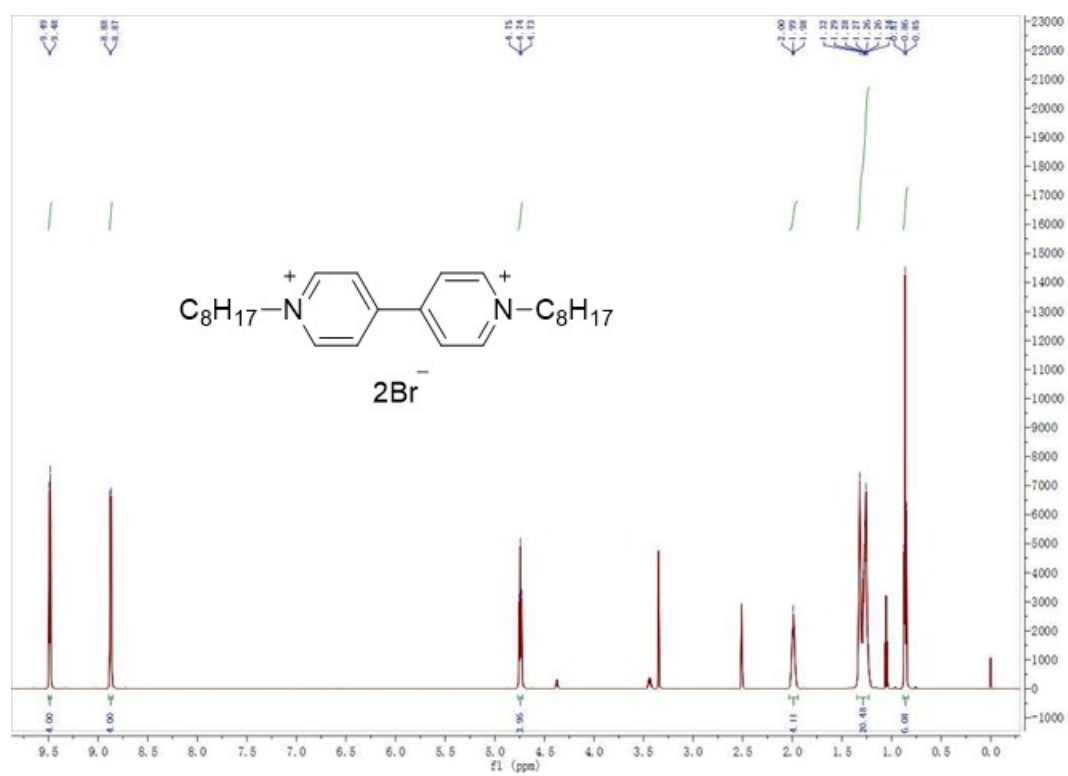


The Antitumor Activity of 4,4'-Bipyridinium Amphiphiles

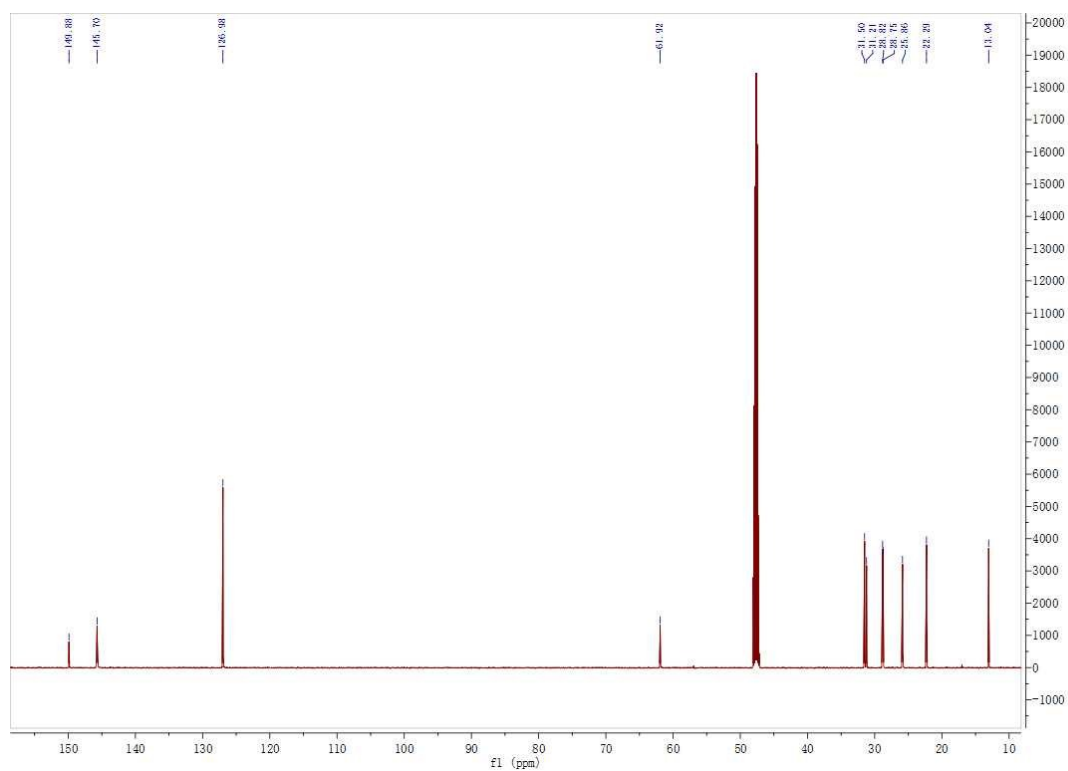
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Baiwang Sun^{a,*}

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211189, PR China. Fax: +86 25 52090614, Tel: +86 25 52090614, E-mail address:
chmsunbw@seu.edu.cn*

(a)



(b)



(c)

