

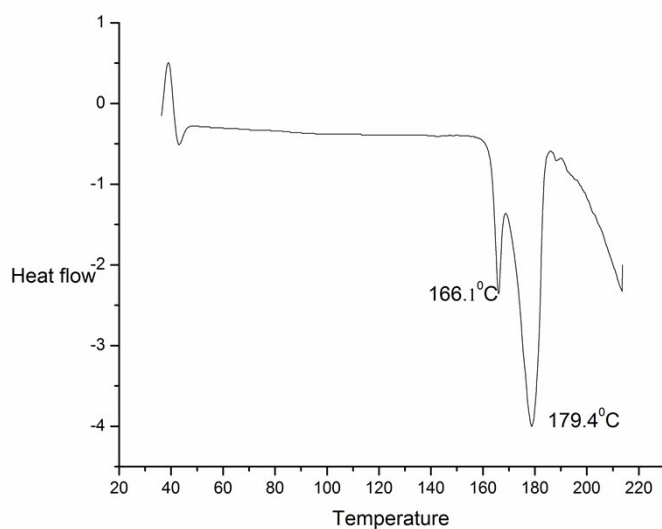
## The Hierarchies of Hydrogen Bond in Cocrystals/ Salts of Isoniazid and its Schiff Base-Case Study

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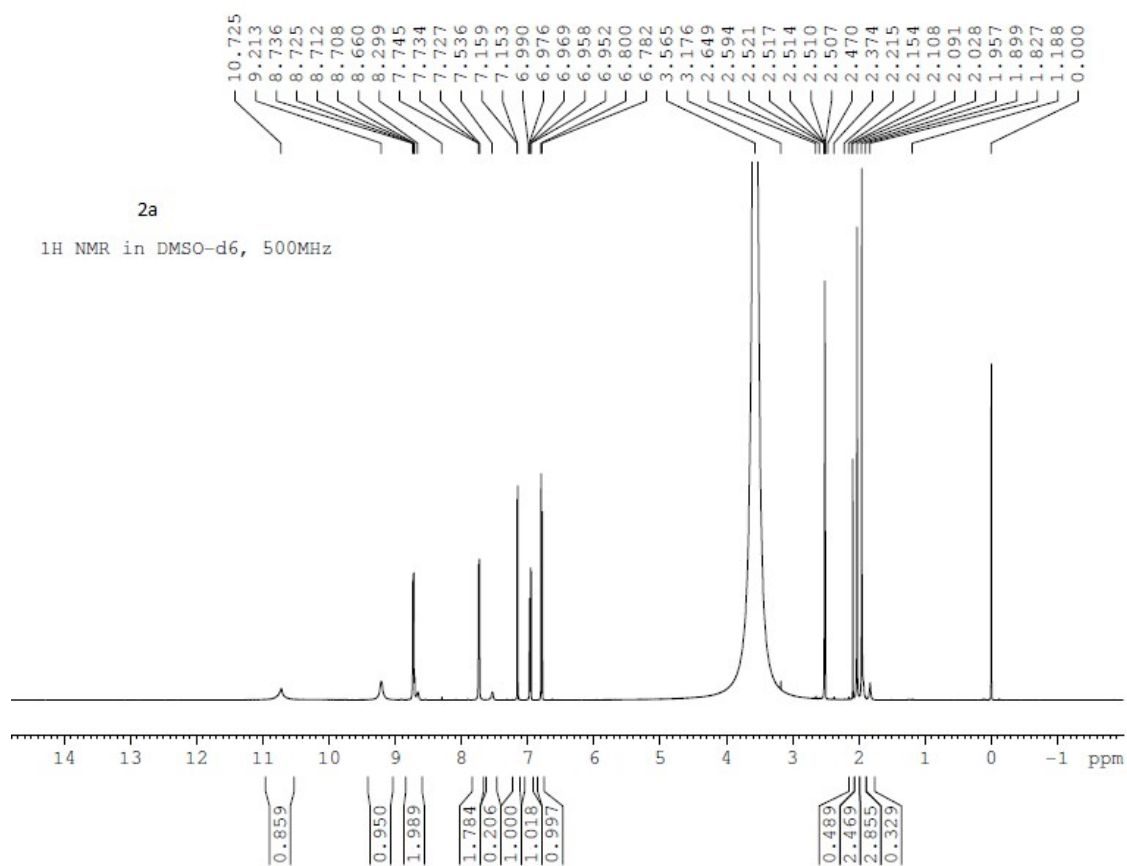
