Electronic Supplementary Information (ESI)

A red fluorescent turn-on chemosensor for Al^{3+} based on dimethoxy triarylamine-benzothiadiazole derivative with aggregation-induced emission

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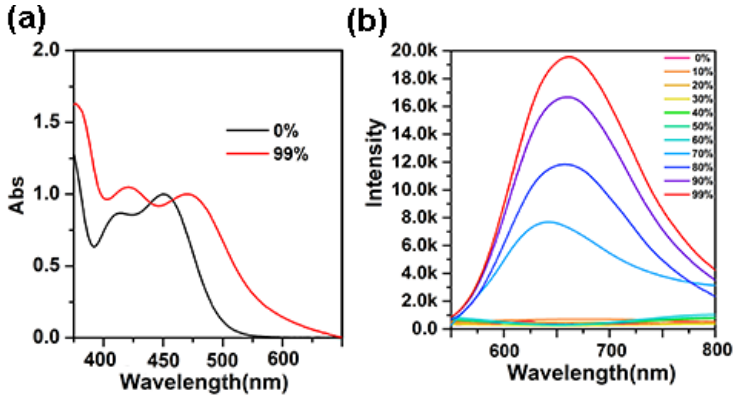


Fig. S1. (a)Normal absorption of **TB-COOH** in DMSO and DMSO/HEPES mixtures (f_w = 99 vol %). (b) Fluorescence emission spectra of **TB-COOH** in DMSO and DMSO/HEPES mixtures with different HEPES fractions (f_w). Solution concentration: 1×10^{-4} M.

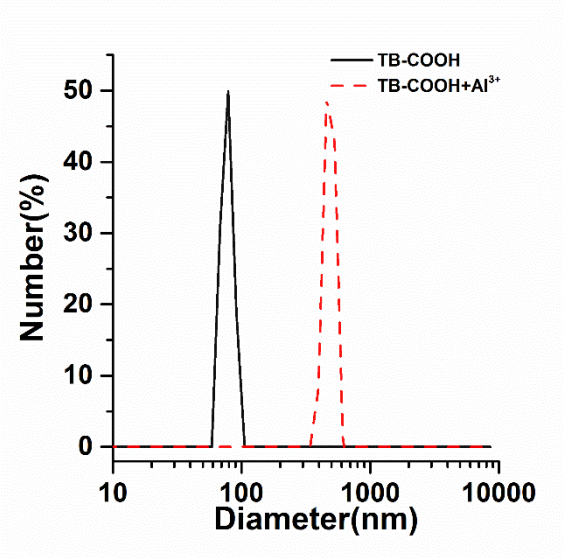


Fig. S2. Dynamic light scattering data for **TB-COOH** (20 μM) with and without Al^{3+} (10 μM) the DMSO/HEPES mixtures containing 50 vol% DMSO)

