

Supplementary Material

Design, synthesis and metal ion sensing of novel indole-fluorene Schiff bases

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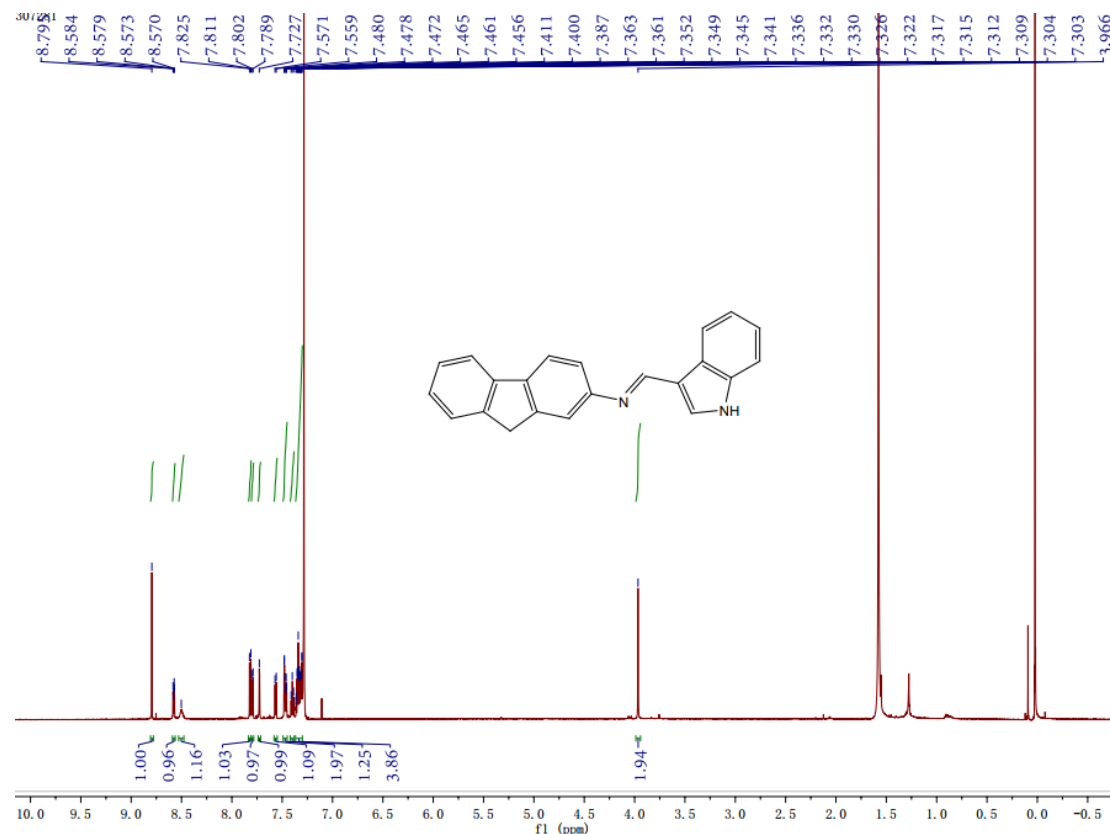
^b*School of Pharmacy, Jiangxi University of Chinese Medicine, Nanchang 330004, China*

