

## Lysosome targetable luminescent bioprobe based on a europium $\beta$ -diketonate complex for cellular imaging applications

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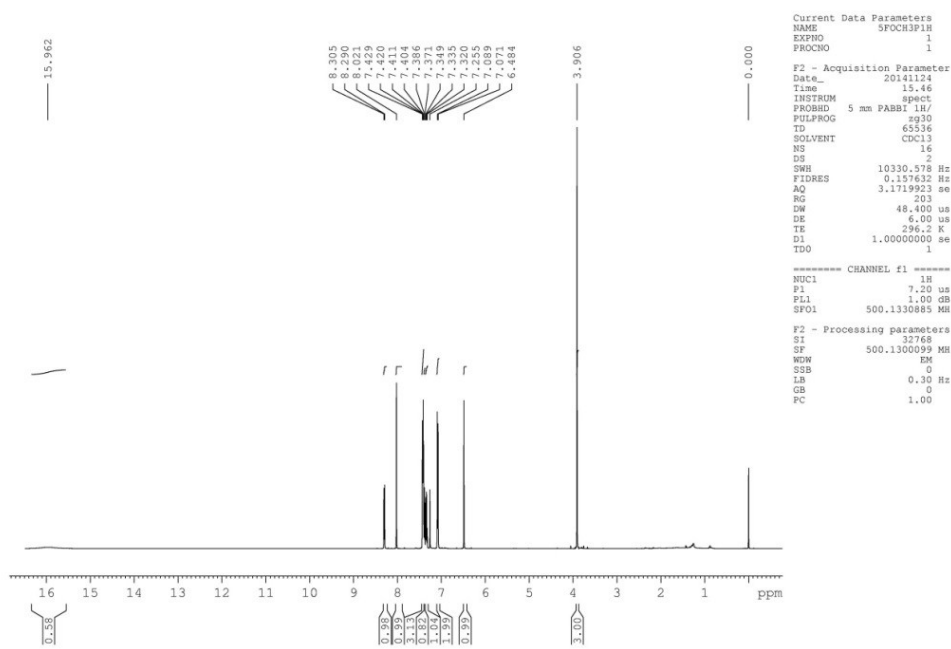


Fig. S1 <sup>1</sup>H NMR spectrum of the ligand HpfphOCH<sub>3</sub>IN.

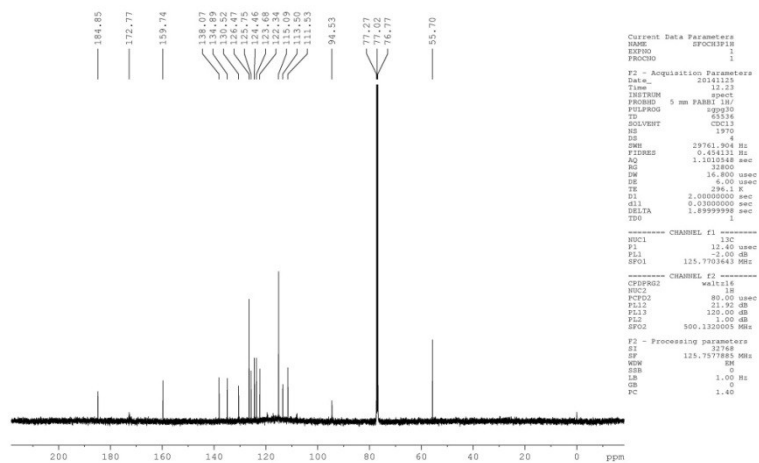


Fig. S2 <sup>13</sup>C NMR spectrum of the ligand HpfphOCH<sub>3</sub>IN.

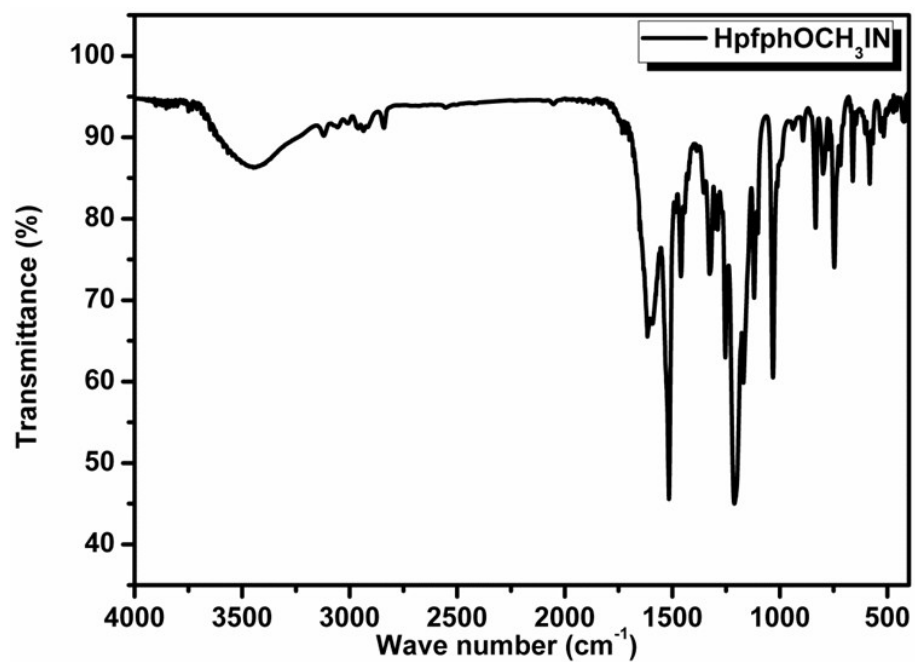


Fig. S3 FT-IR spectrum of the ligand HpfphOCH<sub>3</sub>IN.

