516 Monte da Caparica, Portugal. ^d ProteoMass Scientific Society, Rua dos Inventores, Madan Park, 2825-182 Caparica, Portugal. ^e Department of Chemistry and CICECO, University of Aveiro, Campus de Santiago, 3810-193 Aveiro, Portugal.

E-mail: ^a mmcano@ucm.es,

^{c,d} cle@fct.unl.pt

Table S1. Selected bond distances (Å) and angles (°) for [Pt(pz^{R(8,8)py})₂] **b8**.

Pt – N1	1.975(9)	N1 – Pt – N3	79.6(4)
Pt – N3	2.033(9)	N1 – Pt – N4	179.0(4)
Pt – N3	1.976(10)	N1 – Pt – N6	100.2(4)
Pt – N3	2.018(9)	N3 – Pt – N4	99.5(4)
		N3 – Pt – N6	179.5(4)
		N4 – Pt – N6	80.8(4)

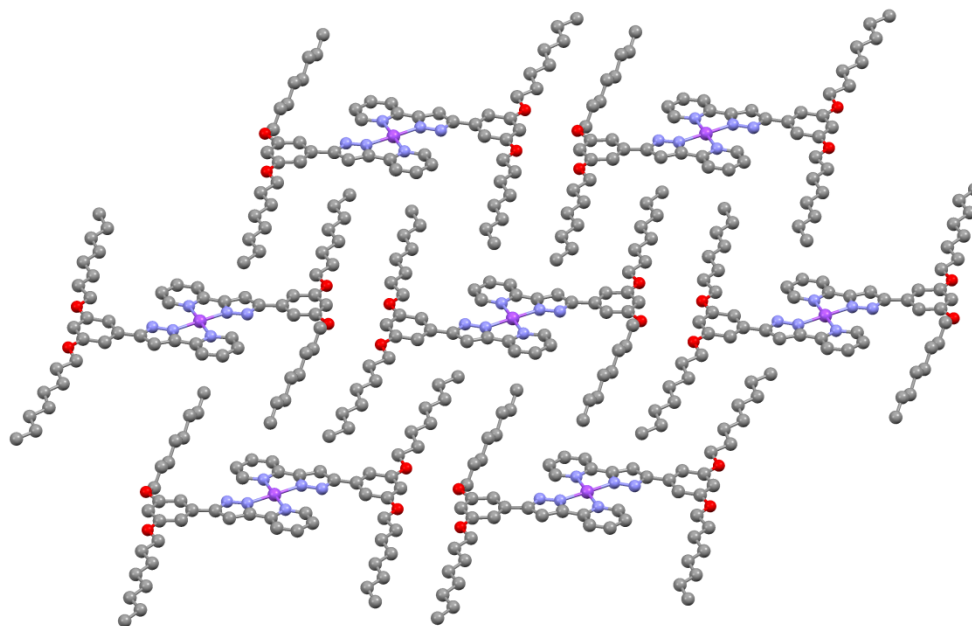


Figure S1. Packing of [Pt(pz^{R(8,8)py})₂] **b8** in the *bc* plane showing high interdigitation