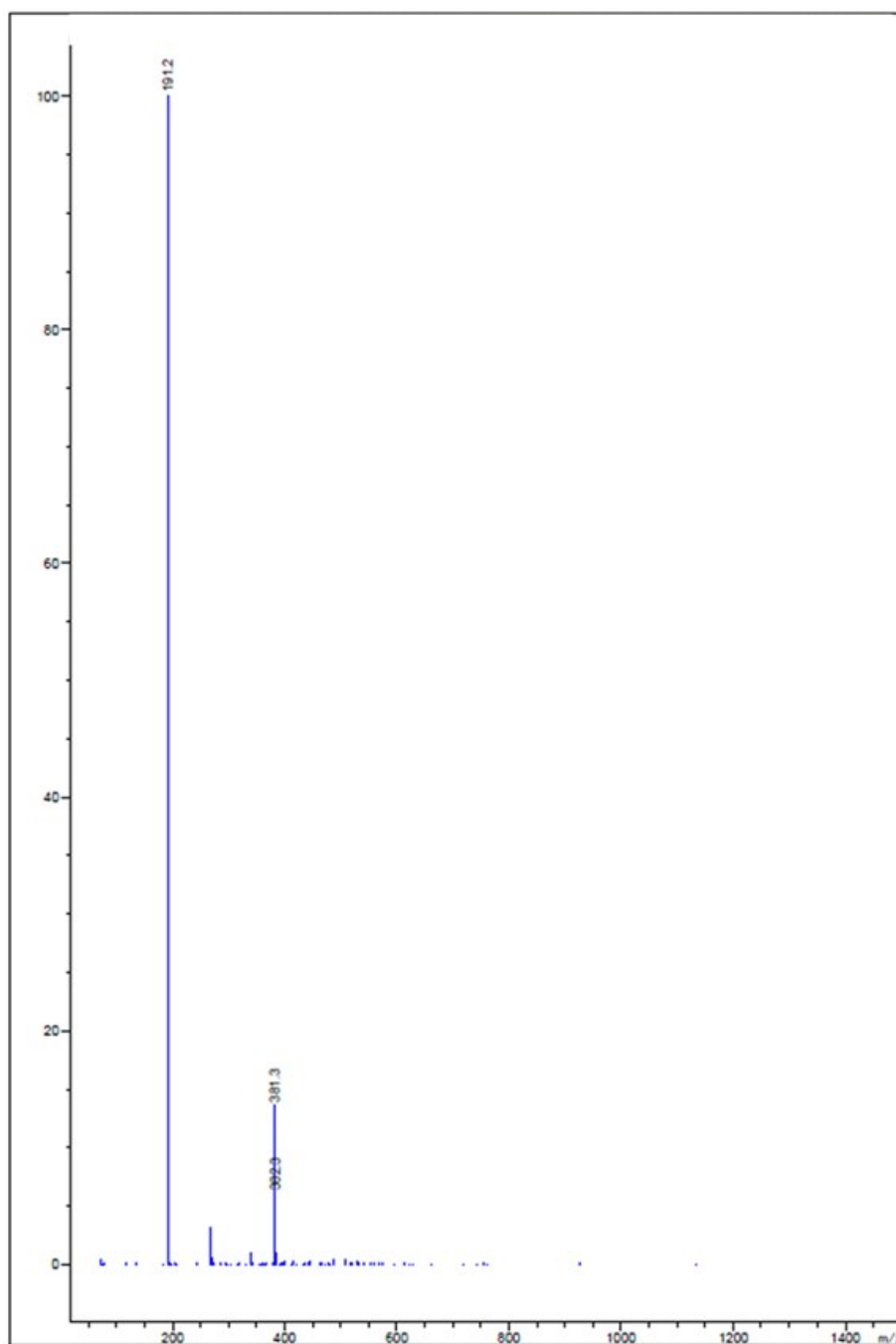
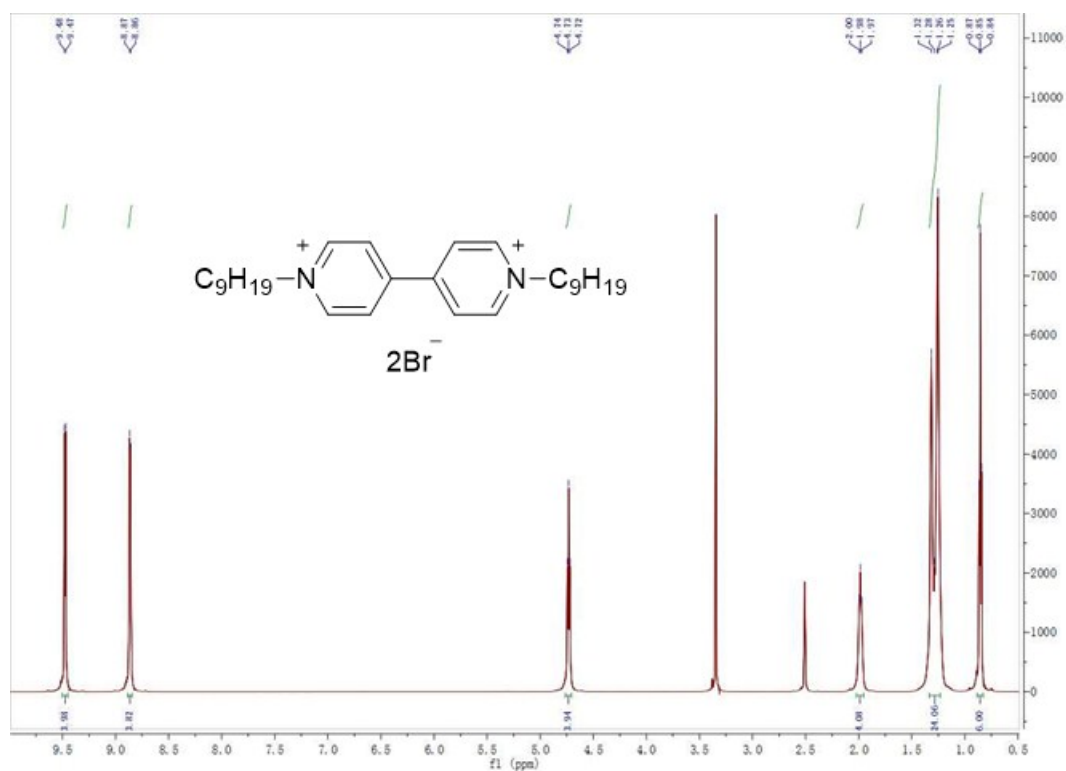
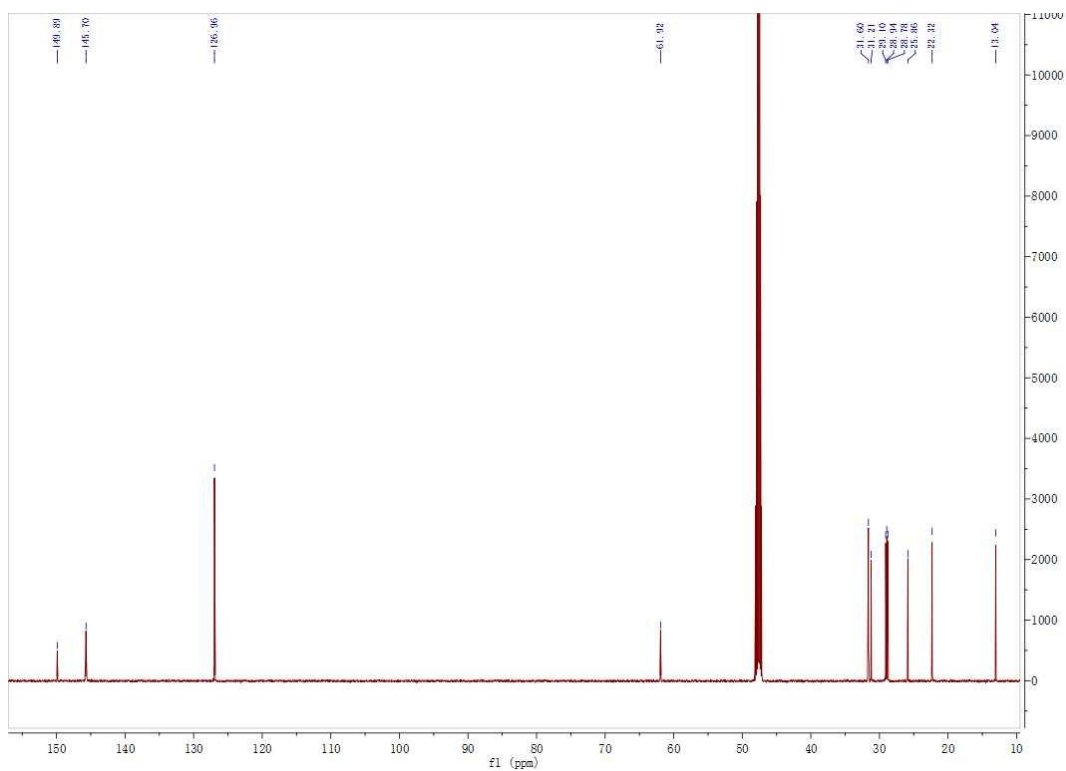


Figure S1. NMR and MS spectra of **1**: (a) ^1H NMR spectrum of **1** in $\text{DMSO-}d_6$; (b) ^{13}C NMR spectrum of **1** in CD_3OD ; (c) MS spectra of **1**.

(a)



(b)



(c)