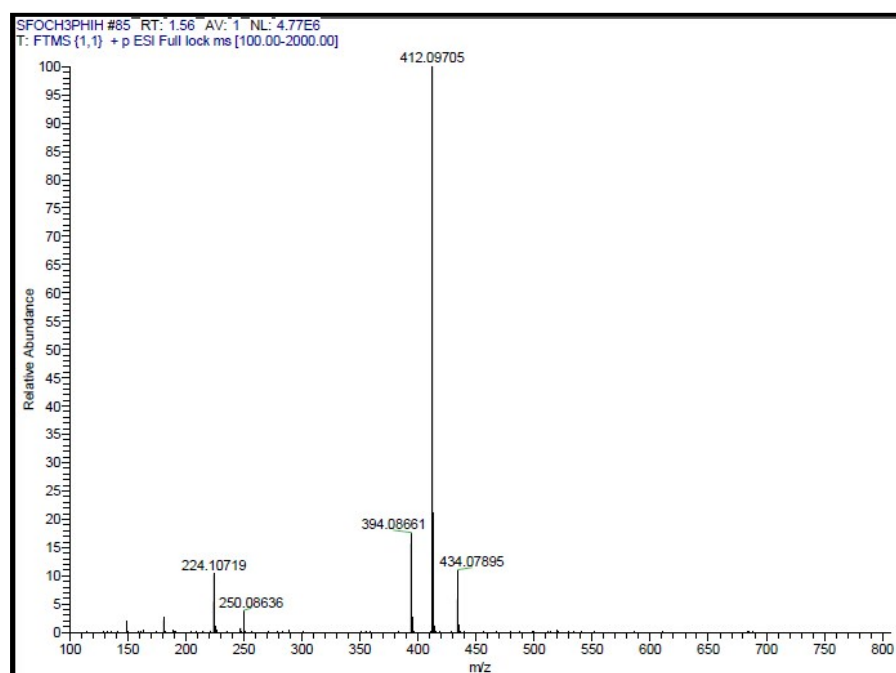


Fig. S4 ESI-MS spectrum of the ligand HpfphOCH<sub>3</sub>IN.

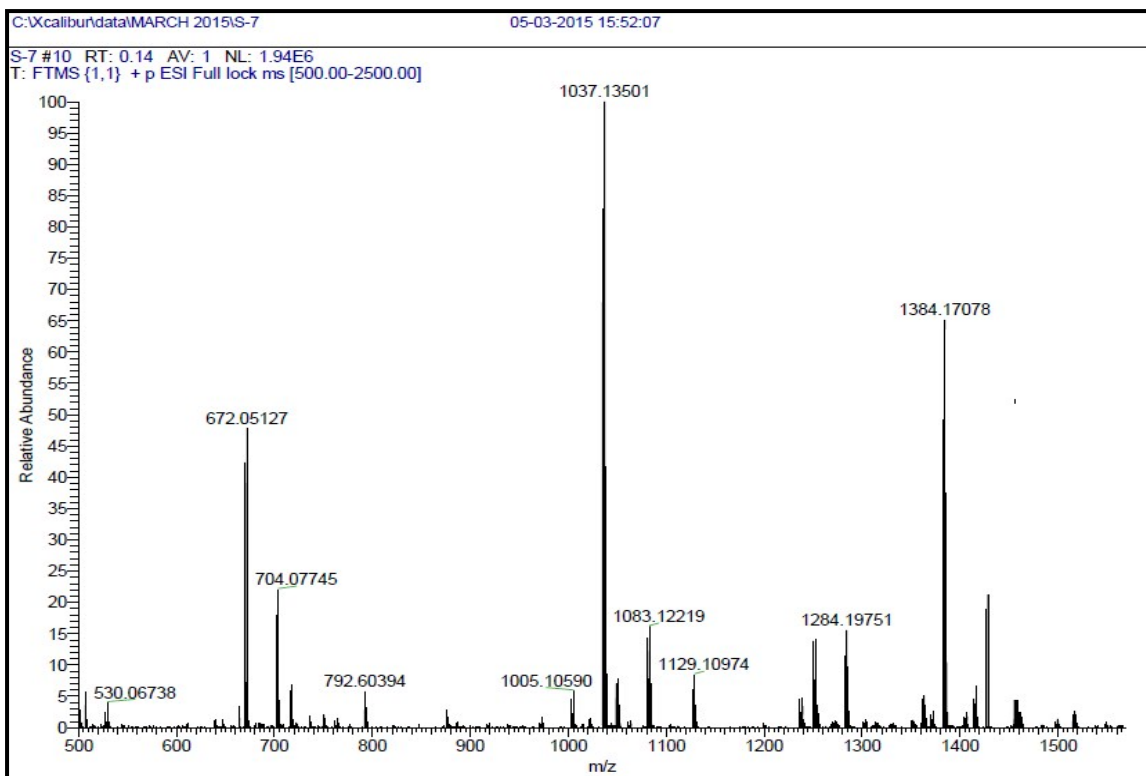


Fig. S5 ESI-MS spectrum of the  $\text{Eu}(\text{pfphOCH}_3\text{IN})_3(\text{H}_2\text{O})_2$ .