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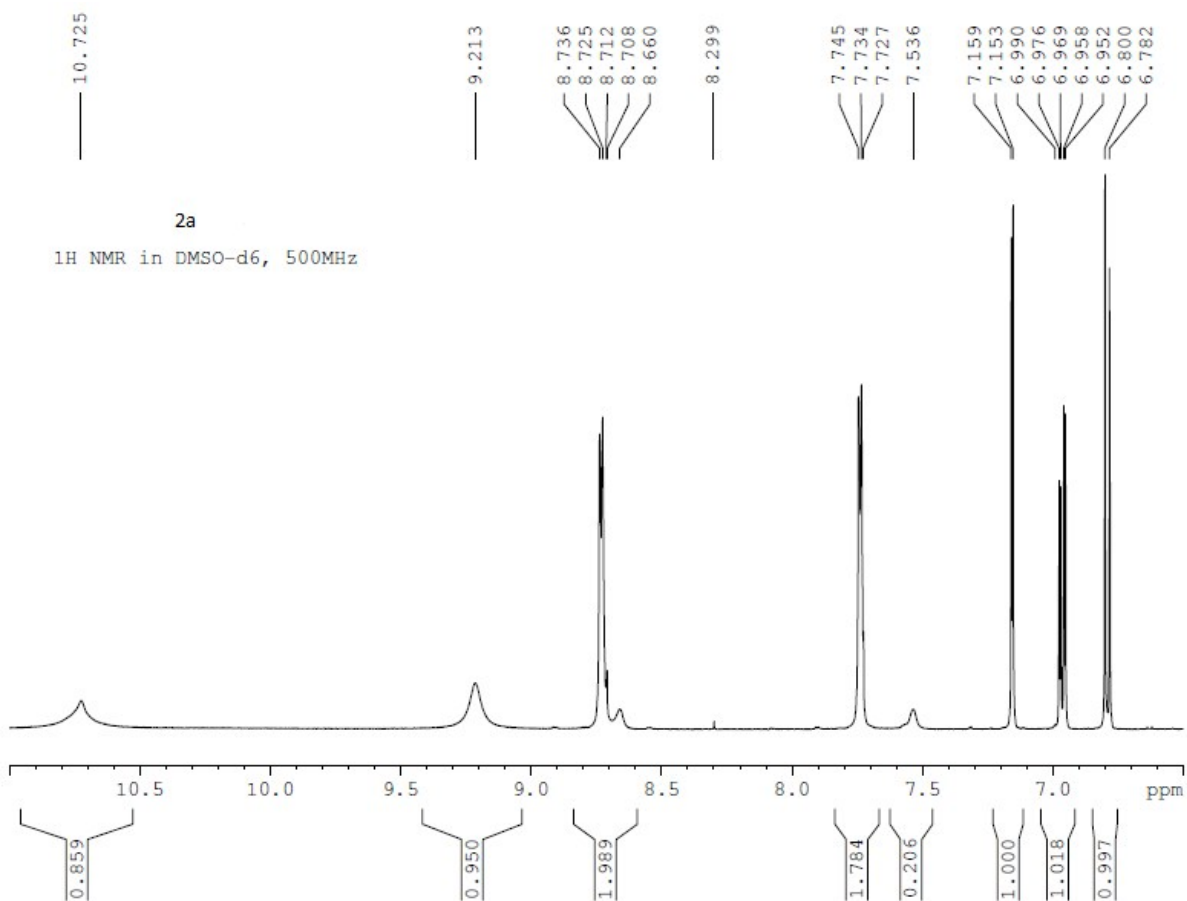
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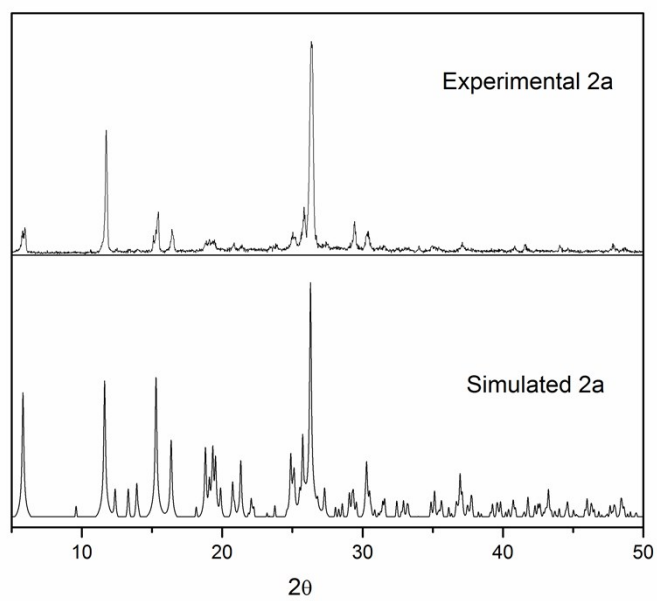
**Figure S1:** DSC thermogram of 2a



