An AIE probe for fluorescence and colorimetric sensing of La^{3+}

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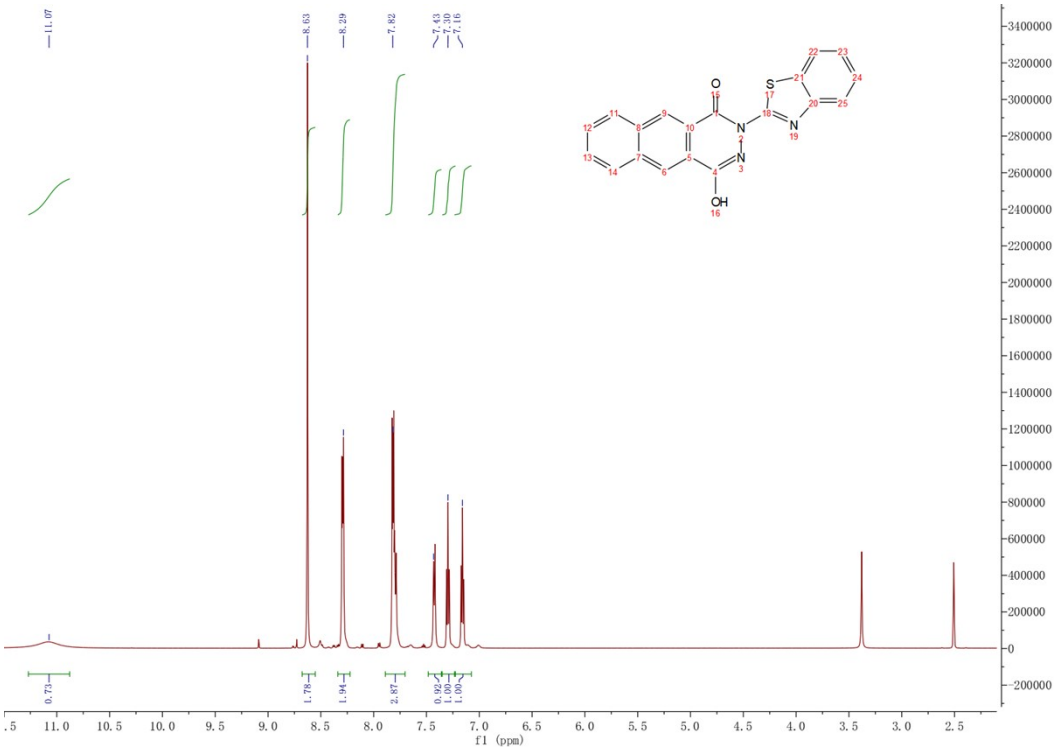


Figure S1 ^{1}H NMR spectra of compound **N**.

