

Supporting Information

High-efficiency and Low Efficiency Roll-Off Near-Infrared Fluorescent OLEDs through Triplet Fusion

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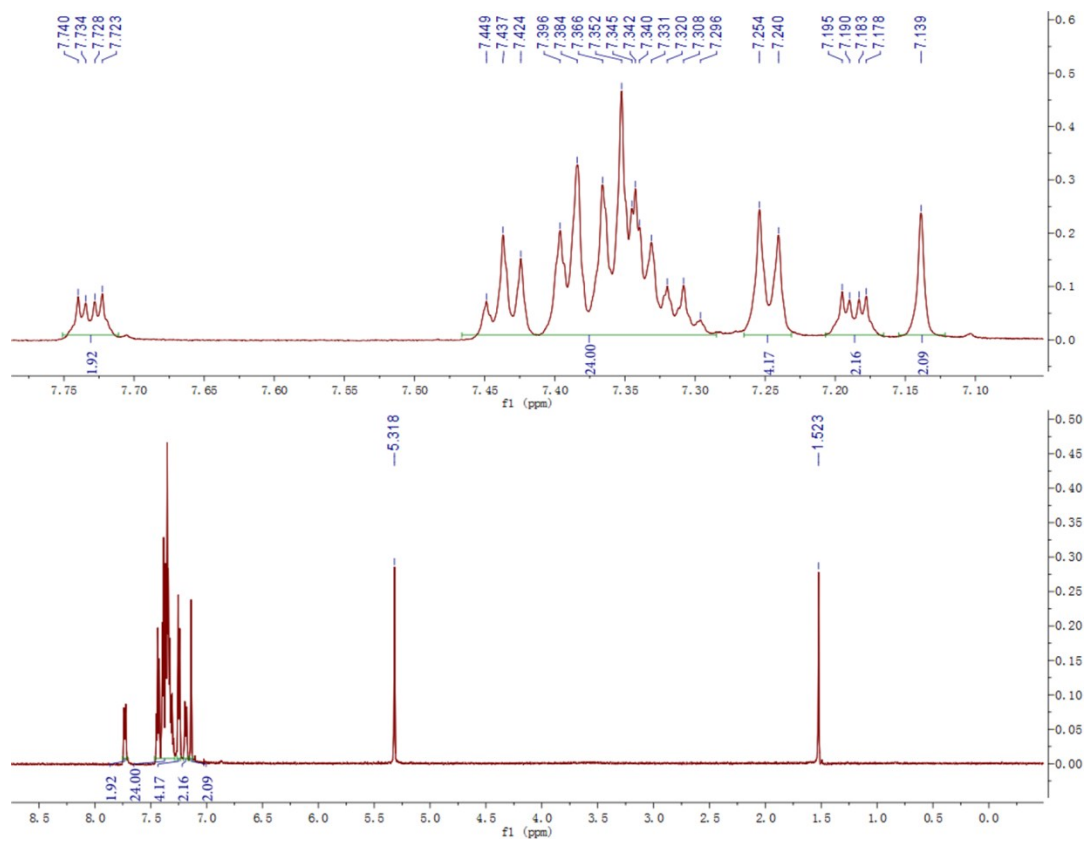


Fig. S1 ^1H NMR spectrum of NSeD.

