Electronic Supplementary Material (ESI) for RSC Advances.

Hydrothermal control, characterization, growth mechanism, and photoluminescence properties of highly crystalline 1D $Eu(OH)_3$ nanostructures

Xiang Ji[1, #], Pingjing Hu[1, #], Xiangzi Li[1, 2,*], Longwei zhang[1, #], Jian Sun[2]

[1]*Anhui Province Key Laboratory of Active Biological Macro-molecules Research, Institute of Synthesis and Application of Medical Materials, Department of Chemistry, Wannan Medical College, Wuhu 241002, China.*

[2]*College of Chemistry and Materials Science, Anhui Laboratory of Molecule-based Materials, Anhui Normal University, Wuhu 241002, China*

E-mail: li-xiang-zi@163.com

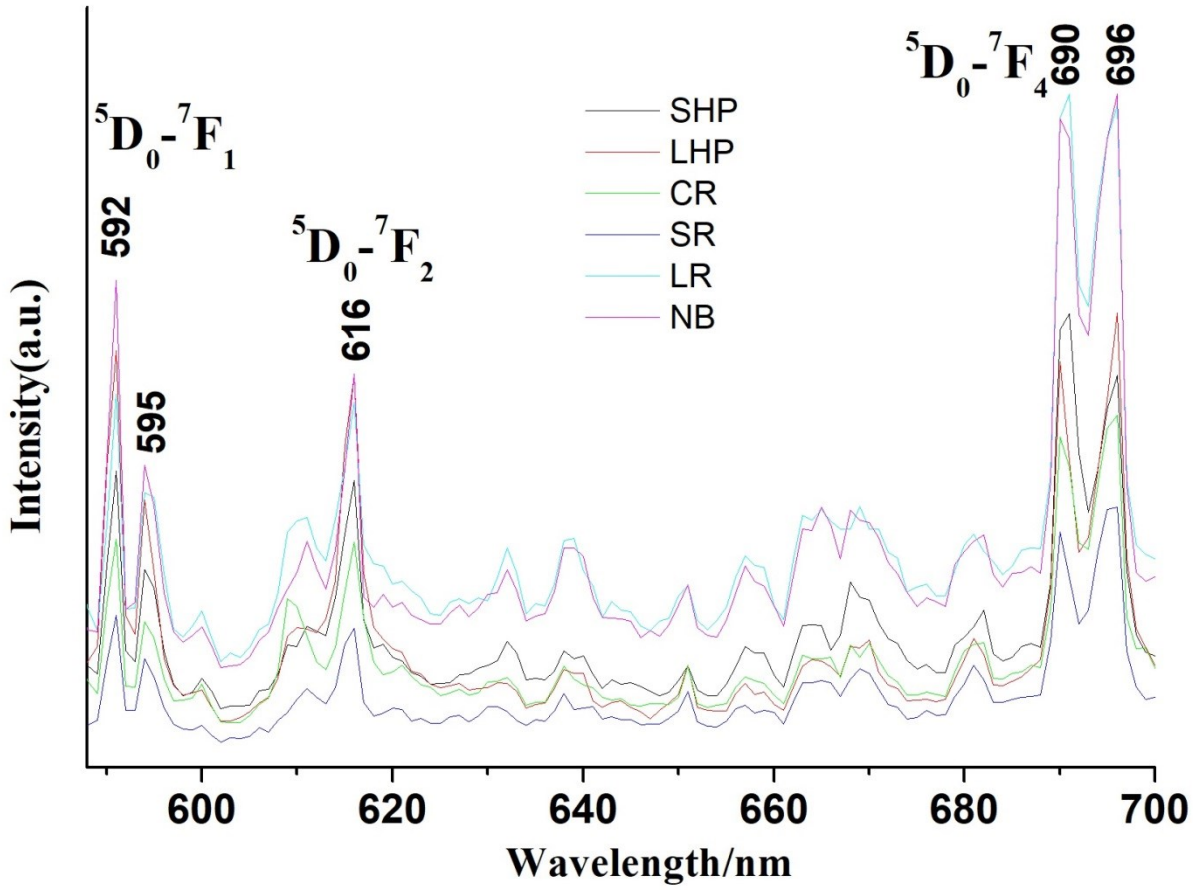

Fig.S1 The overlapped emission spectra of six $Eu(OH)_3$ nanostructures

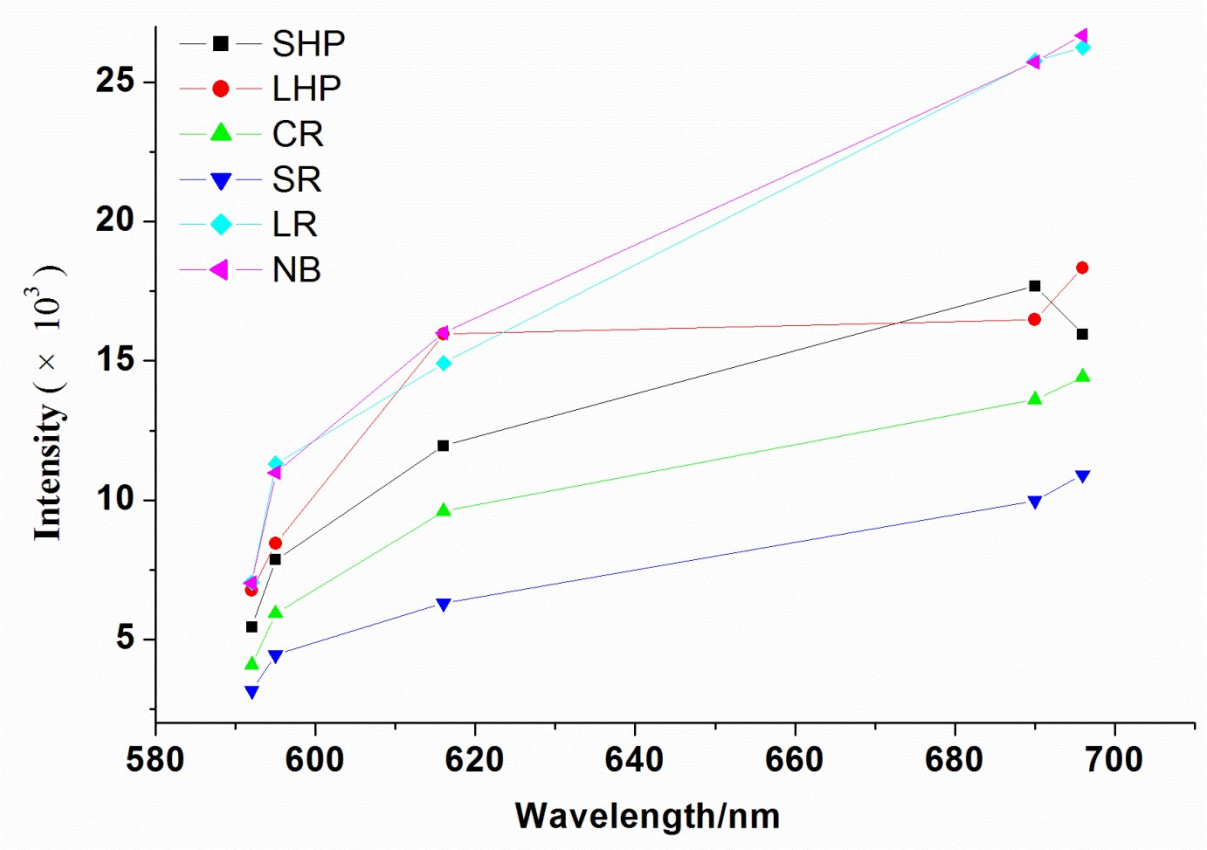

Fig.S2 The λ_{ex}-I curves of six $Eu(OH)_3$ nanostructures

Table S1 The detailed measurements data of six $Eu(OH)_3$ nanostructures

Shape		1	2	3	4	5	6	7	8	9	*x*	$\bar{L}$ (nm)	$\bar{D}$ (nm)	$\bar{L}/\bar{D}$