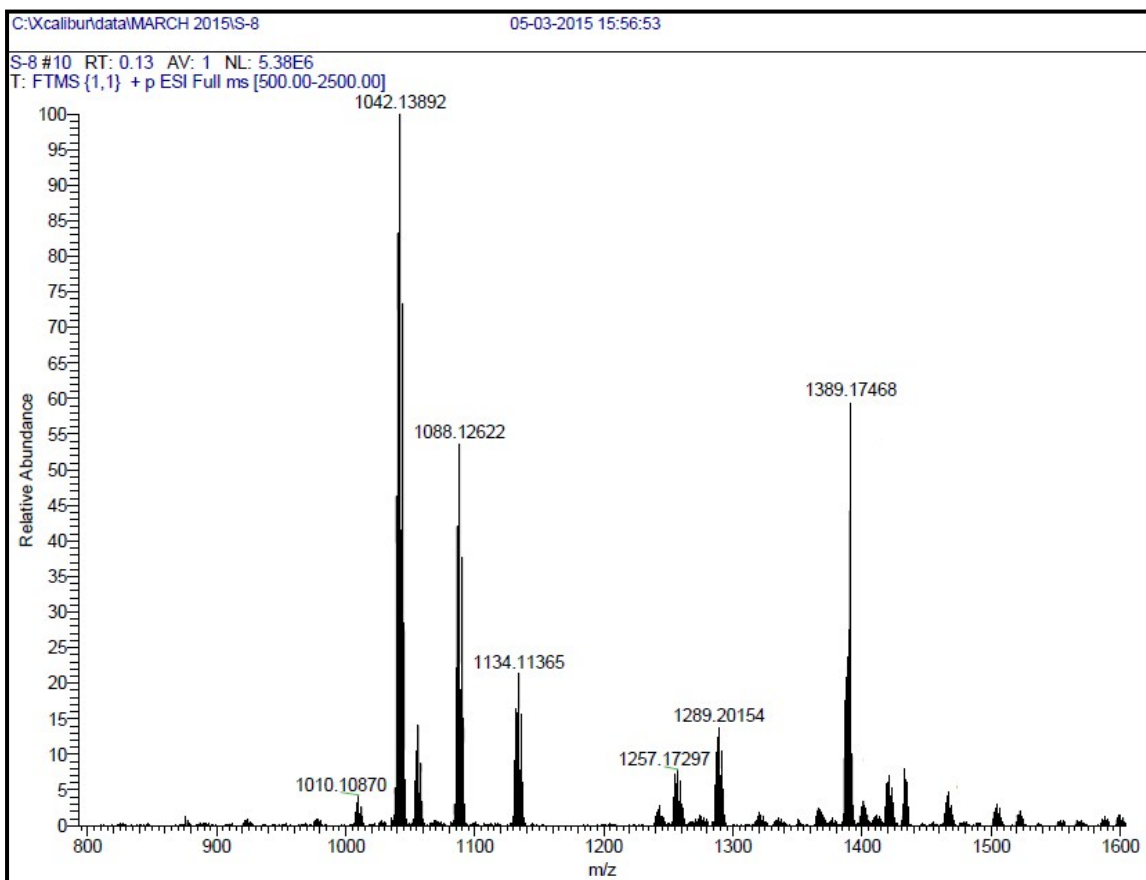
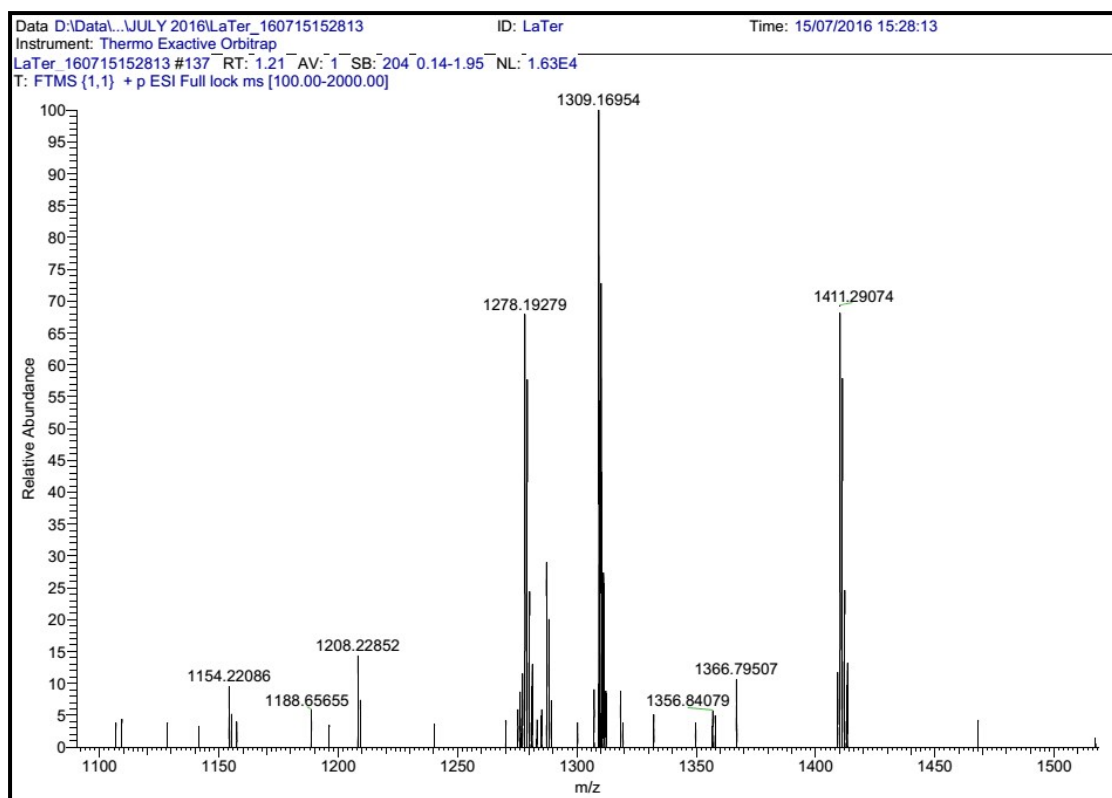