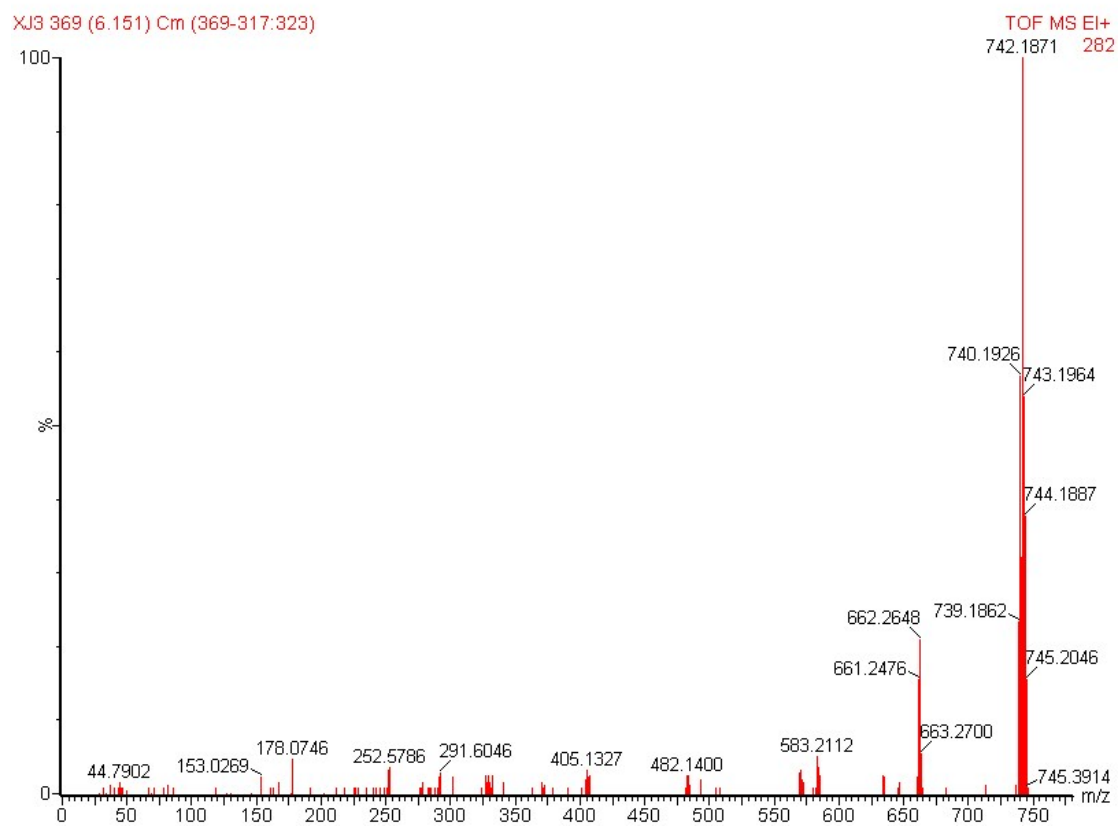


Fig. S2 HRMS-EI Mass spectrum of NSeD.

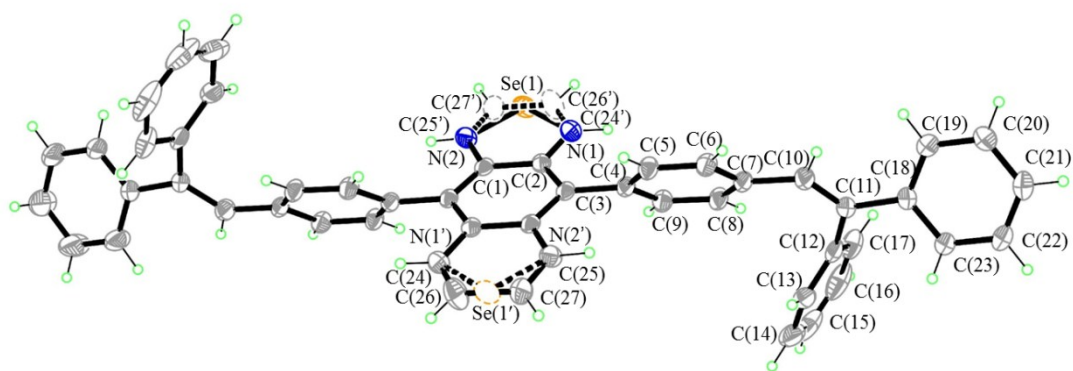


Fig. S3 Single crystal structure of NSeD with thermal ellipsoids plotted at 50% probability level.