SHP	**L (nm)**	280	255	262	266	296	299	278	266	280	15	**276**	–	–
	D (nm)	252	234	212	245	268	266	257	219	265	21	–	**246**	–
	L/D	1.1	1.1	1.2	1.1	1.1	1.1	1.1	1.2	1.1	–	–	–	**1.1**
LHP	**L (nm)**	505	527	411	545	415	441	440	499	358	62	**460**	–	–
	D (nm)	242	239	191	257	214	225	204	220	182	25	–	**219**	–
	L/D	2.1	2.2	2.2	2.1	1.9	2.0	2.2	2.3	2.0	–	–	–	**2.1**
CR	**L (nm)**	258	265	255	246	258	256	235	280	267	13	**258**	–	–
	D (nm)	42	54.4	49.6	40.4	46	48.1	50	55	50.2	5	–	**48**	–
	L/D	6.0	4.9	5.1	6.1	5.6	5.3	4.7	5.1	5.3	–	–	–	**5.3**
SR	**L (nm)**	137	109	97	104	84	122	139	–	–	21	**113**	–	–
	D (nm)	29.1	27.5	27.5	28	29.3	31	30.2	–	–	1	–	**29**	–
	L/D	4.7	4.0	3.5	3.7	2.9	3.9	4.6	–	–	–	–	–	**3.9**
LR	**L (nm)**	278	285	402	141	209	313	290	–	–	82	**274**	–	–
	D (nm)	22.6	21	25.3	18	28	23.5	24.4	–	–	3	–	**23**	–
	L/D	12.3	13.6	15.9	7.8	7.5	13.3	11.9	–	–	–	–	–	**11.8**
NB	**L (nm)**	2114	1629	1597	1795	2390	1233	1277	–	–	422	**1719**	–	–
	D (nm)	264	220	176	121	187	143	165	–	–	48	–	**182**	–
	L/D	8.0	7.4	9.1	14.8	12.8	8.6	7.7	–	–	–	–	–	**9.4**