

Supplementary Information

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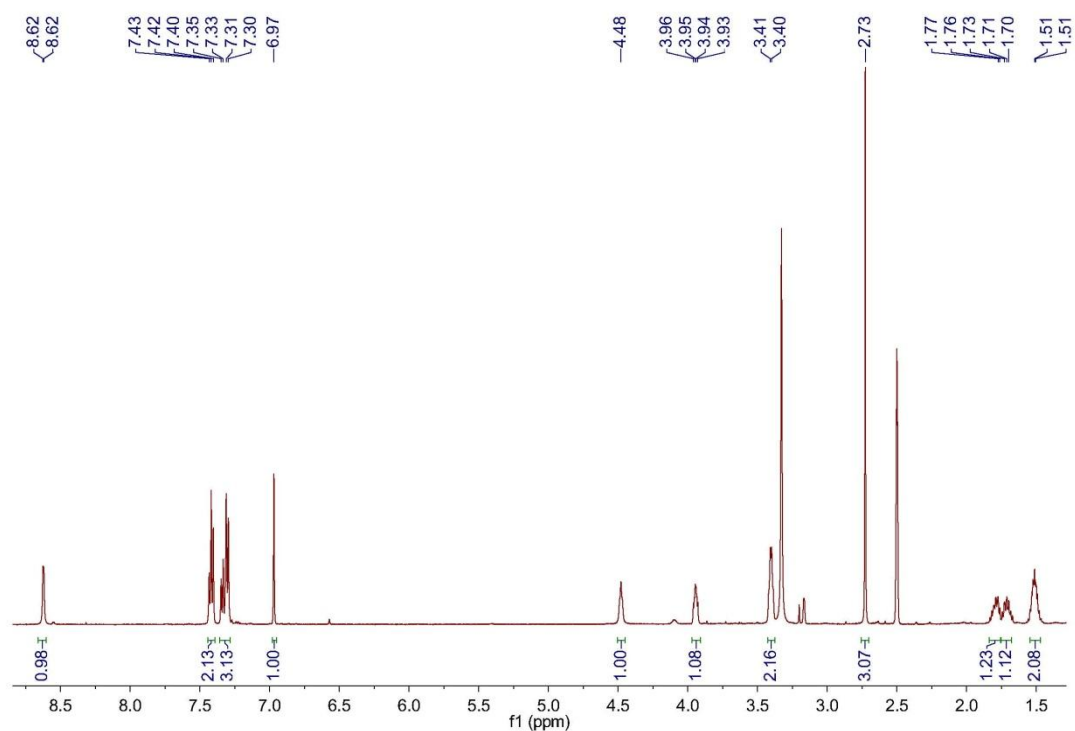
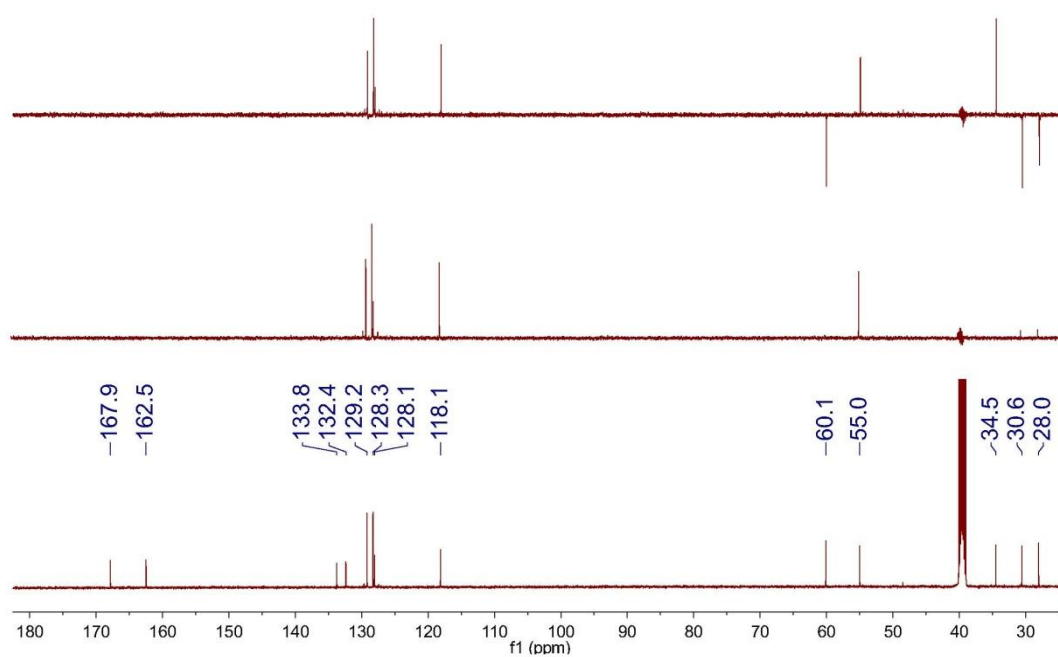
Figure S1. ^1H NMR (500 MHz, $\text{DMSO-}d_6$) spectrum of compound **1**.**Figure S2.** ^{13}C NMR (125 MHz, $\text{DMSO-}d_6$) and DEPT spectra of compound **1**.

