Electronic Supplementary Information for Dalton Transactions

Supplementary Information: **Synthesis and cytotoxicity of dinuclear complexes containing ruthenium(II) bipyridyl units linked by a bis-pyridylimine ligand**

Ursula McDonnell, Jessica M.C.A. Kerchoffs, Rosa P.M. Castineiras, Anna C.G. Hotze, Matthew R. Hicks, Michael J. Hannon and Alison Rodger

1. Characterisations

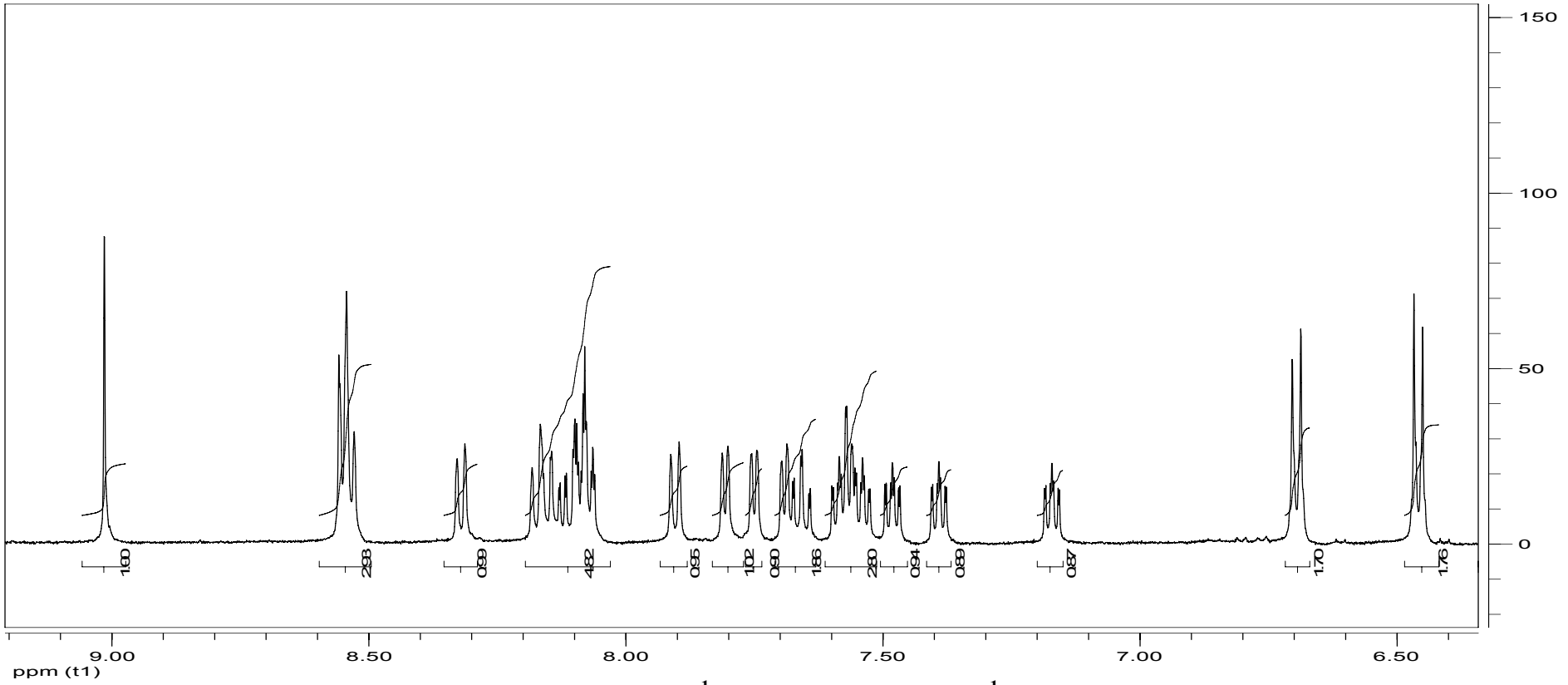

Figure SI.1 ^{1}**H-NMR (–)-[Ru$_2$(bpy)$_4$L^1](PF$_6$)$_4$**

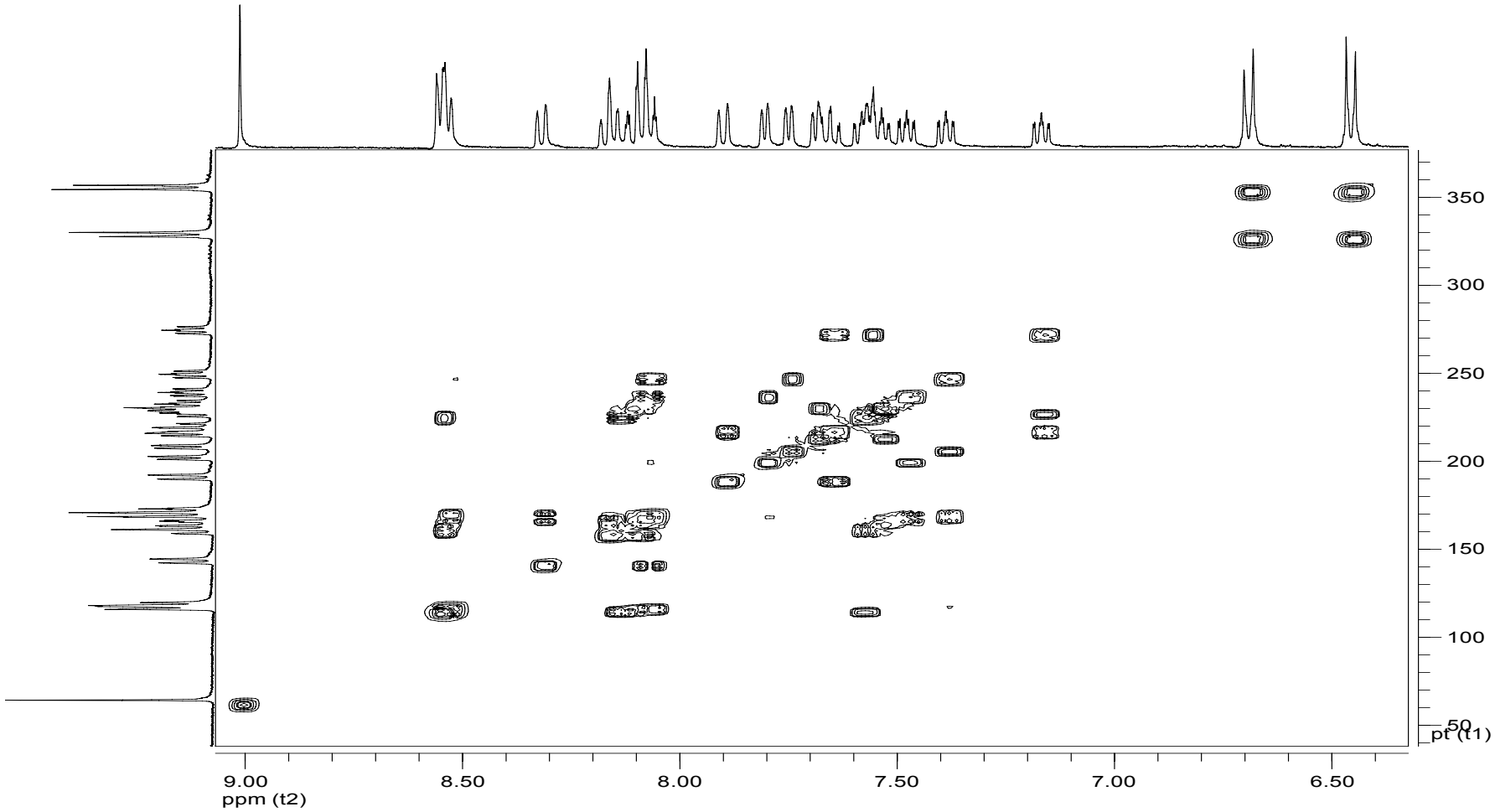

Figure SI.2 COSY (-)-$[Ru_2(bpy)_4L^1](PF_6)_4$

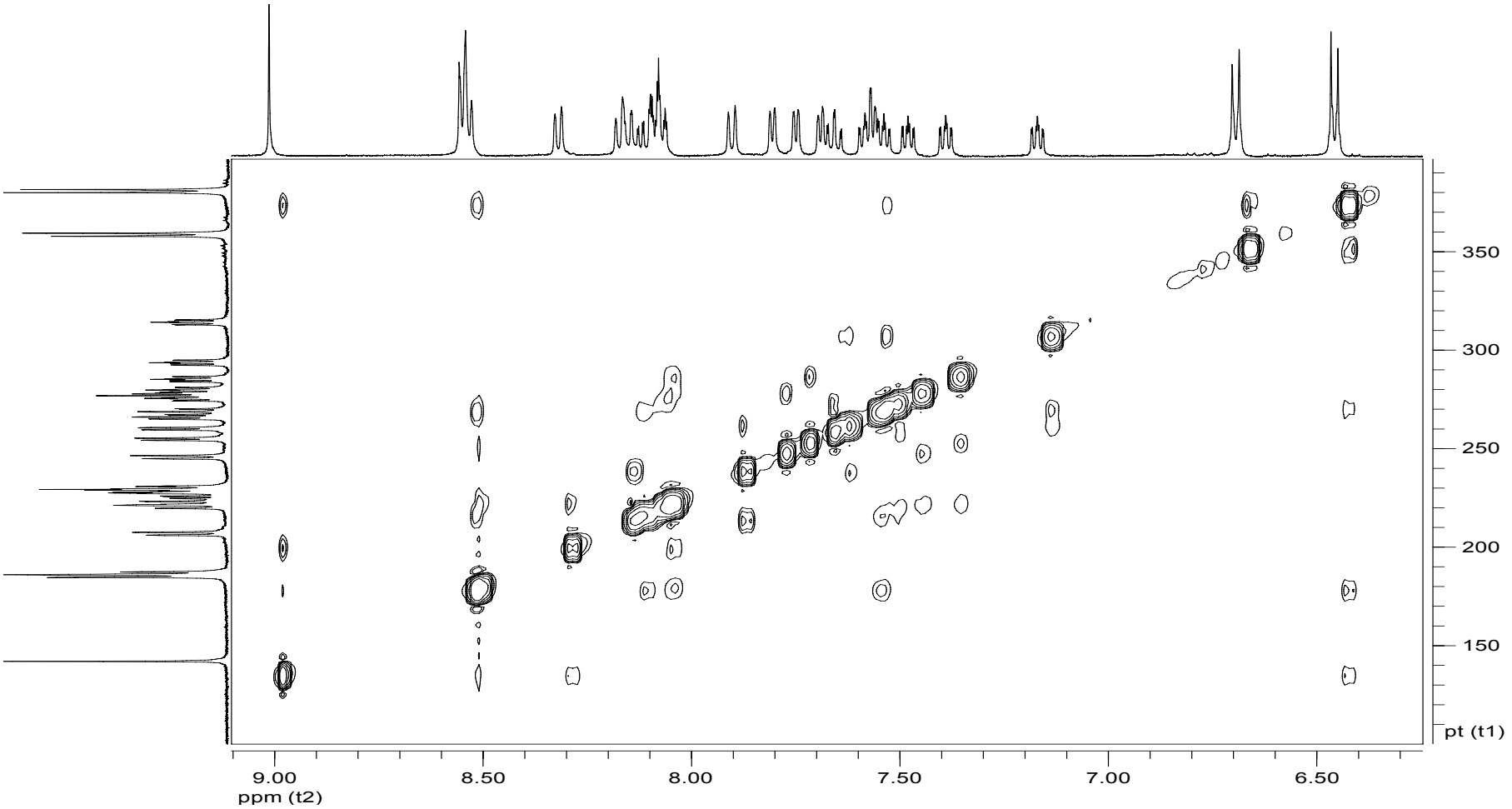