Characterization Data

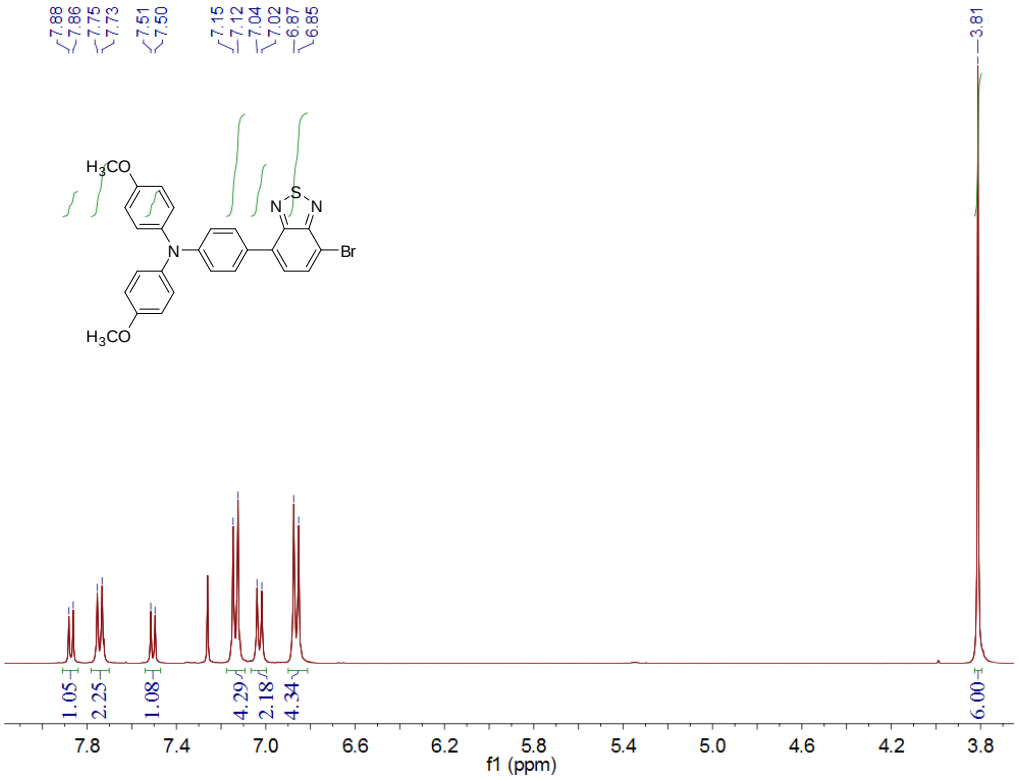


Fig. S3. ^{1}H NMR spectrum of **2** in $CDCl_3$

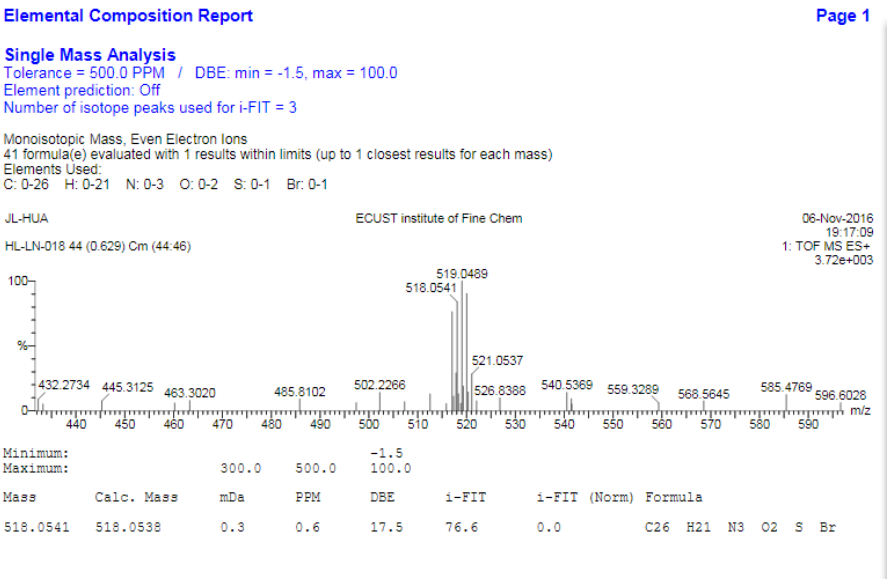


