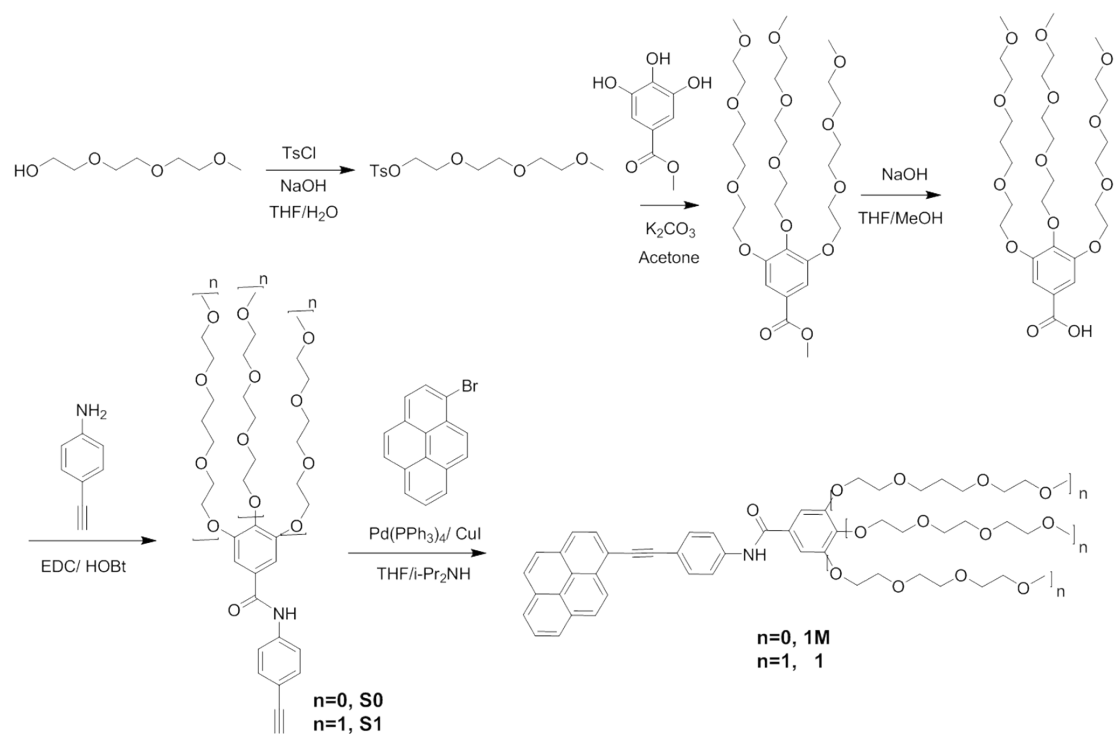


Supporting Information

Aggregation-induced photodimerization of an alkynylpyrene derivative as a photoresponsive fluorescent ink

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Scheme S1. Synthesis route of compound **1**.

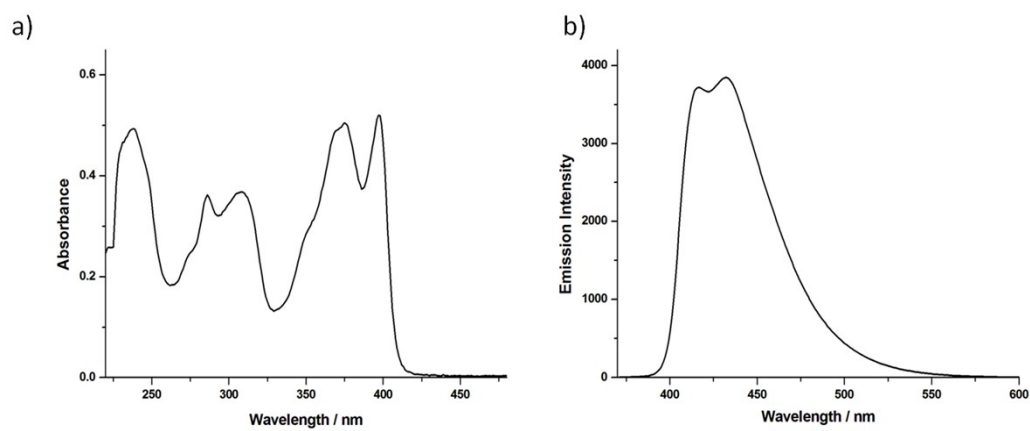


Fig. S1 a) UV/Vis spectra and b) emission spectra of compound **1** in dilute dichloromethane solution (1.0×10^{-5} M).

