

## Supporting Information

# Synthesis of Ester-Functionalized Indolo[2,1-*a*]isoquinolines *via* Iron-Catalyzed Radical Cascade Cyclization of 2-aryl-*N*-acryloyl indoles with Carbazates

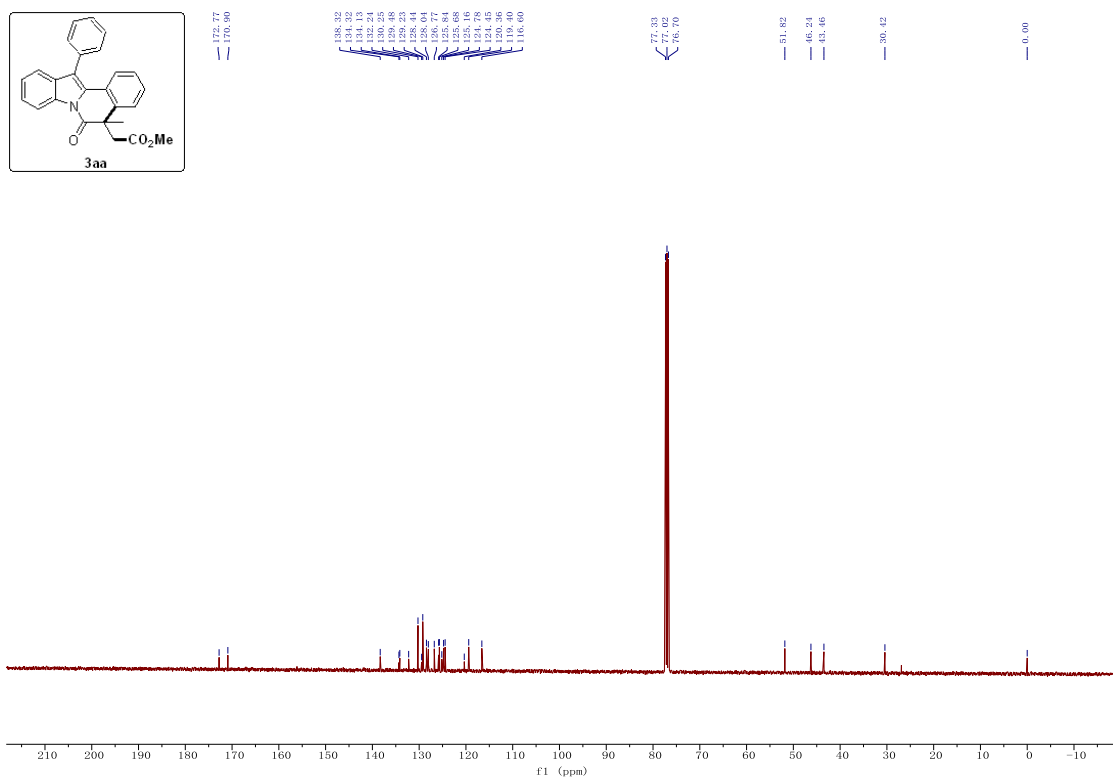
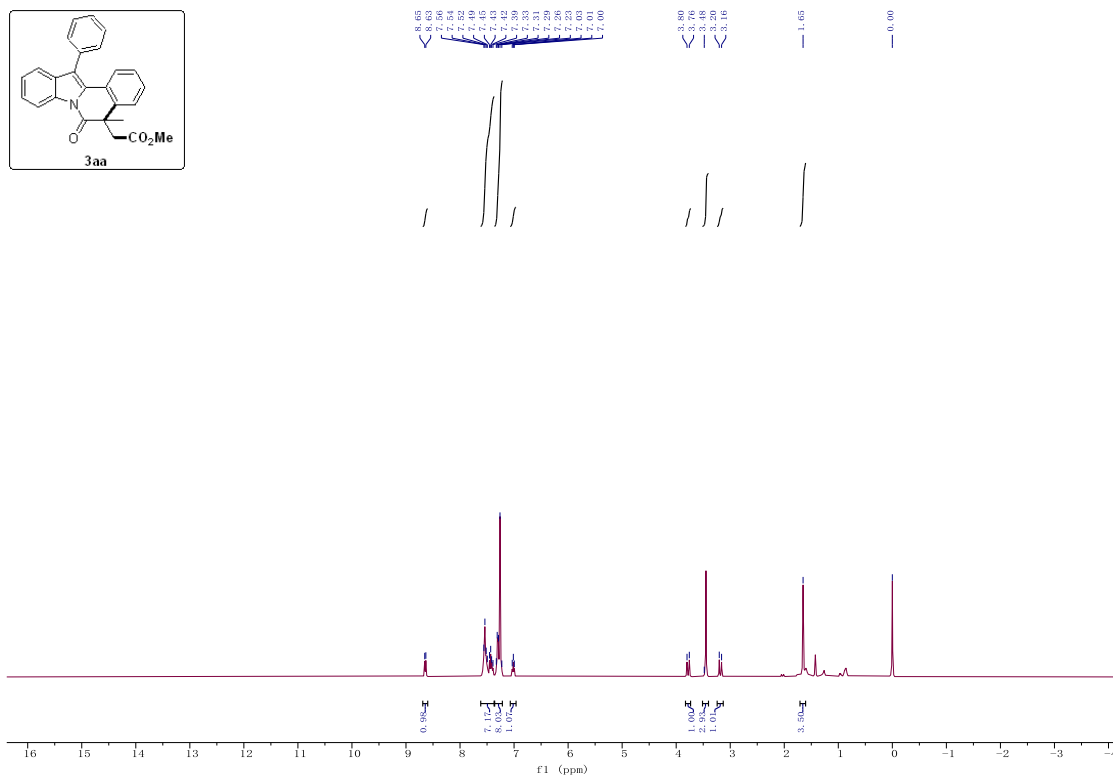
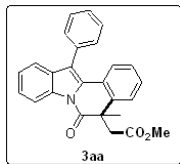
Yucai Tang, <sup>\*a</sup> Kaiming Dai,<sup>a</sup> Xingxian Xiang,<sup>a</sup> Yiting Yang,<sup>a</sup> Min Li<sup>a</sup>

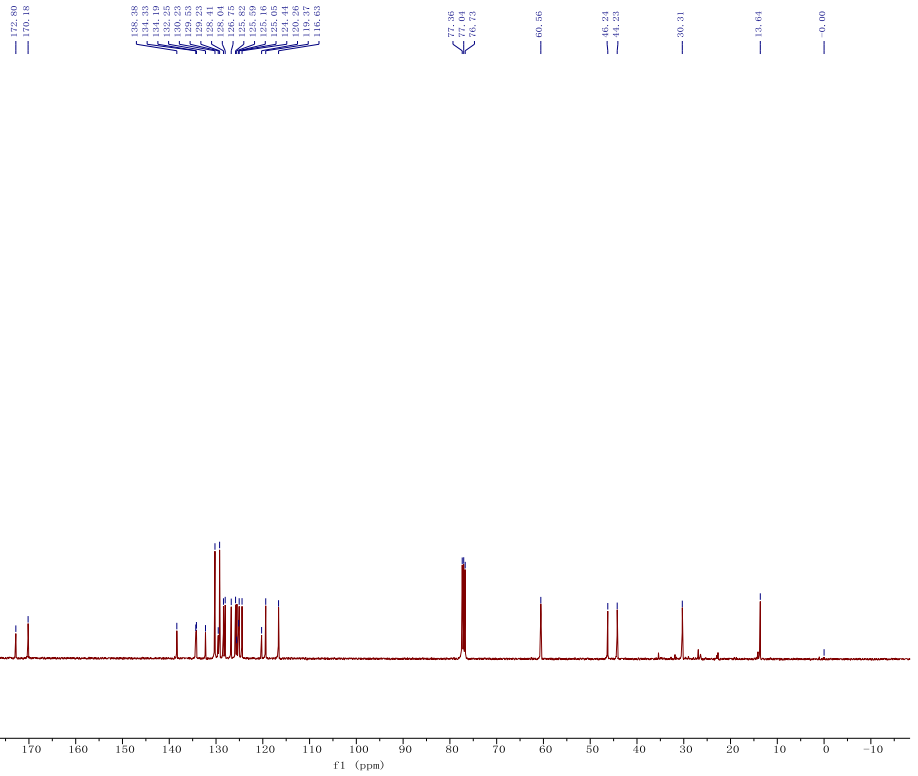
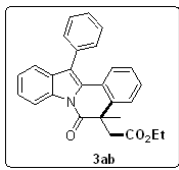
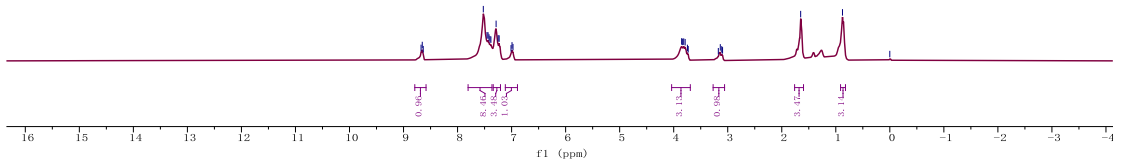
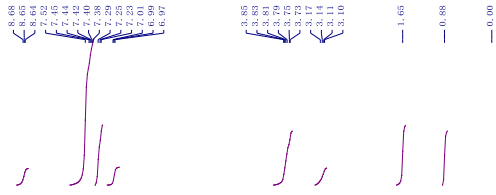
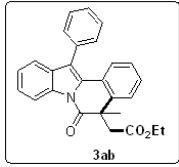
*College of Chemistry and Materials Engineering, Hunan University of Arts and  
Science, Hunan Provincial Key Laboratory of Water Treatment Functional Materials,  
Hunan Province Engineering Research Center of Electroplating Wastewater Reuse  
Technology, Changde 415000, Hunan, China*

