

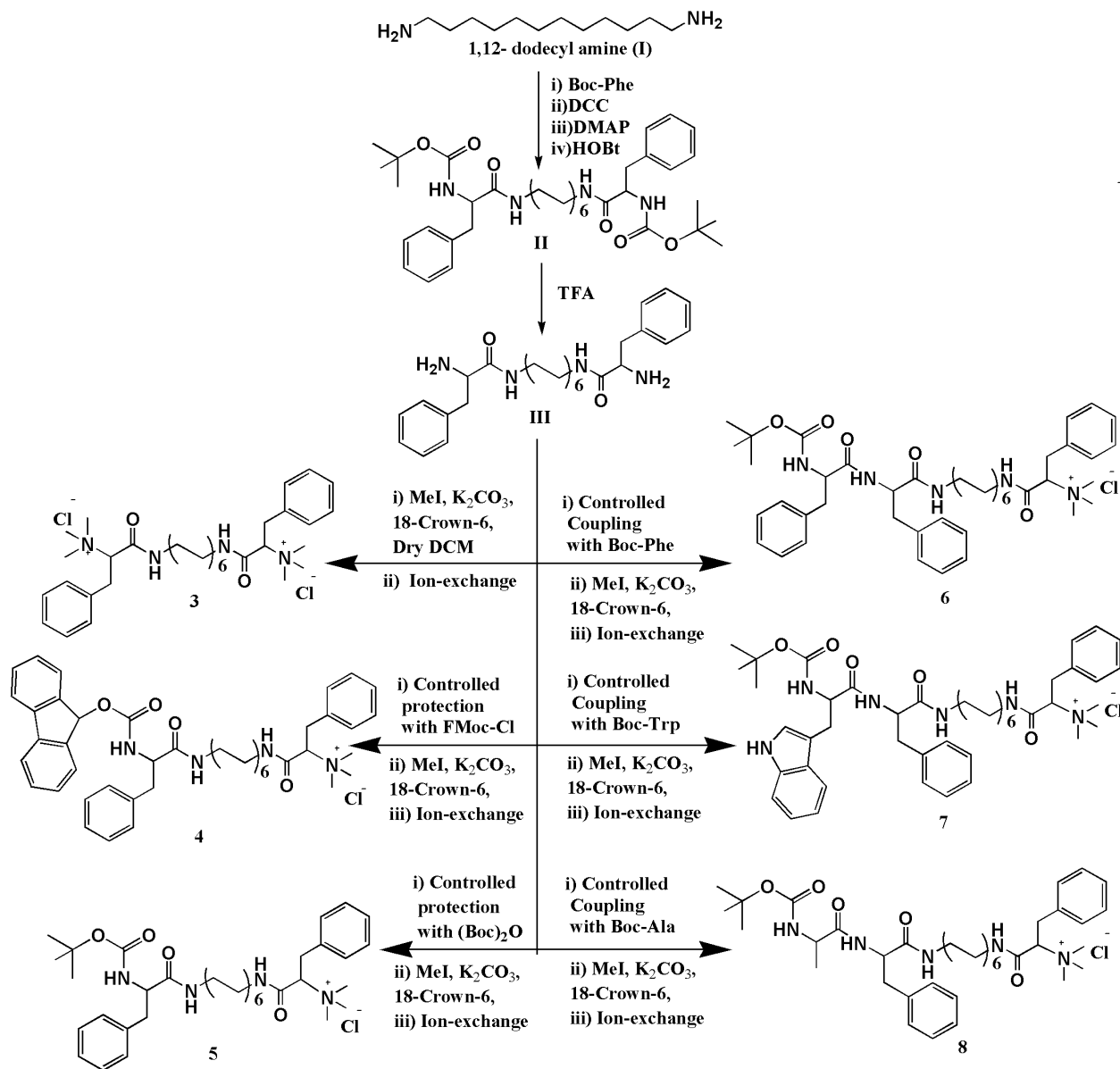
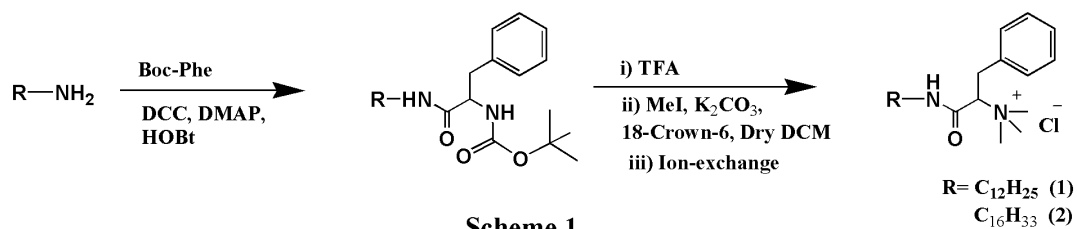
Electronic Supplementary Information

Refining hydrogelator design: soft materials with improved gelation ability, biocompatibility and matrix for in situ synthesis of specific shaped GNP

Dibyendu Das, Subhabrata Maiti, Sayanti Brahmachari and Prasanta Kumar Das*

*Department of Biological Chemistry, Indian Association for the Cultivation of Science
Jadavpur, Kolkata – 700 032, India*

*To whom correspondence should be addressed. Fax: +(91)-33-24732805, E-mail: bcpkd@iacs.res.in



Scheme S1 Synthetic scheme of all the amphiphiles (1-8).

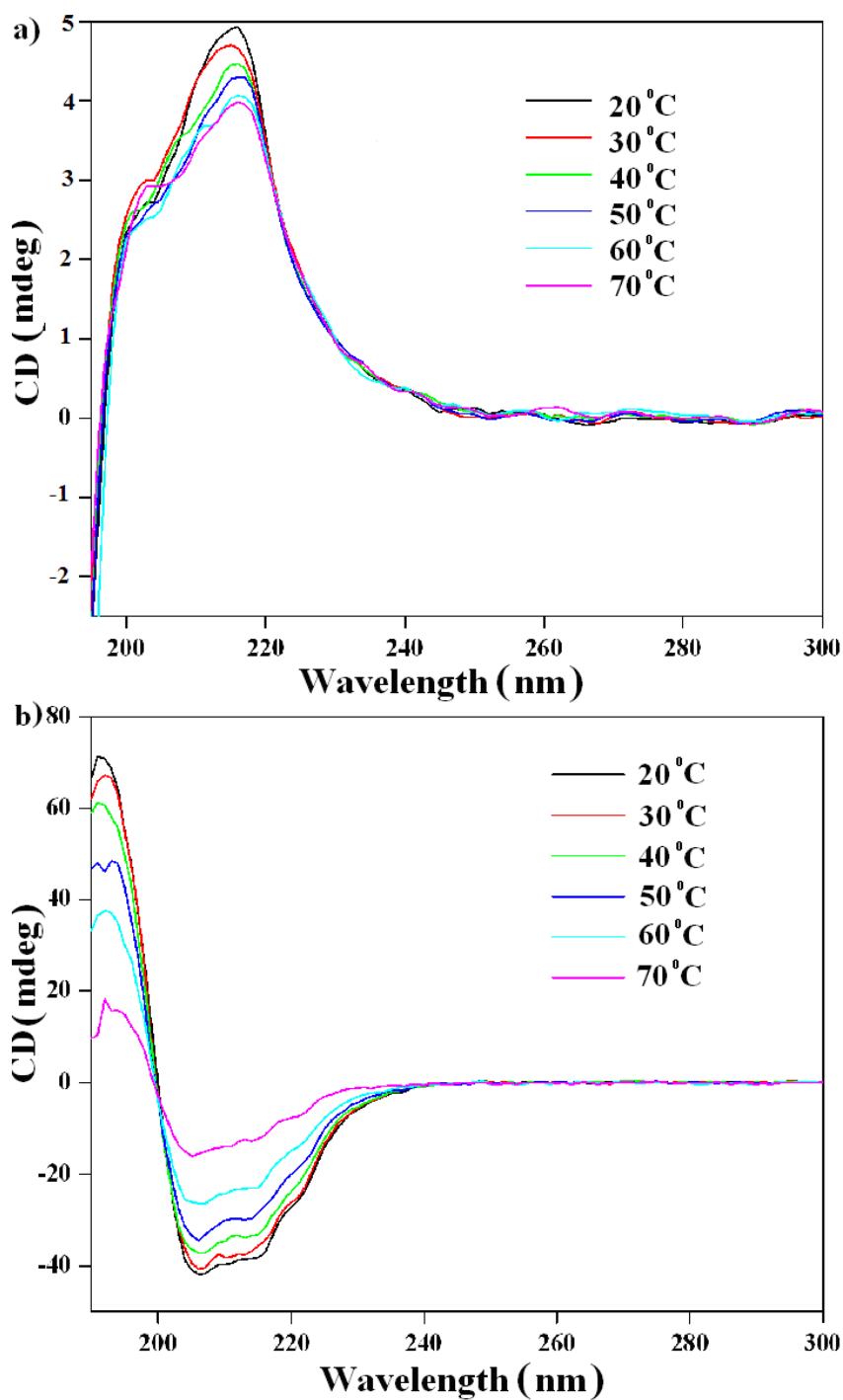


Fig. S1 CD spectra of **5** and **6** at 0.025%, w/v in plain water with varying temperature from 20 to 70 °C.

