Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting Information

Porous organic polymer based on melamine and 5,5'-bis(bromomethyl)-2,2'-bipyridine: functionalization with lanthanide ions for chemical sensing, and highly efficient adsorption of methyl orange

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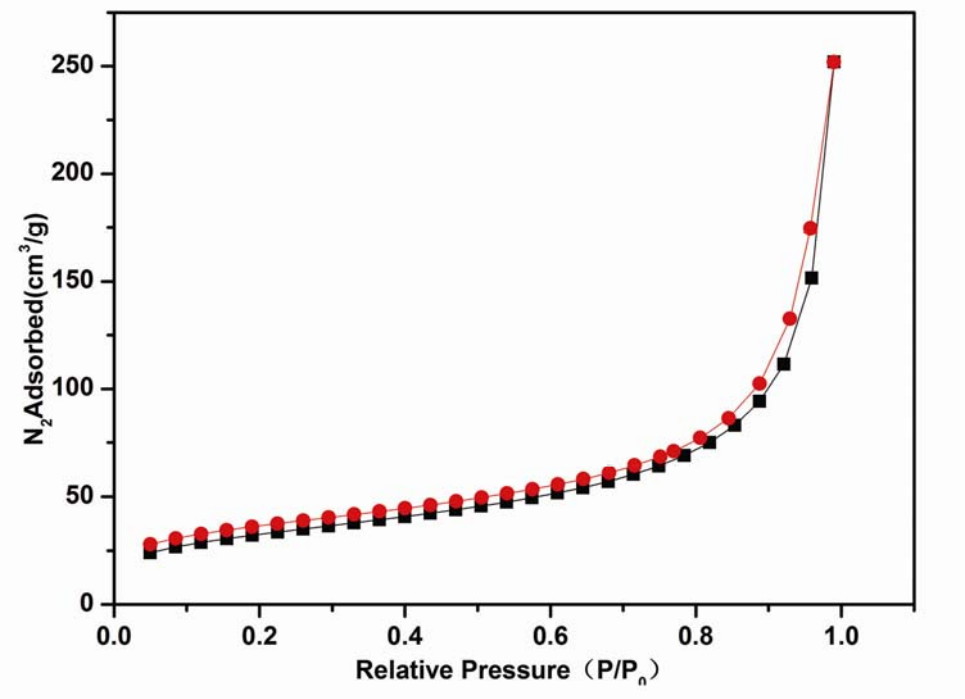

Materials	SBET (m^2/g)	Pore volume (cm^3/g)	Pore size (nm)
Polymer	**114**	**0.199**	**7**

Fig. S1 N_2 adsorption-desorption isotherms for POP-1.

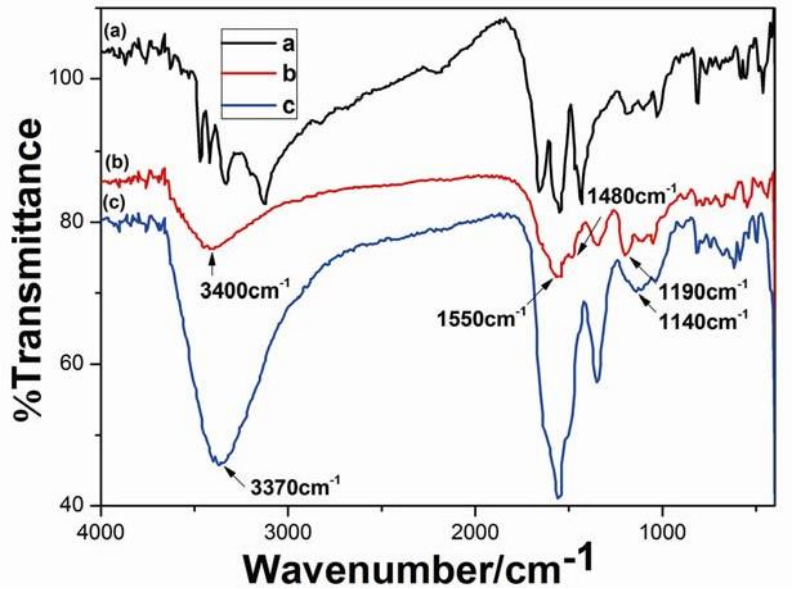

Fig. S2 1.Fourier transform infrared spectra (FT-IR) of (a) Melamine ; (b) POP-1; (c) Eu^{3+}@POP-1.