Figure SI.3 NOESY (-)-$[Ru_2(bpy)_4L^1](PF_6)_4$

2. Determination of extinction coefficient (ε)

(a) *(b)*

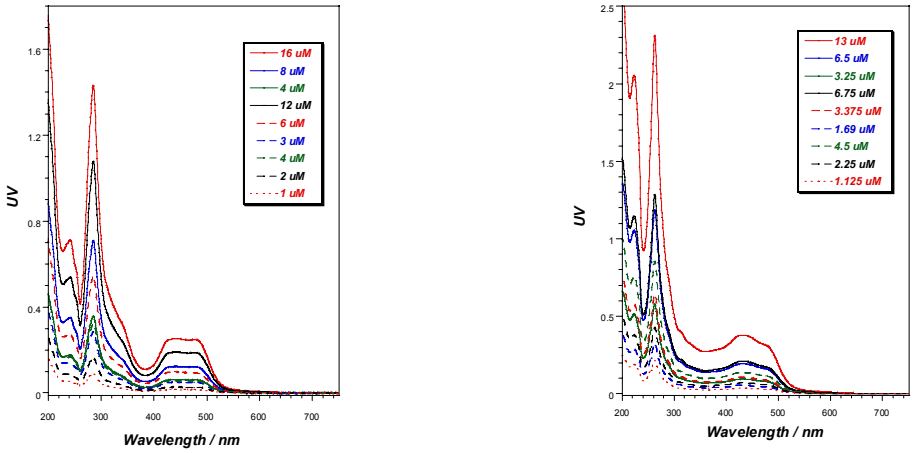

Figure SI.4 UV/visible absorbance data for the determination of ε for (a) rac-$[Ru_2(bpy)_4L^1]^{4+}$ and (b) $[Ru_2(phen)_4L^1]^{4+}$

(a) *(b)*

