

Supporting Information

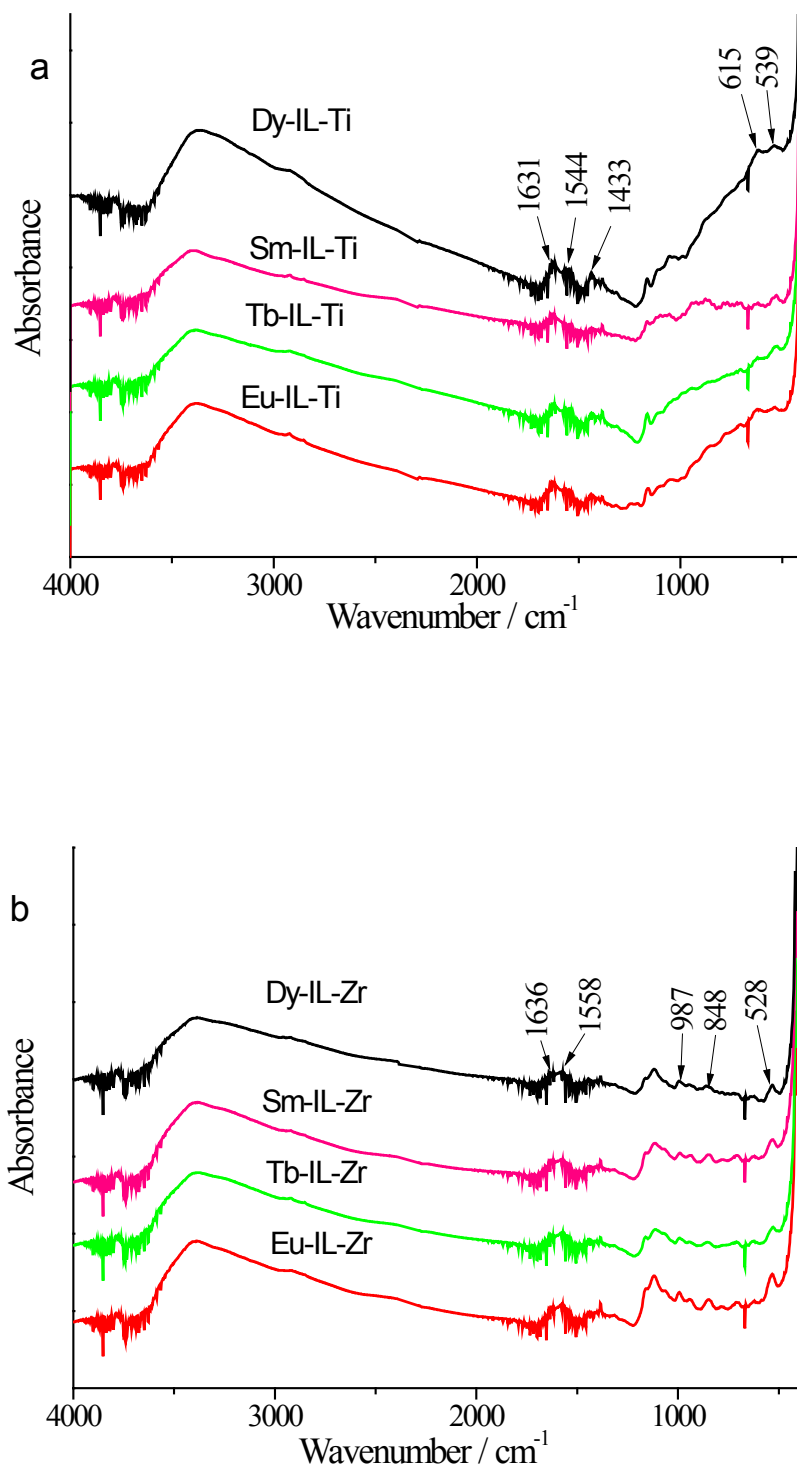


Figure S1 The Fourier transform infrared spectra of hybrid xerogels Ln-IL-Ti (a); Ln-IL-Zr (b) (Ln = Eu, Tb, Sm, Dy).