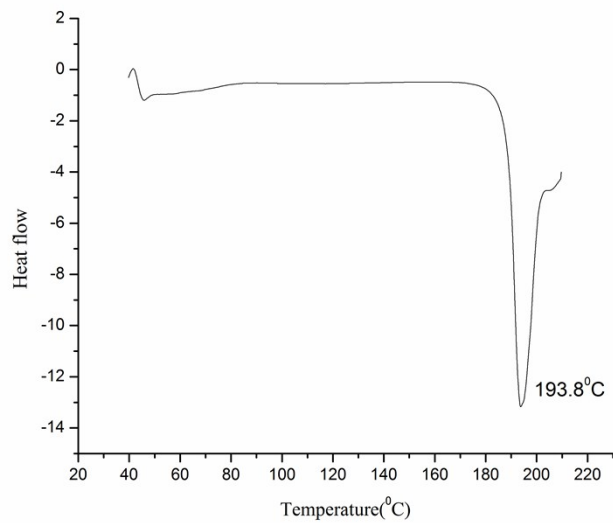
**Figure S2a:** NMR spectrum of 2a



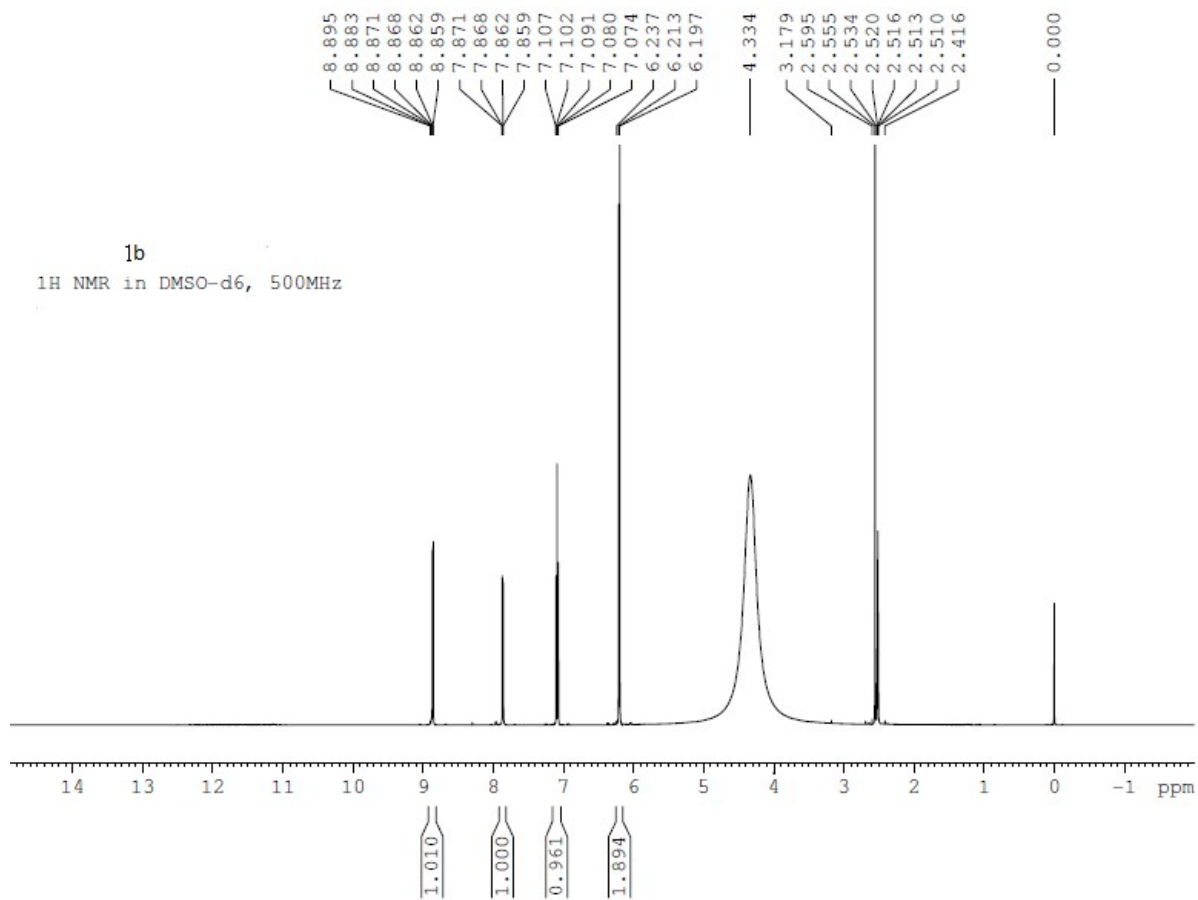
**Figure S2b:** NMR spectrum of 