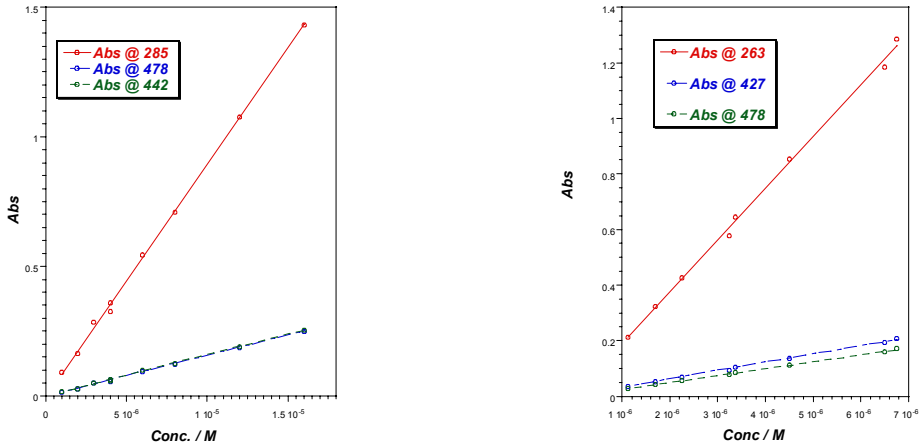

Figure SI.5 Absorbance versus concentration in the MLCT and in-ligand regions for (a) rac-$[Ru_2(bpy)_4L^1]^{4+}$ and (b) rac-$[Ru_2(phen)_4L^1]^{4+}$. Absorbance values above 2.5 were omitted. The slope of the plots is the extinction coefficient at the indicted wavelength.