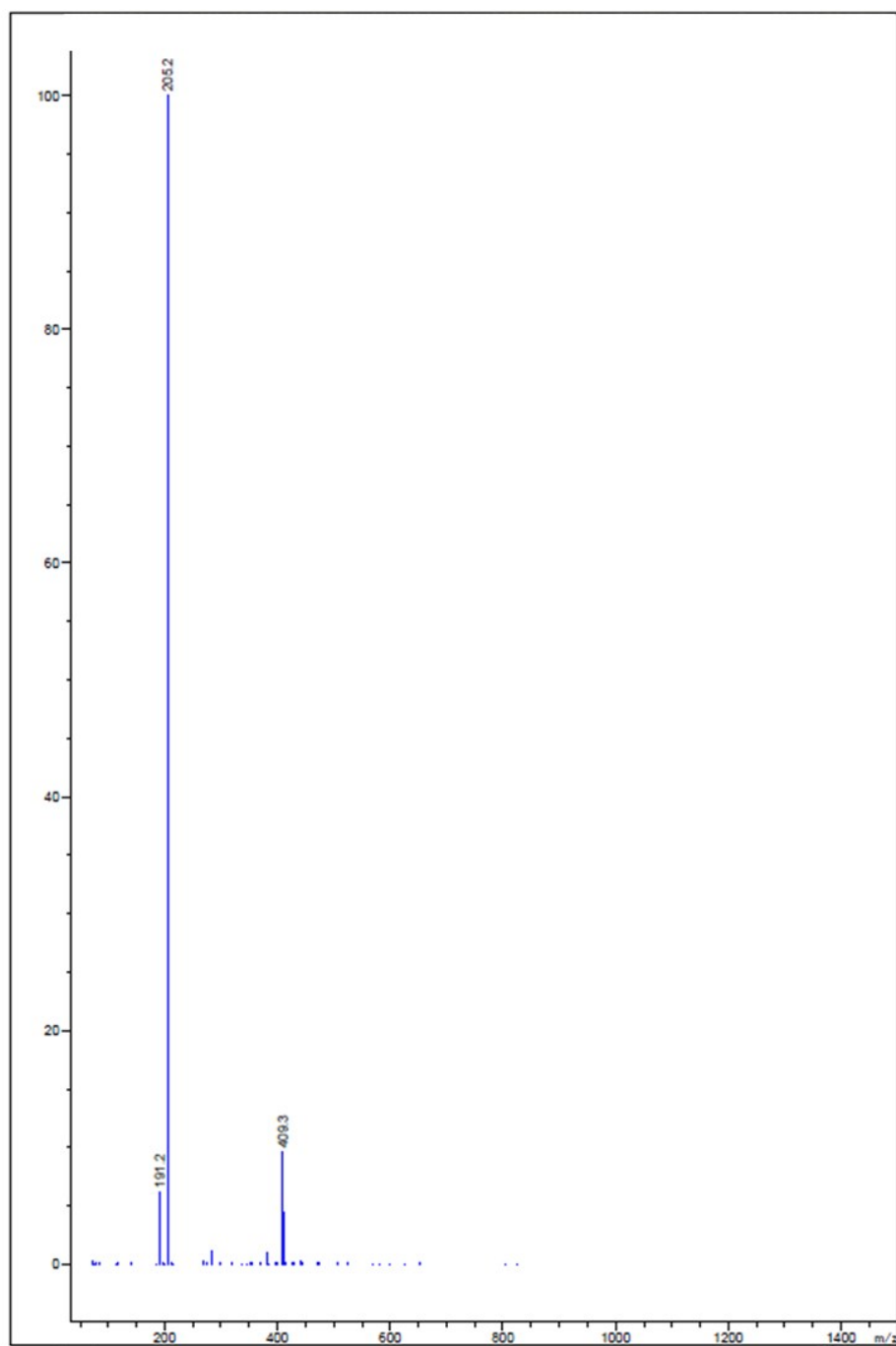
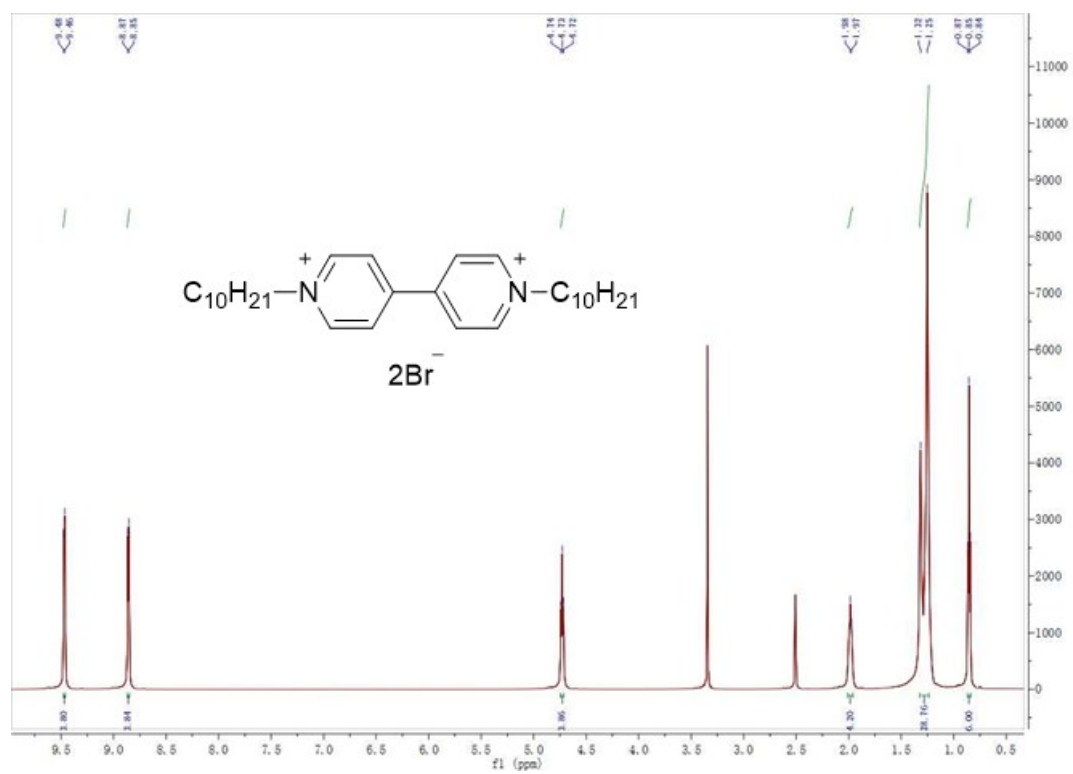
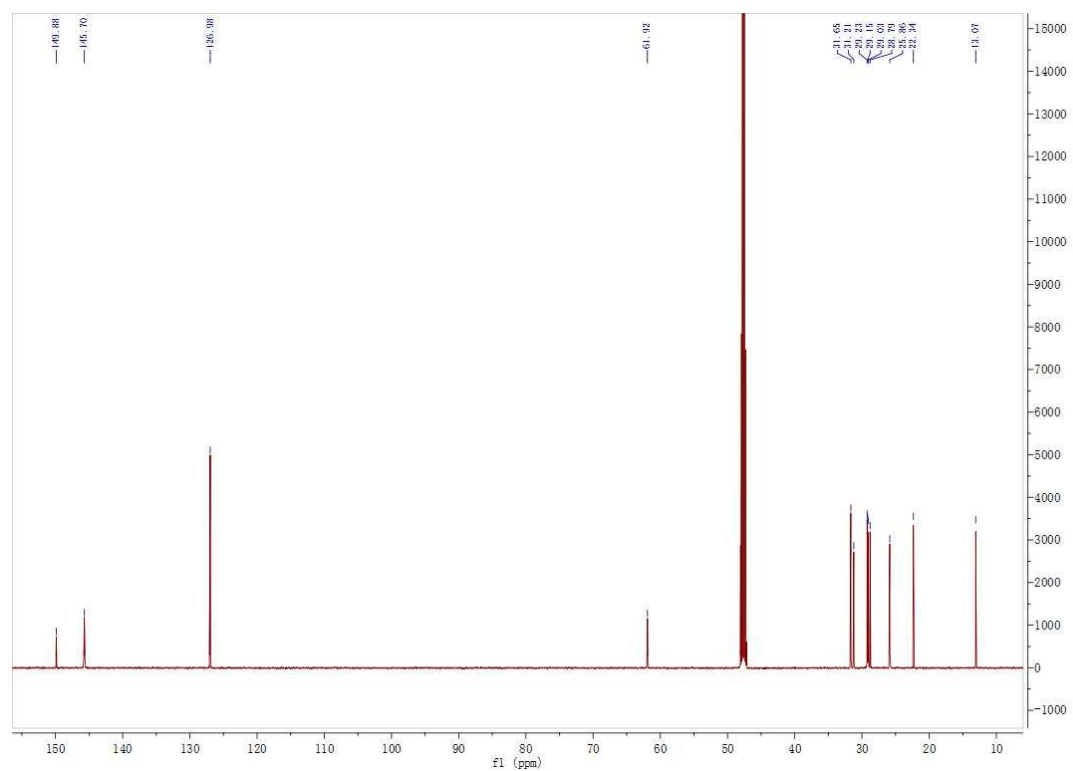


Figure S2. NMR and MS spectra of **2**: (a) ^1H NMR spectrum of **2** in $\text{DMSO-}d_6$; (b) ^{13}C NMR spectrum of **2** in CD_3OD ; (c) MS spectra of **2**.

(a)



(b)



(c)