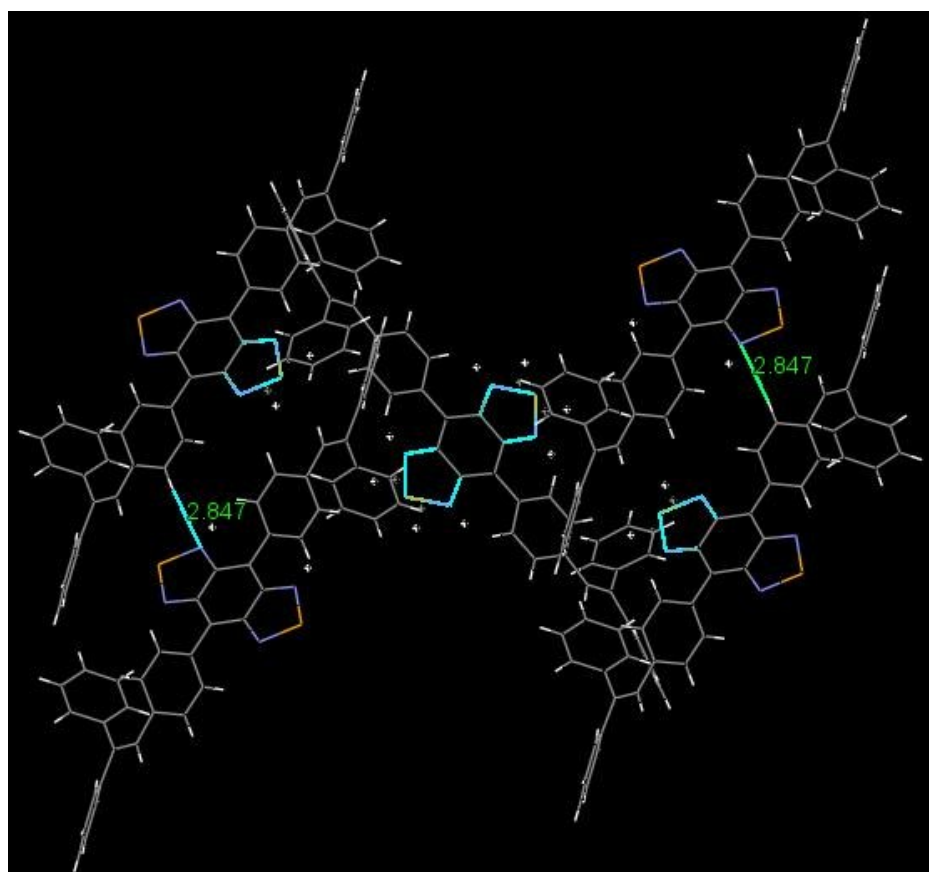


Fig. S4 Molecular packing diagram of NSeD in single crystal with denoted intermolecular interactions.

