Supporting Information

Solvent-Minimized, Chromatography-Free, Diastereoselective Synthesis of Oxazolidine-Dispirooxindoles *via oxa*-1, 3-Dipolar Cycloaddition of 3-Oxindole

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1. Studies on stability of product

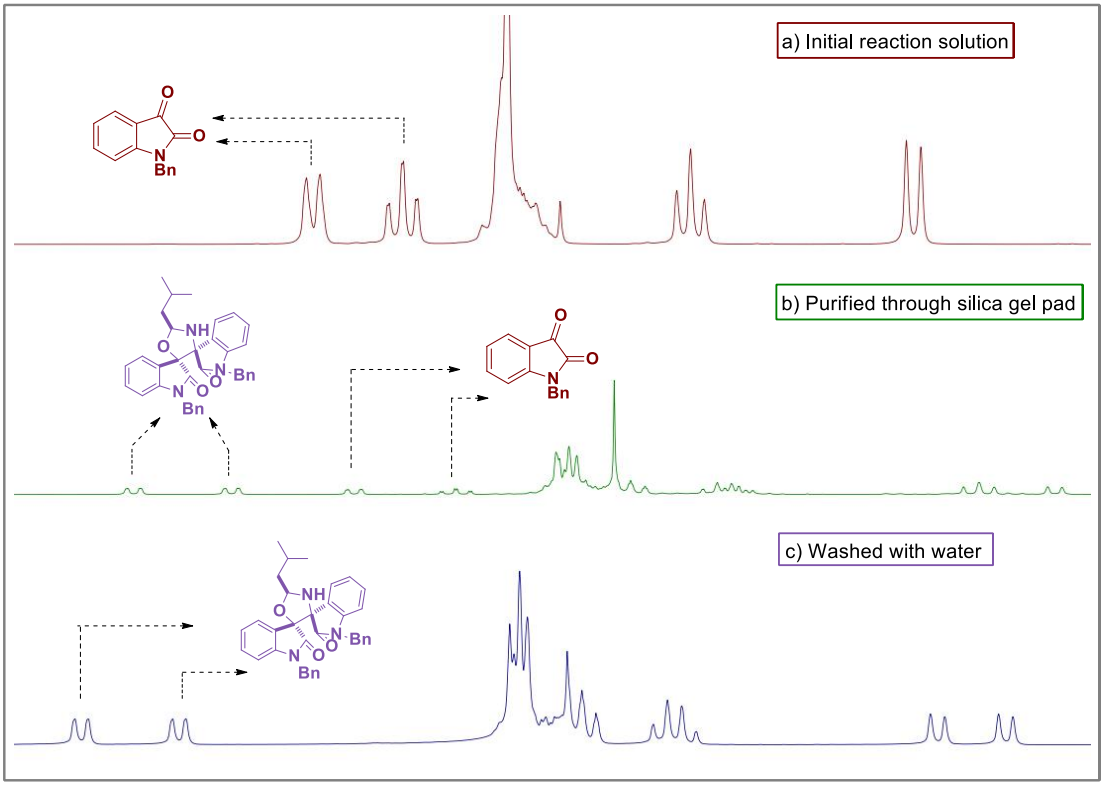
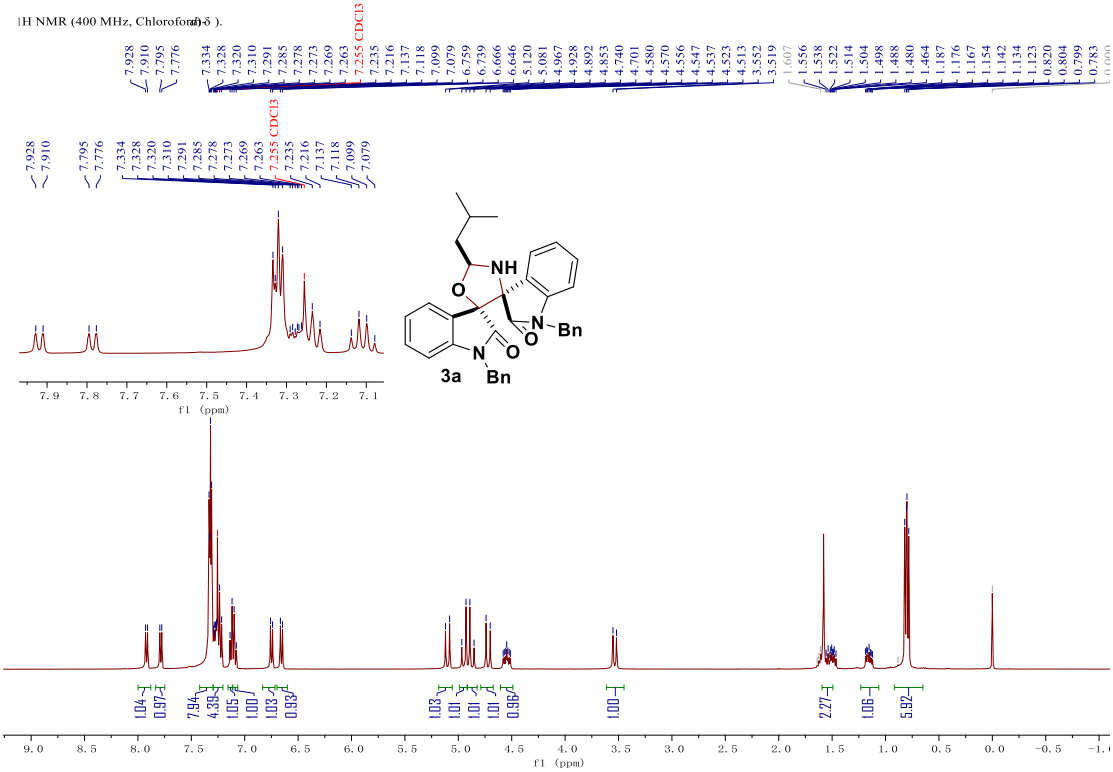
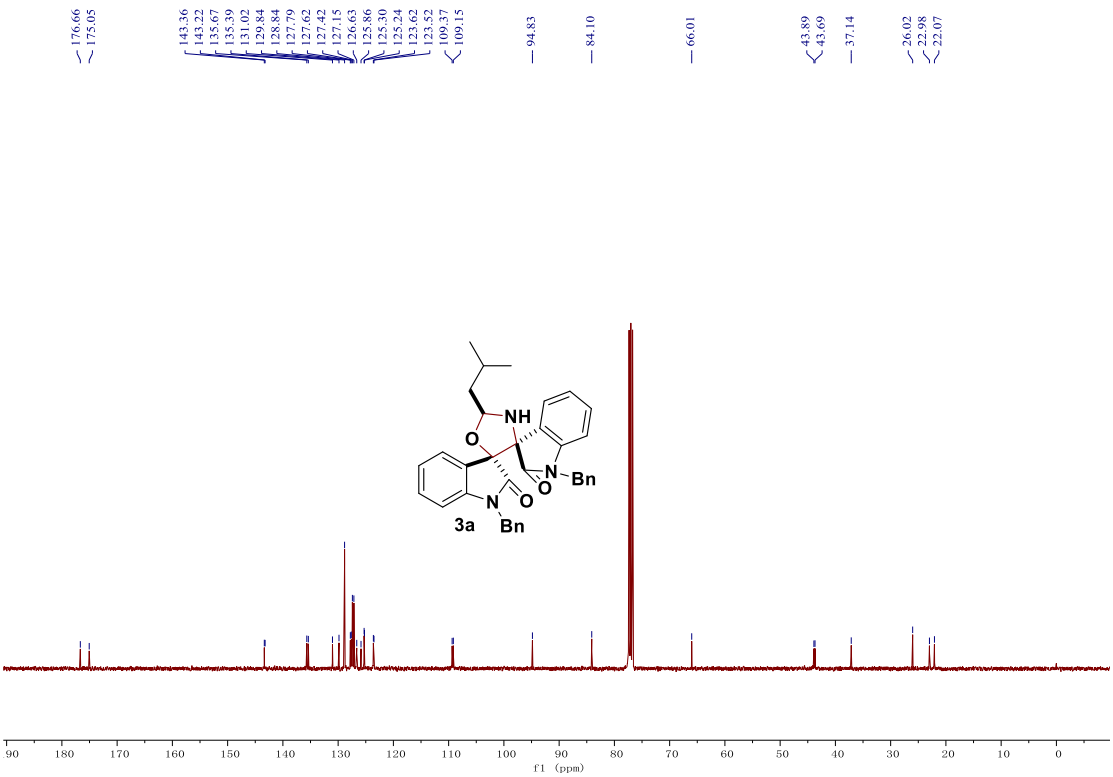


Figure S1 NMR spectra of (a) initial mixture of **1a** and **2a**; (b) reaction mixture purified through silica gel pad; (c) reaction mixture washed with water.

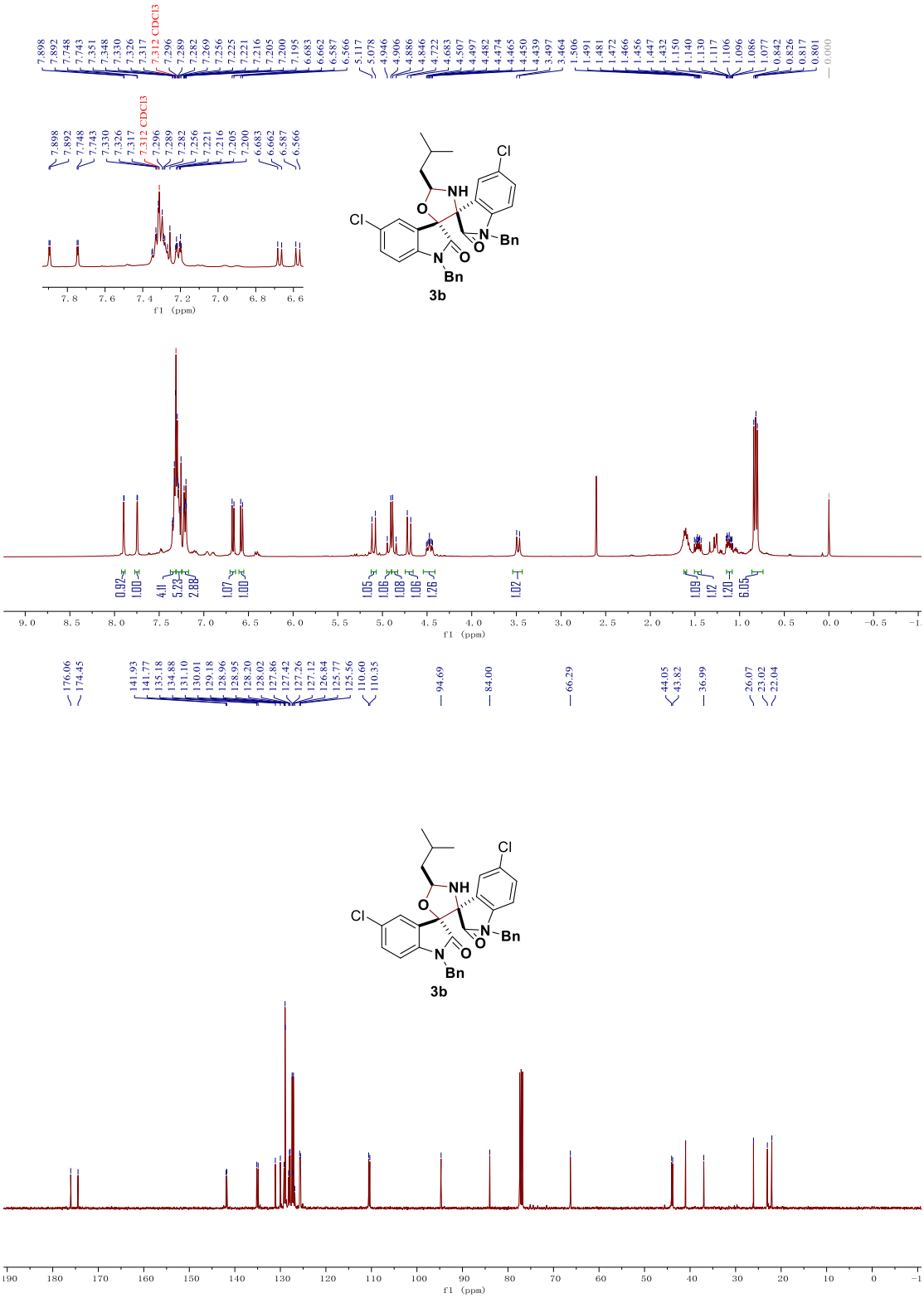
In order to better understand the inherent features of cycloadduct **3a**, different purification modes of **3a** were carried out and the results are presented in Figure S1. Once the reaction was complete, the reaction mixture was purified through a short silica gel pad. It was found that the resulting cycloadduct **3a** partially decomposed to give starting material **1a** (Fig, S1b), suggesting that **3a** is sensitive to acidic condition. On the other hand, the reaction mixture was subjected to washing with water, affording pure **3a** in excellent yield (Fig. S1c). Moreover, NMR spectrum of pure **3a** is still clean after being saved in air as solid for several days, suggesting that **3a** is quite stable as solid state.