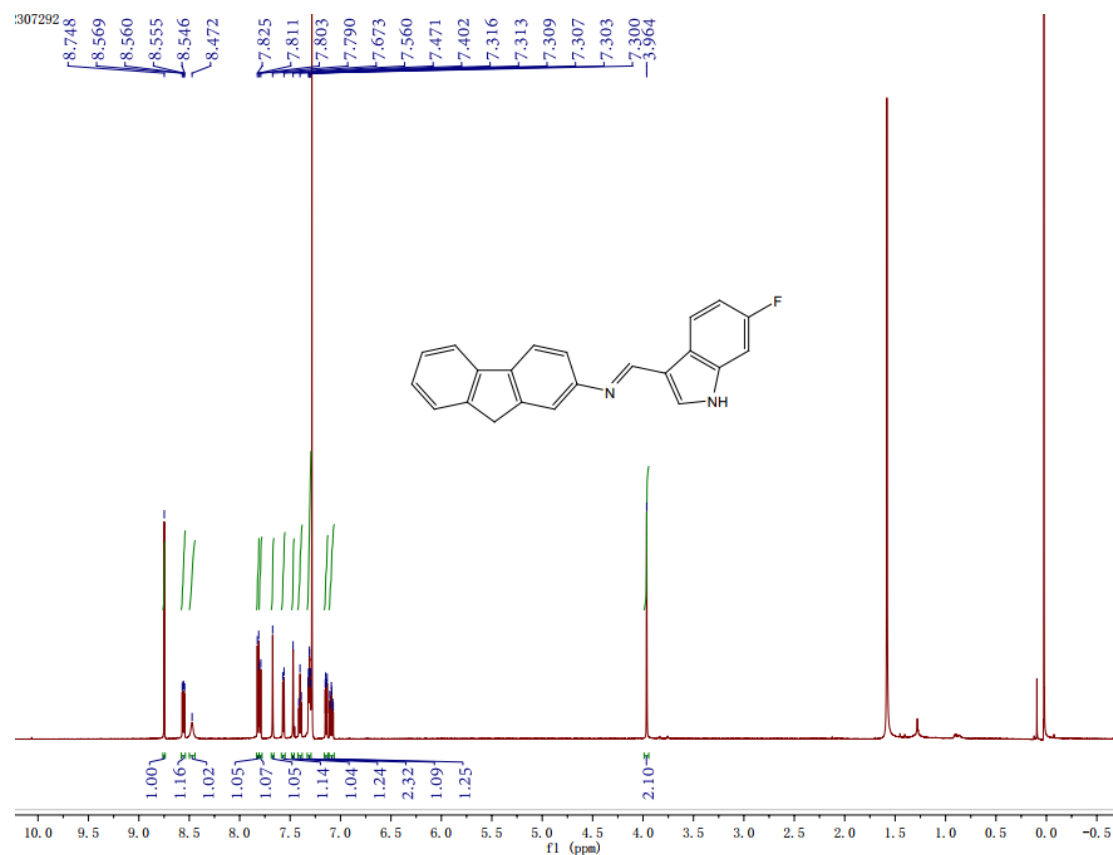
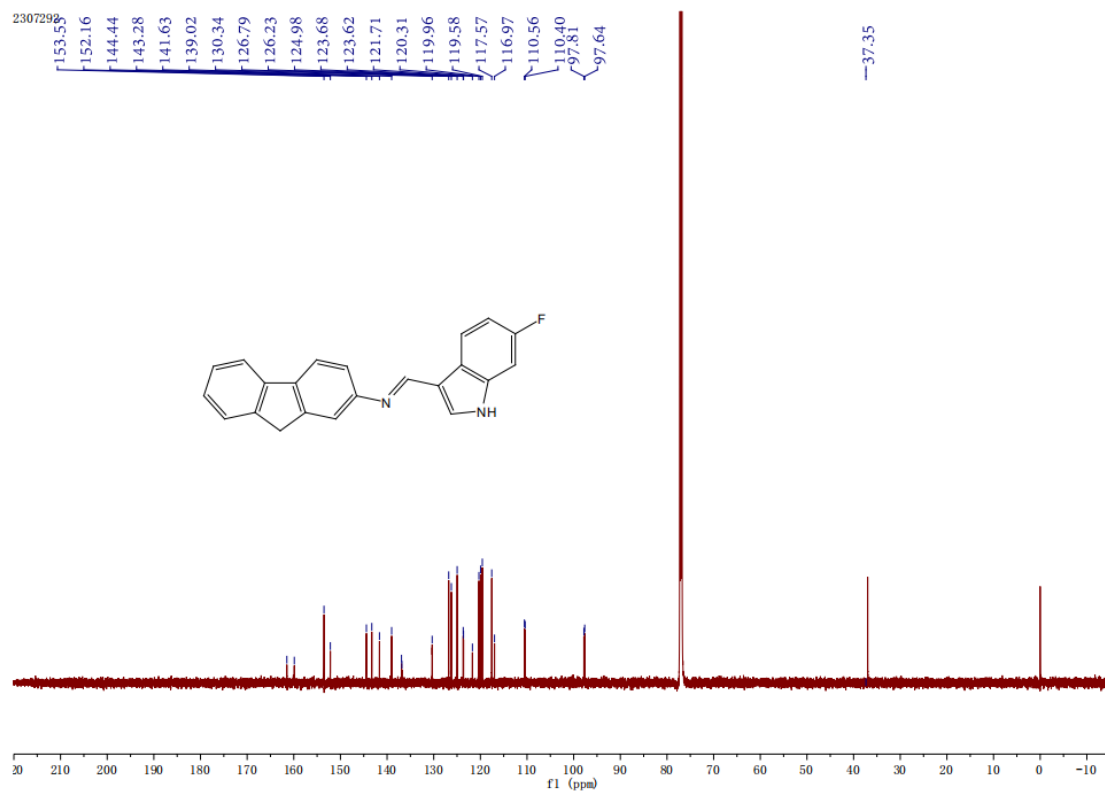
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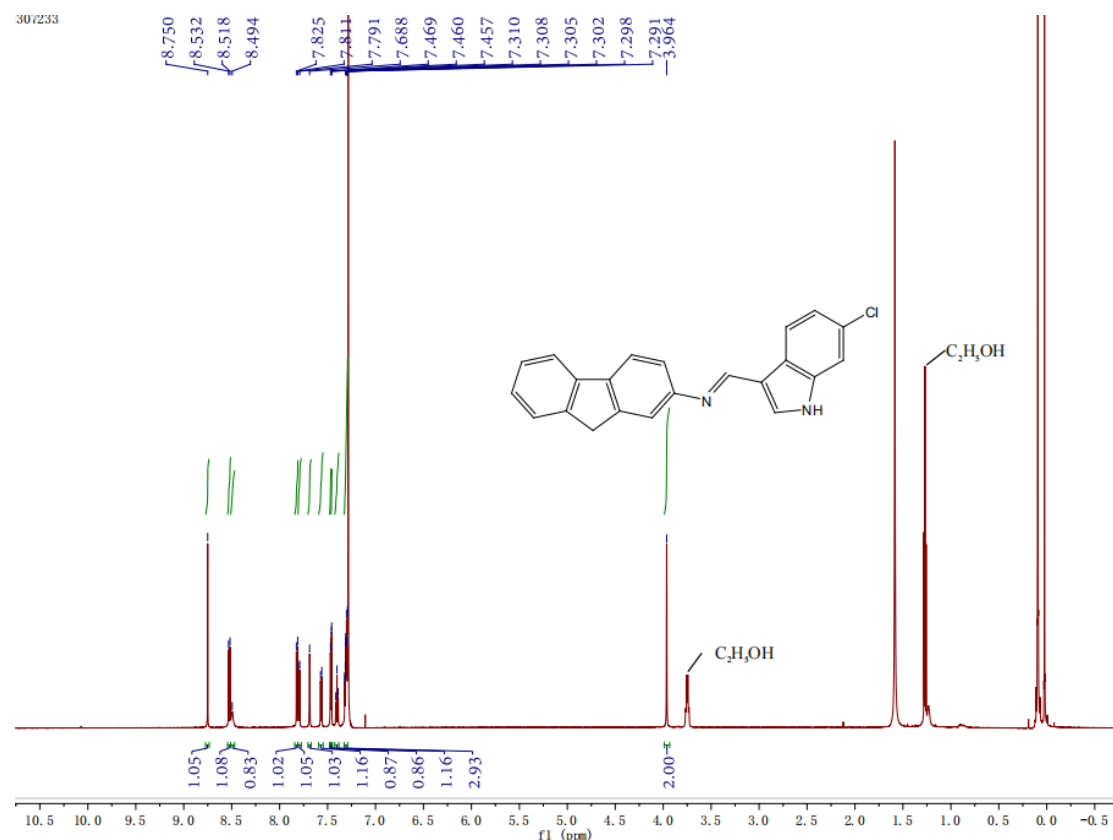
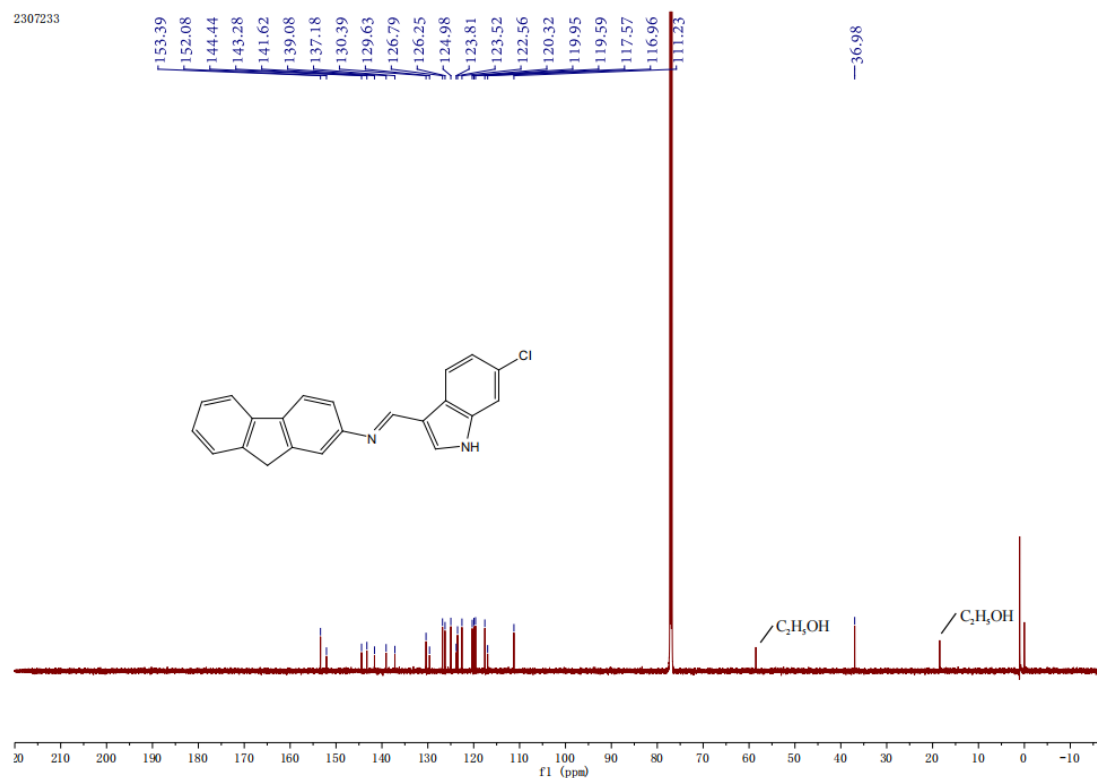
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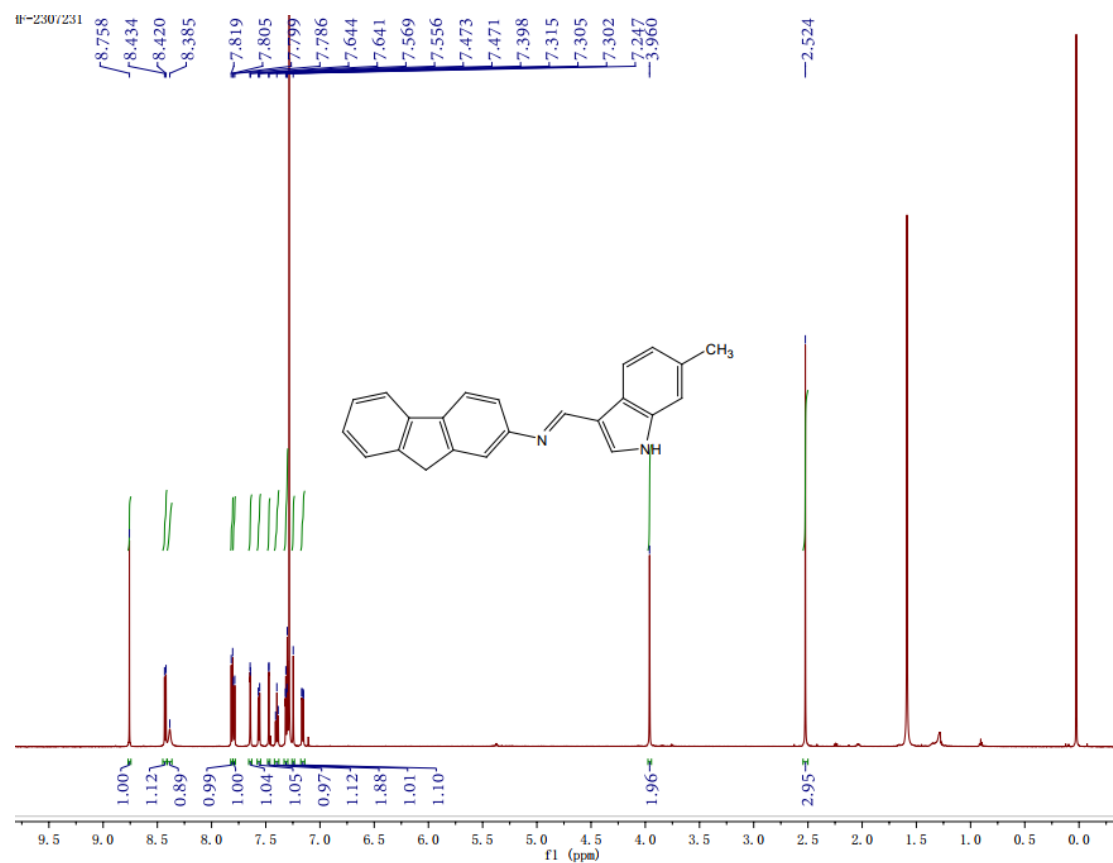
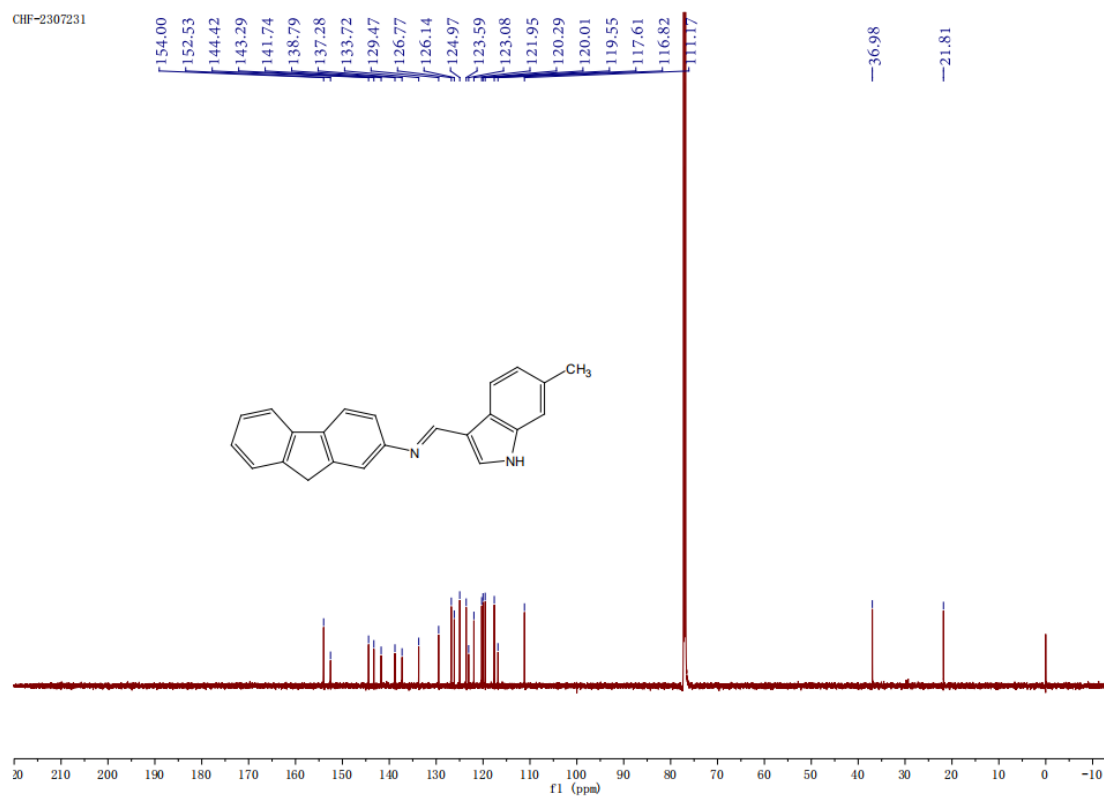
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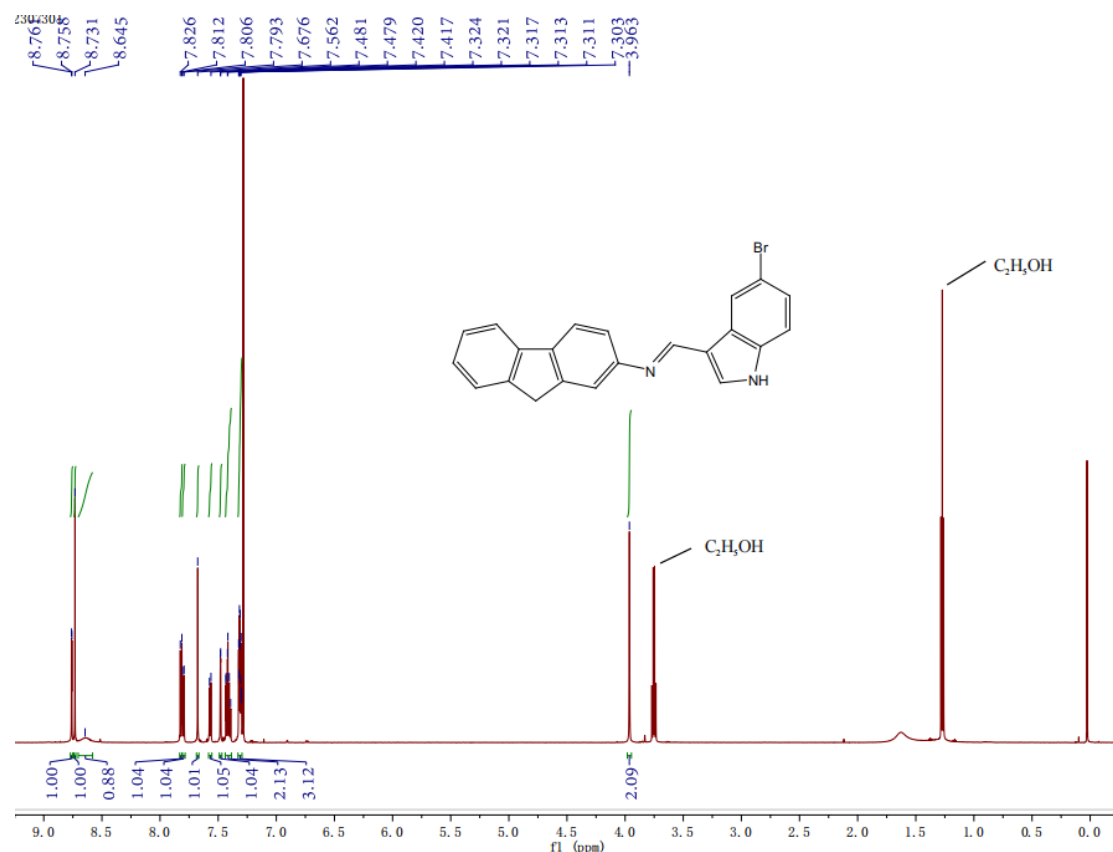
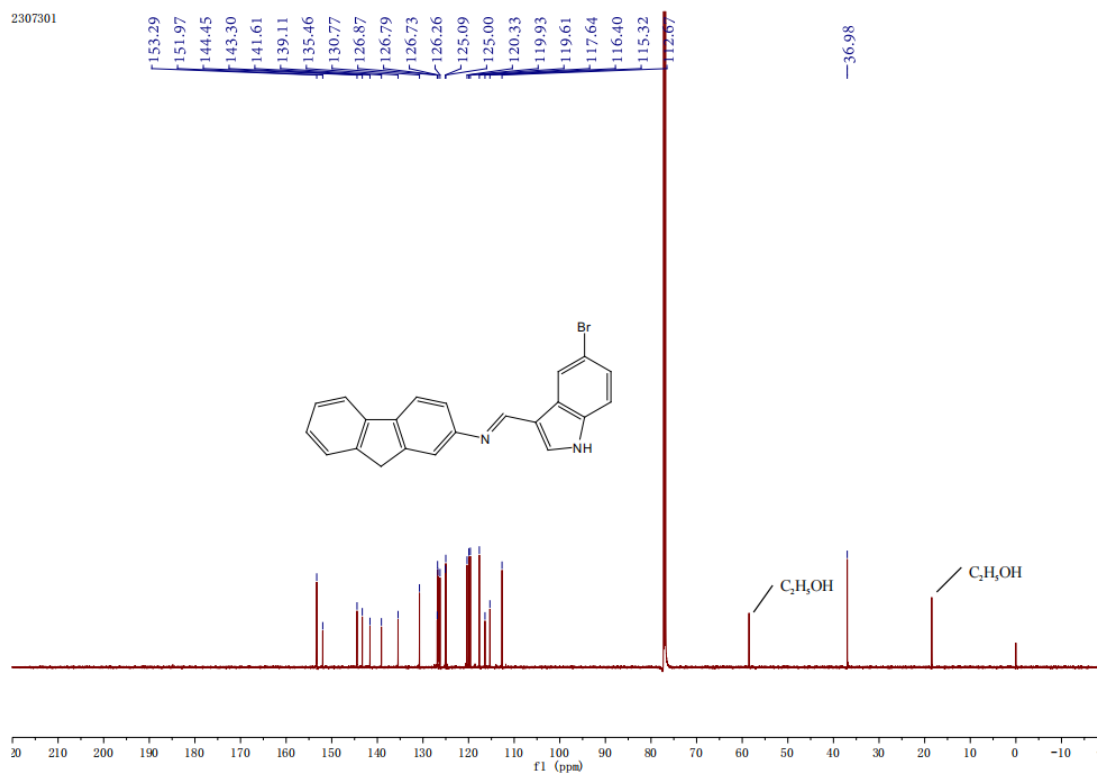
1. NMR spectra

