Supporting Information for

Two mono- and dinuclear Eu(III) enantiomeric pairs based on chiral bis-bidentate bridging ligands: synthesis, structures, luminescent and ferroelectric properties

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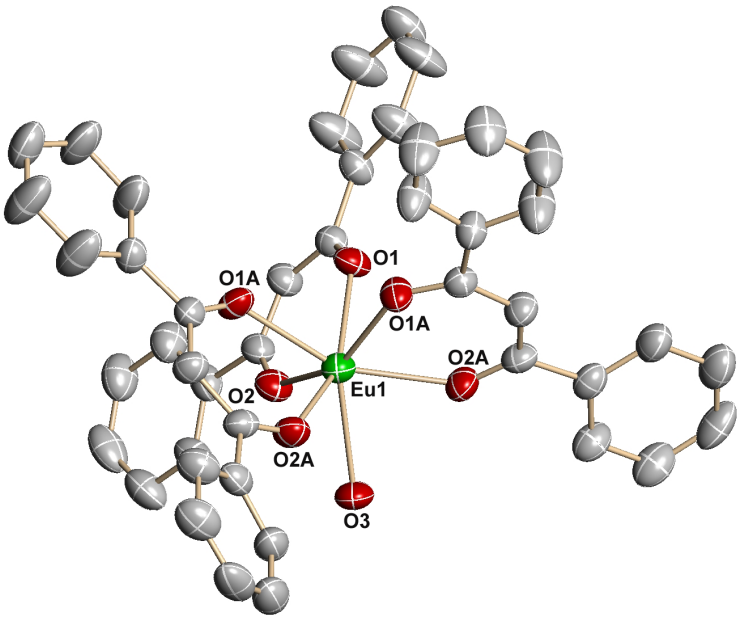

Fig. S1. The structure of $Eu(dbm)_3H_2O$ showing 50% probability displacement ellipsoids of non-hydrogen atoms with partly atom-numbering scheme. H atoms are omitted for clarity.