2a



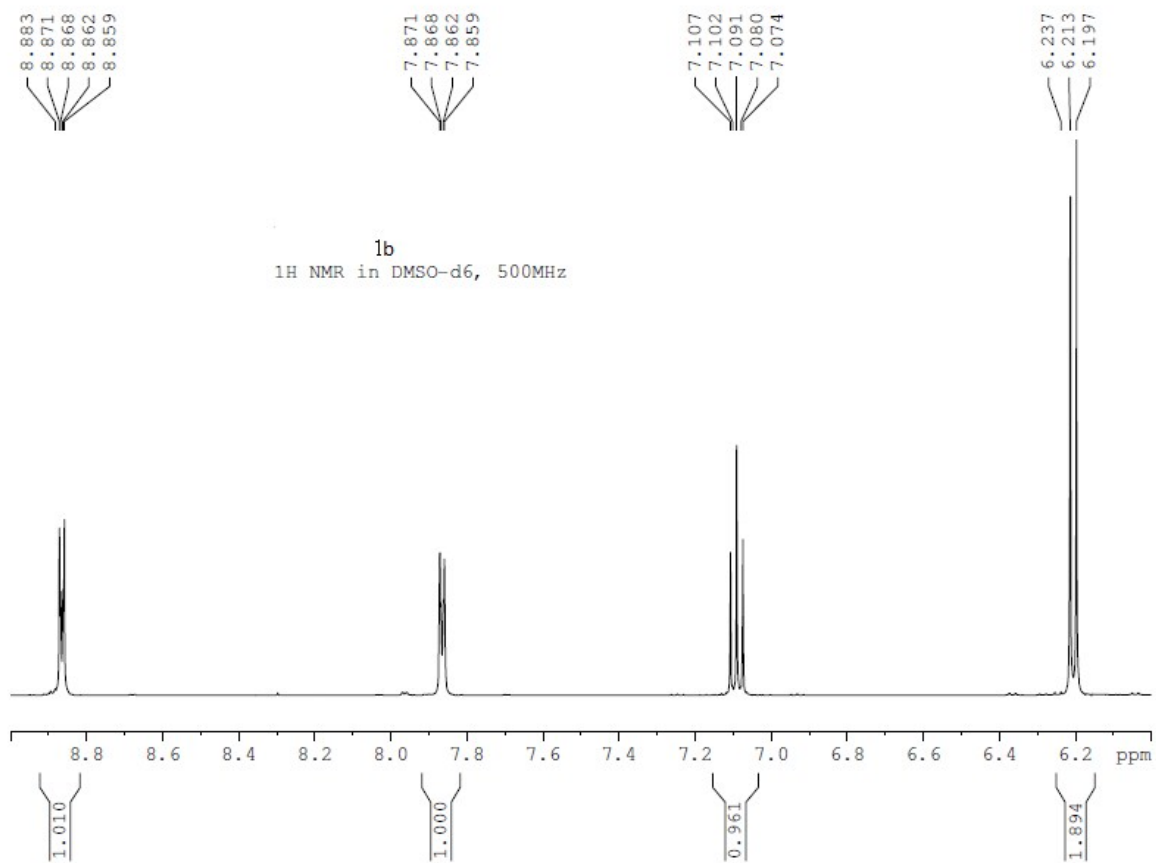
**Figure S3:** XRPD of 2a



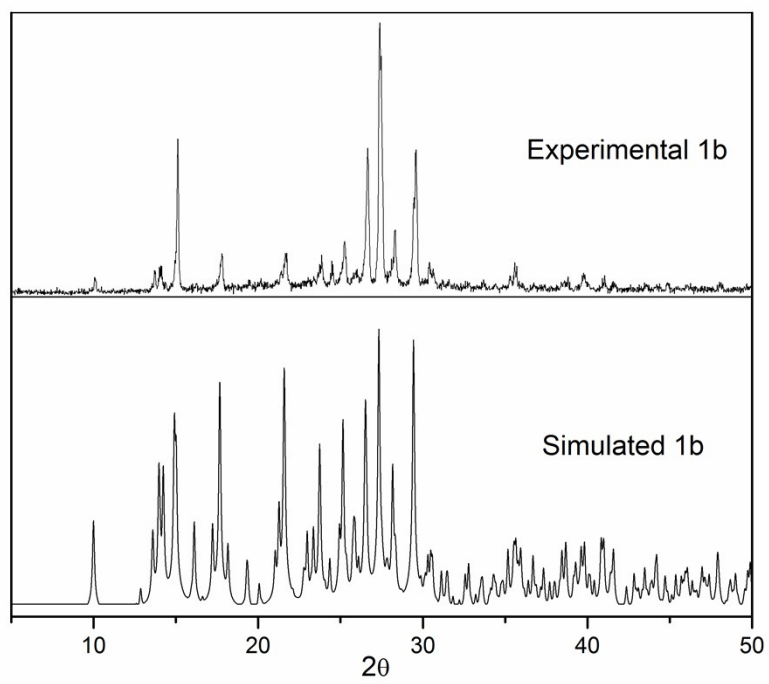
**Figure S4:** DSC thermogram of 1b