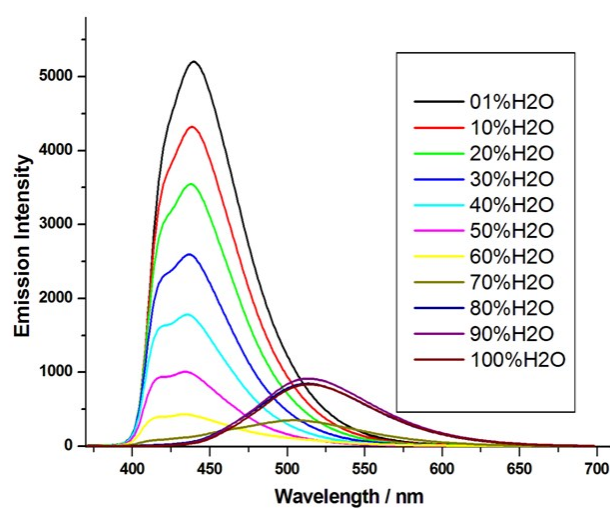


Fig. S2 Fluorescence emission spectra of **1** in DMSO/H₂O mixtures with different DMSO fractions at a fixed concentration (1.0×10^{-5} M, $\lambda_{\text{ex}}=340$ nm)

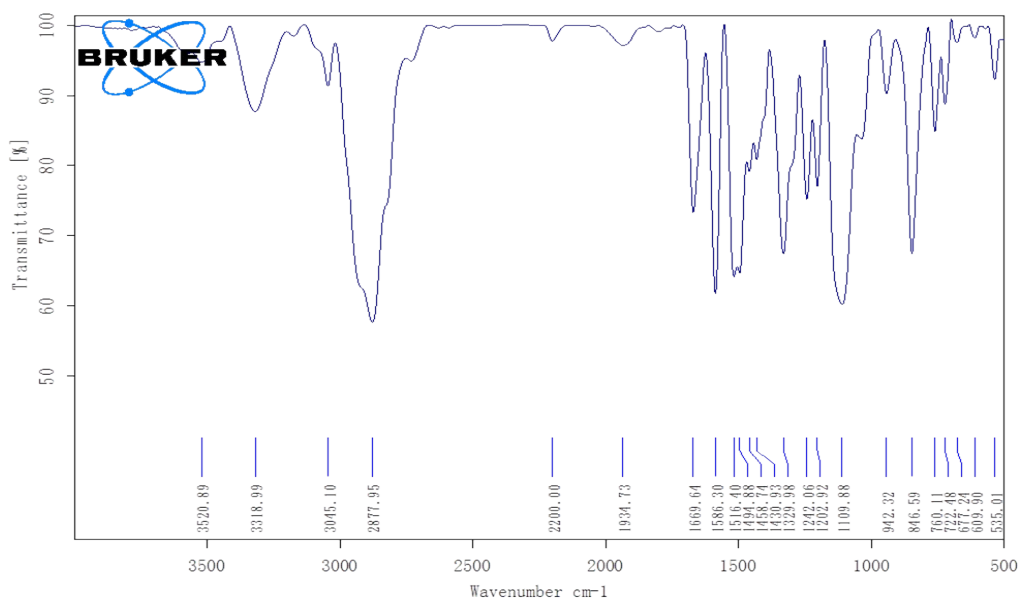


Fig. S3 FT-IR spectra of compound **1**.