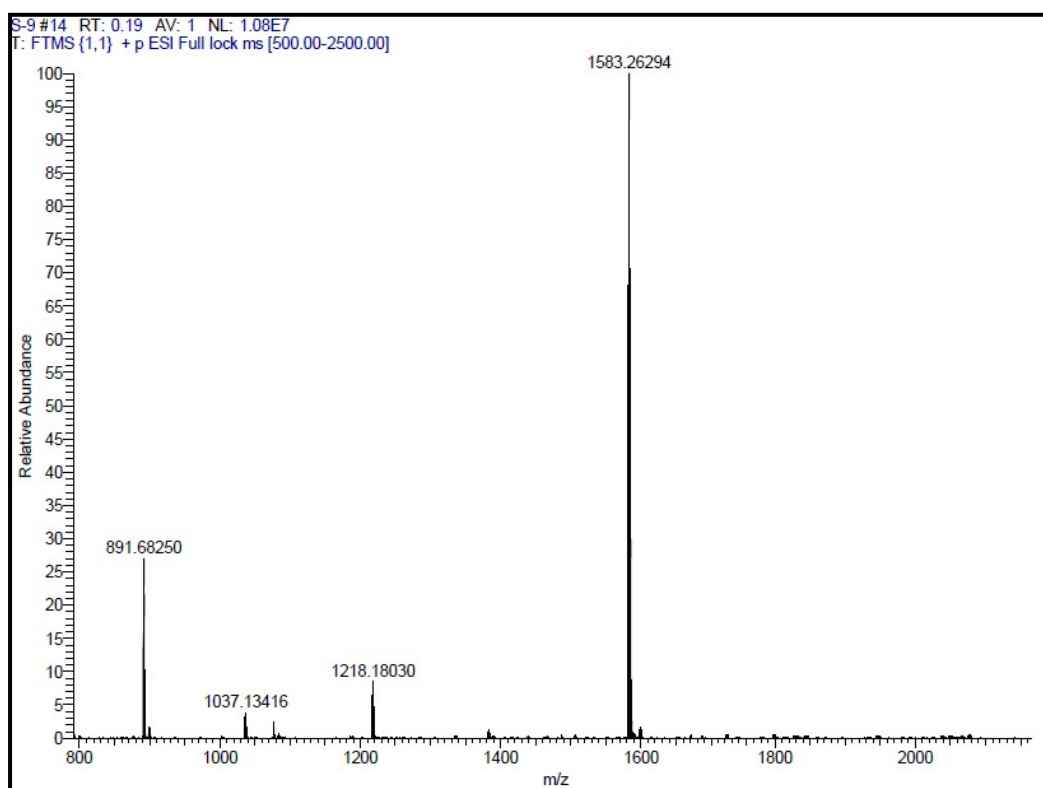