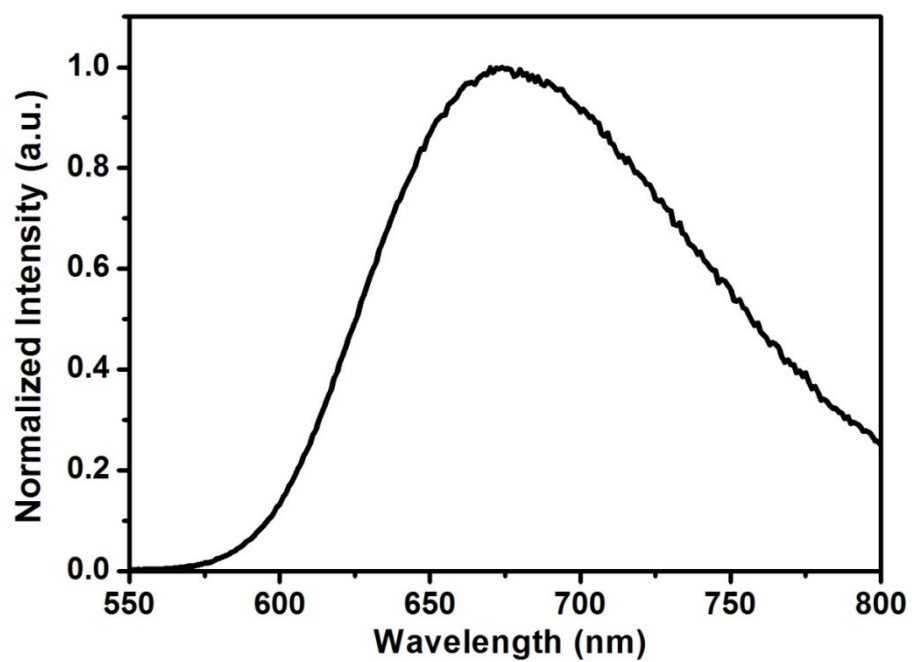


Fig. S5 The emission spectrum of NSeD in toluene solution at 298K.