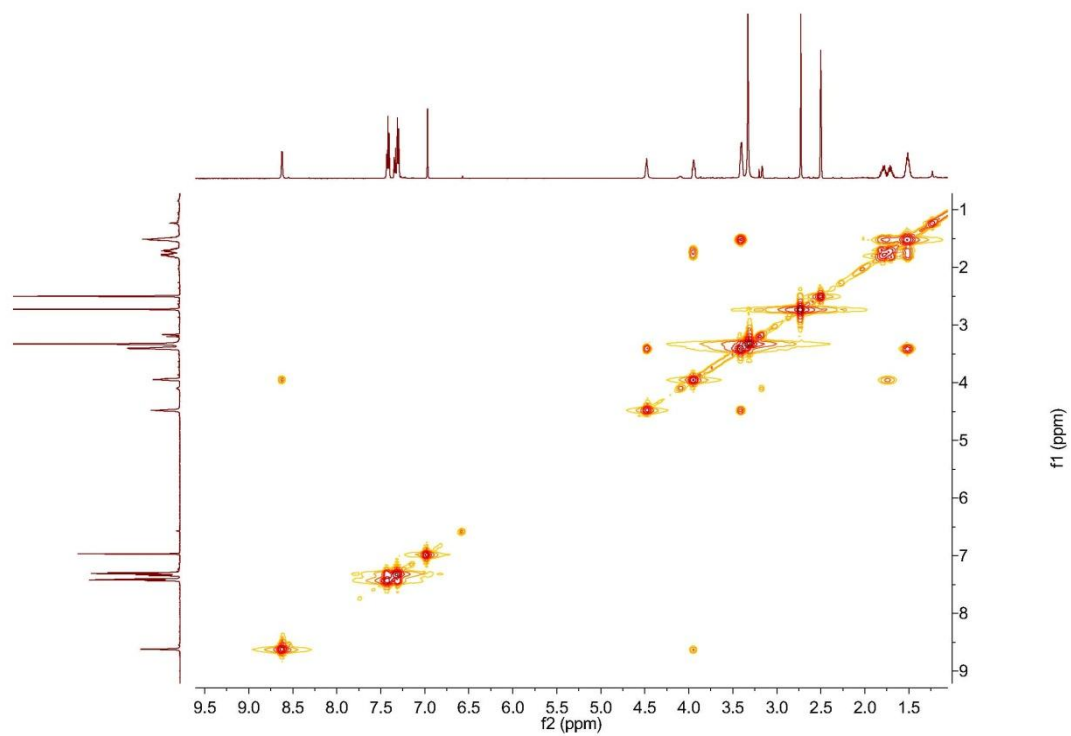
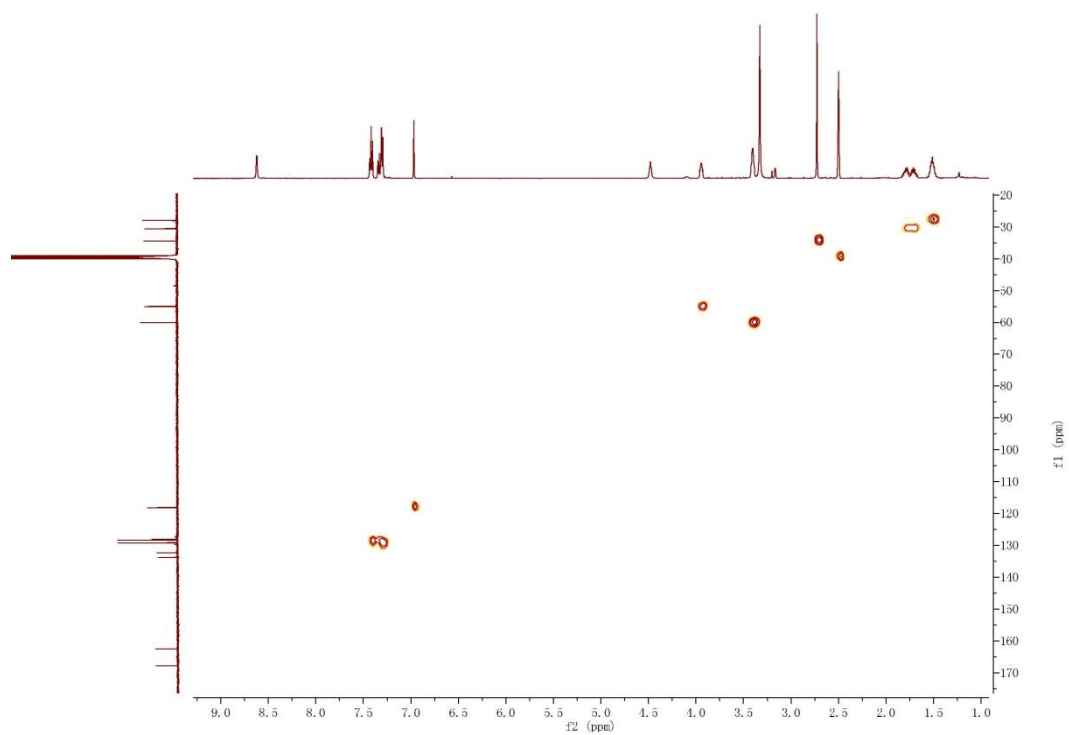
Figure S3. ^1H - ^1H COSY spectrum of the compound **1**.**Figure S4.** HSQC spectrum of compound **1**.

Figure S5. HMBC spectrum of compound 1.

