Supplementary Material (ESI) for Chemical Communications

Unprecedented formation of an acetamidate-bridged dinuclear platinum(II) terpyridyl complex – Correlation of luminescence properties with the crystal forms and dimerization studies in solution

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Supplementary Information

Characterization:

1: Yield: 80 %. ^{1}H NMR (400 MHz, acetone-d_6, 298 K, relative to Me_4Si): δ 9.03 (d with Pt satellite, J = 5.5 Hz, J_{Pt-H} 40 Hz, 2 H, trpy), 8.84 (d with Pt satellite, J = 5.5 Hz, J_{Pt-H} 40 Hz, 2H, trpy), 8.68 (m, 2 H, trpy), 8.52 (d, 12 H, trpy), 7.93 (m, 2 H, trpy), 7.87 (m, 2 H, trpy), 2.87 (s, 3 H, CH_3); positive FAB–MS: *m/z* 1212 $[M - OTf]^+$, 1063 $[M - 2OTf]^+$, 914 $[M - 3OTf]^+$; elemental analyses calcd for $C_{35}H_{26}F_9N_7O_{10}Pt_2S_3$ (found): C 30.86 (30.63), H 1.91 (1.85), N 7.20 (7.00).

Table S1 Photophysical data for **1**.

Complex	Medium (T[K])	Absorption	Emission
		λ_{max} [nm] (ε_{max}[dm^{3}mol^{-1}cm^{-1}])[a]	λ_{max} [nm] (τ_o[μs])
1	MeCN (298)	326 (23710), 338 (29305), 366 (5840), 386 (4090), 426 (1510), 458 (1090), 478 (700)	597 (0.15), [788][b]
1-red	Solid (298)		690 (0.4)
	Solid (77)		762 (1.1)
1-dark	Solid (298)		750 (0.2)
	Solid (77)		805 (–[c])

[a] Concentration < 2×10^{-5} M
[b] New emission peak appeared when concentration > 1×10^{-3} M
[c] Not determined

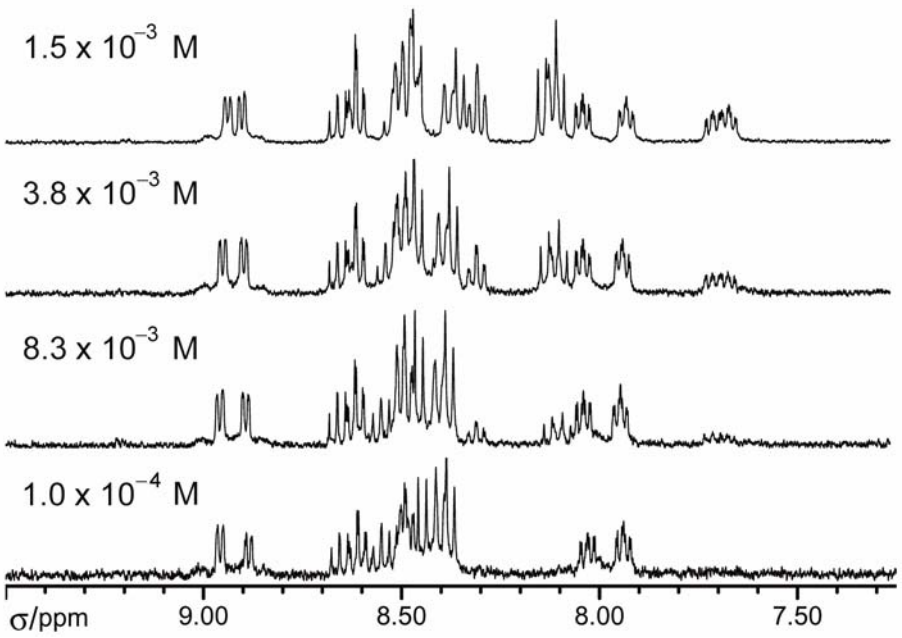

Figure S1

Figure S1 Concentration-dependent ^{1}H NMR spectra of **1** in CD_3CN at room temperature.

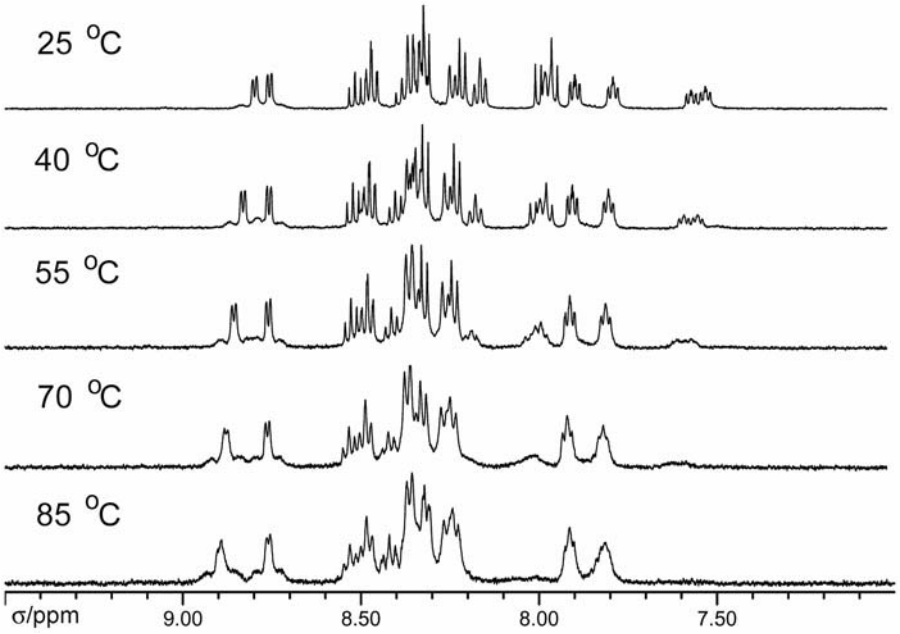

Figure S2

Figure S2 Variable-temperature ^{1}H NMR spectra of **1** in CD_3CN (conc. = 3.8×10^{-3}M)