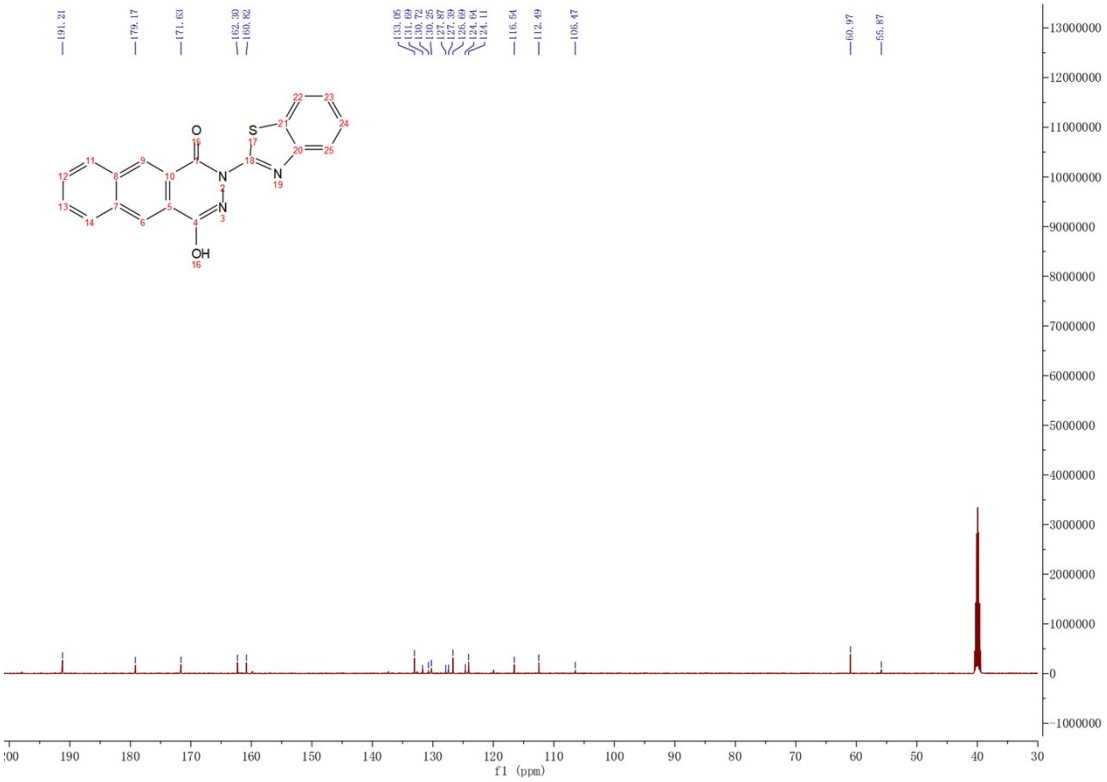


Figure S2 ^{13}C NMR spectra of compound **N**.

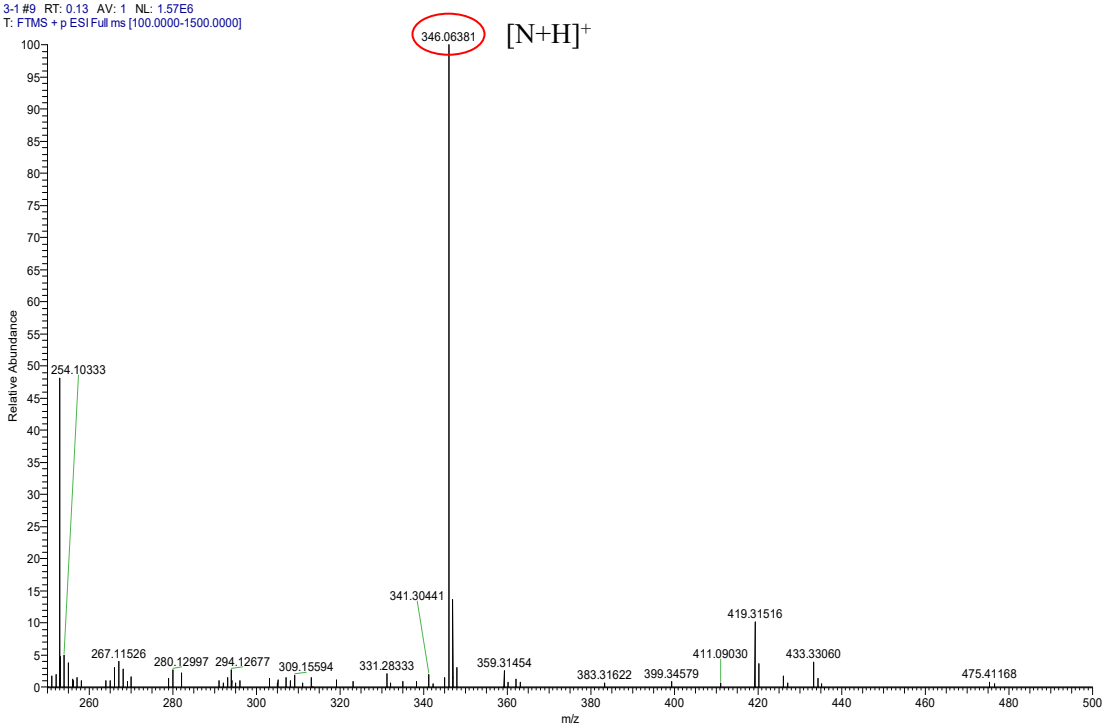


Figure S3 ESI-MS spectrum of probe **N**.