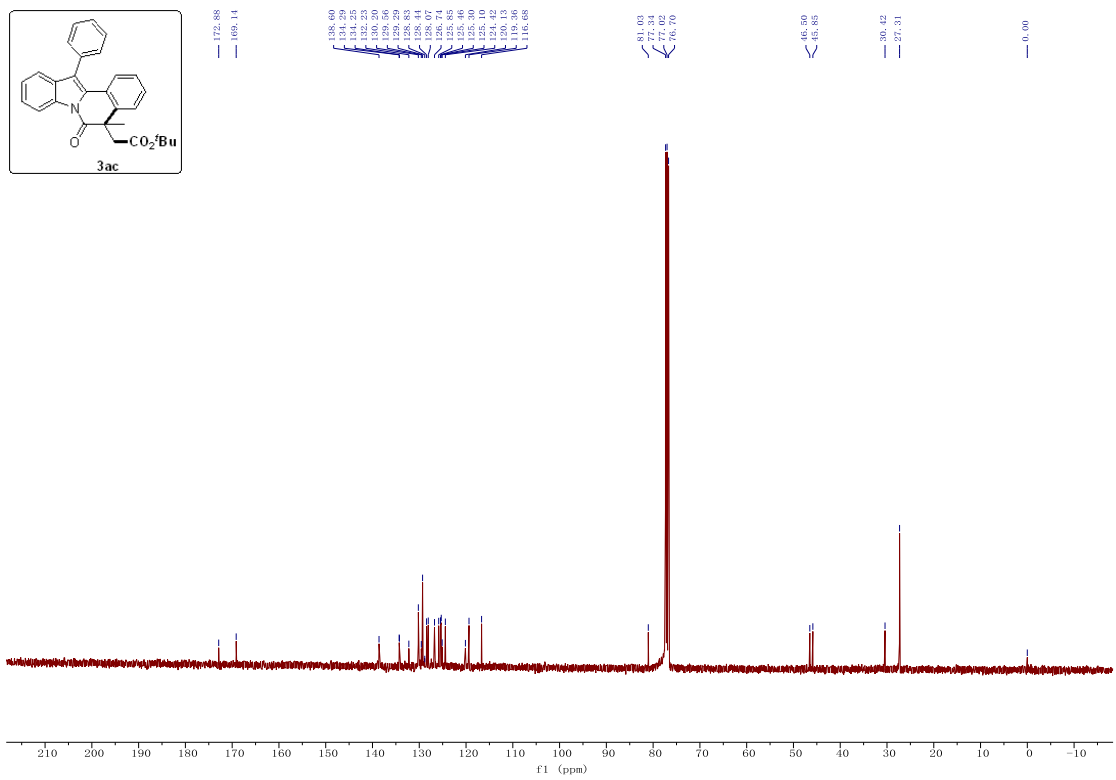
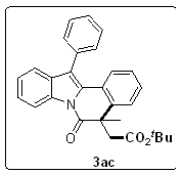
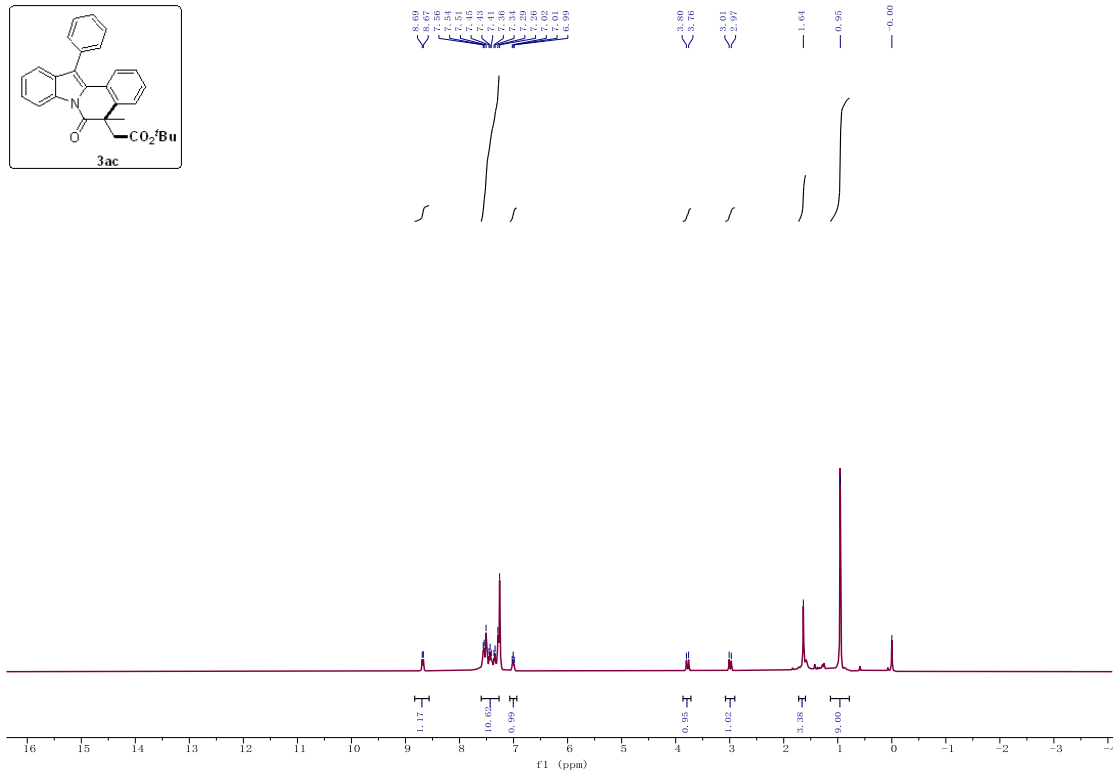
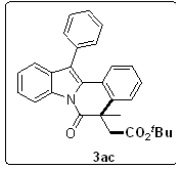
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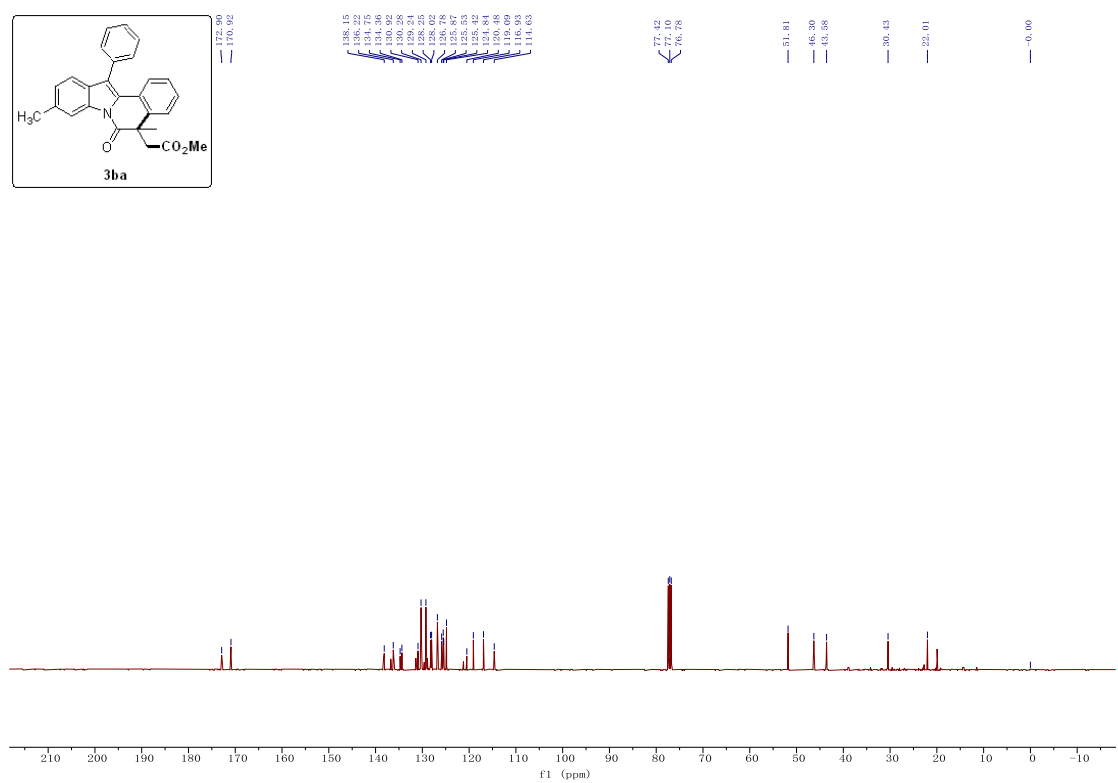
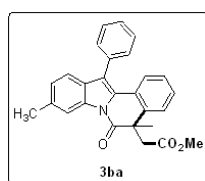
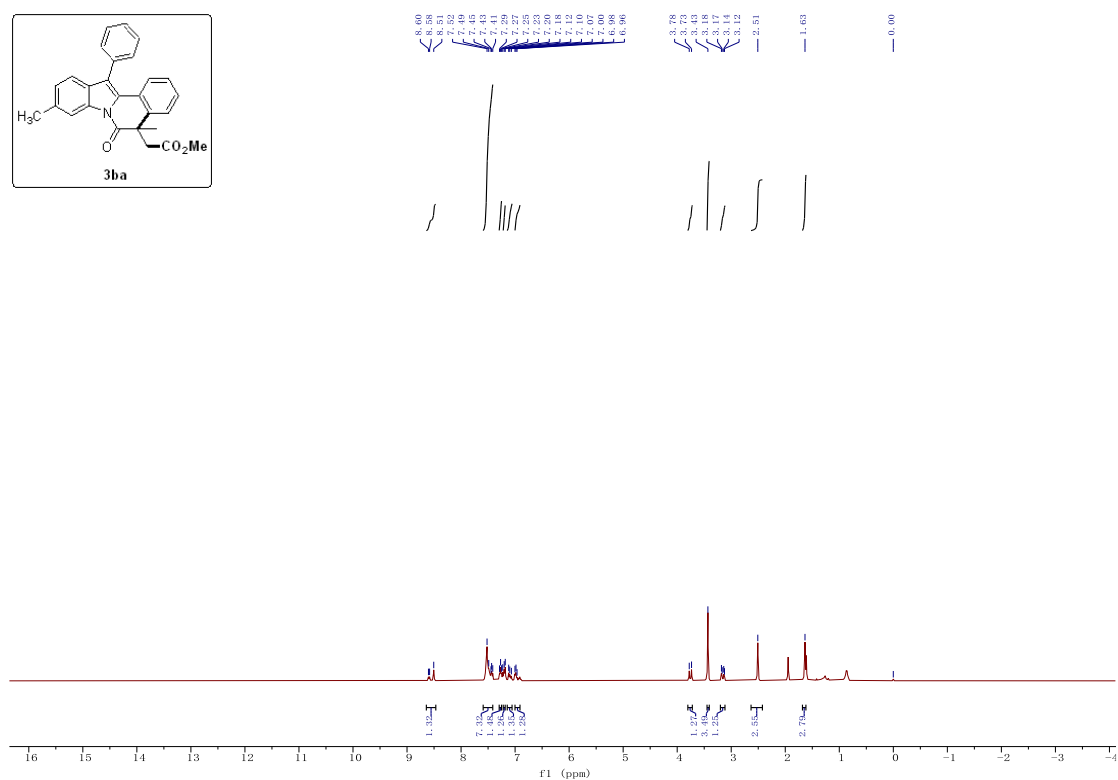
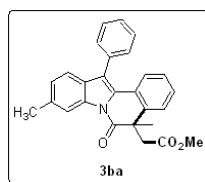
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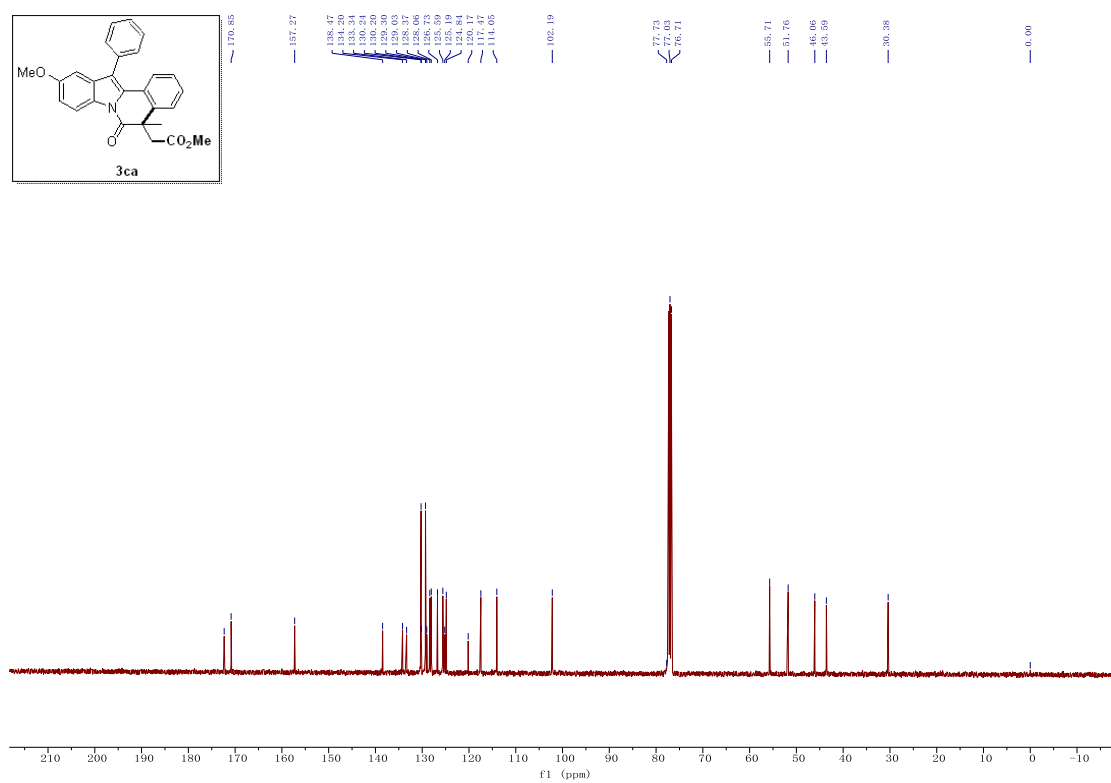
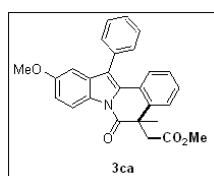
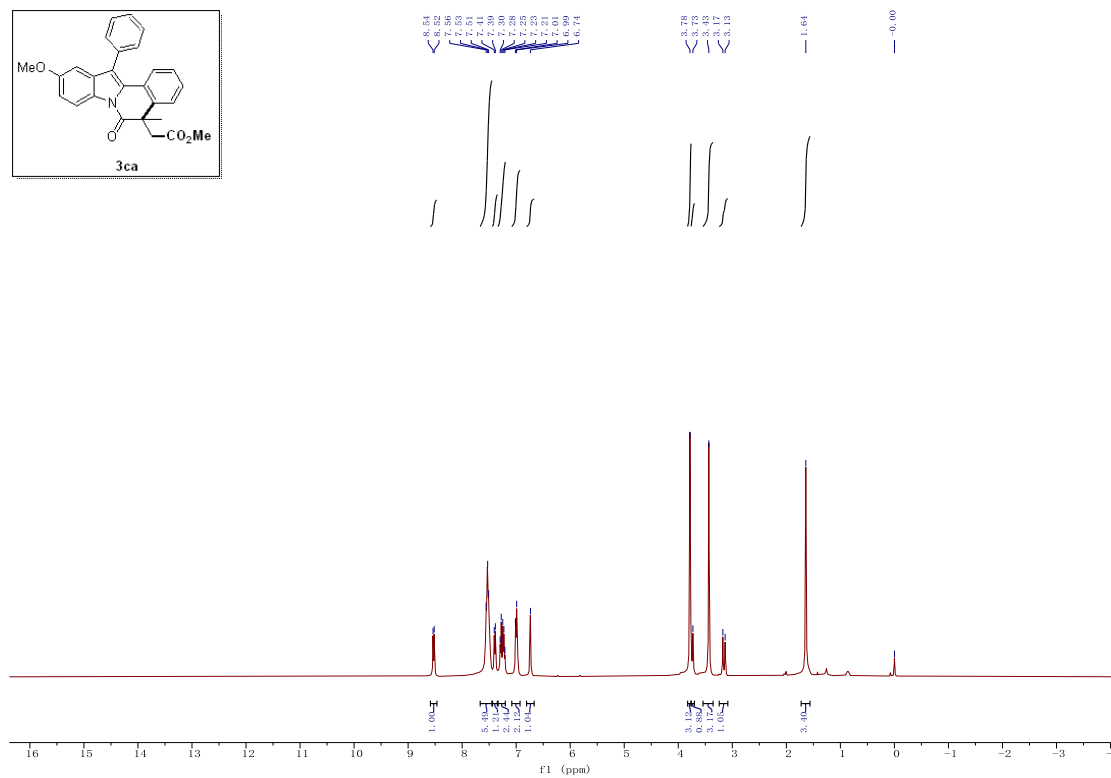
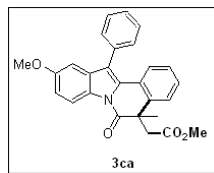
<sup>1</sup>H and <sup>13</sup>C NMR spectra of products-----S2-S34

