Supplementary Material (ESI) for Chemical Communications

Supplementary Information

Evidence of multiple pathways capable of emitting peroxyoxalate chemiluminescence using a charge coupled device spectrometer

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Table 1 Comparison of background emission characteristics generated in ODI derivative CL reactions

	ODI[d]	*OD2MI*[d]	*OD2EI*[d]	*OD4MI*[d]	*OD2MI + OD4MI*[d]
I_{max}[a]	0.60	0.05	0.02	1.00	0.80
τ_{max}[b]	0.34	0.40	0.52	0.30	0.30
τ_{half}[c]	0.90	2.09	3.87	0.45	0.45

[a] Relative maximum background intensity for each experimental condition normalized by that observed for the OD4MI CL reaction. [b] Time to reach the maximum emission (sec).[C] half-life of the decay (sec). [d] ODI derivatives formed from the reaction between TCPO and ImH derivatives for 90 seconds at room temperature (21 ± 2.0 °C). Reaction condition: [TCPO] = 1.0 mM, [ImH derivative] = 10.0 mM, [H_2O_2] = 0.1 M in the mixture of 50% acetonitrile + 50% ethyl acetate. Background emissions were measured with PTI with photo-multiplier tube.

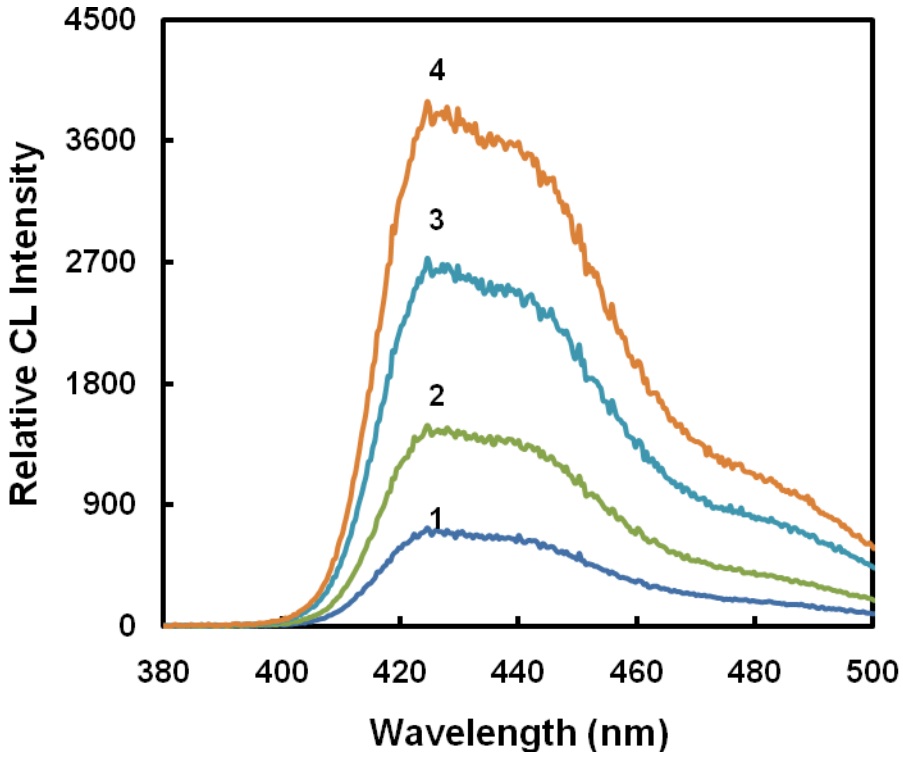

Fig. S-1. CL spectra observed in ODI derivative CL reactions.
1. OD2EI-CL, **2**. OD2MI-CL , **3**. ODI-CL, **4**. OD4MI-CL.

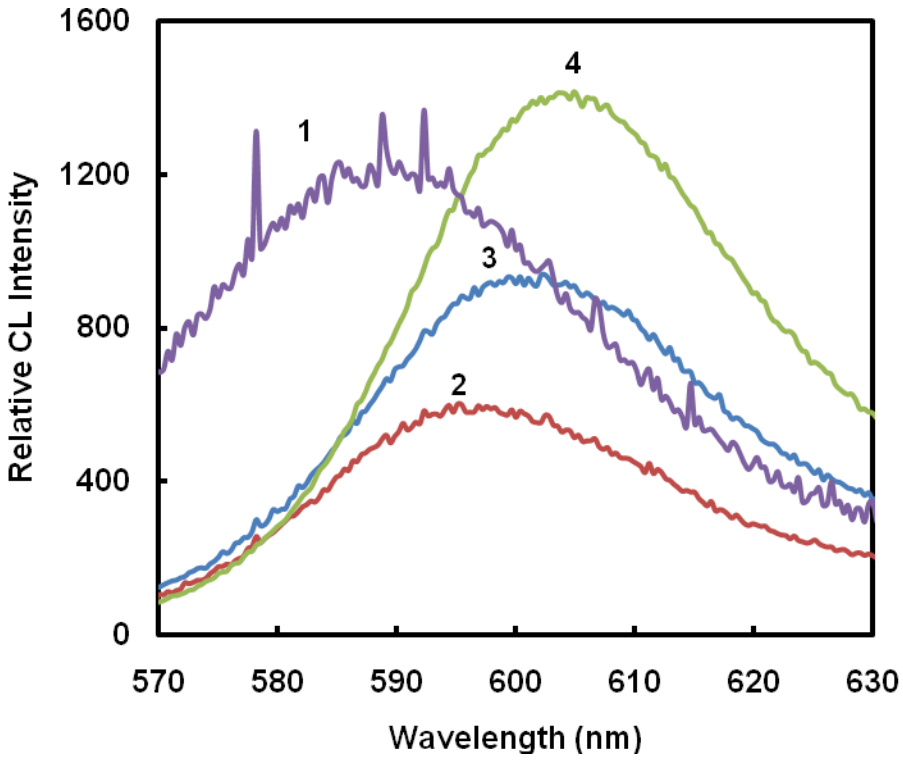

Fig. S-2. Fluorescence and CL spectra of rhodamine 101 in mixture (50 % ethyl acetate, 25 % water, and 25 % isopropyl alcohol). **1**. Fluorescence, **2**. ODI-CL, **3**. TCPO-CL, **4**. DNPO-CL