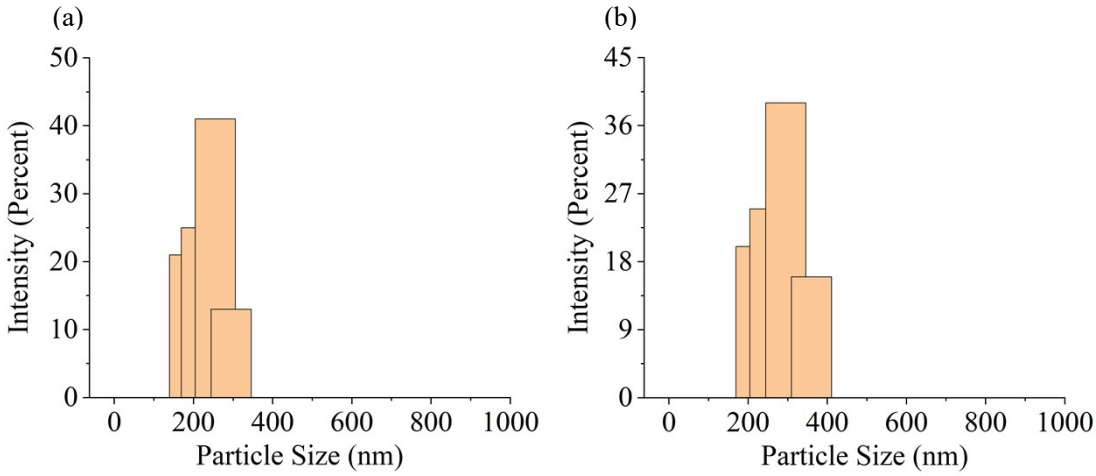


Figure S4 Particle size distributions of **NMH** in (a) EtOH and (b) EtOH/H_2O (1/9, v/v).

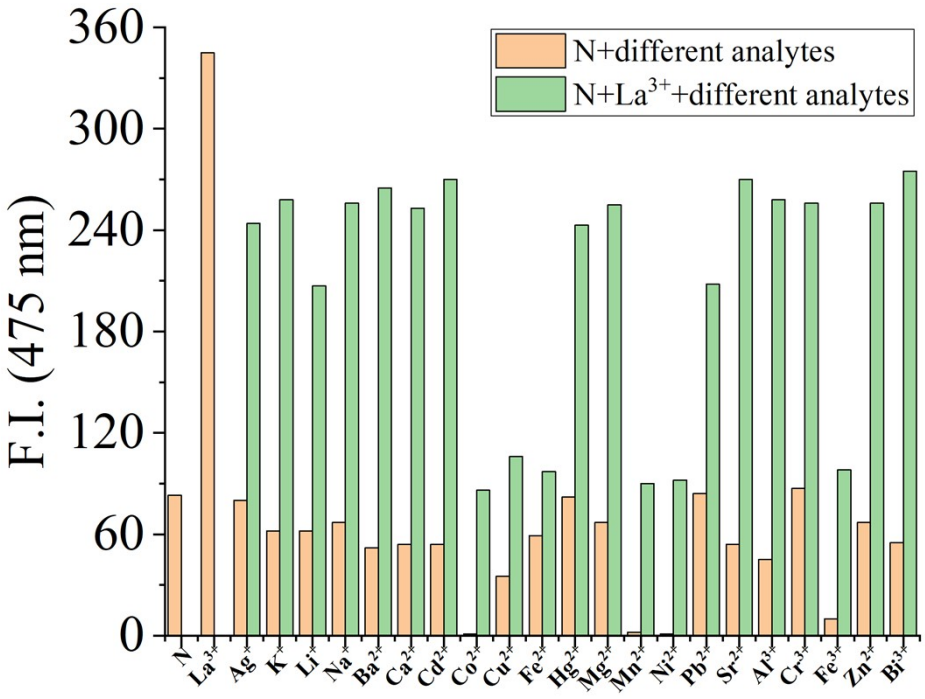


Figure S5 The fluorescence intensity a of probe **N** (10 μM) in the presence of La^{3+} (50 μM) and additional other metal ions (50 μM) in H_2O/EtOH (9/1, v/v, pH=7.4) medium.

