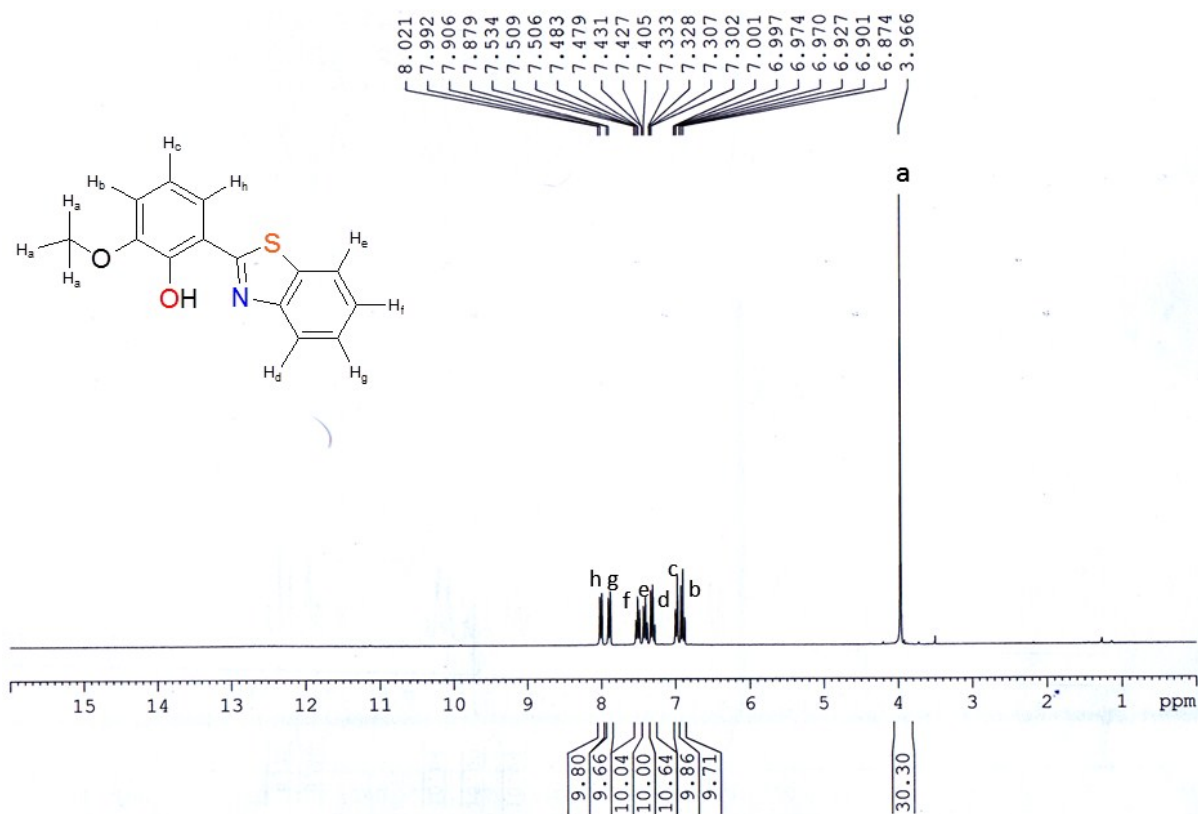


## Supporting Information

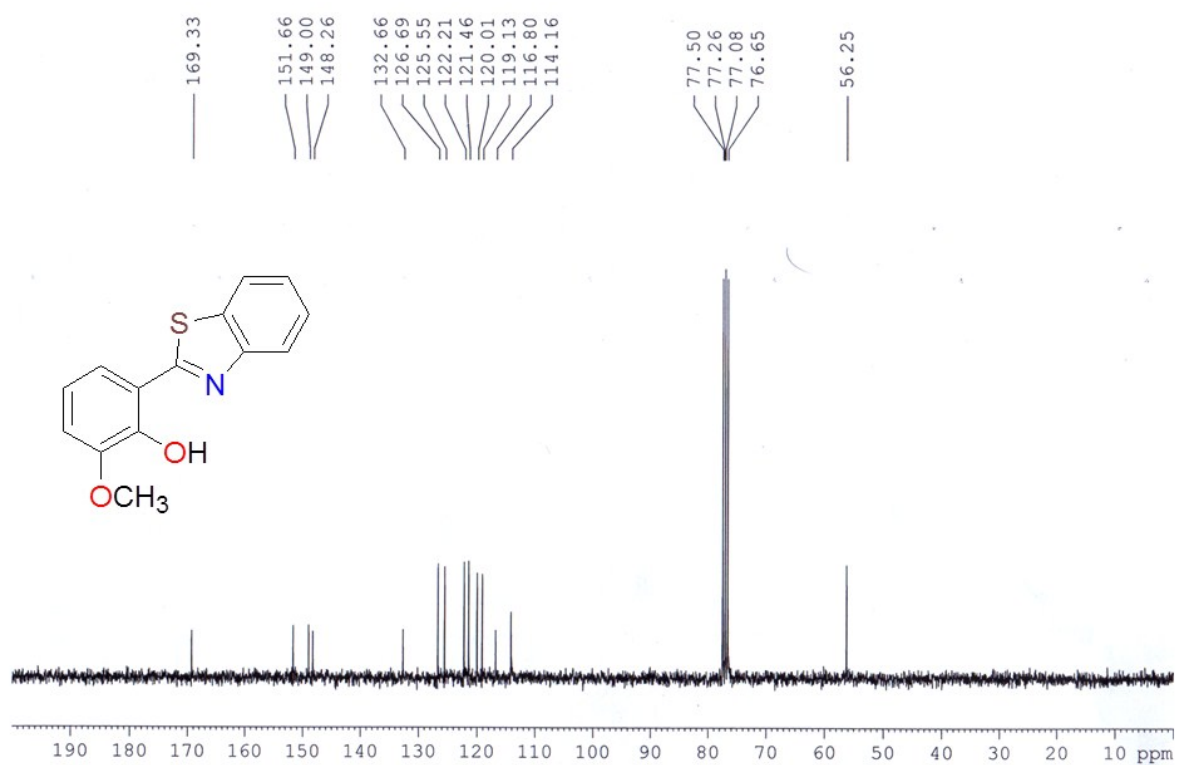
### Contents

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#### 1. Characterisation of TMP