2. NMR spectra of compound 3a-3g, 4a-4m





^{1}H NMR ($CDCl_3$, 400 MHz), ^{13}C NMR ($CDCl_3$, 100 MHz)



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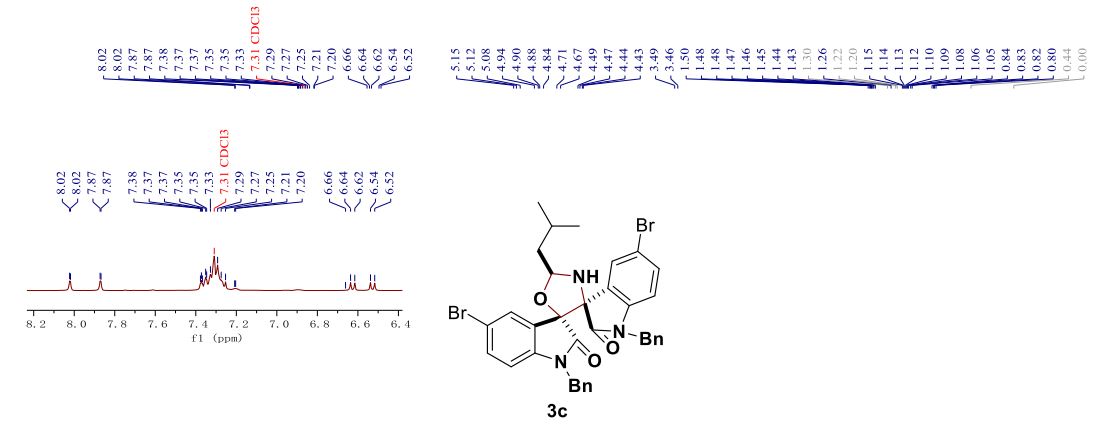
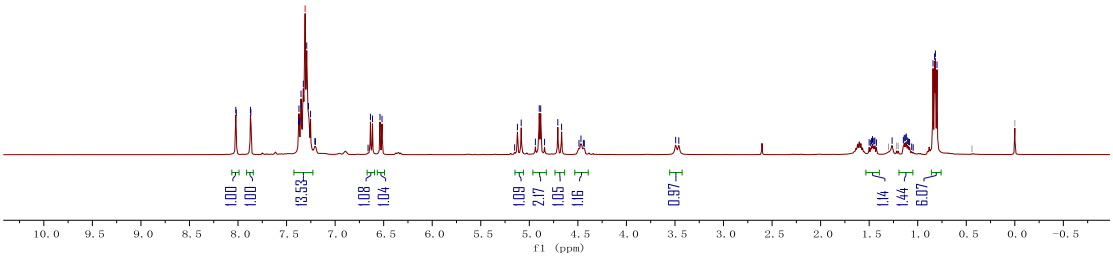
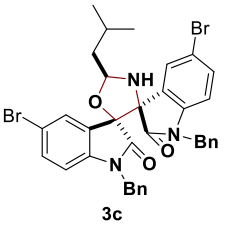


3c





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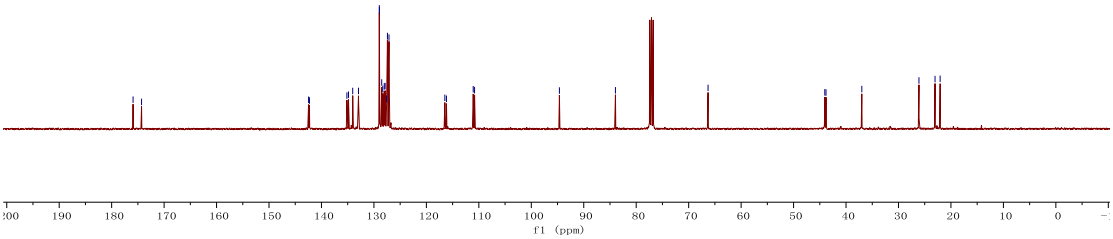

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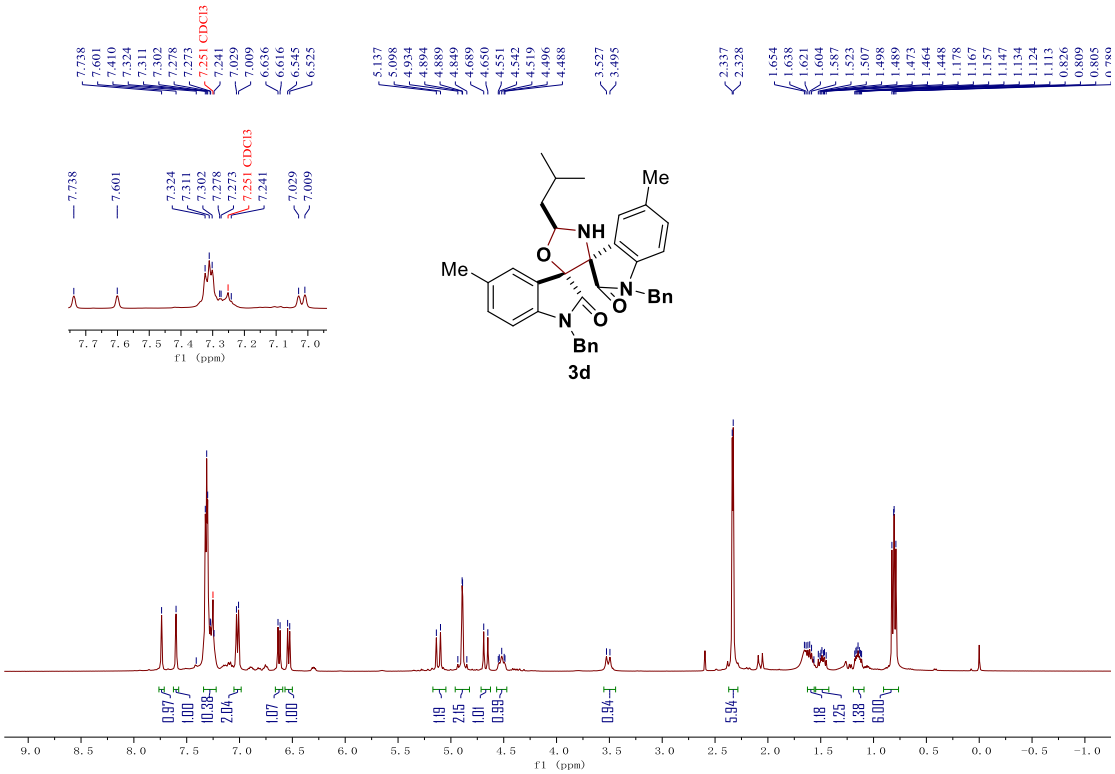

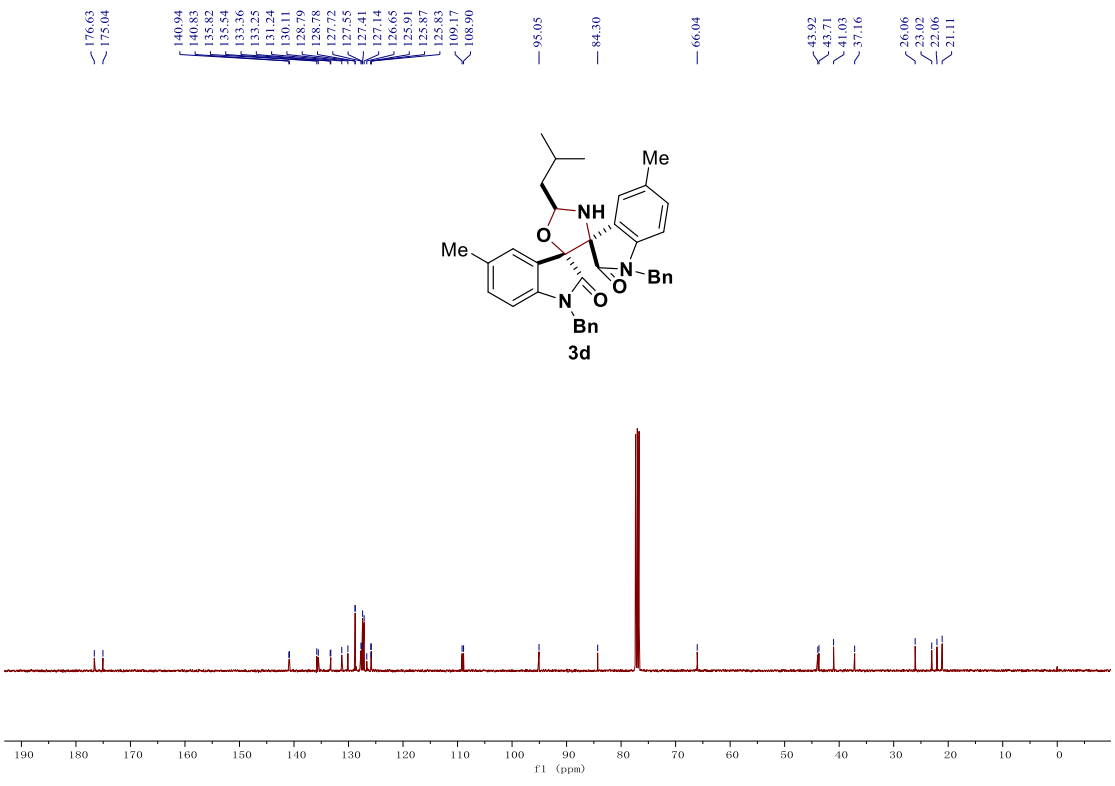

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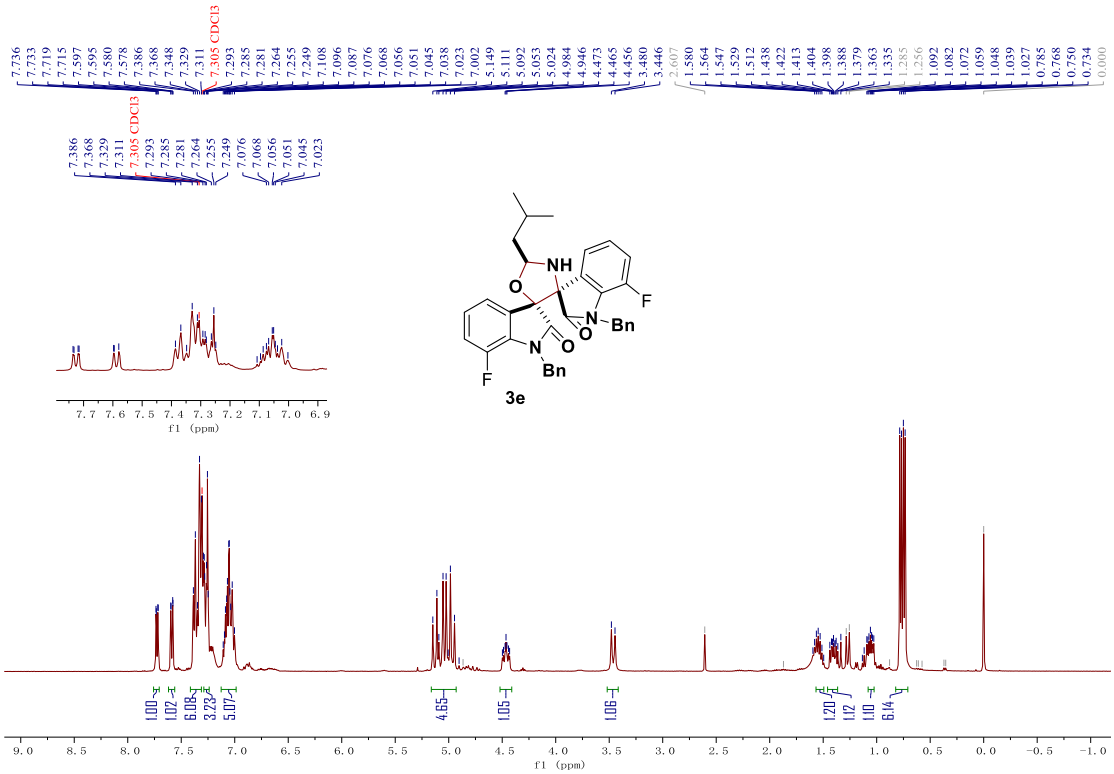

