

## Supplementary Information

### Exploring the catalytic activity of new water soluble dinuclear copper(II) complexes towards the glycoside hydrolysis

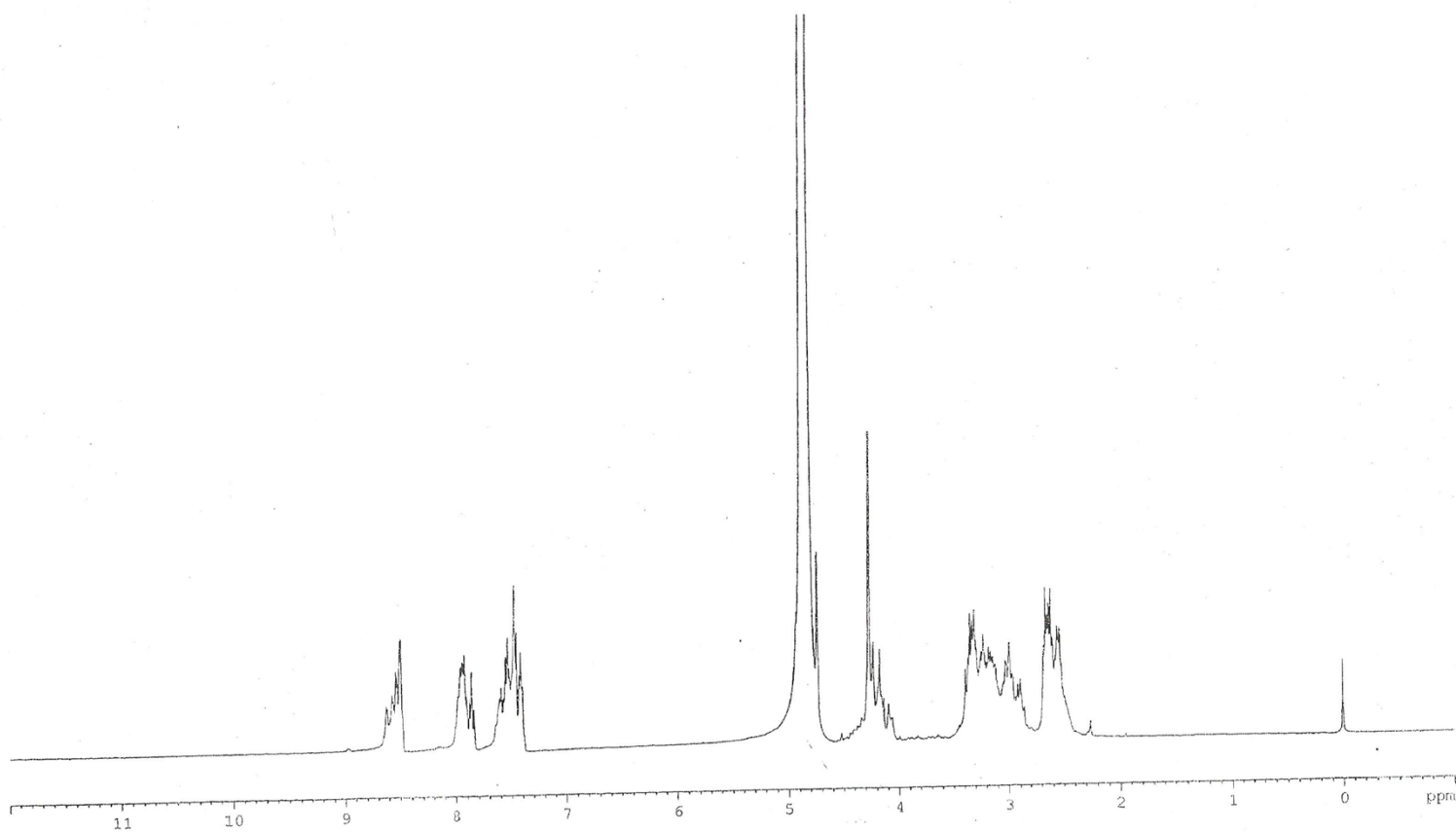
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E-mail:mbera2009@klyuniv.ac.in; Tel.: +91 33 25828282x306; Fax: +91 33 25828282*