3. *Stability studies*

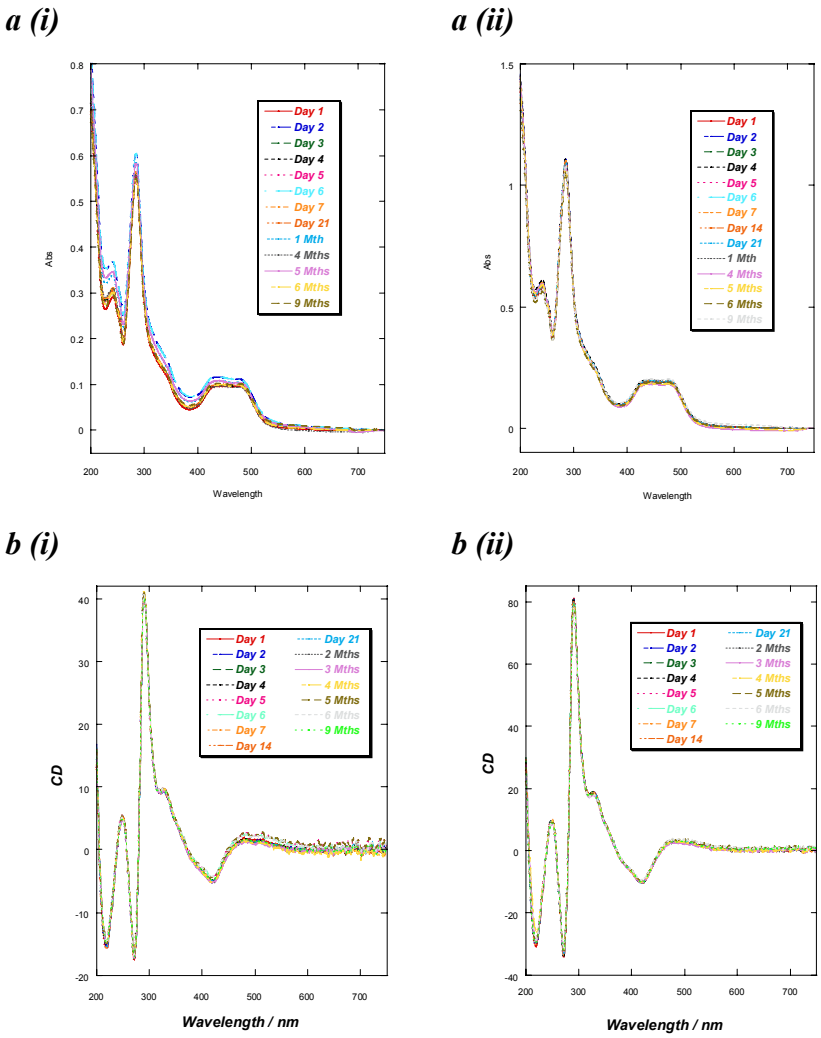

Figure SI.6 (a) UV/visible absorbance and (b) CD spectra of (+)-$[Ru_2bpy_4L]^{4+}$ (20 μM) stored in (i) the dark and (ii) the light as a function of time. The spectra were collected in a 1 cm and 0.5 cm path length cuvette.