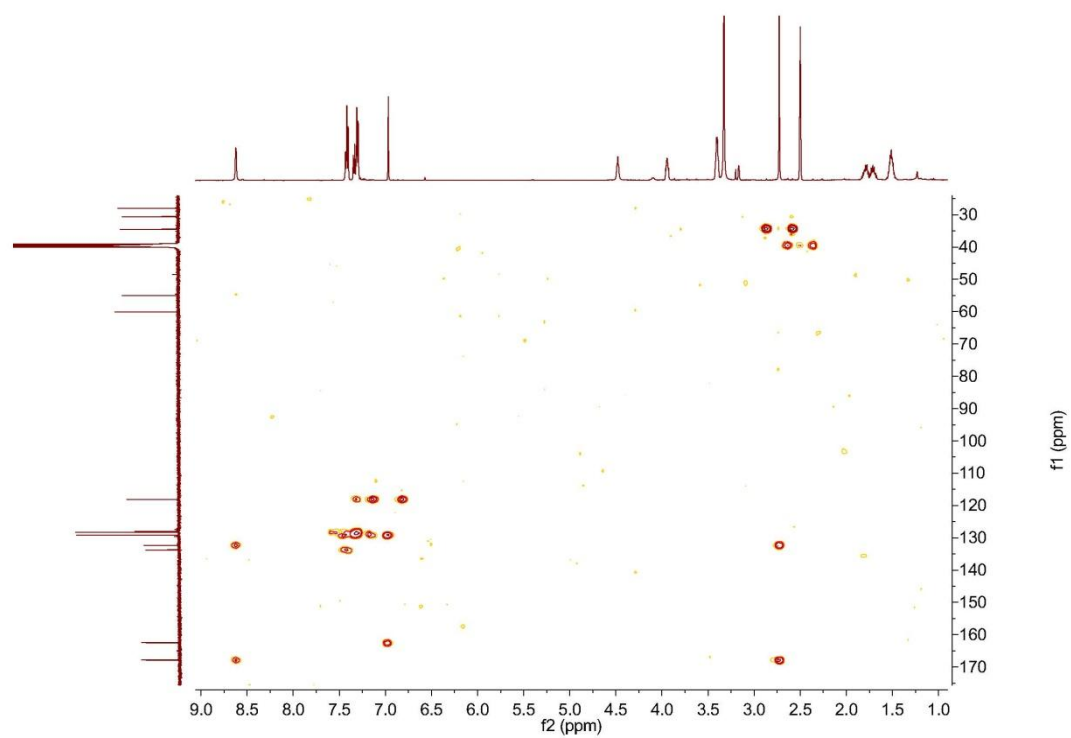
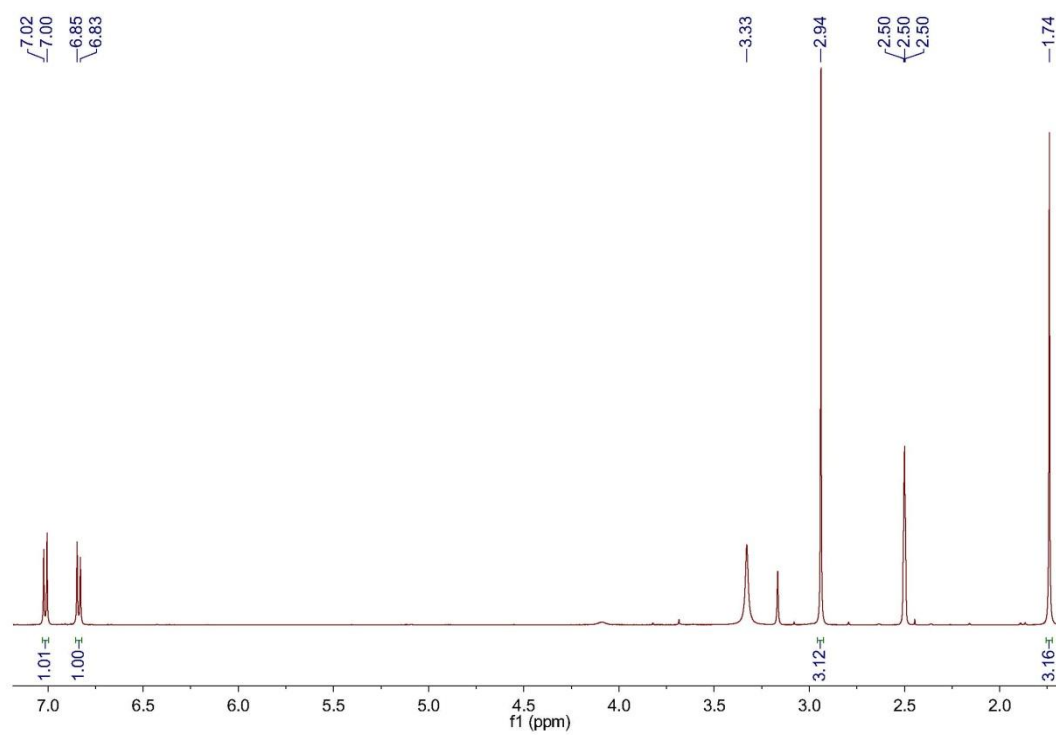
Figure S6. ^1H NMR (500 MHz, $\text{DMSO}-d_6$) spectrum of compound 2.