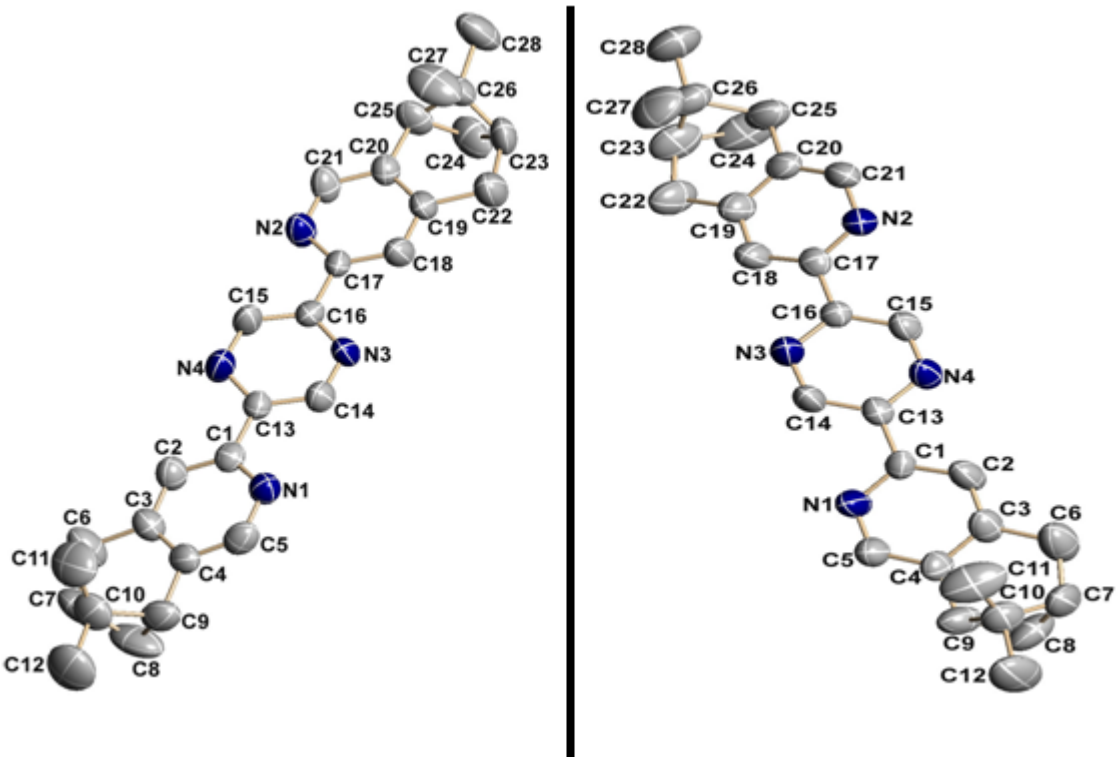

Fig. S2. The structures of $\mathbf{L}_S$ (left) and $\mathbf{L}_R$ (right), showing 50% probability displacement ellipsoids of non-hydrogen atoms. H atoms are omitted for clarity.

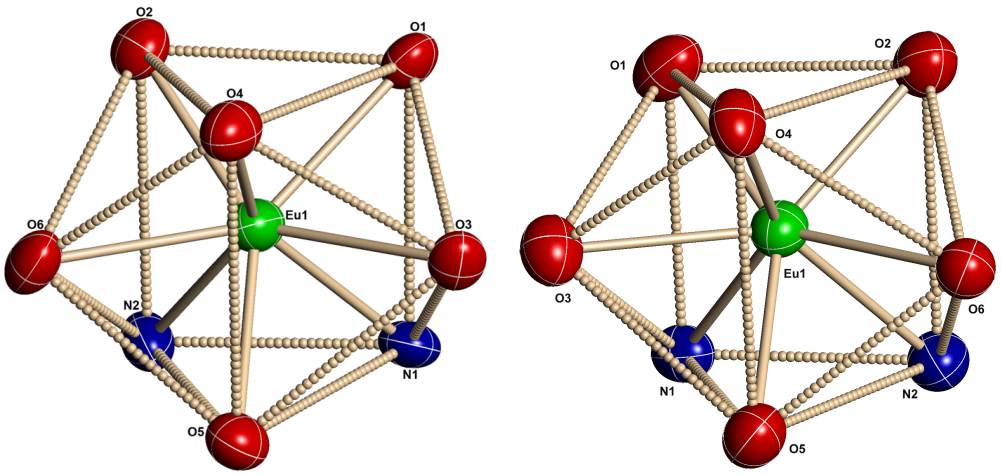

Fig. S3. Coordination geometries of ***R*-1** (left) and ***S*-1** (right) around the Eu(III) ions.

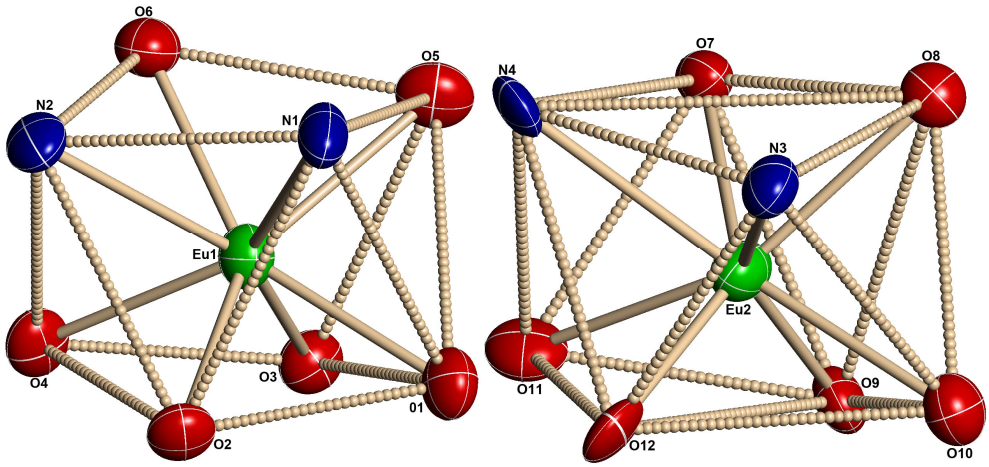

Fig. S4. Coordination geometries of ***R*-2** around the Eu(III) ions.