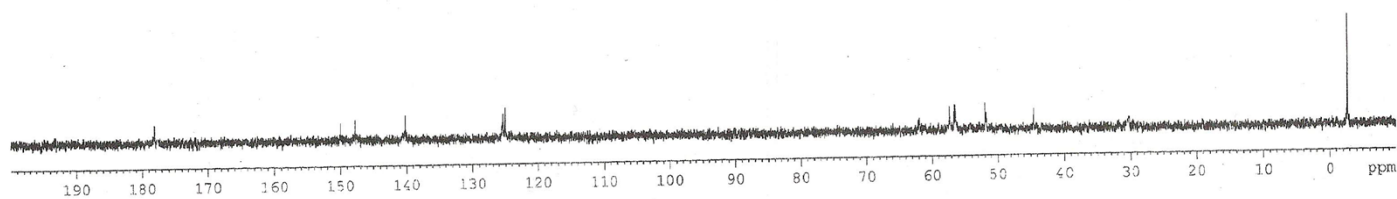
#### Figures with captions



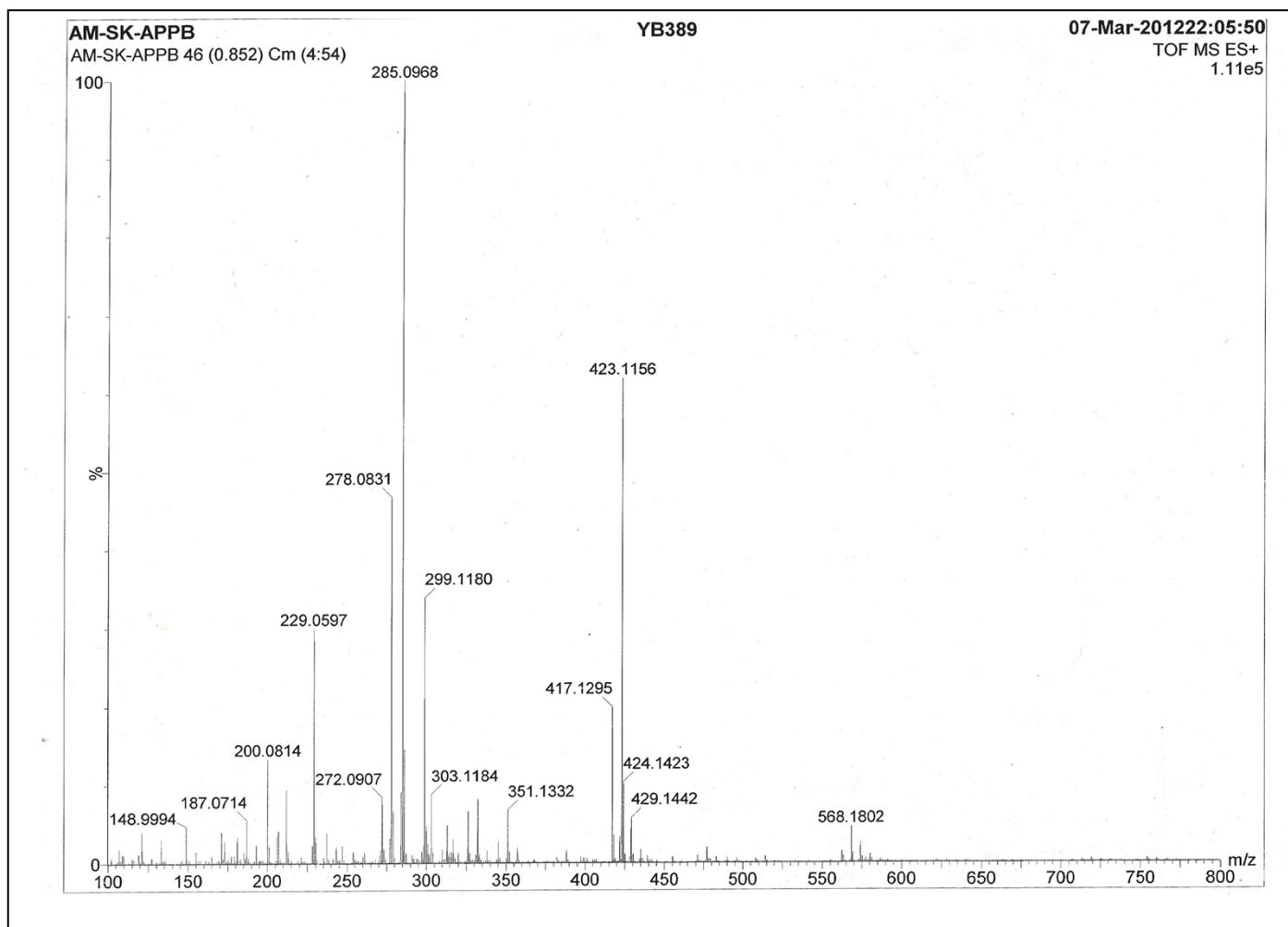
**Fig. S1** FTIR spectrum of the ligand H<sub>3</sub>phpda in the region of 4000-450 cm<sup>-1</sup>.



