Supporting Information

Figure 1s Changes in the UV–Vis absorption spectra by titration of [Zn(L₁)(Py)] with Nd(NO₃)₂•6(H₂O) in MeCN solutions (4×10⁻⁵ M)

Figure 2s Titration of [Zn(L₁)(Py)] with Nd(NO₃)₂•6(H₂O) in MeCN solution (4×10⁻⁵ M), showing the quenching of [Zn(L₁)(Py)] chromophore-based visible emission upon gradual addition of Nd(NO₃)₂•6(H₂O)

Figure 3s Titration of [Zn(L₁)(Py)] with Nd(NO₃)₂•6(H₂O) in MeCN solution (4×10⁻⁵ M), showing a gradual increase of Nd-centered NIR emission upon gradual addition of Nd(NO₃)₂•6(H₂O)

Figure 4s Changes in the UV–Vis absorption spectra by titration of [Zn(L₂)(Py)] with Nd(NO₃)₂•6(H₂O) in MeCN solutions (4×10⁻⁵ M)

Figure 5s Titration of [Zn(L₂)(Py)] with Nd(NO₃)₂•6(H₂O) in MeCN solutions (4×10⁻⁵ M), showing the gradual quenching of [Zn(L₂)(Py)] chromophore-based visible emission upon gradual addition of Nd(NO₃)₂•6(H₂O)

Figure 6s Titration of [Zn(L₂)(Py)] with Nd(NO₃)₂•6(H₂O) in MeCN solutions (4×10⁻⁵ M), showing a gradual increase of Nd-centered NIR emission upon gradual addition of
Nd(NO₃)₃•6(H₂O)

Figure 1s

![Figure 1s](image1)

Figure 2s

![Figure 2s](image2)
Figure 5s

![Graph showing emission spectra for different molar ratios of Zn(L2)(Py) : Nd(NO3)3]  
- [Zn(L\(^2\))(Py)] : Nd(NO3)\(_3\) = 8 : 0
- [Zn(L\(^2\))(Py)] : Nd(NO3)\(_3\) = 8 : 1
- [Zn(L\(^2\))(Py)] : Nd(NO3)\(_3\) = 8 : 2
- [Zn(L\(^2\))(Py)] : Nd(NO3)\(_3\) = 8 : 3
- [Zn(L\(^2\))(Py)] : Nd(NO3)\(_3\) = 8 : 4

Figure 6s

![Graph showing emission spectra for different molar ratios of Zn(L2)(Py) : Nd(NO3)3]  
- [Zn(L\(^2\))(Py)] : Nd(NO3)\(_3\) = 8 : 1
- [Zn(L\(^2\))(Py)] : Nd(NO3)\(_3\) = 8 : 2
- [Zn(L\(^2\))(Py)] : Nd(NO3)\(_3\) = 8 : 3
- [Zn(L\(^2\))(Py)] : Nd(NO3)\(_3\) = 8 : 4