Supplementary Information

Platinum(II) 1,10-phenanthroline complexes of acetylides containing redox-active groups

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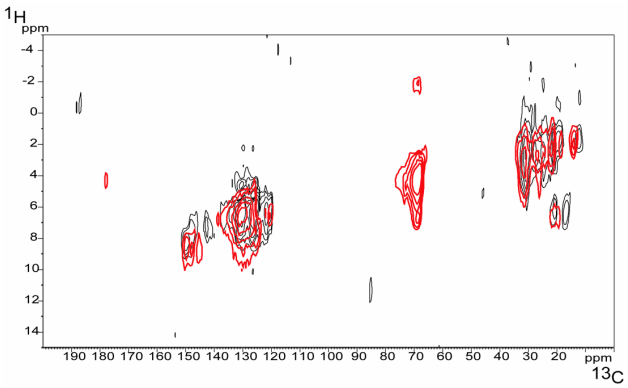

Fig. S1 Solid-state ^{1}H-^{13}C HETCOR NMR spectrum of [Pt(**1**)(C≡C-Ph)$_2$] (black) and [Pt(**1**)(C≡C-*p*-C$_6$H$_4$-C≡C-Fc)$_2$] (red).

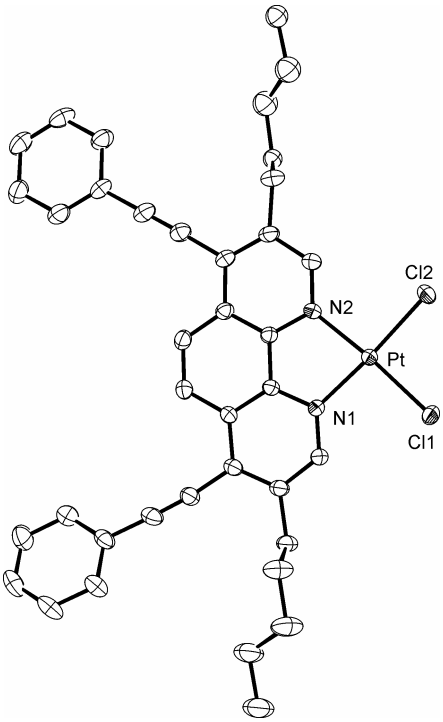

Fig. S2 ORTEP diagram of the molecular structure of [Pt(**1**)Cl_2]·2 $CHCl_3$ in the crystal. Displacement ellipsoids are drawn at the 30% probability level. H atoms and solvent molecules are omitted for clarity. Only one split layer of the disordered pentyl group is shown.

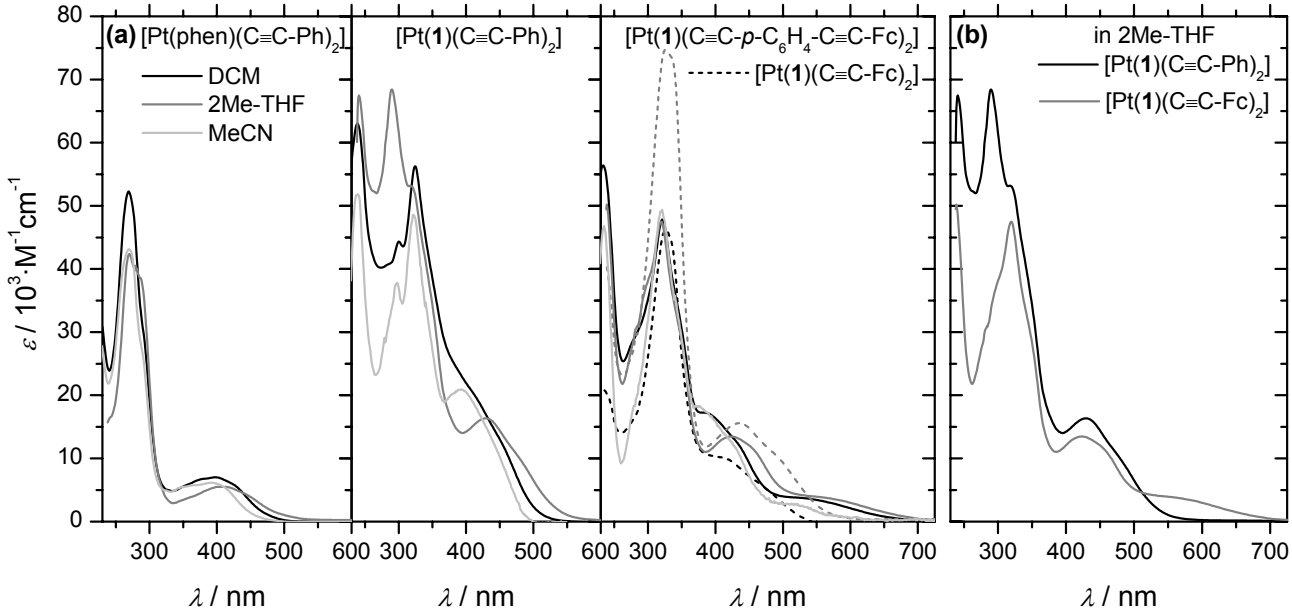

Fig. S3 Absorption spectra at room temperature of: (a) [Pt(phen)(C≡C-Ph)$_2$], [Pt(**1**)(C≡C-Ph)$_2$], [Pt(**1**)(C≡C-Ph-C≡C-Fc)$_2$] and [Pt(**1**)(C≡C-Fc)$_2$] in DCM, 2Me-THF and MeCN; (b) [Pt(**1**)(C≡C-Ph)$_2$] and its redox-functionalised analogue [Pt(**1**)(C≡C-Fc)$_2$] in 2Me-THF.