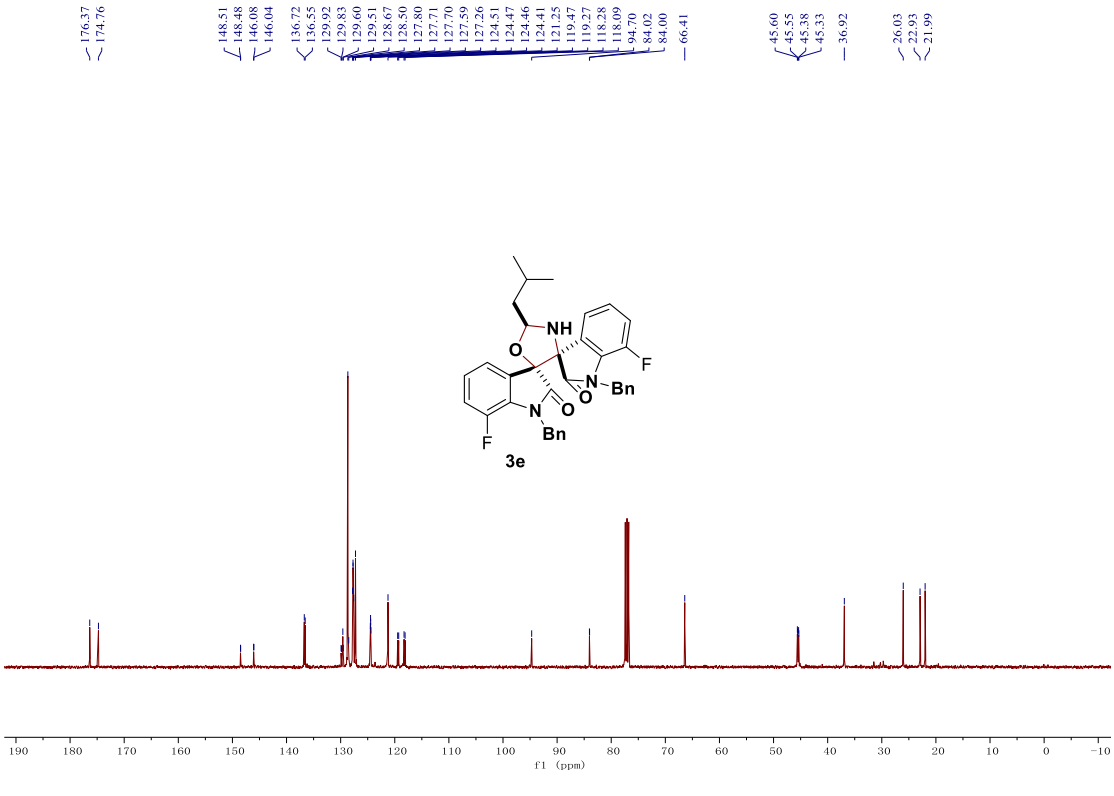

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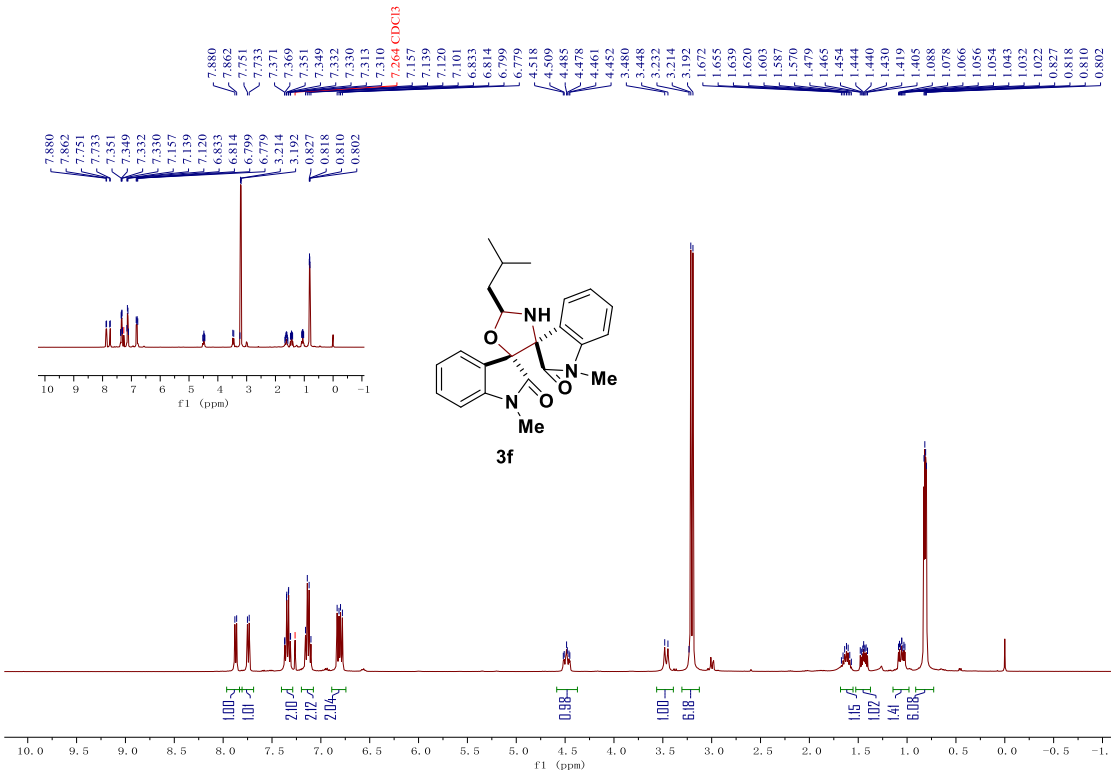

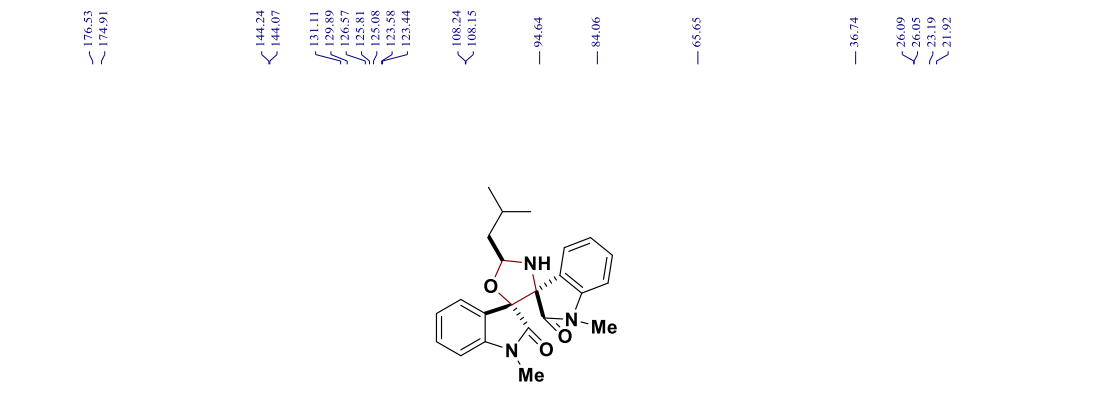

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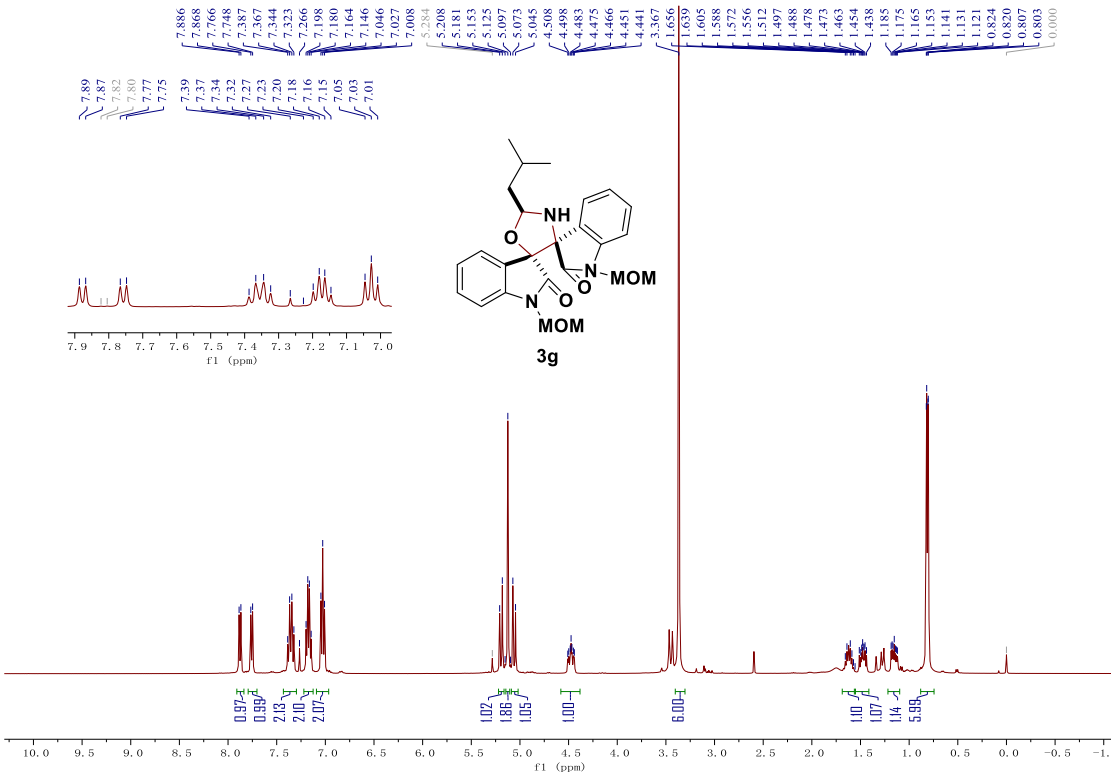