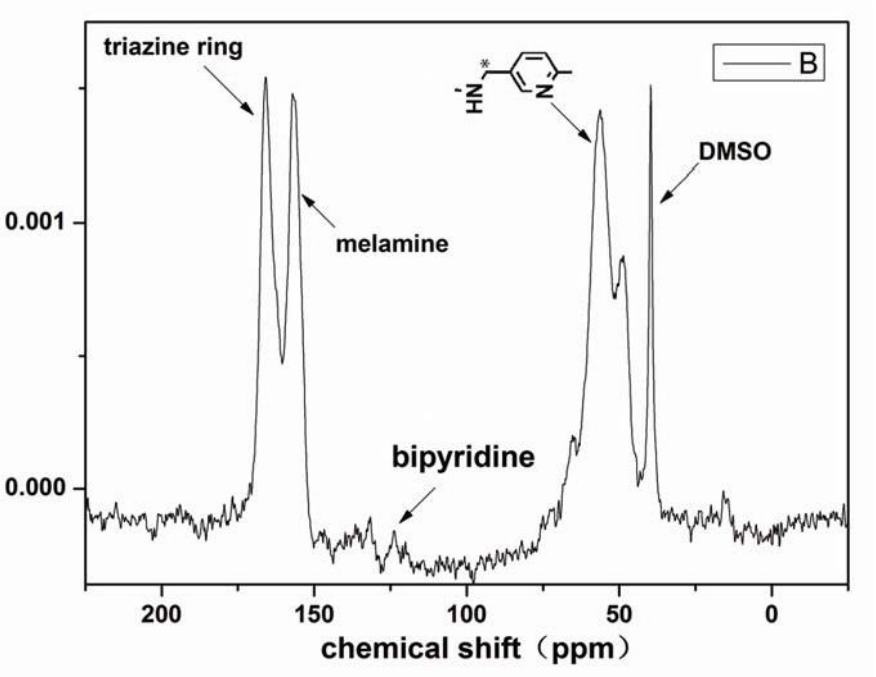

Fig.S3 Cross-polarization (CP) C^{13} MAS natural abundance NMR spectrum of POP-1

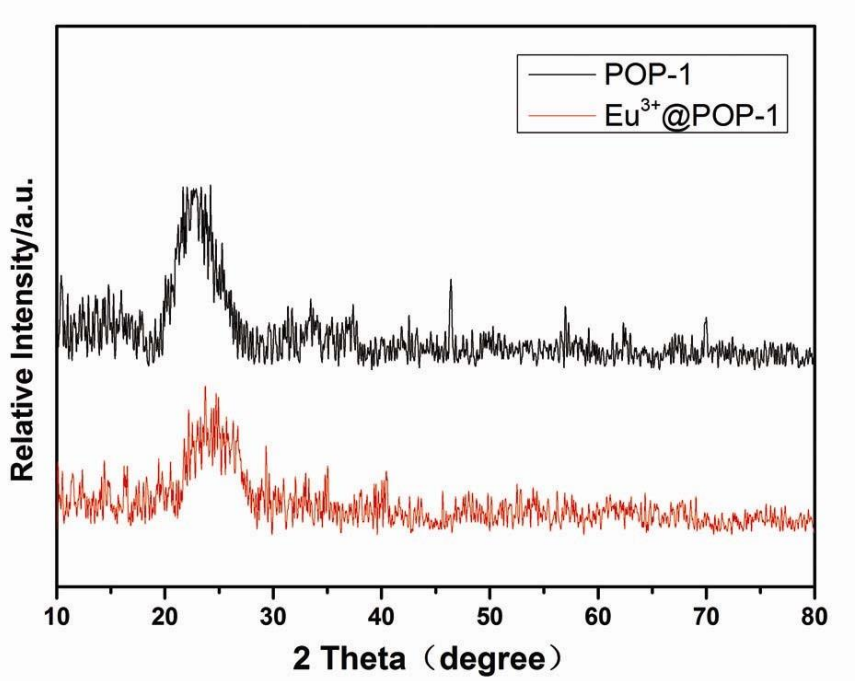

Fig. S4 Powder XRD patterns of POP-1 and Eu^{3+}@POP-1.