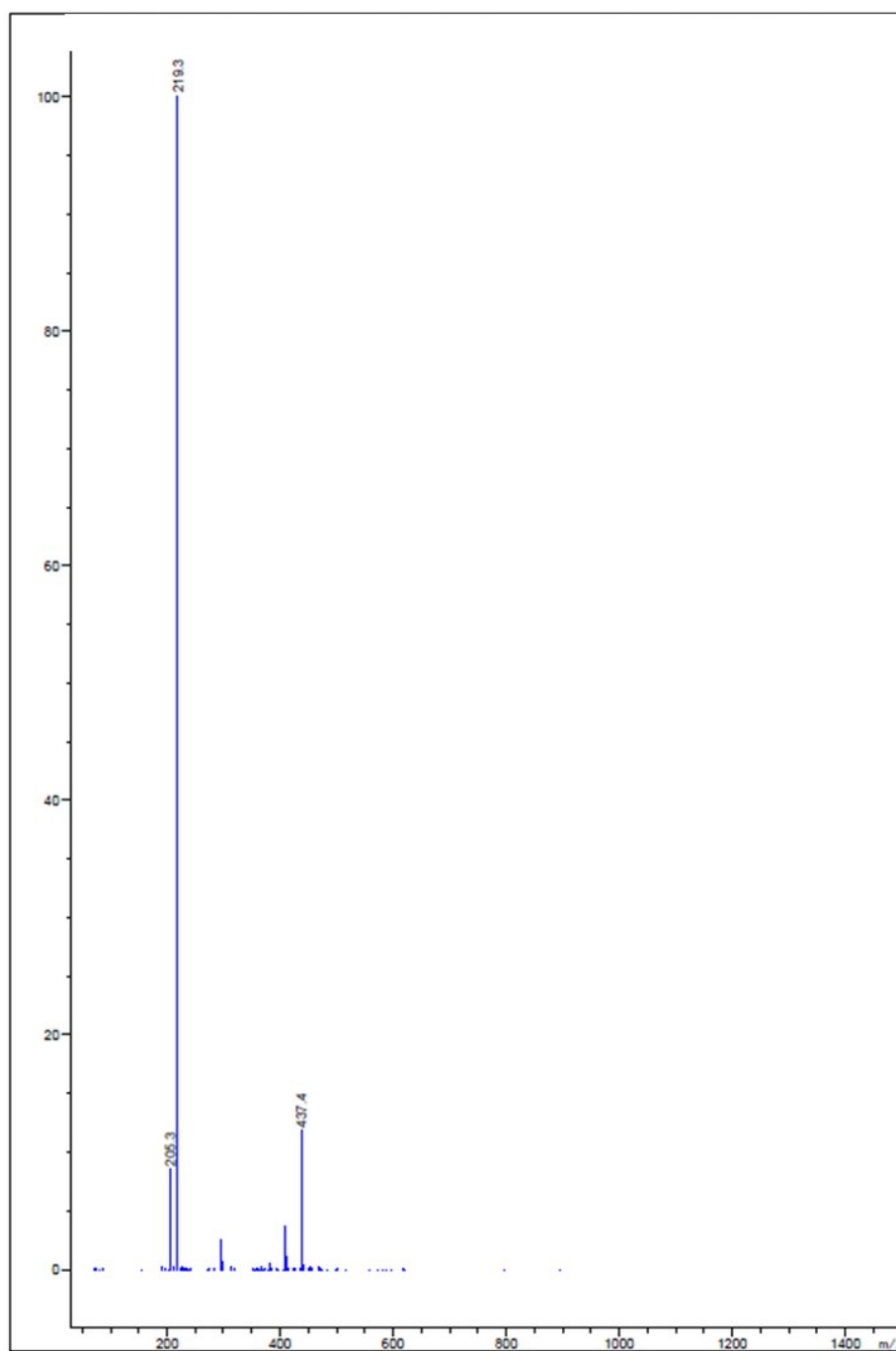
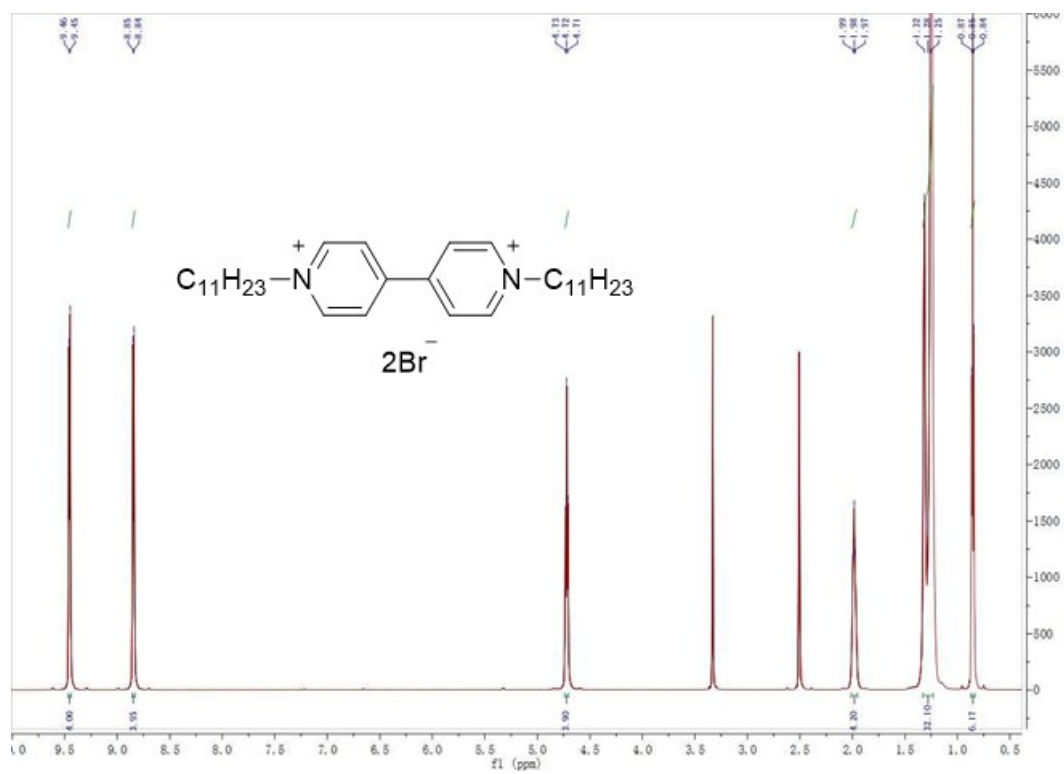
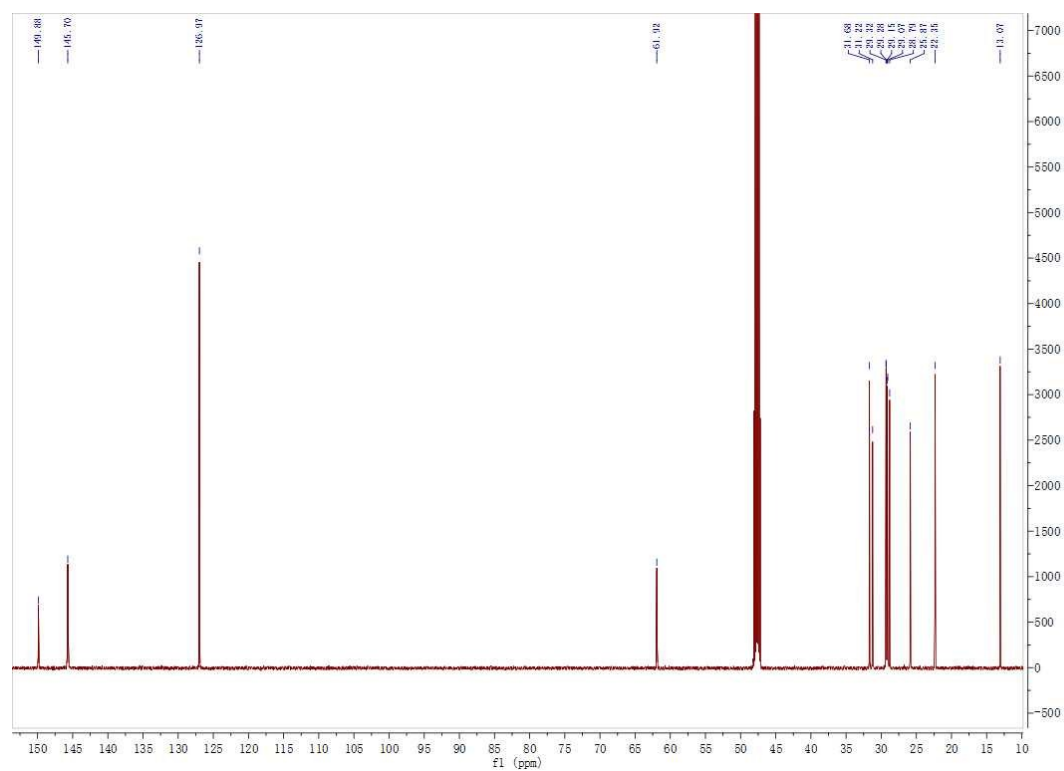


Figure S3. NMR and MS spectra of **3**: (a) ^1H NMR spectrum of **3** in $\text{DMSO-}d_6$; (b) ^{13}C NMR spectrum of **3** in CD_3OD ; (c) MS spectra of **3**.

(a)



(b)



(c)