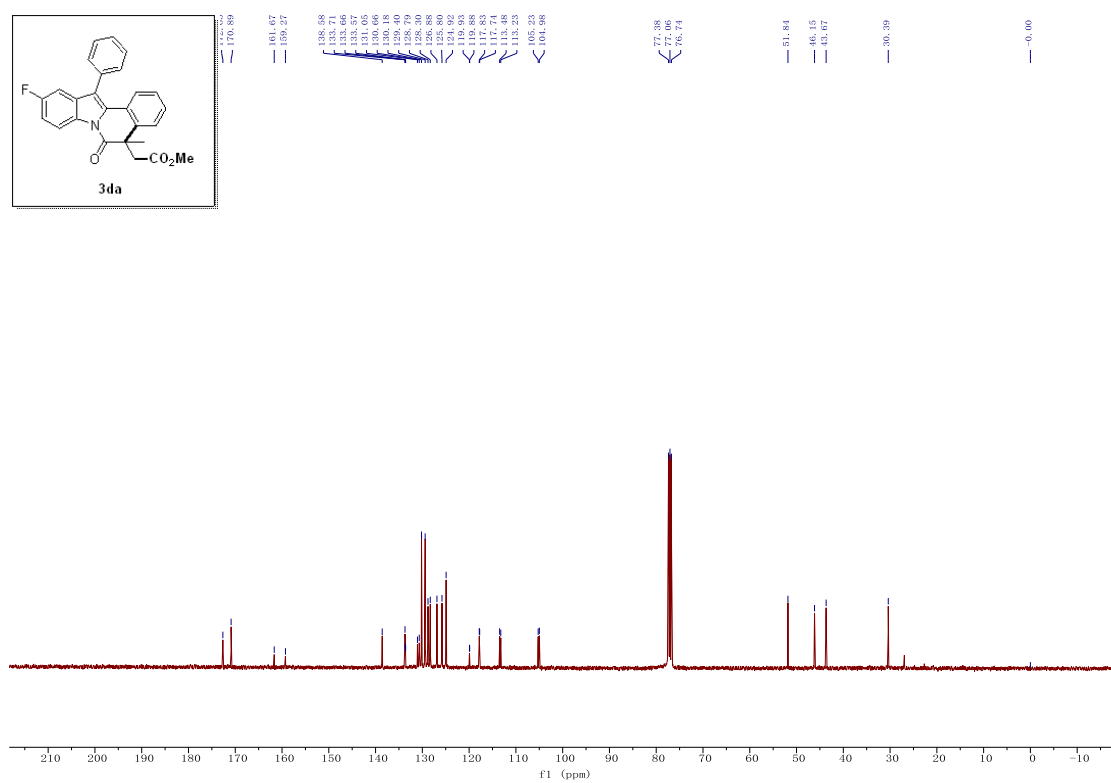
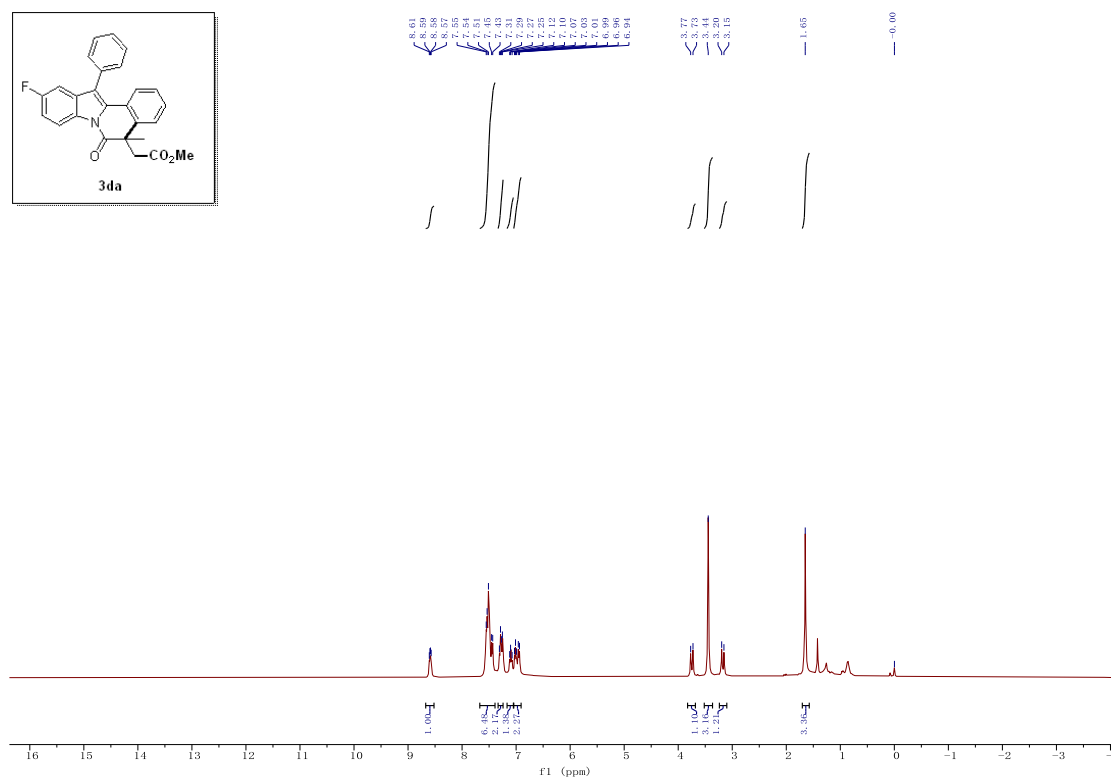
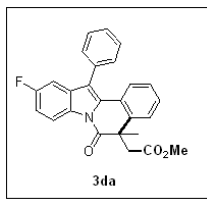


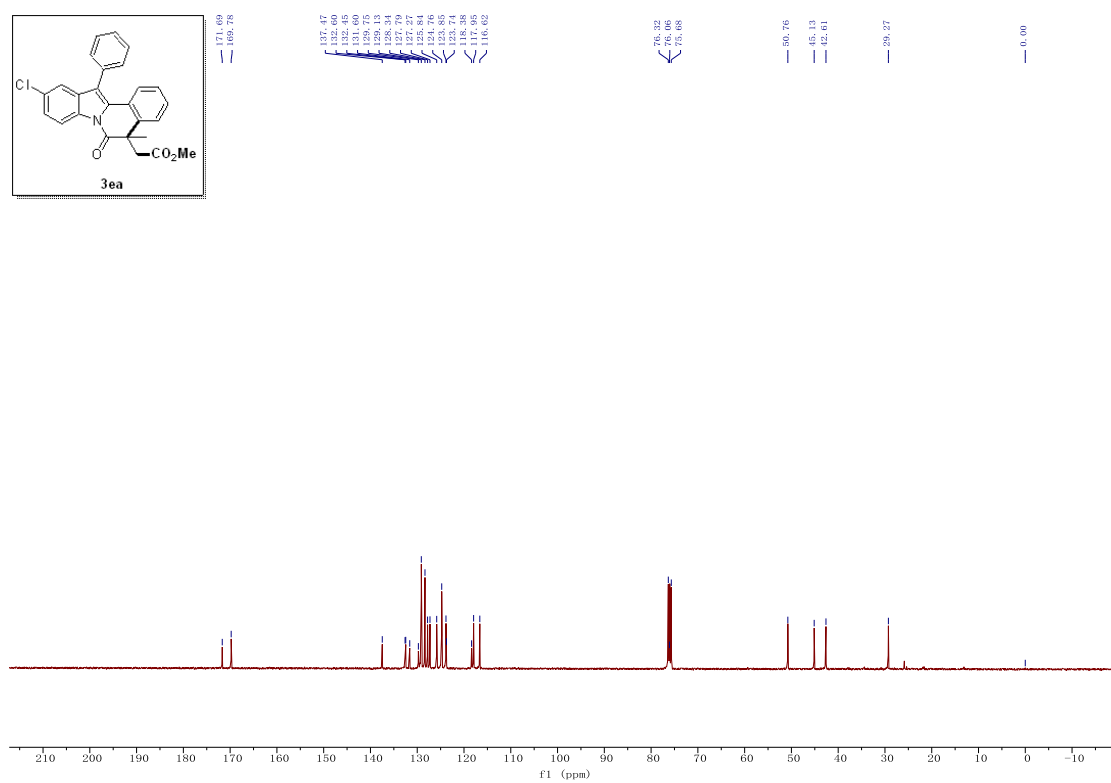
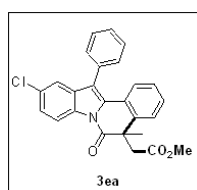
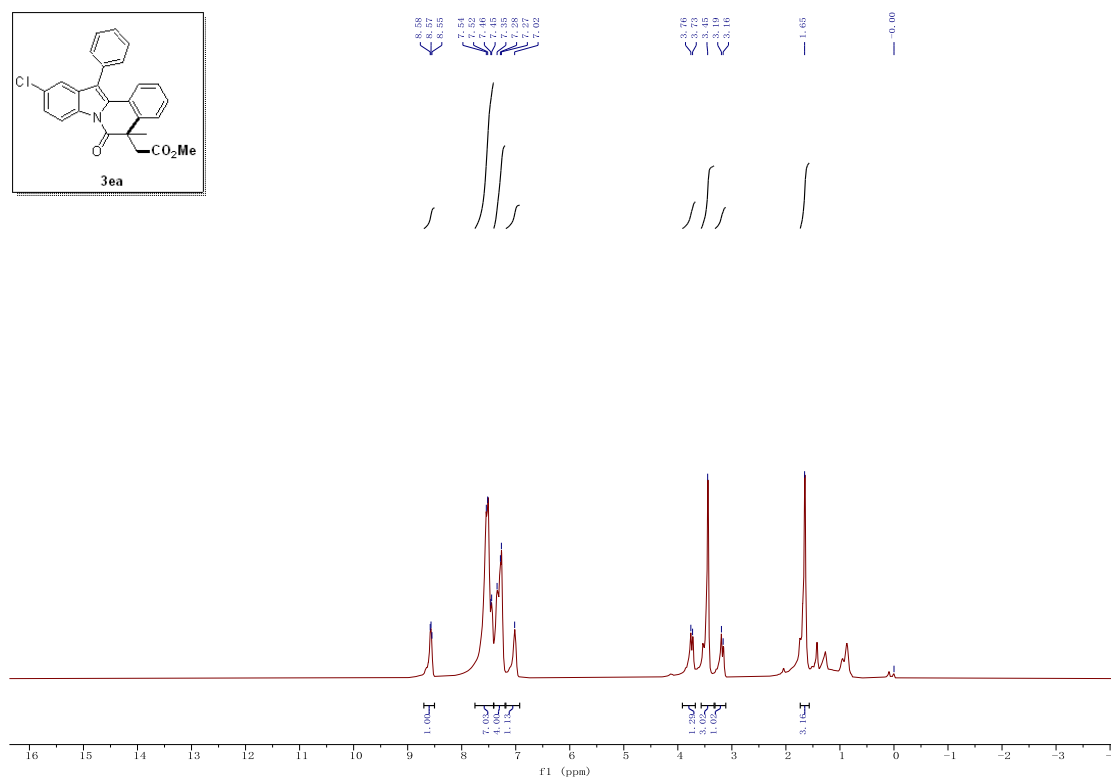
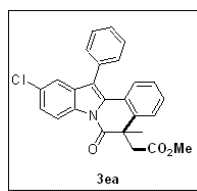