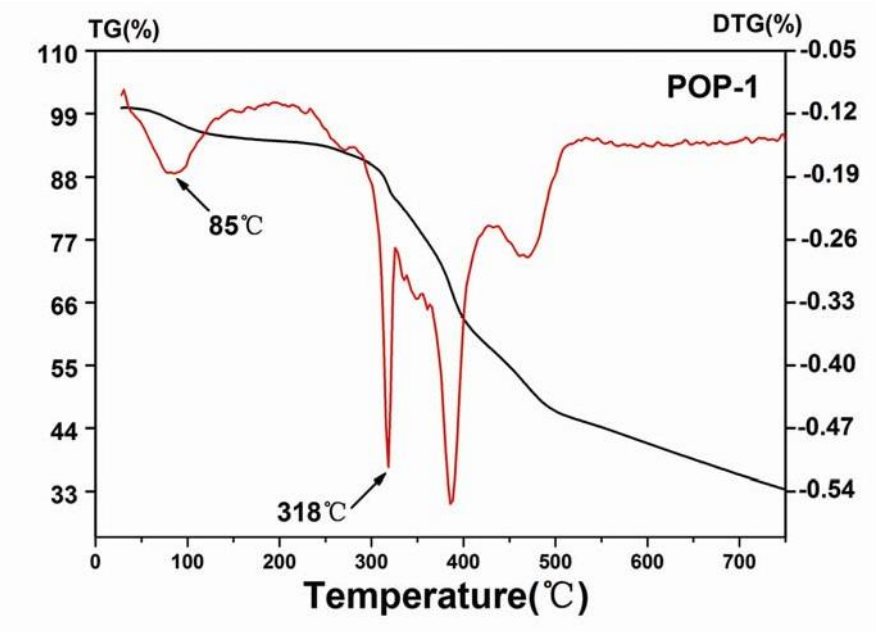

Fig. S5 Thermogravimetric analysis of POP-1.

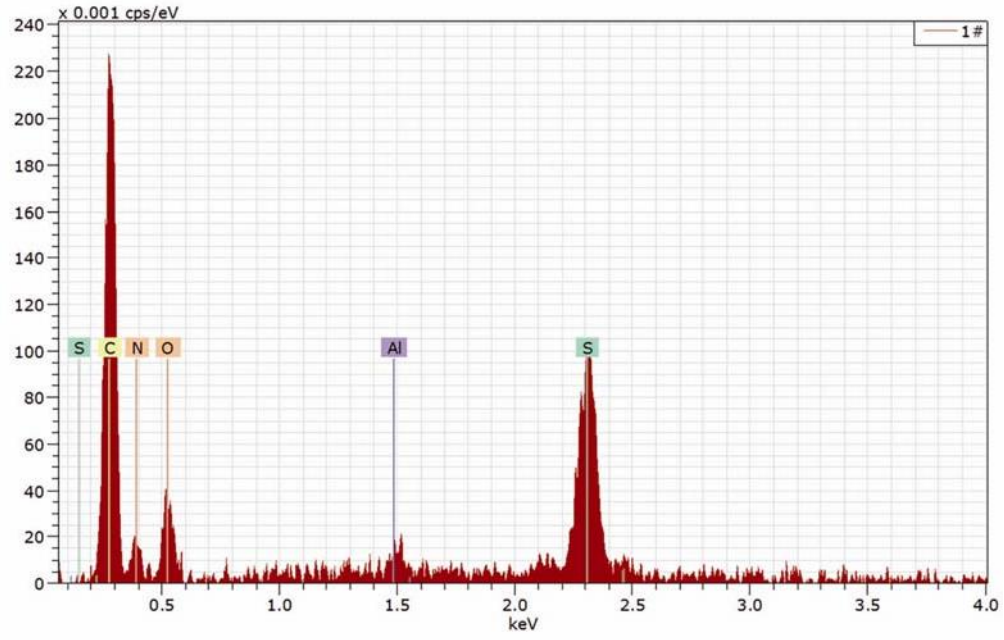

Fig. S6 Energy dispersive X-ray (EDX) analysis of POP-1.