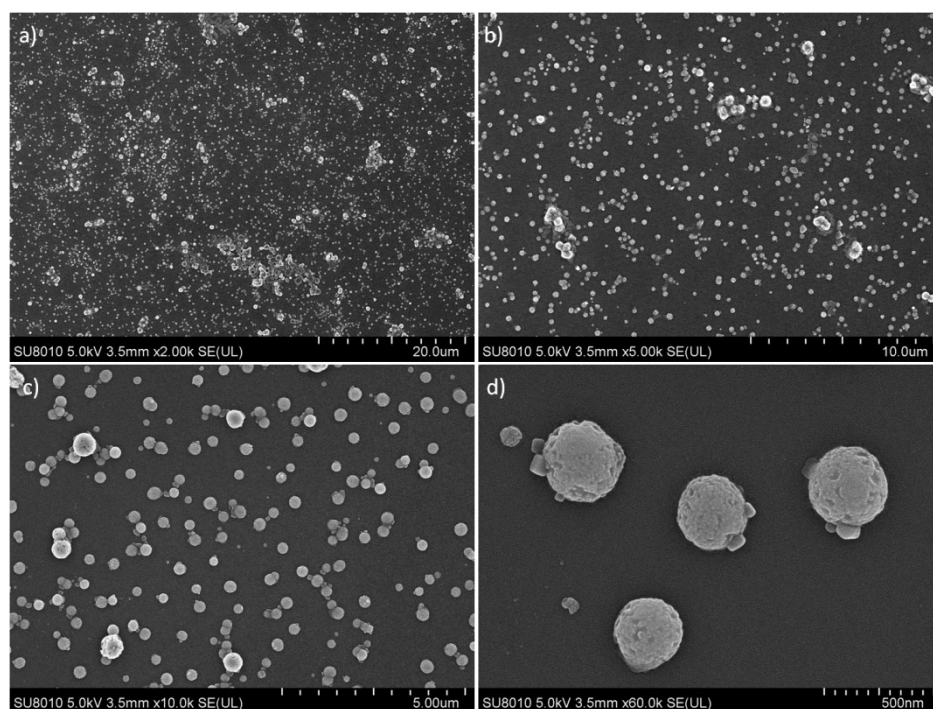


Fig. S4 Selected SEM image of **1** prepared in DMSO/H₂O mixture (v:v 1:99).

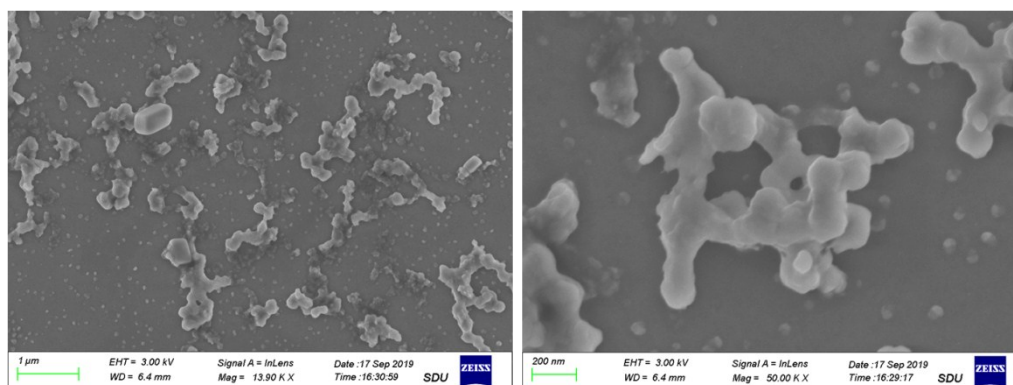


Fig. S5 SEM images of **1** after 400 nm LED irradiation for 30 min.