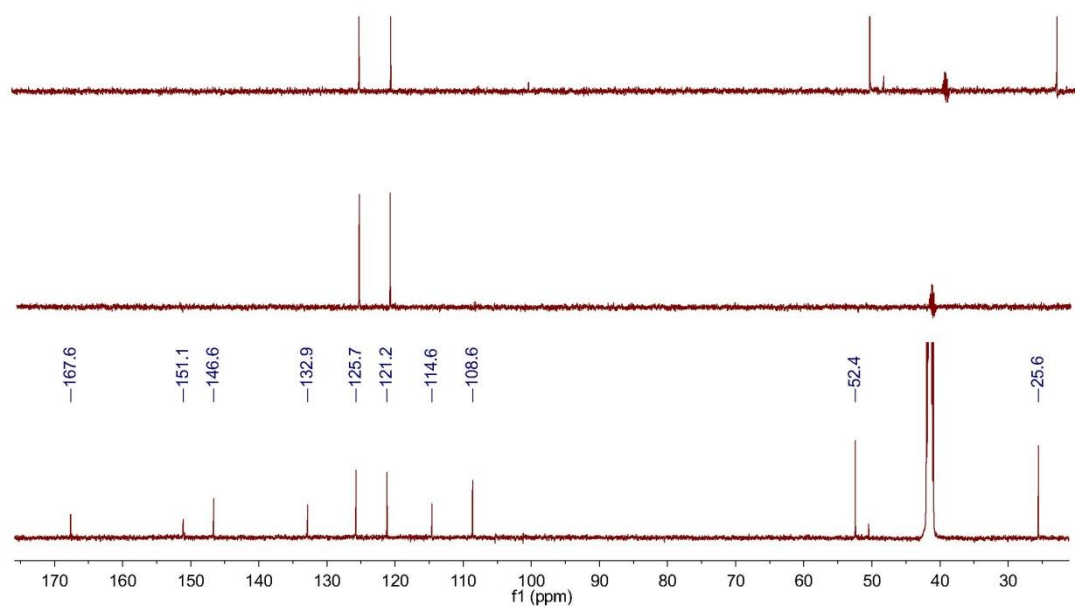
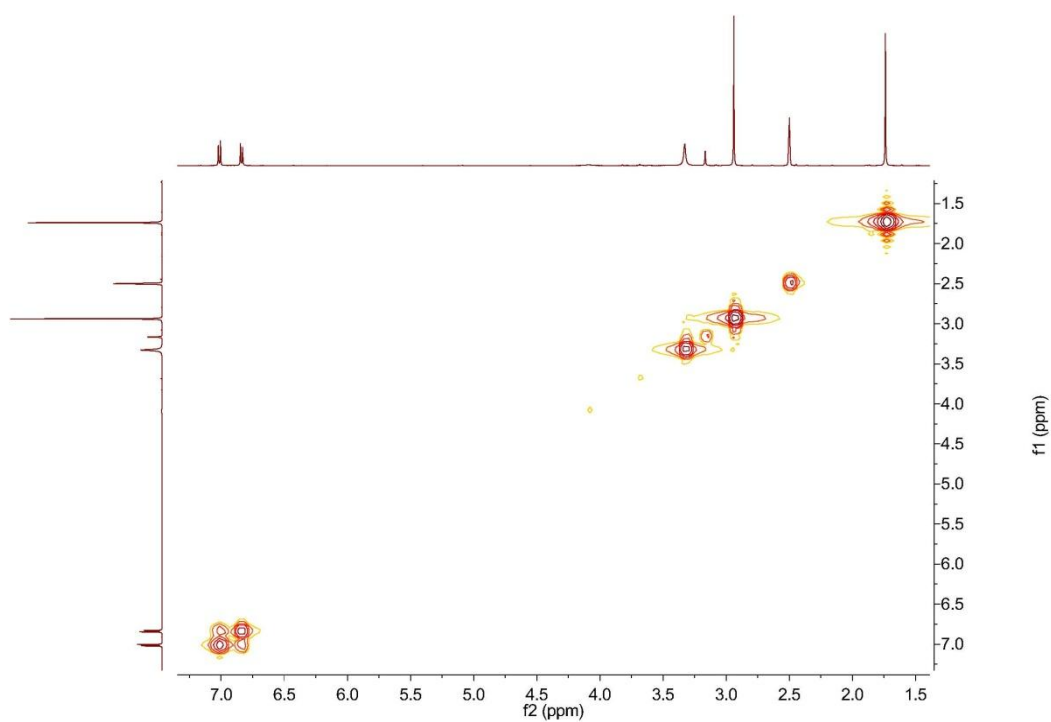
Figure S7. ^{13}C NMR (125 MHz, $\text{DMSO-}d_6$) and DEPT spectra of compound **2**.**Figure S8.** ^1H - ^1H COSY spectrum of the compound **2**.

Figure S9. HSQC spectrum of compound 2.

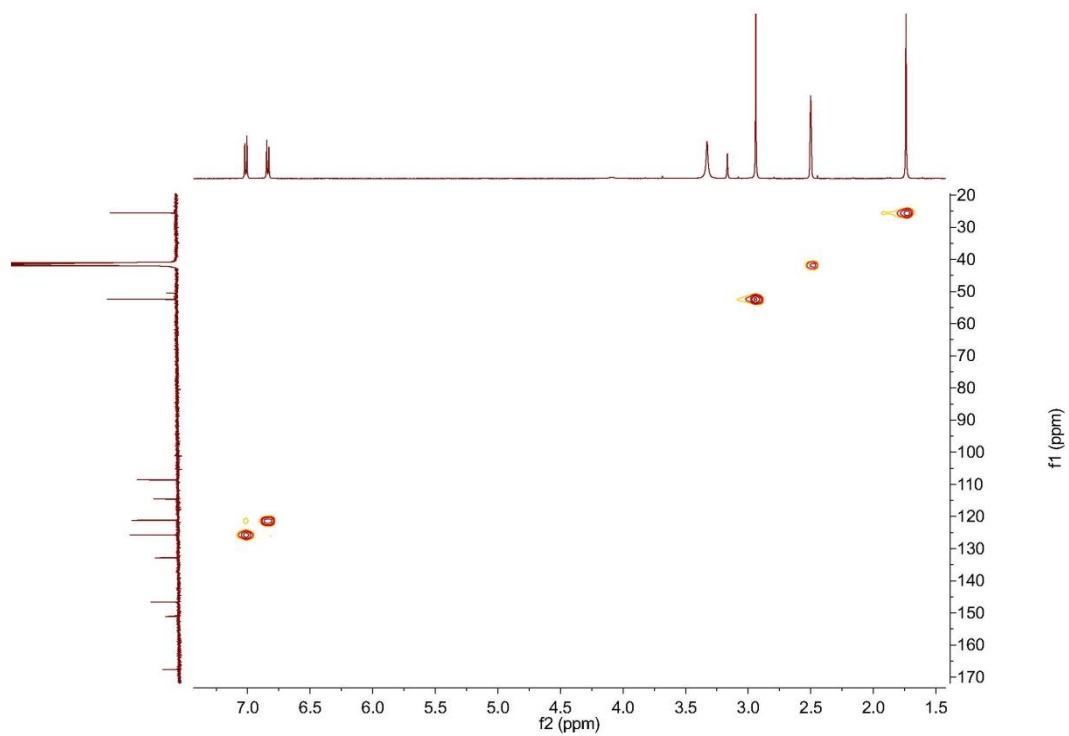


Figure S10. HMBC spectrum of compound 2.