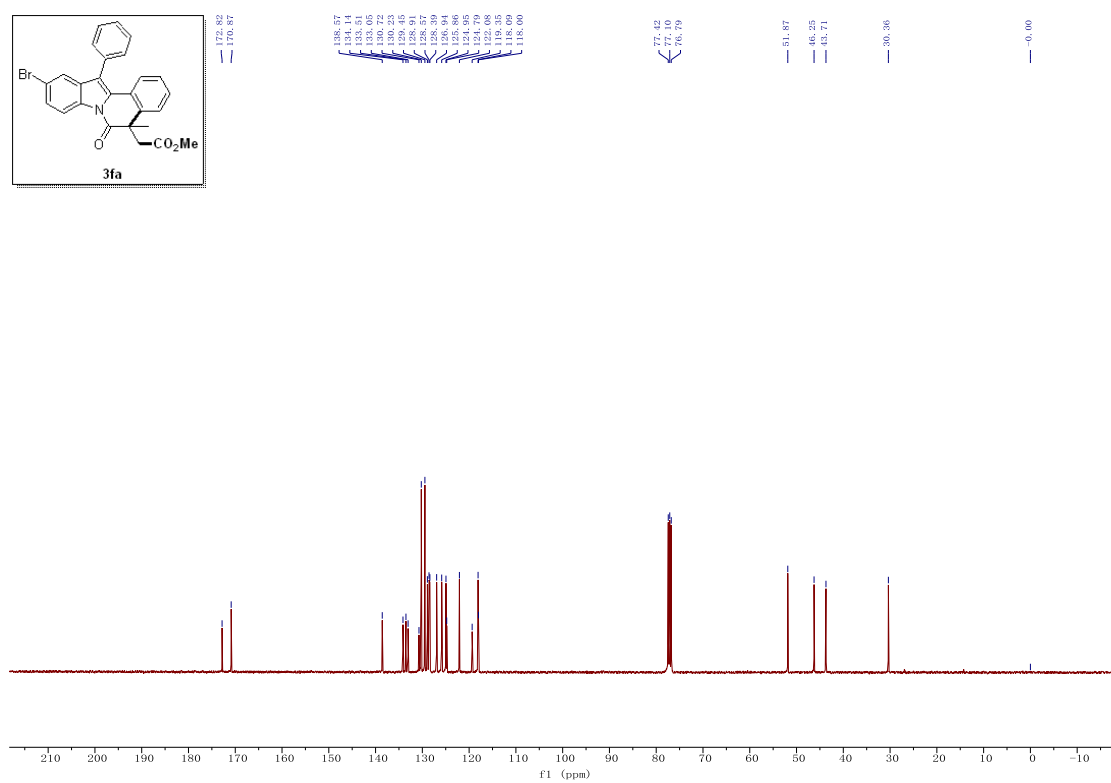
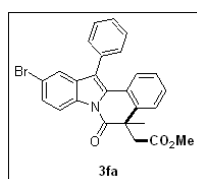
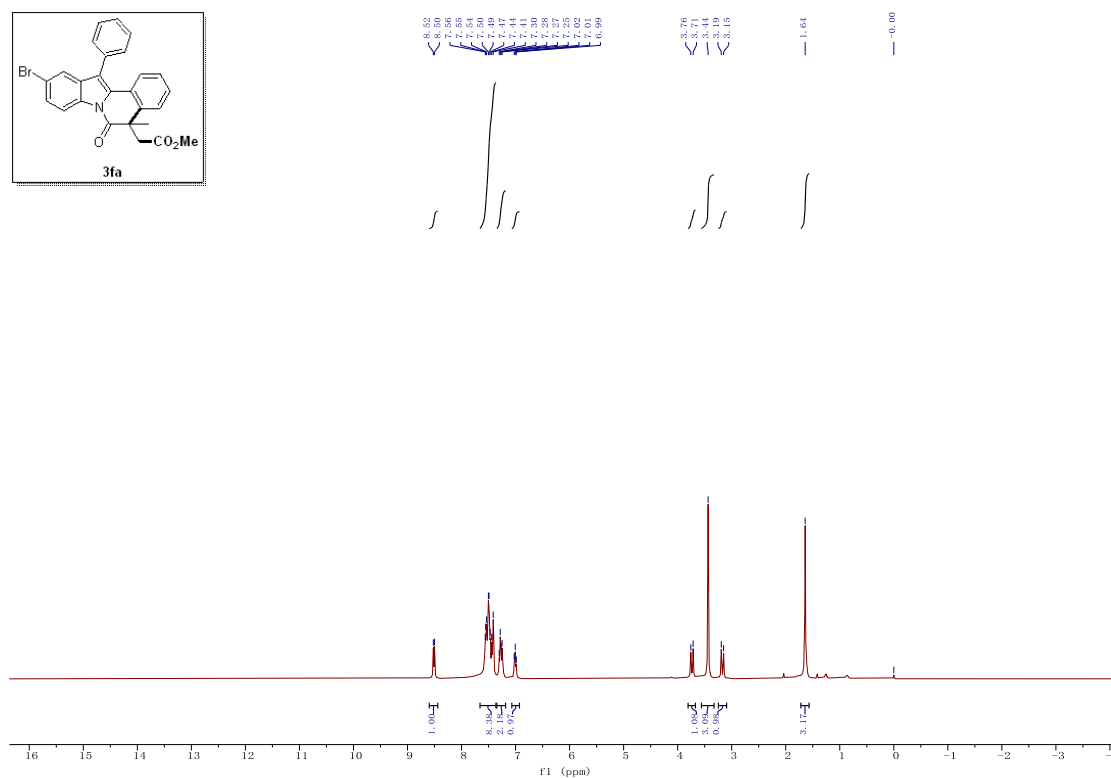
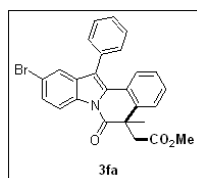


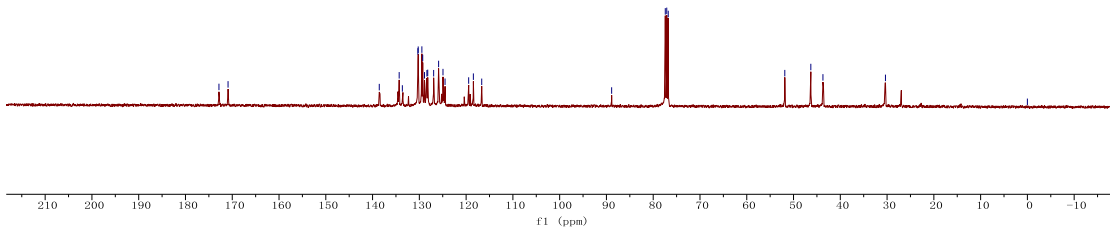
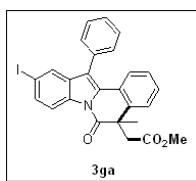
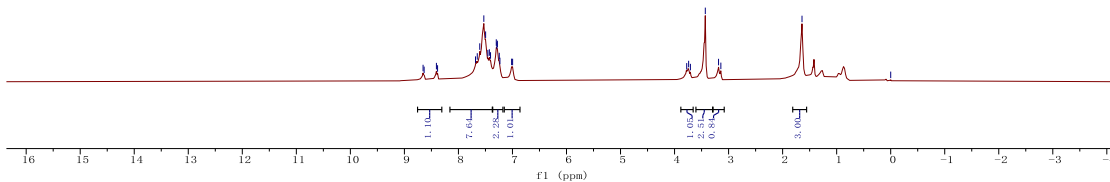
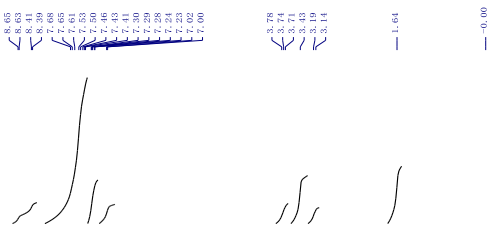
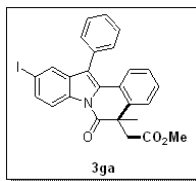


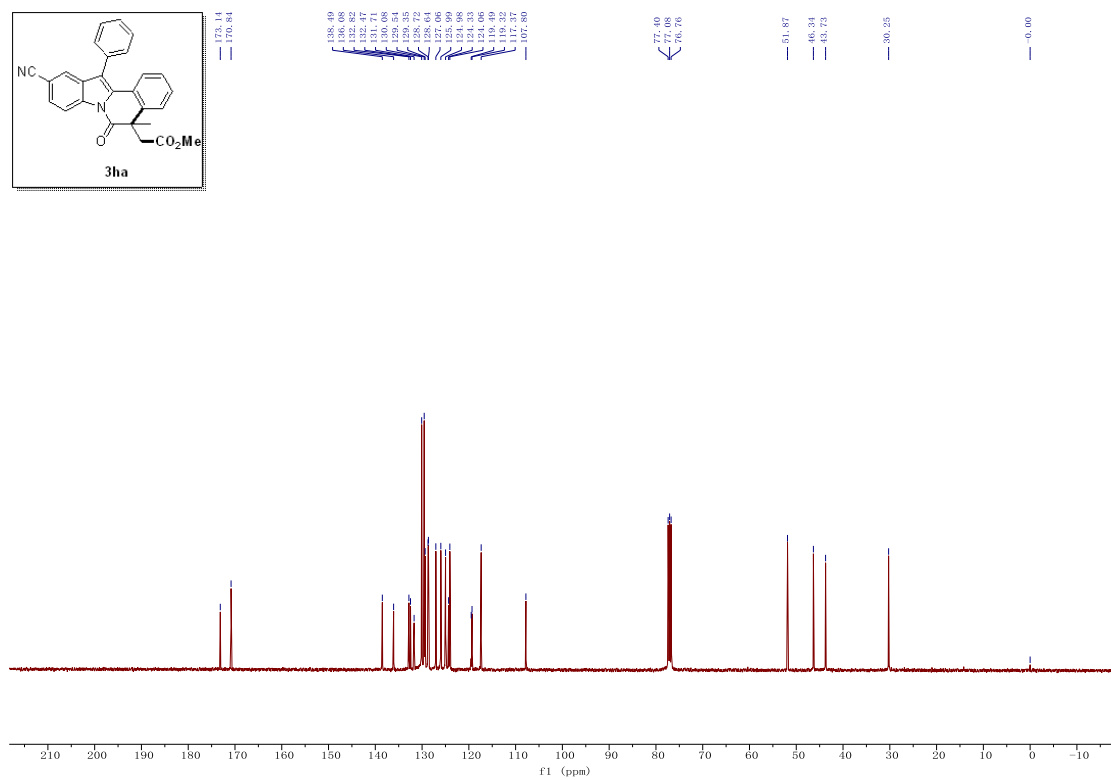
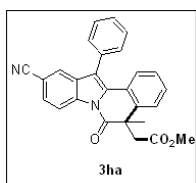
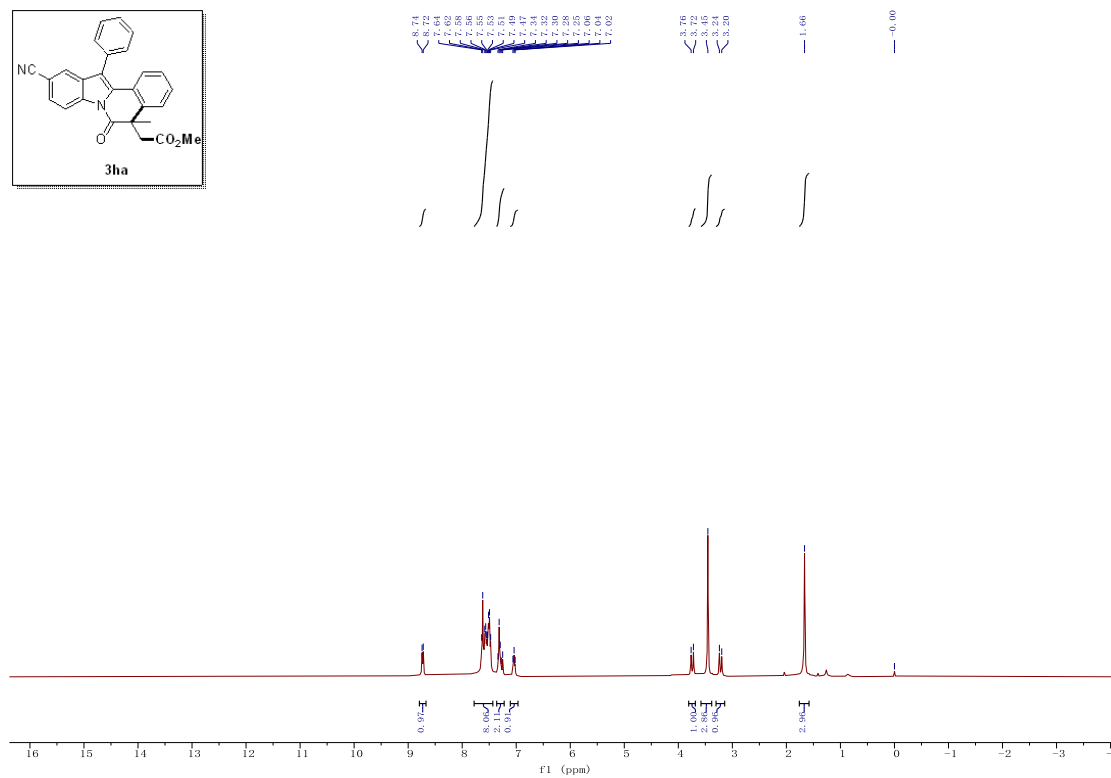
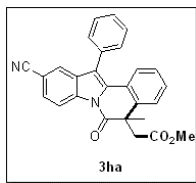


