

Supplementary Information

Novel perfluorodiphenylphosphinic acid lanthanide (Er or Er/Yb) complex with high NIR photoluminescence quantum yield

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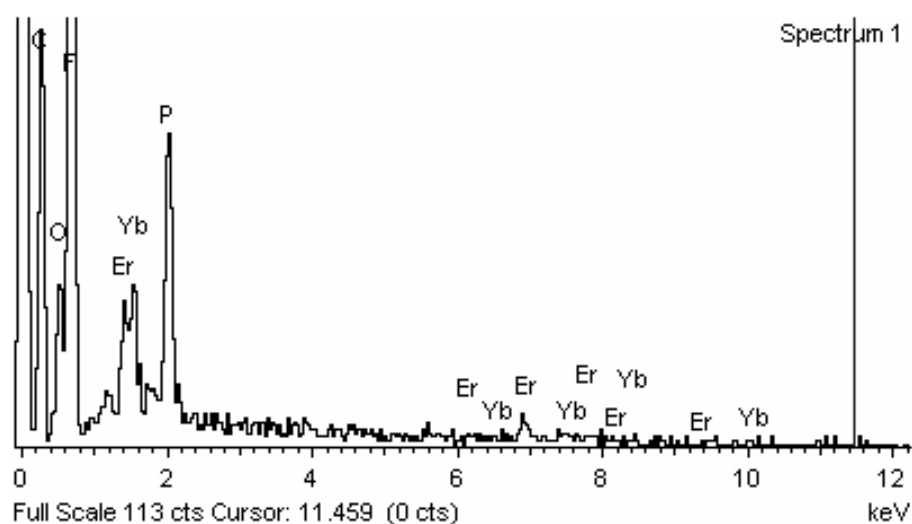


Fig. S1. The X-ray energy dispersive spectrum from the complex $[(C_6F_5)_2POO]_3Er_{0.5}Yb_{0.5}$.

Table S1. The EDS analysis results for the complex $[(C_6F_5)_2POO]_3Er_{0.5}Yb_{0.5}$.

Element	Weight%	Atomic%
C	9.67	18.62
O	6.48	9.36
F	51.71	62.93
P	7.73	5.77
Er	12.32	1.70
Yb	12.09	1.62
Totals	100.00	

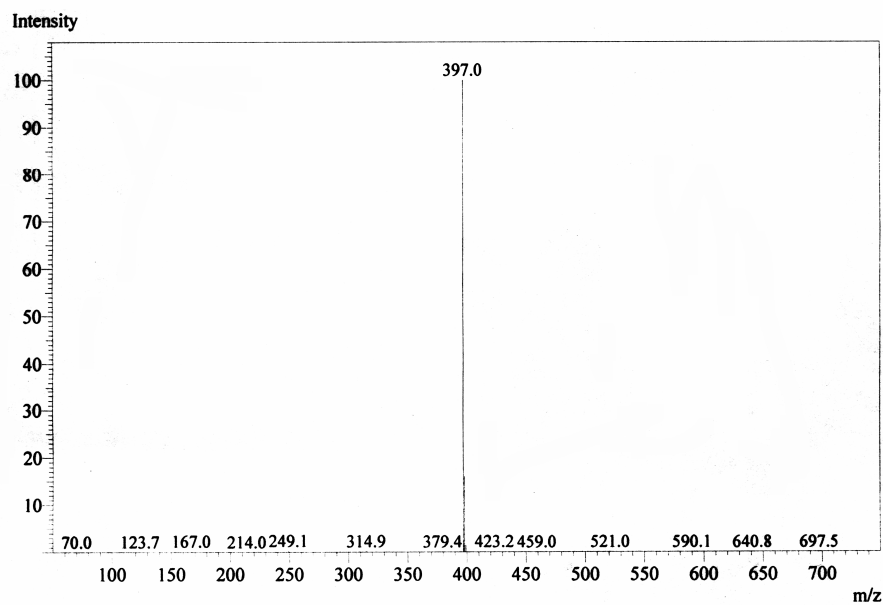


Fig. S2. The ESI mass spectrum in the negative mode of perfluorodiphenylphosphinic acid in methanol; m/z $[(C_6F_5)_2POO]^-$: 397.

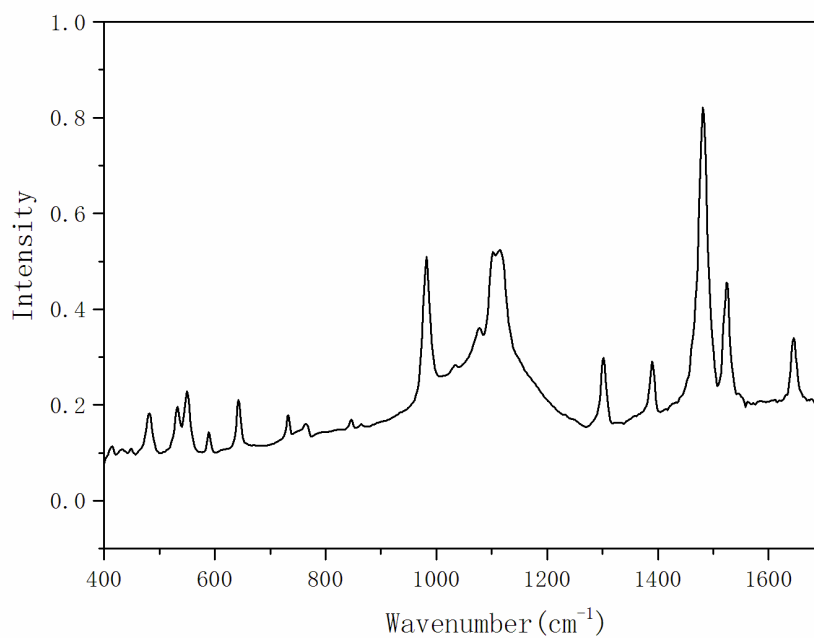


Fig. S3. IR spectrum of perfluorodiphenylphosphinic acid.