**Figure S5a:** NMR spectrum of 1b



**Figure S5b:** NMR spectrum of 1b



**Figure S6:** XRPD of 1b

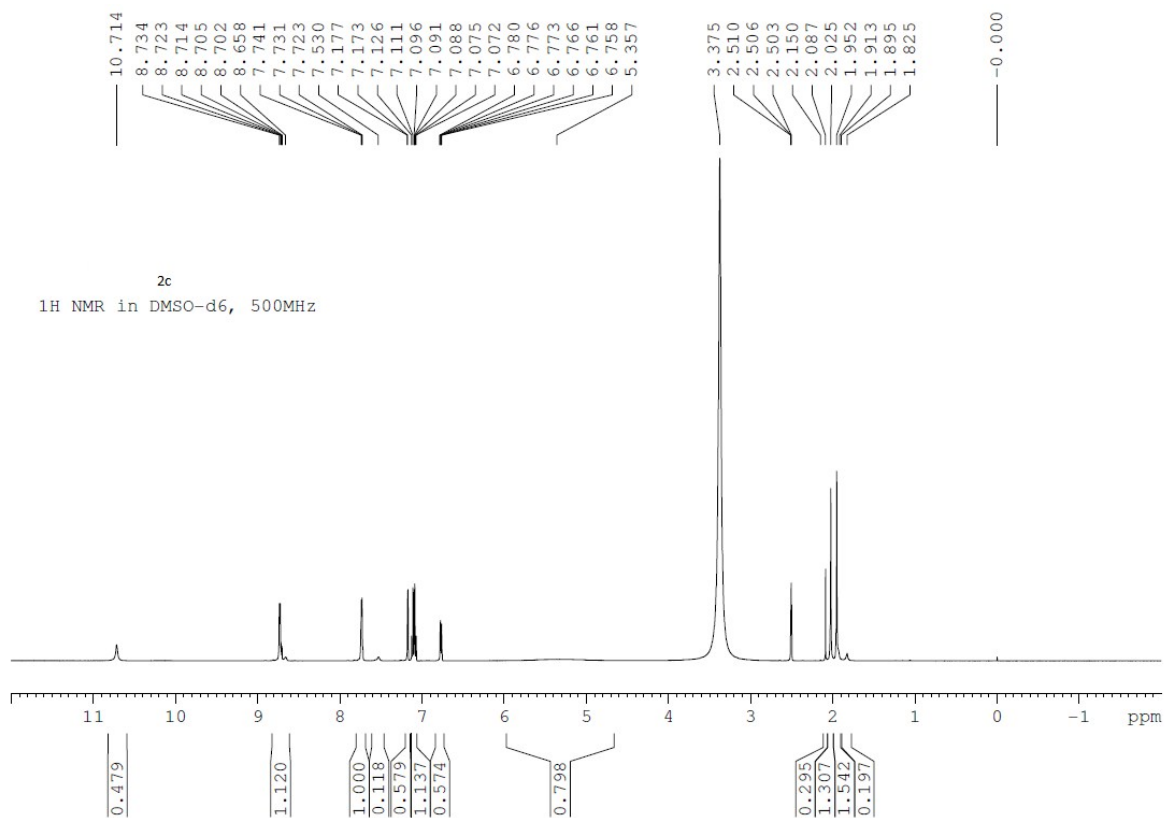