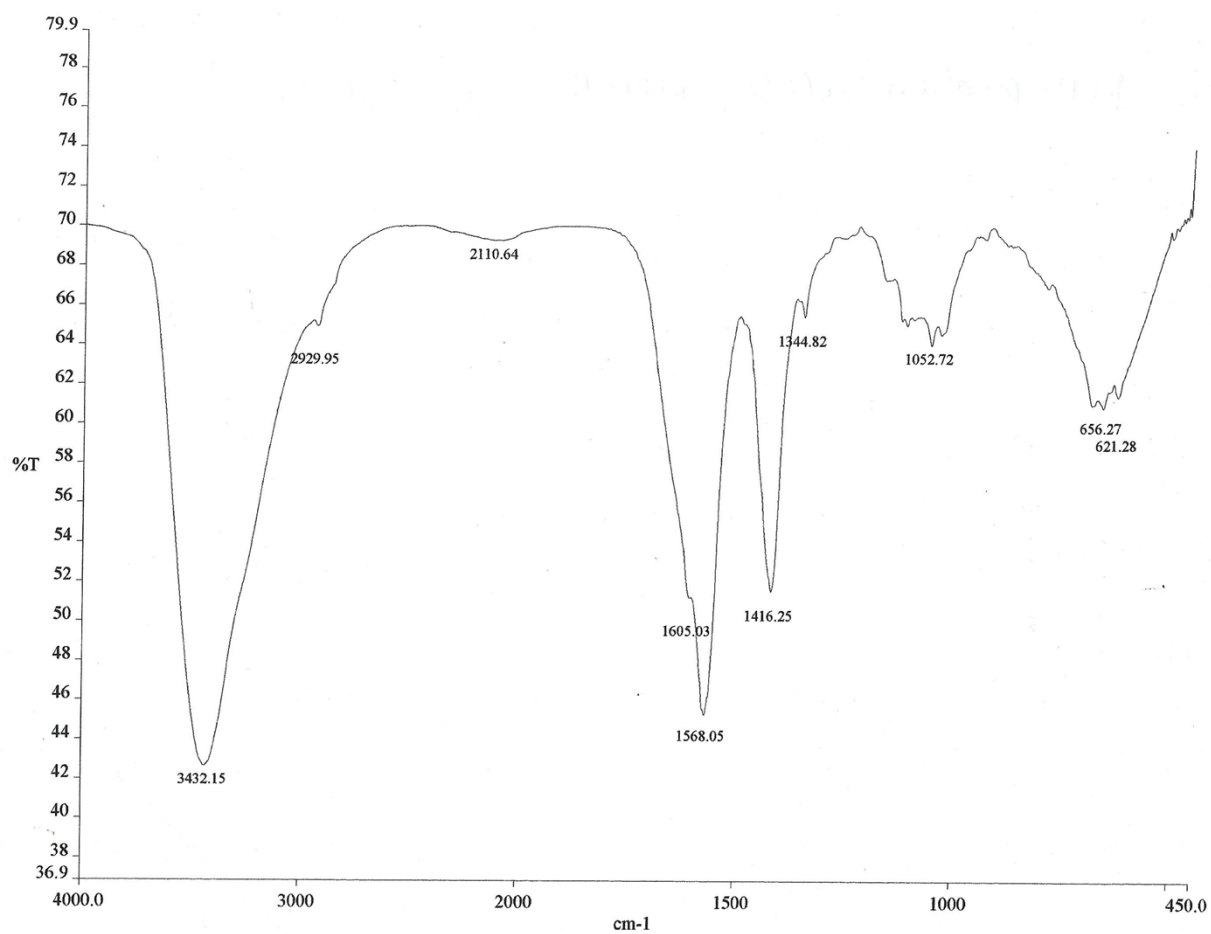
**Fig. S2**  $^1\text{H}$  NMR spectrum of the ligand  $\text{H}_3\text{phpda}$  in  $\text{D}_2\text{O}$ .



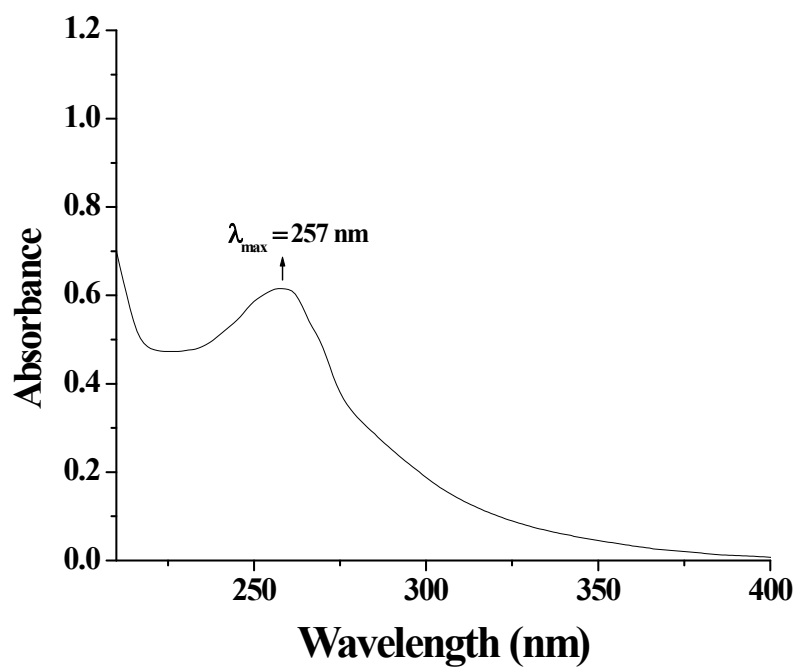
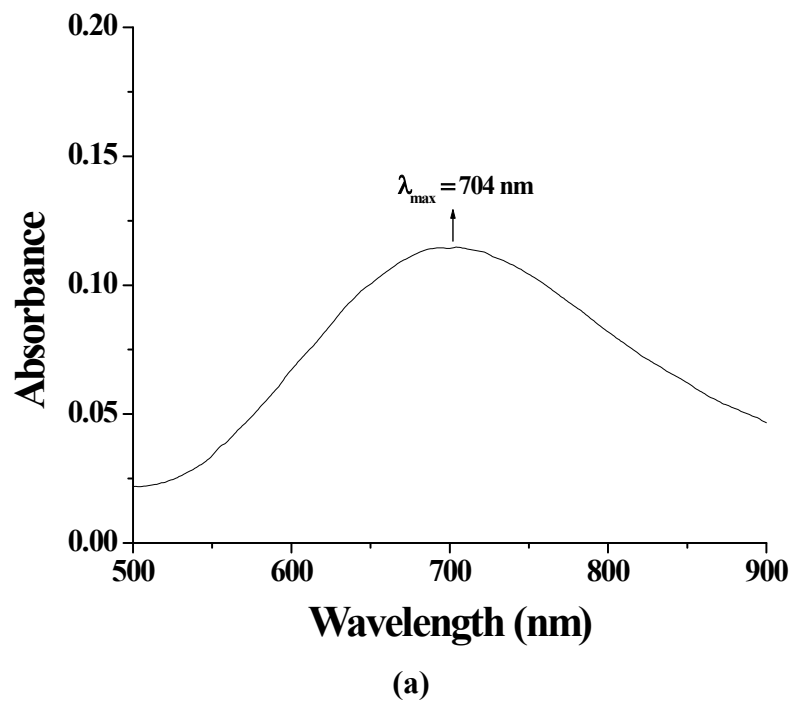
**Fig. S3**  $^{13}\text{C}$  NMR spectrum of the ligand  $\text{H}_3\text{phpda}$  in  $\text{D}_2\text{O}$ .