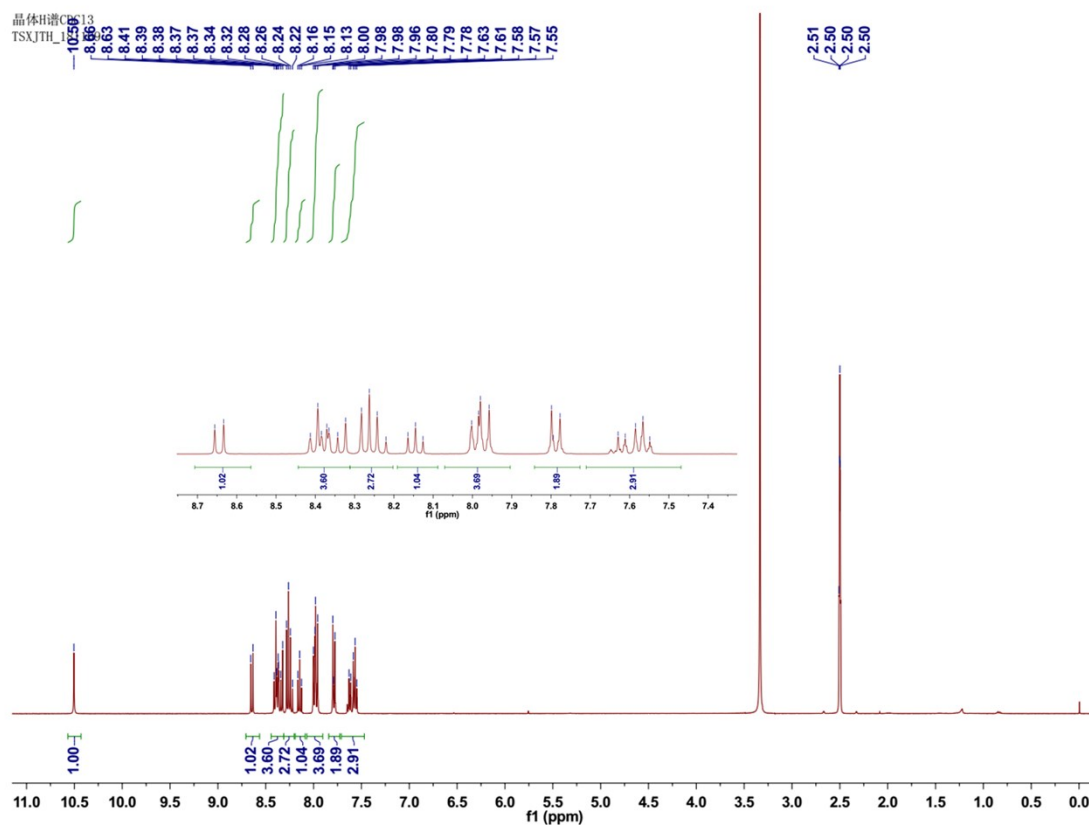


Fig. S6 ^1H NMR spectrum of compound **1M** in DMSO- d_6 (400 MHz) at 298 K.