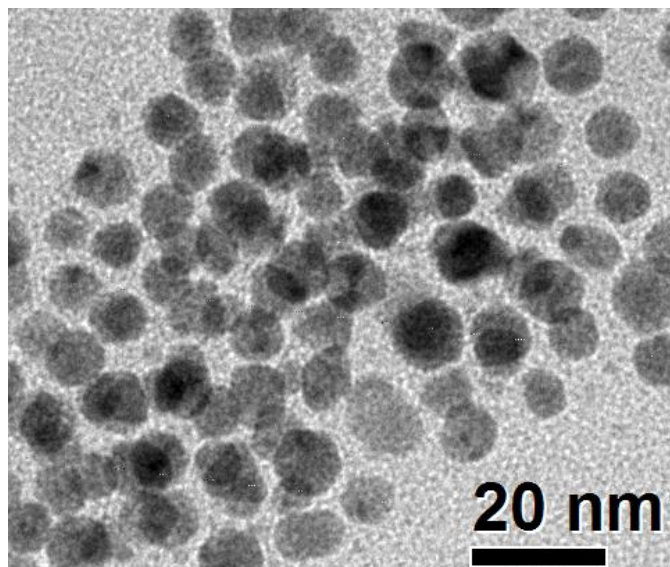


Fig. S2 TEM images of GNPs in gel **2** at 1:10 concentration ratio (HAuCl_4 :**2**).

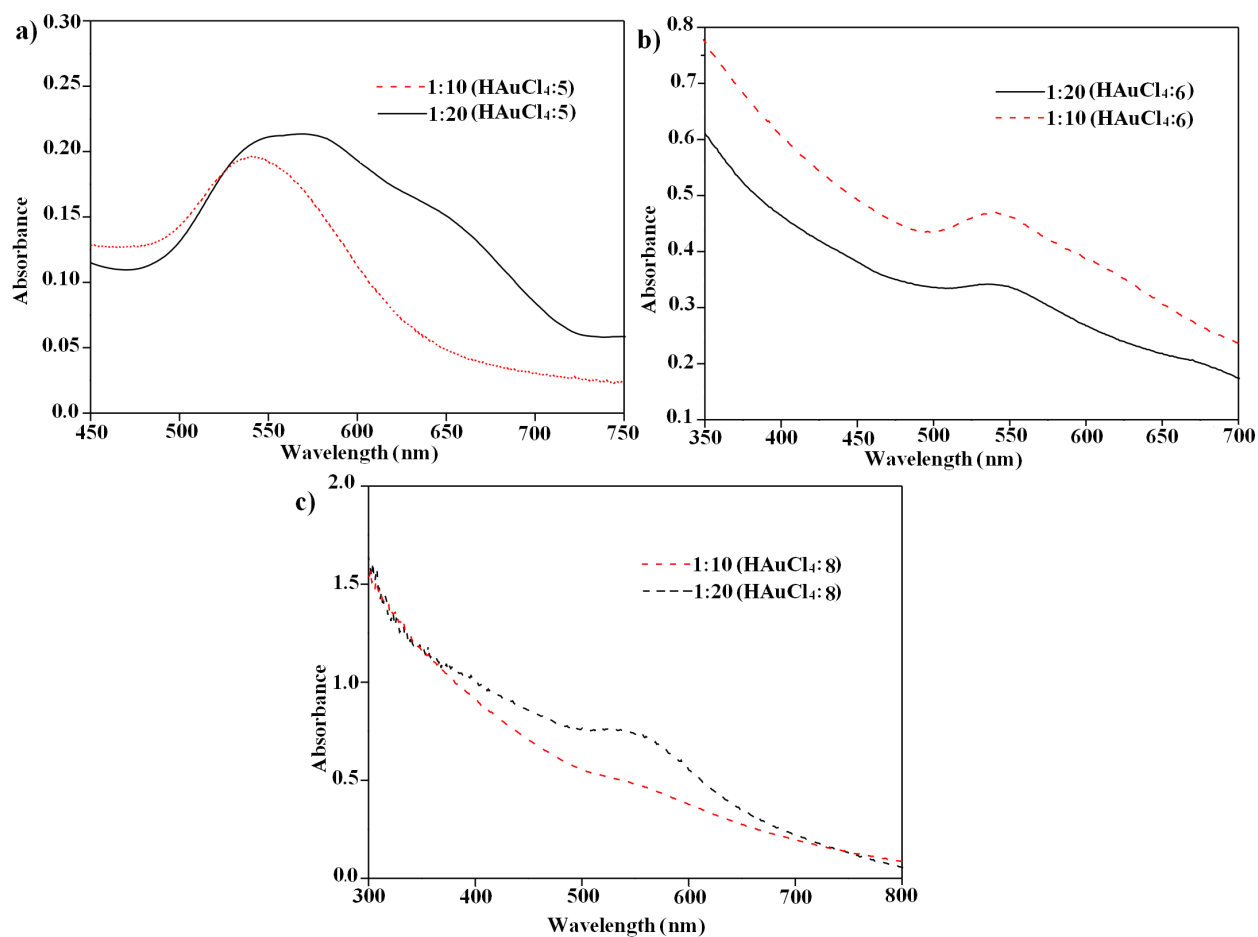
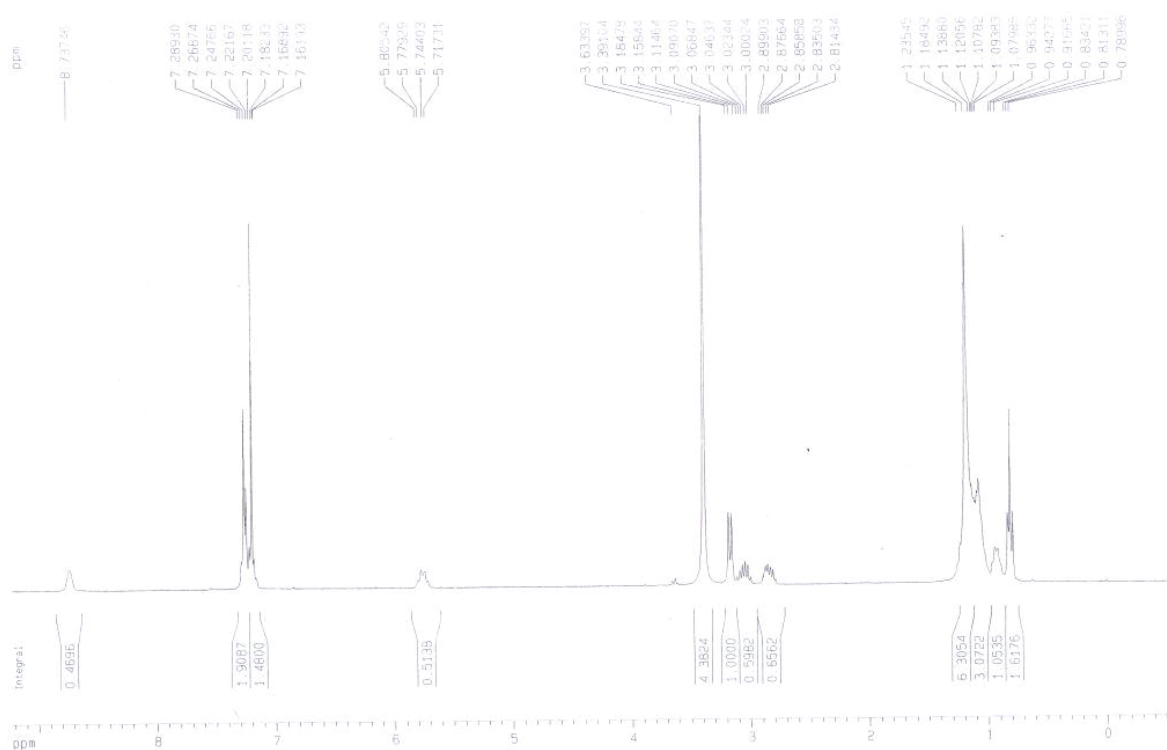