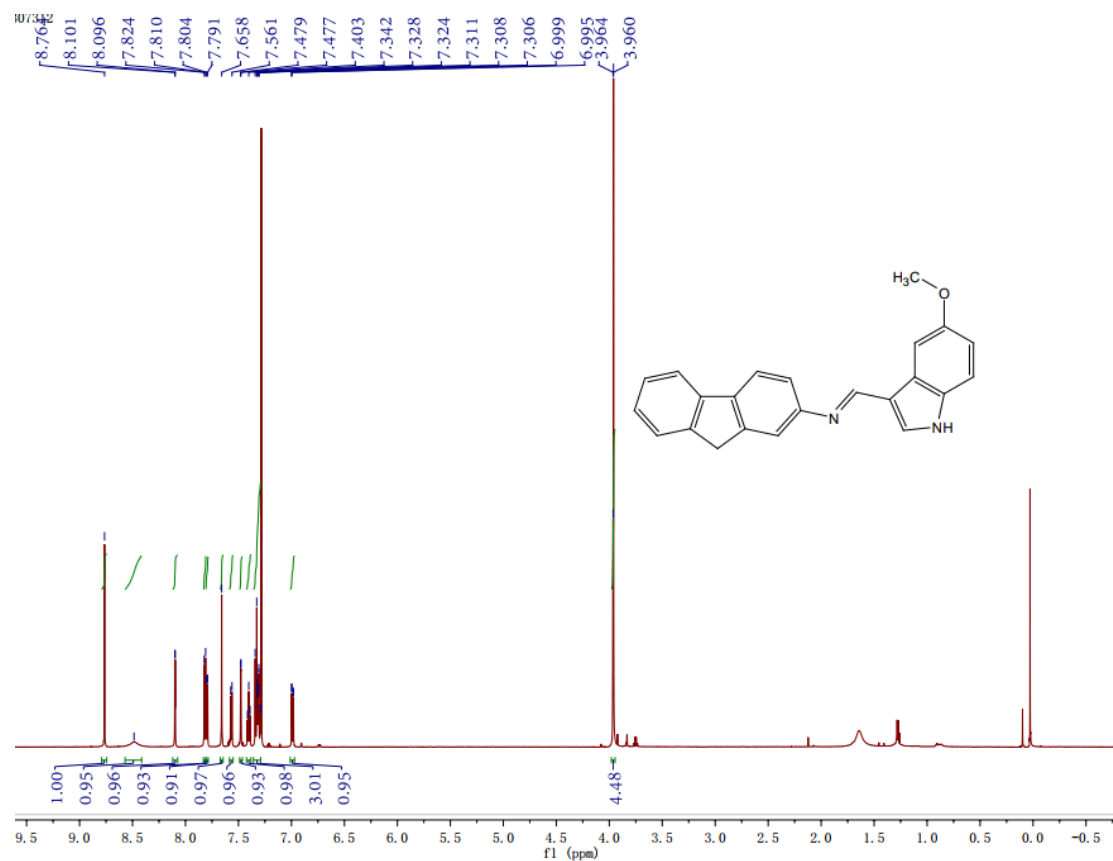
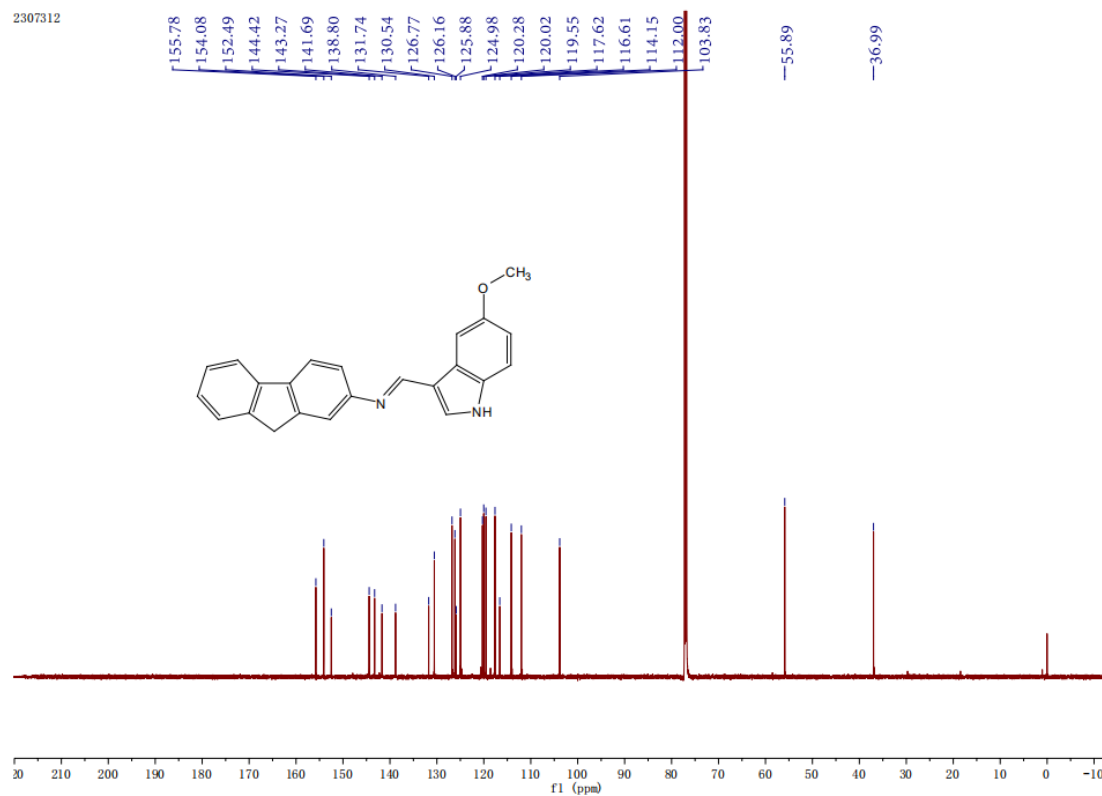