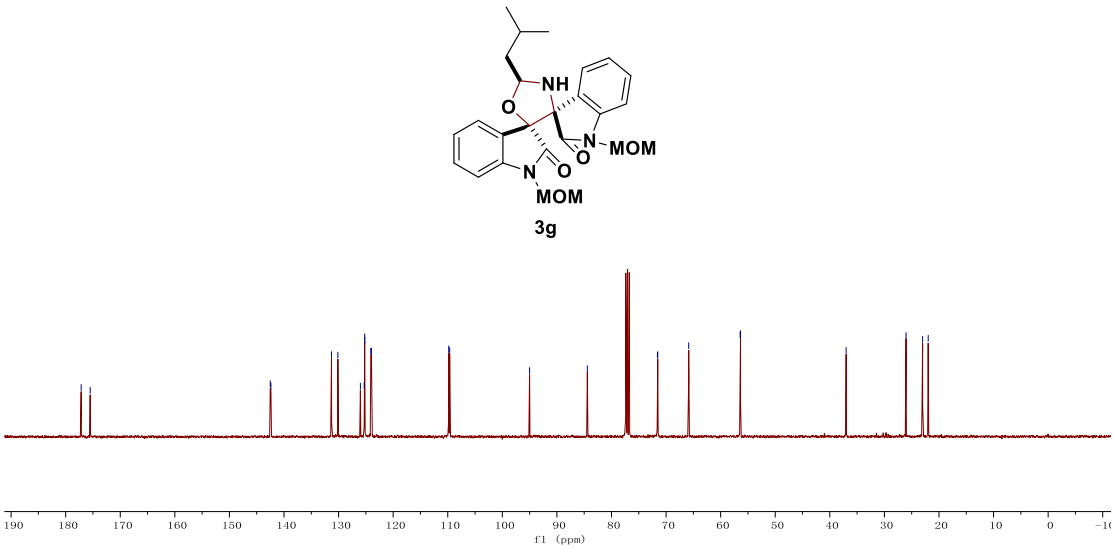

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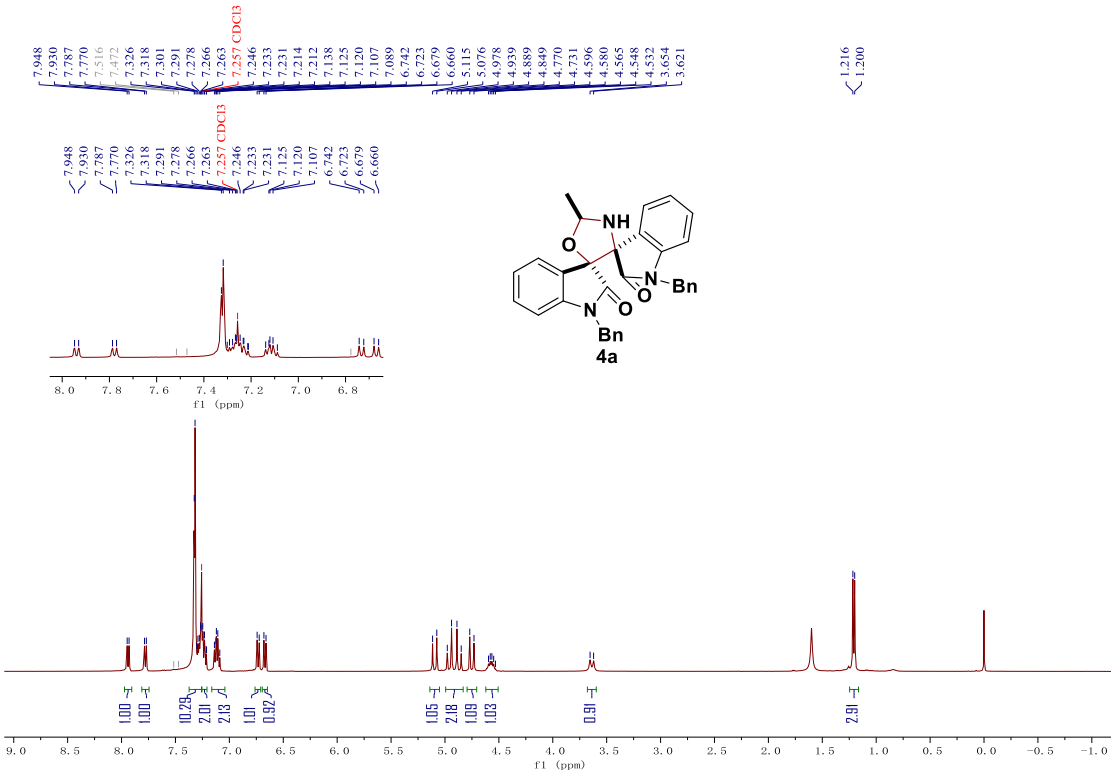

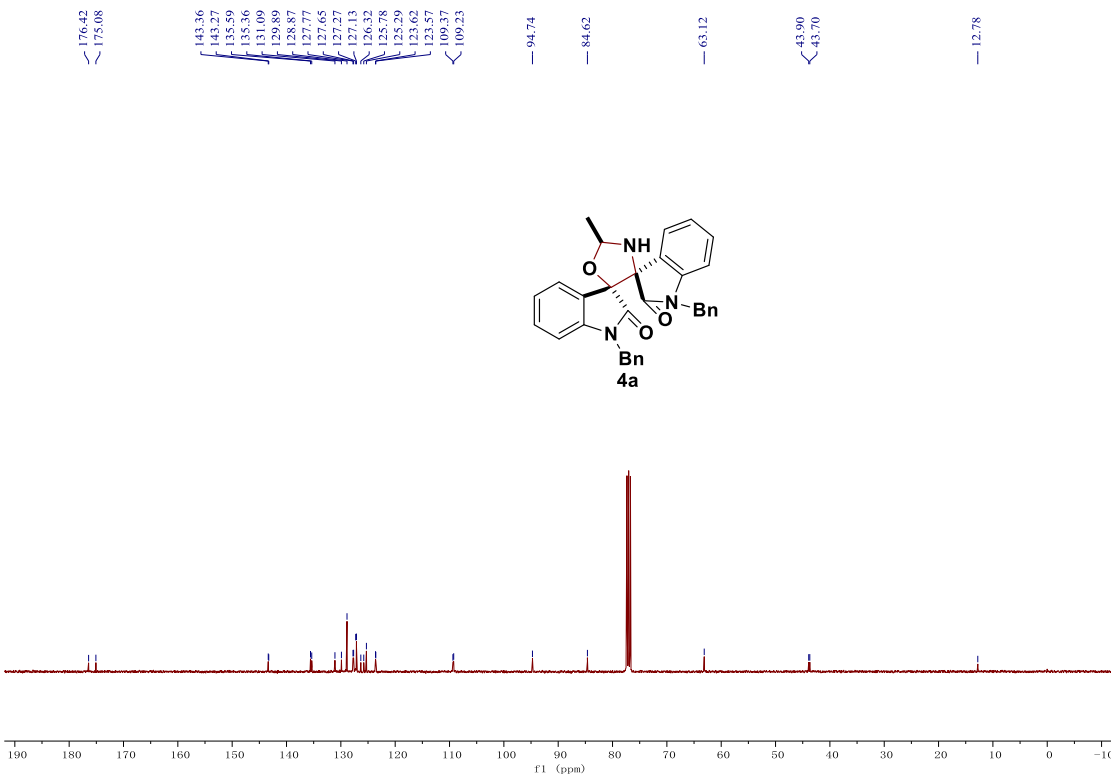

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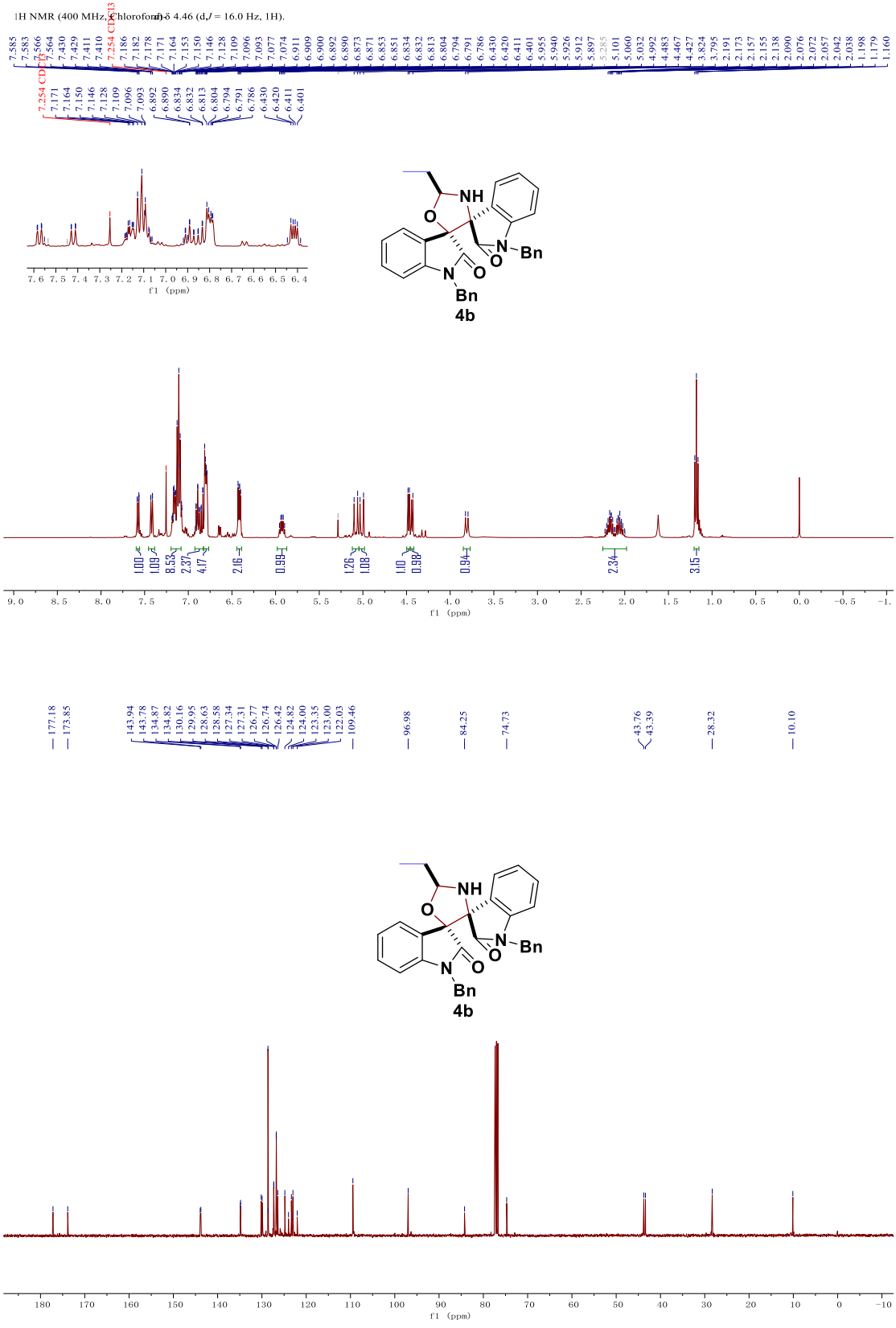

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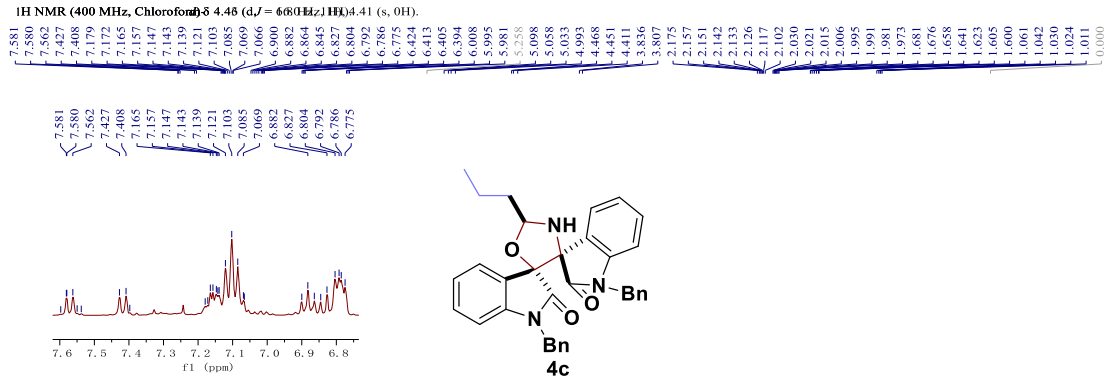