Fig. S3 The UV-vis spectra of in-situ prepared Au-nanoparticles (a-c) within the hydrogels of **5**, **6** and **8**, respectively at two different concentration ratios of reactants (**5**, **6** and **8** at their MGC 11.2, 29.3, 25.5 mM, respectively).

a)



b)

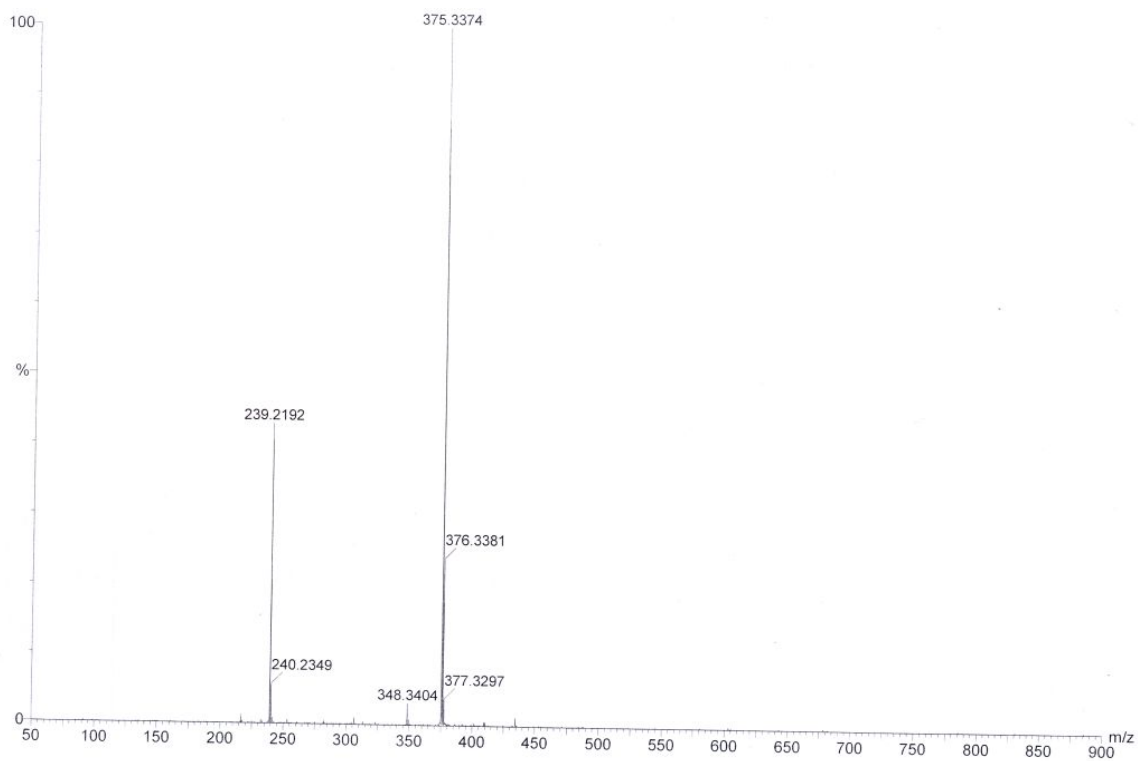
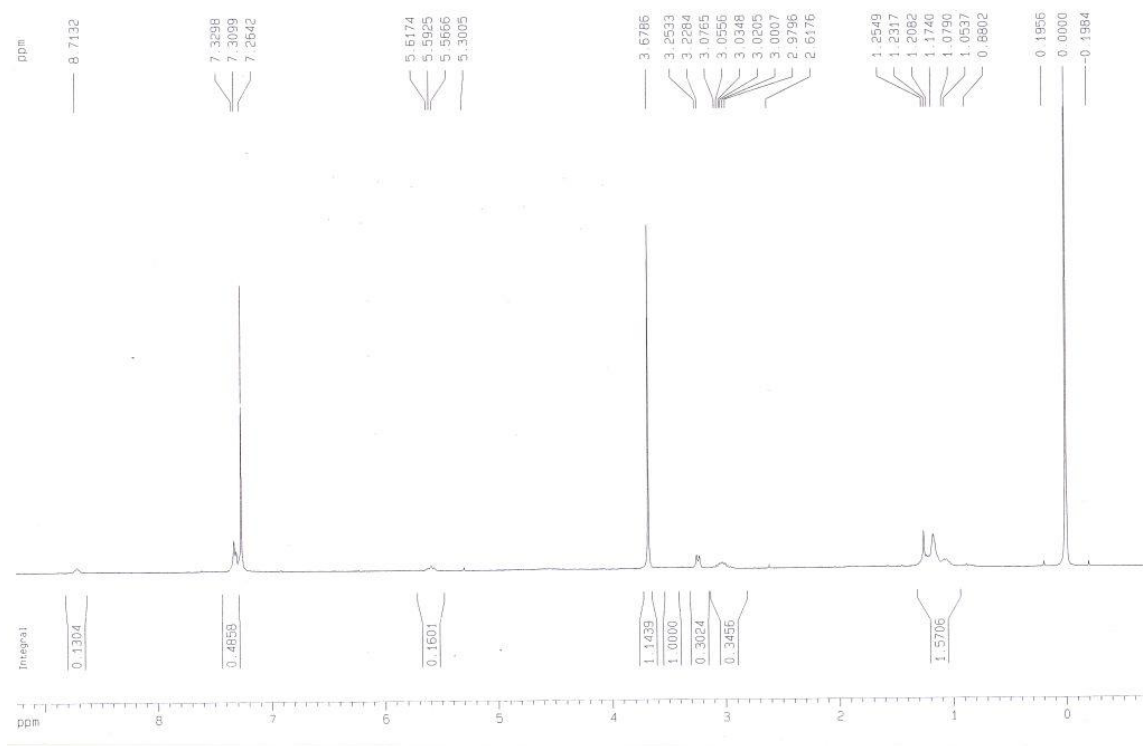


Fig. S4. a) ¹H NMR and b) mass spectra of 1.

a)



b)