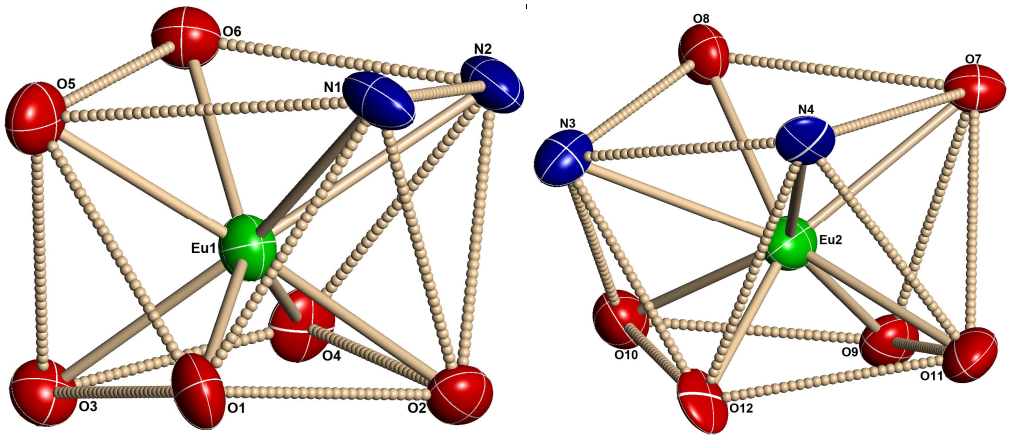

Fig. S5. Coordination geometries of ***S*-2** around the Eu(III) ions.

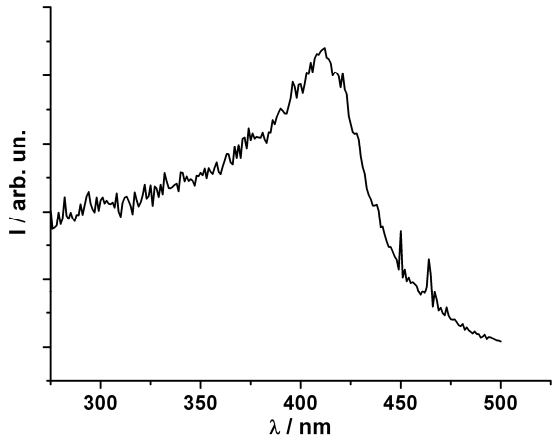

Fig. S6. The excitation spectrum for ***R*-1** and ***R*-2** in solid state.

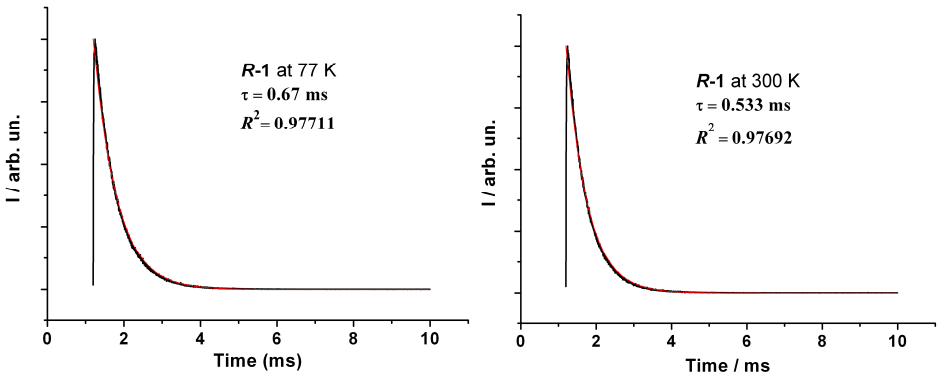

Fig. S7. Photoluminescence lifetime decay measurement of ***R*-1** in solid state at 77 and 300 K.