Figure S7a: NMR spectrum of 2c

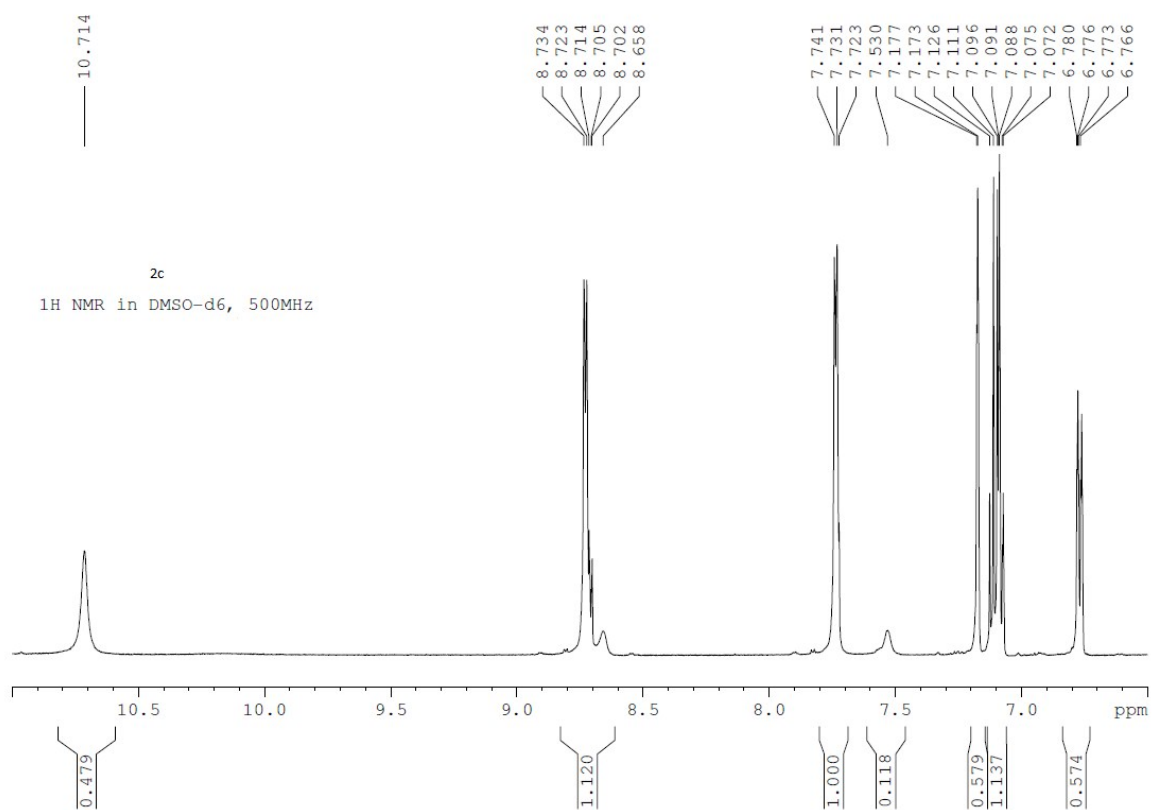
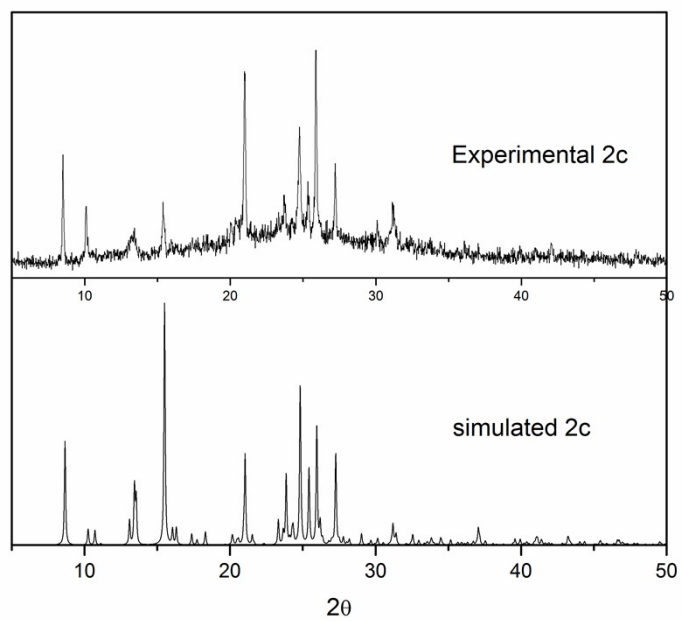
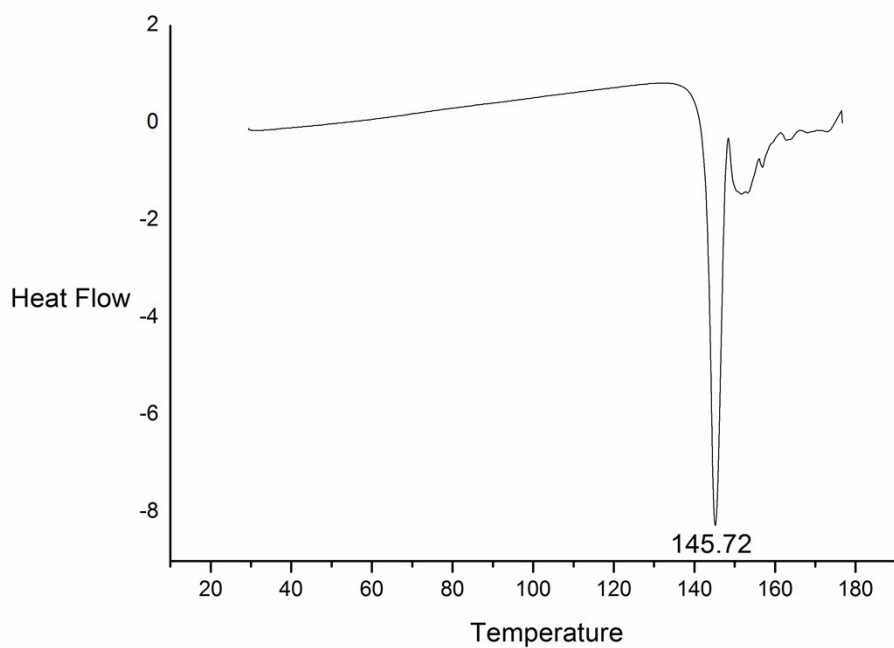