Fig. S6 ESI-MS spectrum of the  $\text{Gd}(\text{pfphOCH}_3\text{IN})_3(\text{H}_2\text{O})_2$ .



**Fig. S7** ESI-MS spectrum of the  $\text{La}(\text{pfphOCH}_3\text{IN})_3(\text{H}_2\text{O})_2$ .



**Fig. S8** ESI-MS spectrum of the  $\text{Eu}(\text{pfphOCH}_3\text{IN})_3(\text{DDXPO})$ .

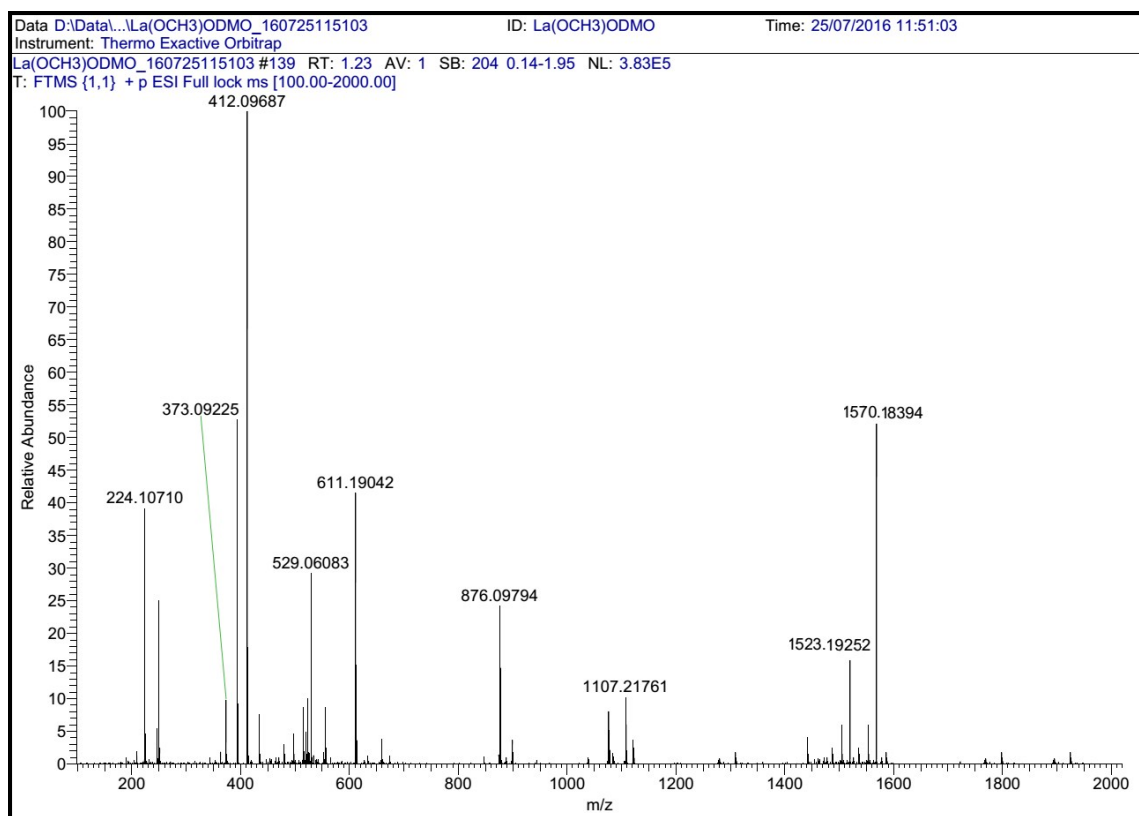


Fig. S9 ESI-MS spectrum of the La(pfphOCH<sub>3</sub>IN)<sub>3</sub>(DDXPO).

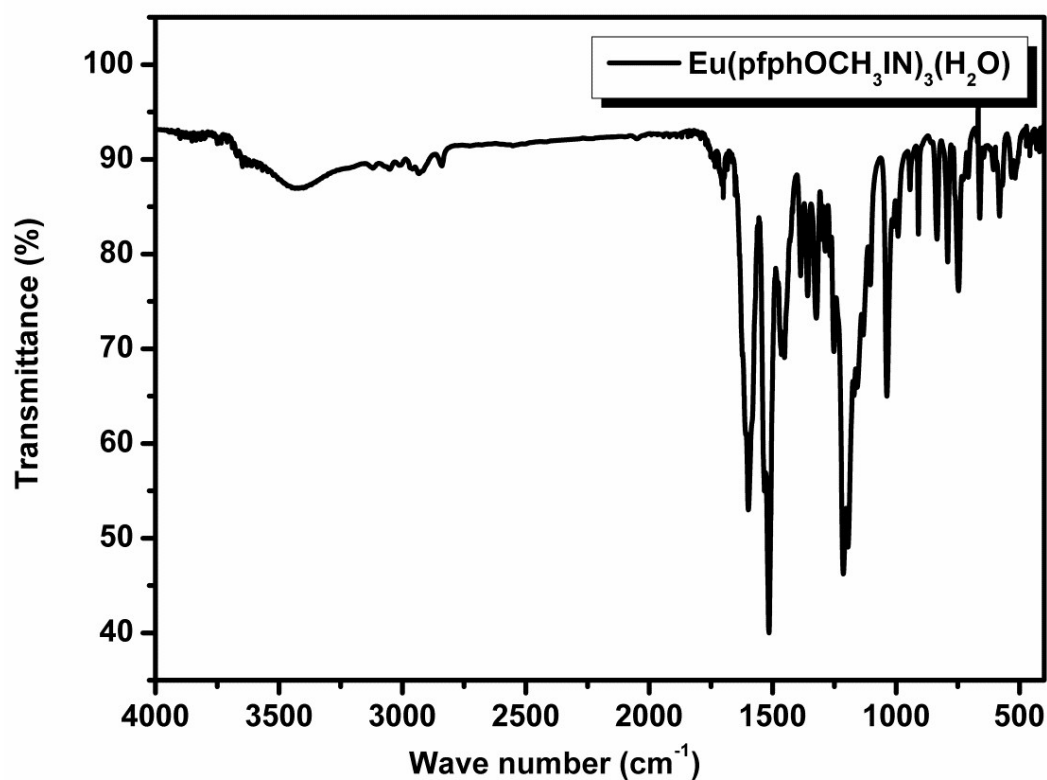


Fig. S10 FT-IR spectrum of the complex Eu(pfphOCH<sub>3</sub>IN)<sub>3</sub>(H<sub>2</sub>O)<sub>2</sub>.