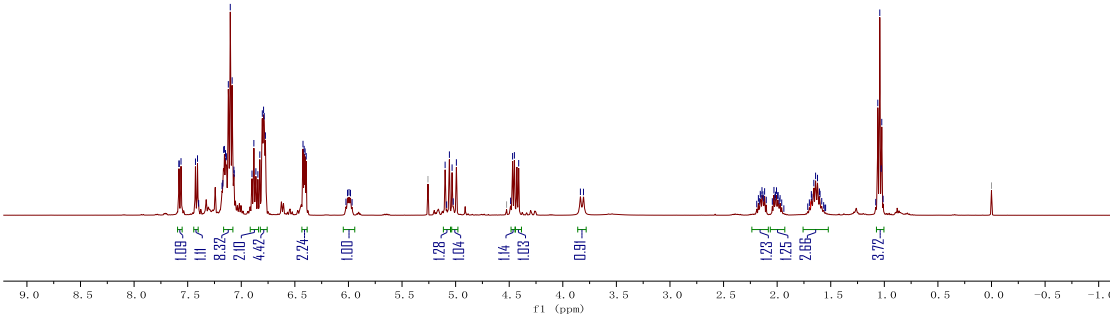

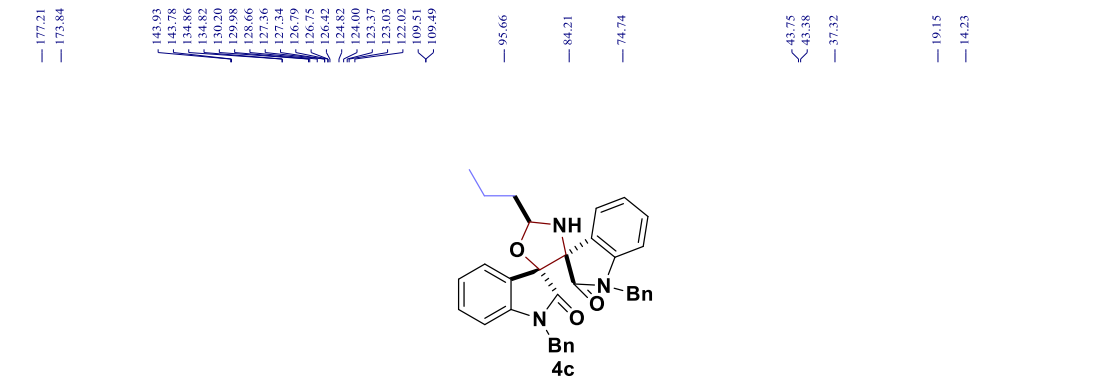

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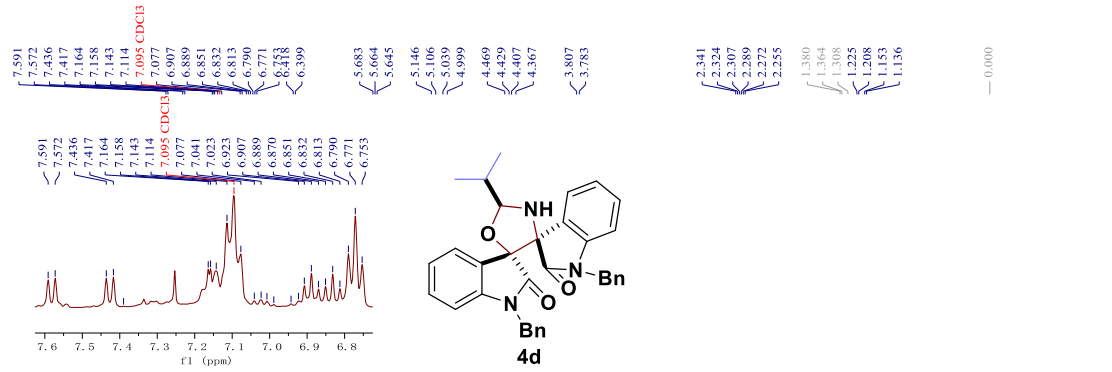
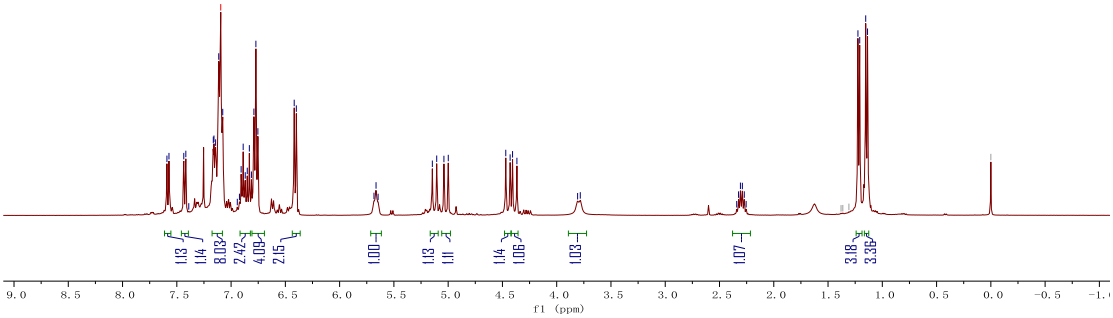
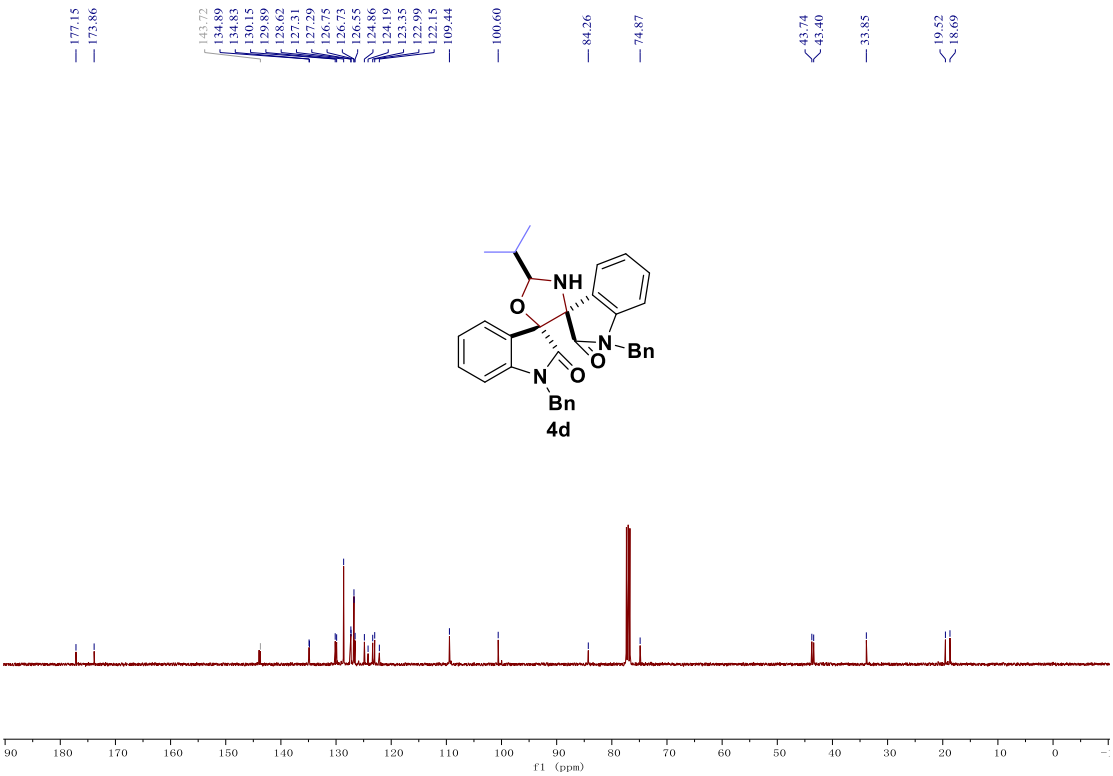


4d





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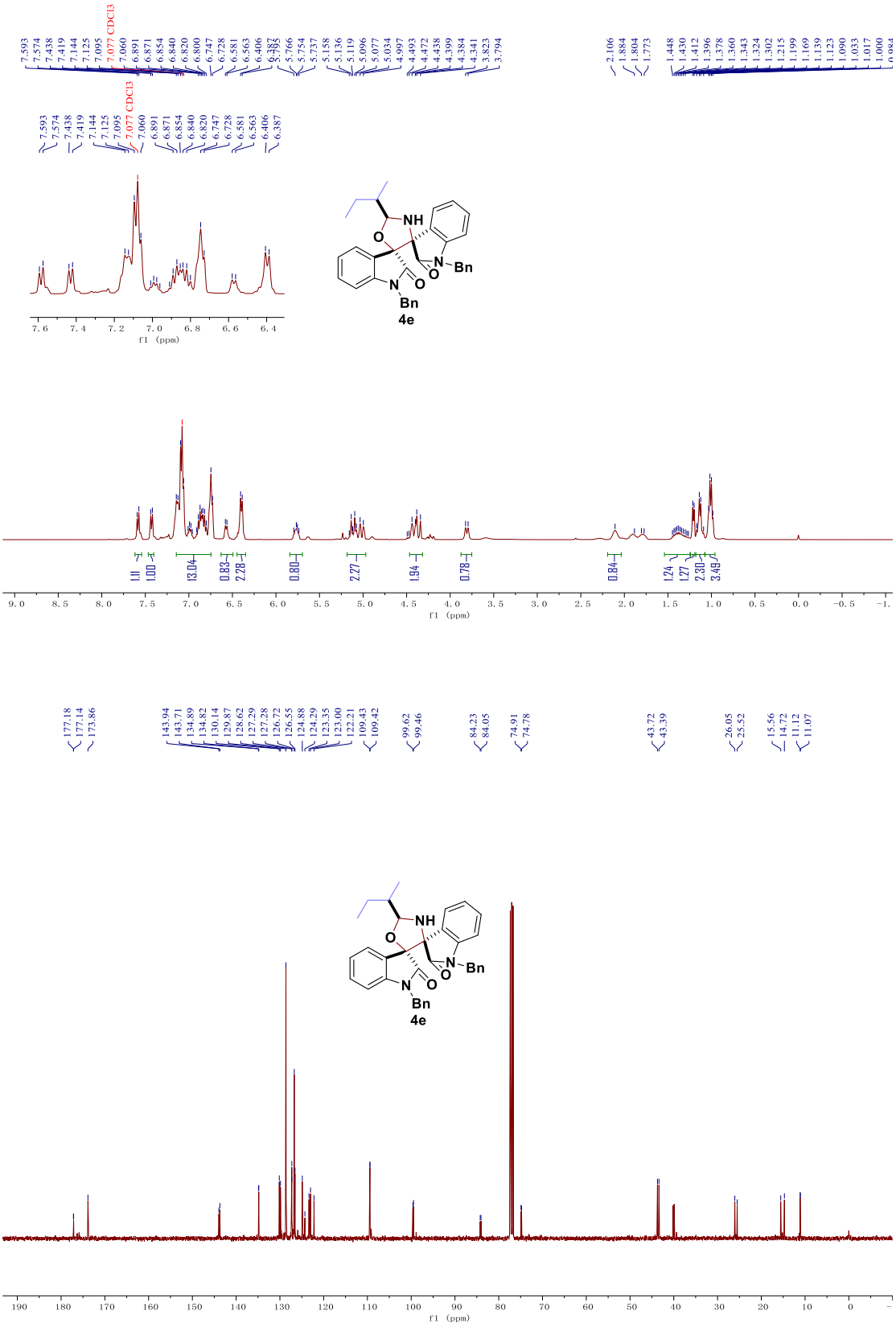

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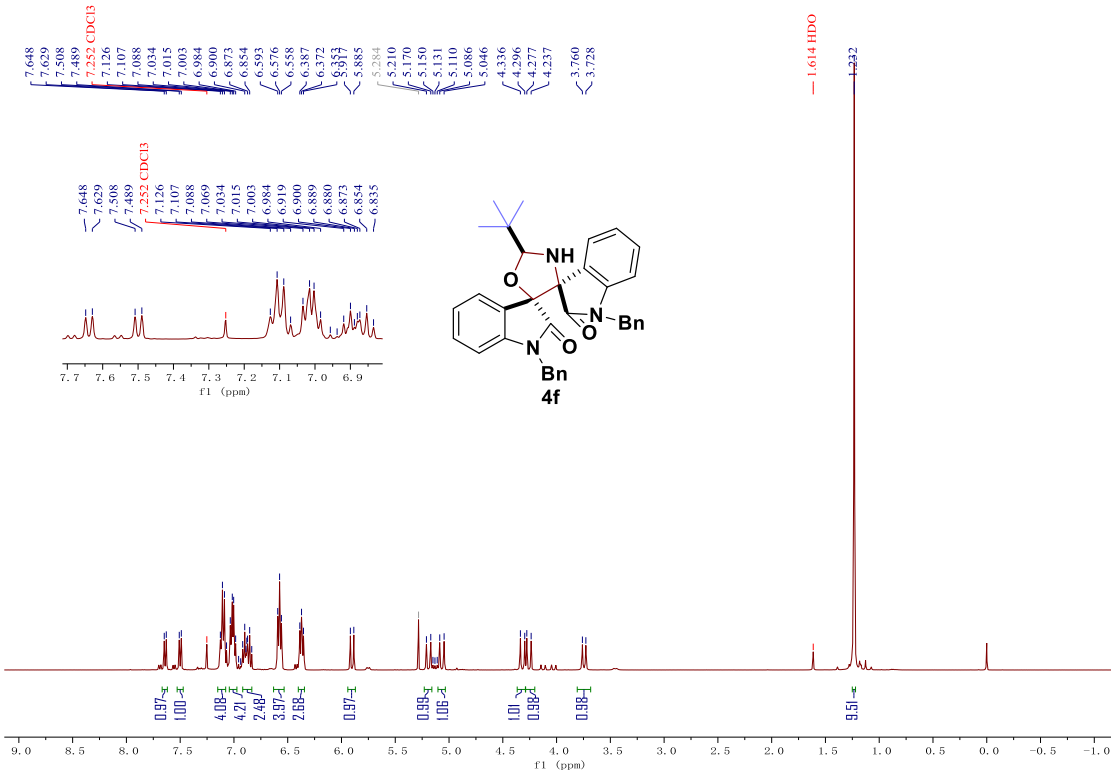