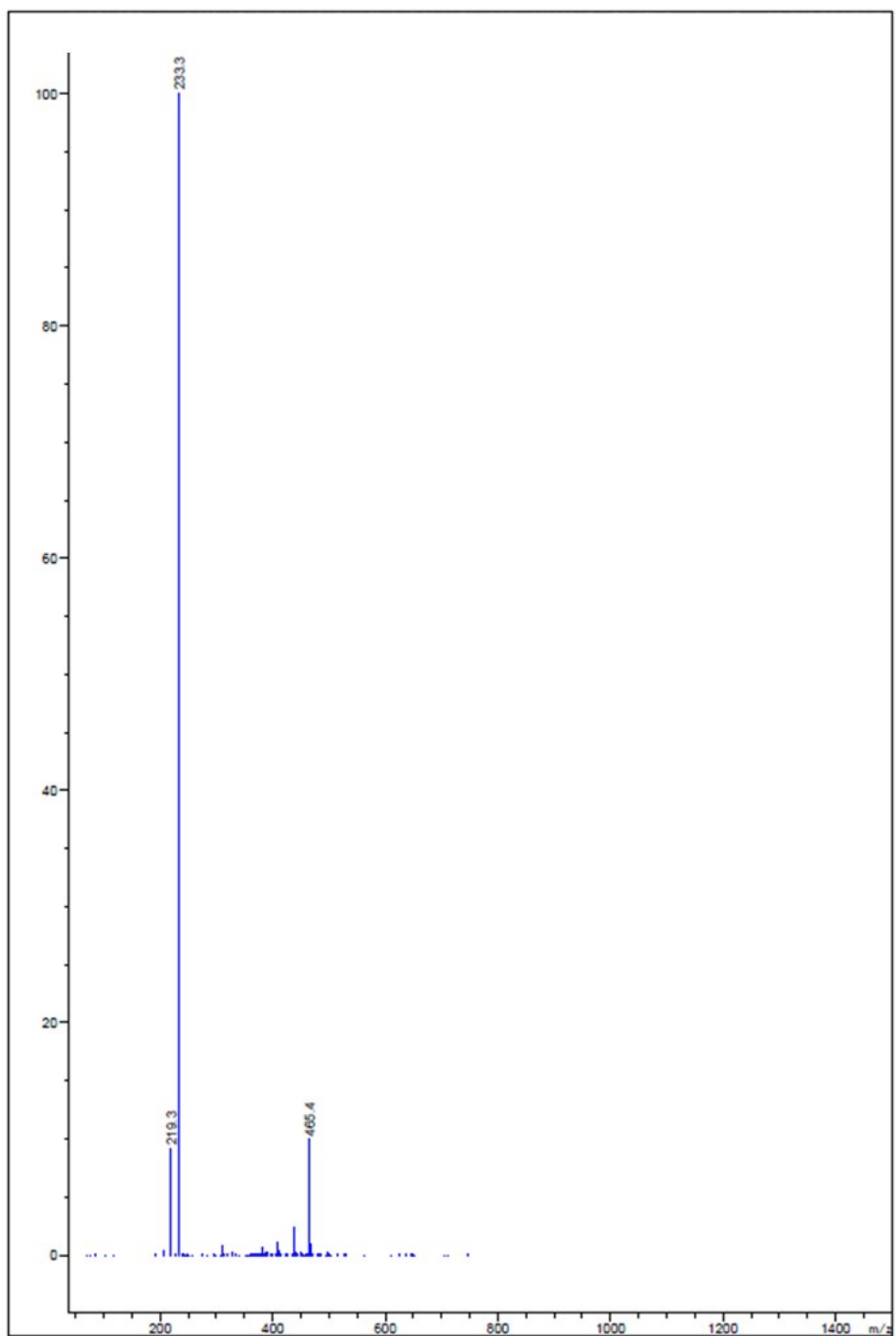
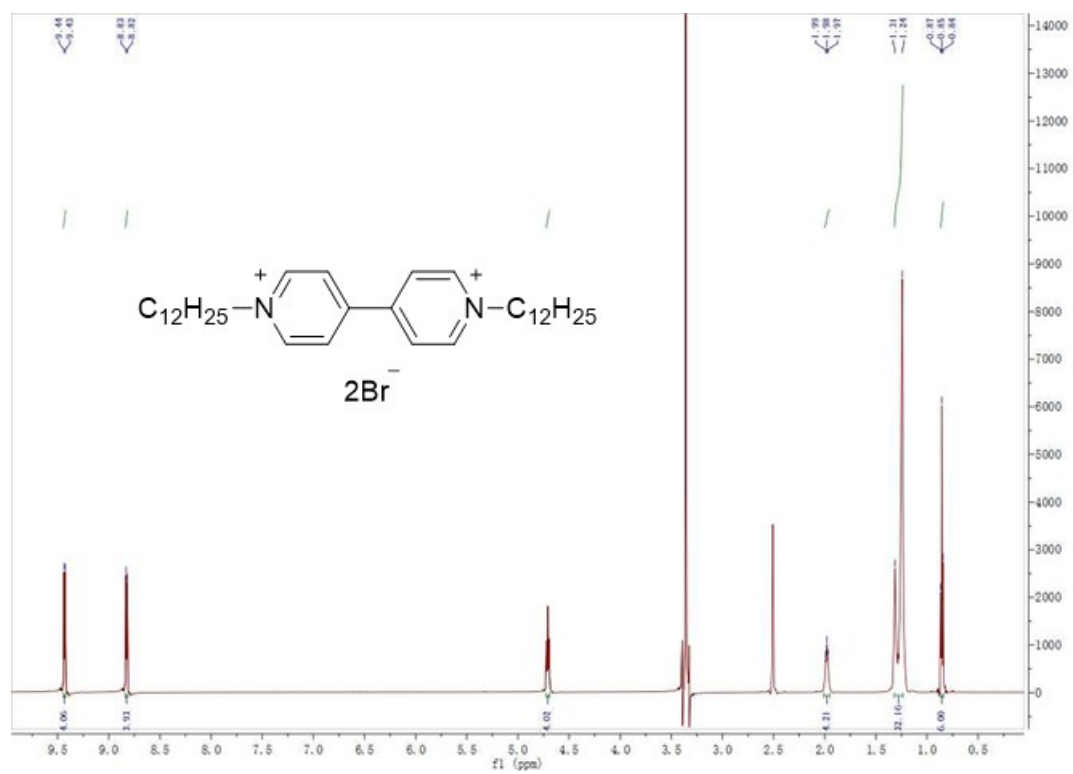
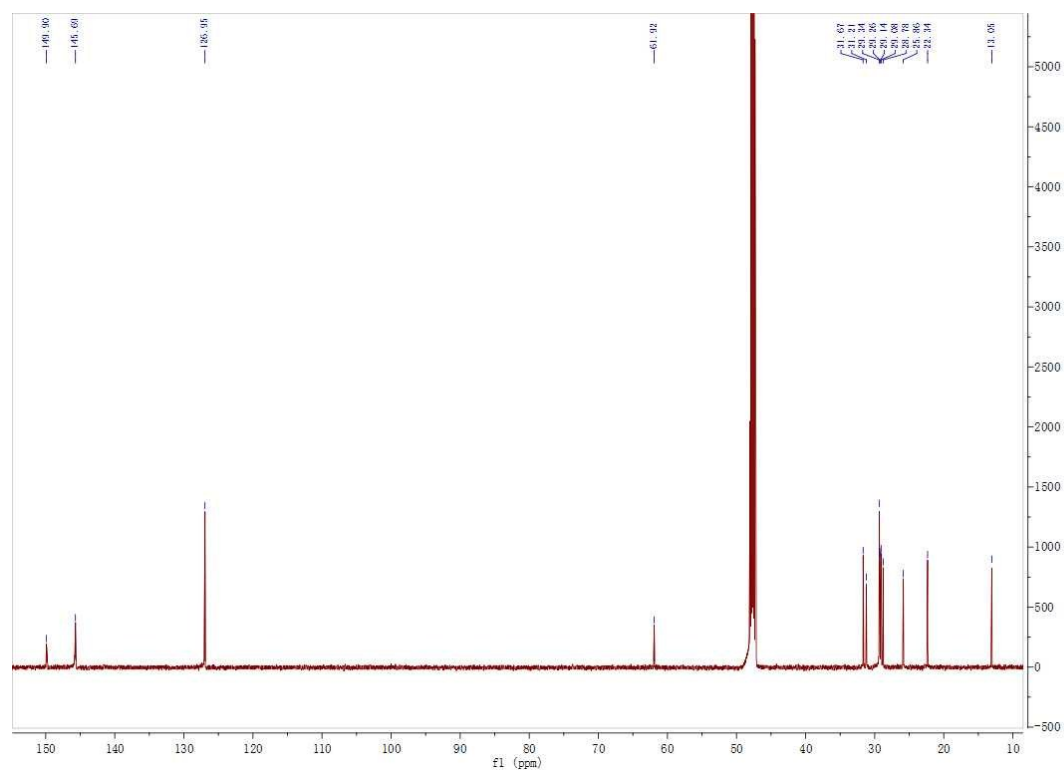


Figure S4. NMR and MS spectra of **4**: (a) ^1H NMR spectrum of **4** in $\text{DMSO-}d_6$; (b) ^{13}C NMR spectrum of **4** in CD_3OD ; (c) MS spectra of **4**.

(a)



(b)



(c)

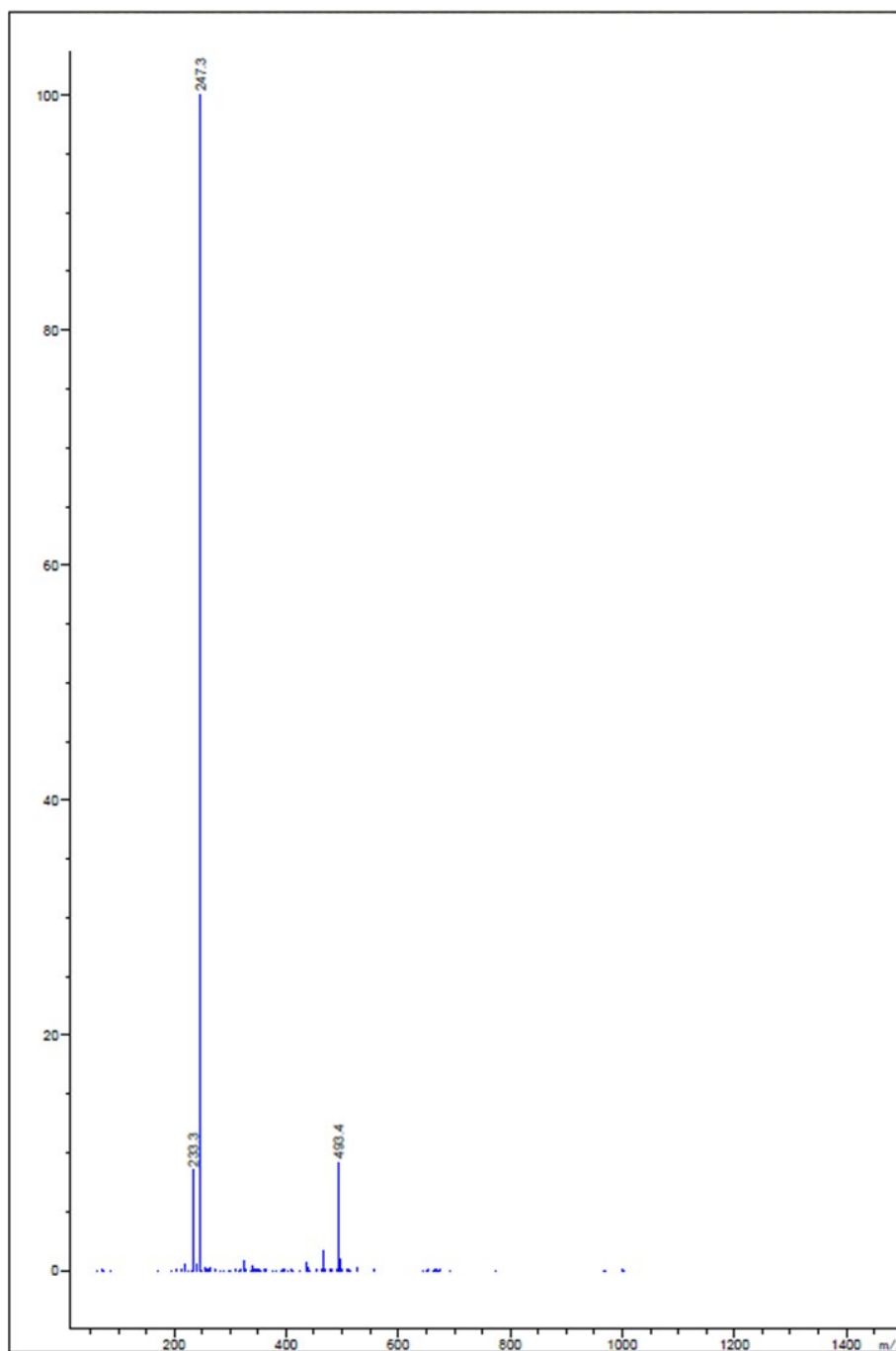
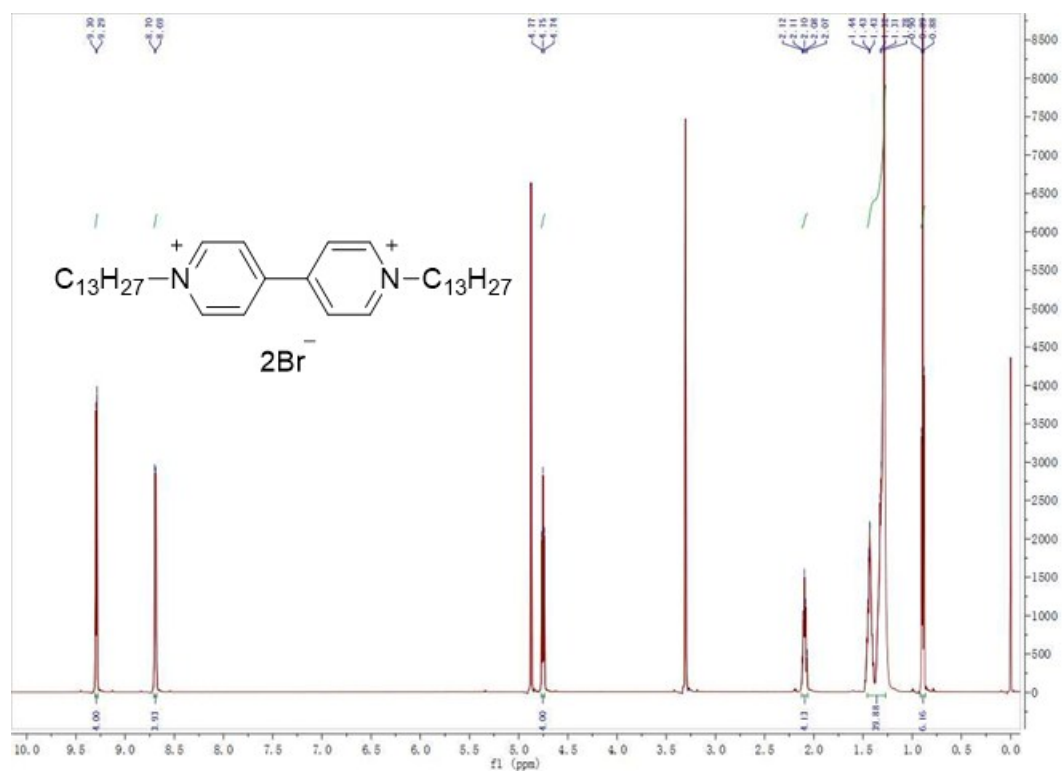
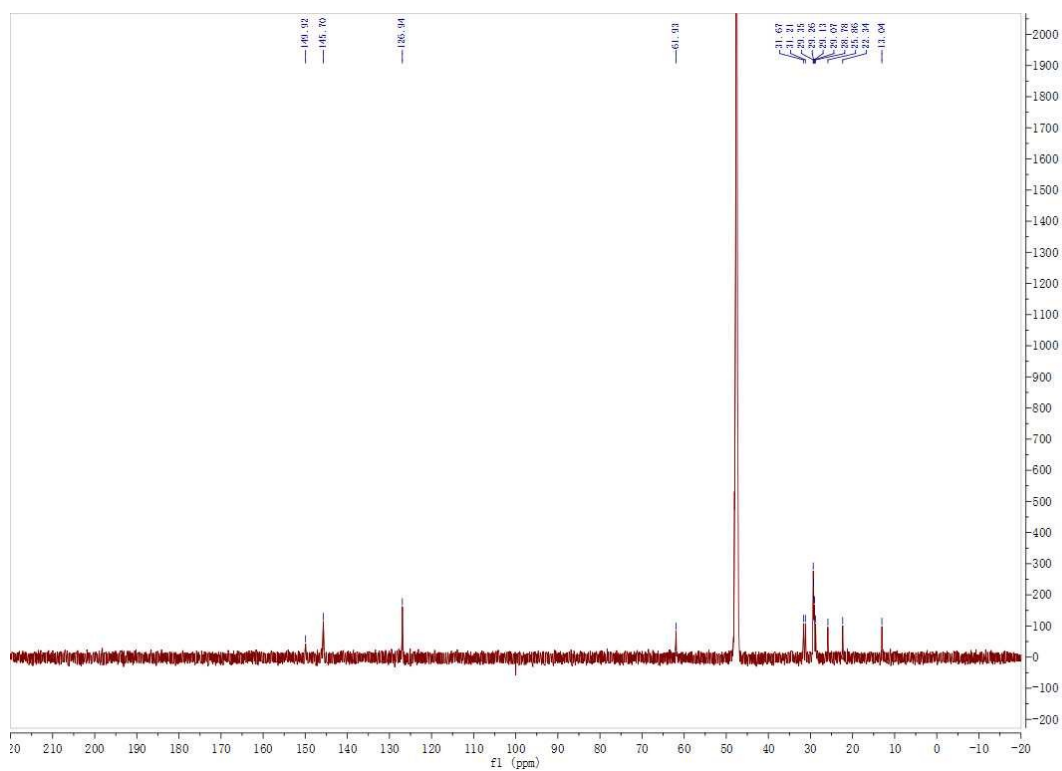