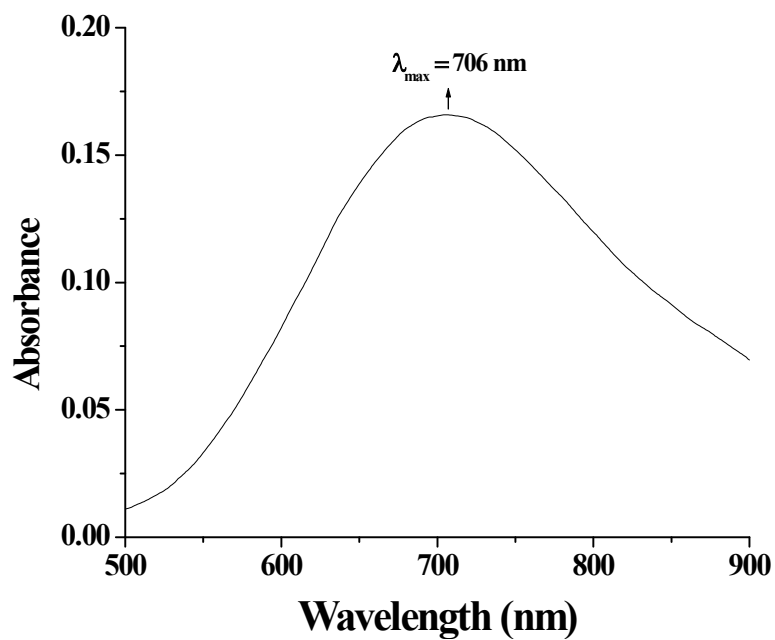
**Fig. S4** ESI mass spectrum (positive ion mode) of the ligand H<sub>3</sub>phpda in methanol solution.



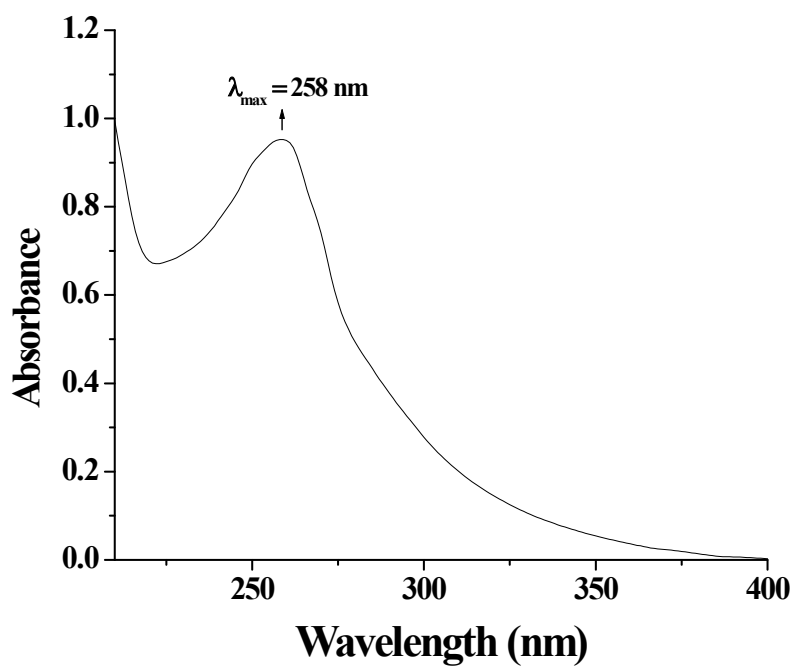
**Fig. S5** FTIR spectrum of complex **1** in the region of 4000-450 cm<sup>-1</sup>.