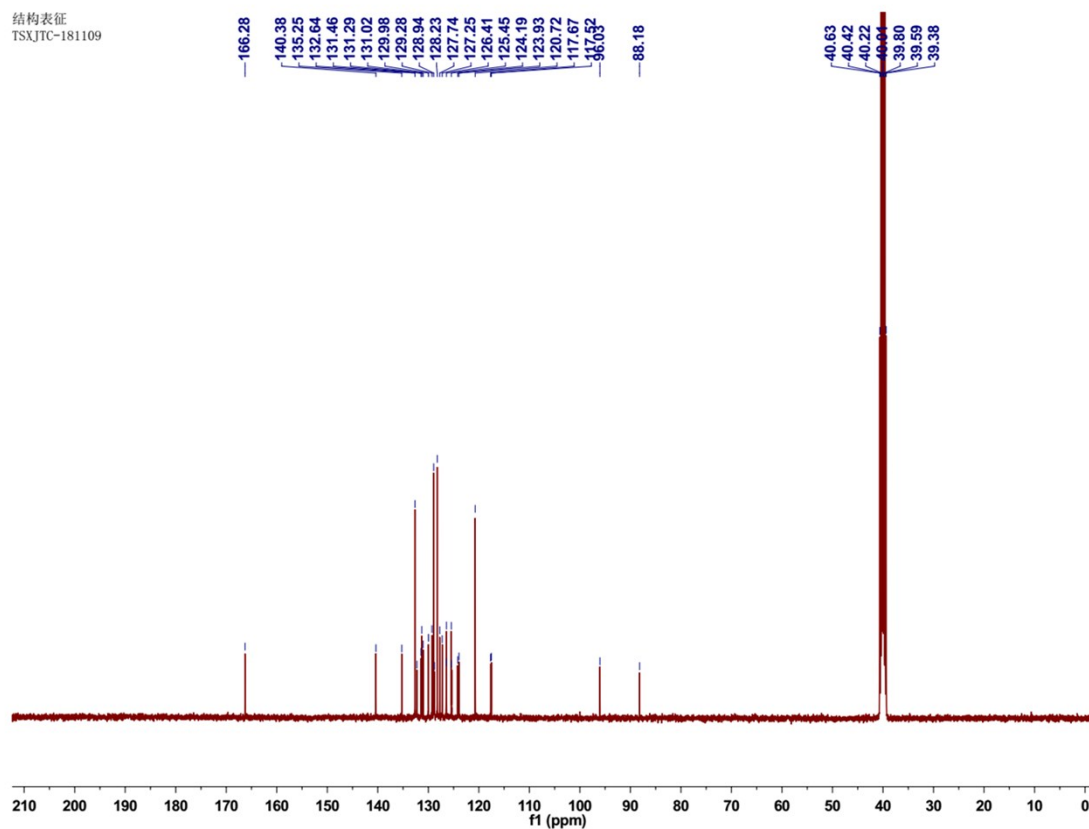


Fig. S7 ^{13}C NMR spectrum of compound **1M** in DMSO- d_6 (100 MHz) at 298 K.

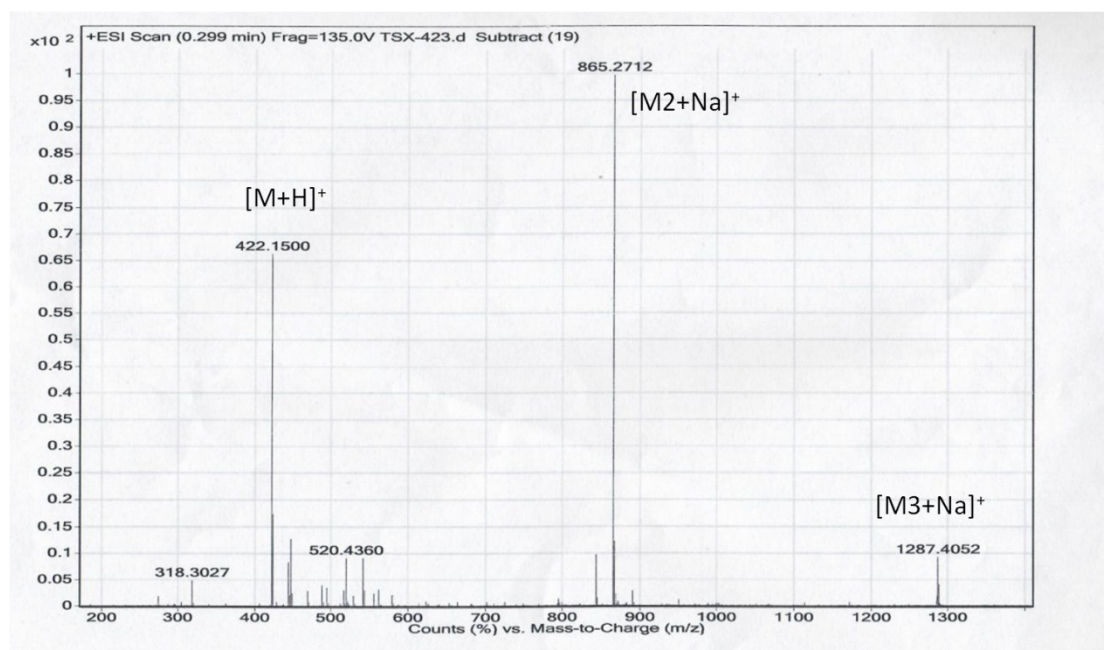


Fig. S8 HR-ESI-MS spectra of compound **1M**.