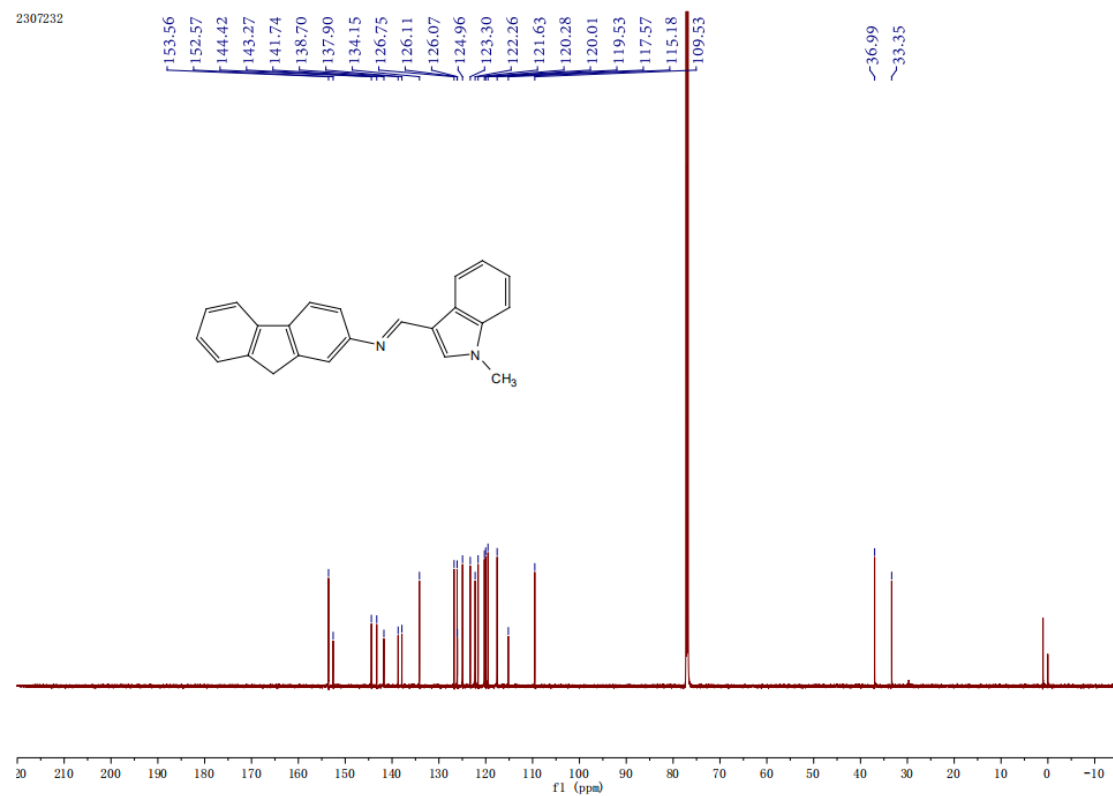
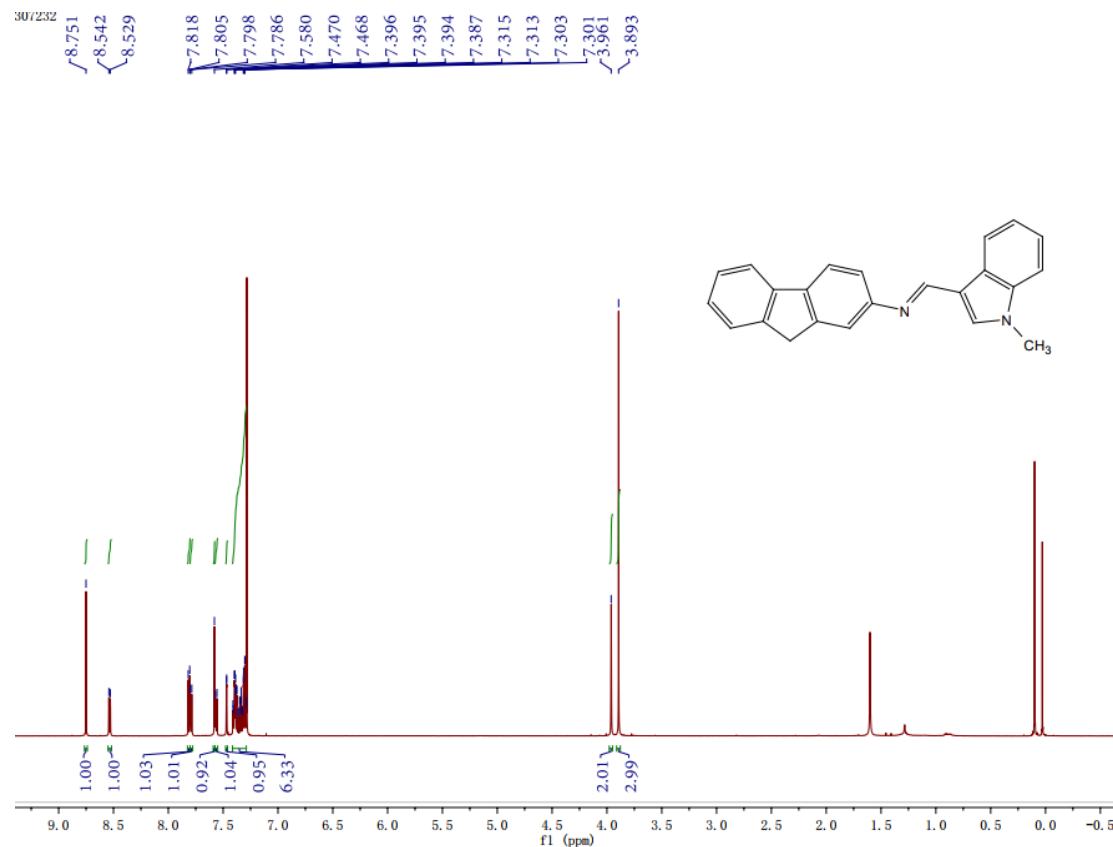
Figure S3 ¹H NMR (CDCl₃, 600 MHz) of **5b**Figure S4 ¹³C NMR (CDCl₃, 150 MHz) of **5b**

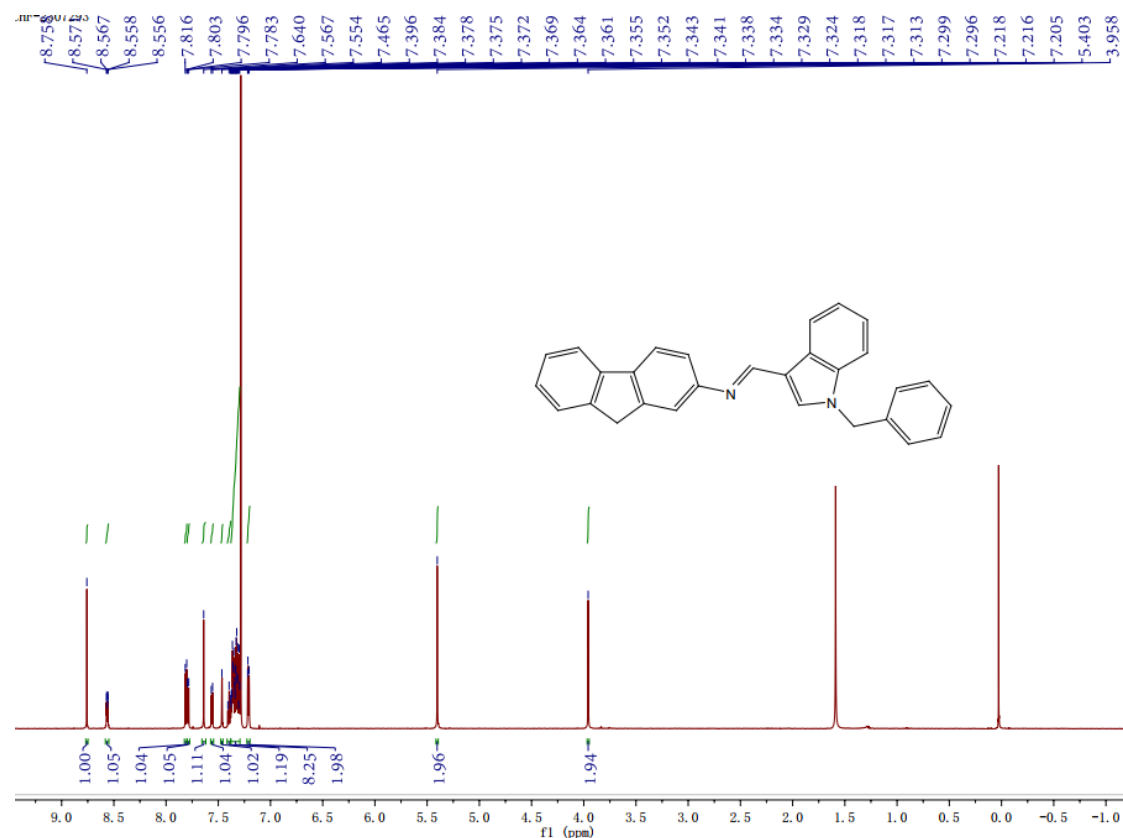
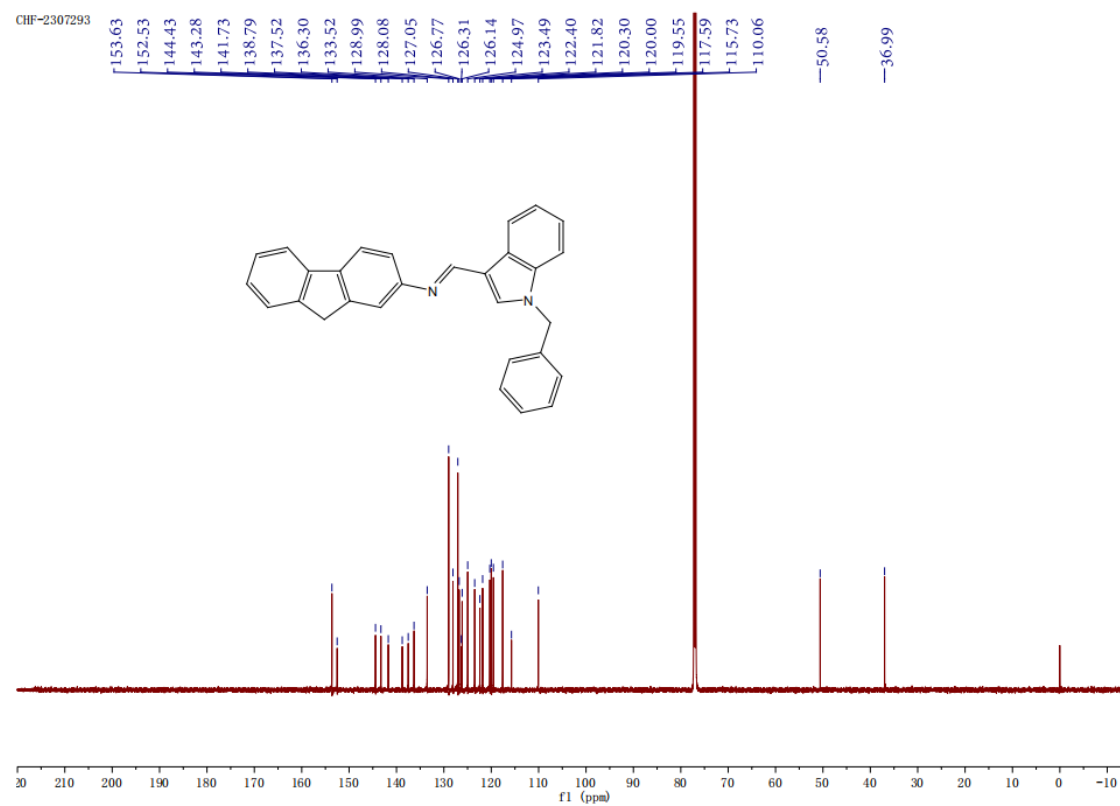
Figure S5 ¹H NMR (CDCl₃, 600 MHz) of **5c**Figure S6 ¹³C NMR (CDCl₃, 150 MHz) of **5c**