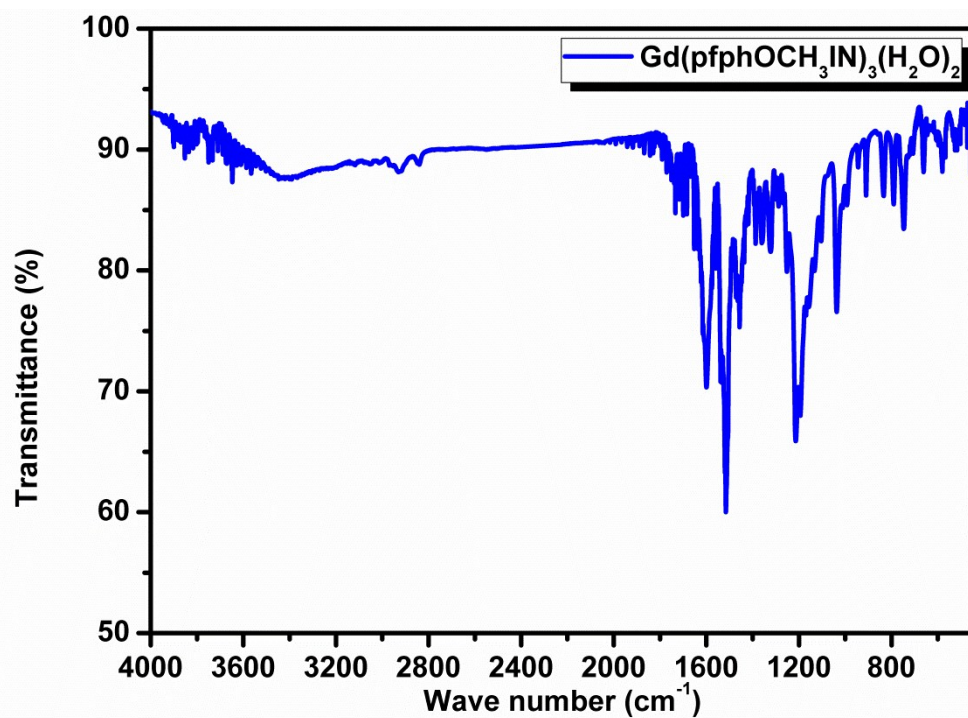


Fig. S11 FT-IR spectrum of the complex  $\text{Gd}(\text{pfphOCH}_3\text{IN})_3(\text{H}_2\text{O})_2$ .

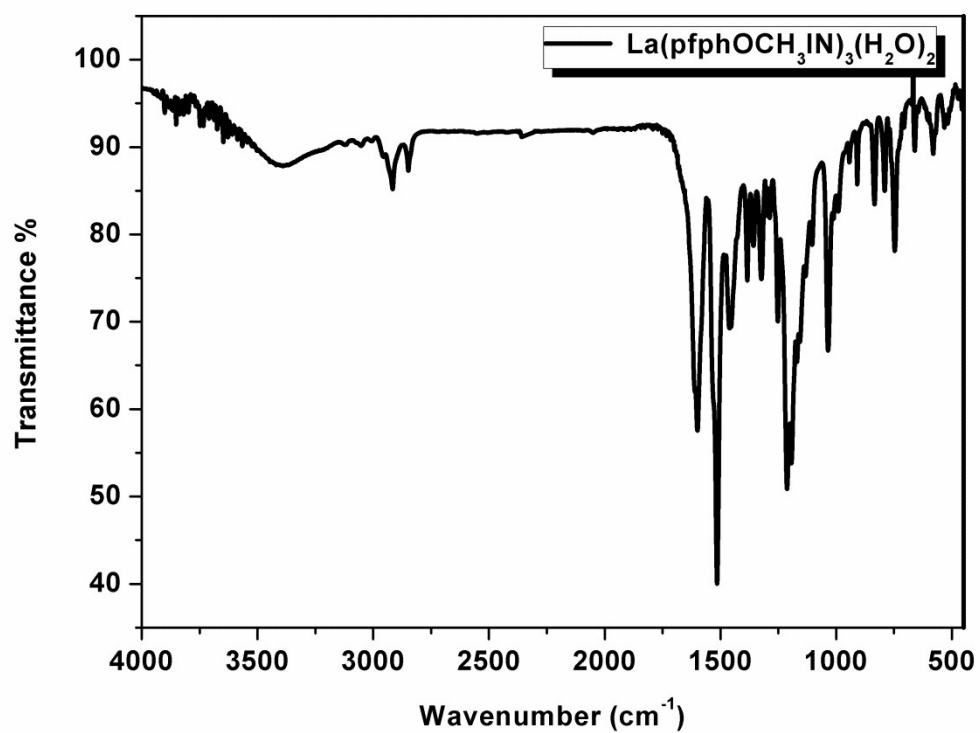


Fig. S12 FT-IR spectrum of the complex  $\text{La}(\text{pfphOCH}_3\text{IN})_3(\text{H}_2\text{O})_2$ .