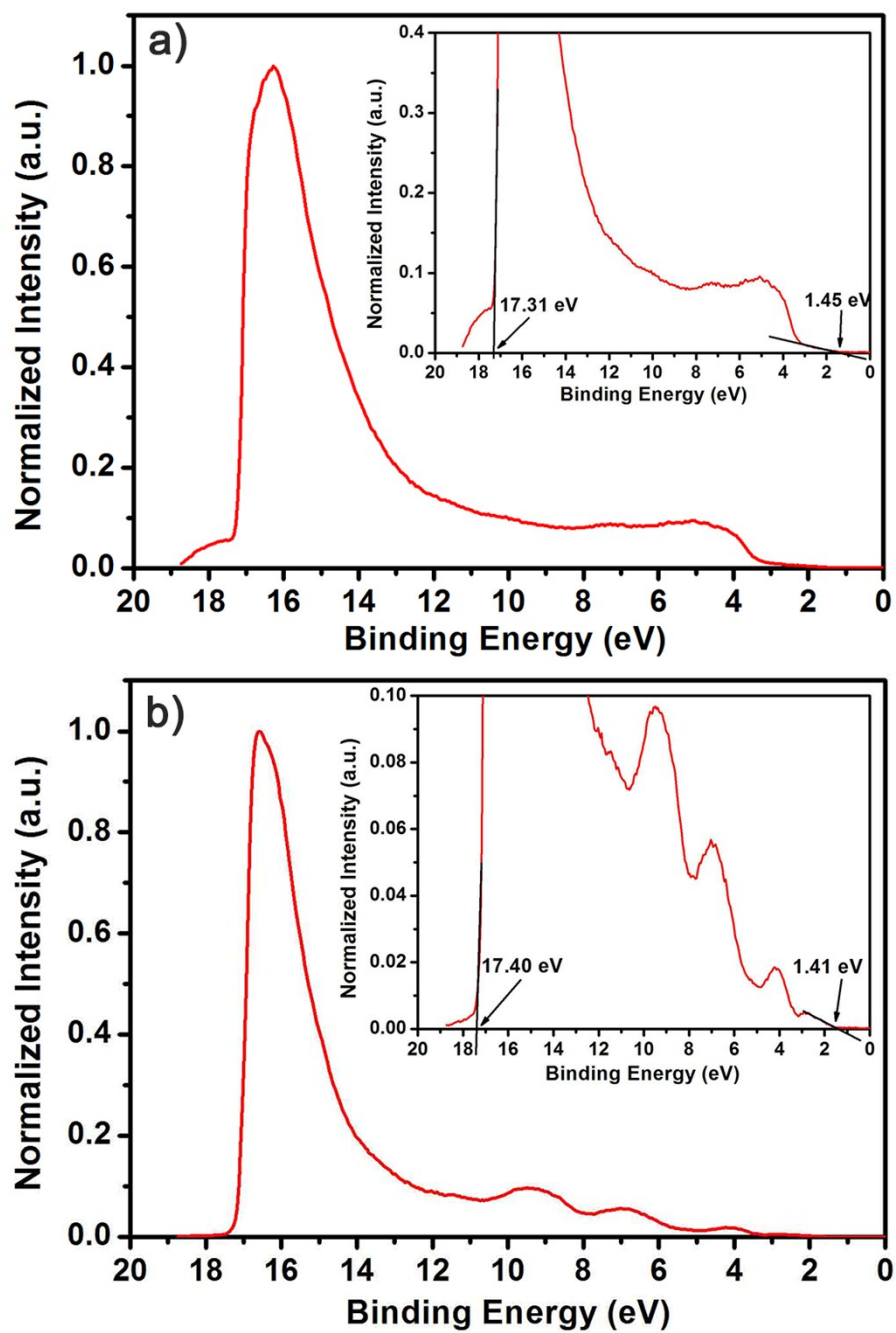


Fig. S6 The ultraviolet photoelectron spectroscopy spectra of (a) $\text{Ga}_2(\text{saph})_2\text{q}_2$ and (b) NSeD. Inset: zoom-in view of the cutoff and HOMO regions.

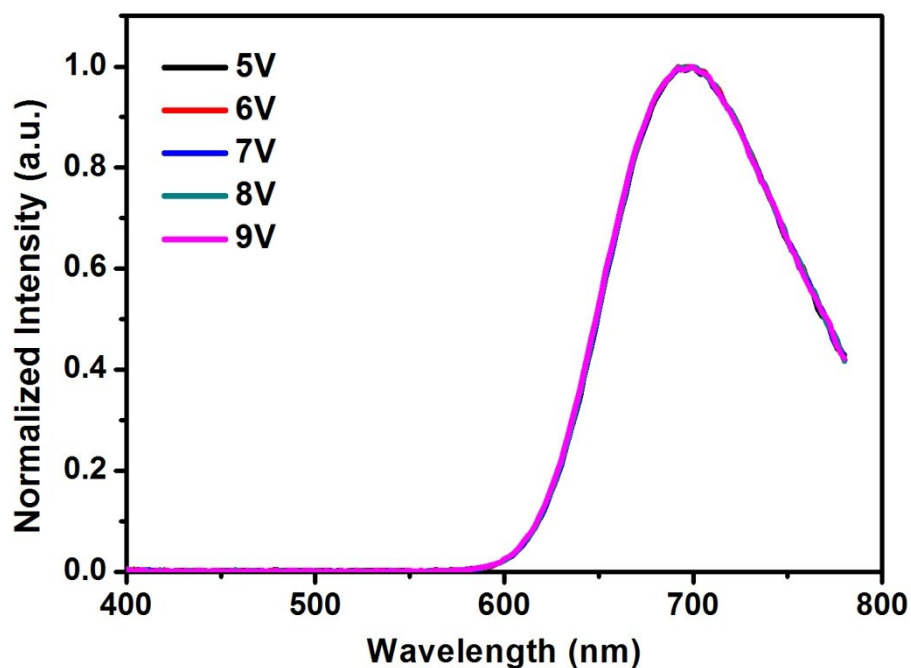


Fig. S7 Electroluminescent spectra of device E recorded at various voltages.