**Fig. S6** UV-vis spectra of complex **1** at (a)  $10^{-3}$ (M) and (b)  $10^{-4}$ (M) in aqueous solution at pH~7.2.

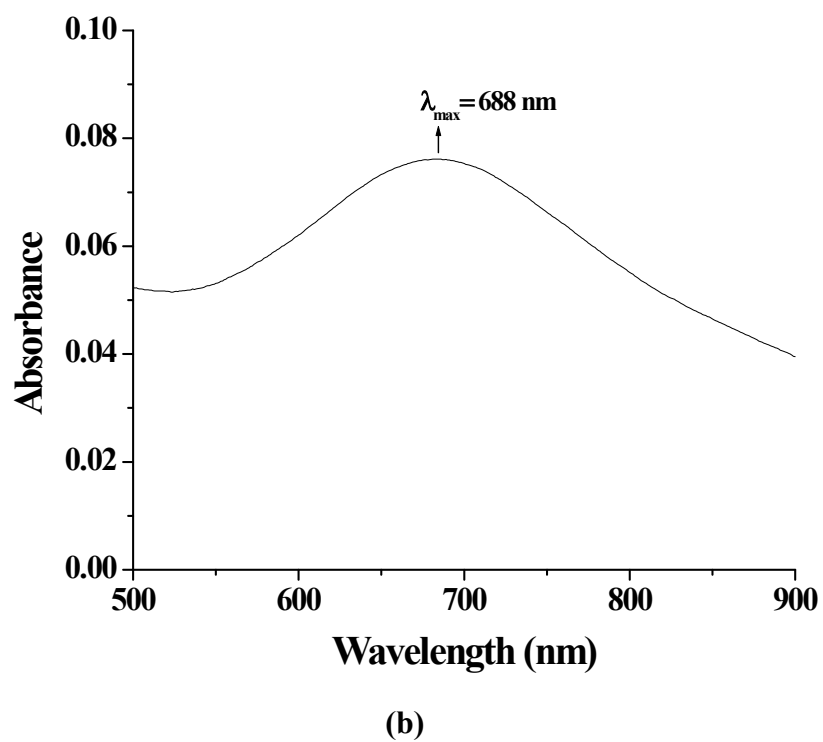
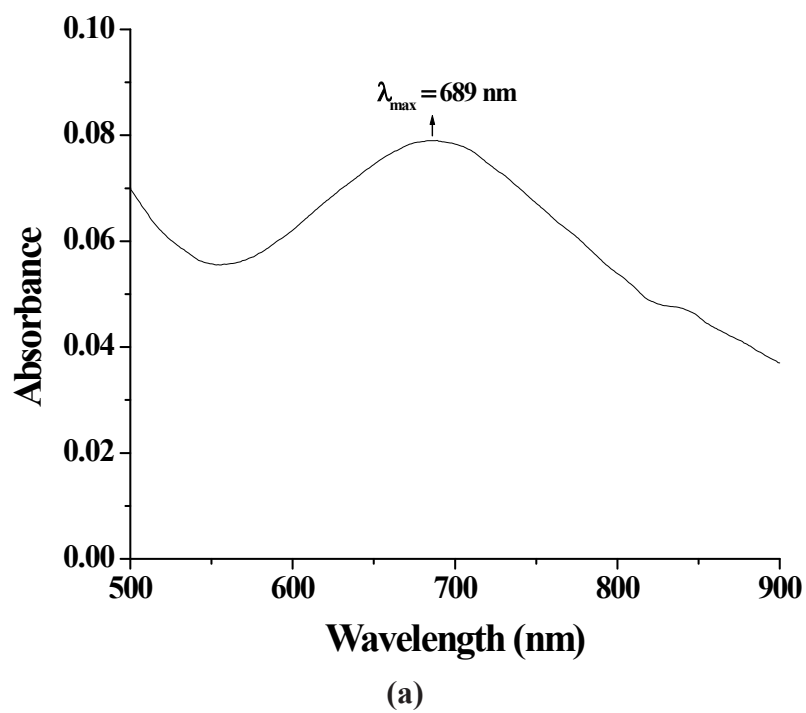


(a)

