

Energy Upconversion Sensitized by a Platinum(II) Terpyridyl Acetylide Complex

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Luminescent Lifetimes Measurements. Luminescence lifetimes were determined by time-resolved luminescent spectroscopy. The irradiation source was an Oriel nitrogen laser (Model 79111) with a 5 ns pulse width operating at approximately 25 Hz. The multi-line output of which was split into selected wavelength components (514.5 nm) using a diffraction grating in concert with several optics. The detector was an Andor Technologies Intensified CCD camera (1024 x 128 pixels) with an onboard delay generator and a minimum gate width of 5 ns operating in full vertical binning mode and triggered by a TTL prepulse from the nitrogen laser. 10-15 spectra at different delay times after the laser pulse were taken per lifetime measurement, the integrated intensities of which were fit to a single-exponential function. The detector was calibrated with a Hg(Ar)pencil-style calibration lamp.

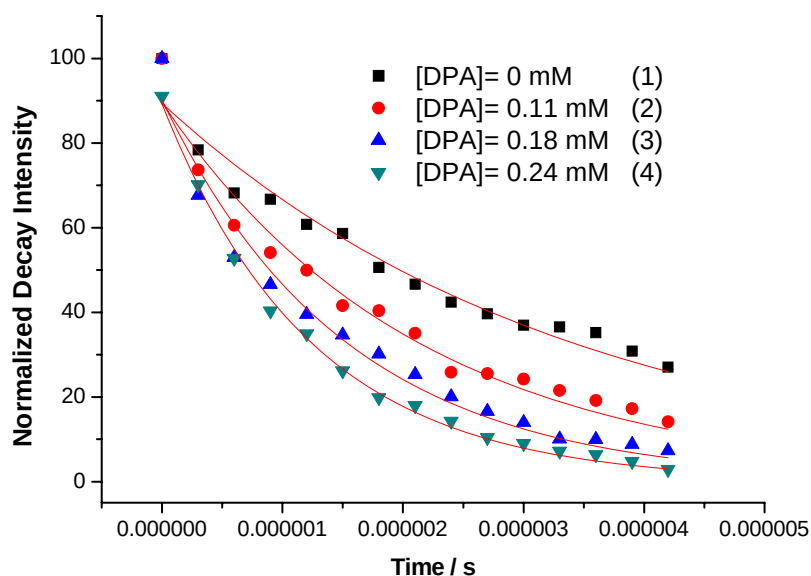


Figure S1. Luminescence decay of the platinum(II) terpyridine acetylide complex **1** (2.2×10^{-5} M) measured as a function of DPA concentration in aerated CH_2Cl_2 . (1). [DPA]= 0 mM, $\tau=4.8 \mu\text{s}$ (2). [DPA]= 0.11 mM, $\tau= 2.1 \mu\text{s}$ (3). [DPA]= 0.18 mM, $\tau= 1.5 \mu\text{s}$ (4). [DPA]= 0.24 mM, $\tau= 1.2 \mu\text{s}$