Figure S5. NMR and MS spectra of **5**: (a) ^1H NMR spectrum of **5** in $\text{DMSO-}d_6$; (b) ^{13}C NMR spectrum of **5** in CD_3OD ; (c) MS spectra of **5**.

(a)



(b)



(c)

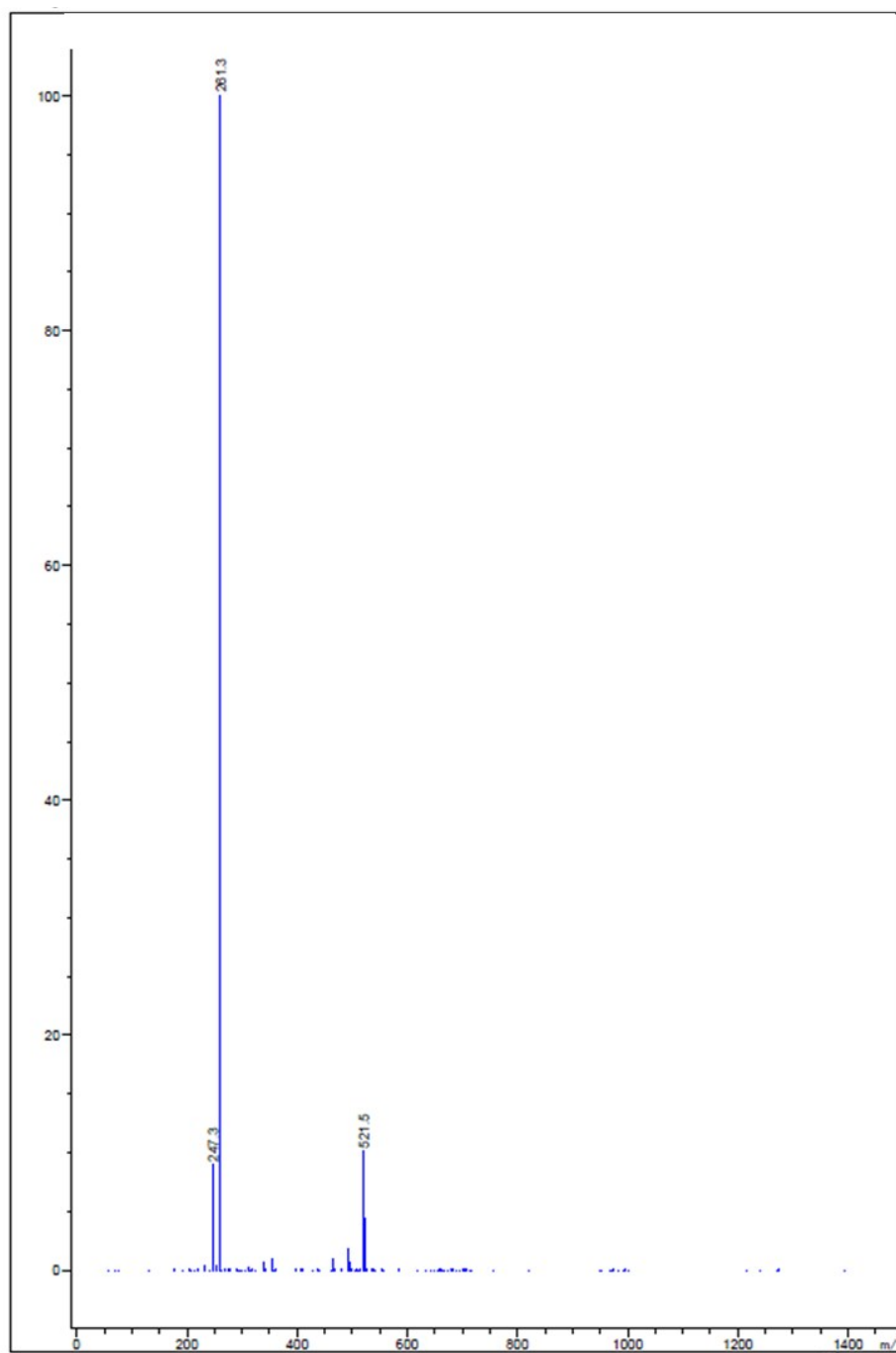
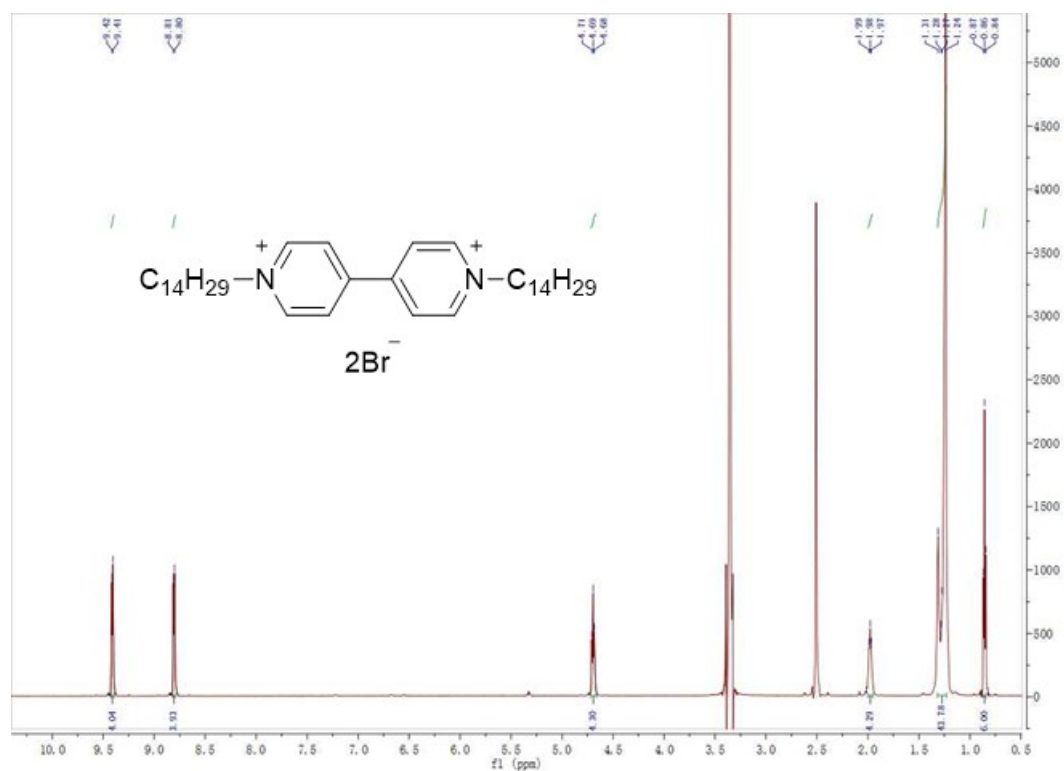