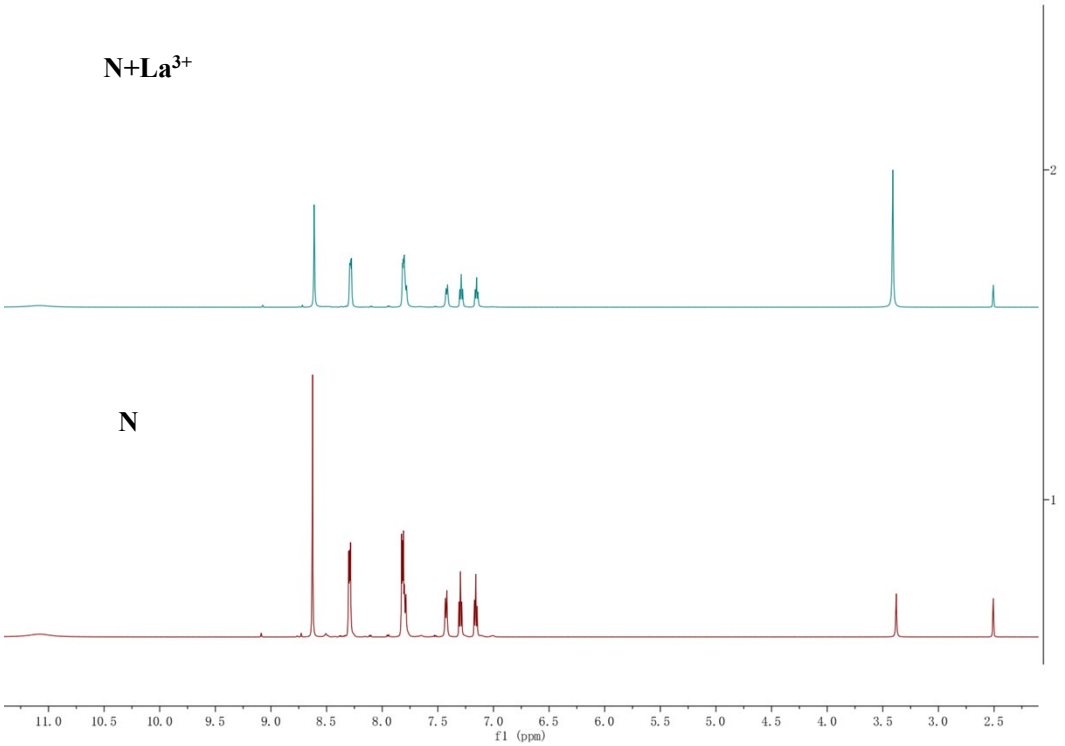


Figure S6 ^{1}H NMR (DMSO-*d*$_6$, 600 MHz) spectra of probe **N** and **N**/La^{3+} system.