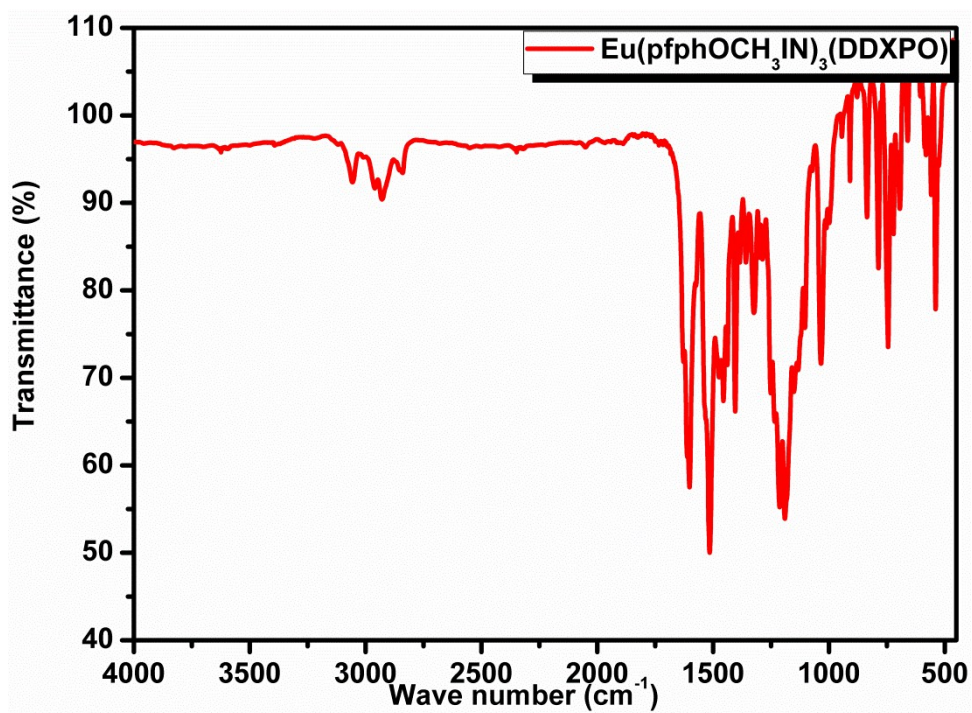


Fig. S13 FT-IR spectrum of the complex  $\text{Eu}(\text{pfphOCH}_3\text{IN})_3(\text{DDXPO})$ .

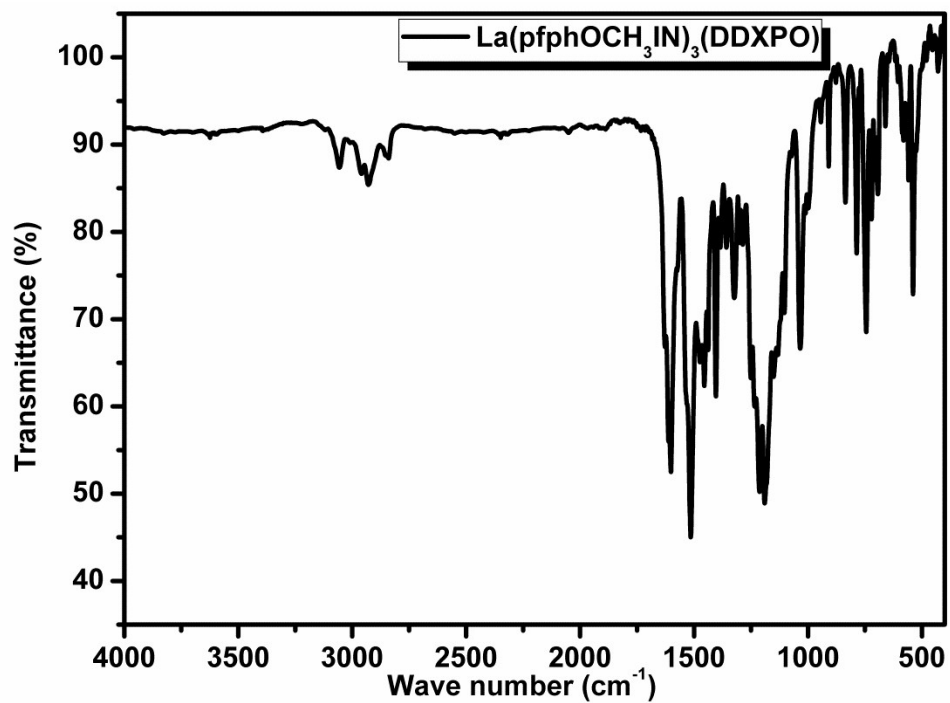


Fig. S14 FT-IR spectrum of the complex  $\text{La}(\text{pfphOCH}_3\text{IN})_3(\text{DDXPO})$ .



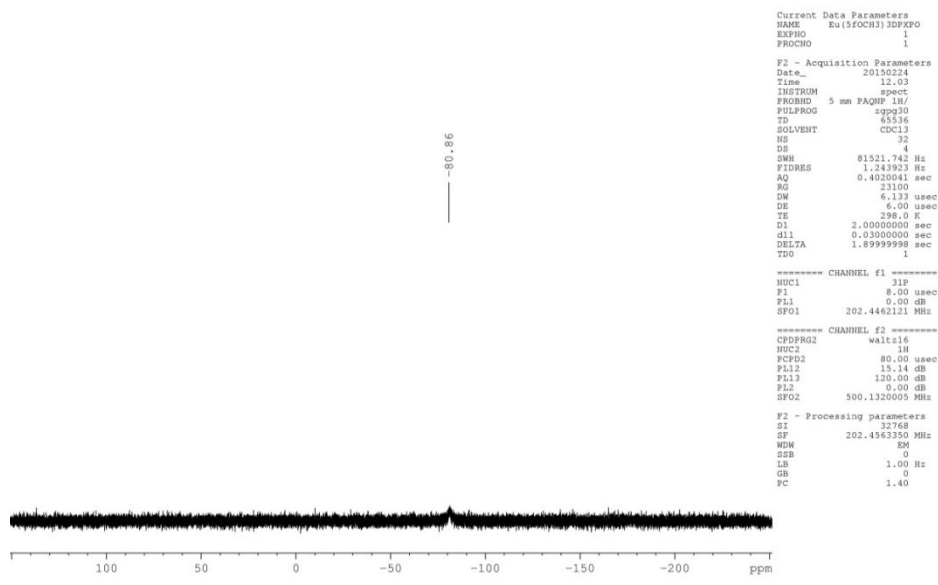


Fig. S15 <sup>31</sup>P NMR spectrum of the Eu(pfphOCH<sub>3</sub>IN)<sub>3</sub>(DDXPO) in CDCl<sub>3</sub>.