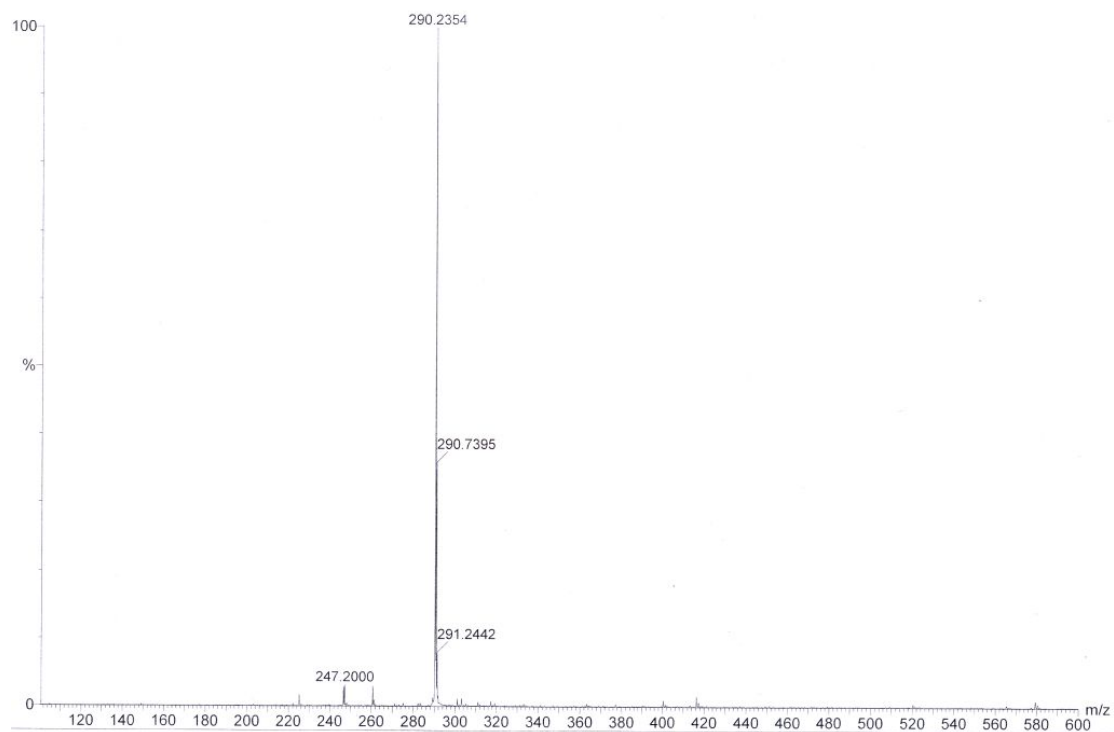
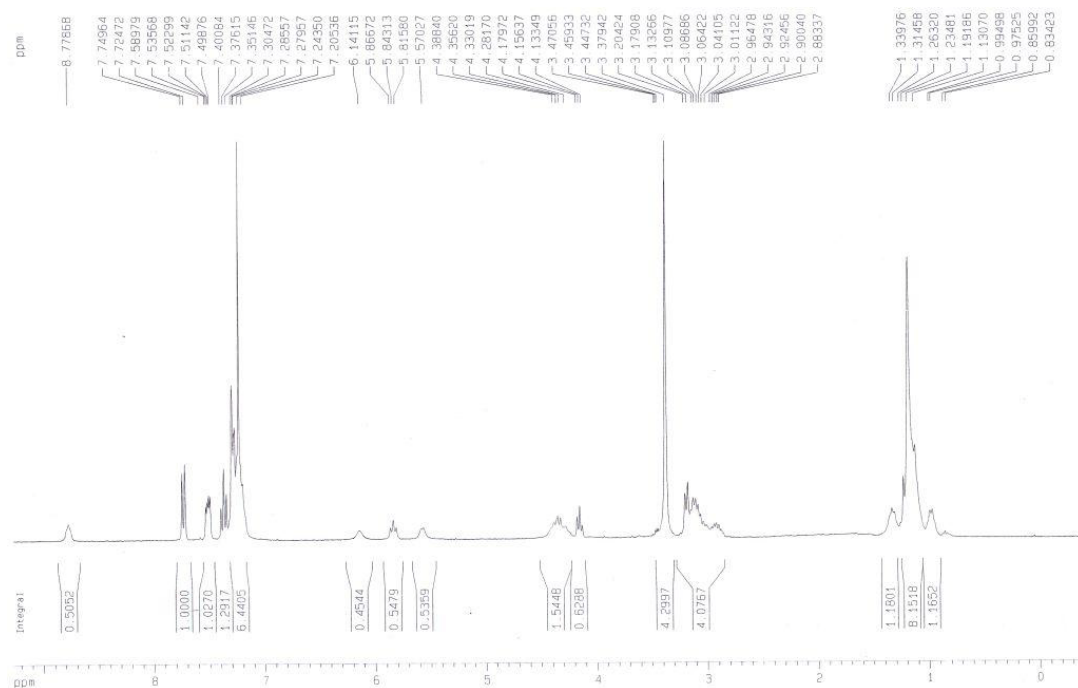
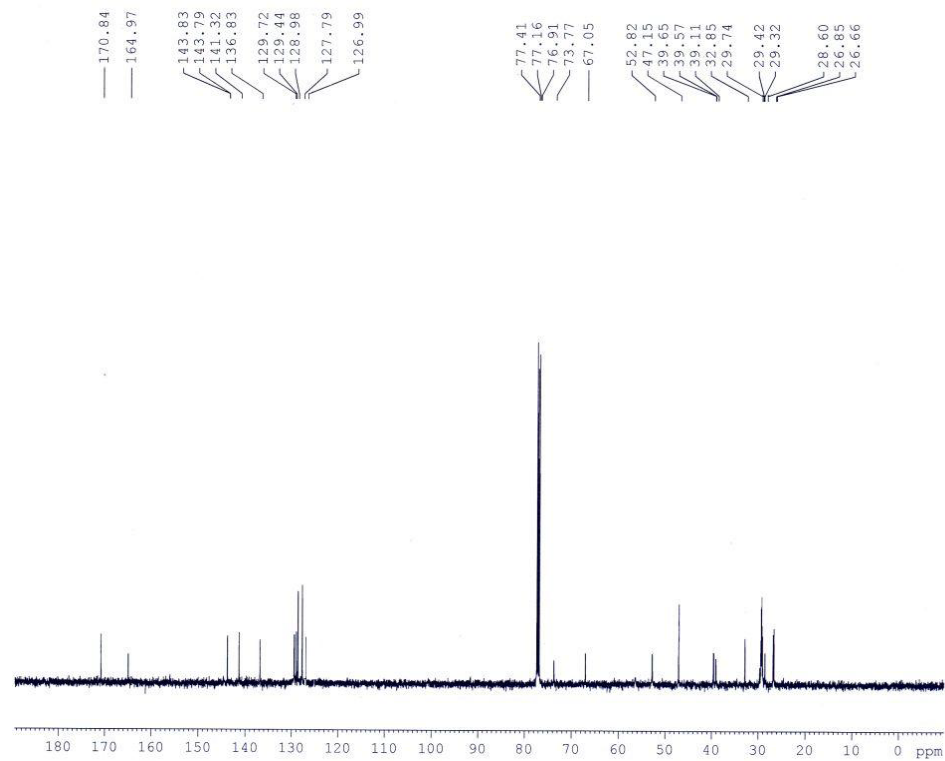


Fig. S5. a) ¹H NMR, b) mass spectra of **3**.

a)



b)



c)