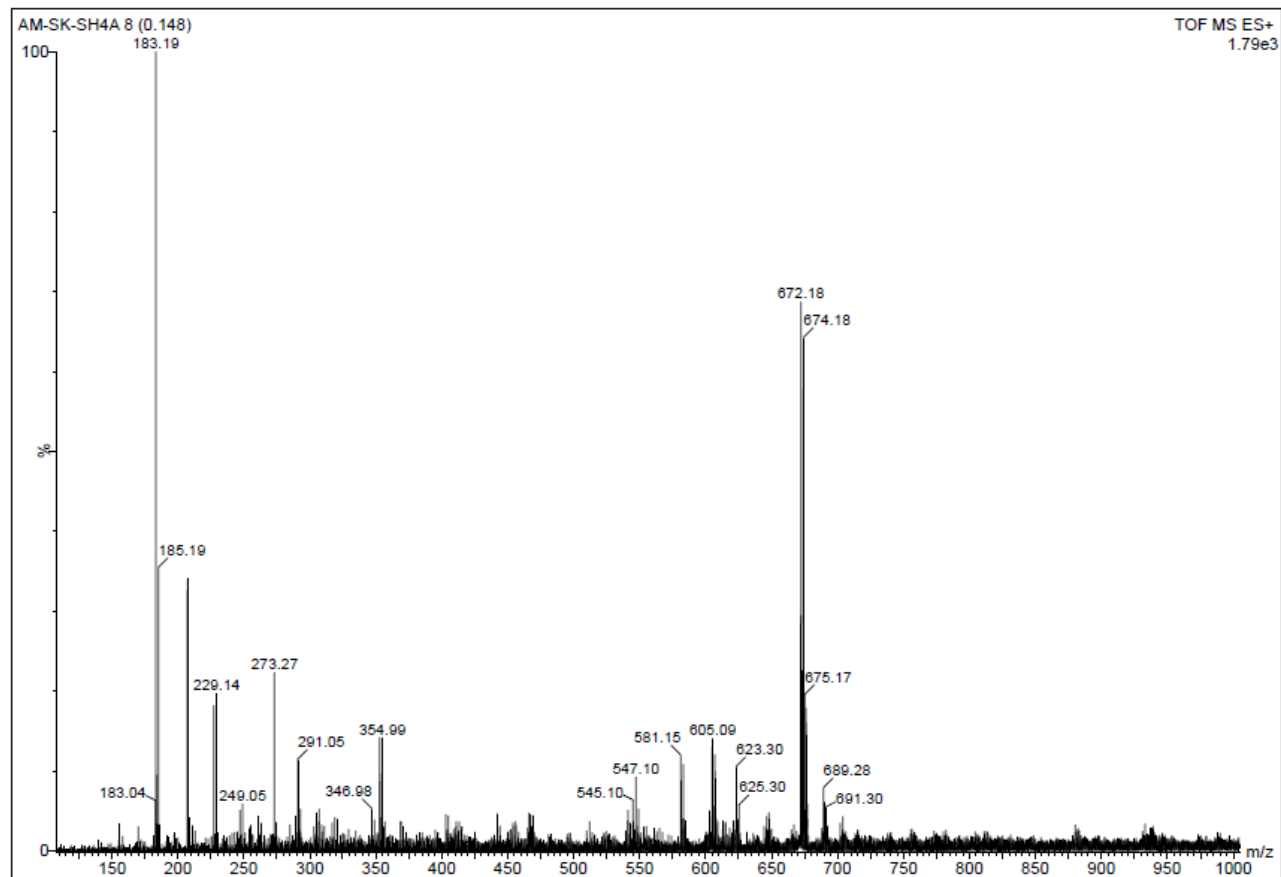


(b)

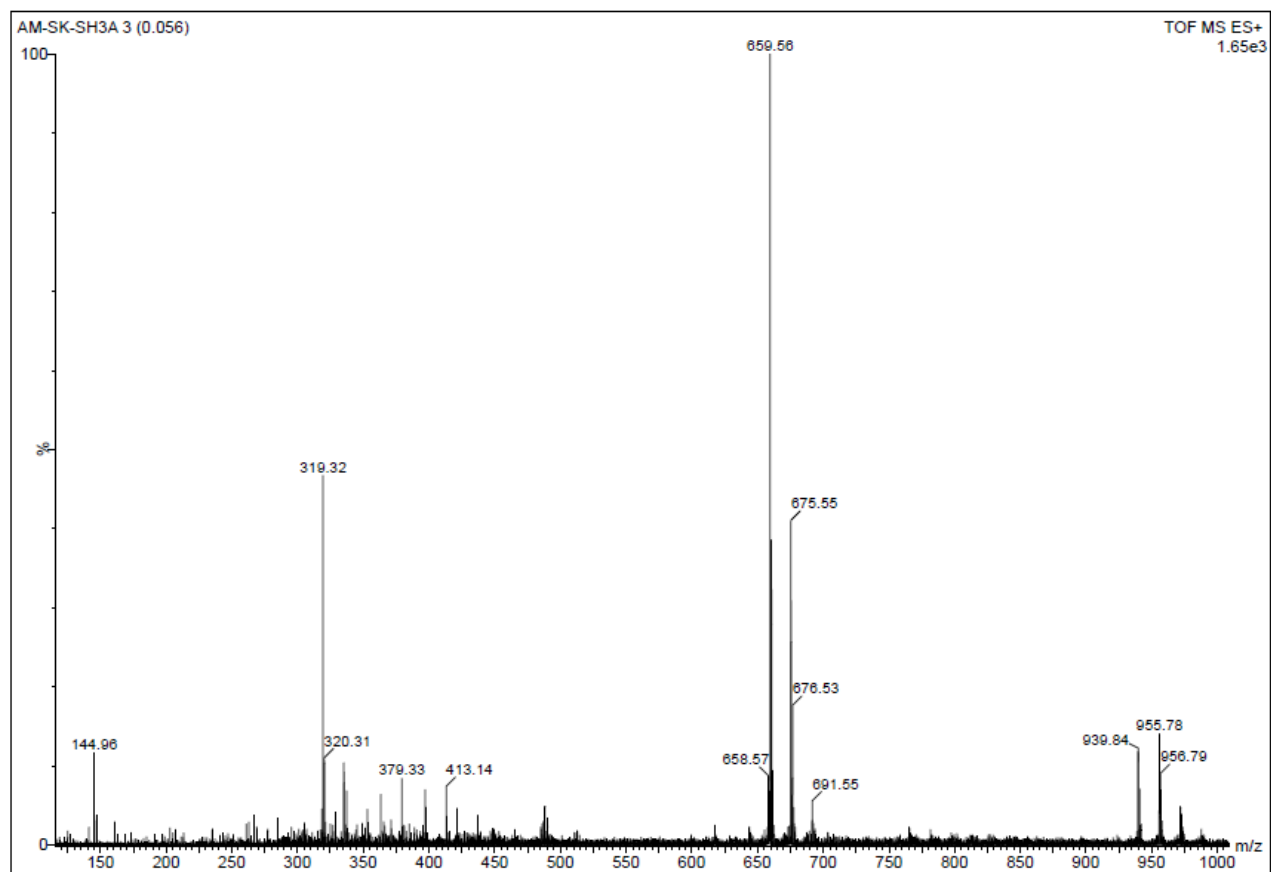
**Fig. S7** UV-vis spectra of complex **2** at (a)  $10^{-3}$ (M) and (b)  $10^{-4}$ (M) in aqueous solution at pH~7.2.



