

Supplementary Material

Photo-Luminescence Dynamics of Ionic Liquids Composed of the Dicyanoaurate(I) Anion

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Keywords

Ionic liquid, dicyanoaurate, luminescence dynamics, oligomer formation

Table S1. Parameters obtained by the fit of the peak positions of phosphorescence of [C₄MIm][Au(CN)₂] and [P₁₄][NTf₂]. The unit for $\Delta\nu_i$ and ν_∞ is 10^3 cm^{-1} and τ_i ns, respectively.

	$\lambda_{\text{ext}} / \text{nm}$	$\Delta\nu_1$	τ_1	$\Delta\nu_2$	τ_2	$\Delta\nu_3$	τ_3	ν_∞	τ_{ave}	$\Delta\nu$
[C ₄ MIm] ⁺	310	0.74	2.02	1.19	10.4	4.44	5560	16.89	7.19	1.93
	340	0.86	1.23	0.96	9.42	4.41	5380		5.55	1.82
[P ₁₄] ⁺	310	0.62	1.18	1.33	21.2	-	-	21.70	14.8	1.95
	340	0.65	1.39	0.90	25.8	-	-		15.6	1.55

Figure S1. Time profile of the luminescence peak position for different concentrations of $\text{Au}(\text{CN})_2^-$ excited at the different wavelength (a) 310 nm and (b) 340 nm.