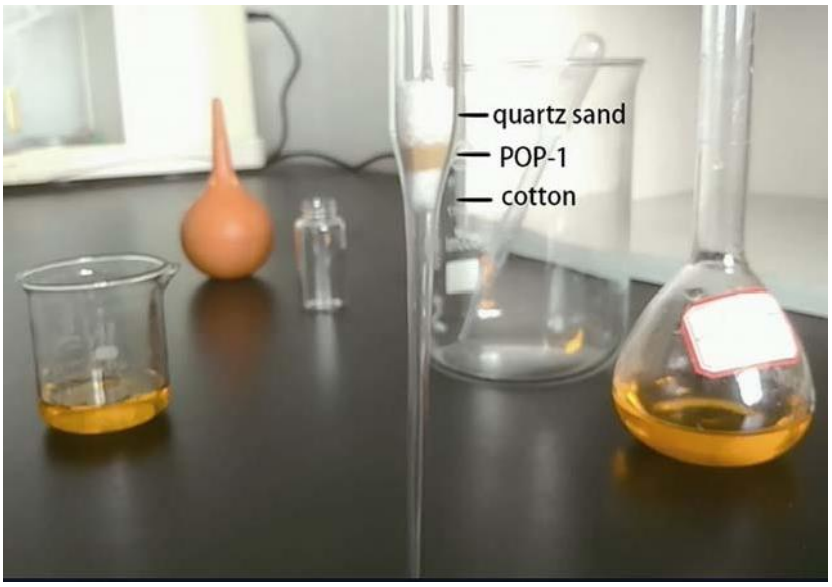

Fig. S7 The adsorption device for MO.

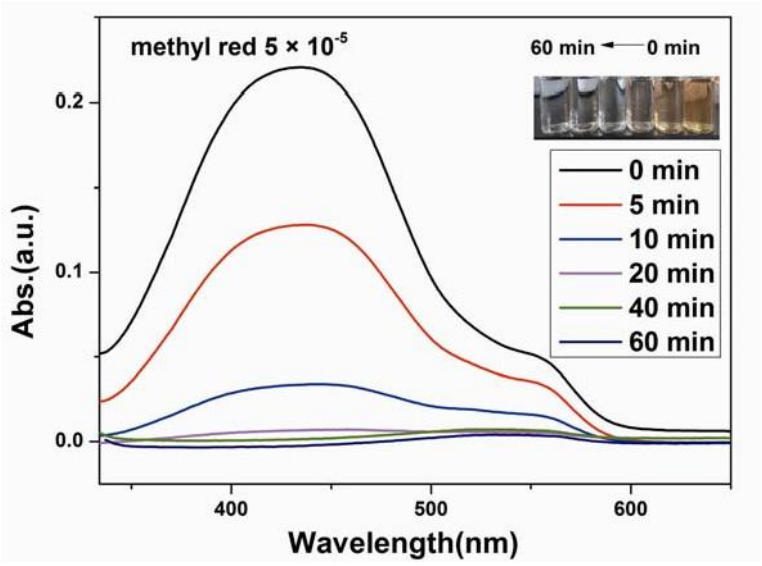

Fig. S8 UV-vis spectra of methyl red with POP-1 at given intervals, respectively. Inset: photographic images of dye solutions for different periods of time.