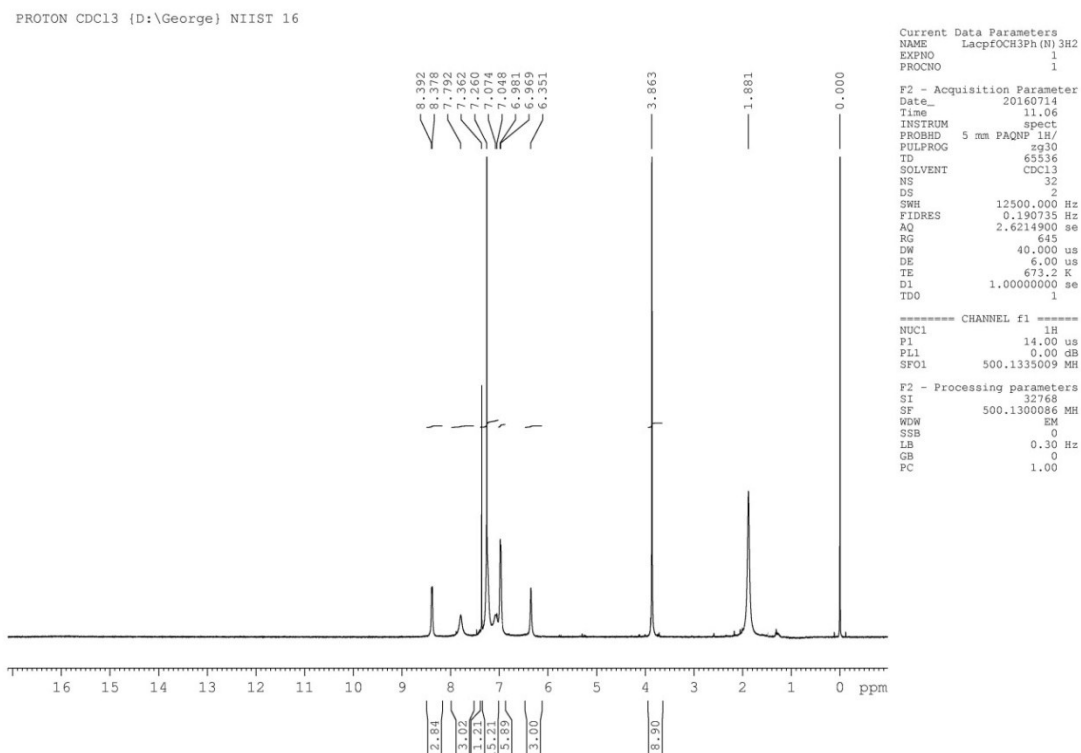


Fig. S16 <sup>1</sup>H NMR spectrum of La(pfphOCH<sub>3</sub>IN)<sub>3</sub>(H<sub>2</sub>O)<sub>2</sub>.

LA (OMe)3(DOXPO)  
PROTON CDC13 {D:\George} NIIST 1

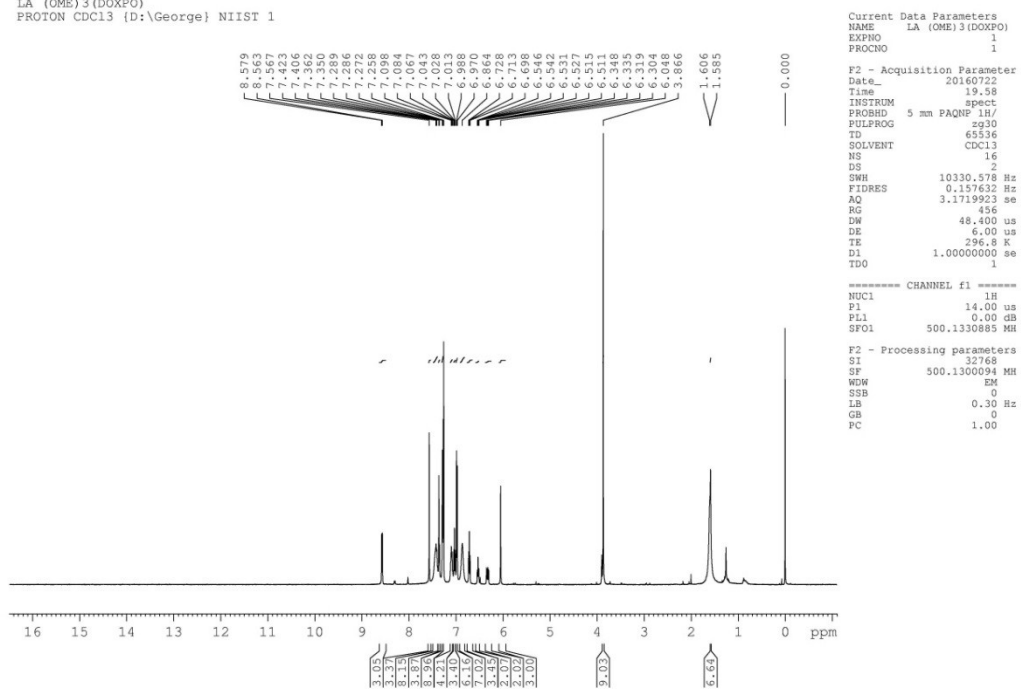


Fig. S17  $^1\text{H}$  NMR spectrum of  $\text{La}(\text{pfphOCH}_3\text{IN})_3(\text{DOXPO})$ .