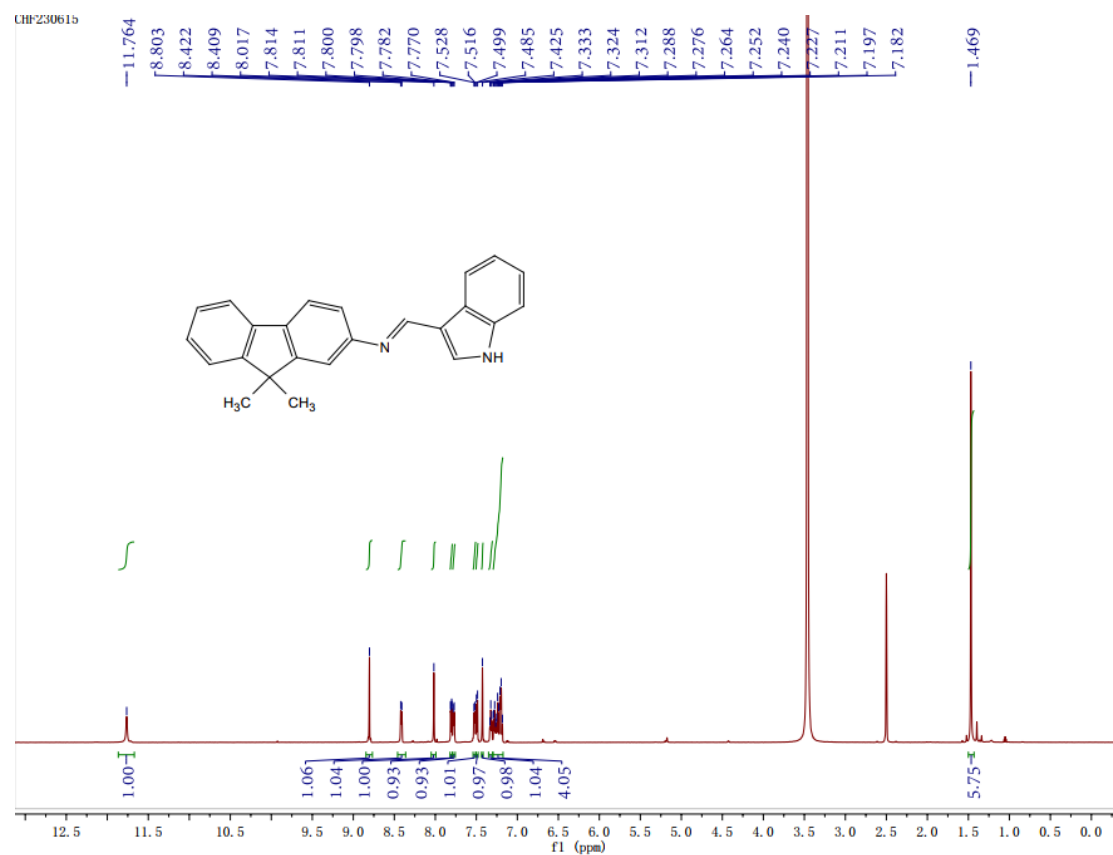
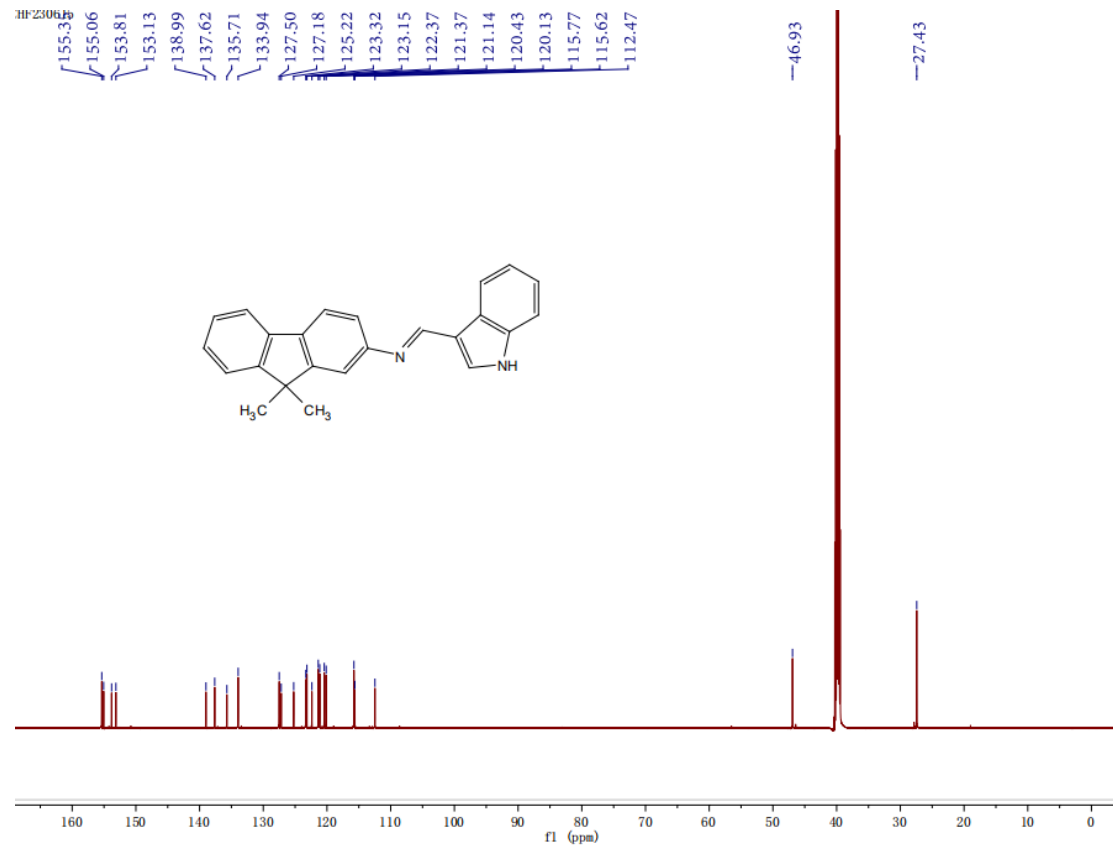
Figure S7 ¹H NMR (CDCl₃, 600 MHz) of **5d**Figure S8 ¹³C NMR (CDCl₃, 150 MHz) of **5d**

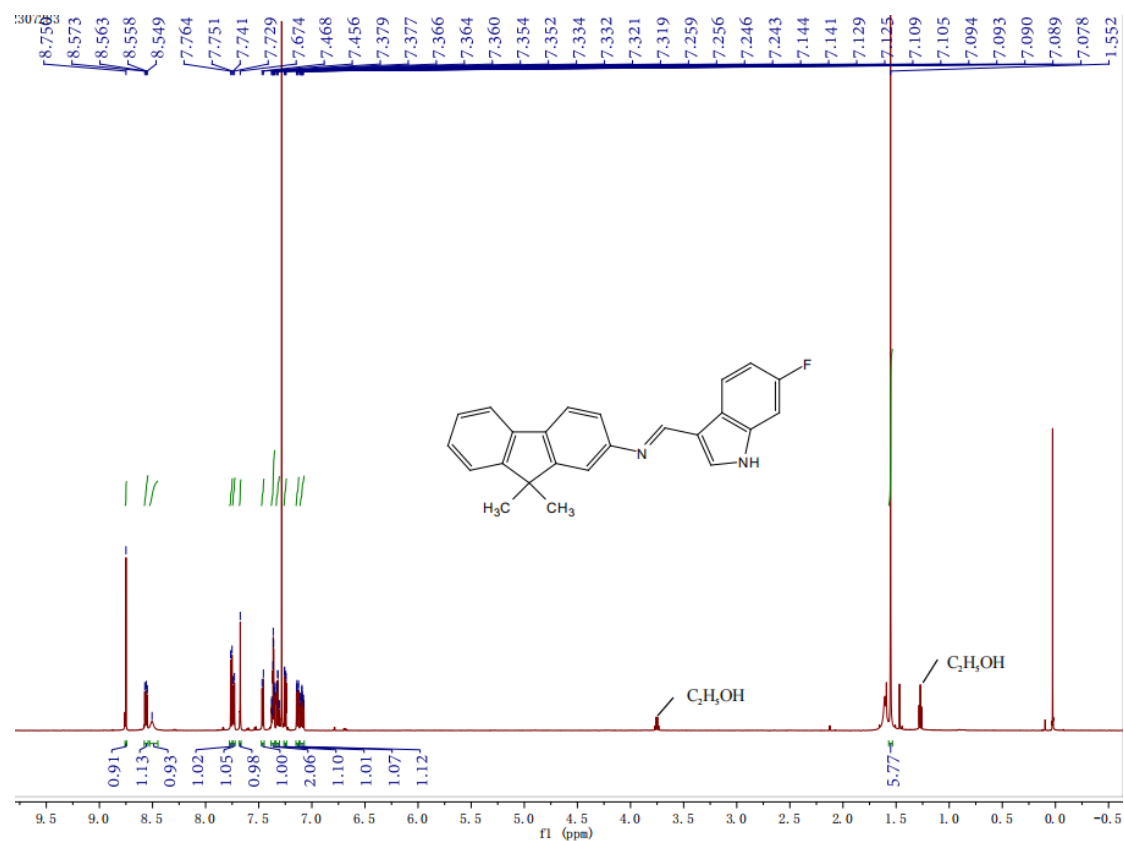
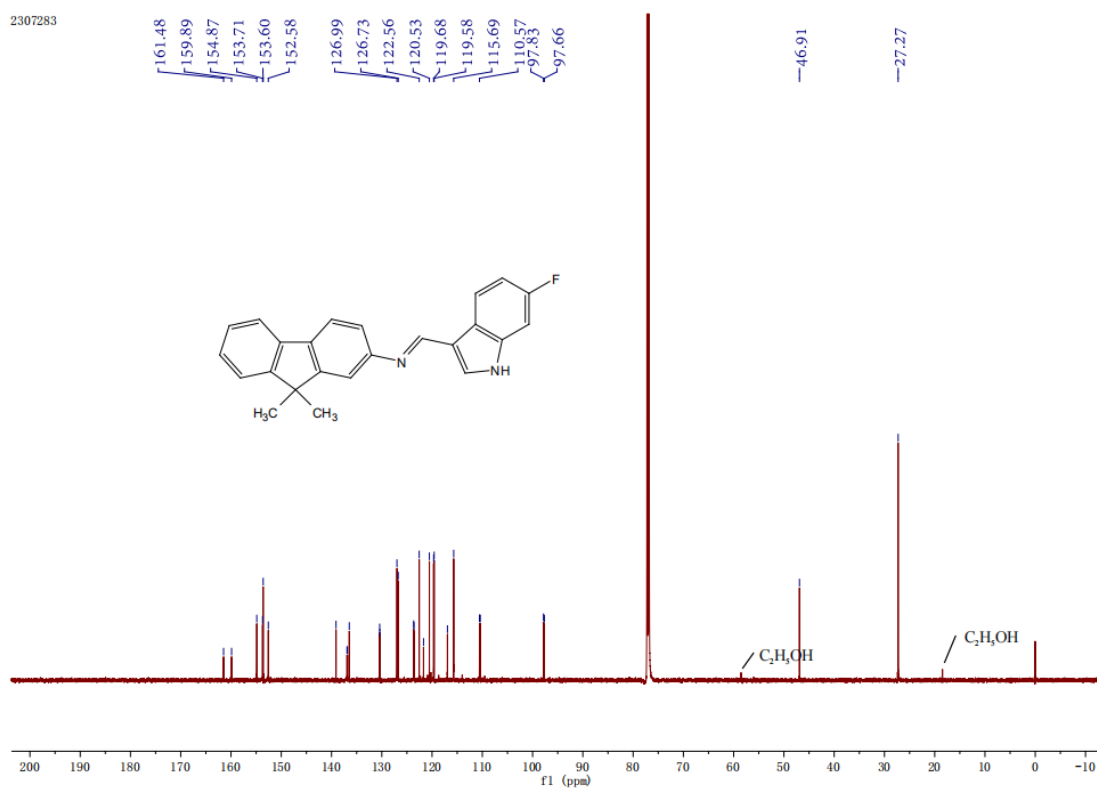
Figure S9 ¹H NMR (CDCl₃, 600 MHz) of **5e**Figure S10 ¹³C NMR (CDCl₃, 150 MHz) of **5e**