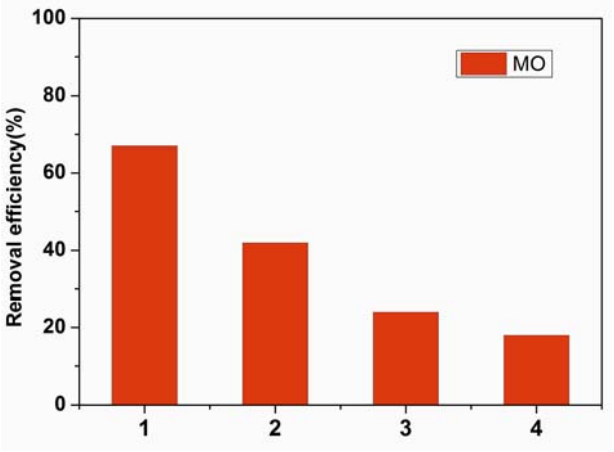

Fig. S9. The removal efficiency of as-synthesized adsorbent before and after four cycles.

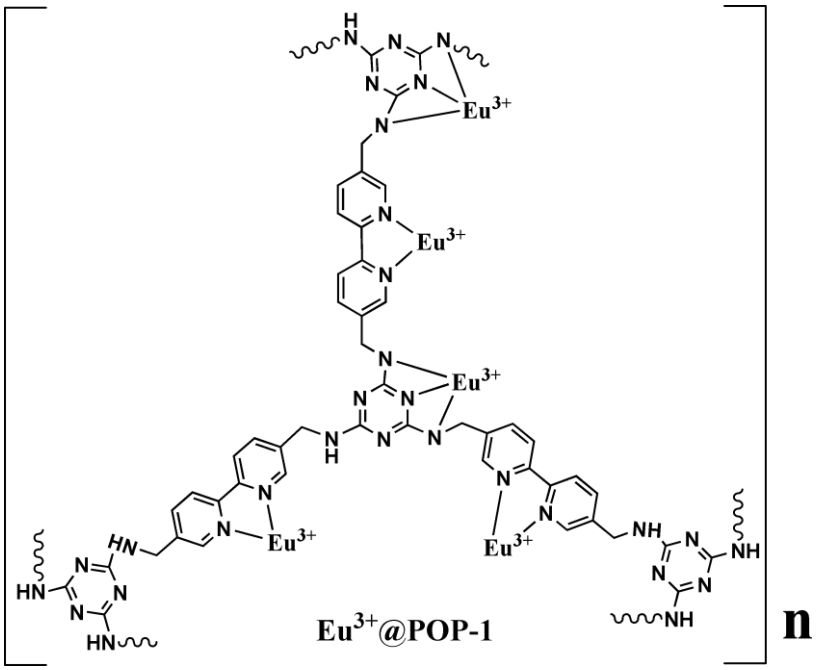

Fig. S10 Schematic diagram of Eu^{3+}@POP-1.