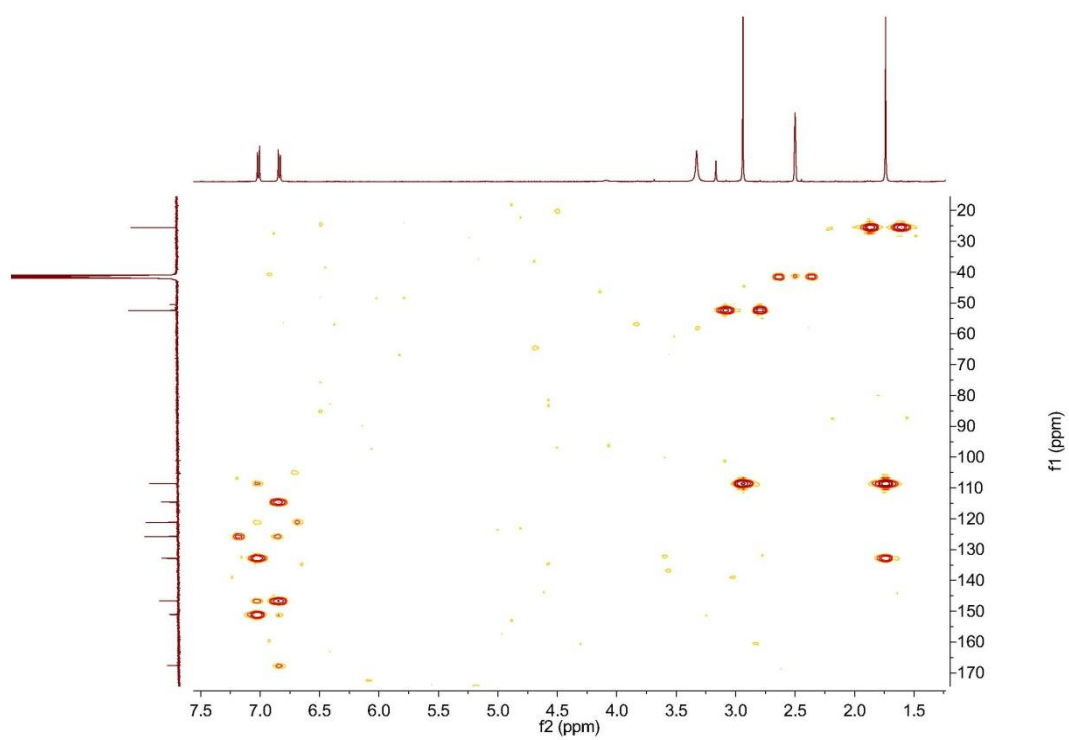


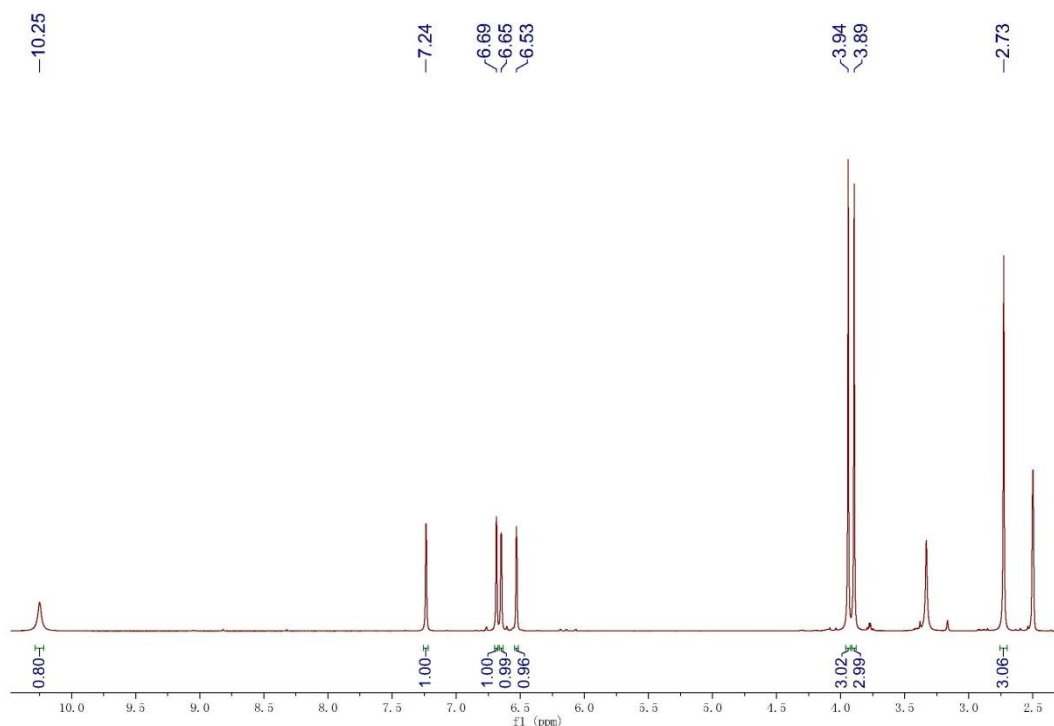
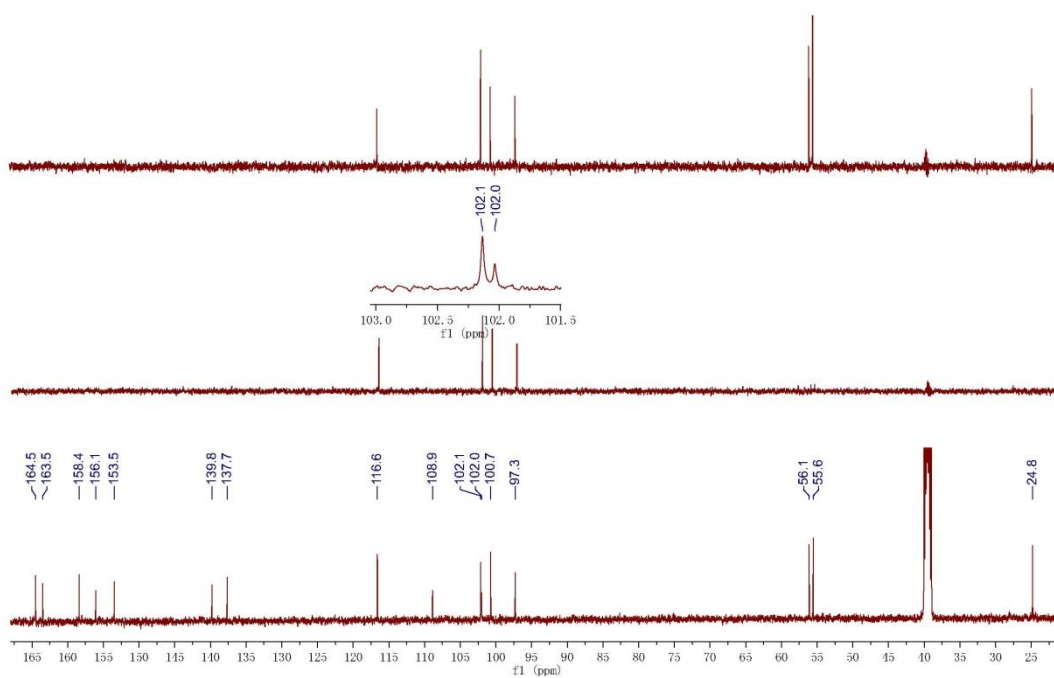
Figure S11. ^1H NMR (500 MHz, $\text{DMSO-}d_6$) spectrum of compound 3.**Figure S12.** ^{13}C NMR (125 MHz, $\text{DMSO-}d_6$) and DEPT spectra of compound 3.