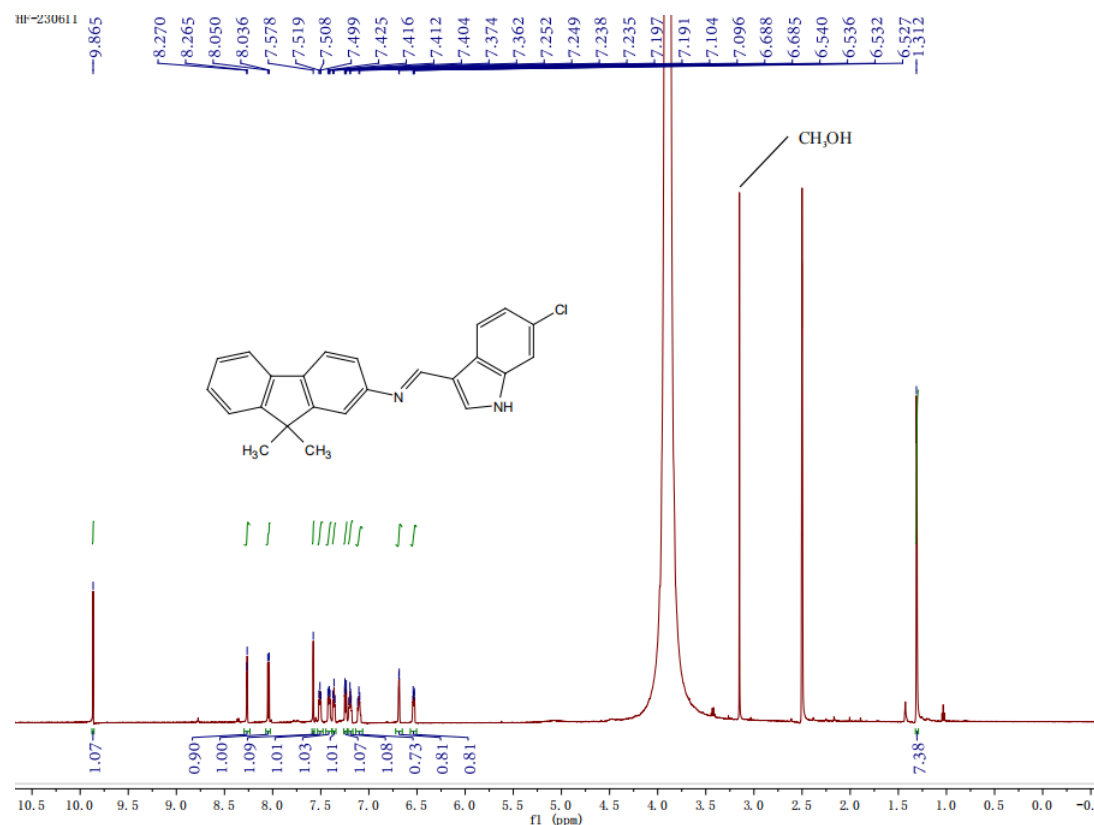
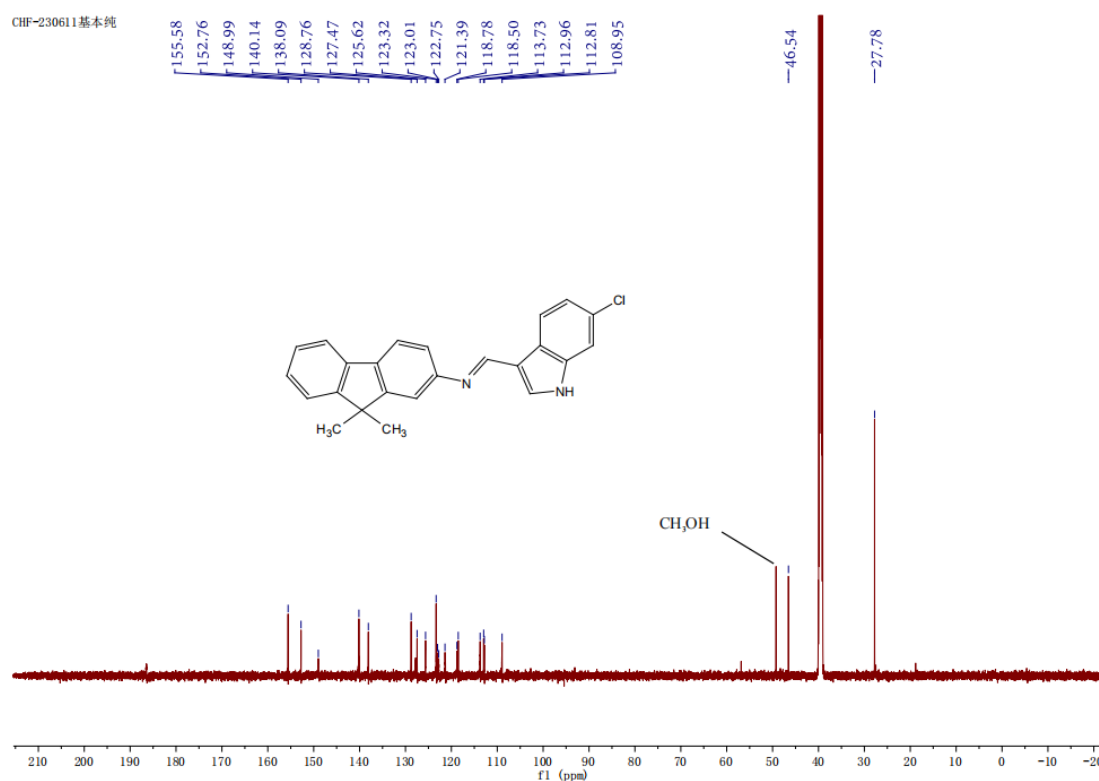
Figure S11 ¹H NMR (CDCl₃, 600 MHz) of **5f**Figure S12 ¹³C NMR (CDCl₃, 150 MHz) of **5f**



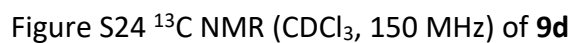
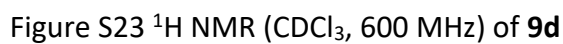
Figure S15 ¹H NMR (CDCl₃, 600 MHz) of **5h**Figure S16 ¹³C NMR (CDCl₃, 150 MHz) of **5h**

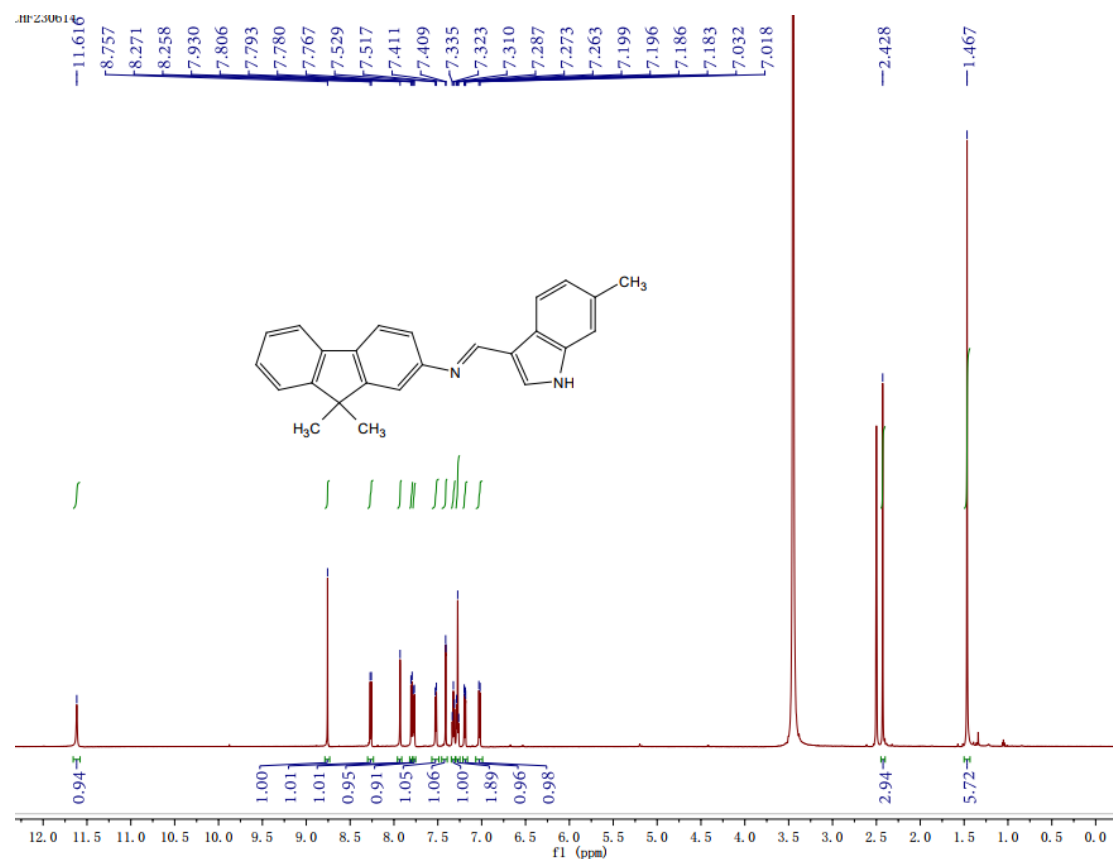
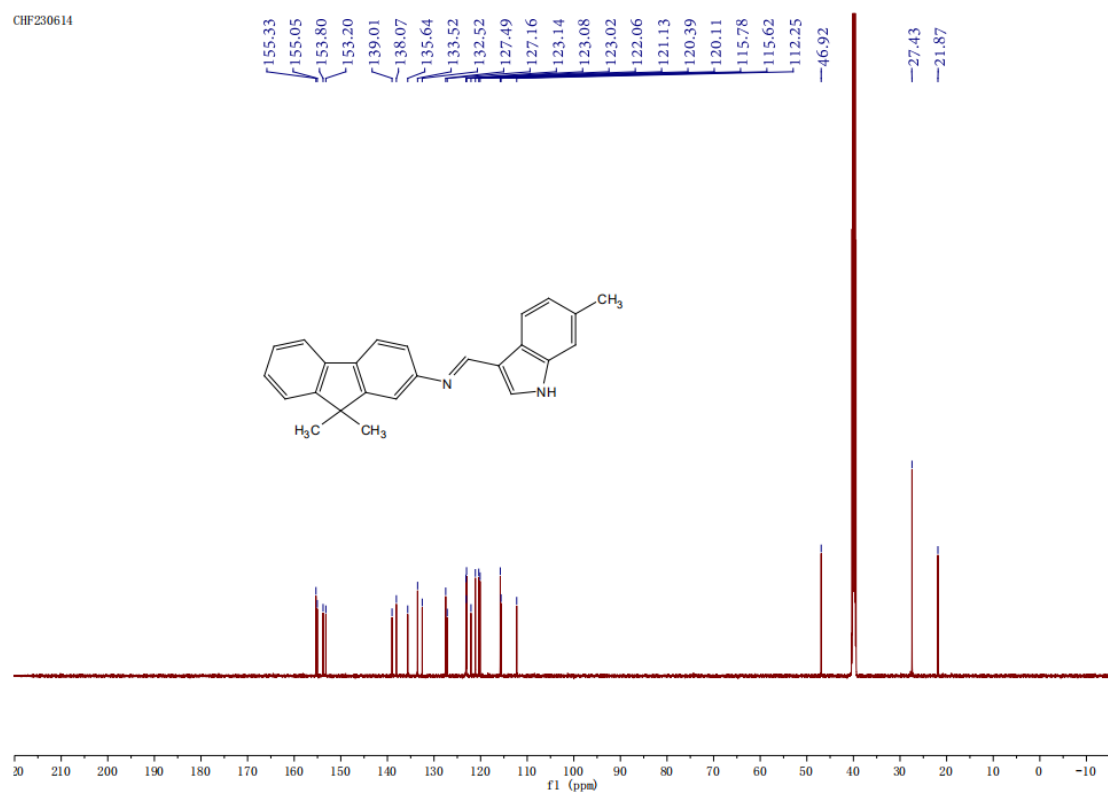
Figure S17 ^1H NMR (DMSO- d_6 , 600 MHz) of **9a**Figure S18 ^{13}C NMR (DMSO- d_6 , 150 MHz) of **9a**