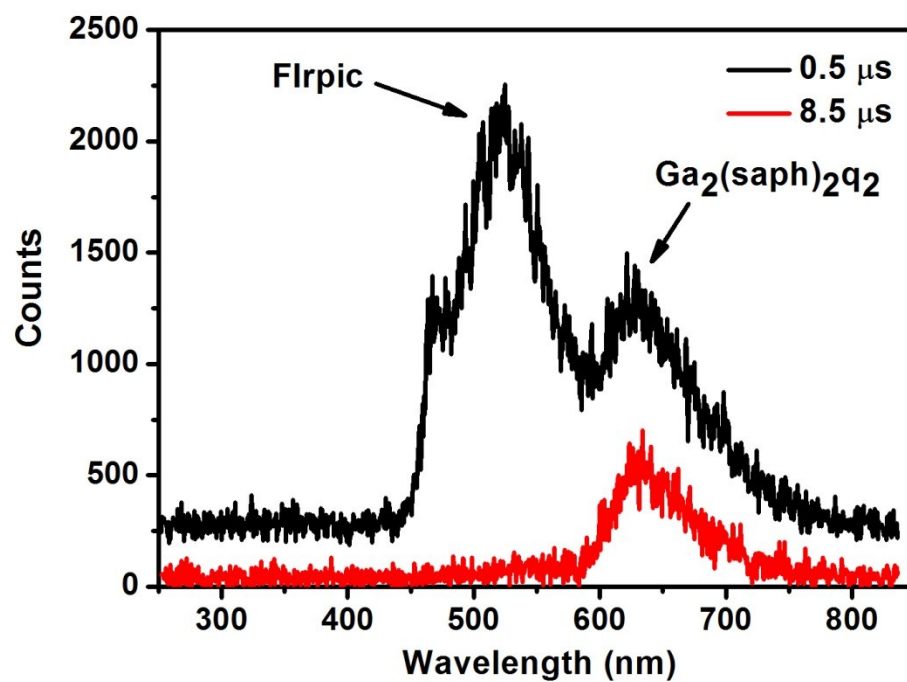


Fig. S8 Phosphorescence spectra of $\text{Ga}_2(\text{saph})_2\text{q}_2$ doped in PMMA host with Flrpic triplet sensitizer. The spectra were recorded with different delayed time scales after excitation ($\lambda_{\text{ex}} = 355 \text{ nm}$) for the $\text{Ga}_2(\text{saph})_2\text{q}_2$ doped film.

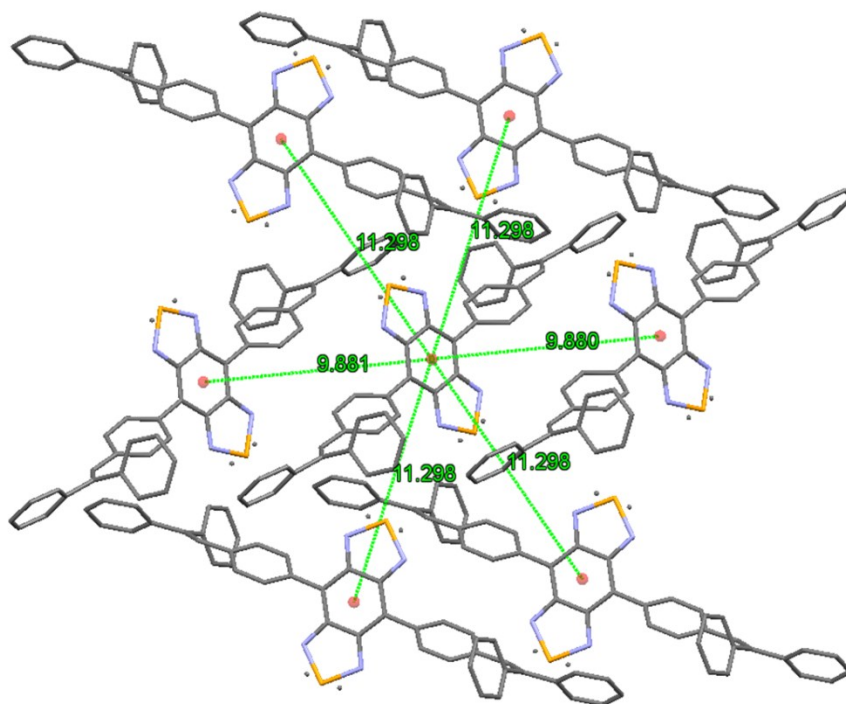


Fig. S9 Partial crystal packing diagram of NSeD with denoted distance between naphthoselenadiazole cores.