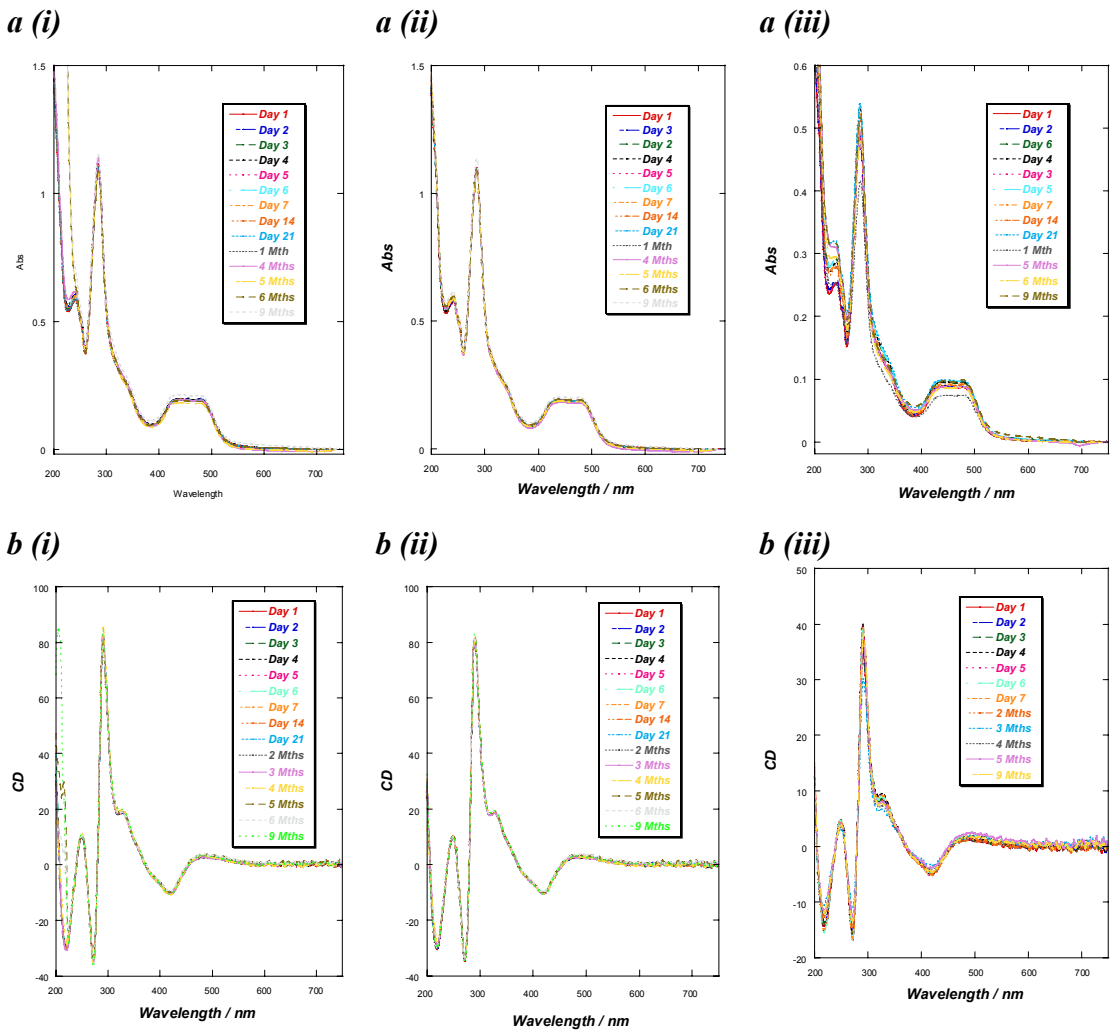

Figure SI.7 *(a) UV/visible absorbance and (b) CD spectra of (+)-$[Ru_2bpy_4L^1]^{4+}$ (20 μM) stored at (i) 4ºC, (ii) 37ºC, (iii)60ºC as a function of time. The spectra were collected in a 1 cm path length cuvette.*

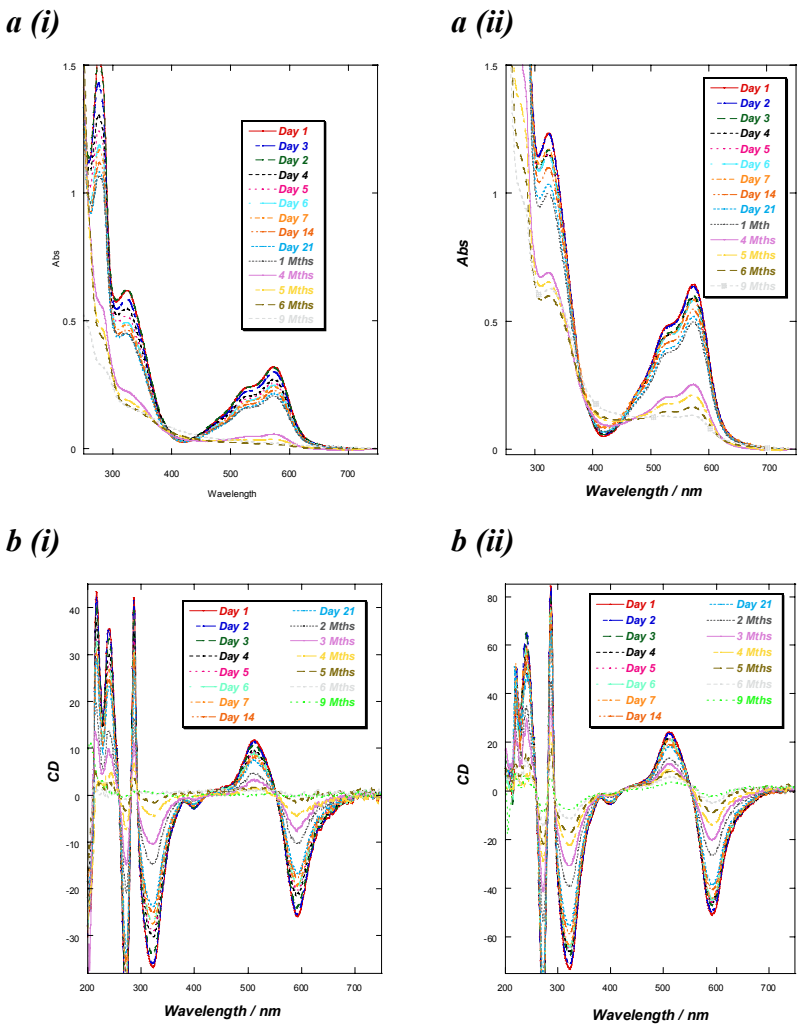

Figure SI.8 *(a) UV/visible absorbance and (b) CD spectra of (+)-$[Fe_2L^1_3]^{4+}$ (20 μM) stored in (i) the dark and (ii) the light as a function of time. The spectra were collected in a 1 cm path length cuvette.*