Figure S7b: NMR spectrum of 2c

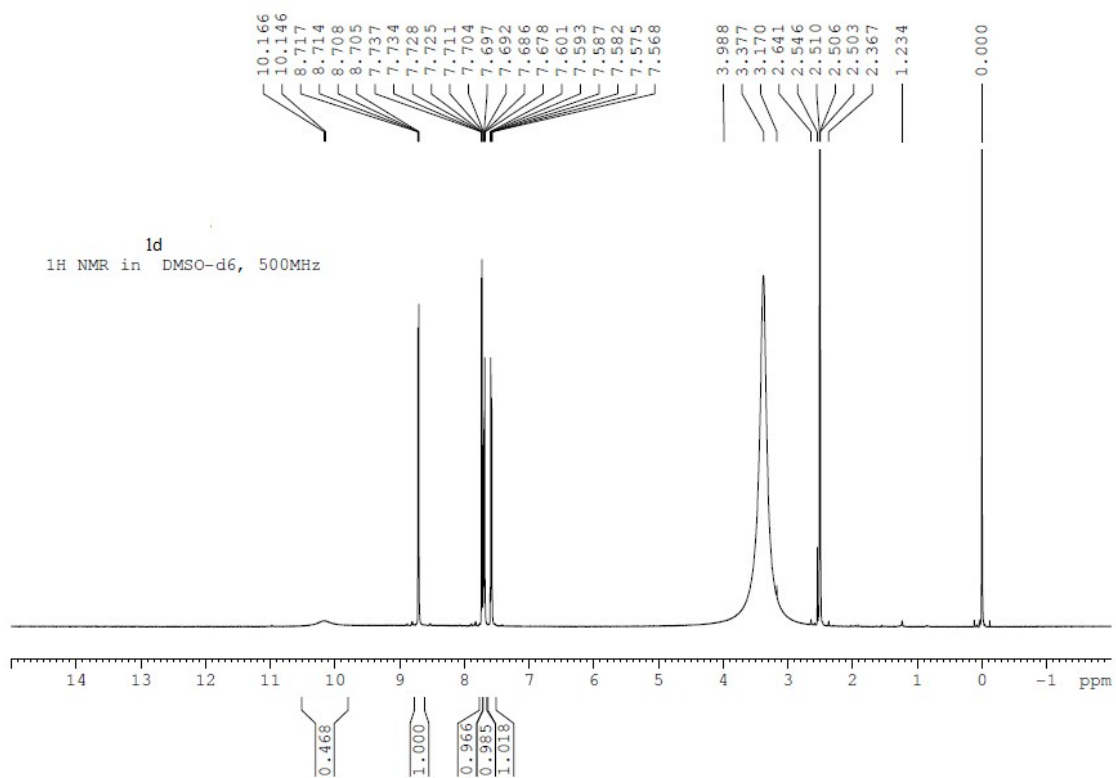


**Figure S8:** XRPD of 2c

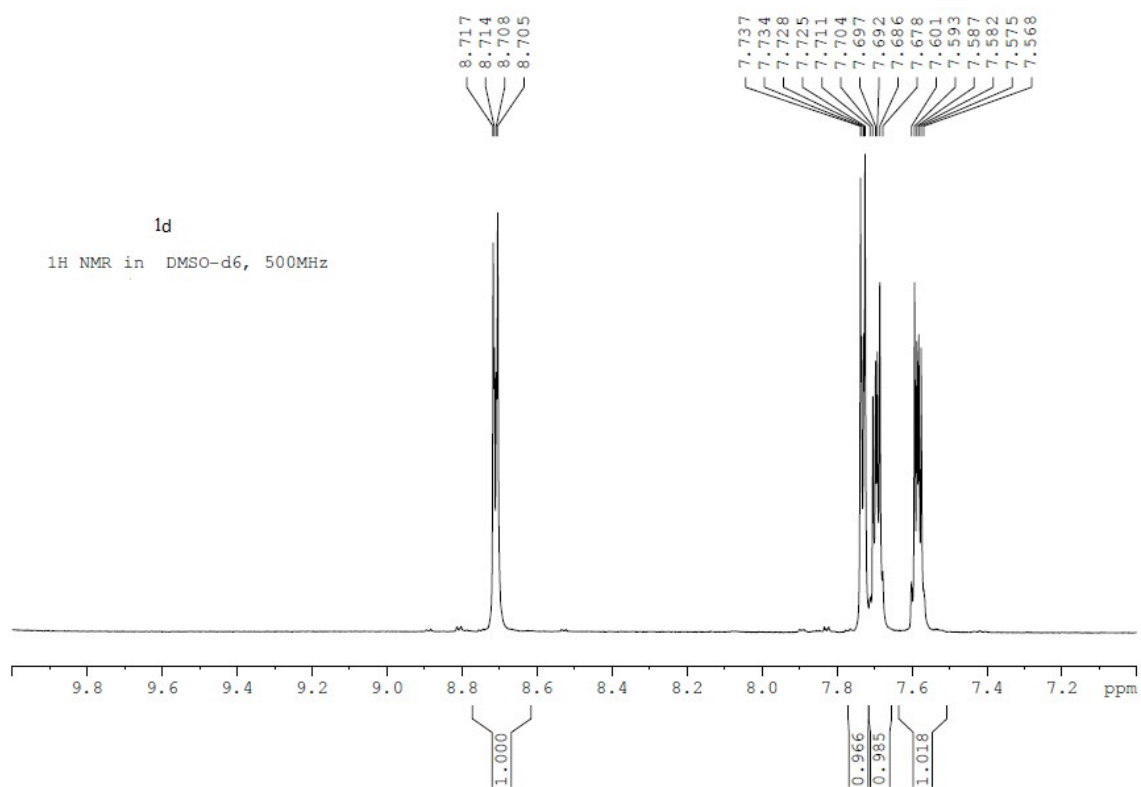




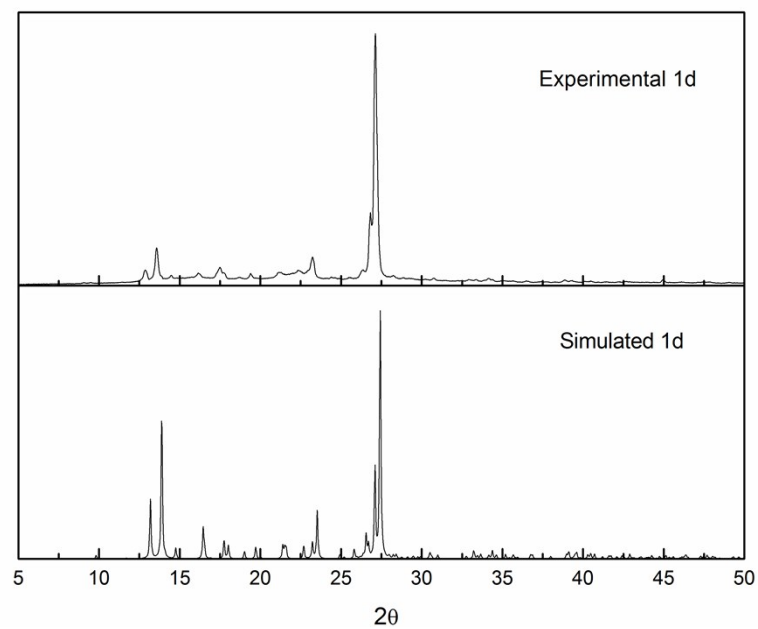
**Figure S9:** DSC thermogram of 1d



**Figure S10a:** NMR spectrum of 1d



**Figure S10b:** NMR spectrum of 1d



**Figure S11:** XRPD of 1d

**Characterization by  $^1\text{H}$  NMR:**

**NMR(500 MHz, DMSO- $d_6$ ): 1a:** 8.7 (dd,  $J=12\text{Hz}$ , 2H), 7.7 (d,  $J=9\text{Hz}$ , 2H), 7.1 (d,  $J=3\text{Hz}$ , 1H), 6.9(dd,  $J=9\text{Hz}$ , 1H), 6.8(d,  $J=9\text{Hz}$ , 1H),

**NMR(500 MHz, DMSO- $d_6$ ): 1b:** 8.8(dd,  $J=4.5\text{Hz}$ , 2H), 7.8(dd,  $J=4.5\text{Hz}$ , 2H), 7.8(dd,  $J=4.5\text{Hz}$ , 2H), 6.2(d,  $J=8\text{Hz}$ , 2H), 7.0(t,  $J=4.2\text{Hz}$ , 1H).

**NMR(500 MHz, DMSO- $d_6$ ): 1c:** 8.7(dd,  $J=9\text{Hz}$ , 2H), 7.7(dd,  $J=9\text{Hz}$ , 2H), 7.1(d,  $J=2\text{Hz}$ , 1H), 6.7(dd,  $J=3.5\text{Hz}$ , 1H), 7.0(d,  $J=7.5\text{Hz}$ , 1H), 7.1(d,  $J=8\text{Hz}$ , 1H).

**NMR(500 MHz, DMSO- $d_6$ ): 1d:** 8.7(d,  $J=4.5\text{Hz}$ , 2H), 7.7(d,  $J=4.5\text{Hz}$ , 2H), 7.6(m,  $J=9\text{Hz}$ , 2H), 7.5(m,  $J=10\text{Hz}$ , 2H)

**Characterization by FT-IR:**

**1a:** 1601(m), 1656(s) 3211.4(s).

**1b:** 1580(m), 1636(s), 1580(m), 3054(s)

**1c:** 1601.6(m), 1669.6(s), 3071(s).

**1d:** 1632.3(m), 1659.6(s), 3306.1(s).