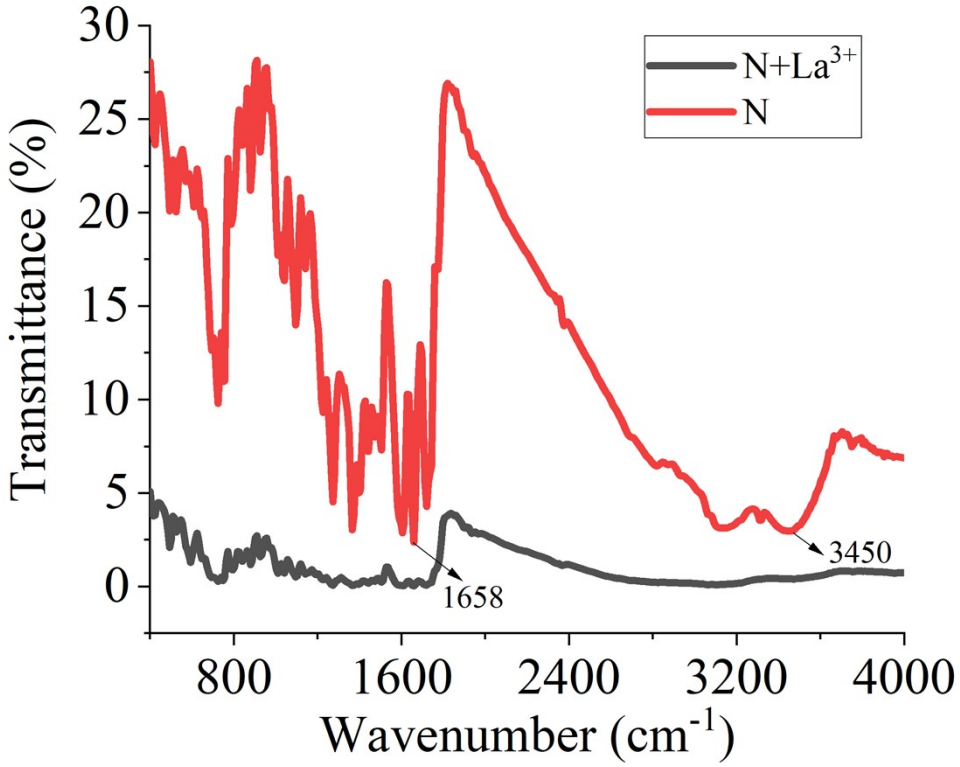


Figure S7 FT-IR spectra of probe **N** and **N**/La^{3+}.

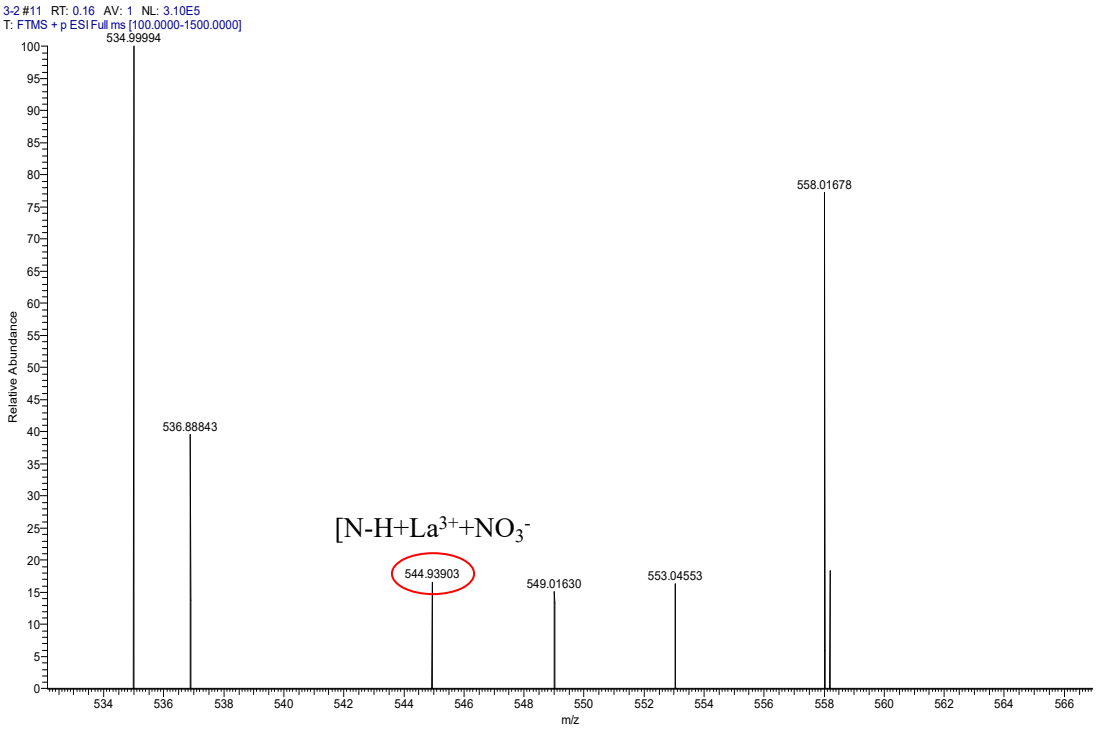


Figure S8 ESI-MS spectrum of **N**/La^{3+}.