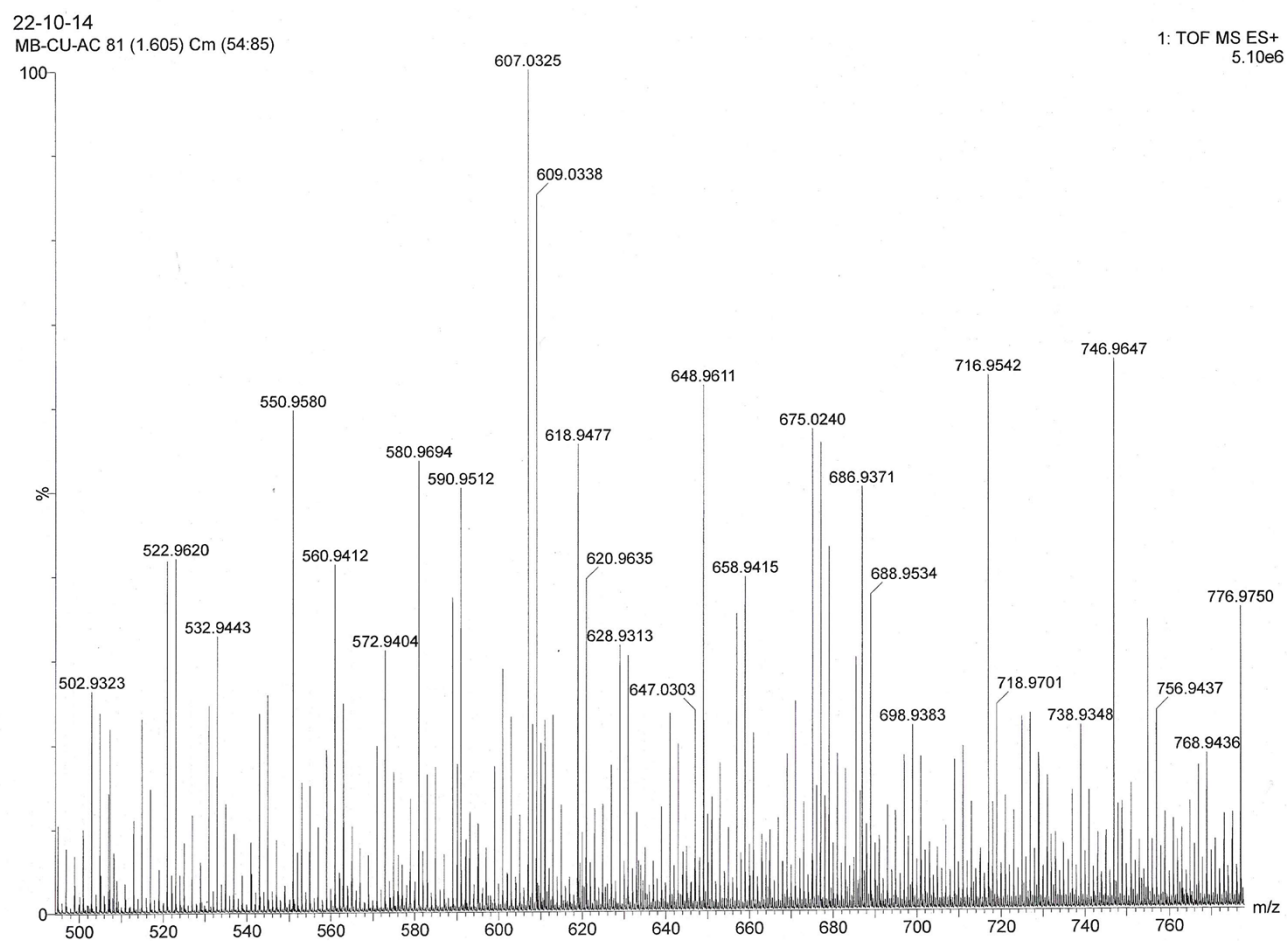
**Fig. S8** UV-vis spectra of (a) complex **1** at  $10^{-3}$  M and (b) complex **2** at  $10^{-3}$  M in aqueous solution at pH  $\sim 10.5$ .