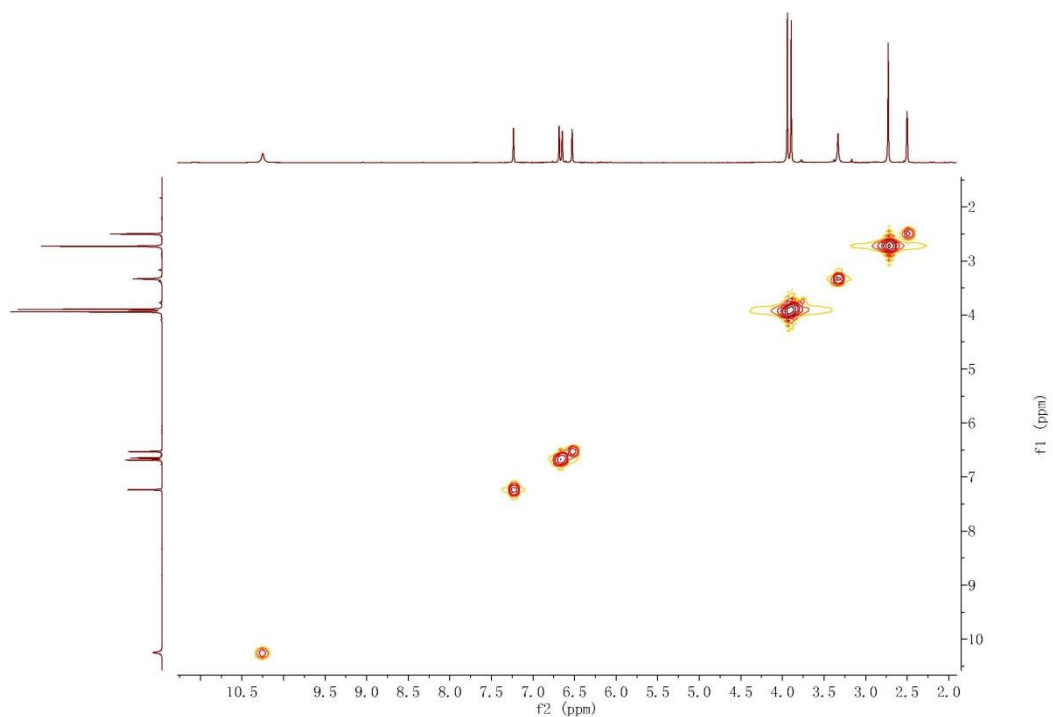
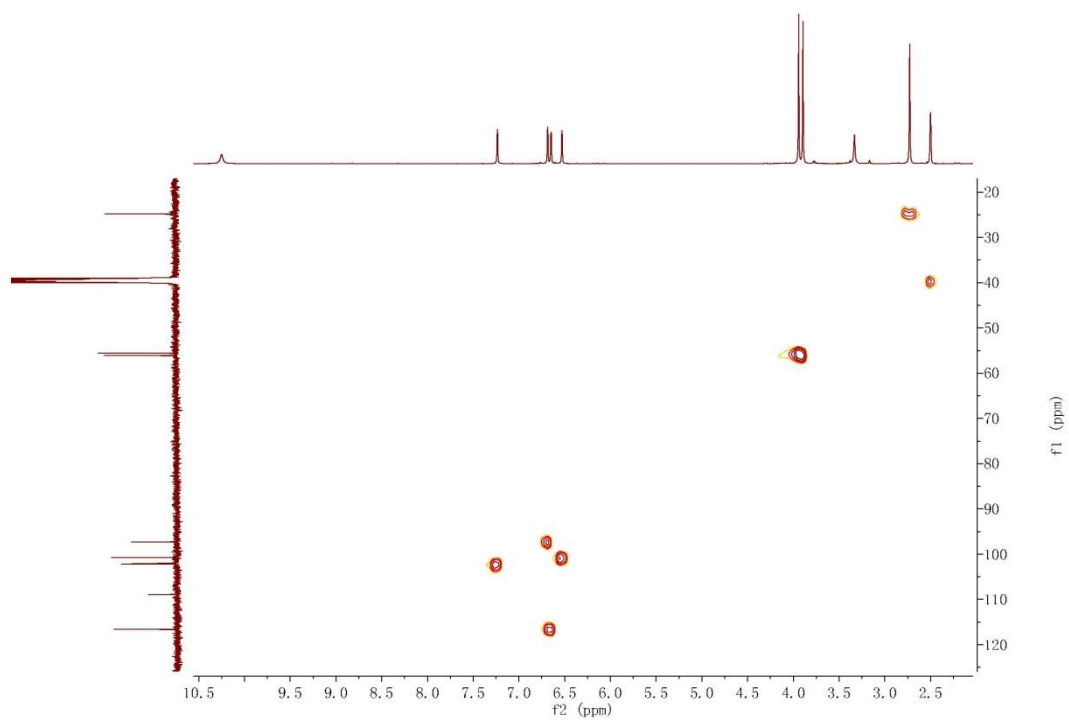
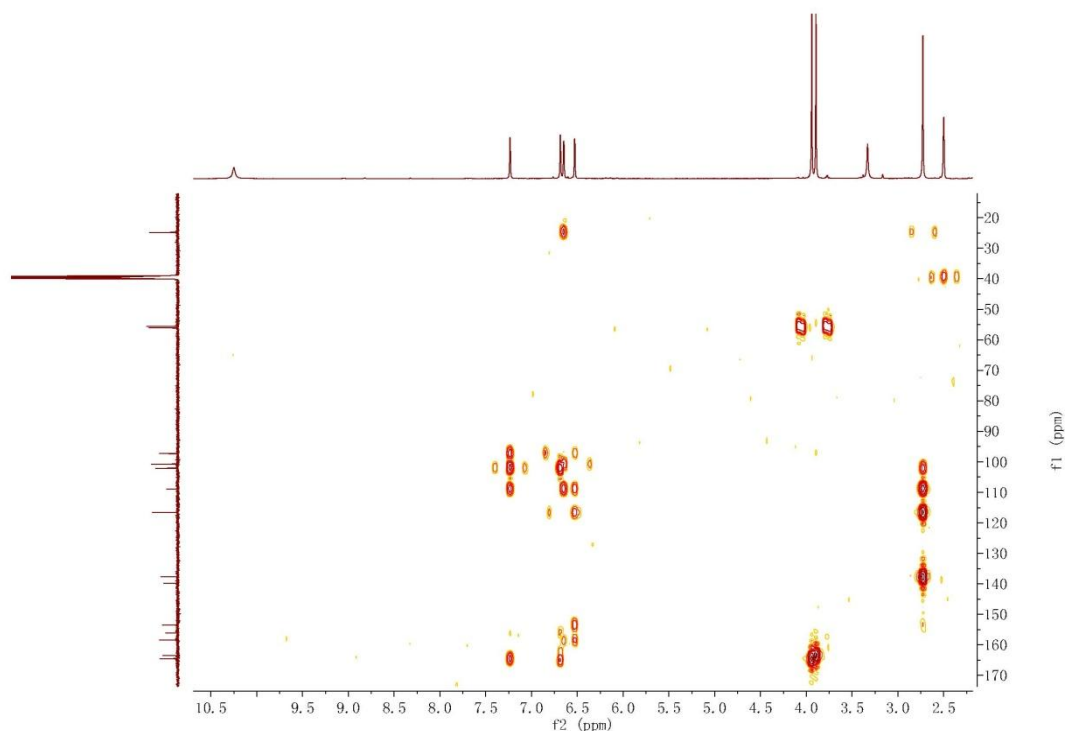
Figure S13. ^1H - ^1H COSY spectrum of the compound **3**.**Figure S14.** HSQC spectrum of compound **3**.