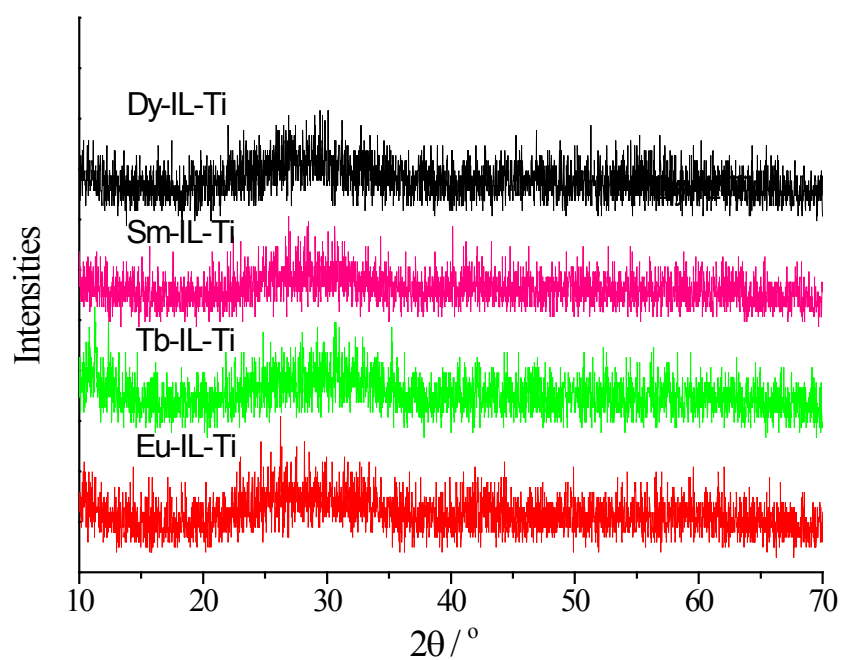


Figure S2 The selected wide angle X-ray diffraction patterns Ln-IL-Ti hybrid xerogels (Ln = Eu, Tb, Sm, Dy).

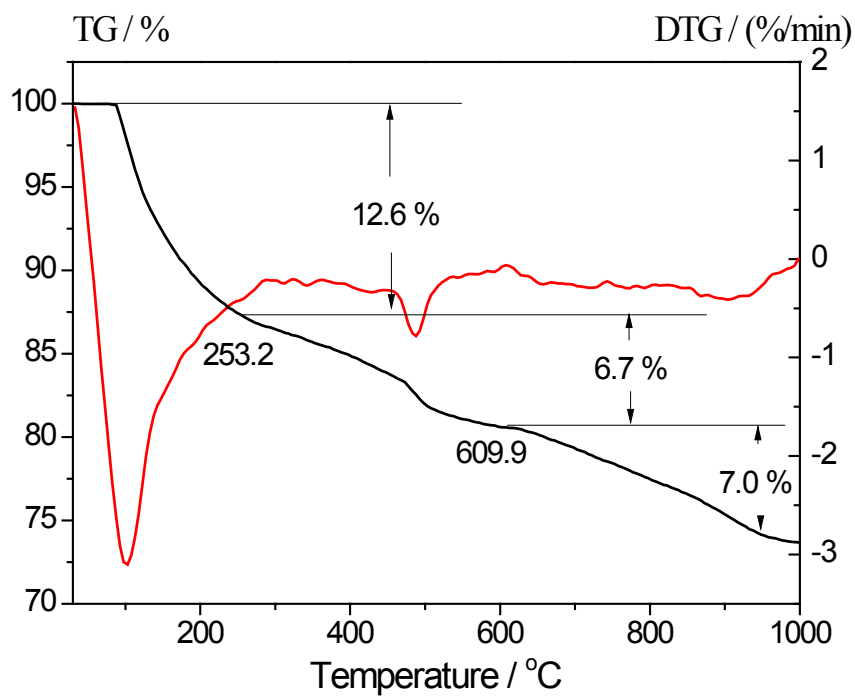


Figure S3 The selected thermogravimetric and differential thermogravimetry curves of Eu-IL-Zr hybrid xerogel.