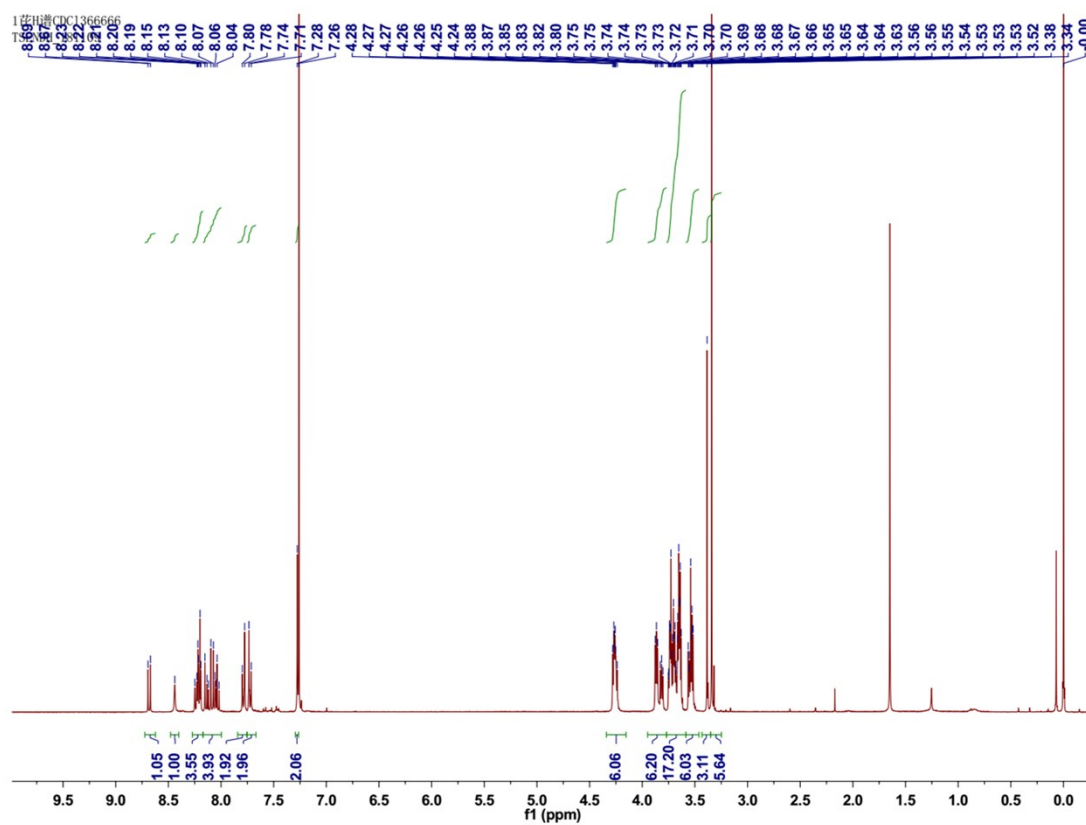


Fig. S9 ^1H NMR spectrum of compound **1** in CDCl_3 (400 MHz) at 298 K.