Figure S15. HMBC spectrum of compound 3.



¹H- and ¹³C-NMR Data of Compound 4

Colorless oil; ¹H NMR data (at 500 MHz in DMSO-*d*₆): δ_H 4.18 (1H, ddd, *J* = 9.0, 4.1, 0.7 Hz, H-2), 2.33 (1H, m, H-3a), 1.98 (1H, m, H-3b), 2.14 (2H, m, H-4), 7.98 (1H, br s, H-6), 3.67 (3H, s, H-7); ¹³C NMR data (at 125 MHz in DMSO-*d*₆): δ_C 173.3 (C-1, C), 54.6 (C-2, CH), 24.4 (C-3, CH₂), 28.8 (C-4, CH₂), 176.9 (C-5, C), 52.0 (C-7, CH₃).

¹H- and ¹³C-NMR Data of Compound 5

Yellow oil; [α]_D²⁷ +90 (c 0.10, MeOH); ¹H NMR data (at 500 MHz in DMSO-*d*₆): δ_H 3.48 (2H, m, H-3), 1.88 (2H, m, H-4), 2.21 (1H, m, H-5a), 1.94 (1H, m, H-5b), 4.44 (1H, dd, *J* = 9.2, 7.1 Hz, H-6), 6.94 (1H, s, H-10), 2.73 (3H, s, H-11), 7.43-7.31 (5H, m, H-2', 3', 4', 5', 6'); ¹³C NMR data (at 125 MHz in DMSO-*d*₆): δ_C 167.7 (C-1, C), 44.8 (C-3, CH₂), 22.2 (C-4, CH₂), 27.4 (C-5, CH₂), 58.0 (C-6, CH), 160.0 (C-7, C), 134.2 (C-9, C), 118.6 (C-10, CH), 34.1 (C-11, CH₃), 133.6 (C-1', C), 129.4 (C-2', CH), 128.3 (C-3', CH), 128.1 (C-4', CH), 128.3 (C-5', CH), 129.4 (C-6', CH).