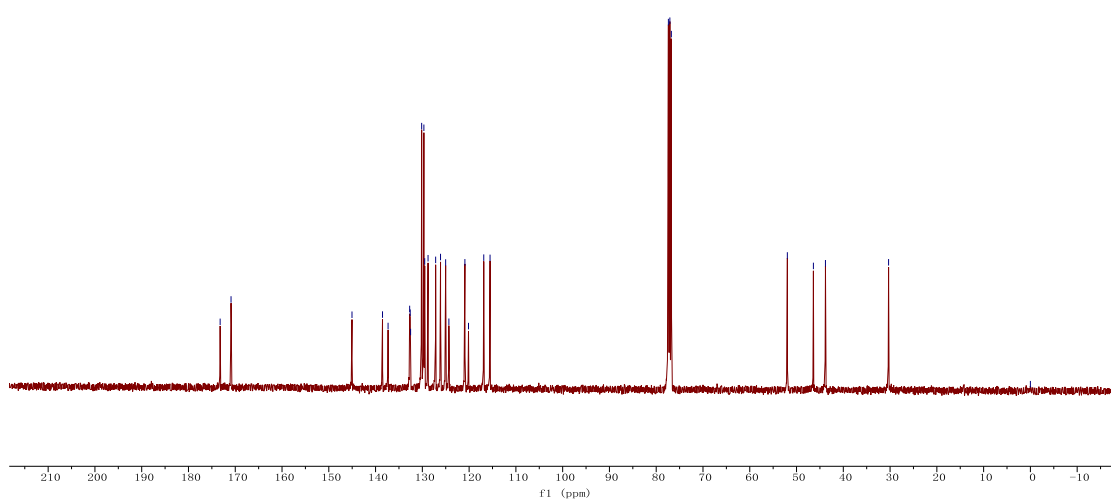
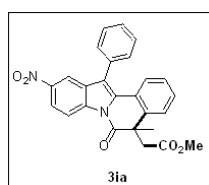
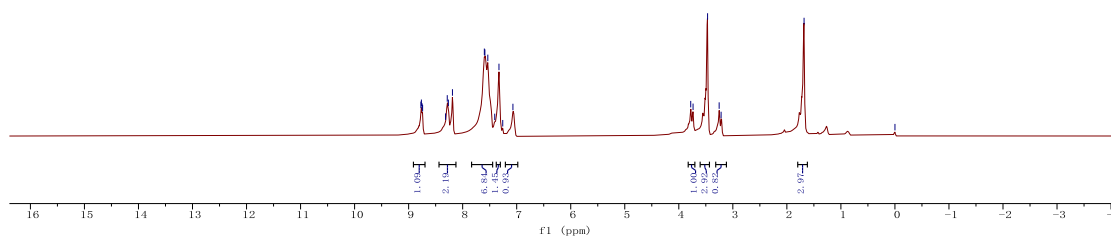
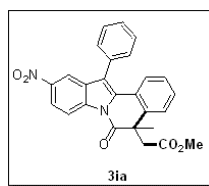


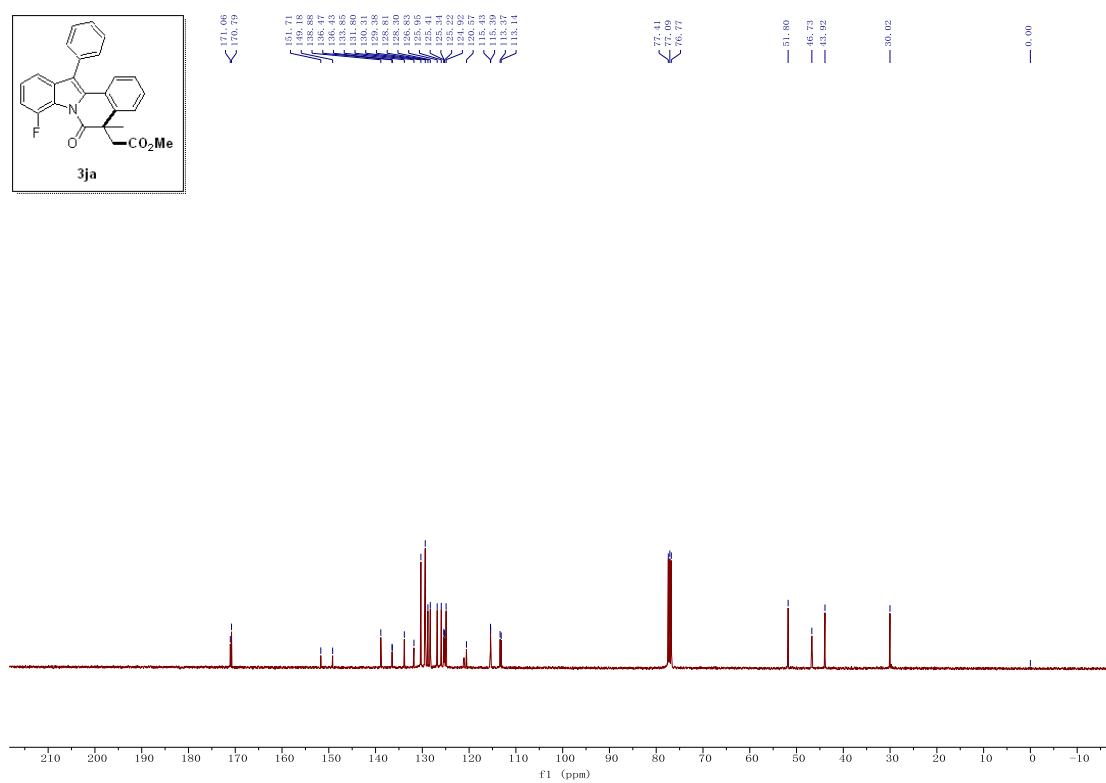
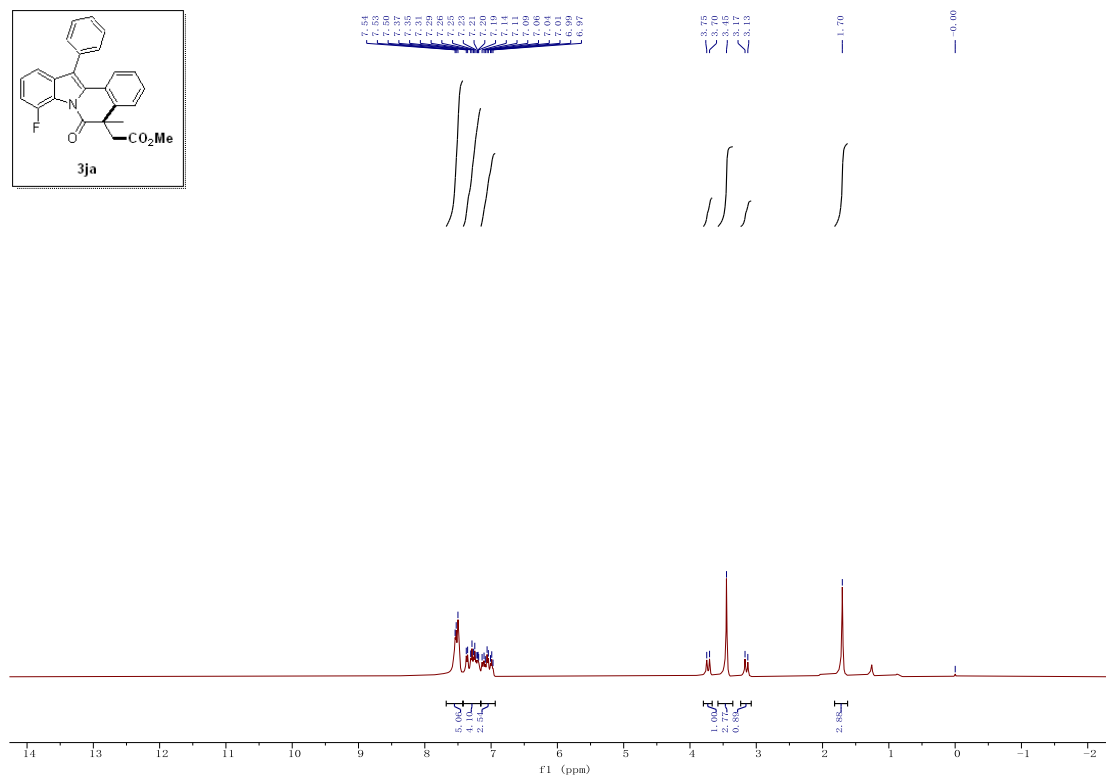
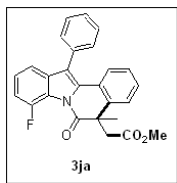




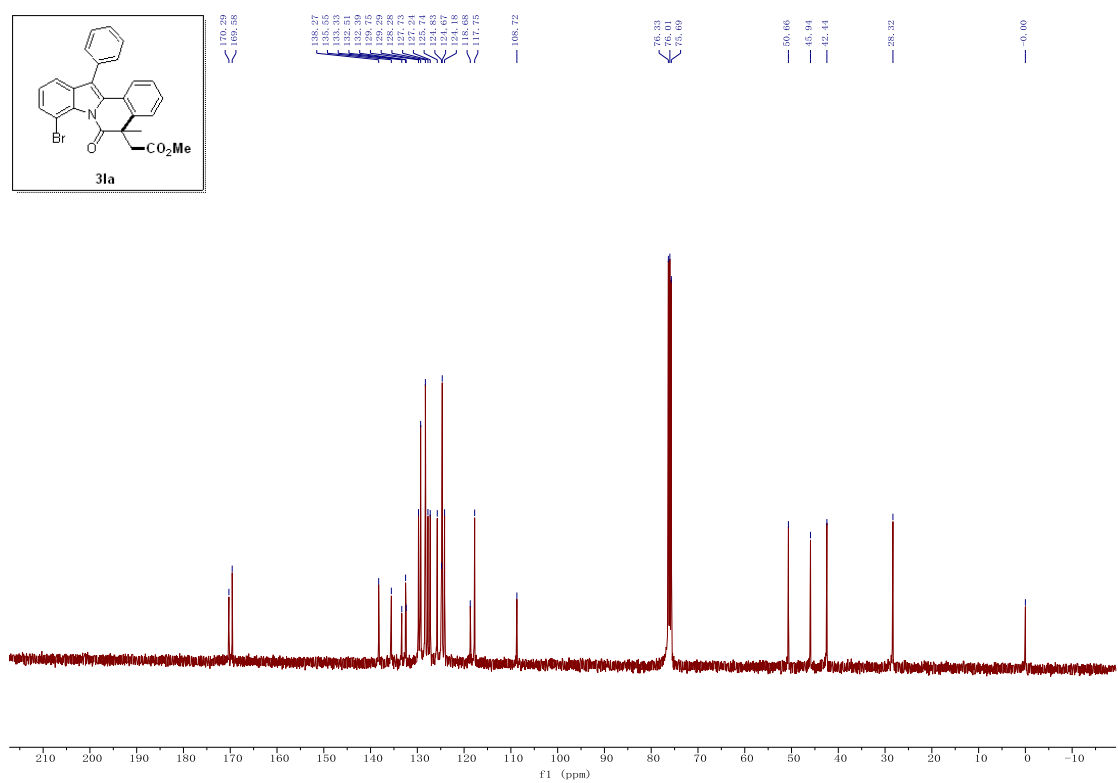
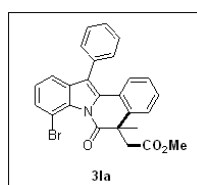
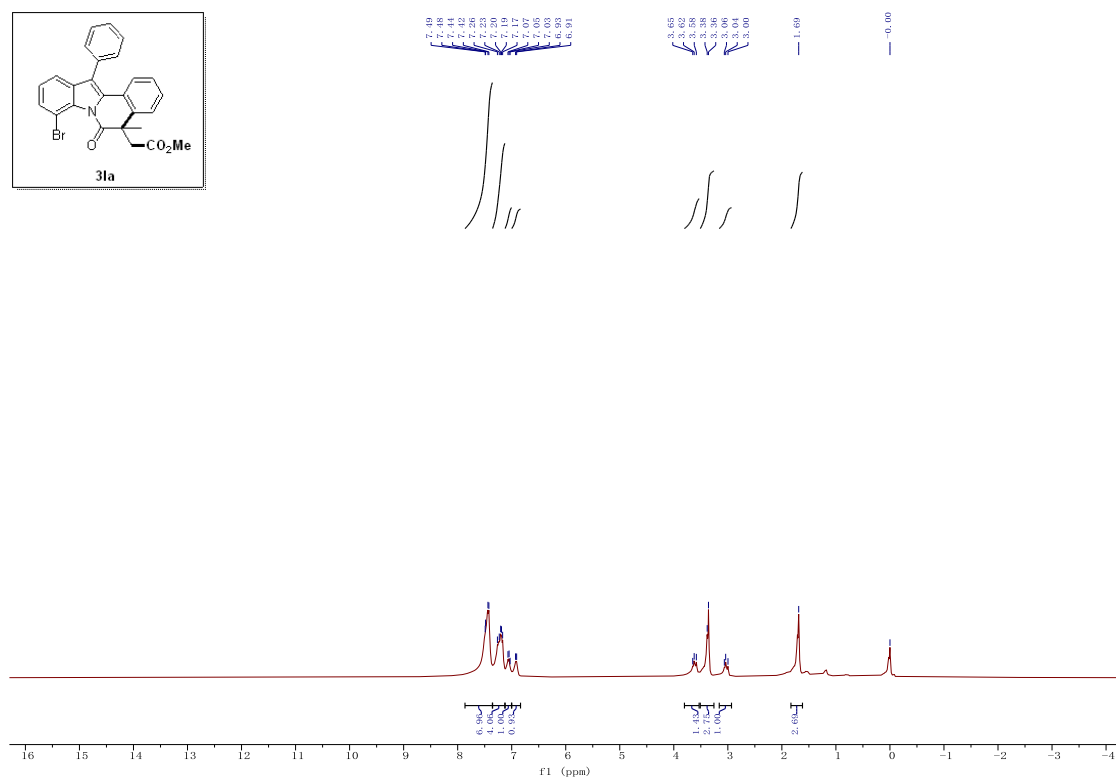
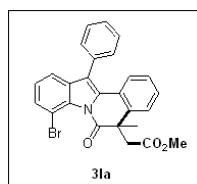


