



## Supporting Information

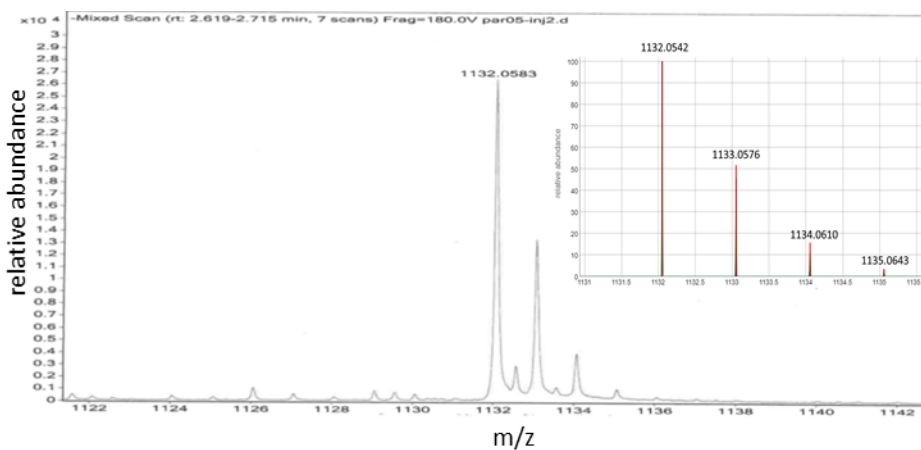
for

### **Investigation of a bimetallic terbium(III)/copper(II) chemosensor for the detection of aqueous hydrogen sulfide**

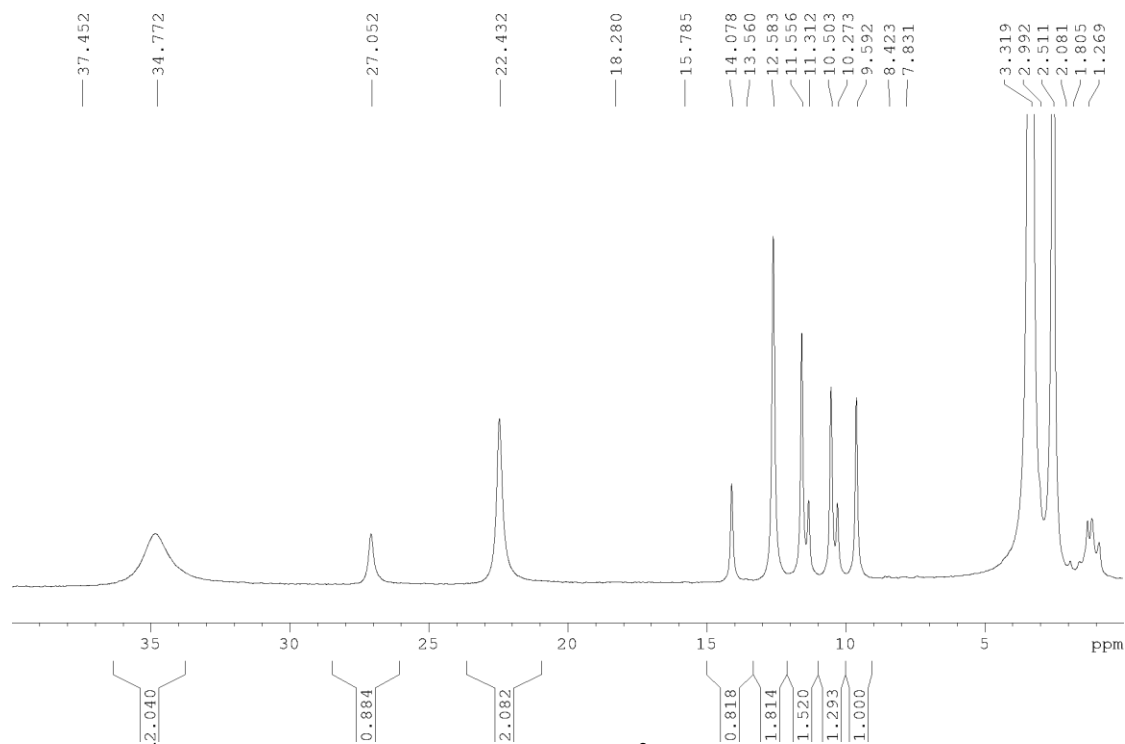
Parvathy Mini, Michael R. Grace, Genevieve H. Dennison and Kellie L. Tuck