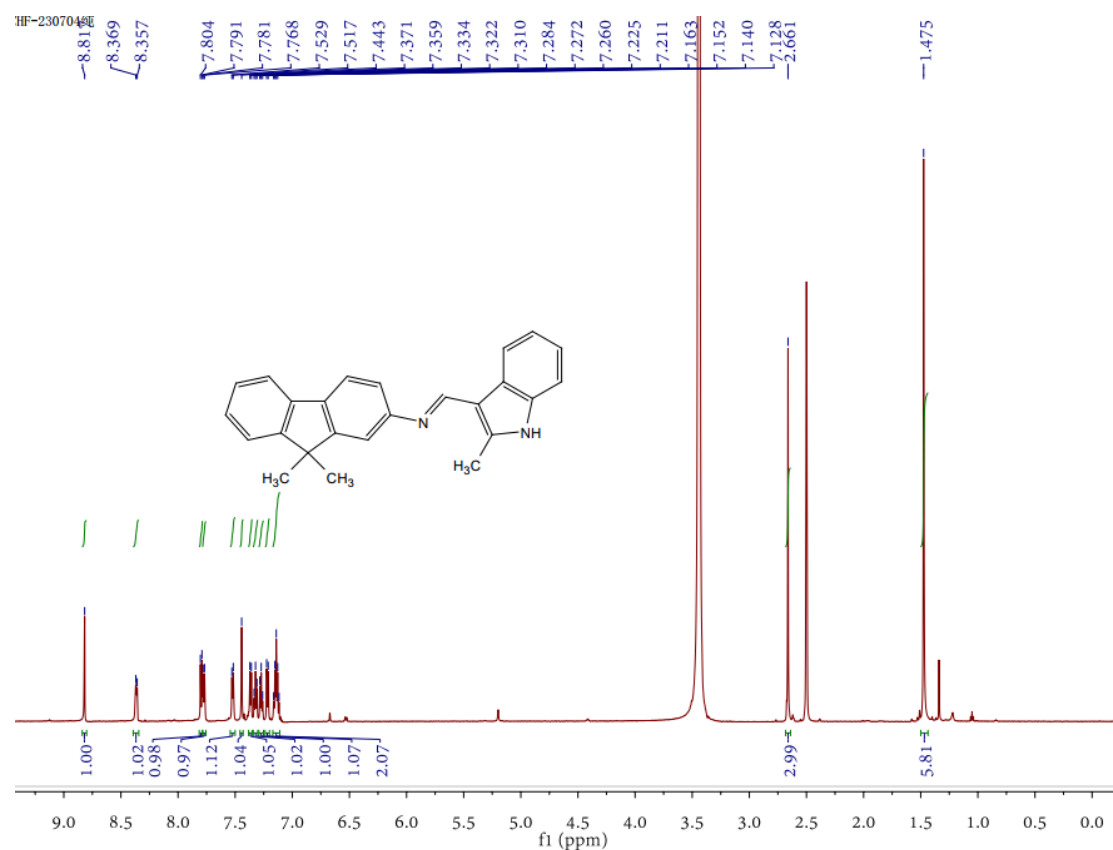
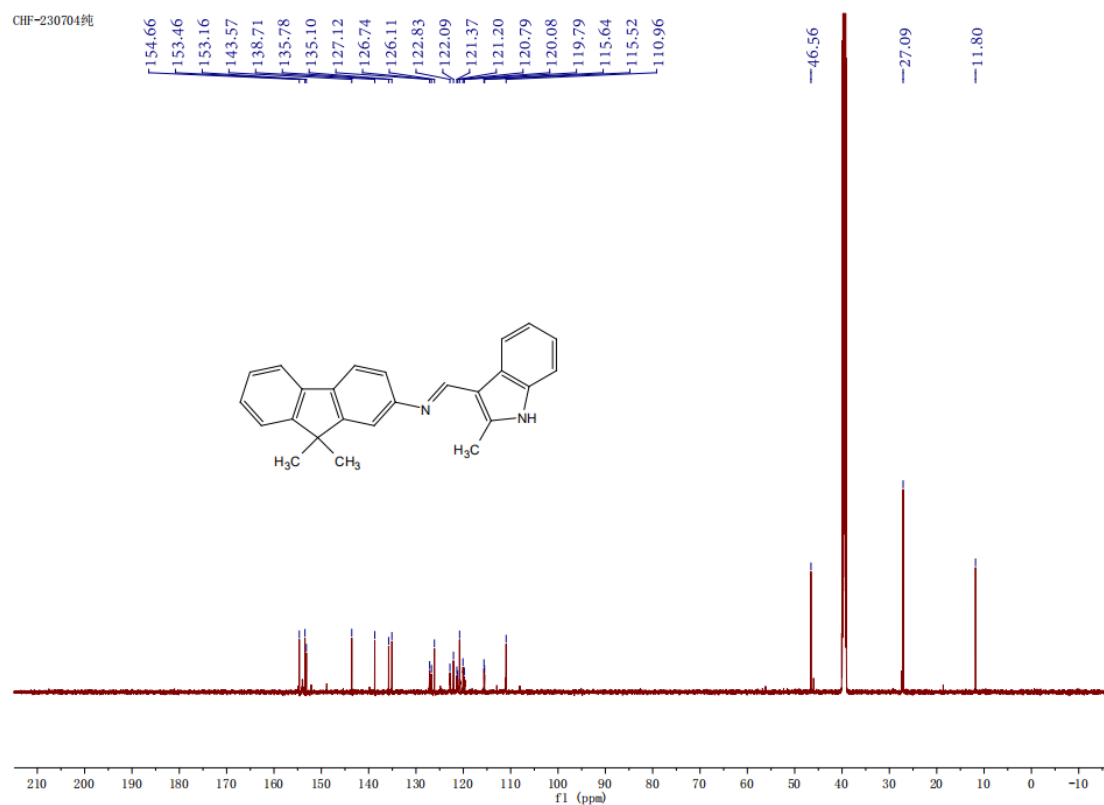
Figure S19 ¹H NMR (CDCl₃, 600 MHz) of **9b**Figure S20 ¹³C NMR (CDCl₃, 150 MHz) of **9b**

Figure S21 ¹H NMR (DMSO-*d*₆, 600 MHz) of **9c**Figure S22 ¹³C NMR (DMSO-*d*₆, 150 MHz) of **9c**

Note: Minor peaks at $\delta \approx 3.35$ ppm (¹H NMR) and $\delta \approx 50$ ppm (¹³C NMR) originate from trace exogenous methanol contamination during sample preparation. Methanol was not utilized in the synthesis or purification of compound **9c**.



Figure S25 ¹H NMR (DMSO-*d*₆, 600 MHz) of **9e**Figure S26 ¹³C NMR (DMSO-*d*₆, 150 MHz) of **9e**

Figure S27 ¹H NMR (DMSO-*d*₆, 600 MHz) of **9f**Figure S28 ¹³C NMR (DMSO-*d*₆, 150 MHz) of **9f**