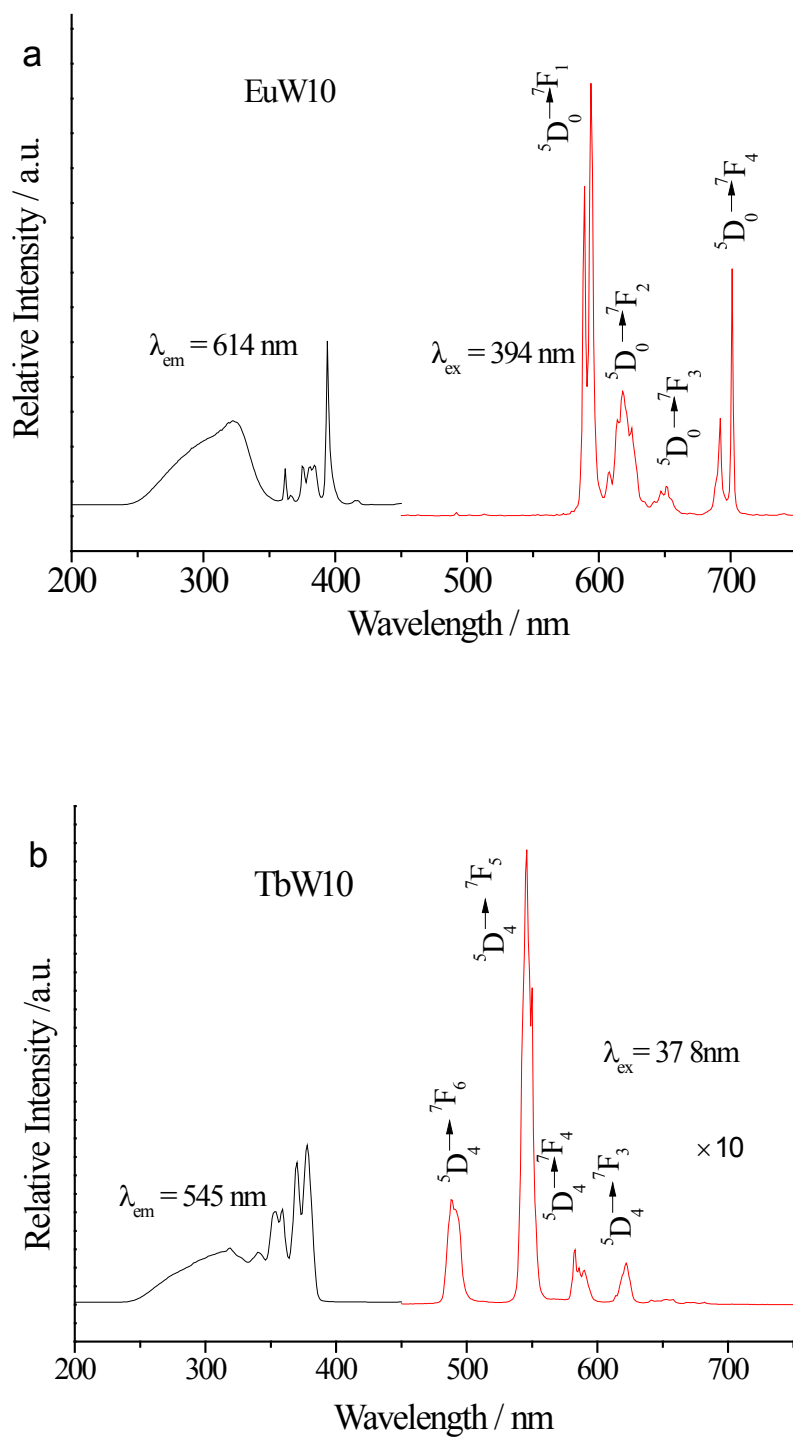


Figure S4 The excitation and emission spectra of EuW10 (a) and TbW10 (b).