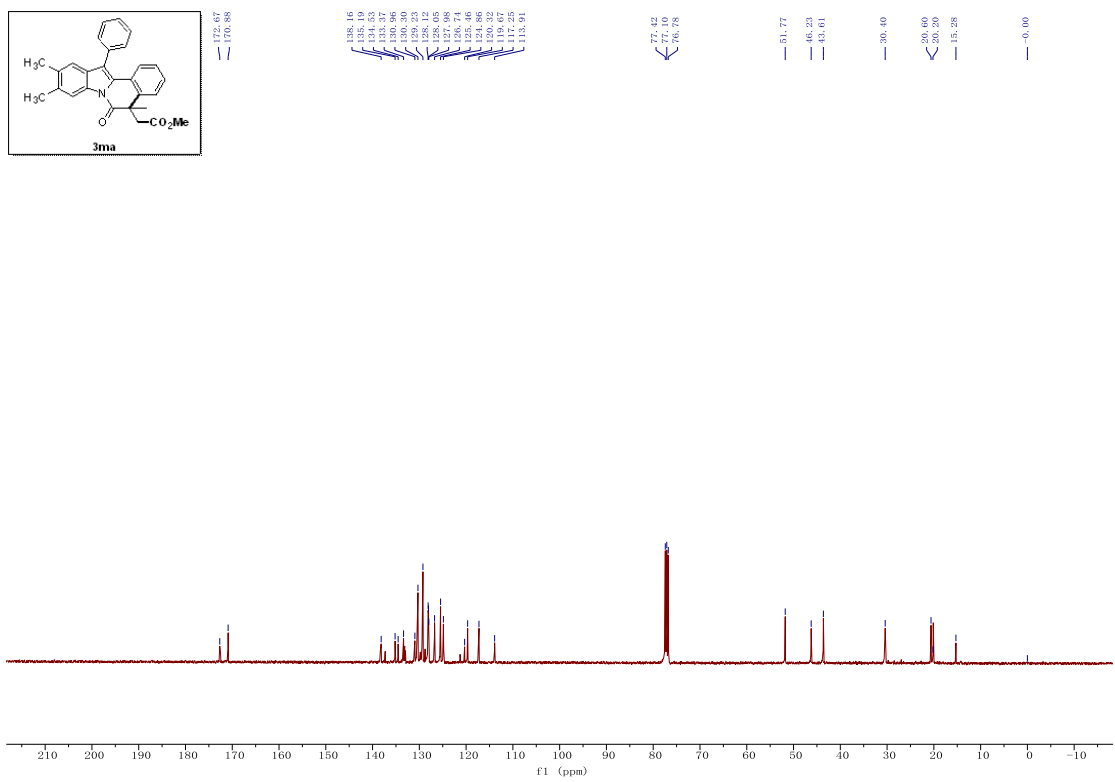
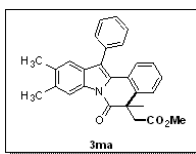
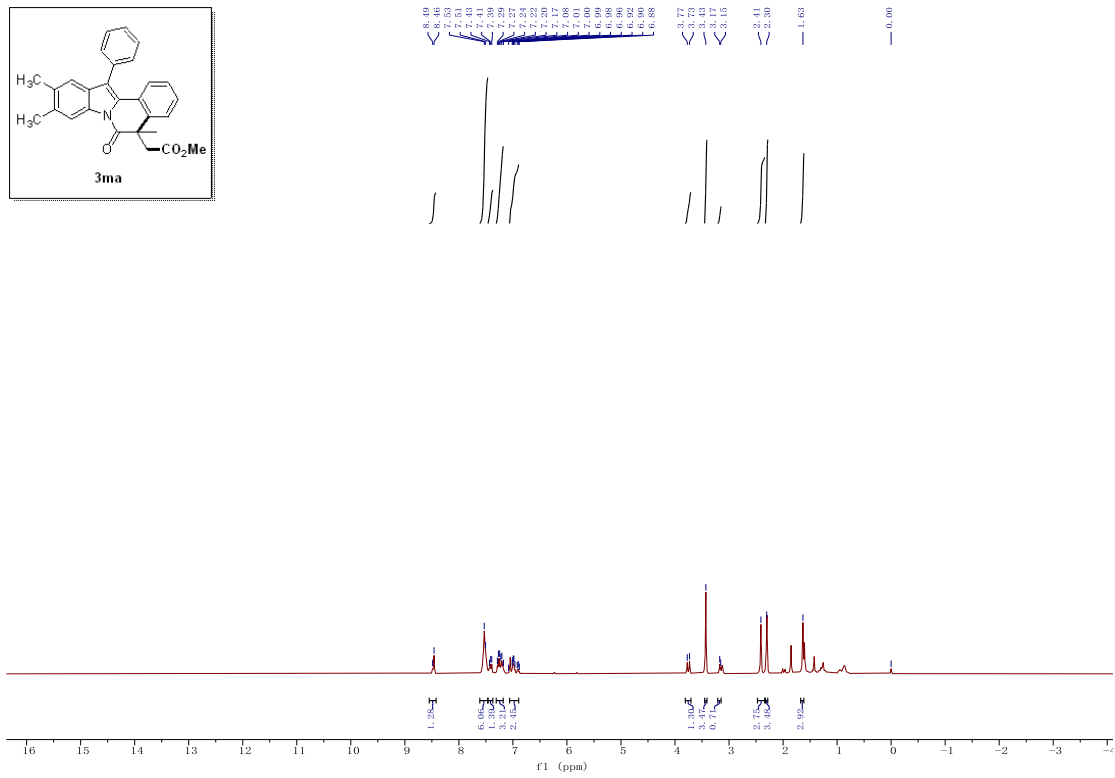
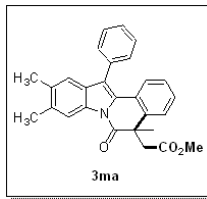




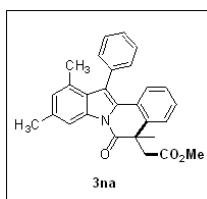
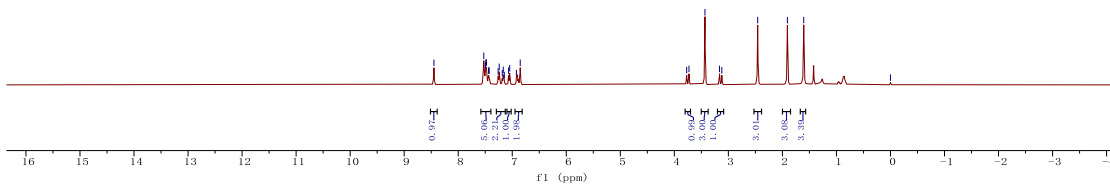
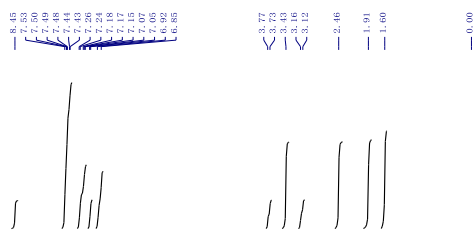
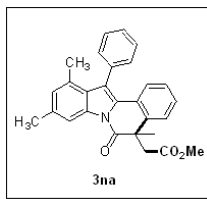


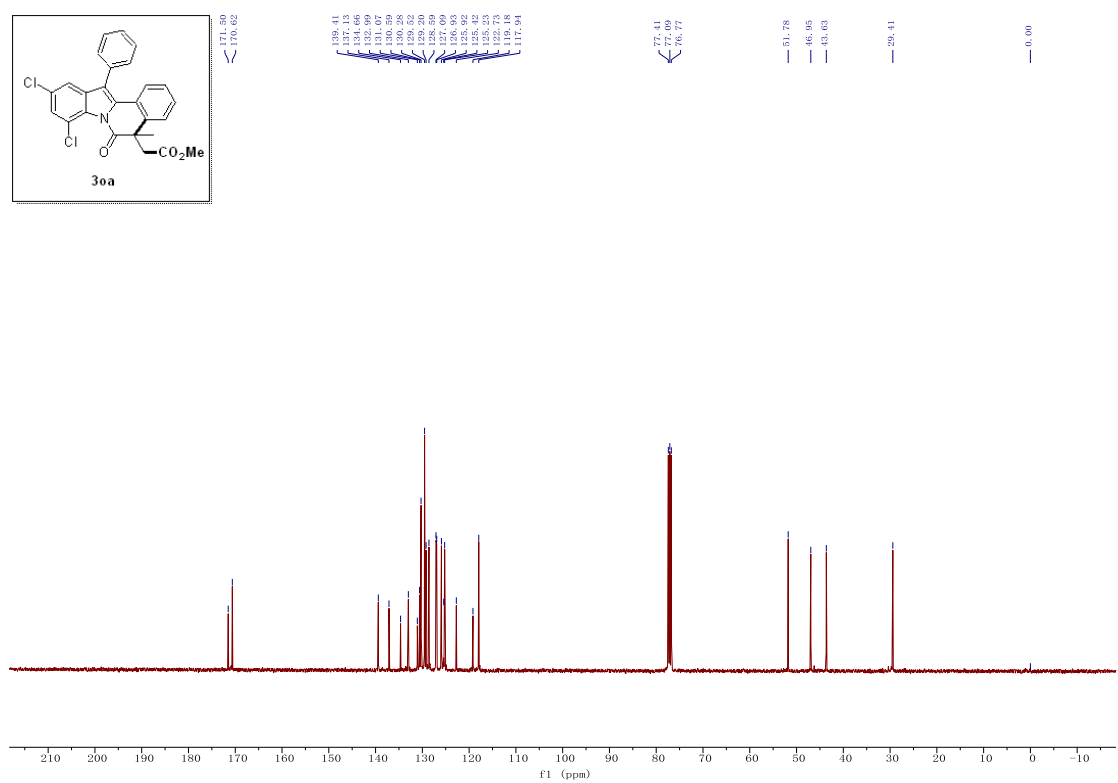
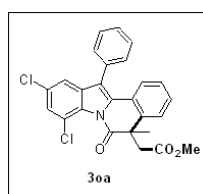
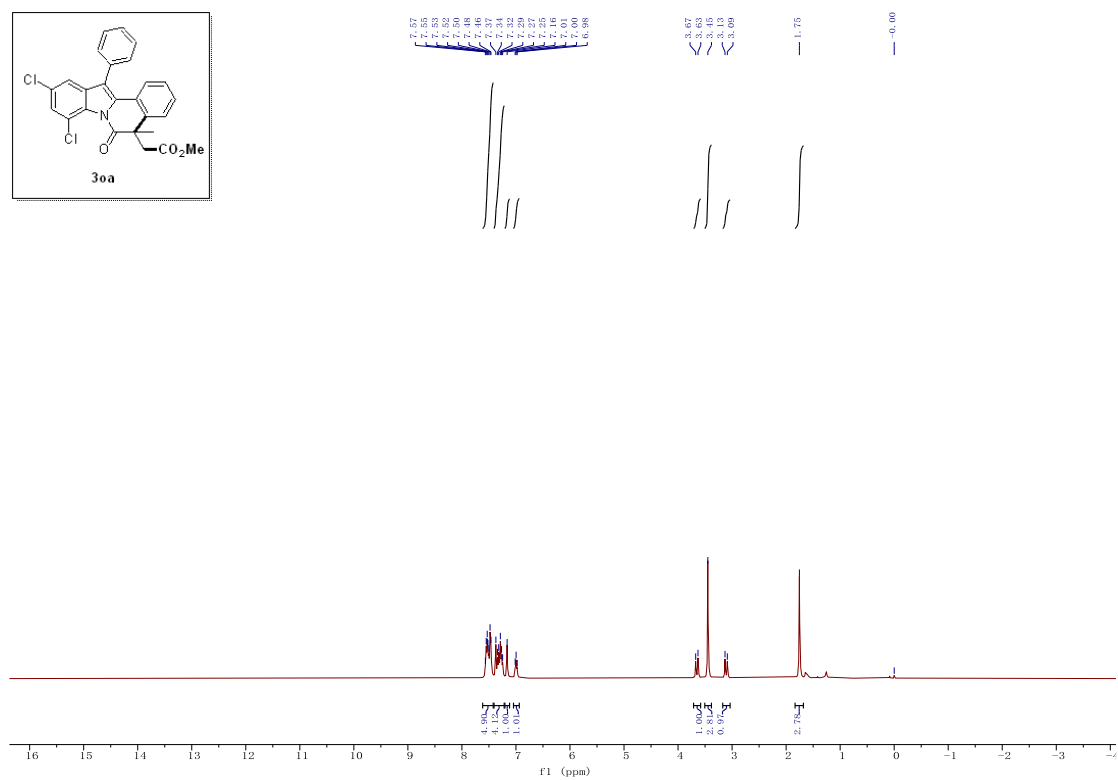
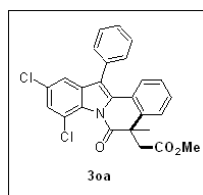