Fig. S4. High-Resolution mass spectrum of **2**

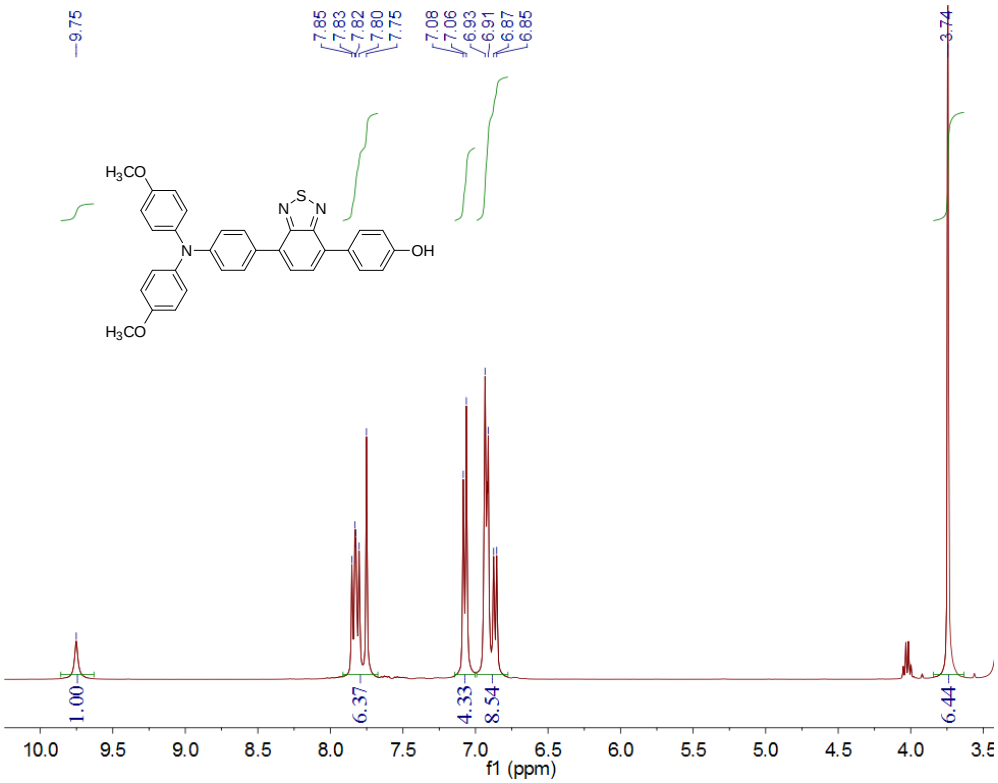


Fig. S5. [1]H NMR spectrum of **3** in DMSO-$_{d6}$

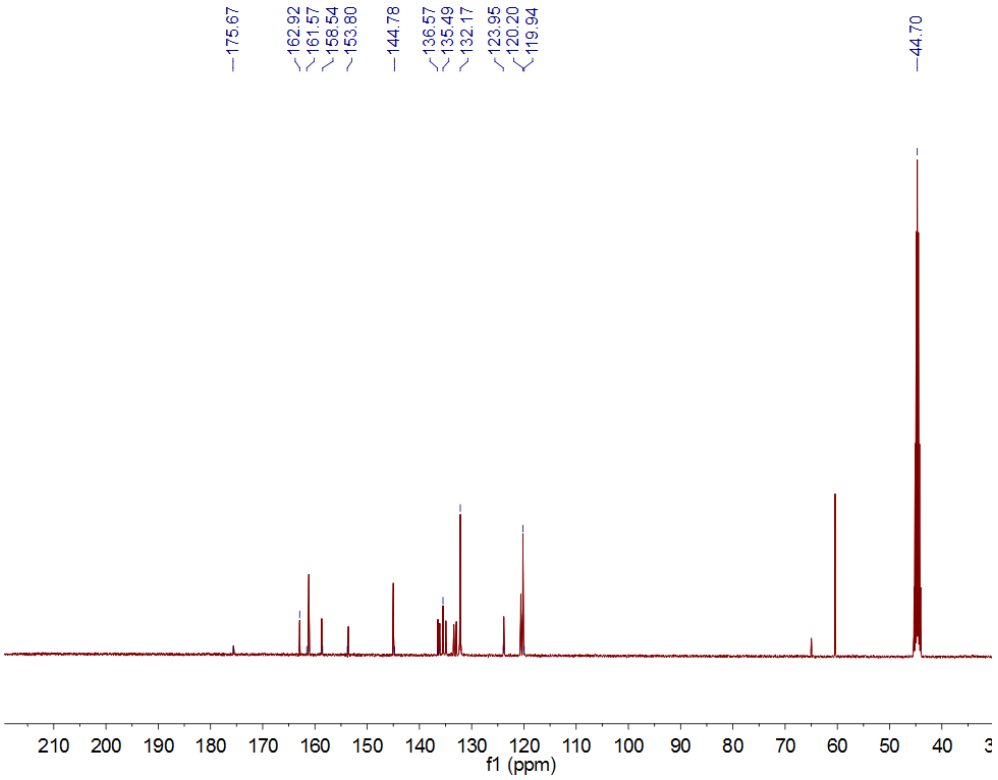