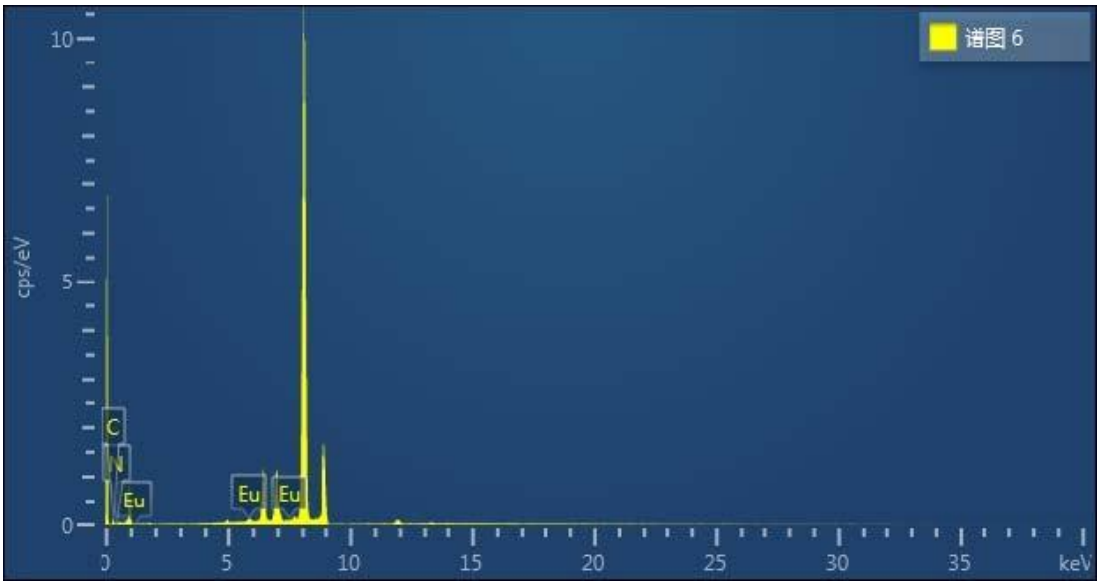

Fig. S11 Energy dispersive X-ray (EDX) analysis of Eu^{3+}@ARPOP-1

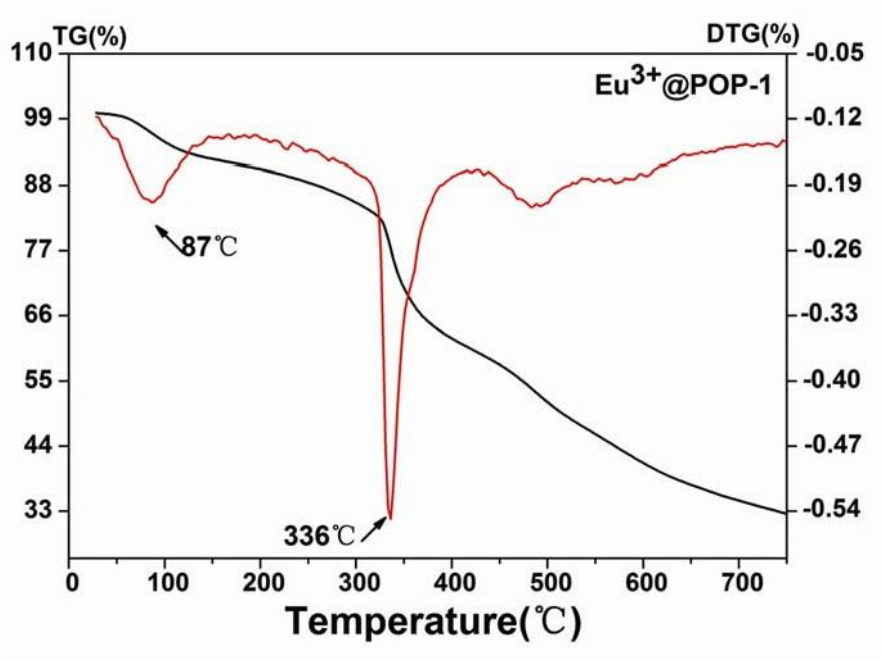

Fig. S12 Thermogravimetric analysis of Eu^{3+}@POP-1.

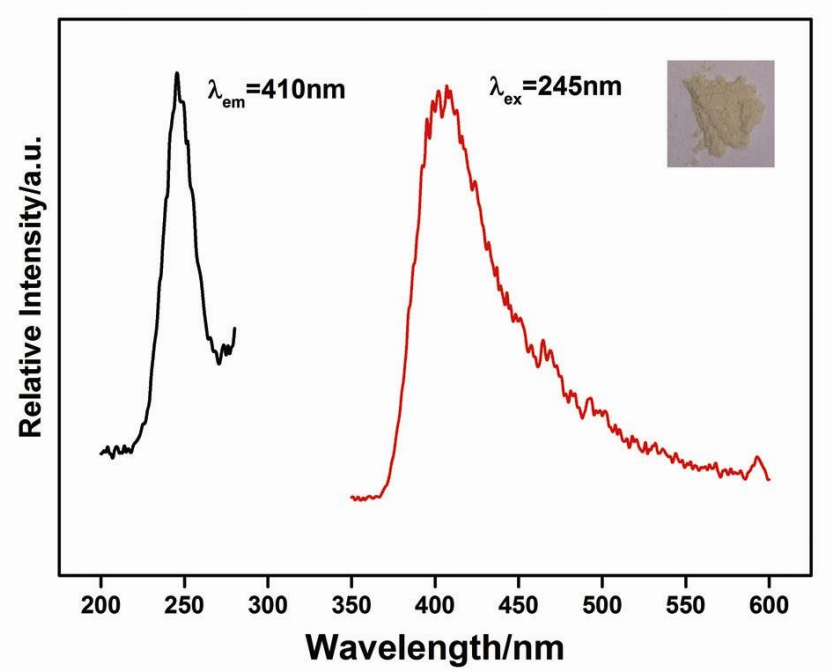

Fig. S13 Excitation spectrum and emission spectrum of POP-1.