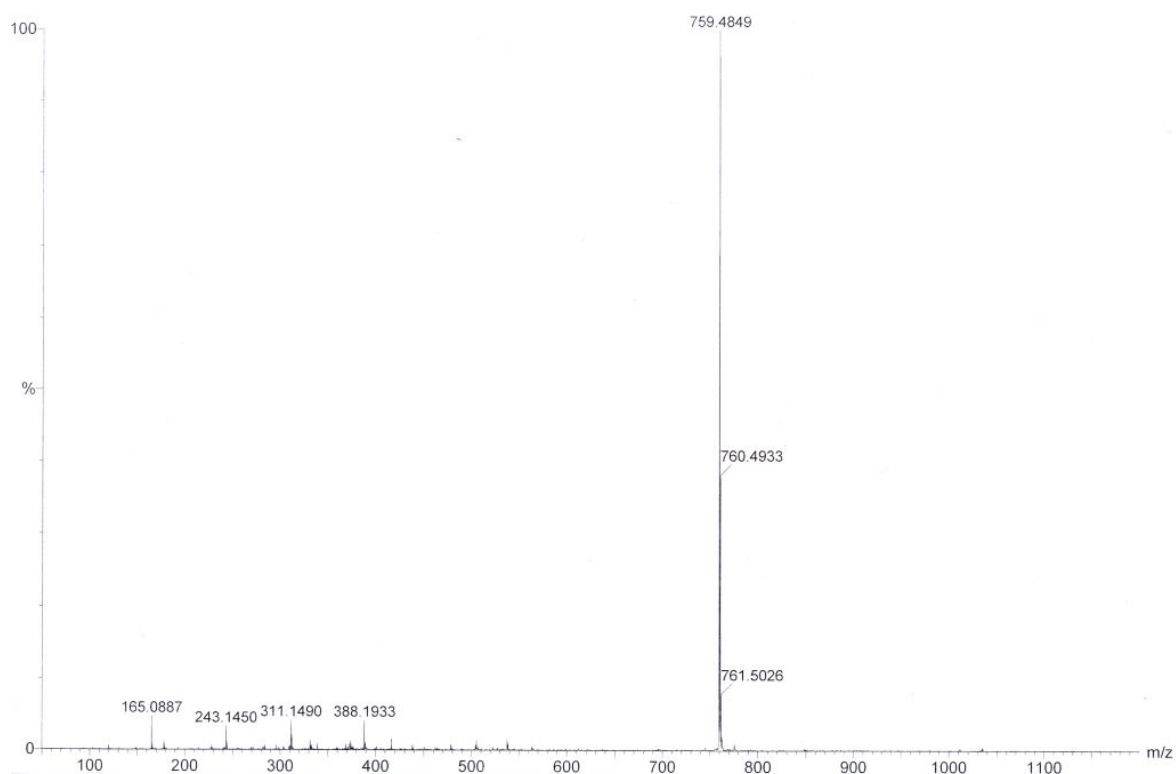
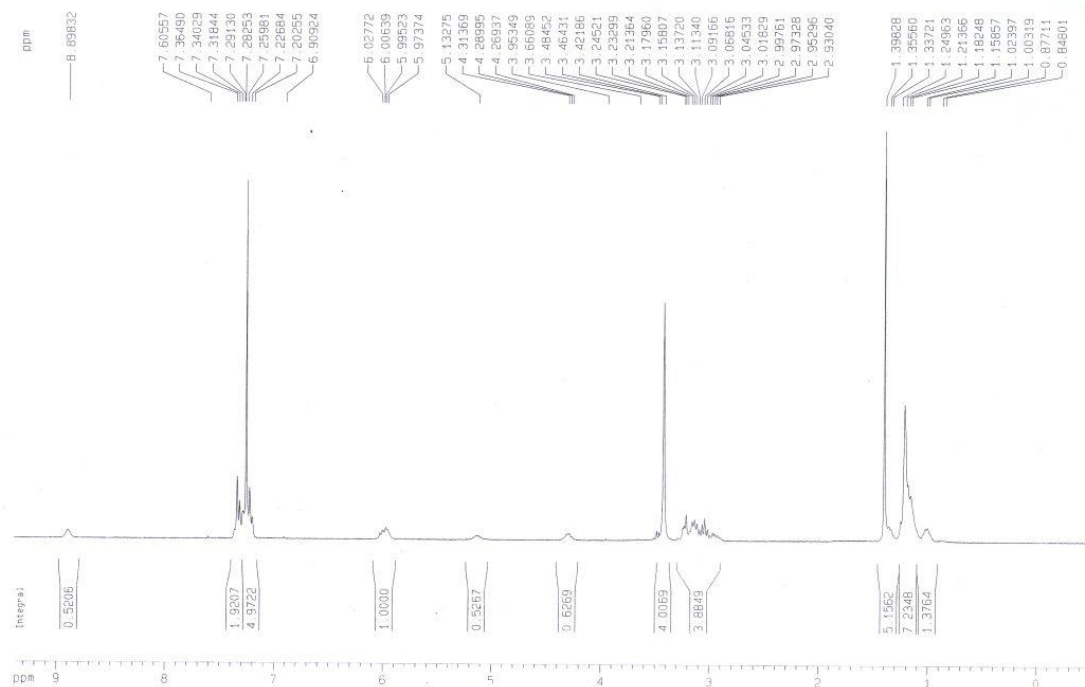
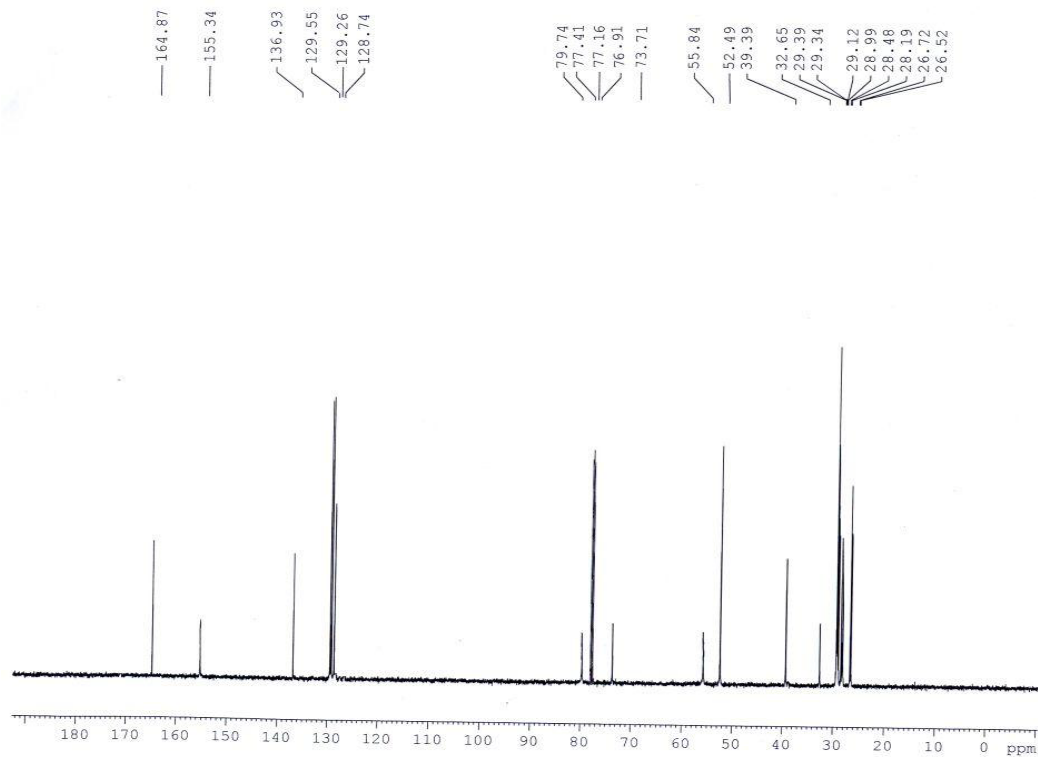


Fig. S6. a) ^1H NMR b) ^{13}C NMR and c) mass spectra of **4**.

a)



b)



c)