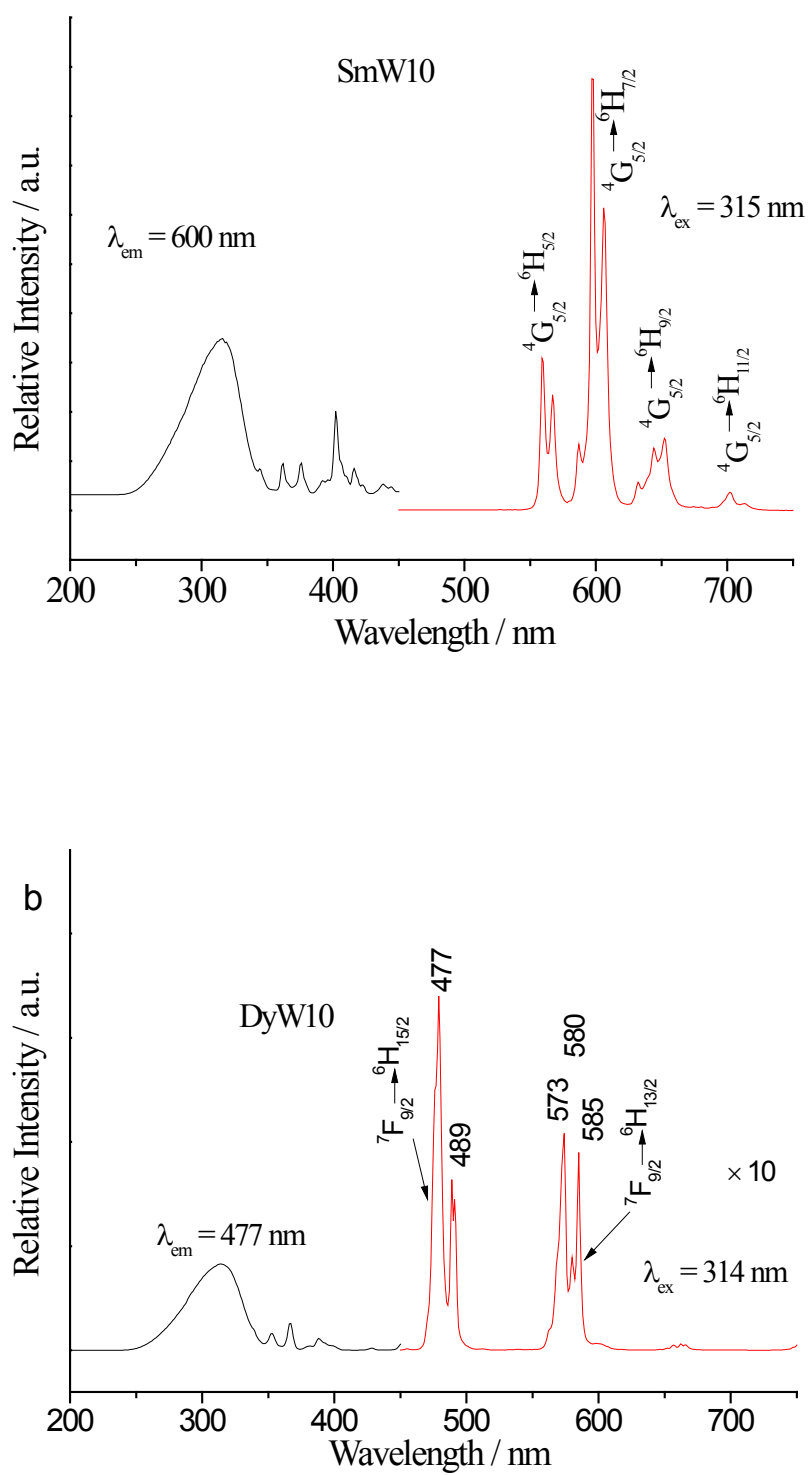


Figure S5 The excitation and emission spectra of SmW10 (a) and DyW10 (b).

Table S1 Color coordinates and color of four parent polyoxometalates LnW10 and twelve derived hybrid xerogels Ln-IL-M, (Ln = Eu, Tb, Sm, Dy, M = Al, Ti, Zr).

Materials	<i>x</i>	<i>y</i>	λ_{ex} / nm	Color
Na ₉ EuW10	0.5772	0.4154	394	Orange
Na ₉ TbW10	0.3121	0.6003	378	Green
Na ₉ SmW10	0.5772	0.4154	315	Orange
Na ₉ DyW10	0.318	0.3486	314	White
Eu-IL-Al	0.6214	0.3762	303	Orange
Eu-IL-Ti	0.3793	0.4055	290	Nearly white
Eu-IL-Zr	0.4687	0.5089	300	Yellow
Tb-IL-Al	0.3118	0.5725	300	Green Yellow
Tb-IL-Ti	0.3618	0.4119	290	Nearly white
Tb-IL-Zr	0.3584	0.4177	300	Nearly white
Sm-IL-Al	0.5797	0.4187	304	Orange
Sm-IL-Ti	0.4629	0.5139	402	Yellow
Sm-IL-Zr	0.464	0.513	303	Yellow
Dy-IL-Al	0.3184	0.3519	298	White
Dy-IL-Ti	0.3614	0.4091	295	Nearly white
Dy-IL-Zr	0.357	0.4033	300	Nearly white