**Fig. S9** ESI mass spectrum (positive ion mode) of complex **1** in aqueous solution at pH~7.2.



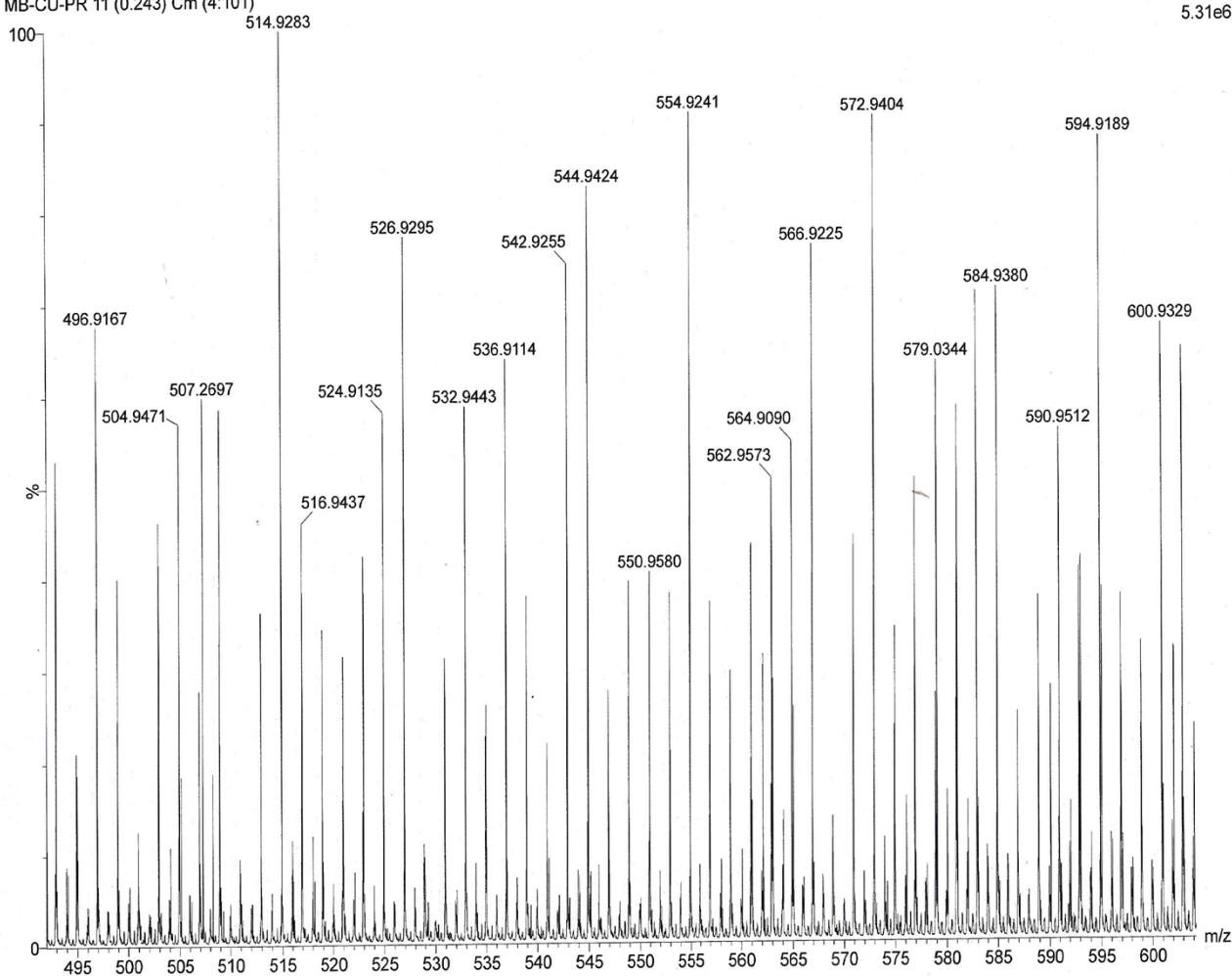
**Fig. S10** ESI mass spectrum (positive ion mode) of complex **2** in aqueous solution at pH~7.2.



**Fig. S11** ESI mass spectrum (positive ion mode) of complex **1** in aqueous solution at pH~10.5.

22-10-14  
MB-CU-PR 11 (0.243) Cm (4:101)

1: TOF MS ES+  
5.31e6



**Fig. S12** ESI mass spectrum (positive ion mode) of complex **2** in aqueous solution at pH~10.5.