Supporting Information

Enhanced Intramolecular Energy Transfer with Strengthen ff Luminescence of a Stable Helical Eu Complex in ionic liquid

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Figure S1. Luminescence decay curves of EuL in [BMIM][PF₆] (black line) and acetonitrile (red line) ($\lambda_{ex} = 340 \text{ nm}$, $\lambda_{mon} = 616 \text{ nm}$).



Figure S2. The excitation spectra of EuL (a) in [BMIM][PF₆] and (b) in acetonitrile monitored at 616 nm.



Figure S3. (a) Electronic absorption, (b) emission spectra ($\lambda_{ex} = 328 \text{ nm}$) and (c) decay curves ($\lambda_{ex} = 340 \text{ nm}$, $\lambda_{mon} = 616 \text{ nm}$) of EuL in [BMIM][PF₆]/acetonitrile with various concentrations.



Figure S4. Projection views of the single crystal of $[EMIM][PF_6]$ along with (a) (10-2), (b) (102), (c) (012), (d) (011), and (e) (110) planes

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Figure S5. Phosphorescence decay curves (black line) localized on the ligand of GdL at 77 K (a) in [BMIM][PF₆] and (b) in ethanol. Grey line is IRF. ($\lambda_{ex} = 340 \text{ nm}$, $\lambda_{mon} = 488 \text{ nm}$)