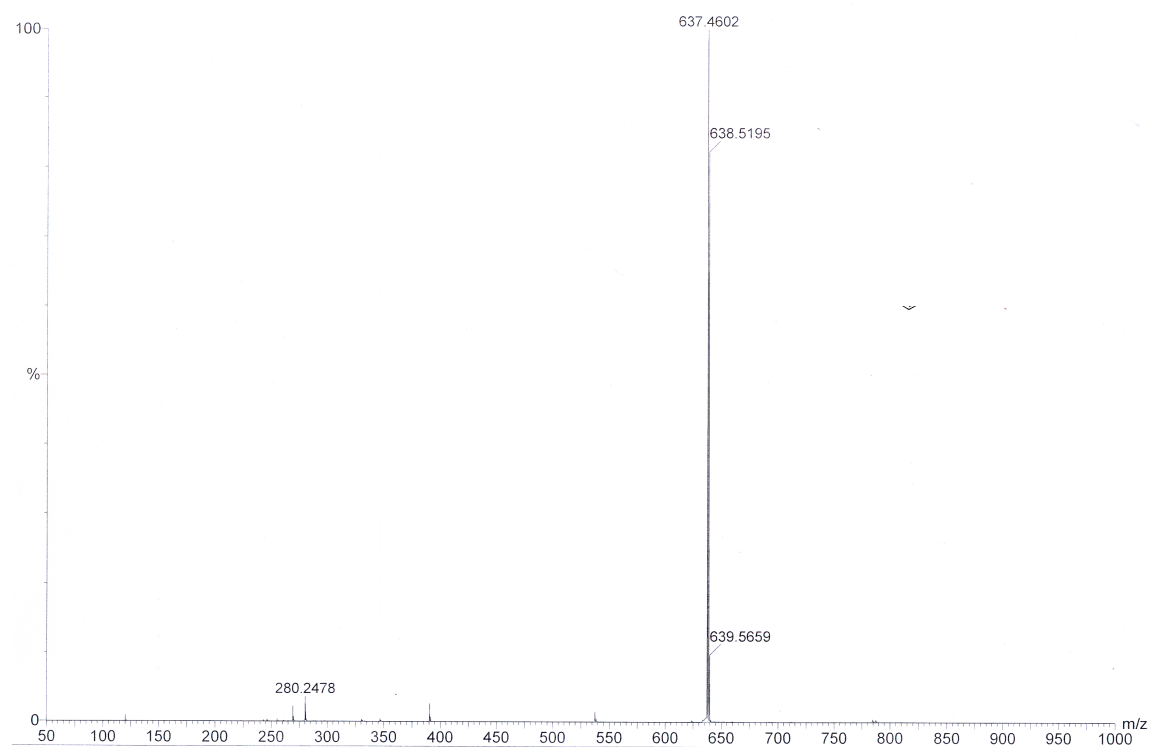
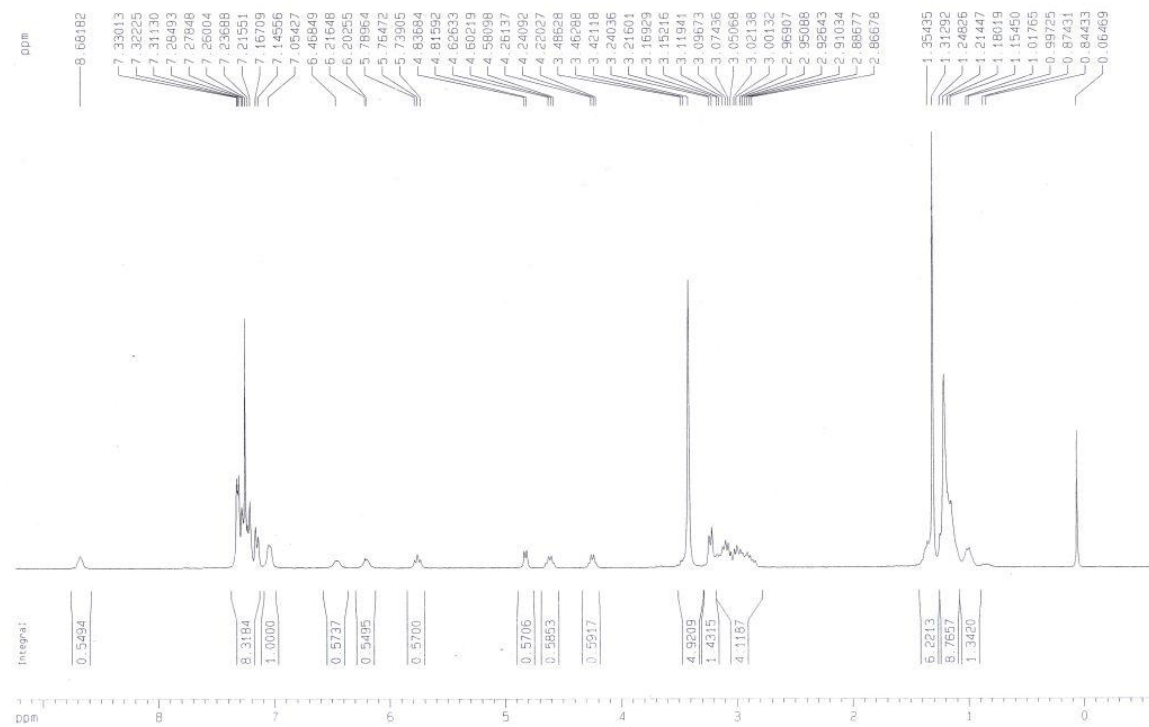
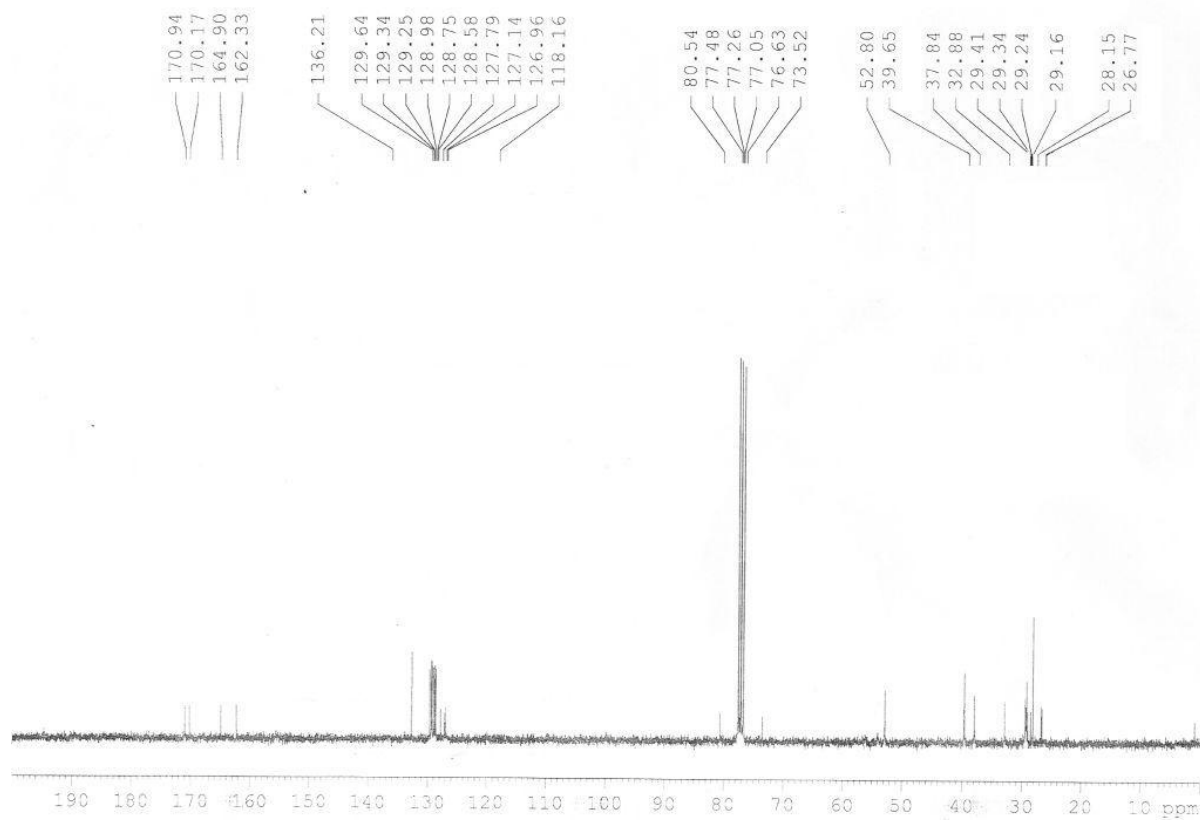


Fig. S7. a) ^1H NMR b) ^{13}C NMR and c) mass spectra of **5**.

a)



b)



c)