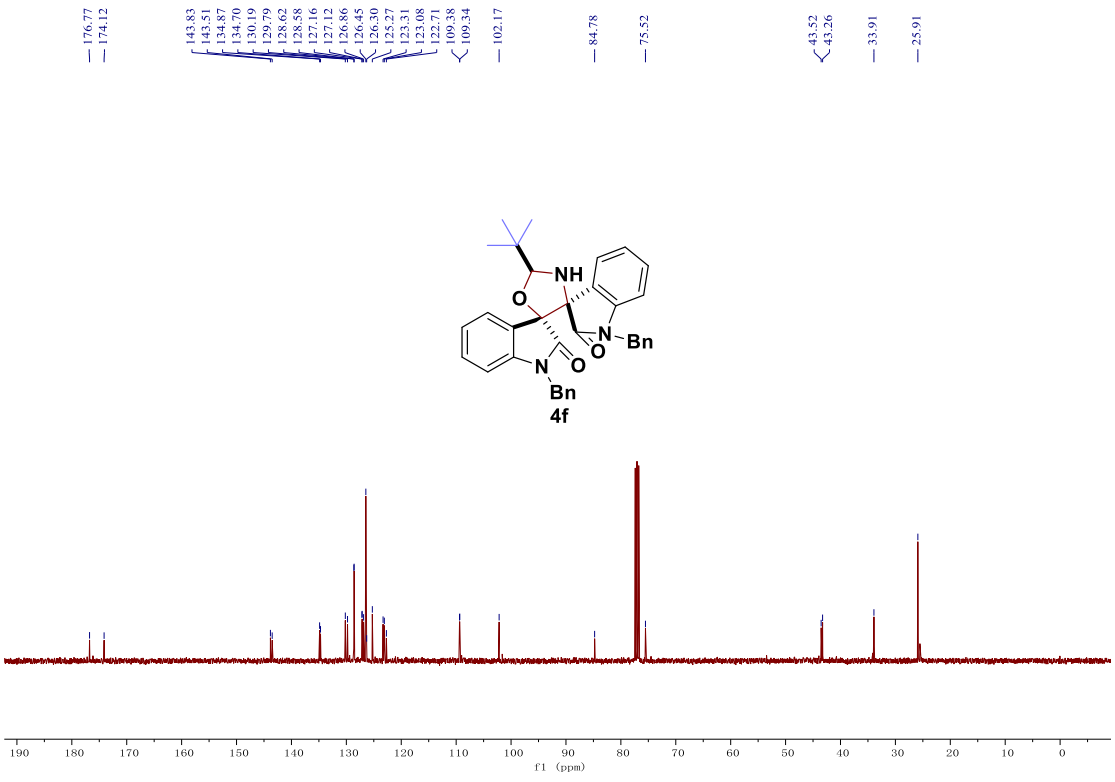

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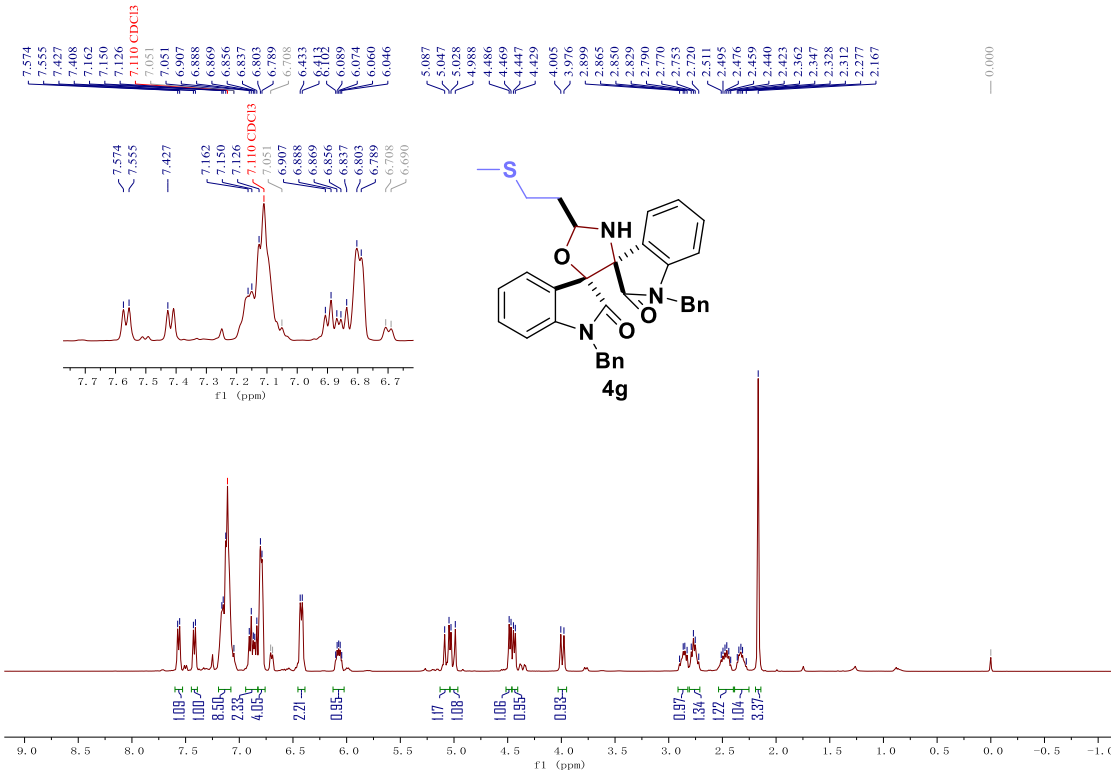

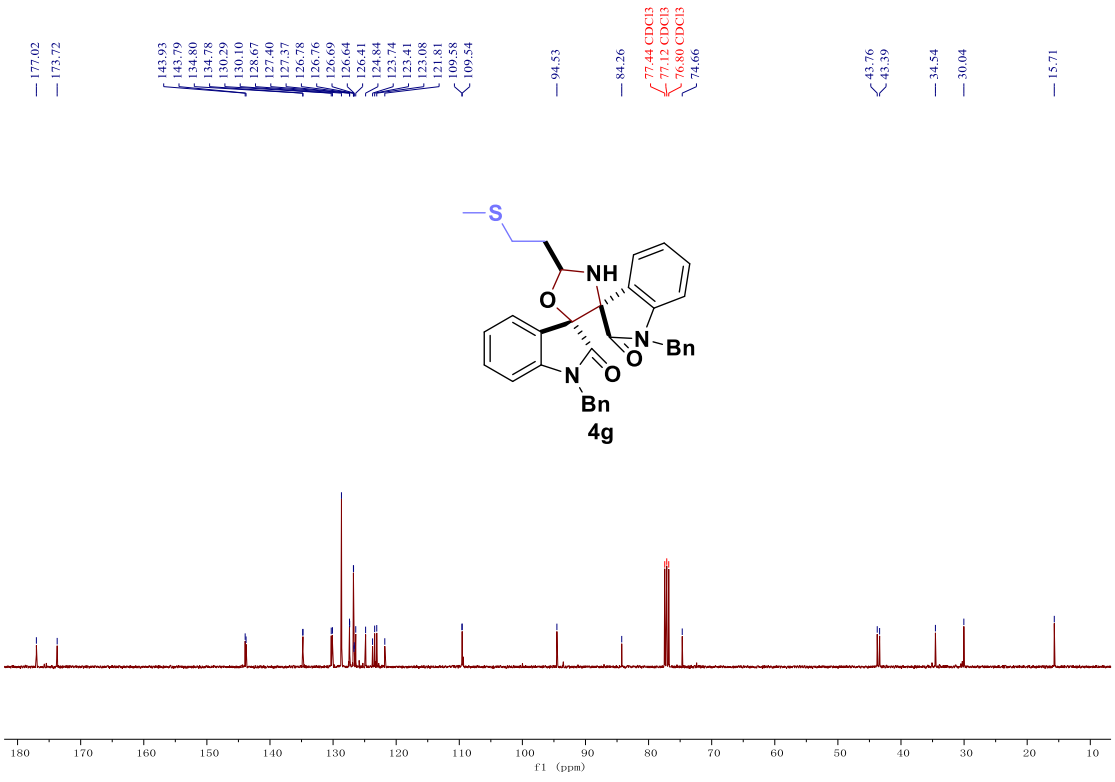

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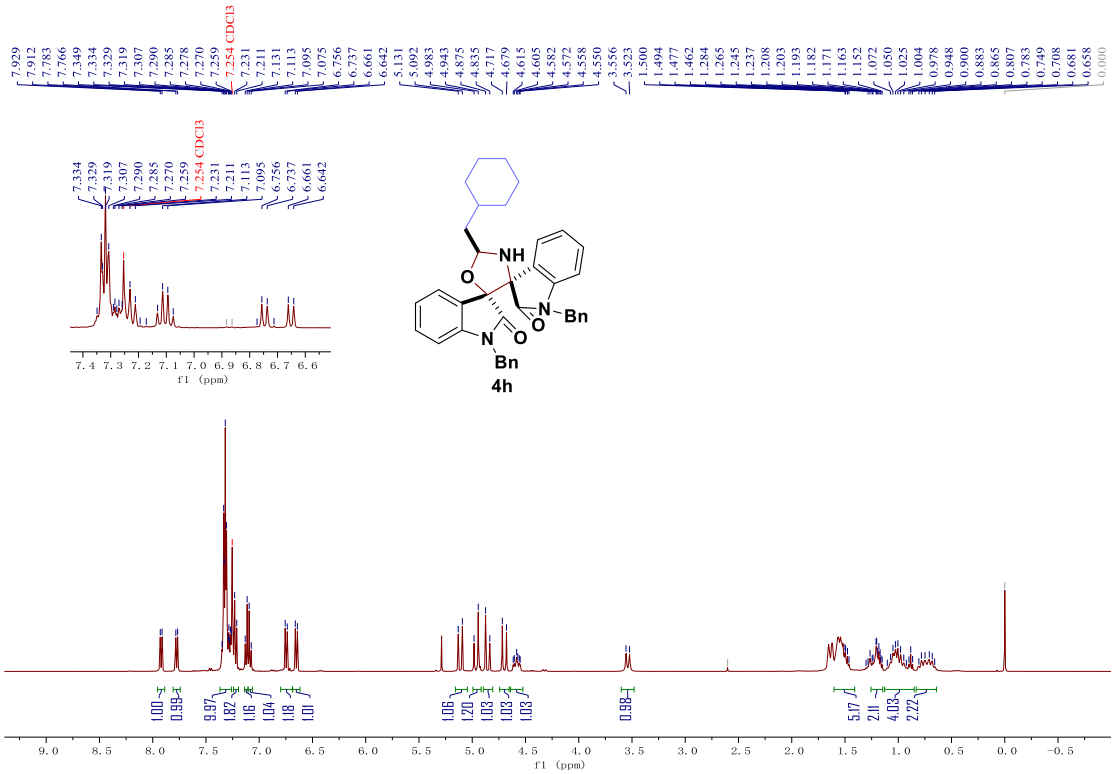