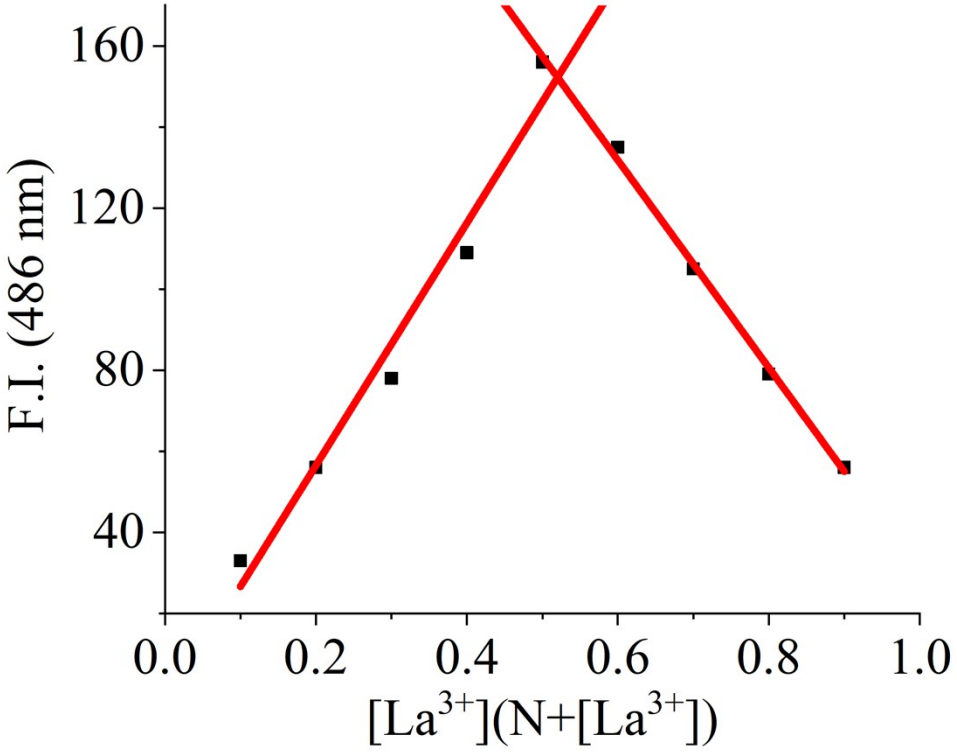
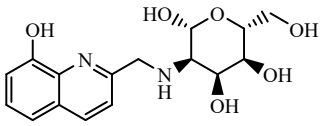
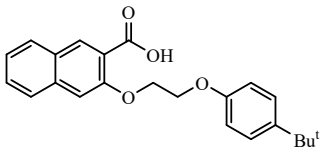
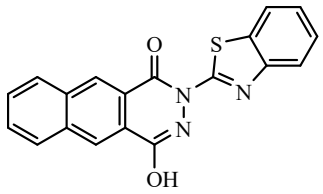


Figure S9 Job's plot of **N**/La^{3+} system in EtOH/H_2O (1/9, v/v, pH=7.4） medium

Table 1 Comparison of diverse aspects of La^{3+} fluorescence probes.

Ref.	probe molecules	Response Mode	Media	application
[31]		fluorescence "turn on"	HEPES buffer	HepG2 cells image
[35]		fluorescence "turn on"	CH_3CN/H_2O (2/1, v/v)	None
This work		fluorescence colorimetric	$EtOH/H_2O$ (9/1, v/v)	Solid state detection