

## 基于铈取代多金属氧簇的手性发光液晶材料

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## Chiral Luminescent Liquid Crystal Material Based on Europium-Substituted Polyoxometalate

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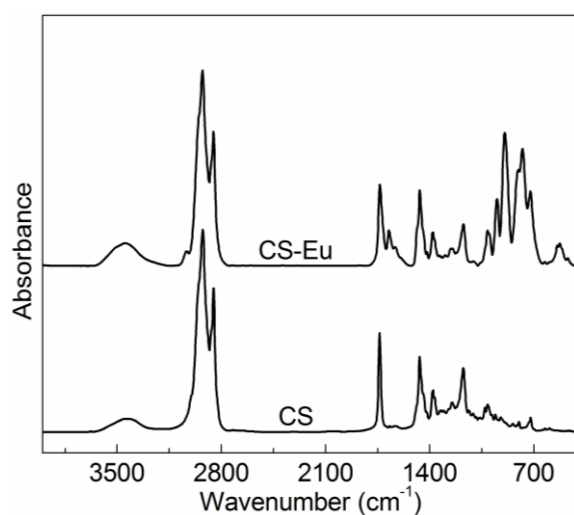
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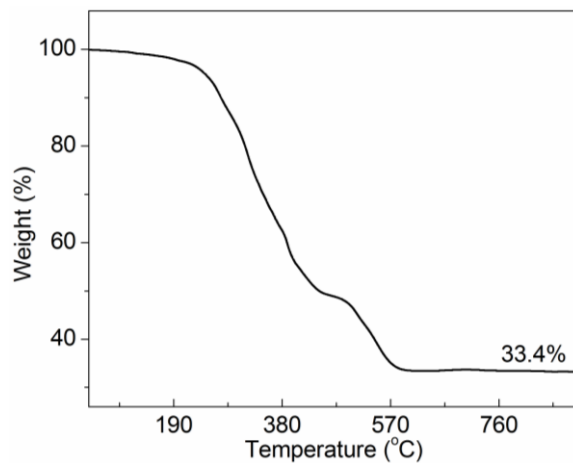
WU Li-Xin, Email: wulx@jlu.edu.cn; Tel: +86-431-85168481.



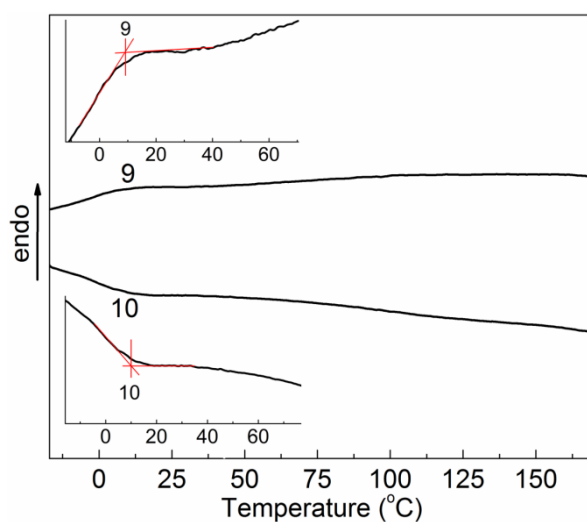
**Fig.S1 IR spectrum of CS-Eu (up) and CS (bottom) in KBr pellet**

**Table S1 Assignments of characteristic infrared spectra of CS and CS-Eu**

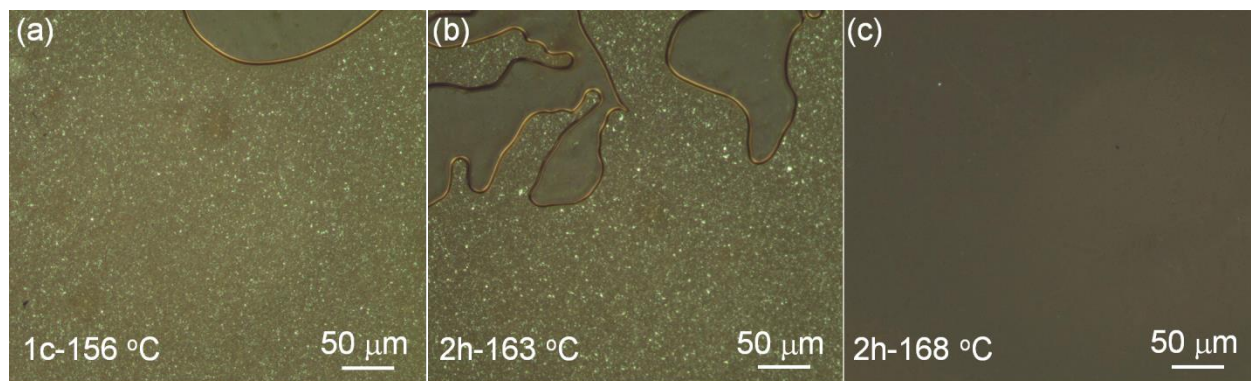
Wavenumber/cm <sup>-1</sup>		Assignment
CS	CS-Eu	
3440	3450	O-H asymmetrical stretching
	3033	Aromatic C-H stretching
2923	2925	CH <sub>2</sub> asymmetrical stretching
2850	2852	CH <sub>2</sub> symmetrical stretching
1735	1735	∅-C=O stretching
1467	1467	CH <sub>2</sub> scissoring
1377	1378	CH <sub>3</sub> scissoring
1247	1249	C-O-C antisymmetrical stretching
1174	1172	C-N stretching
1012	1012	=C-O-C antisymmetrical stretching
	946	W-O <sub>d</sub> antisymmetrical stretching
	894	W-O <sub>b</sub> -W antisymmetrical stretching
	777, 723	W-O <sub>c</sub> -W antisymmetrical stretching



**Fig.S2** TGA thermograms of CS-Eu carried out in air at the heating rate of  $10\text{ }^{\circ}\text{C}\cdot\text{min}^{-1}$



**Fig.S3** DSC traces of CS-Eu on the second heating and first cooling runs. The insets show the enlargements of the DSC peaks corresponding to glass state transitions.



**Fig.S4** POM images of CS-Eu at (a)  $156\text{ }^{\circ}\text{C}$  on the first cooling run, (b)  $163\text{ }^{\circ}\text{C}$  and (c)  $168\text{ }^{\circ}\text{C}$  on the second heating process

**Table S2 X-ray data of compound CS-Eu on the first cooling run**

<i>T</i> /°C	Phase group	$2\theta/(\circ)$	<i>d</i> /nm	<i>hkl</i>	<i>d</i> -spacing/nm
30	SmA*	2.1	4.21	001	4.21
		4.0	2.21	002	
		5.9	1.50	003	
		8.0	1.10	004	
55	SmA*	2.1	4.21	001	4.21
		4.0	2.21	002	
		5.9	1.50	003	
		8.0	1.10	004	
90	SmA*	2.2	4.02	001	4.02
		4.1	2.16	002	
		6.0	1.47	003	
		8.0	1.10	004	
125	SmA*	2.2	4.02	001	4.02
		4.1	2.16	002	
		6.1	1.45	003	
		8.1	1.09	004	