*Beilstein J. Org. Chem.* **2024**, *20*, 2818–2826. [doi:10.3762/bjoc.20.237](https://doi.org/10.3762/bjoc.20.237)

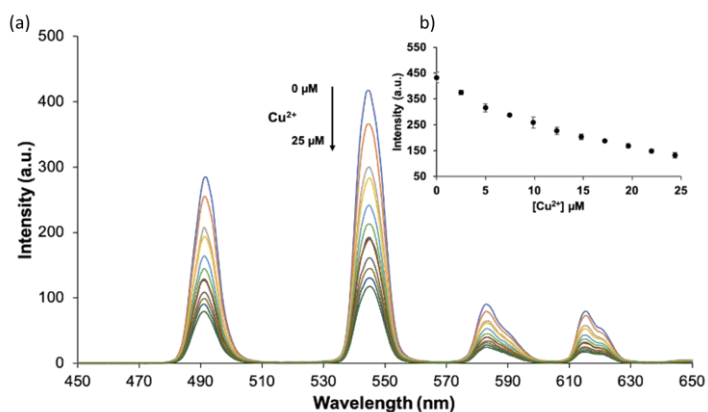
**Copies of HRMS, <sup>1</sup>H NMR and fluorescence emission spectra**



**Figure S1:** HRMS of  $[\text{Tb.1}\cdot 2\text{Na}^+]^-$ , insert: Simulated MS using EnviPat Web 2.4 software, available at <https://www.envipat.eawag.ch/>.



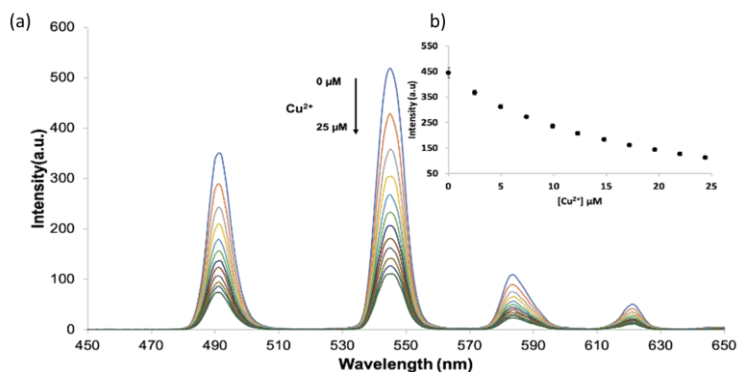
**Figure S2.**  $^1\text{H}$  paramagnetic NMR spectrum of  $[\text{Tb.1}]^{3-}$  ( $\text{DMSO-}d_6$ , 400 MHz).



**Figure S3:** (a) Changes in the luminescence emission spectrum of  $[\text{Tb.1}]^{3-}$  ( $5 \mu\text{M}$ ) upon the addition of  $\text{Cu}^{2+}$  ( $0\text{--}25 \mu\text{M}$ ); spectra measured in 10 mM Tris HCl buffer (pH 7.4) with  $\lambda_{\text{ex}} = 250 \text{ nm}$ .

(b) Luminescence intensity detected at 545 nm upon the addition of  $\text{Cu}^{2+}$  ( $n = 3$ ).

<http://app.supramolecular.org/bindfit/view/d0e6f7ef-6faf-450b-b842-d8ae13300612>



**Figure S4:** (a) Changes in the luminescence emission spectrum of  $[\text{Tb.1}]^{3-}$  ( $5 \mu\text{M}$ ) upon the addition of  $\text{Cu}^{2+}$  ( $0\text{--}25 \mu\text{M}$ ); spectra measured in 10 mM HEPES buffer (pH 7.4) with  $\lambda_{\text{ex}} = 250 \text{ nm}$ .

(b) Luminescence intensity detected at 545 nm upon the addition of  $\text{Cu}^{2+}$  ( $n = 3$ ).

<http://app.supramolecular.org/bindfit/view/9e883727-6b75-4a9f-835b-13a80df0e89d>