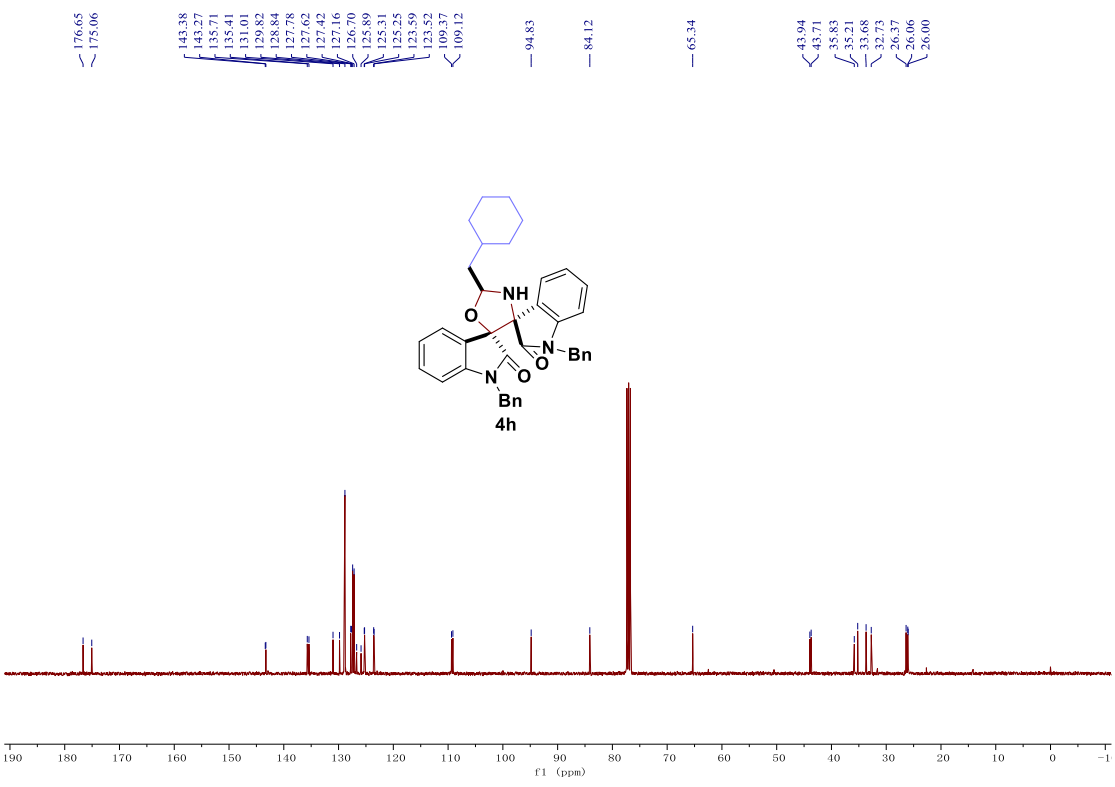

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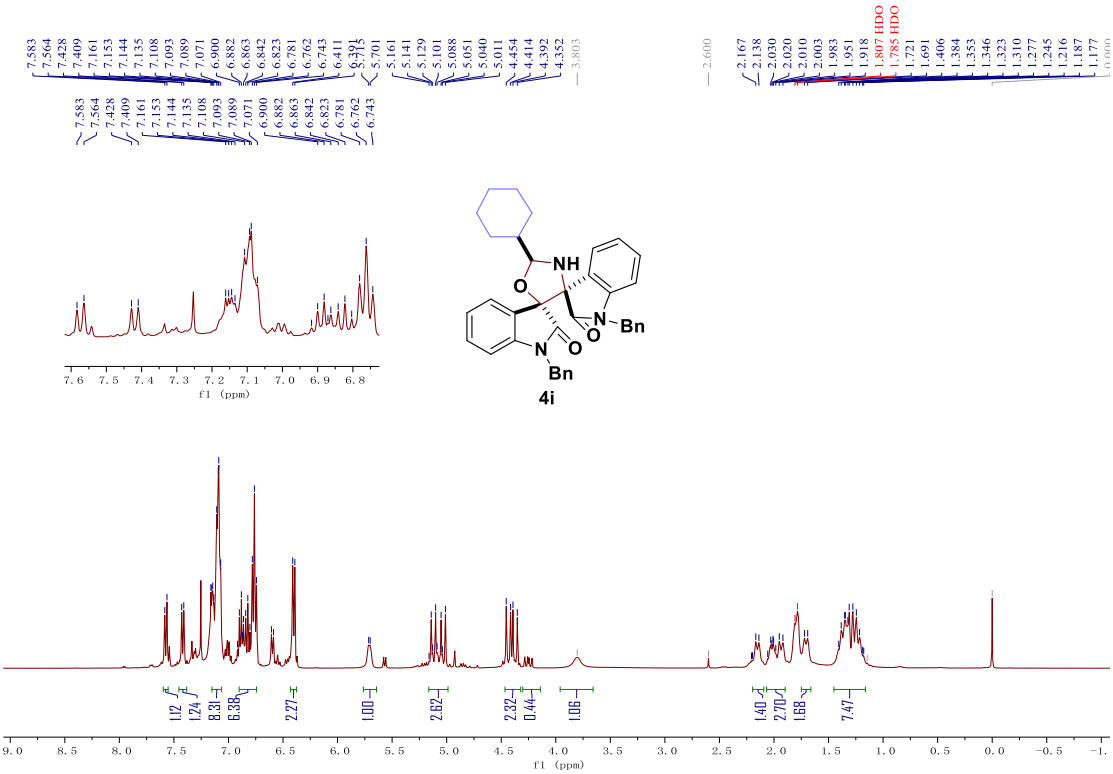

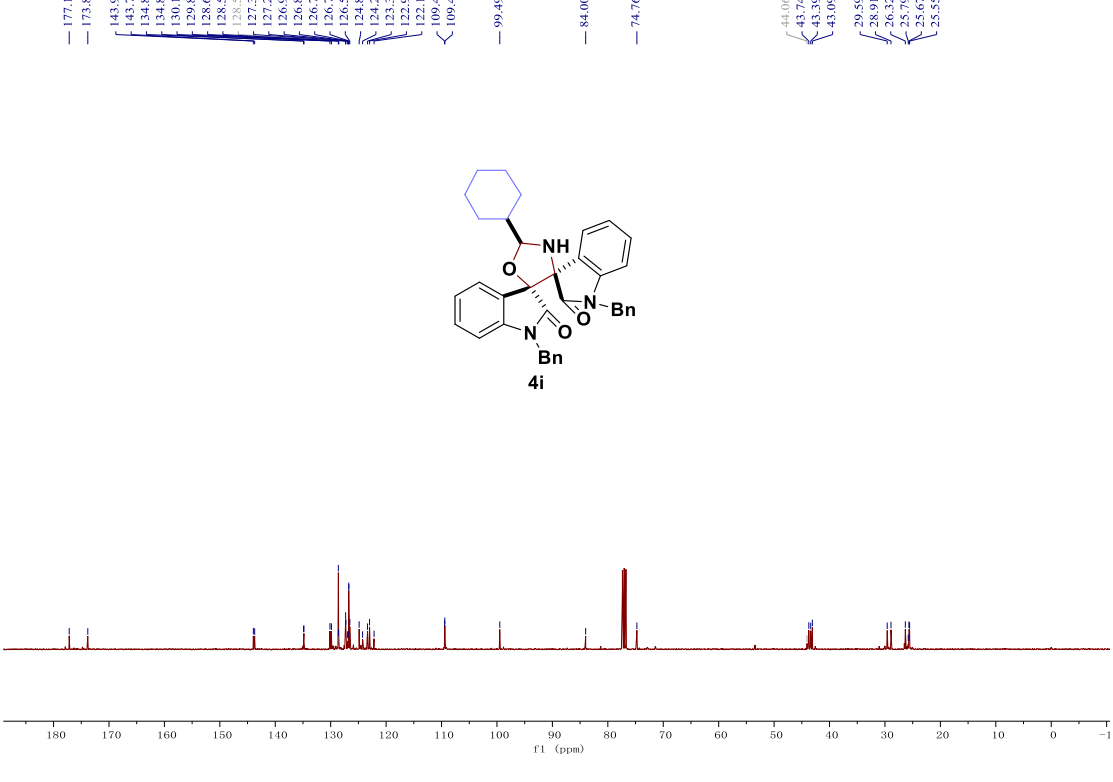

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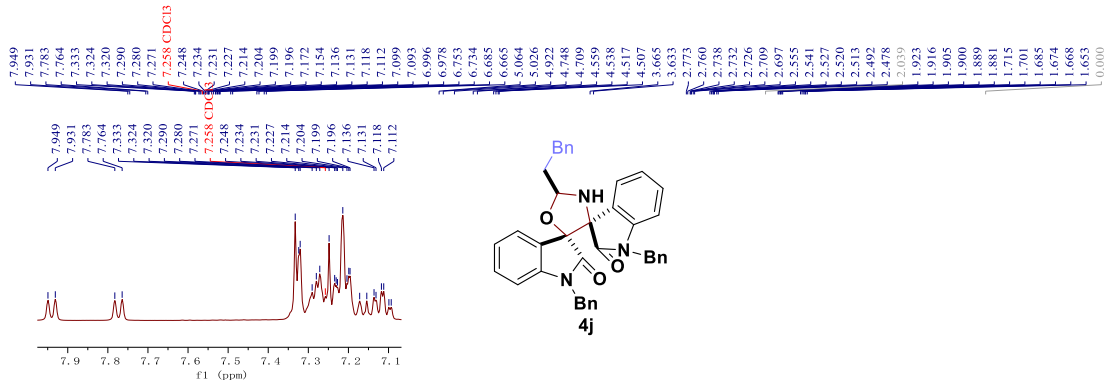

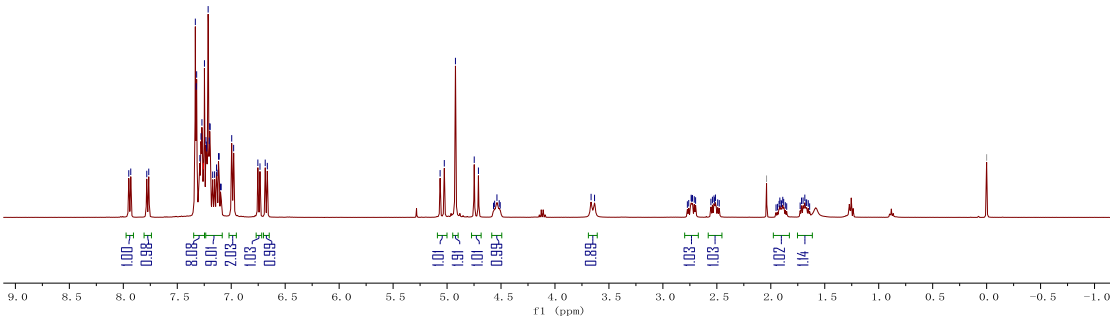

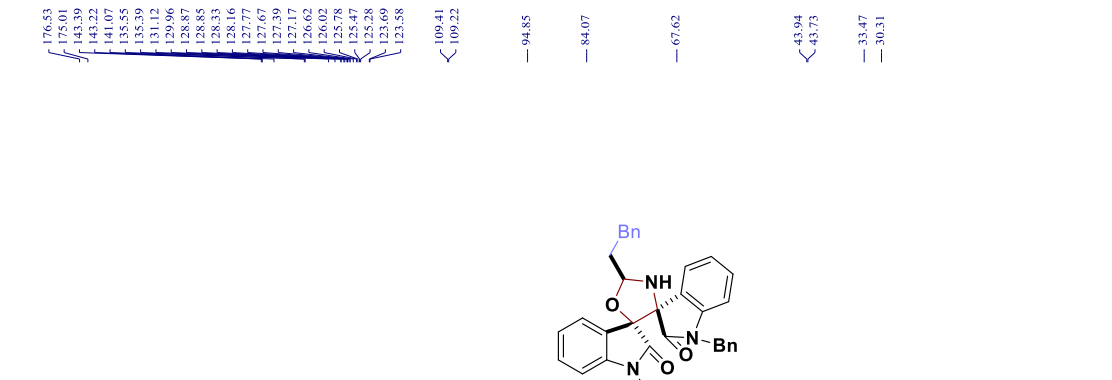

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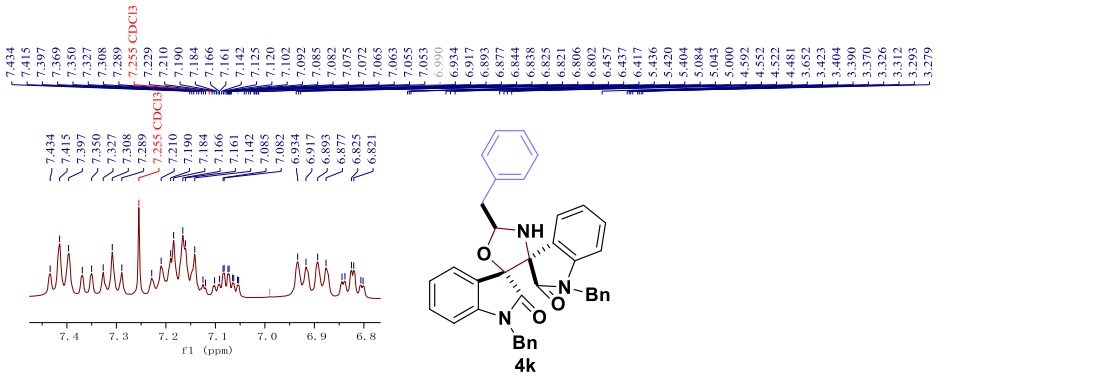