Figure S6. NMR and MS spectra of **6**: (a) ^1H NMR spectrum of **6** in CD_3OD ; (b) ^{13}C NMR spectrum of **6** in CD_3OD ; (c) MS spectra of **6**.

(a)



(b)

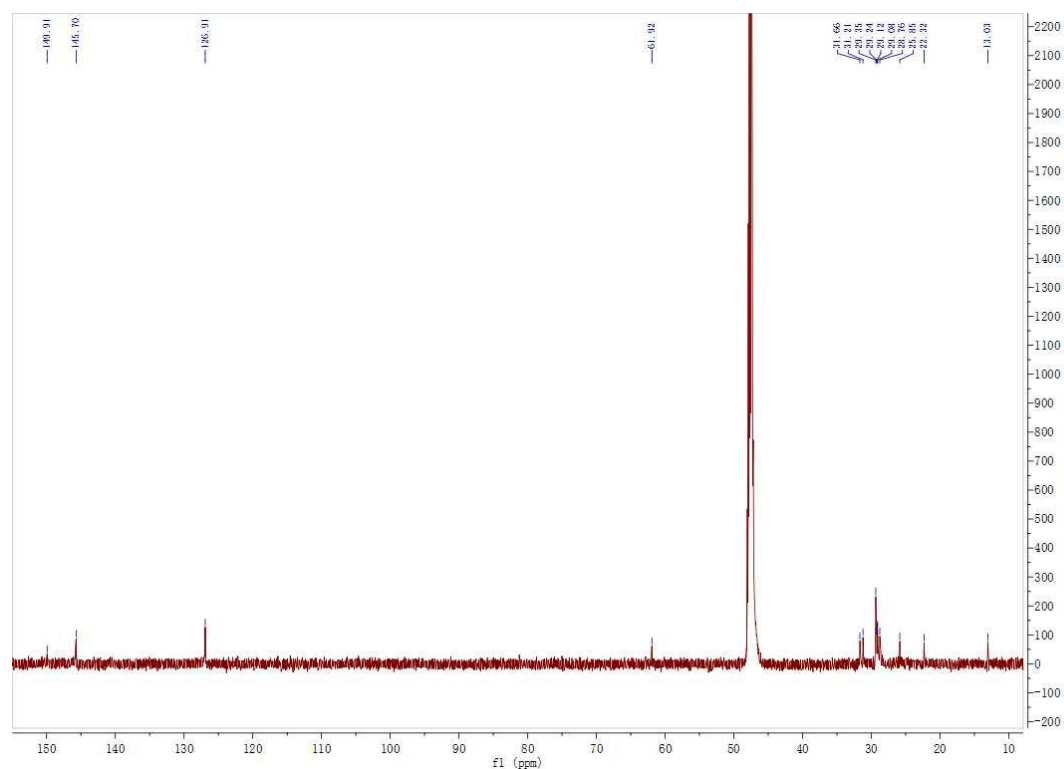
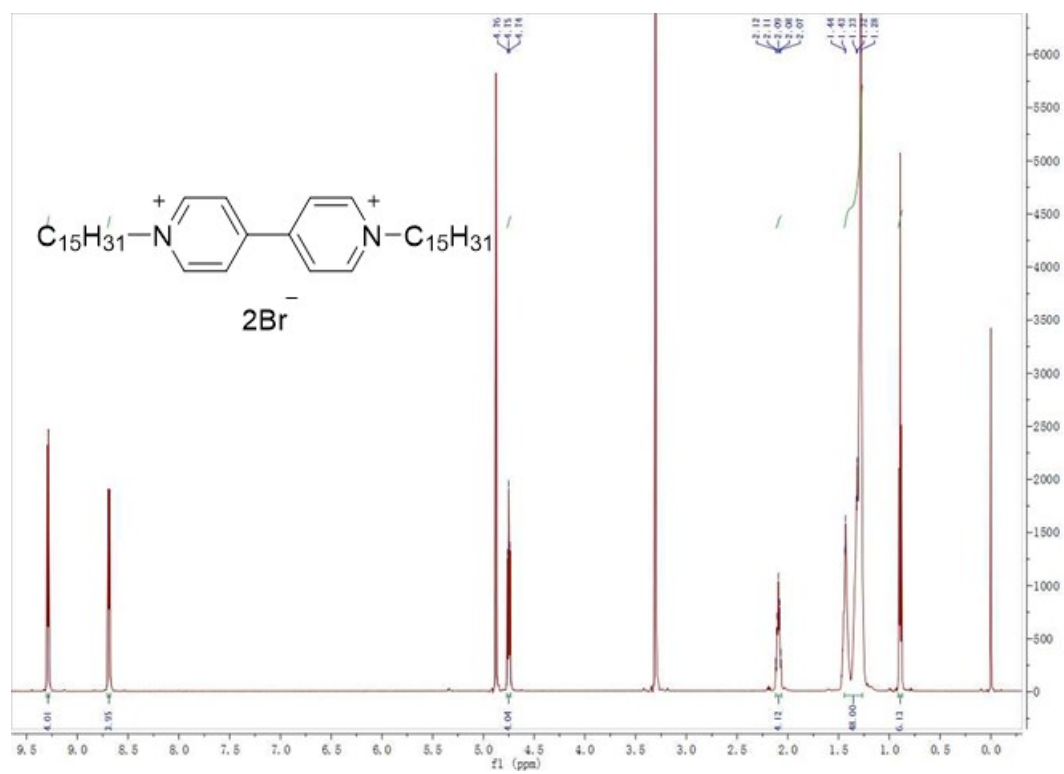


Figure S7. (a) ^1H NMR spectrum of **7** in $\text{DMSO}-d_6$; (b) ^{13}C NMR spectrum of **7** in CD_3OD .

(a)



(b)

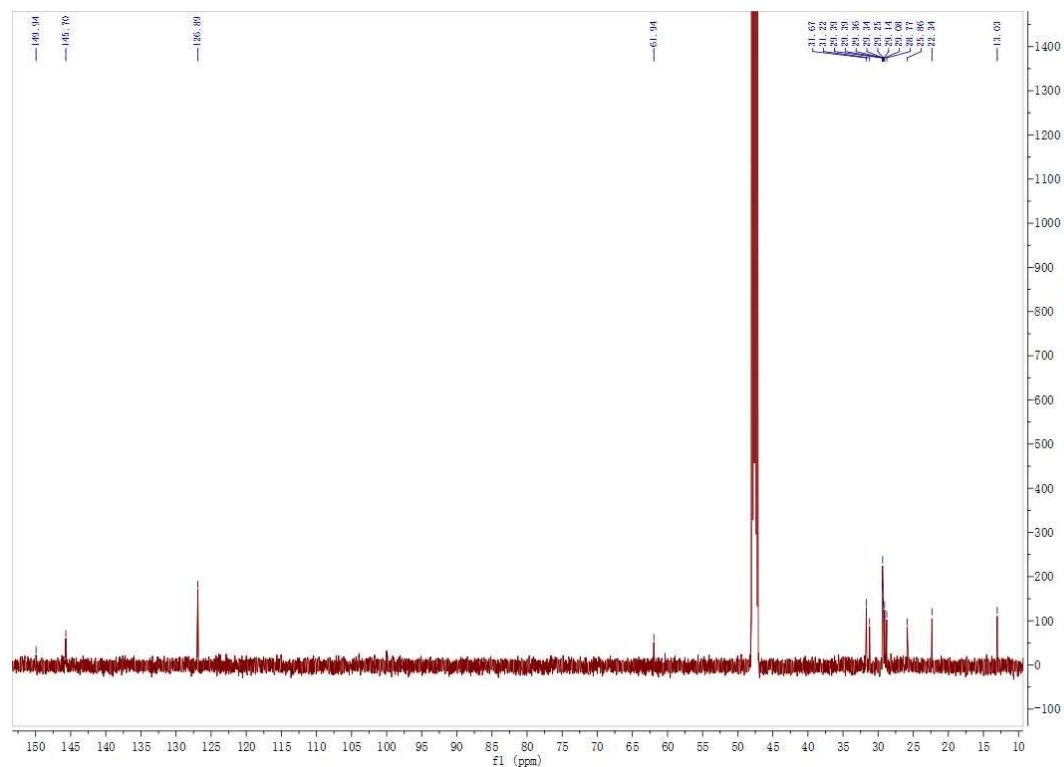


Figure S8. (a) ^1H NMR spectrum of **8** in CD_3OD ; (b) ^{13}C NMR spectrum of **8** in CD_3OD .