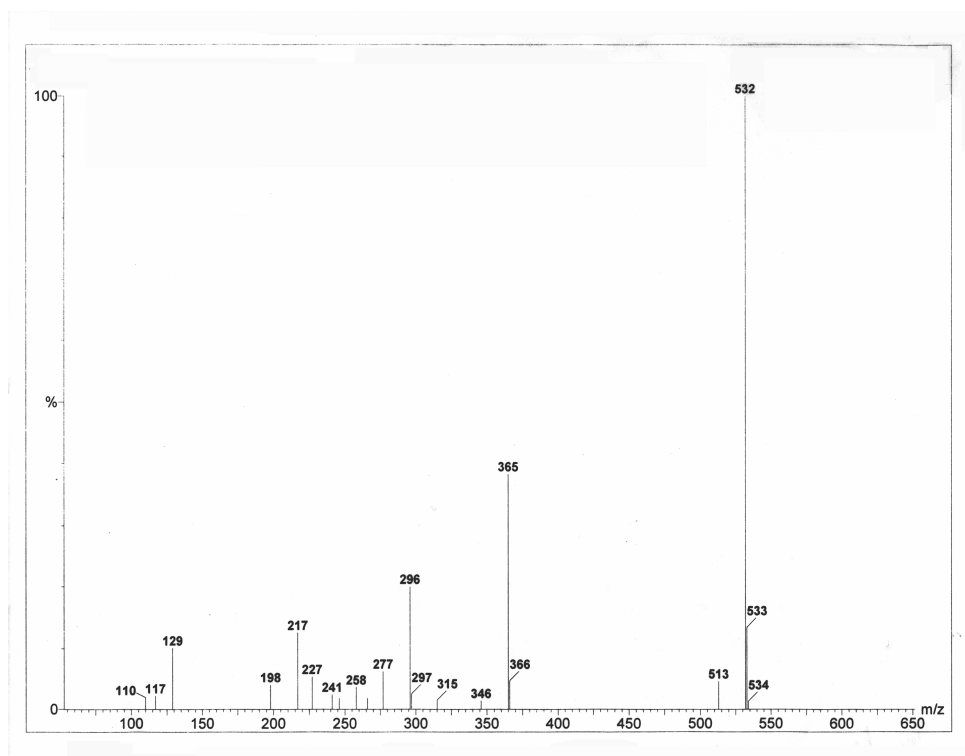


Fig. S4. The EI mass spectrum of tris-(pentafluorophenyl)-phosphine.

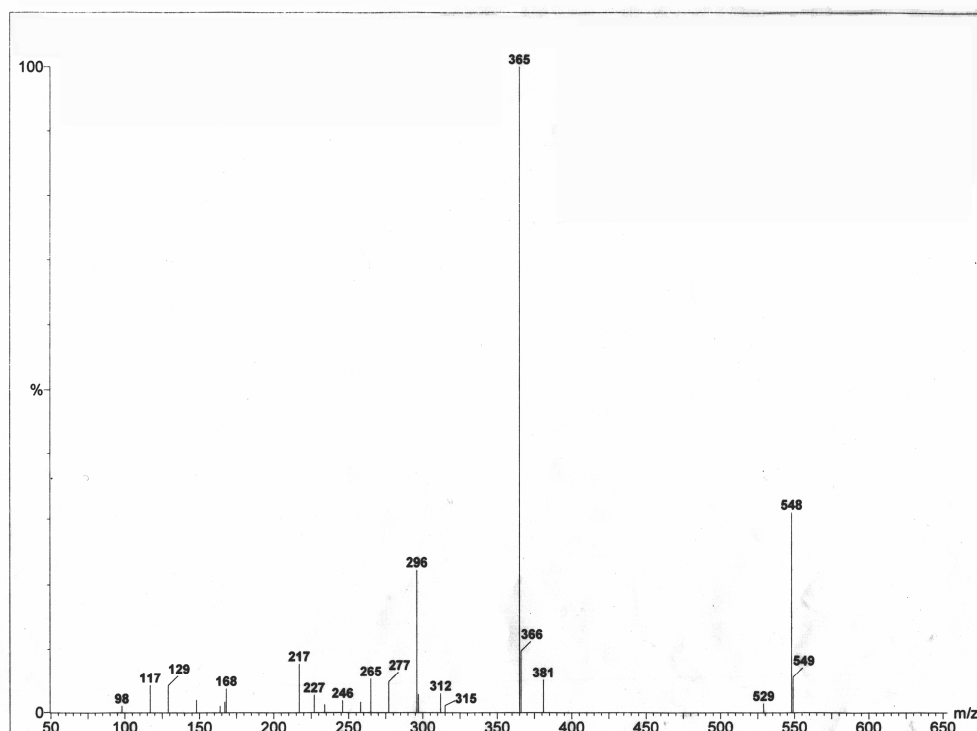


Fig. S5. The EI mass spectrum of tri-(pentafluorophenyl)-phosphine oxide.