¹H- and ¹³C-NMR Data of Compound 6

Yellow oil; ¹H NMR data (at 500 MHz in DMSO-*d*₆): δ_H 3.52 (1H, dd, *J* = 12.5, 4.7 Hz, H-3a), 3.16 (1H, m, H-3b), 4.19 (1H, m, H-4), 1.94 (1H, dd, *J* = 12.9, 6.3 Hz, H-5a), 1.52 (1H, m, H-5b), 4.29 (1H, dd, *J* = 11.0, 6.2 Hz, H-6), 7.98 (1H, br s, H-8), 4.40 (1H, t, *J* = 4.9 Hz, H-9), 3.08 (1H, dd, *J* = 14.2, 5.3 Hz, H-10a), 3.01 (1H, dd, *J* = 14.2, 5.3 Hz, H-10b), 5.09 (1H, d, *J* = 2.4 Hz, 4-OH), 7.21-7.17 (5H, m, H-2', 3', 4', 5', 6'); ¹³C NMR data (at 125 MHz in DMSO-*d*₆): δ_C 170.7 (C-1, C), 54.0 (C-3, CH₂), 66.6

(C-4, CH), 37.4 (C-5, CH₂), 56.8 (C-6, CH), 165.4 (C-7, C), 55.4 (C-9, CH), 35.3 (C-10, CH₂), 137.4 (C-1', C), 129.7 (C-2', CH), 128.0 (C-3', CH), 126.3 (C-4', CH), 128.0 (C-5', CH), 129.7 (C-6', CH).

¹H- and ¹³C-NMR Data of Compound 7

Yellow oil; ¹H NMR data (at 500 MHz in DMSO-*d*₆): δ_H 3.40 (1H, m, H-3a), 3.33 (1H, m, H-3b), 1.80 (2H, m, H-4), 2.12 (1H, m, H-5a), 1.84 (1H, m, H-5b), 4.13 (1H, m, H-6), 7.96 (H, br s, H-8), 3.91 (1H, s, H-9), 2.34 (1H, m, H-10), 1.01 (3H, d, *J* = 7.2 Hz, H-11), 0.84 (3H, d, *J* = 6.8 Hz, H-12); ¹³C NMR data (at 125 MHz in DMSO-*d*₆): δ_C 170.2 (C-1, C), 44.6 (C-3, CH₂), 22.0 (C-4, CH₂), 27.8 (C-5, CH₂), 58.2 (C-6, CH), 165.2 (C-7, C), 59.4 (C-9, CH), 27.7 (C-10, CH), 18.3 (C-11, CH₃), 16.4 (C-12, CH₃).

¹H- and ¹³C-NMR Data of Compound 8

Yellow amorphous powder; ¹H NMR data (at 500 MHz in DMSO-*d*₆): δ_H 6.72 (1H, s, H-3), 6.38 (1H, s, H-7), 3.42 (3H, s, H-8), 2.05 (3H, s, H-9); ¹³C NMR data (at 125 MHz in DMSO-*d*₆): δ_C 168.7 (C-1, C), 101.0 (C-3, CH), 121.7 (C-3a, C), 151.5 (C-4, C), 118.7 (C-5, C), 158.8 (C-6, C), 102.1 (C-7, CH), 124.8 (C-7a, C), 55.3 (C-8, CH₃), 9.1 (C-9, CH₃).

¹H- and ¹³C-NMR Data of Compound 9

Yellow oil; ¹H NMR data (at 500 MHz in DMSO-*d*₆): δ_H 6.50 (1H, d, *J* = 2.3 Hz, H-4), 6.67 (1H, d, *J* = 2.3 Hz, H-6), 2.26 (1H, dd, *J* = 14.1, 3.3 Hz, H-3'a), 1.95 (1H, dd, *J* = 14.1, 7.4 Hz, H-3'b), 3.69 (1H, m, H-4'), 3.95 (1H, s, H-5'), 5.15 (1H, d, *J* = 3.6 Hz, 4'-OH), 5.31 (1H, d, *J* = 6.1 Hz, 5'-OH), 6.30 (1H, d, *J* = 3.2 Hz, H-6'), 1.47 (3H, s, 2'-CH₃), 3.86 (3H, s, 5-OCH₃), 11.30 (1H, br s, 3-OH); ¹³C NMR data (at 125 MHz in DMSO-*d*₆): δ_C 131.0 (C-1, C), 99.8 (C-2, C), 165.8 (C-3, C), 100.9 (C-4, CH), 163.0 (C-5, C), 55.8 (5-OCH₃), 102.0 (C-6, CH), 168.2 (C-7, C), 26.2 (2'-CH₃), 139.2 (C-1', C), 81.1 (C-2', C), 38.6 (C-3', CH₂), 68.7 (C-4', CH), 69.5 (C-5', CH), 131.2 (C-6', CH).

¹H- and ¹³C-NMR Data of Compound 10

Yellow oil; ¹H NMR data (at 500 MHz in DMSO-*d*₆): δ_H 6.50 (1H, d, *J* = 2.3 Hz, H-4), 6.74 (1H, d, *J* = 2.3 Hz, H-6), 2.16 (1H, dd, *J* = 11.9, 3.6 Hz, H-3'a), 2.03 (1H, t, *J* = 11.9 Hz, H-3'b), 3.61 (1H, m, H-4'), 4.09 (1H, m, H-5'), 5.22 (1H, d, *J* = 5.0 Hz, 4'-OH), 5.38 (1H, d, *J* = 6.1 Hz, 5'-OH), 6.25 (1H, d, *J* = 2.4 Hz, H-6'), 1.49 (3H, s, 2'-CH₃), 3.86 (3H, s, 5-OCH₃), 11.34 (1H, br s, 3-OH); ¹³C NMR data (at 125 MHz in DMSO-*d*₆): δ_C 131.8 (C-1, C), 100.0 (C-2, C), 165.8 (C-3, C), 101.2 (C-4, CH), 163.2 (C-5, C), 55.8 (5-OCH₃), 102.3 (C-6, CH), 167.8 (C-7, C), 27.4 (2'-CH₃), 137.6 (C-1', C), 82.2 (C-2', C), 43.4 (C-3', CH₂), 70.2 (C-4', CH), 72.5 (C-5', CH), 131.0 (C-6', CH).