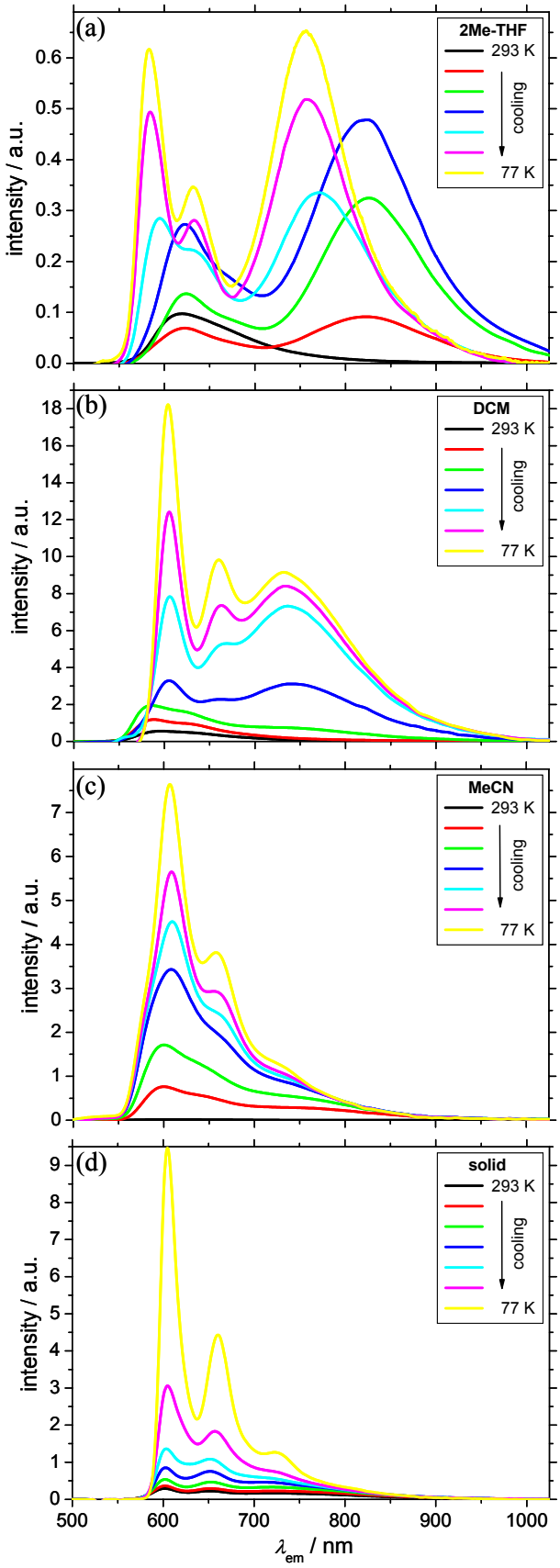

Fig. S4 Emission spectra upon shock-freezing of [Pt(**1**)(C≡C-Ph)$_2$] in different solvents and in microcrystalline form.

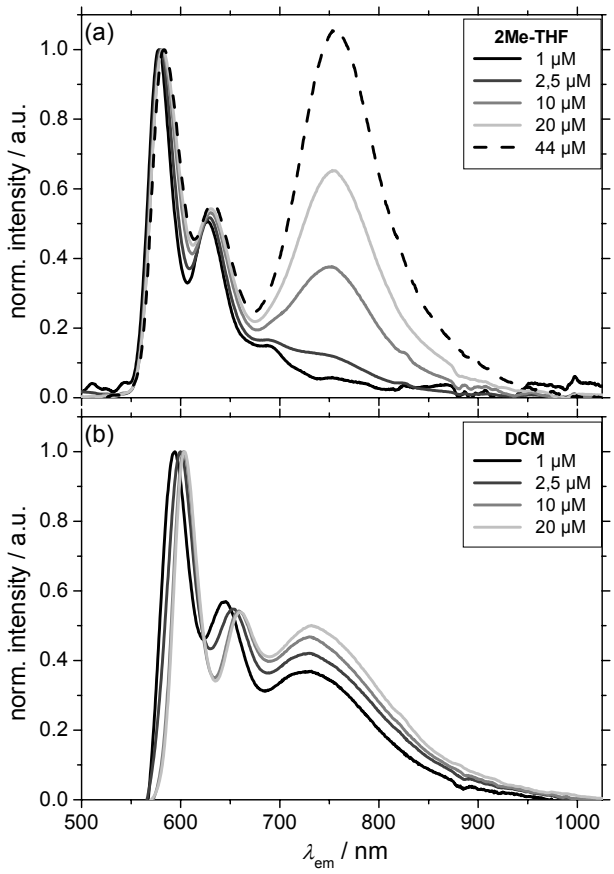

Fig. S5 Concentration dependence of normalised luminescence spectra of [Pt(**1**)(C≡C-Ph)$_2$] at 77 K in frozen glassy solution: (a) 2Me-THF; (b) DCM.