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_{2}Cl_{2}. (1).
[DPA]= 0 mM, \( \tau = 4.8 \mu s \) (2). [DPA]= 0.11 mM, \( \tau = 2.1 \mu s \) (3). [DPA]= 0.18 mM, \( \tau = 1.5 \mu s \) (4). [DPA]= 0.24 mM, \( \tau = 1.2 \mu s \)