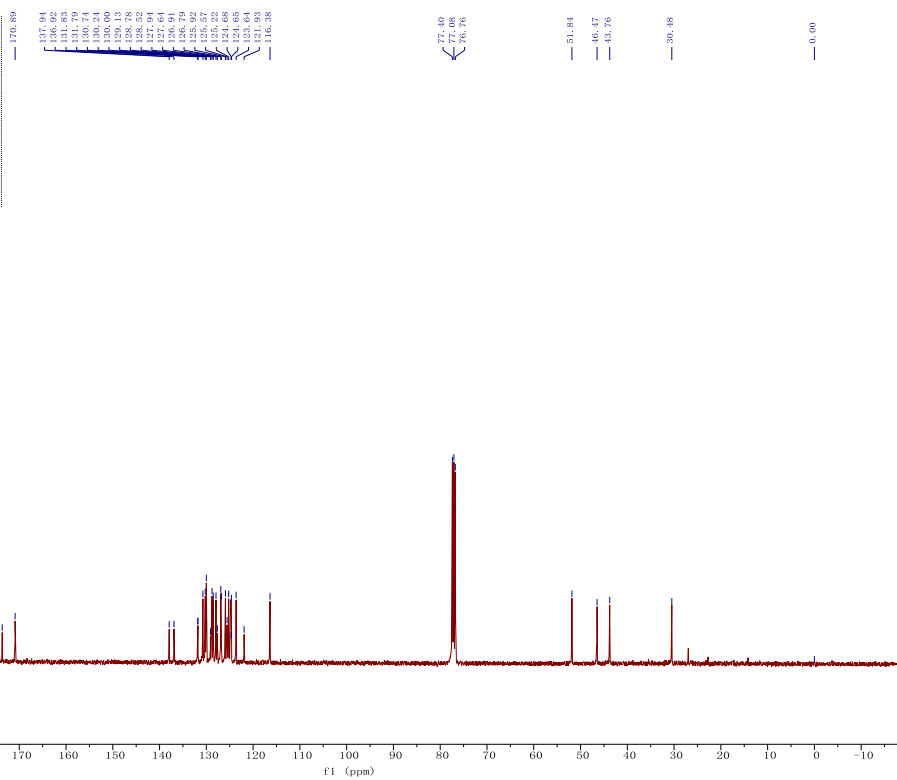
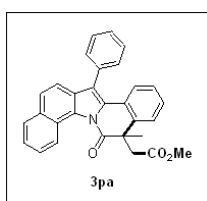
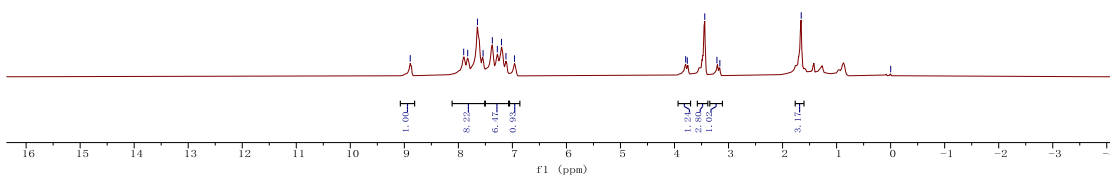
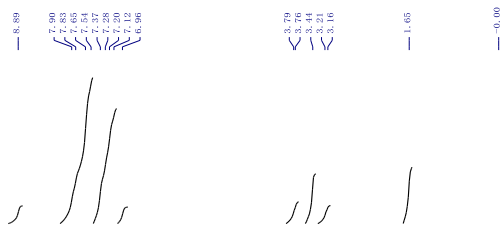
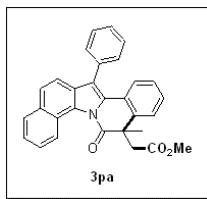


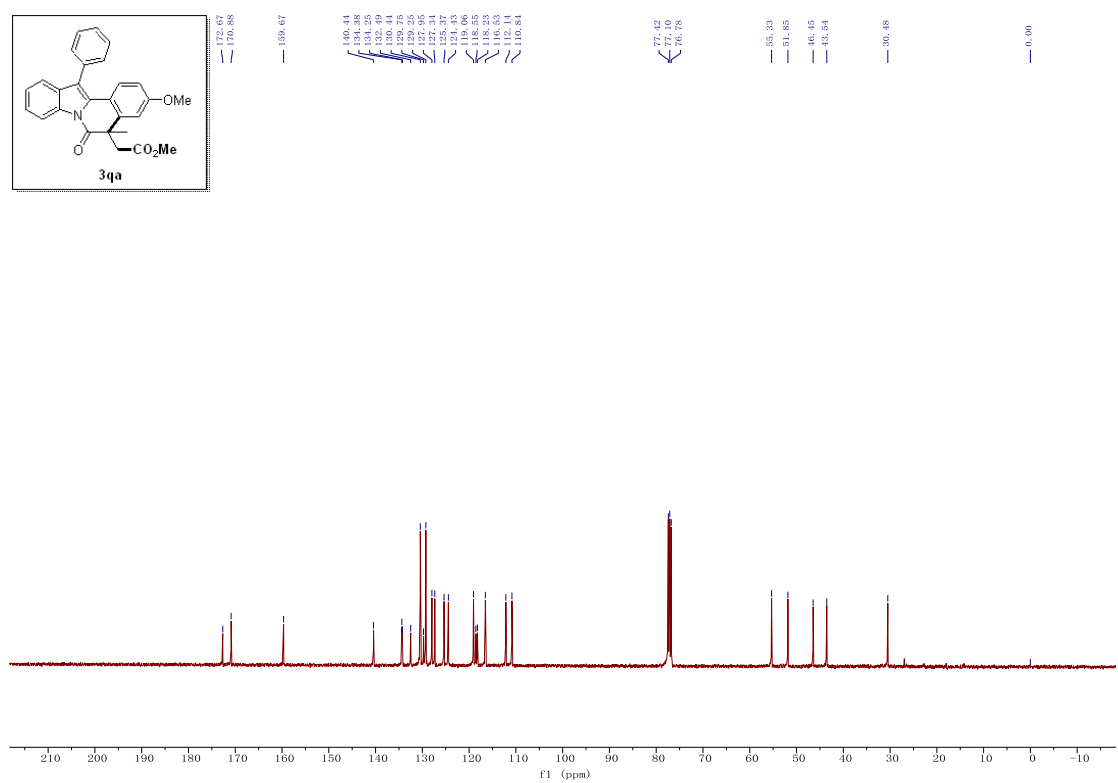
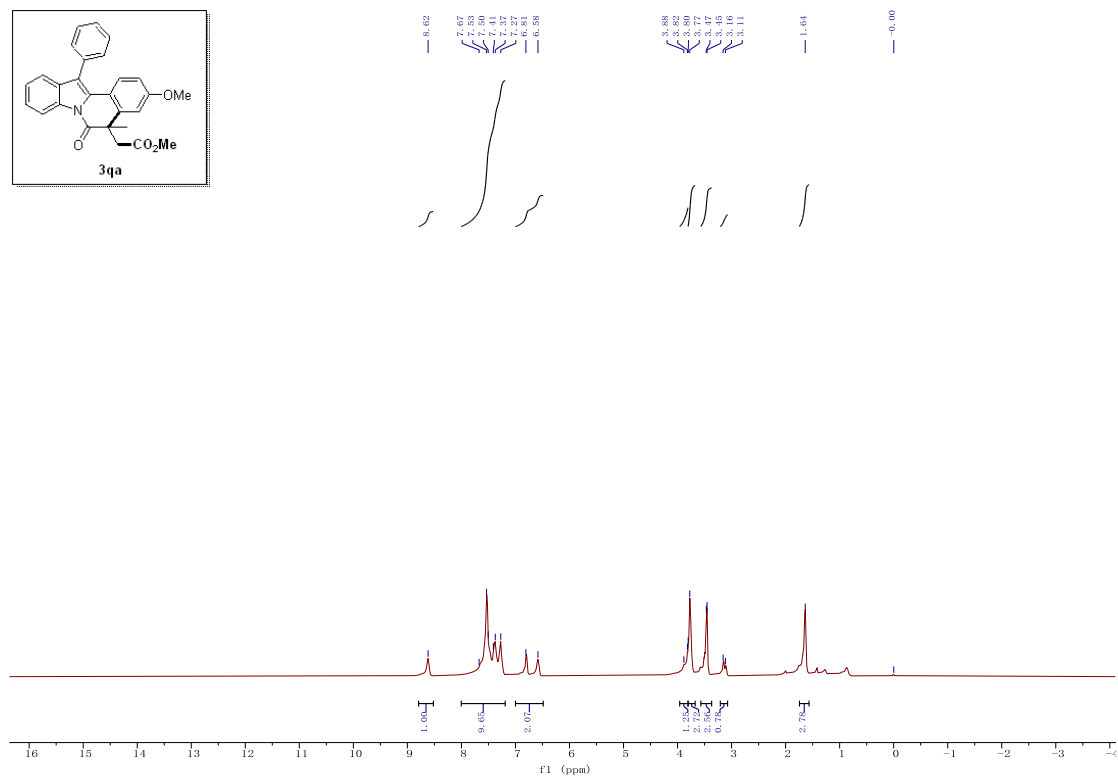
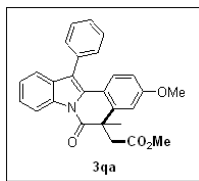


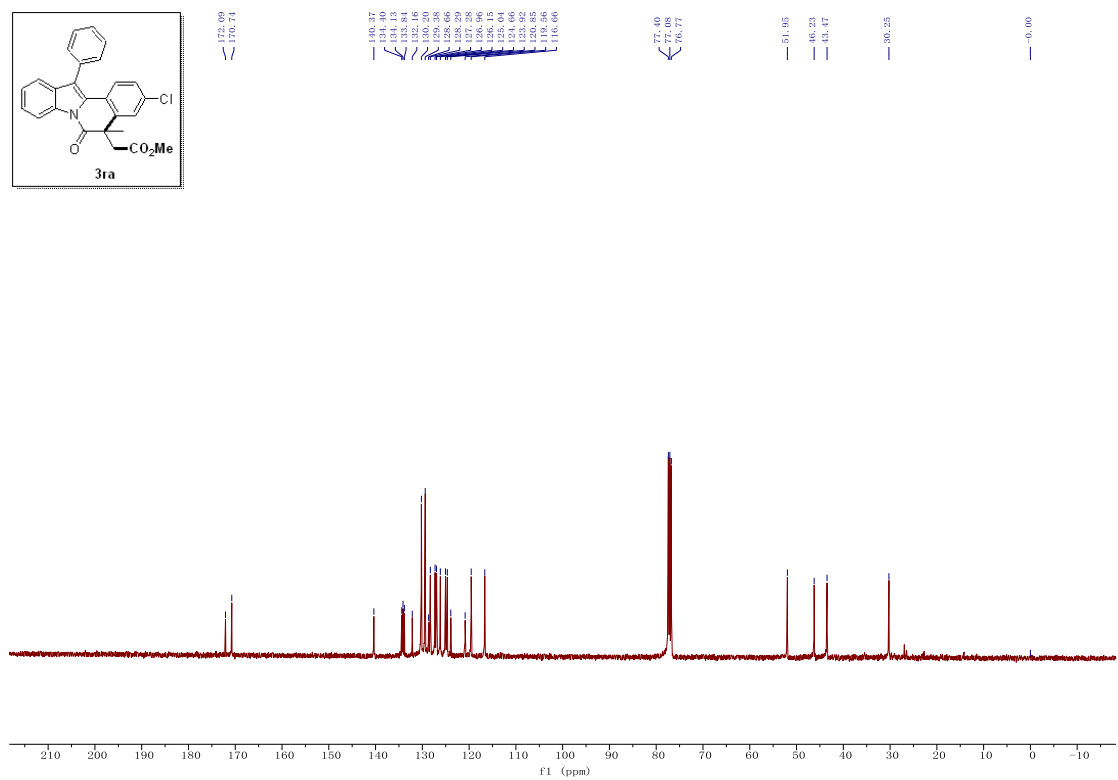
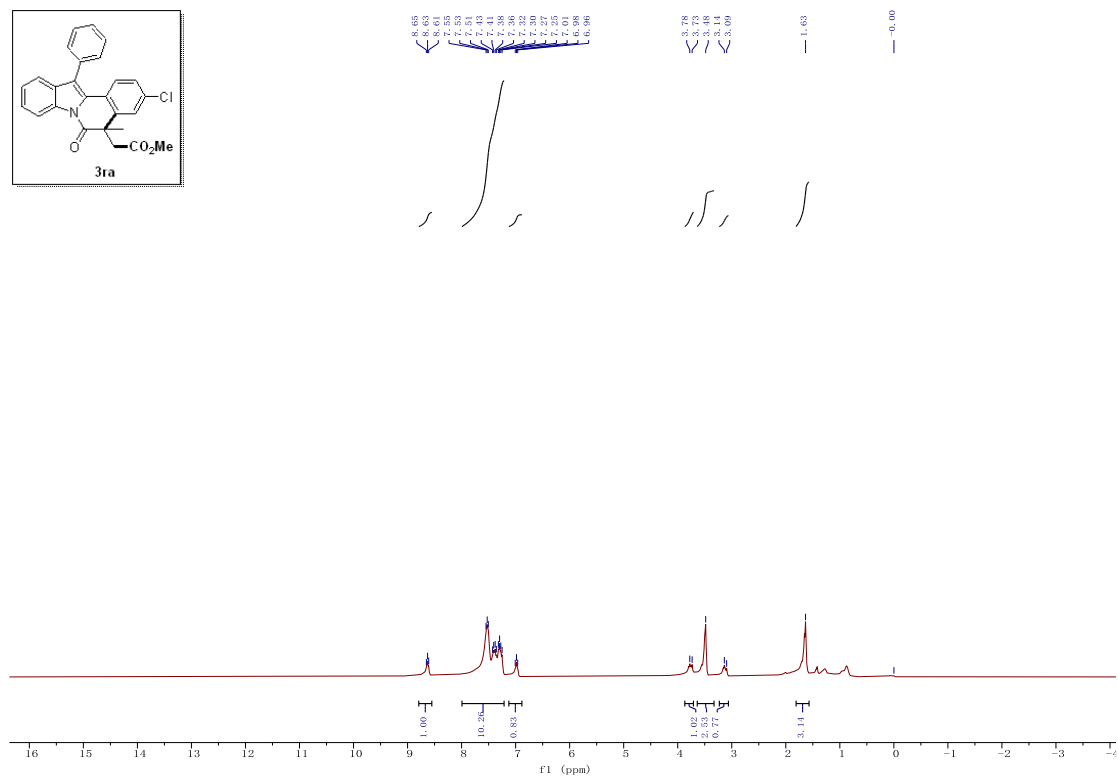
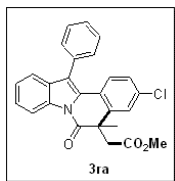