Fig. S6.[13]C NMR spectrum of **3** in DMSO-$_{d6}$

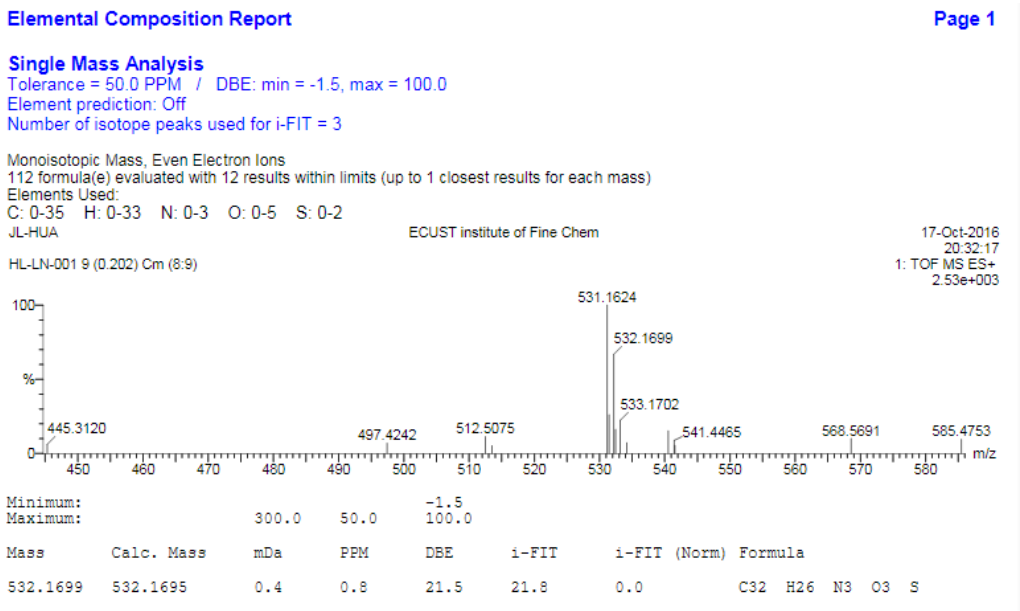


Fig. S7. High-Resolution mass spectrum of **3**

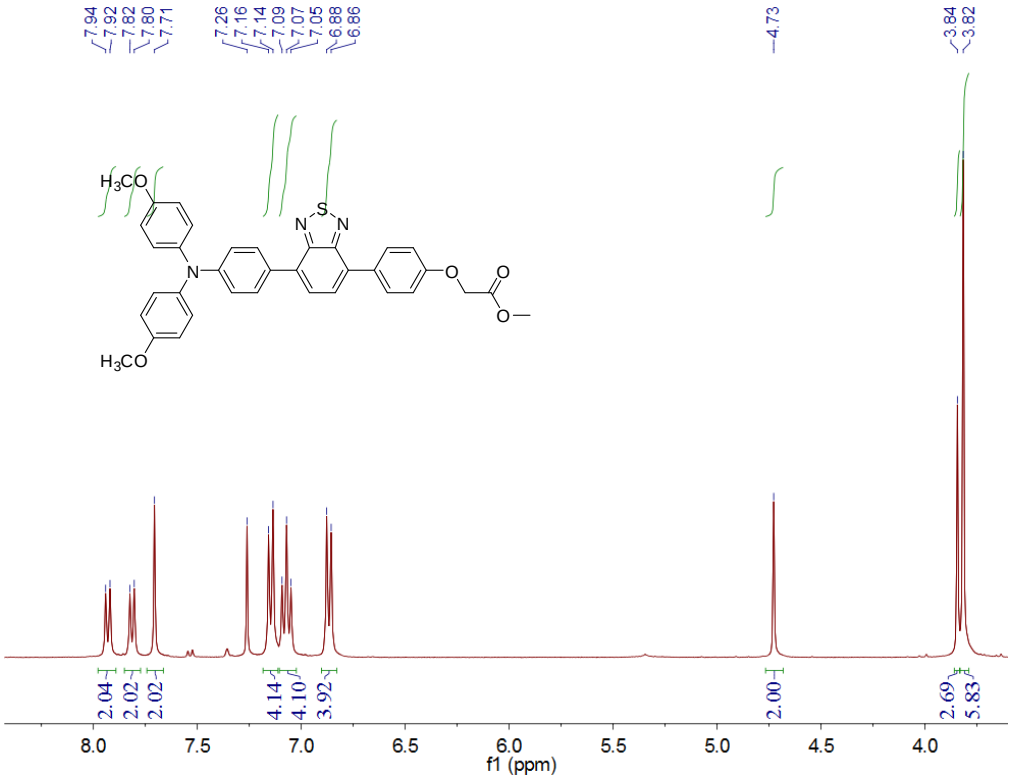