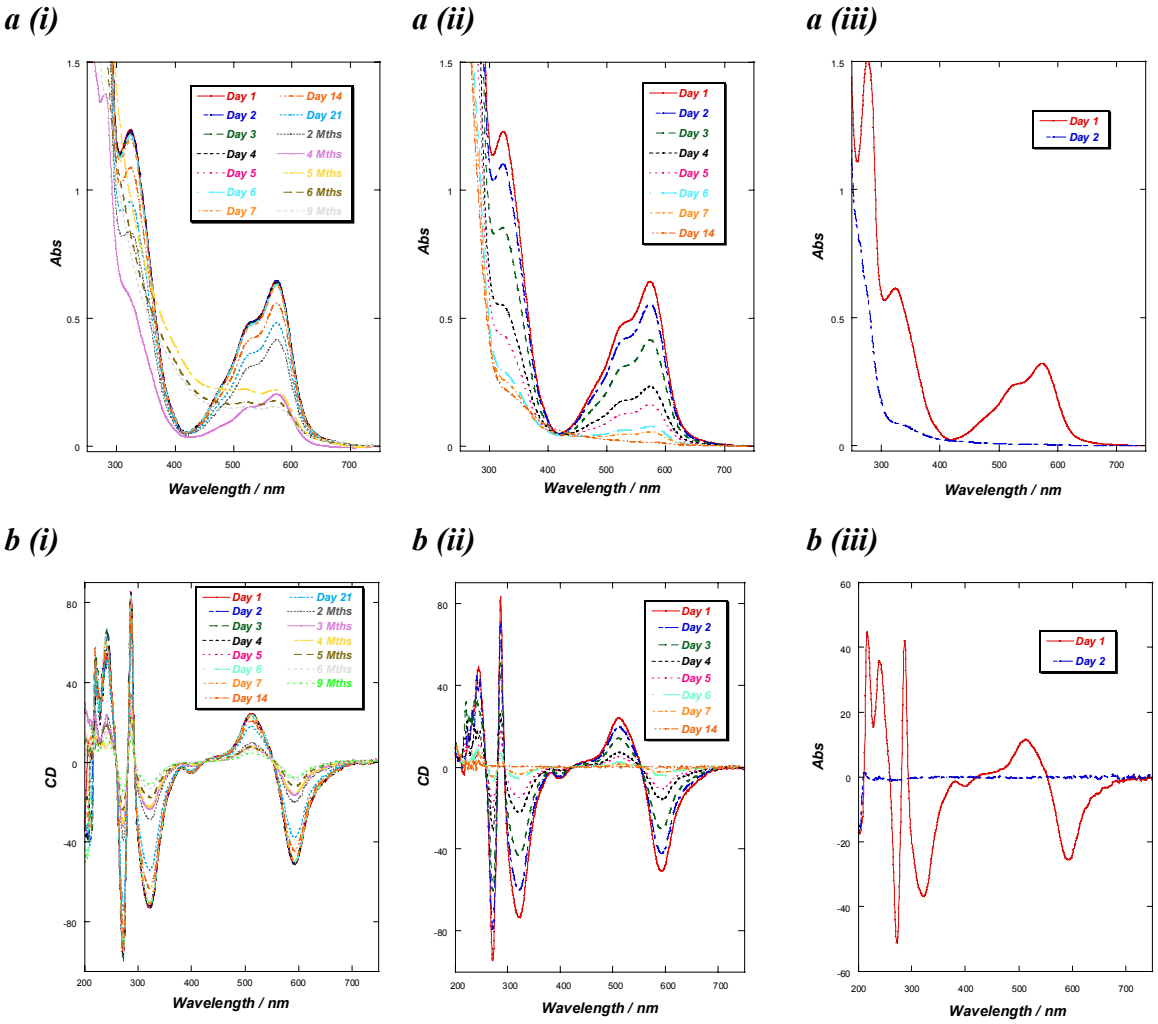

Figure SI.9 *(a) UV/visible absorbance and (b) CD spectra of (+)-$[Fe_2L^1_3]^{4+}$ (20 μM) stored at (i) 4ºC, (ii) 37ºC, (iii) 60ºC as a function of time. The spectra were collected in a 1 cm and 0.5 cm path length cuvette.*