2. HRMS spectra

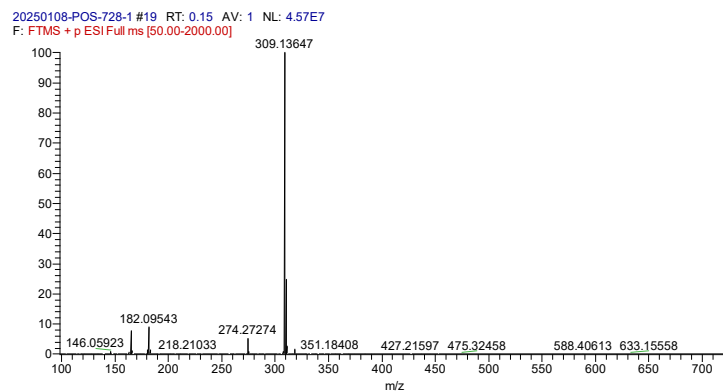


Figure S29 HRMS of **5a**

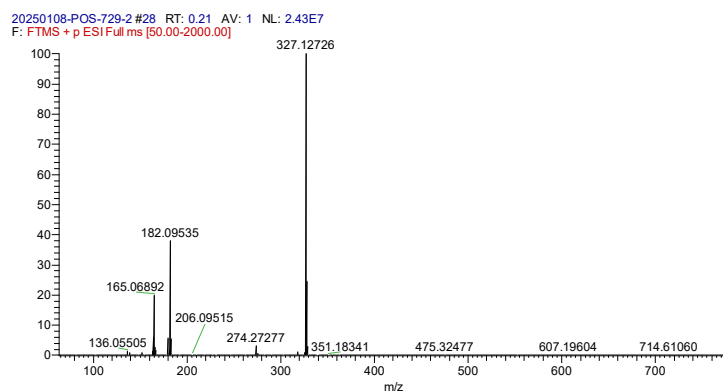


Figure S30 HRMS of **5b**

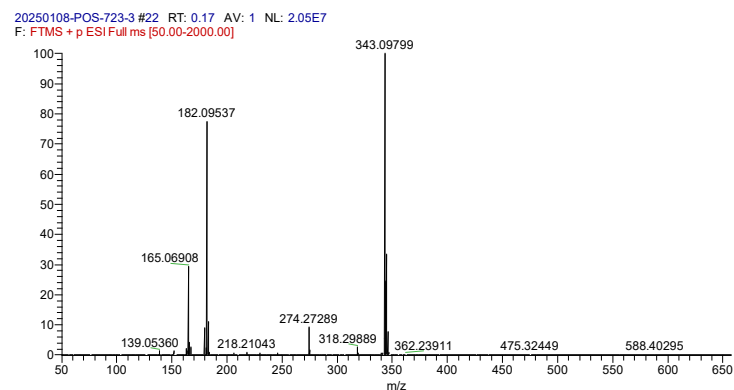
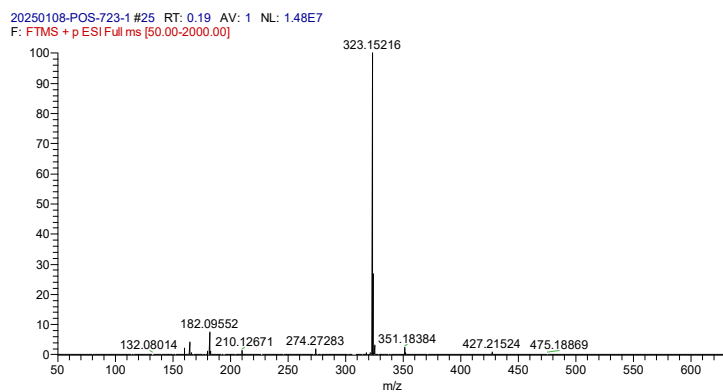
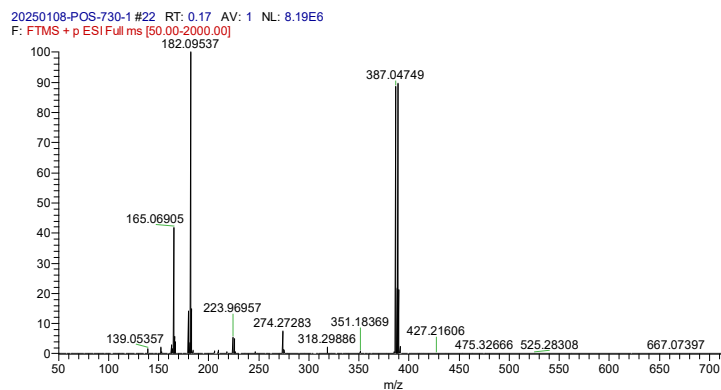
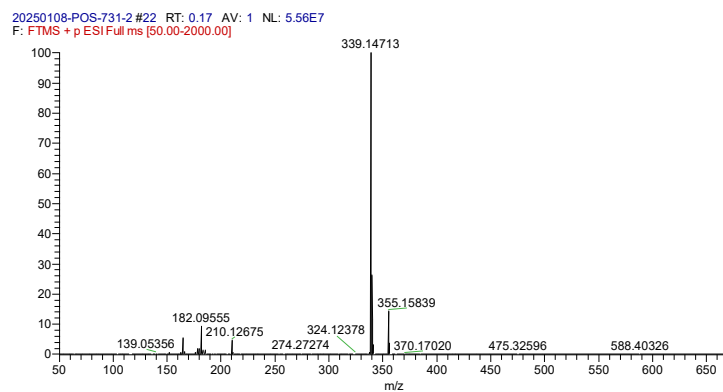
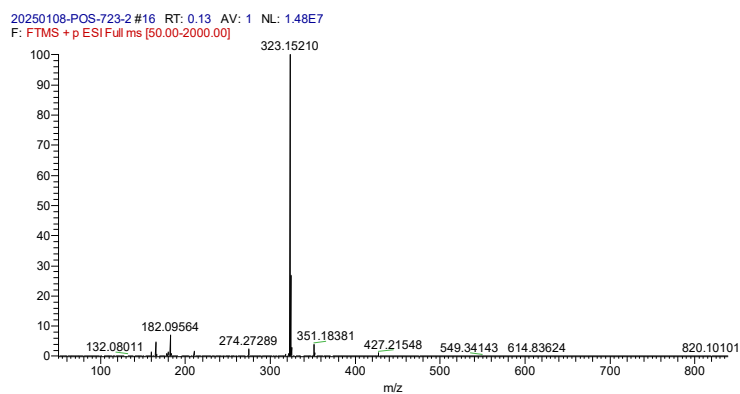
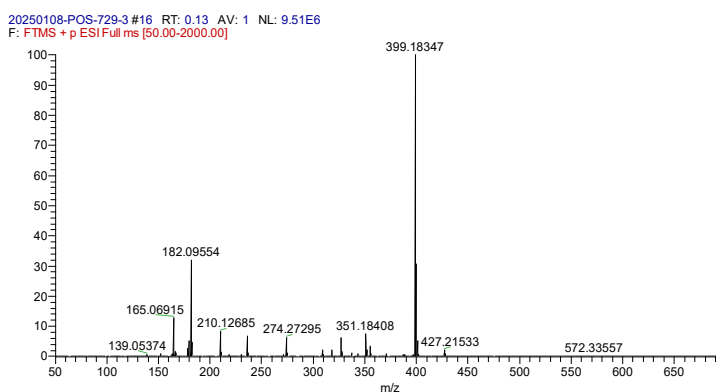
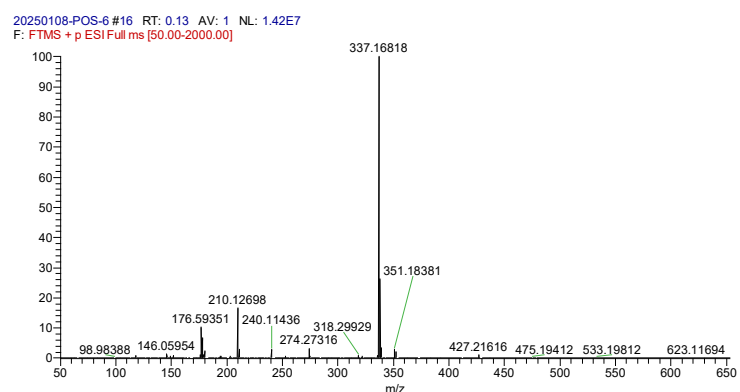
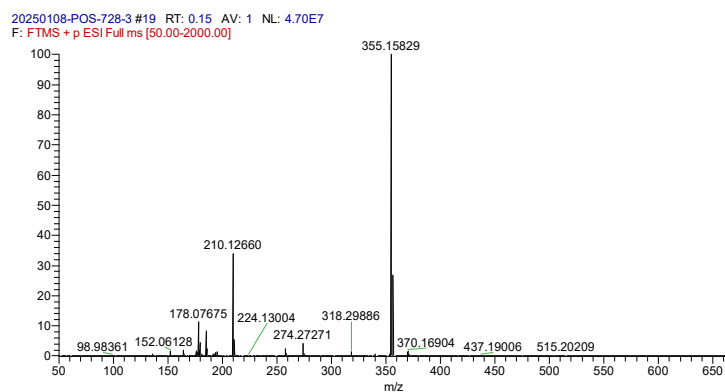
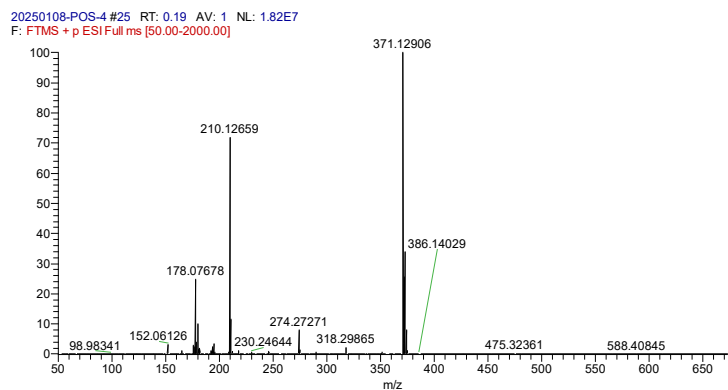
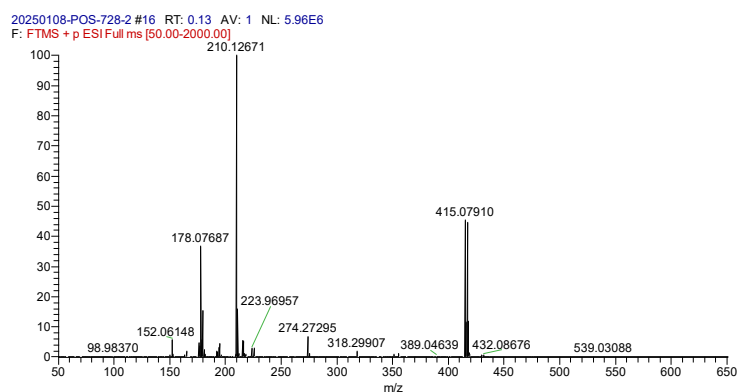
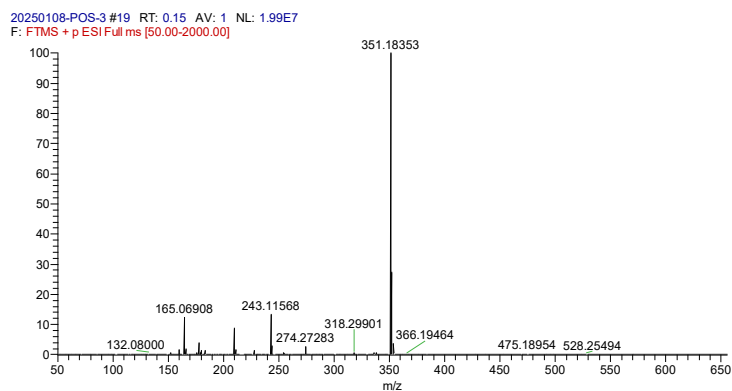
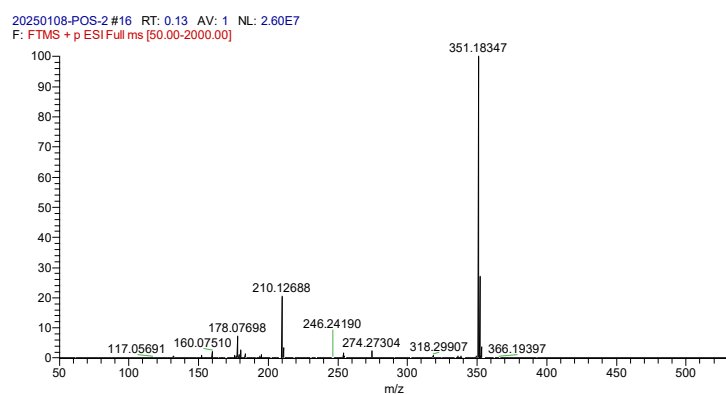


Figure S31 HRMS of **5c**

Figure S32 HRMS of **5d**Figure S33 HRMS of **5e**Figure S34 HRMS of **5f**

Figure S35 HRMS of **5g**Figure S36 HRMS of **5h**Figure S37 HRMS of **9a**

Figure S38 HRMS of **9b**Figure S39 HRMS of **9c**Figure S40 HRMS of **9d**

Figure S41 HRMS of **9e**Figure S42 HRMS of **9f**

3. Fluorescence spectra

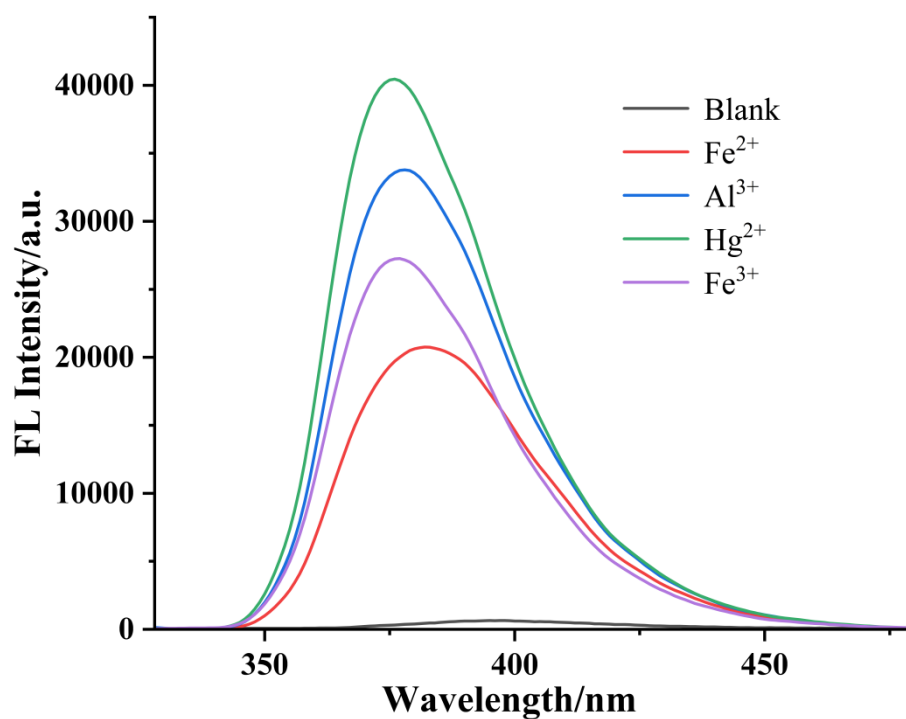


Figure S43 Fluorescence spectra of **5g** with 1 equiv. Hg²⁺, Al³⁺, Fe³⁺ and Fe²⁺ in DMSO.