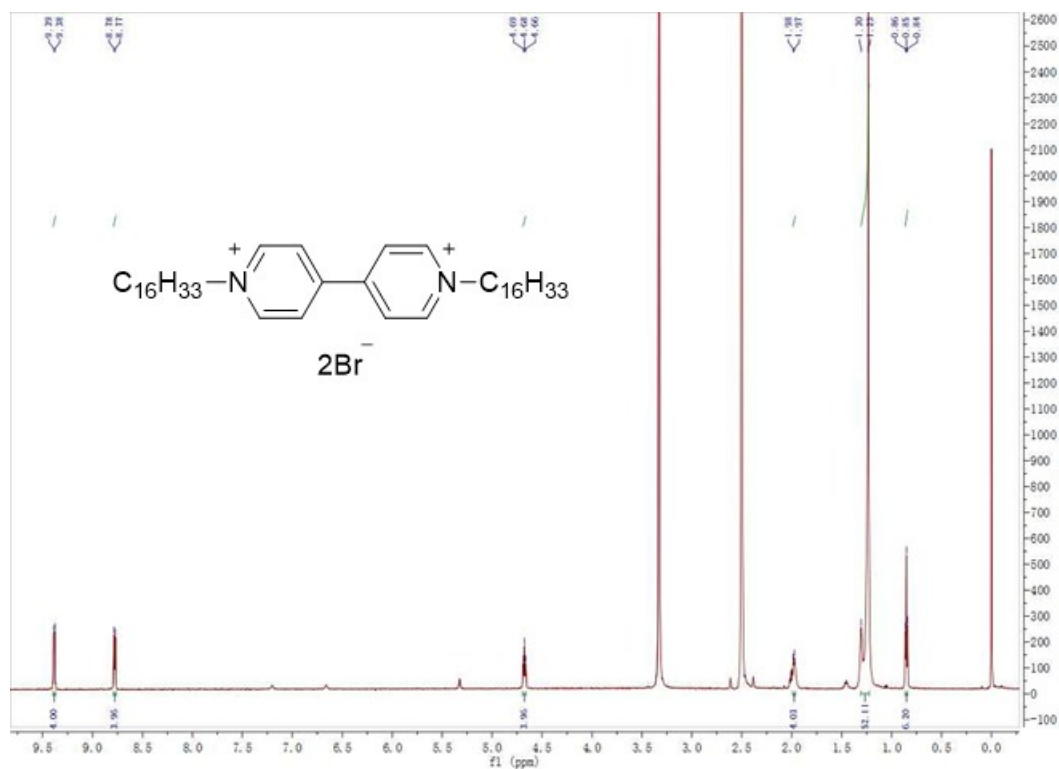


Figure S9. ^1H NMR spectrum of 9 in $\text{DMSO-}d_6$.

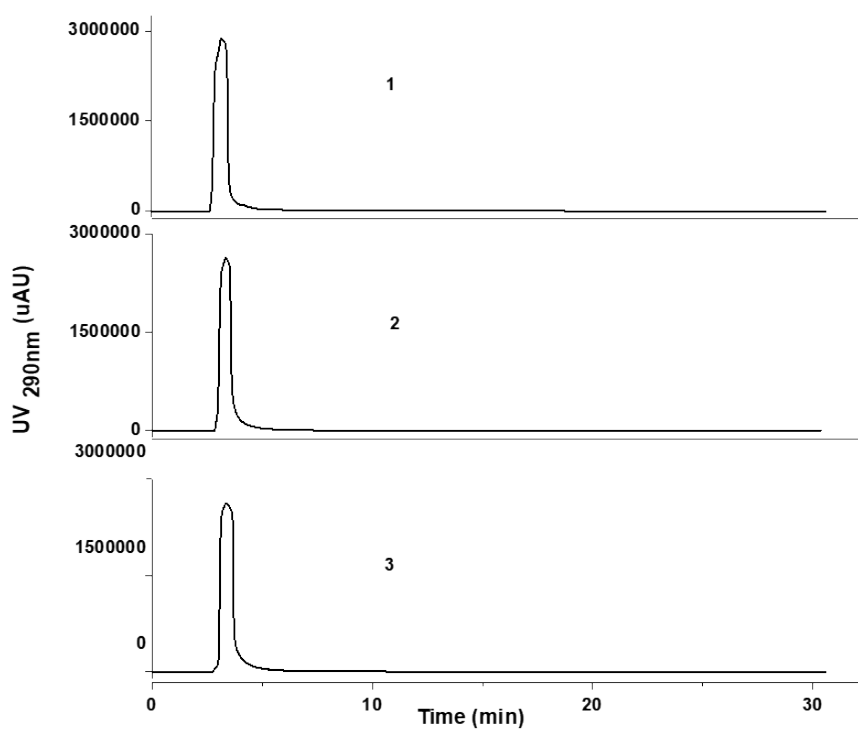


Figure S10. HPLC traces of 1-3.

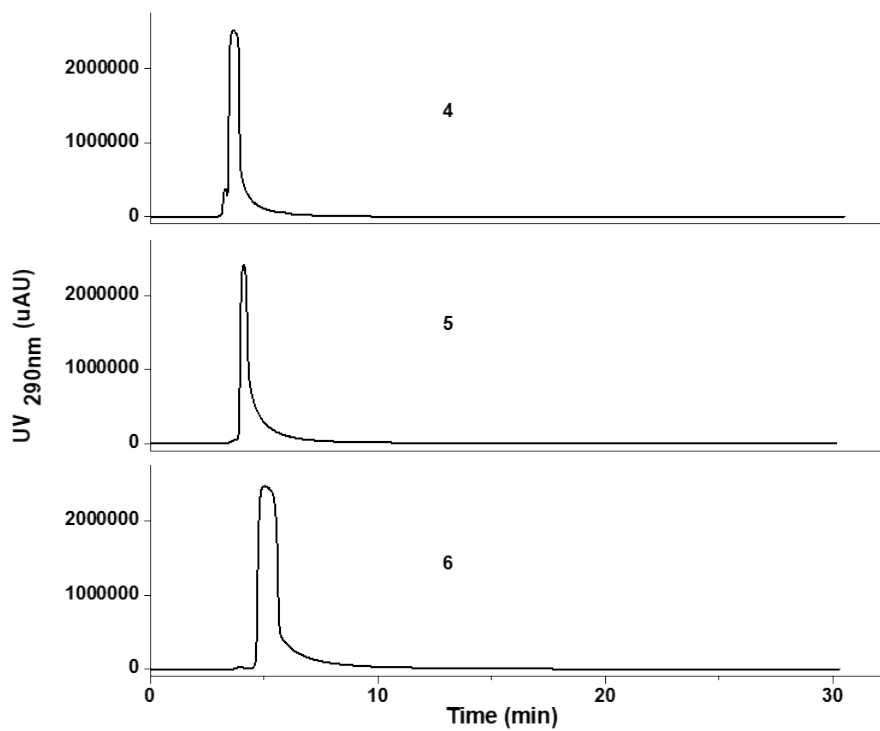


Figure S11. HPLC traces of 4-6.

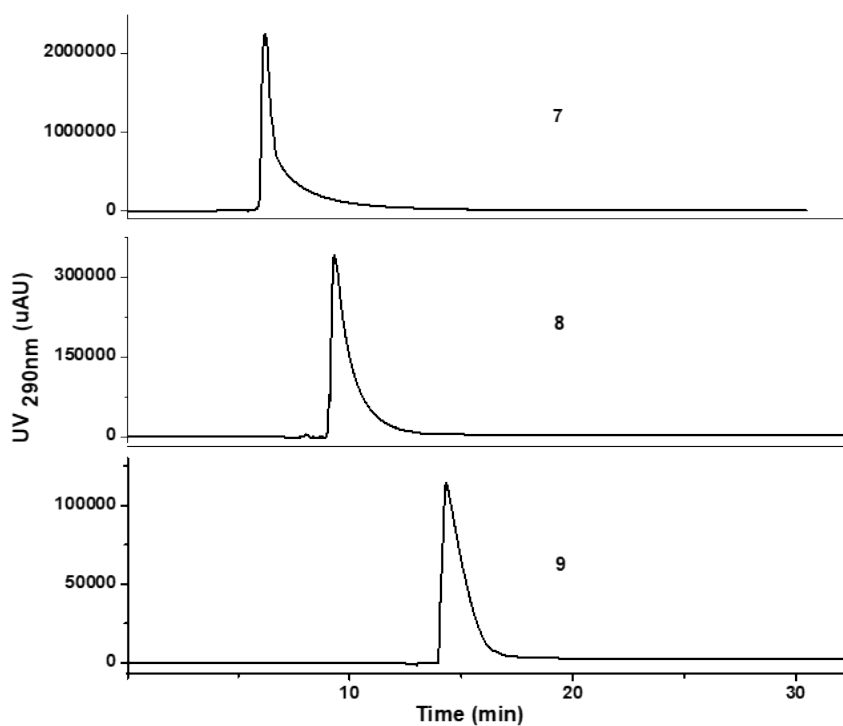


Figure S12. HPLC traces of 7-9.

Table S1. Calculated CLog P of the Compounds **1-9** using the program ChemDraw 14.0.

Compound	1	2	3	4	5	6	7	8	9
CLog P	-1.25	-0.19	0.87	1.93	2.99	4.04	5.10	6.16	7.22