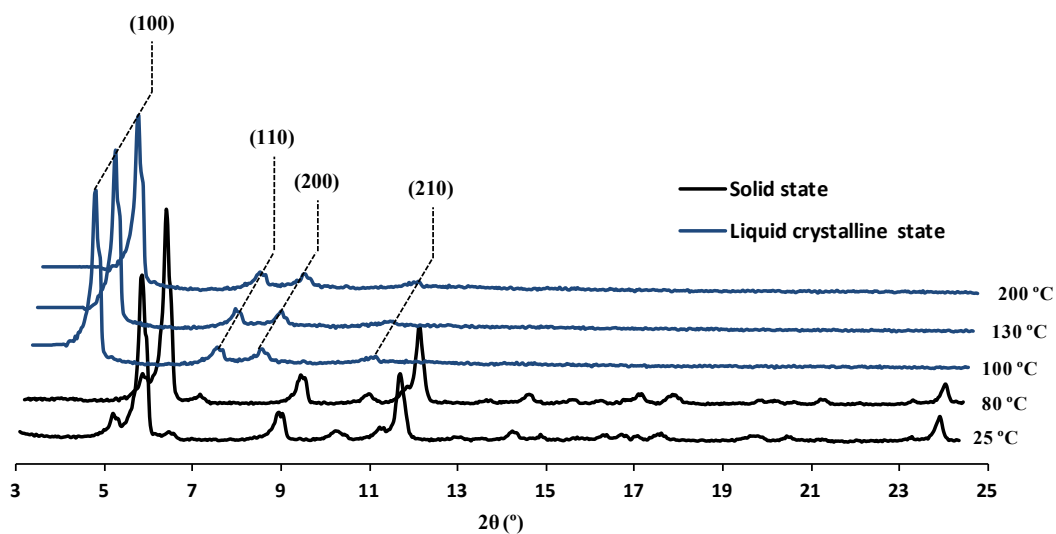


Figure S2. Powder XRD diffraction pattern for Pt(II) compound **b12** on heating

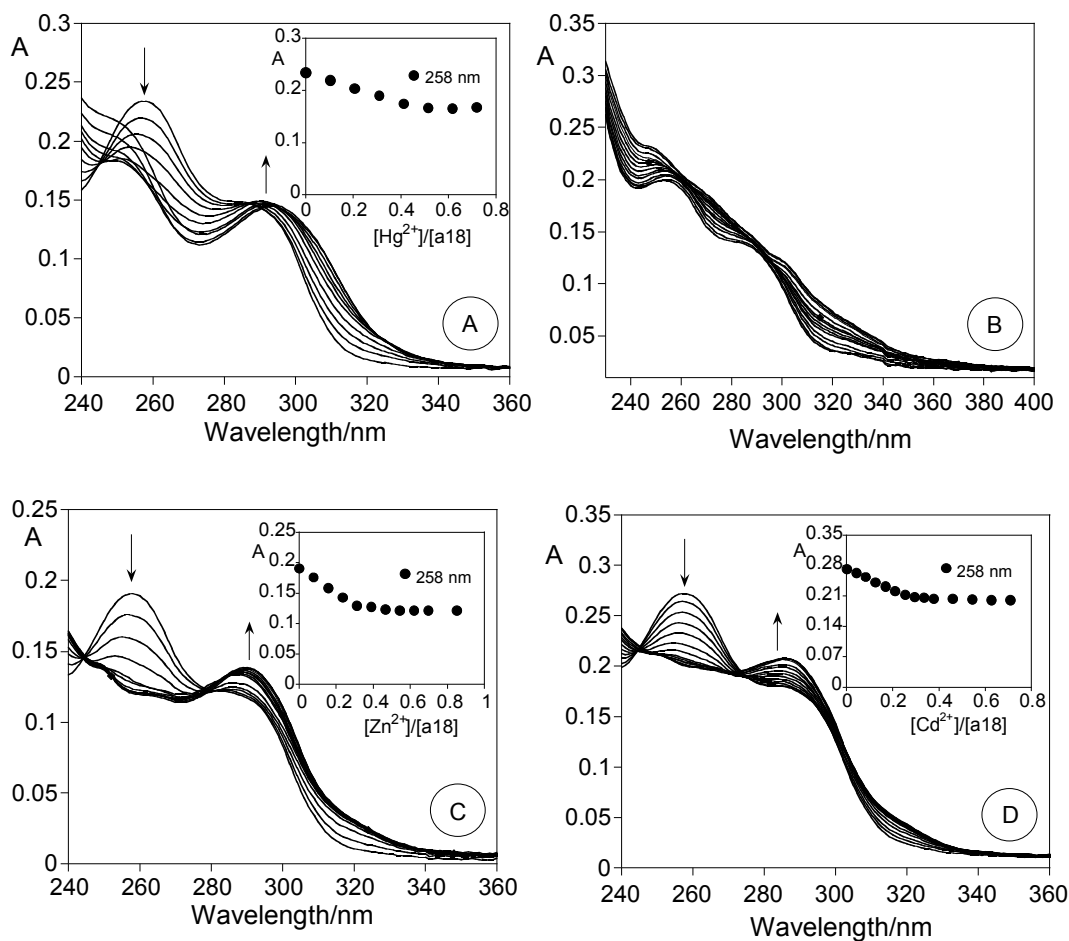


Figure S3. Absorption spectra titrations for $[\text{Hpz}^{\text{R}(18,18)\text{py}}] \mathbf{a18}$ in CH_2Cl_2 solution ($1 \times 10^{-5} \text{ M}$, $\lambda_{\text{exc}} = 286 \text{ nm}$) as a function of increasing amounts of $\text{Hg}(\text{NO}_3)_2$ (A), $[\text{Pd}(\text{CH}_3\text{CN})_4][\text{BF}_4]_2$ (B), $\text{Zn}(\text{BF}_4)_2$ (C) and $\text{Cd}(\text{CF}_3\text{SO}_3)_2$ (D). Insets show the absorption read as a function of $[\text{Hg}^{2+}]/[\mathbf{a18}]$ (A), $[\text{Zn}^{2+}]/[\mathbf{a18}]$ (C) and $[\text{Cd}^{2+}]/[\mathbf{a18}]$ (D).