**Fig. S1.** <sup>1</sup>H NMR Spectrum of **TMP** in CDCl<sub>3</sub>.



**Fig. S2.**  $^{13}\text{C}$  NMR spectrum of **TMP** in  $\text{CDCl}_3$ .

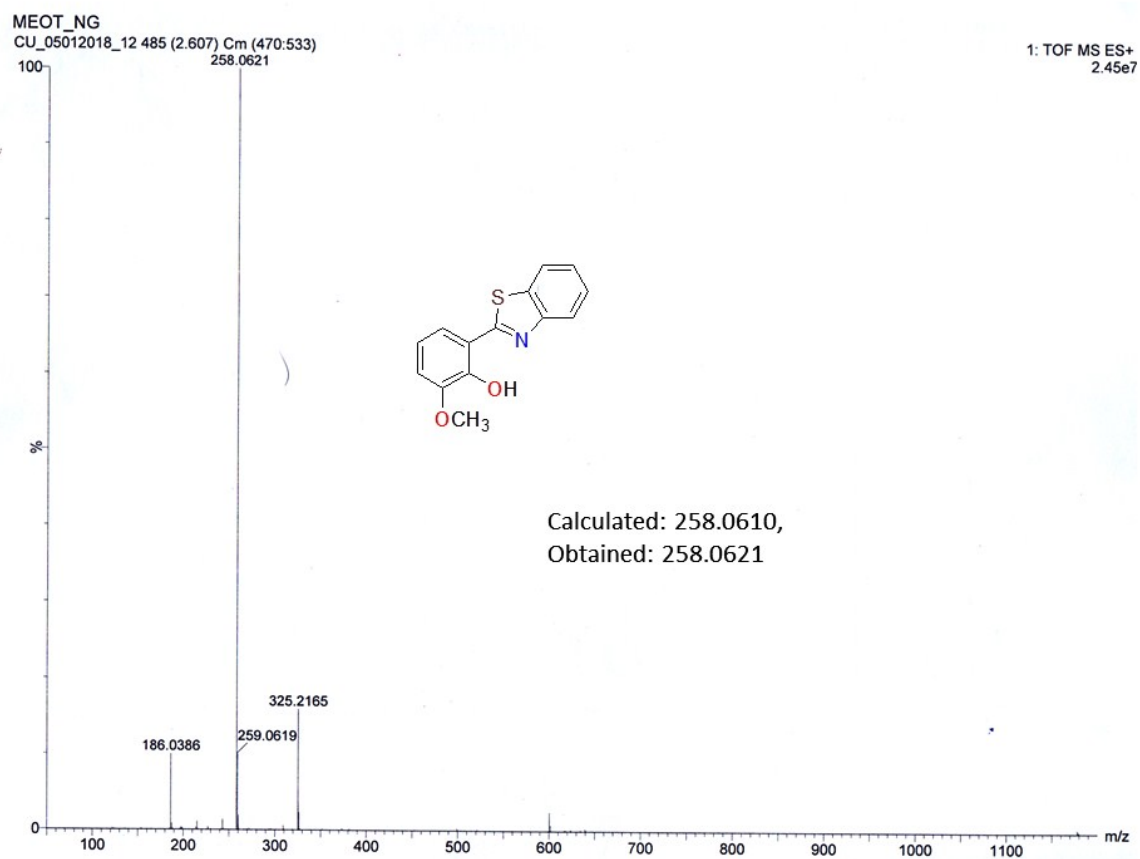


Fig. S3. ESI-MS of TMP in acetonitrile.

## 2. ORTEP diagram of TMP

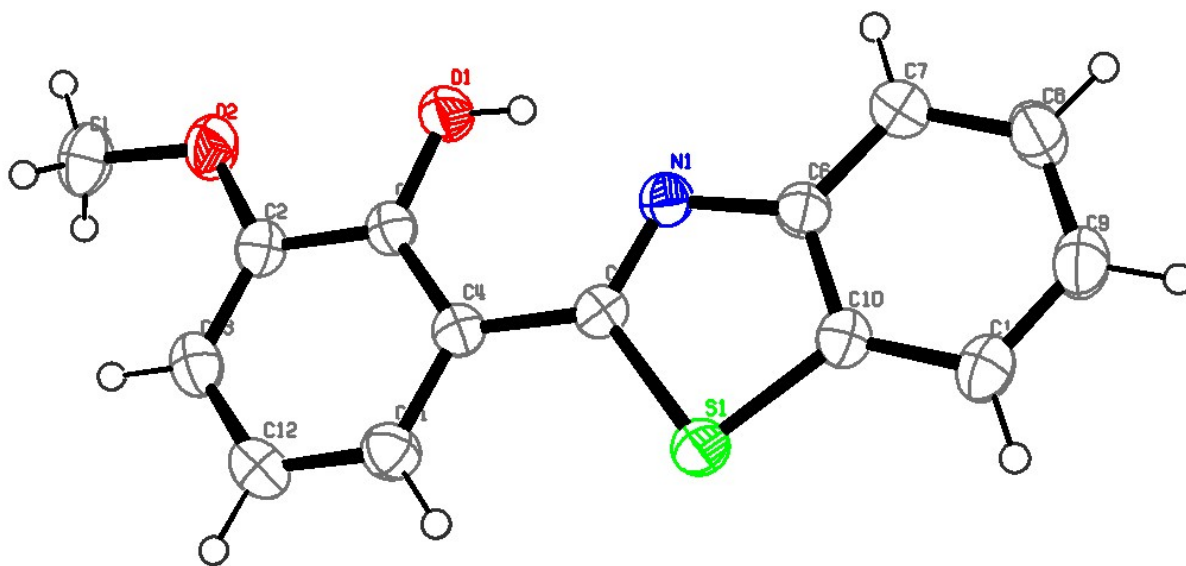


Fig. S4. ORTEP diagram of TMP at 40% probability.