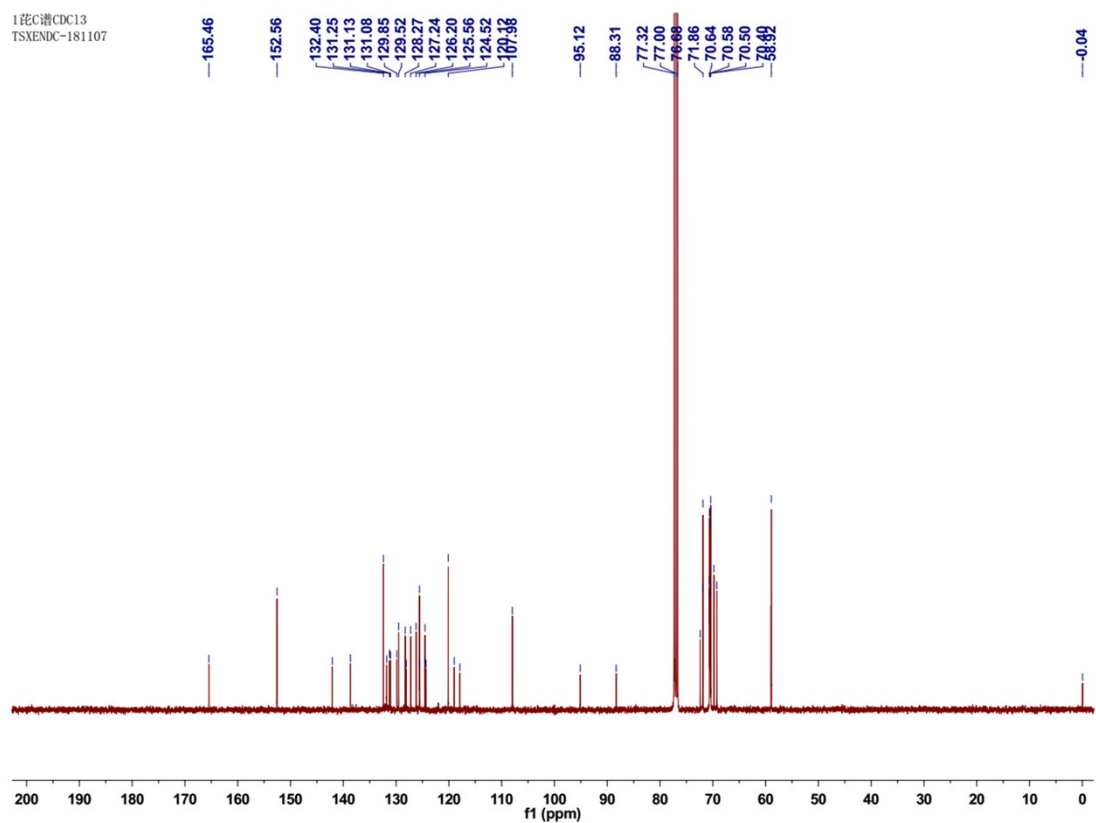


Fig. S10 ^{13}C NMR spectrum of compound **1** in CDCl_3 (100 MHz) at 298 K.

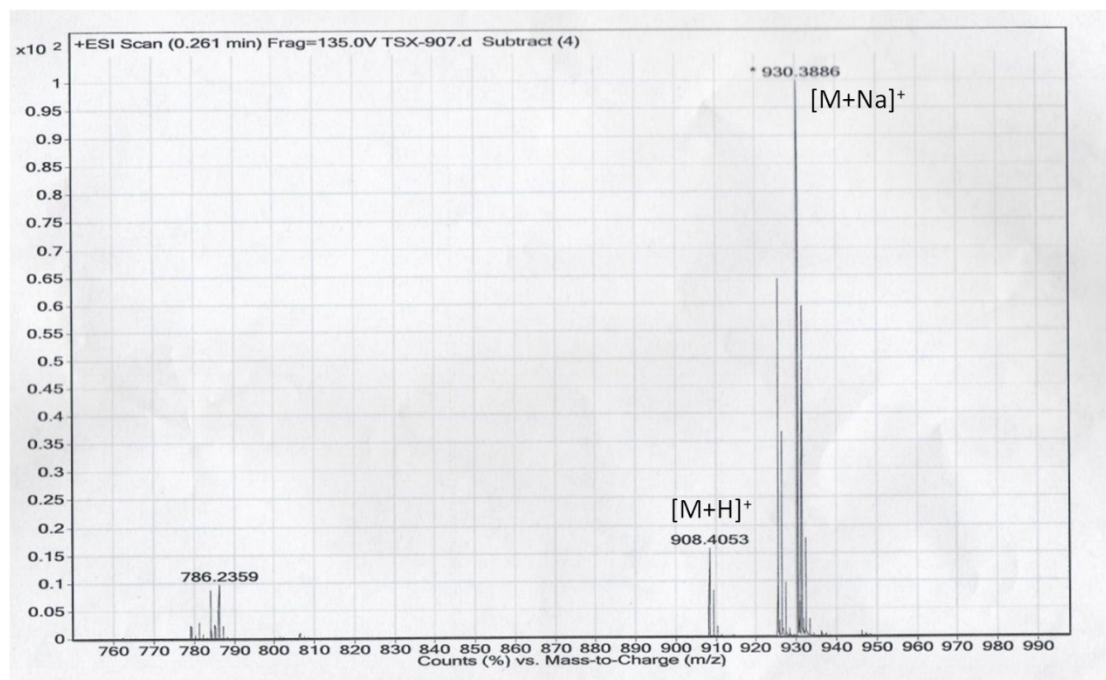


Fig. S11 MALDI-TOF-MS spectra of compound **1**.