Fig. S8. ^{1}H NMR spectrum of **4** in $CDCl_3$

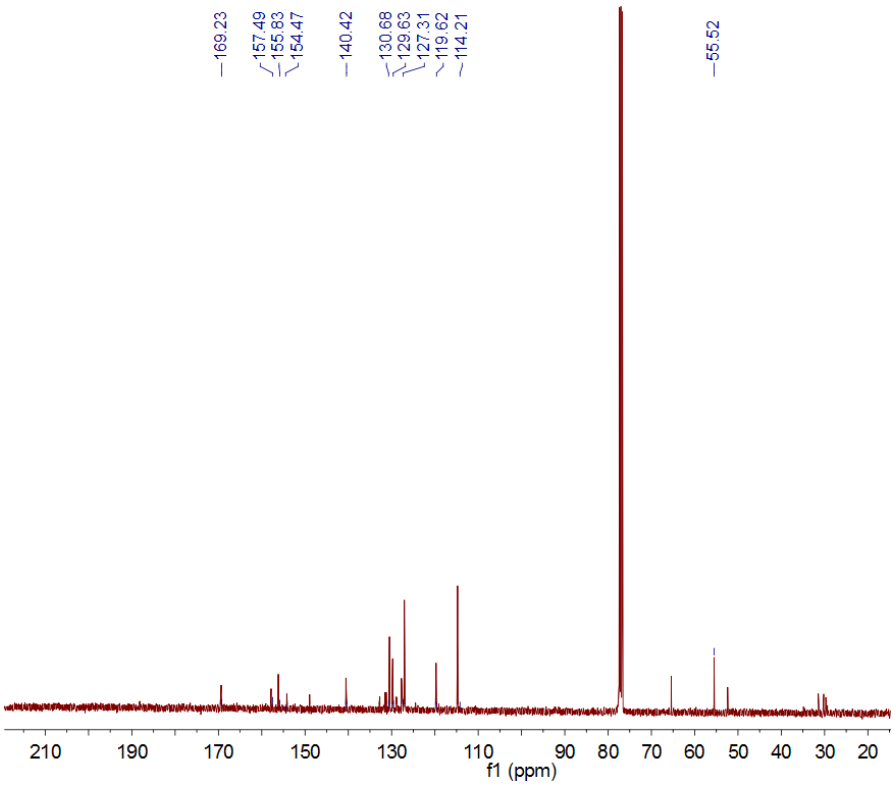


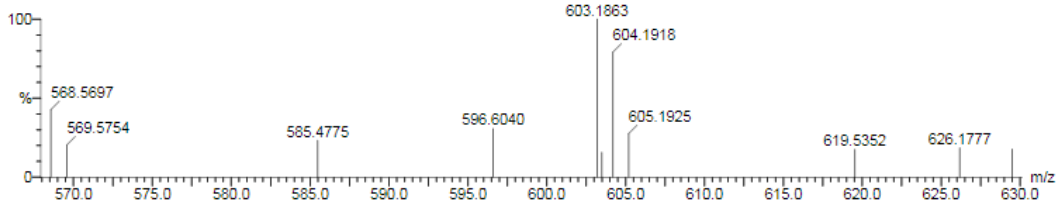
Fig. S9. ^{13}C NMR spectrum of **4** in $CDCl_3$