### 3. Table S1

Table S1. - Crystal Data and Details of the Structure Determination for **TMP** (R = 0.03)

Formula	C <sub>14</sub> H <sub>11</sub> N O <sub>2</sub> S		
Formula Weight	257.30		
Crystal System	orthorhombic		
Space group	P2 <sub>1</sub> 2 <sub>1</sub> 2 <sub>1</sub> (No. 19)		
a, b, c [Angstrom]	16.1754(12)	6.0607(4)	12.2782(9)
V [Ang <sup>3</sup> ]	1203.68(15)		
Z	4		
D(calc) [g/cm <sup>3</sup> ]	1.420		
Mu(MoKa) [ /mm ]	0.261		
F(000)	536		
Crystal Size [mm]	0.48 x 0.54 x 0.60		
Temperature (K)	296		
Radiation [Angstrom]	MoKa 0.71073		
Theta Min-Max [Deg]	2.1, 32.1		

Tot., Uniq. Data, R(int) 17449, 3539, 0.035

Observed Data [ $I > 2.0 \sigma(I)$ ] 3188

Nref, Npar 3539, 166

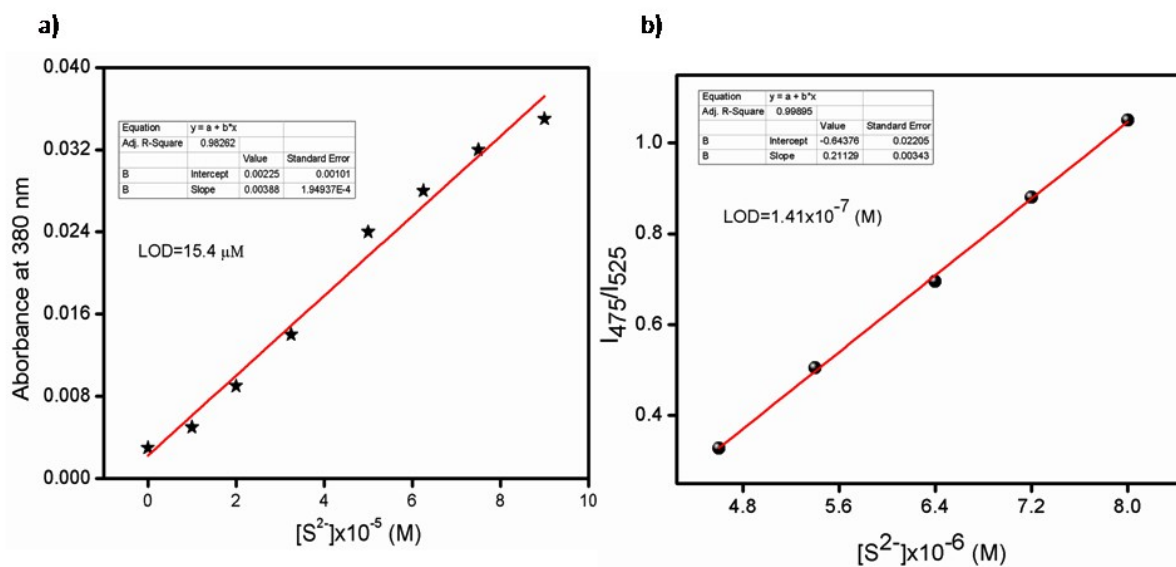
R, wR2, S 0.0344, 0.0883, 1.01

Max. and Av. Shift/Error 0.01, 0.00

Flack x 0.02(2)