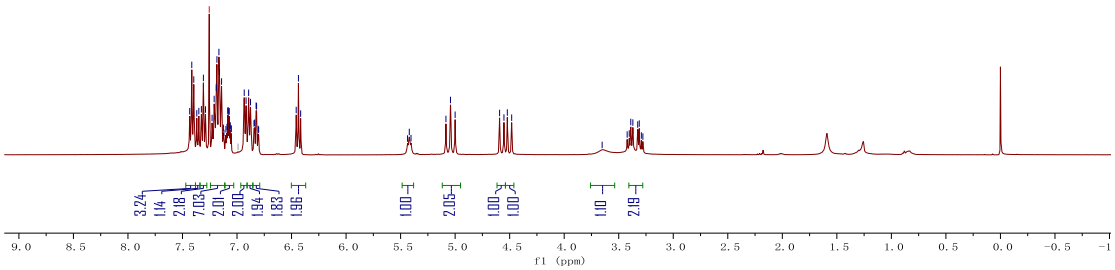

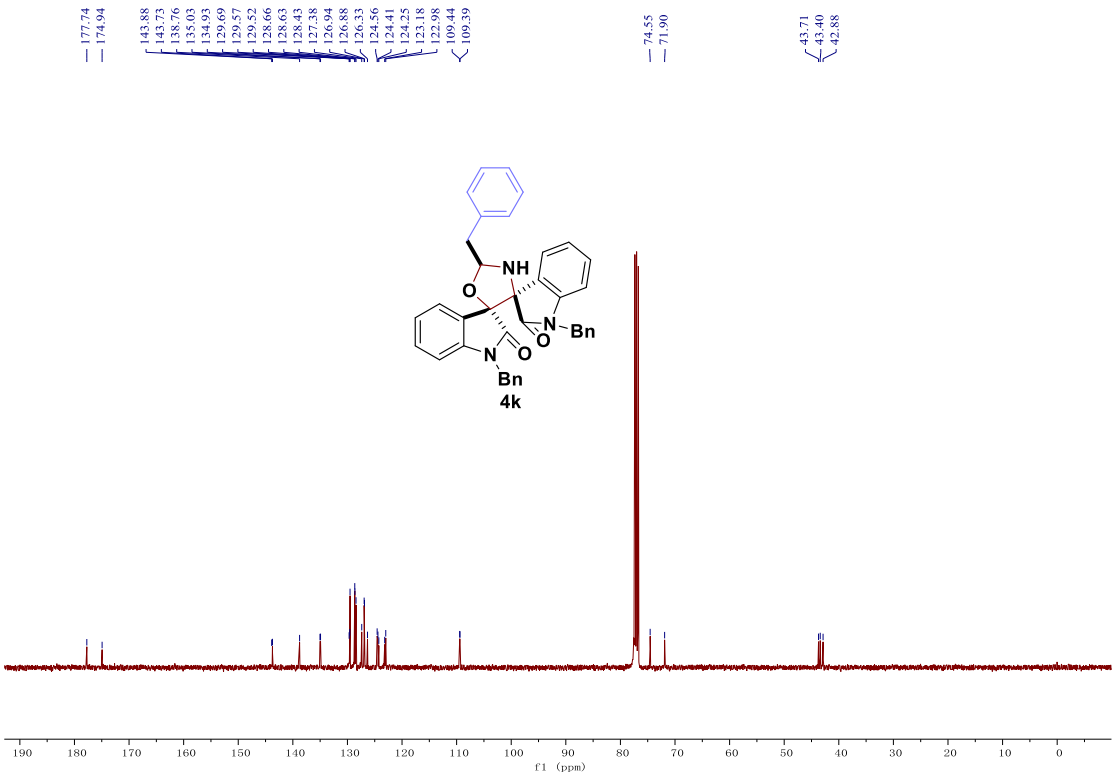

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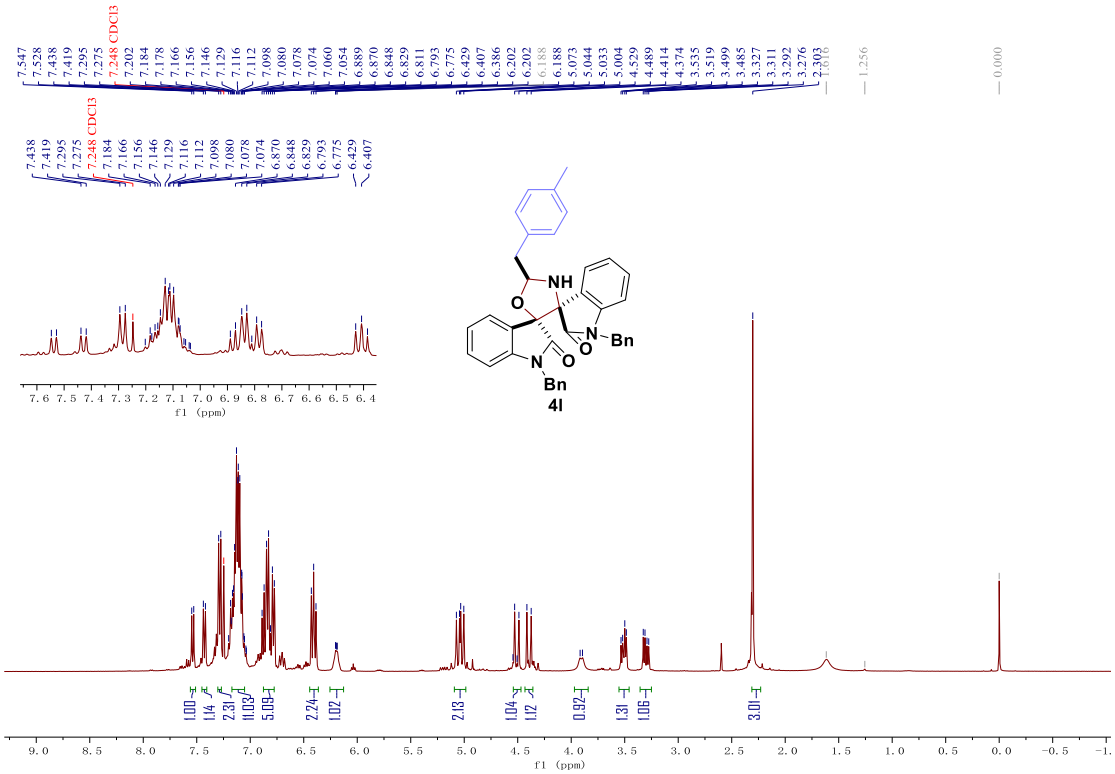

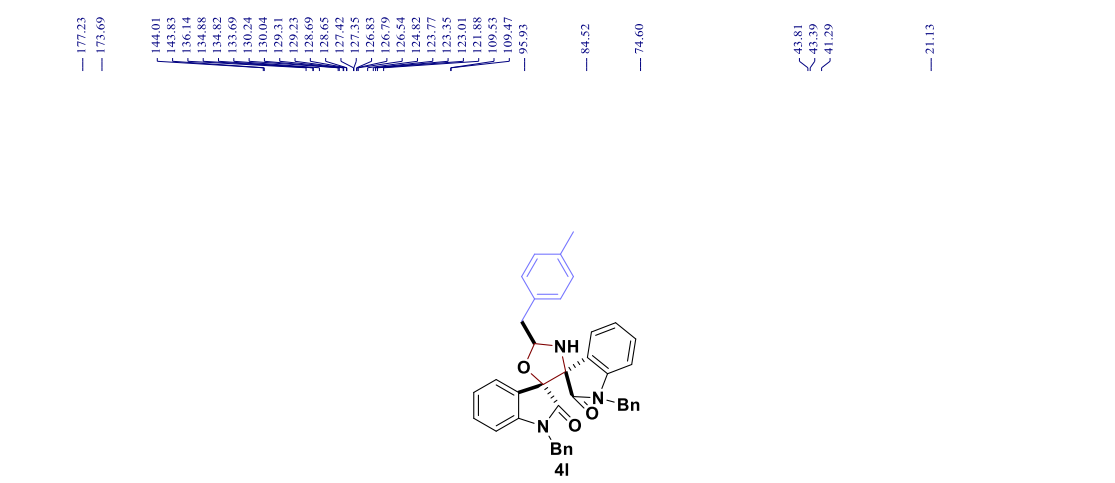

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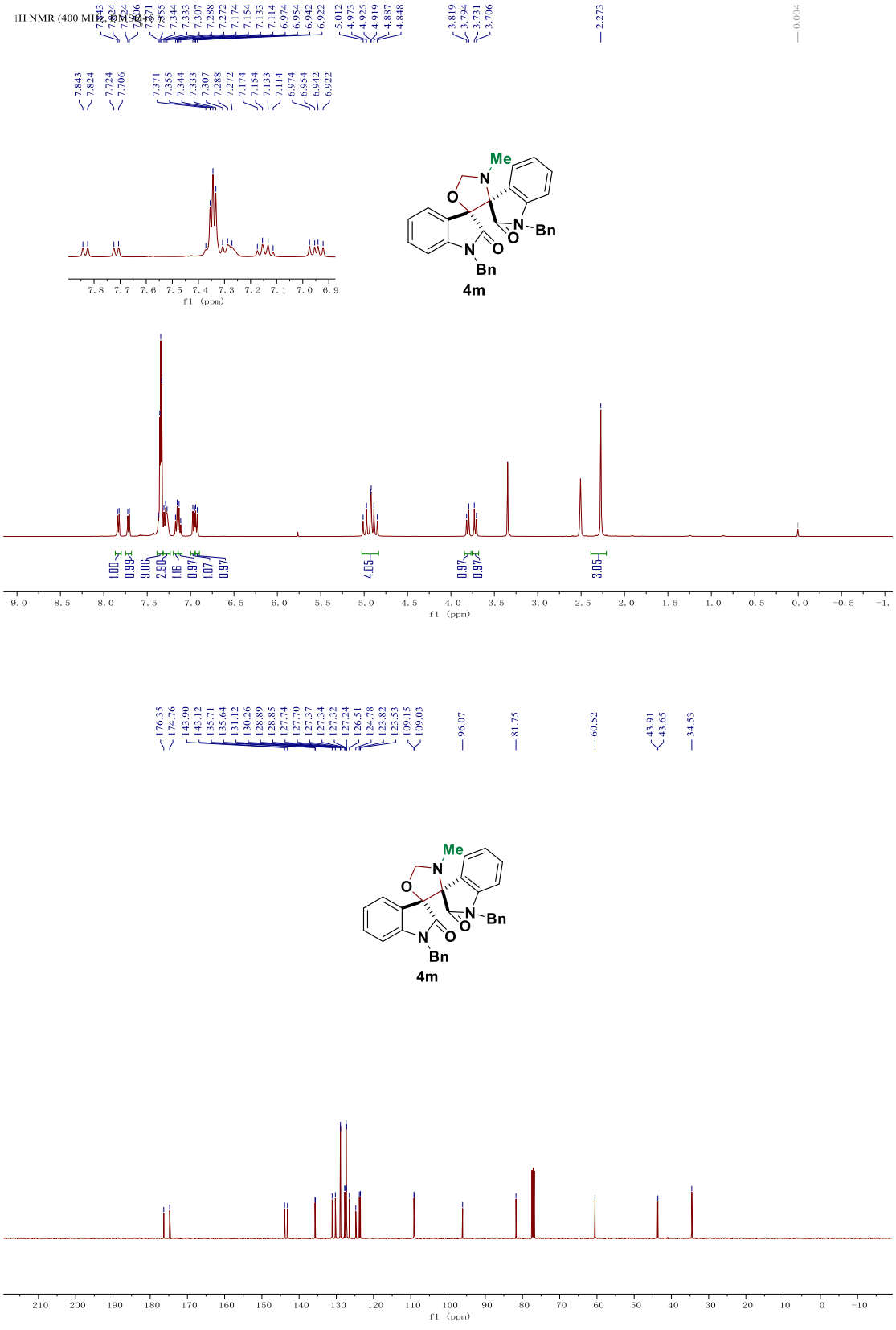
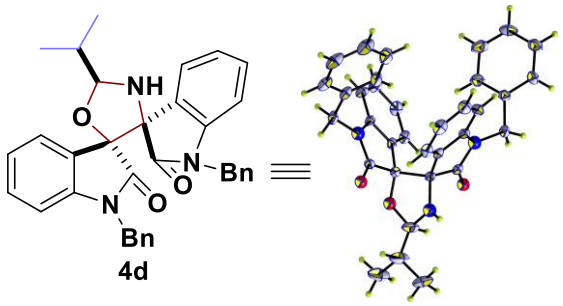


3. X-ray crystallographic data of compound 4d

X-Ray crystallographic analysis of dispirooxindole-piperazine **4d** (CCDC 1568850) showing the thermal ellipsoids at 30% probability level.



Bond precision: C-C = 0.0059 A Wavelength=0.71073

Cell: a=9.4793(2) b=12.6384(3) c=13.2202(4)
alpha=98.616(2) beta=92.833(2) gamma=107.212(1)
Temperature: 293 K

	Calculated	Reported
Volume	1488.43(7)	1488.43(7)
Space group	P -1	P-1
Hall group	-P 1	?
Moiety formula	C34 H31 N3 O3	?
Sum formula	C34 H31 N3 O3	C34 H31 N3 O3
Mr	529.62	529.62
Dx,g cm-3	1.182	1.182
Z	2	2
Mu (mm-1)	0.076	0.076
F000	560.0	560.0
F000'	560.23	
h,k,lmax	11,15,15	11,15,15
Nref	5253	5224
Tmin,Tmax	0.982,0.985	
Tmin'	0.977	

Correction method= Not given

Data completeness= 0.994 Theta(max)= 25.030

R(reflections)= 0.0813(3917) wR2(reflections)= 0.2718(5224)

S = 1.063 Npar= 363