Elemental Composition Report **Page 1**

Single Mass Analysis
Tolerance = 50.0 PPM / DBE: min = -1.5, max = 100.0
Element prediction: Off
Number of isotope peaks used for i-FIT = 3

Monoisotopic Mass, Even Electron Ions
51 formula(e) evaluated with 2 results within limits (up to 1 closest results for each mass)
Elements Used:
C: 0-35 H: 0-33 N: 0-3 O: 0-5 S: 0-2

JL-HUA ECUST institute of Fine Chem 17-Oct-2016 20:27:02
HL-LN-002 117 (1.515) Cm (112:117) 1: TOF MS ES+ 1.39e+003



Minimum:				-1.5			
Maximum:		300.0	50.0	100.0			
Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	i-FIT (Norm)	Formula
604.1918	604.1906	1.2	2.0	22.5	22.8	0.0	C35 H30 N3 O5 S

Fig. S10. High-Resolution mass spectrum of **4**

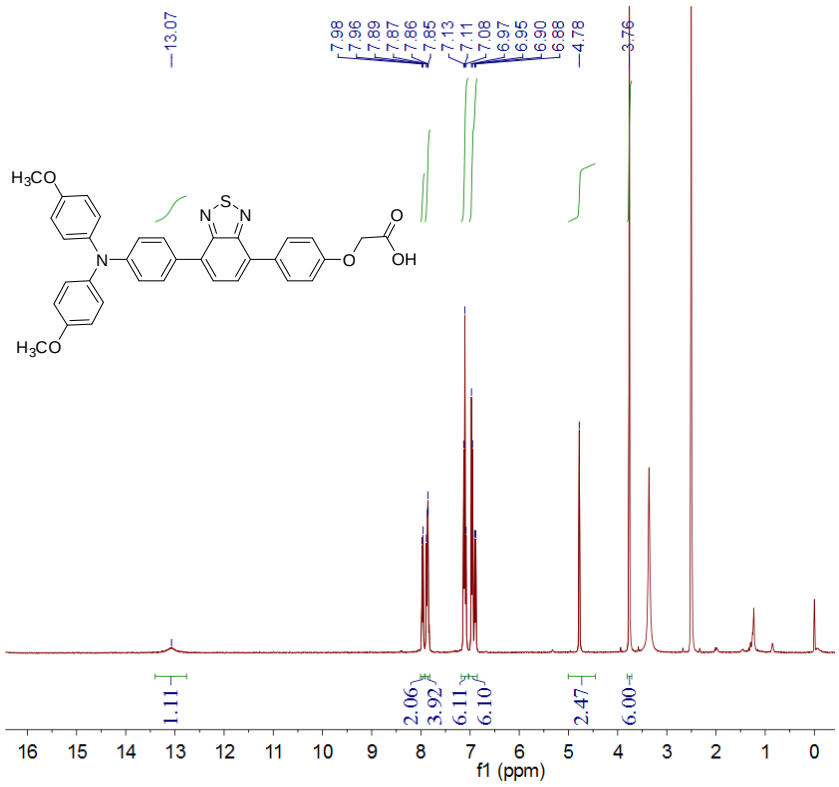


Fig. S11. ^{1}H NMR spectrum of **TB-COOH** in DMSO-$_{d6}$

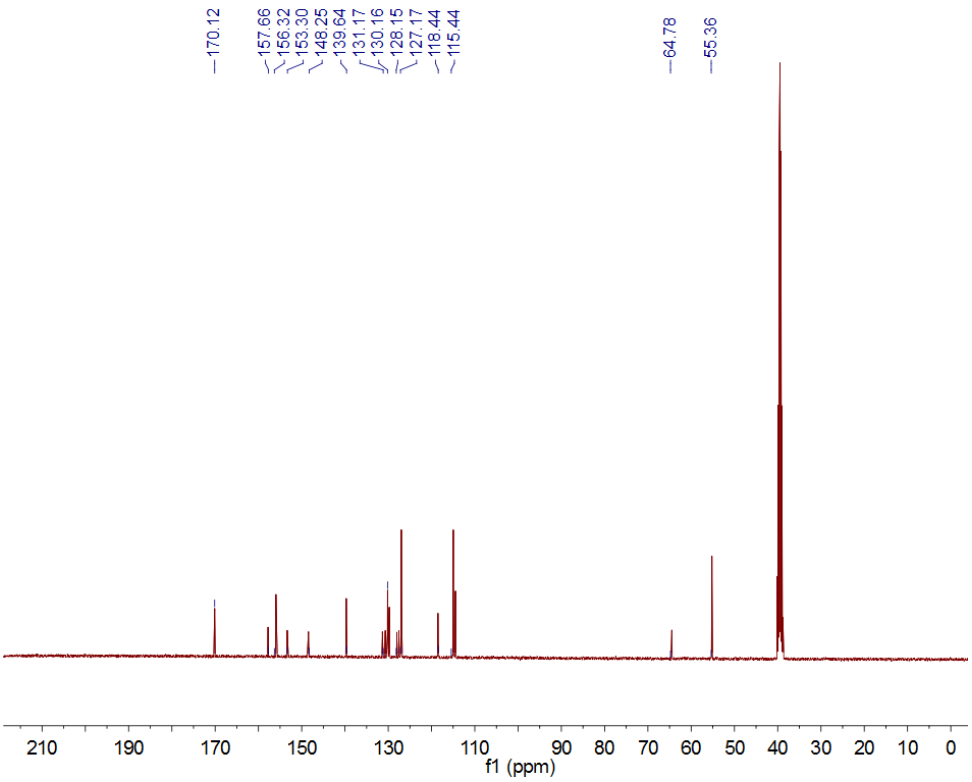


Fig. S12. ^{13}C NMR spectrum of **TB-COOH** in DMSO-$_{d6}$

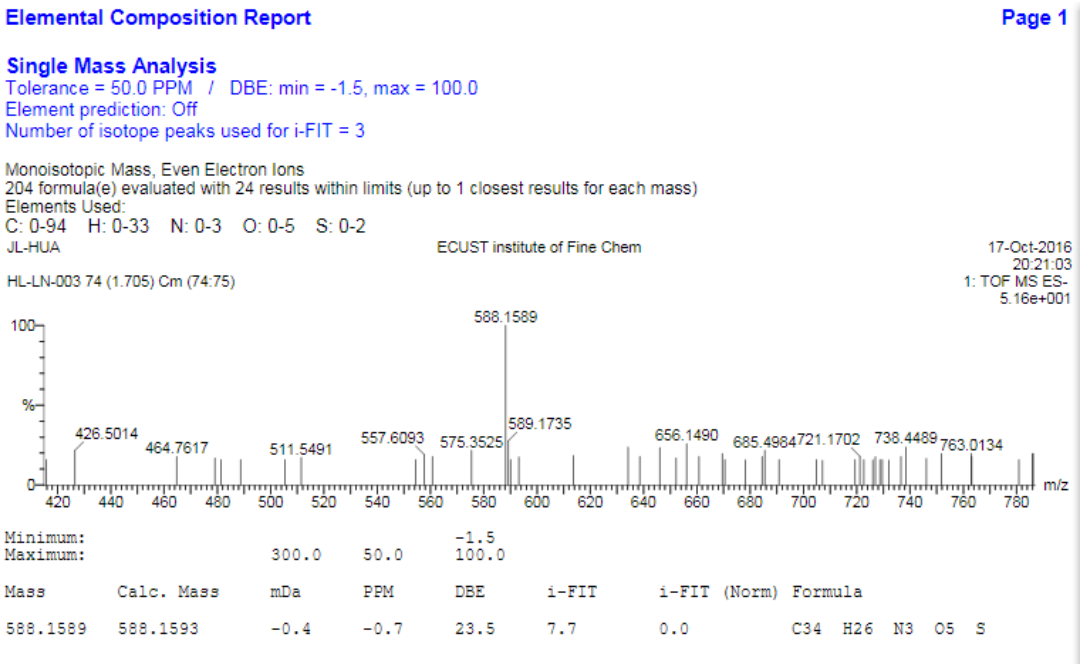


Fig. S13. High-Resolution mass spectrum of **TB-COOH**