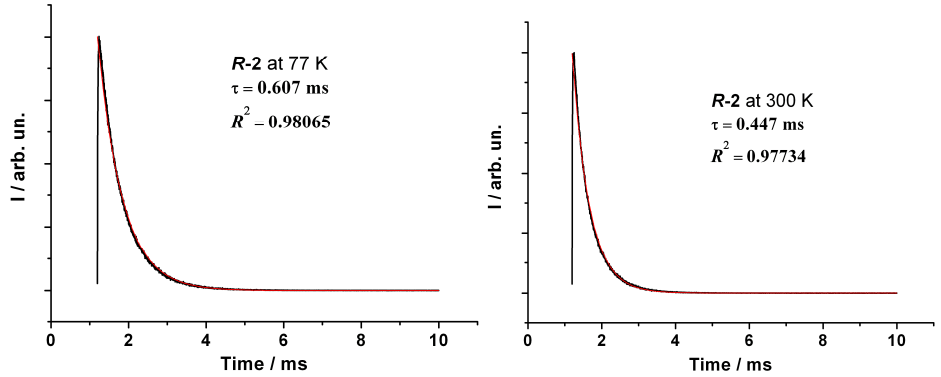

Fig. S8. Photoluminescence lifetime decay measurement of ***R*-2** in solid state at 77 and 300 K.

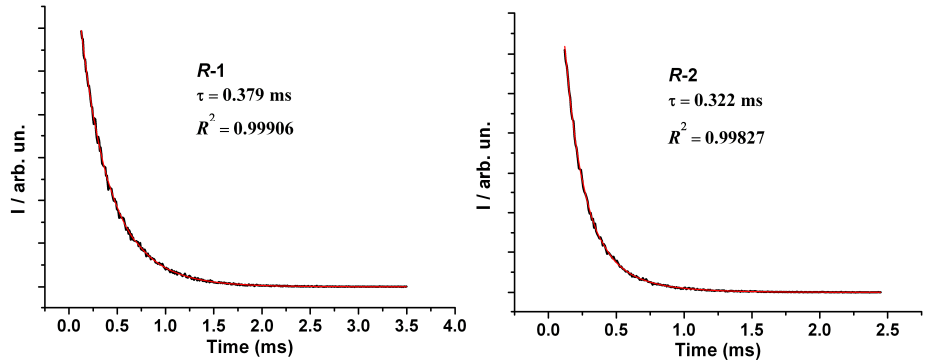

Fig. S9. Photoluminescence lifetime decay measurement of ***R*-1** and ***R*-2** in CH_2Cl_2 at room temperature.

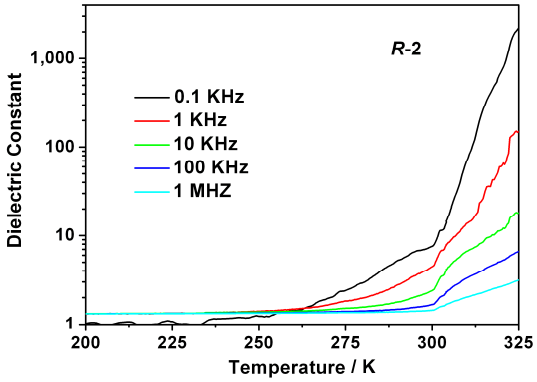

Fig. S10. The temperature dependence of the dielectric constant of ***R*-2** at various frequencies.

Table S1. X-ray crystallographic data for complexes L_R, L_S and $Eu(dbm)_3H_2O$

	L_R	**L_S**	**$Eu(dbm)_3H_2O$**
Chemical formula	$C_{28}H_{30}N4$	$C_{28}H_{30}N4$	$C_{45}H_{35}O_7Eu$
Formula weight	422.56	422.56	837.67
Crystal system	Monoclinic	Monoclinic	Trigonal
Space group	$P2_1$	$P2_1$	$R3$
a /Å	7.0760(5)	7.0752(4)	22.551(3)
b /Å	8.8805(7)	8.8818(6)	22.551(3)
c /Å	19.0843(13)	19.0839(14)	6.3892(15)
α /°	90	90	90
β /°	91.697(7)	91.796(6)	90
γ /°	90	90	120
V/Å^3	1198.70(15)	1198.65(14)	2813.8(9)
Z	2	2	3
D/g cm^{-3}	1.171	1.171	1.483
μ/mm^{-1}	0.07	0.07	1.724
GOF	1.033	1.022	1.008
R_1[a]/$_wR_2$[b]	0.0482/0.0813	0.0531/0.1149	0.0514/0.1072

[a] $R_1 = \sum||Fo|-|Fc||/\sum|Fo|$. [b] $_wR_2 = [\sum w(Fo^2 - Fc^2)^2/\sum w(Fo^2)^2]^{1/2}$