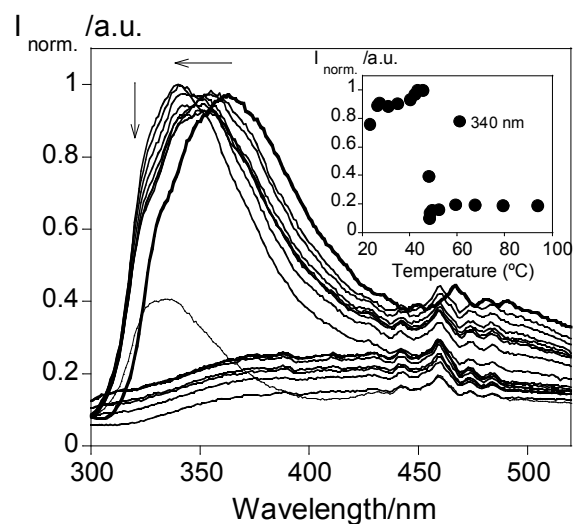


Figure S4. Fluorescence spectra of compound **a6** in solid state as a function of temperature (heating) in the range: 25-100°C. The inset represents the fluorescence intensity maximum of initial solid ($\lambda = 340$ nm) on heating.

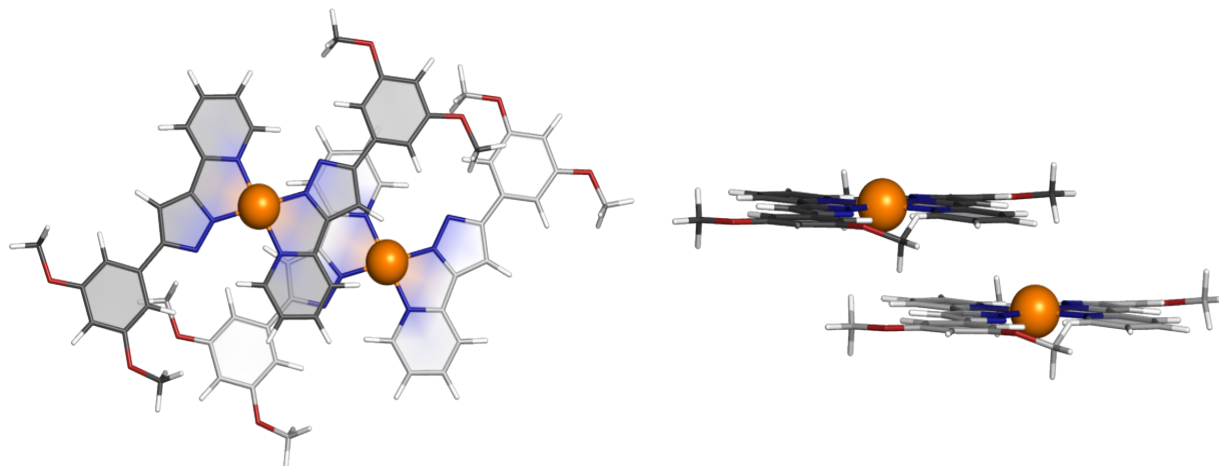


Figure S5. Simulated parallel-displaced conformation of platinum complexes

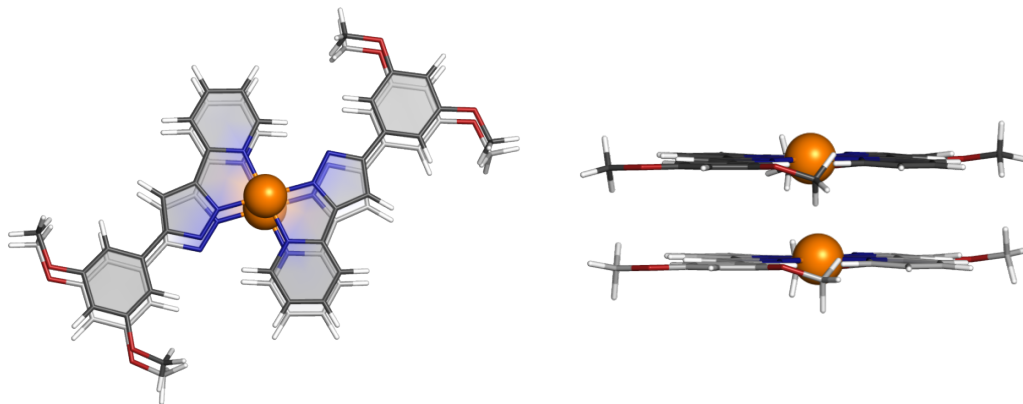


Figure S6. Simulated sandwich conformation of platinum complexes