

Domino-fluorination-protodefluorination enables decarboxylative cross-coupling of α -oxocarboxylic acids with styrene via photoredox catalysis

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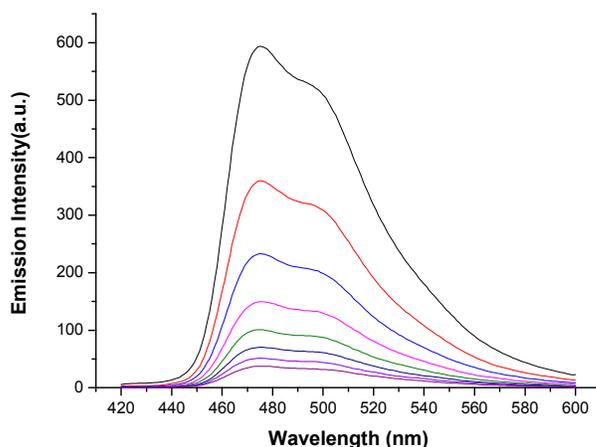
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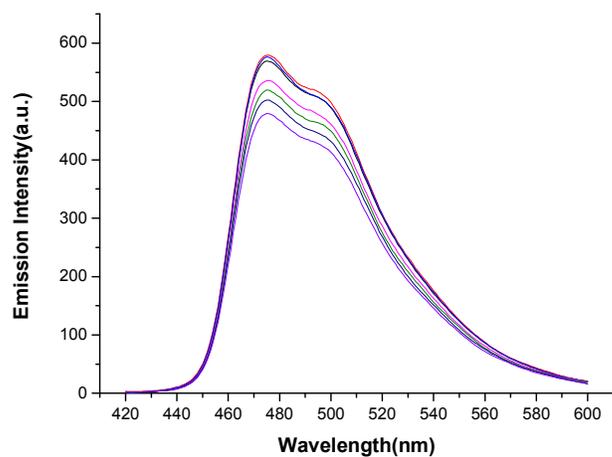
2. Copies of ¹H NMR, ¹³C NMR, ¹⁹F NMR Spectra.....S3

1. Luminescence quenching experiment

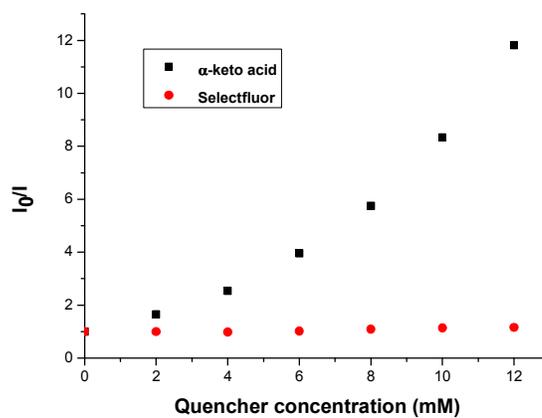
The luminescence quenching experiment was taken using a Cary Eclipse fluorescence spectrophotometer (Varian, USA). The experiments were carried out in 2.5×10^{-5} mol/L of $[\text{Ir}\{\text{dF}(\text{CF}_3)\text{ppy}\}_2\{\text{dtbbpy}\}]\text{PF}_6$ in $\text{CH}_3\text{CN}-\text{H}_2\text{O}$ (V/V, 1:1) at 25°C . The excitation wavelength was 350 nm and the emission intensity was collected at 475 nm. The concentrations of quenchers (α -keto acid **1** and Selectfluor) in $\text{CH}_3\text{CN}-\text{H}_2\text{O}$ were 0, 2, 4, 6, 8, 10, 12, 14mM.



Luminescence quenching of $[\text{Ir}\{\text{dF}(\text{CF}_3)\text{ppy}\}_2\{\text{dtbbpy}\}]\text{PF}_6$ by α -keto acid



Luminescence quenching of $[\text{Ir}\{\text{dF}(\text{CF}_3)\text{ppy}\}_2\{\text{dtbbpy}\}]\text{PF}_6$ by Selectfluor



$[\text{Ir}\{\text{dF}(\text{CF}_3)\text{ppy}\}_2\{\text{dtbbpy}\}]\text{PF}_6$ emission quenching with Selectfluor and benzoylformic acid.

2. Copies of ^1H NMR, ^{13}C NMR spectra