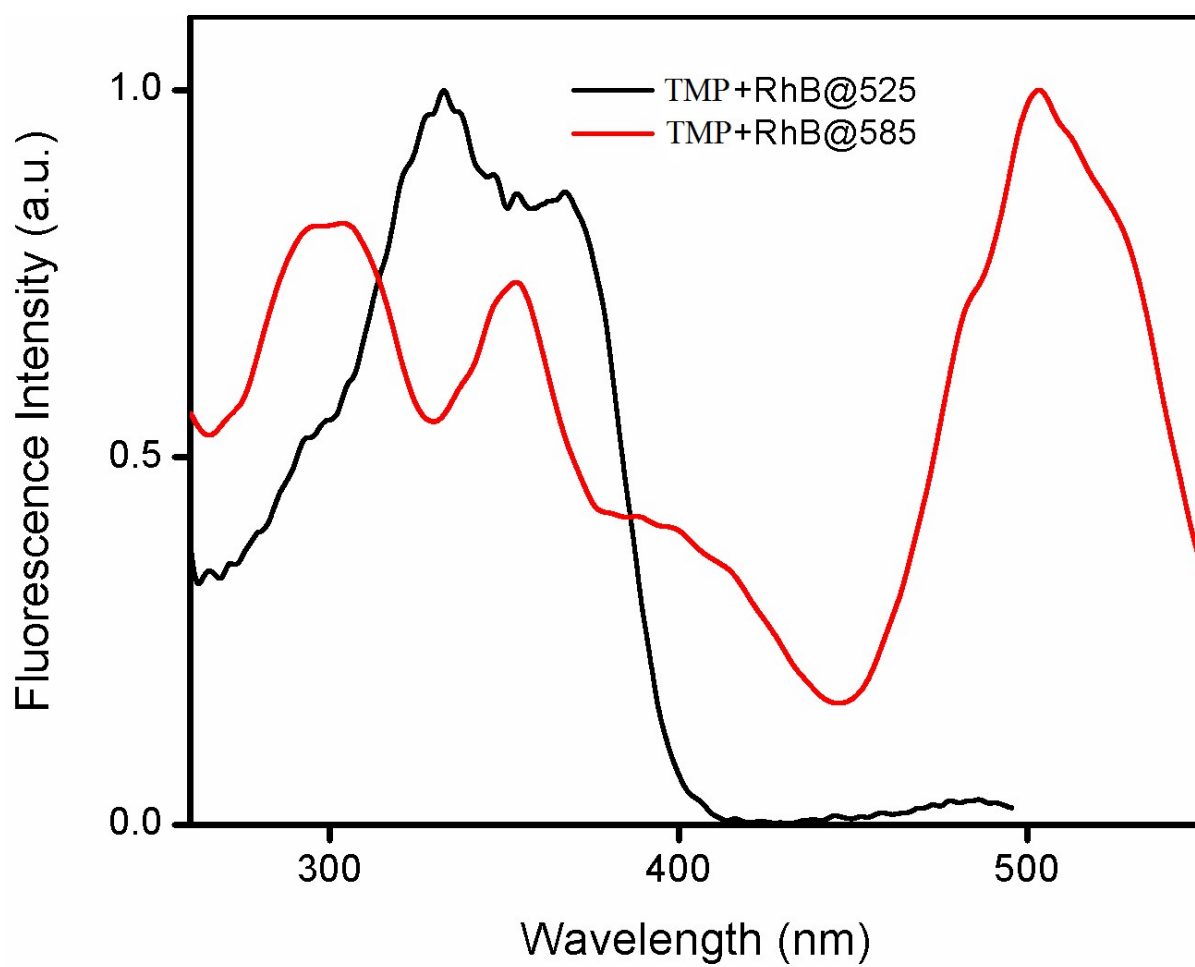
Min. and Max.Resd.Dens. [ $e/\text{Ang}^3$ ] -0.19, 0.23

#### 4. Calibration curves for limit of detection



**Fig. S5.** Calibration curves for determining LOD from (a) UV-Vis titration and (b) Emission Titration data.

### 5. Excitation spectra of TMP+ RhB ensemble



**Fig. S6.** Normalised Excitation spectra of **TMP+ RhB** ensemble in water.