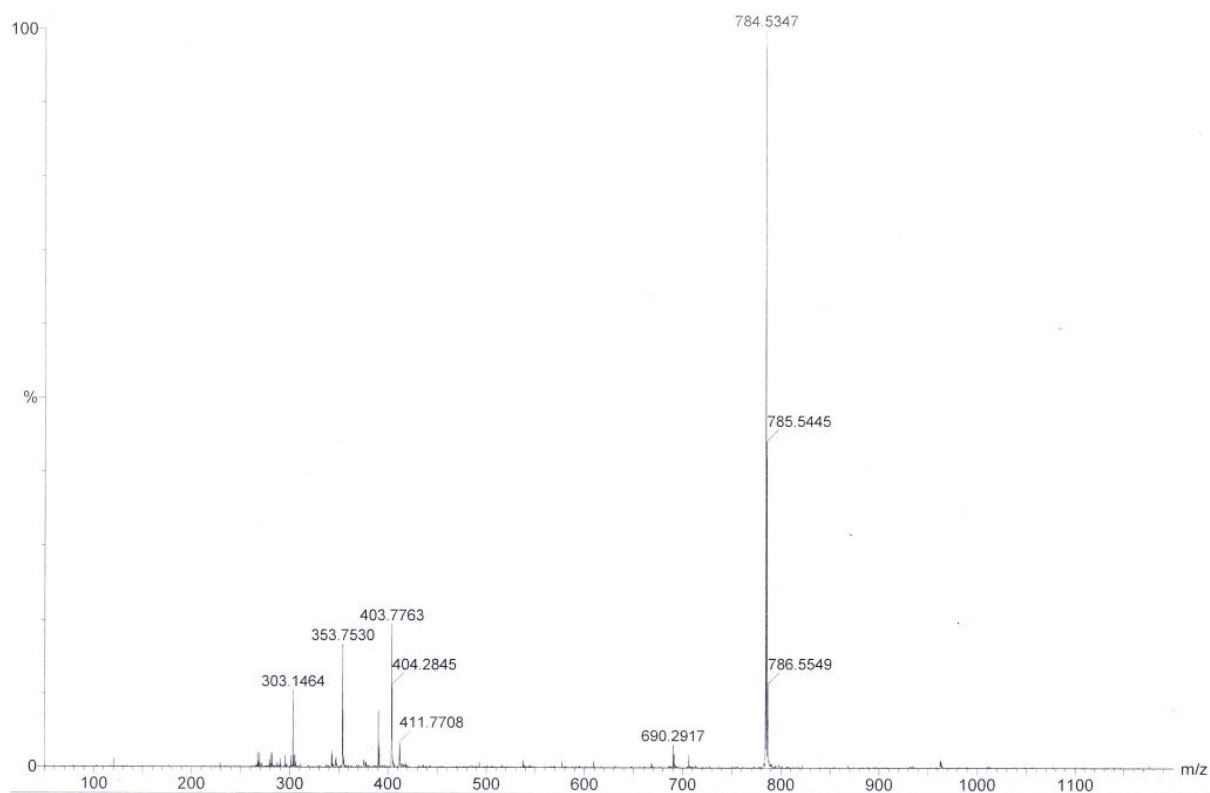
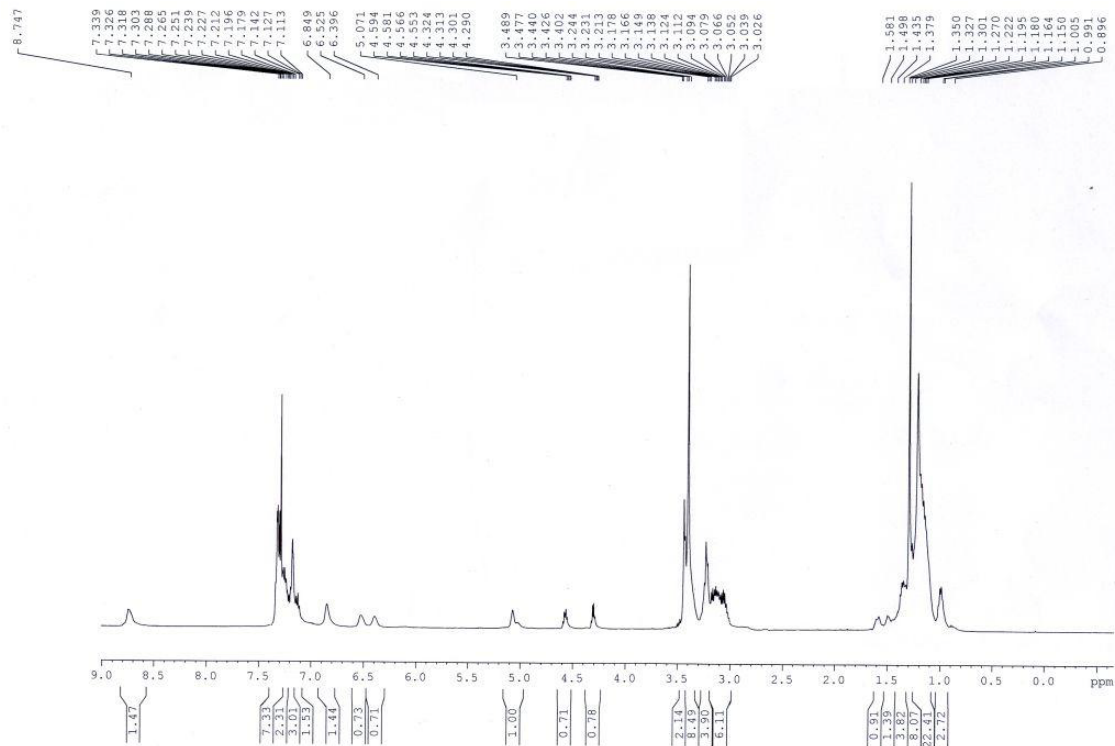
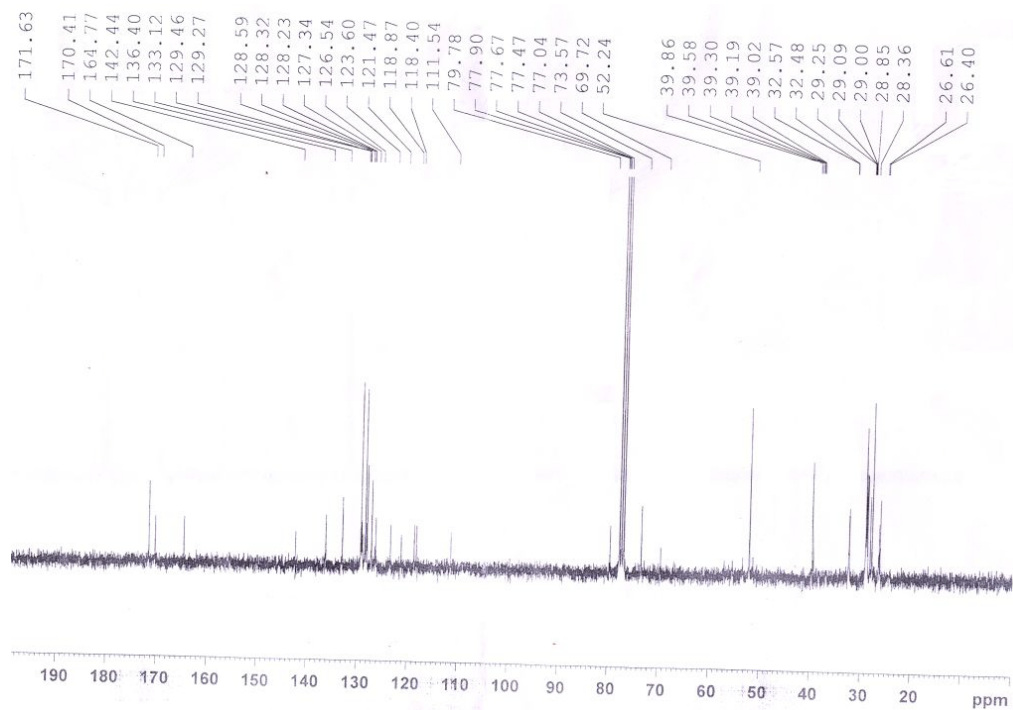


Fig. S8. a) ^1H NMR b) ^{13}C NMR and c) mass spectra of **6**.

a)



b)



c)