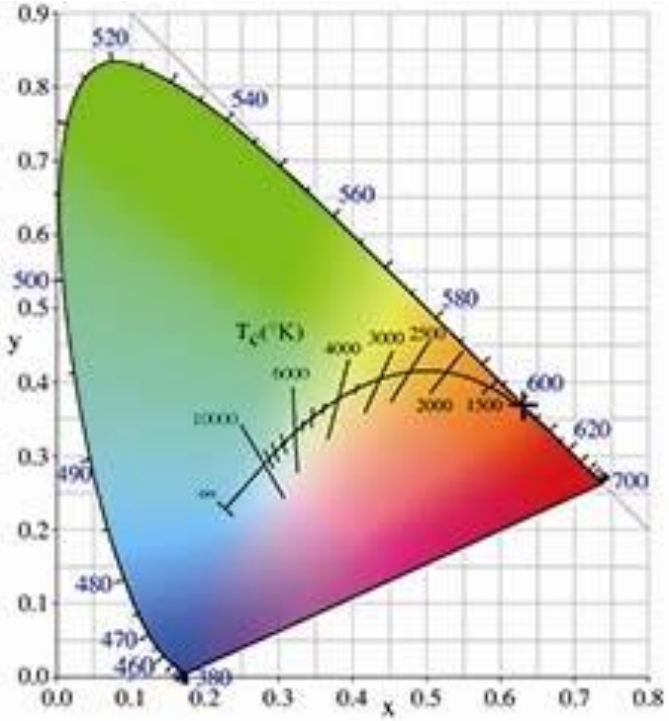

Fig. S14 CIE chromaticity diagram of Eu^{3+}@POP-1.

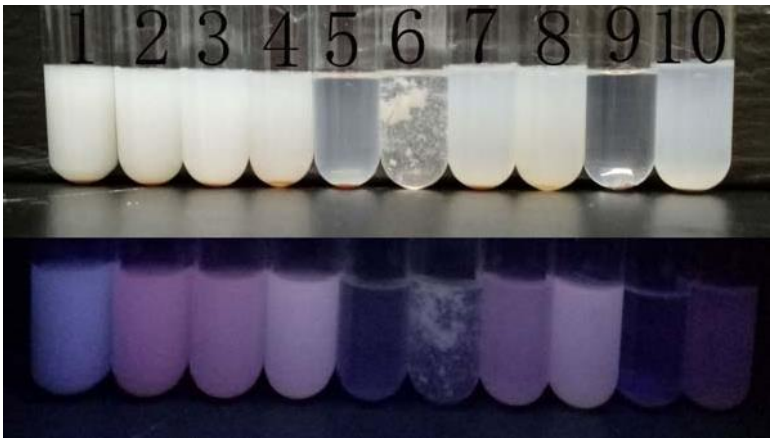

Fig. S15 Eu^{3+}@POP-1 introduced into various pure solvents under UV light （1-$CHCl_3$， 2-$CHCl_2$， 3-Ethyl acetate, 4-DMF， 5-Tolune, 6-Methanol, 7-THF, 8-CCl_4, 9-Diethyl ether, 10-Acetone.

Adsorbents	Uptake capacity (mg g-1)	Ref
5% GO/MIL-100(Fe)	1189	1
ZnAl-LDH-LDO	1015	2
POP-1	738.6	This work
MZIF-67	738	3
Mesoporous Y-Fe_2O_3/SiO_2 nanocomposites	476	4
Fe_3O_4/Al_2O_3/chitosan	416	5
Activated carbon	200	6

Table. S1 Comparison of MO adsorption capacity for adsorbents.

References

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