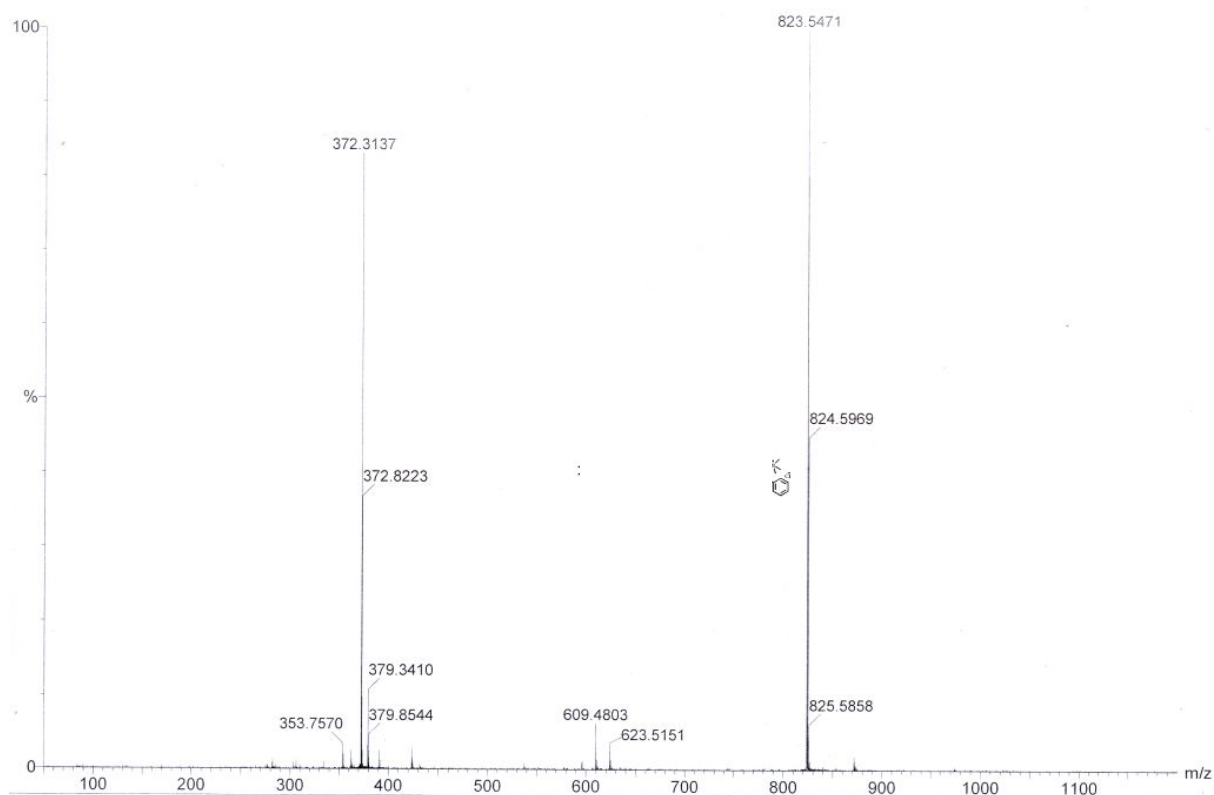
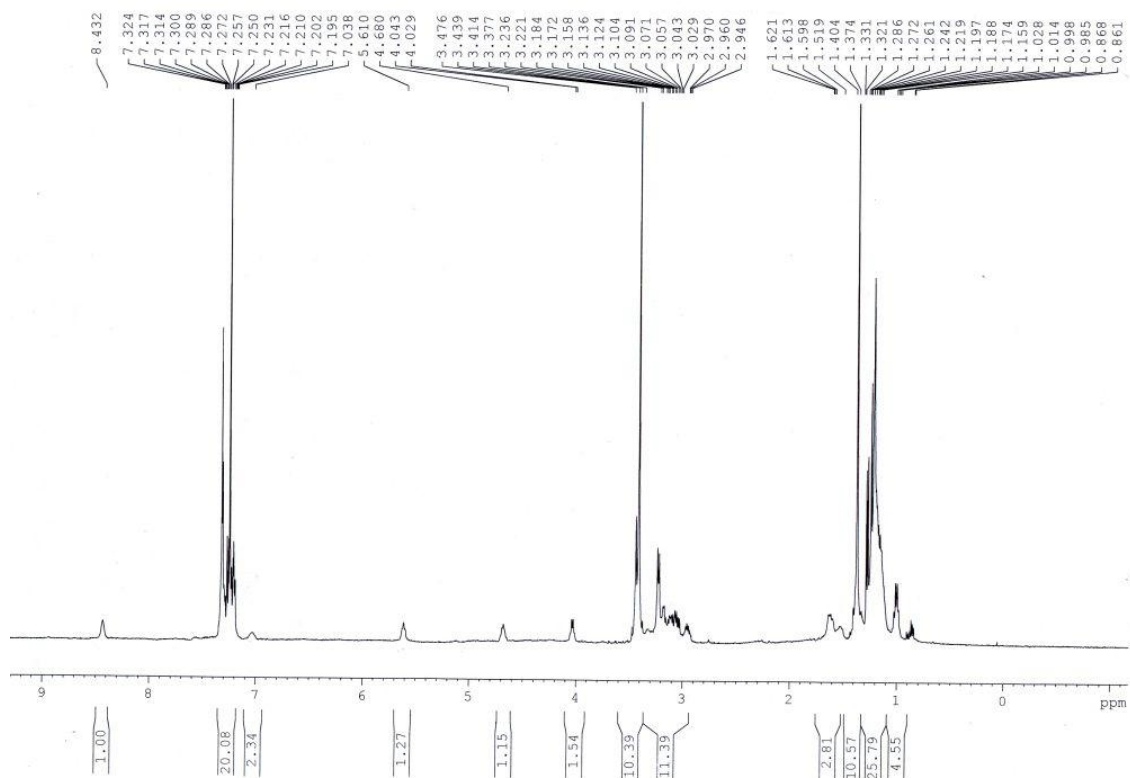


Fig. S9. a) ^1H NMR, b) ^{13}C NMR and c) mass spectra of **7**.

a)



b)

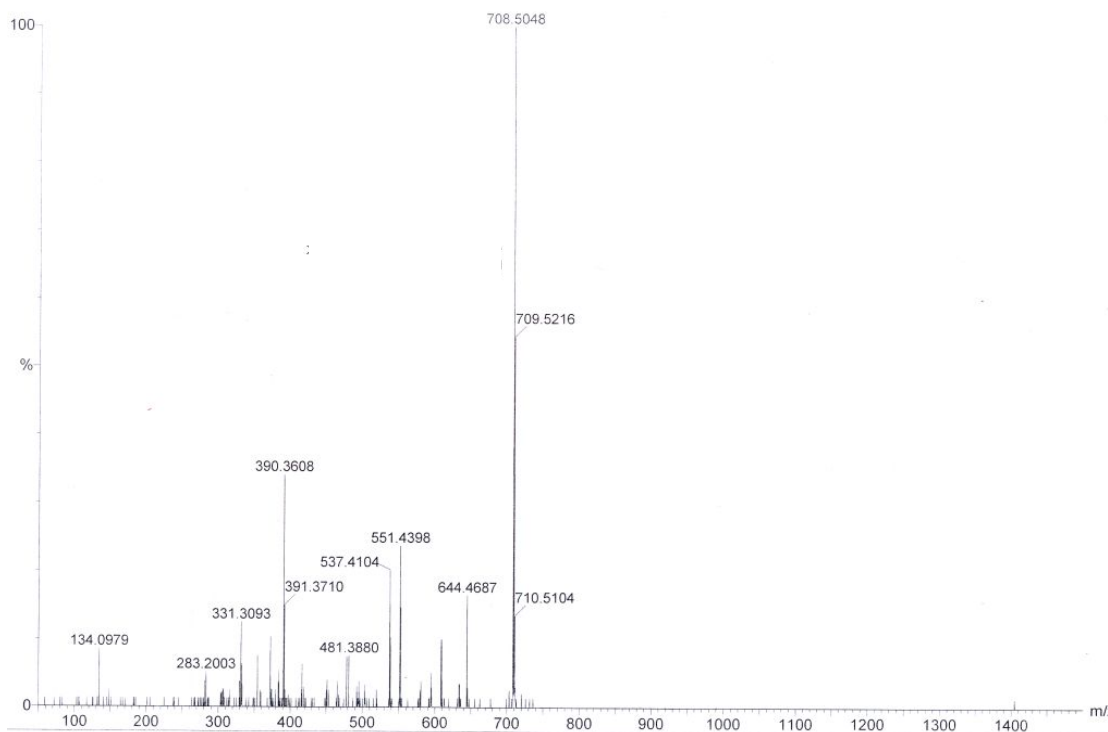


Fig. S10. a) ^1H NMR and b) mass spectra of **8**.