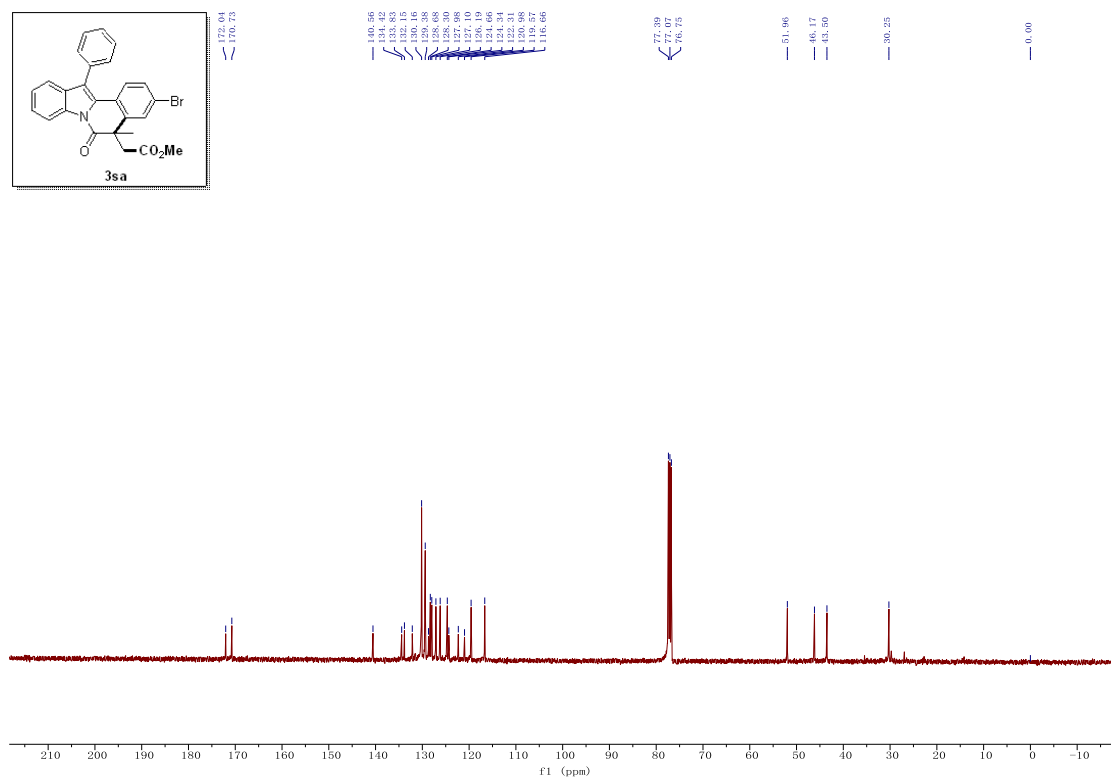
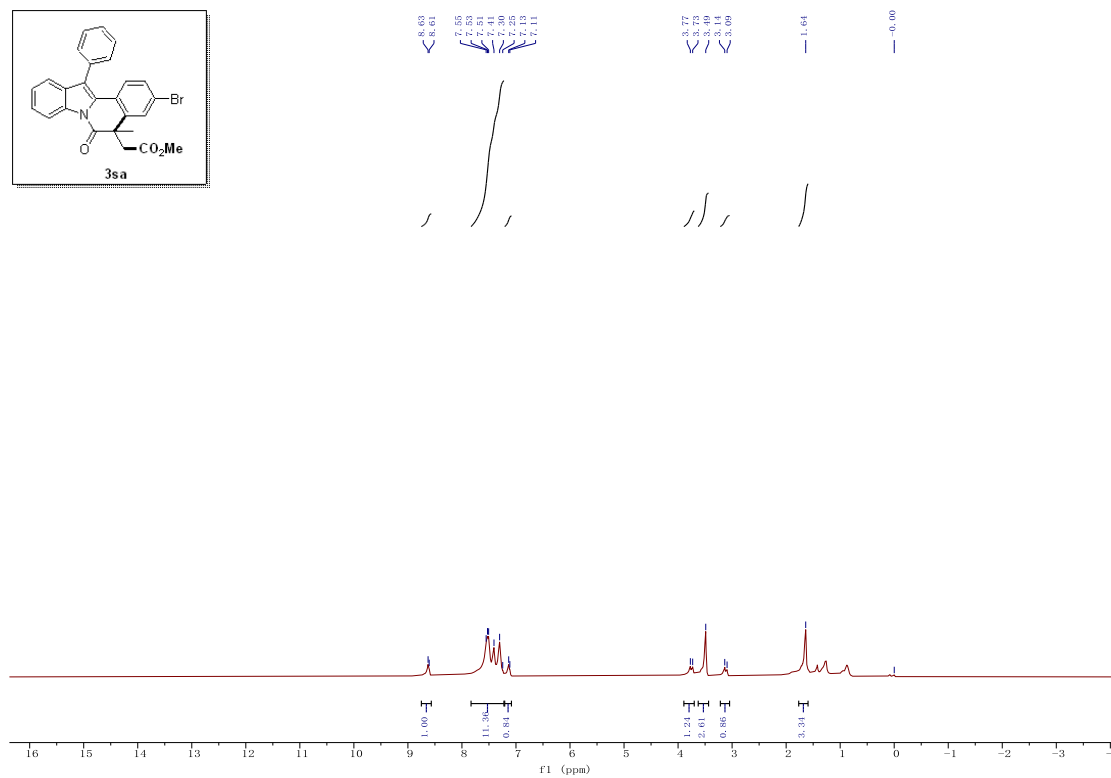
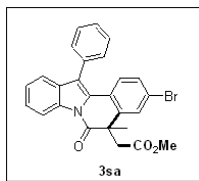


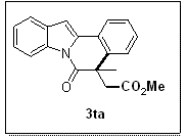










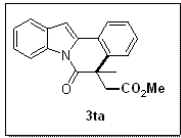
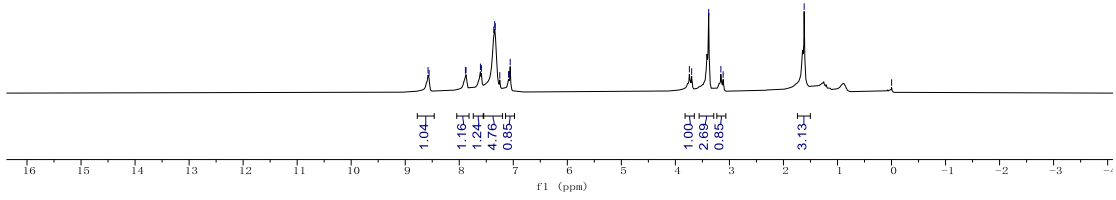


8.58  
8.57  
7.87  
7.87  
7.59  
7.36  
7.33  
7.25  
7.07  
7.06

3.74  
3.70  
3.68  
3.18  
3.12

1.62

-0.00



172.63  
170.80

137.78  
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103.18

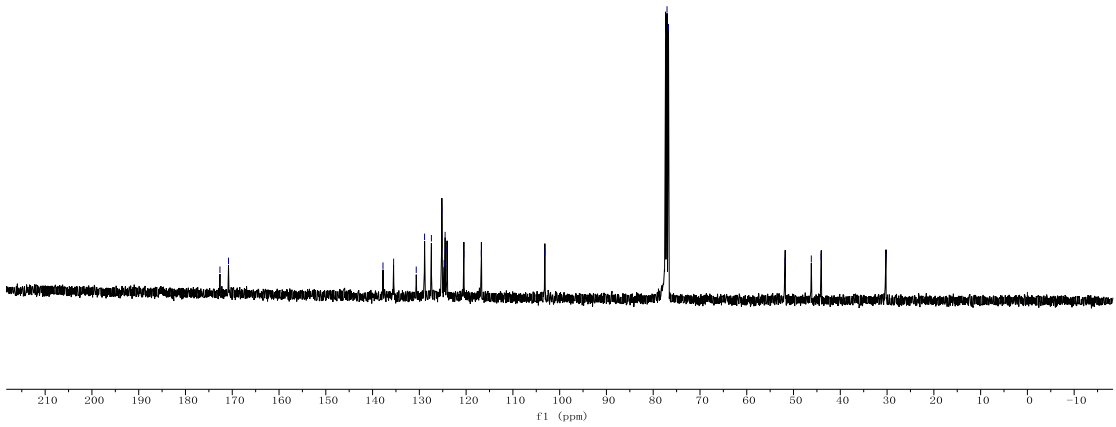
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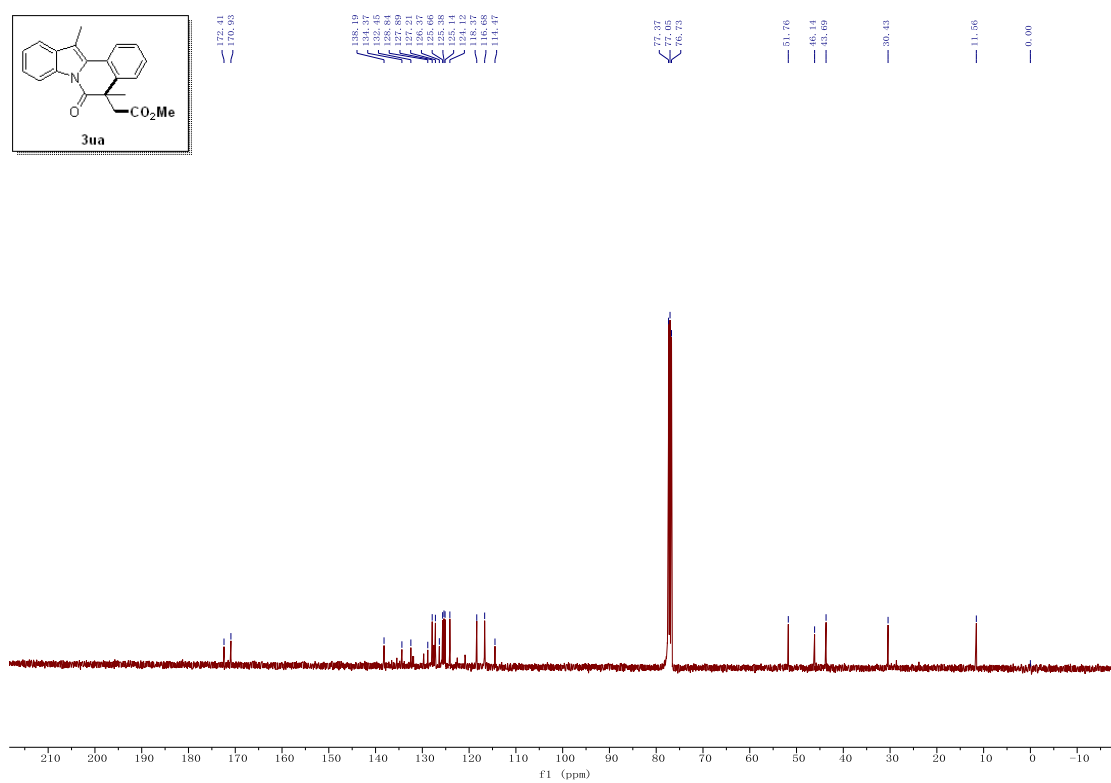
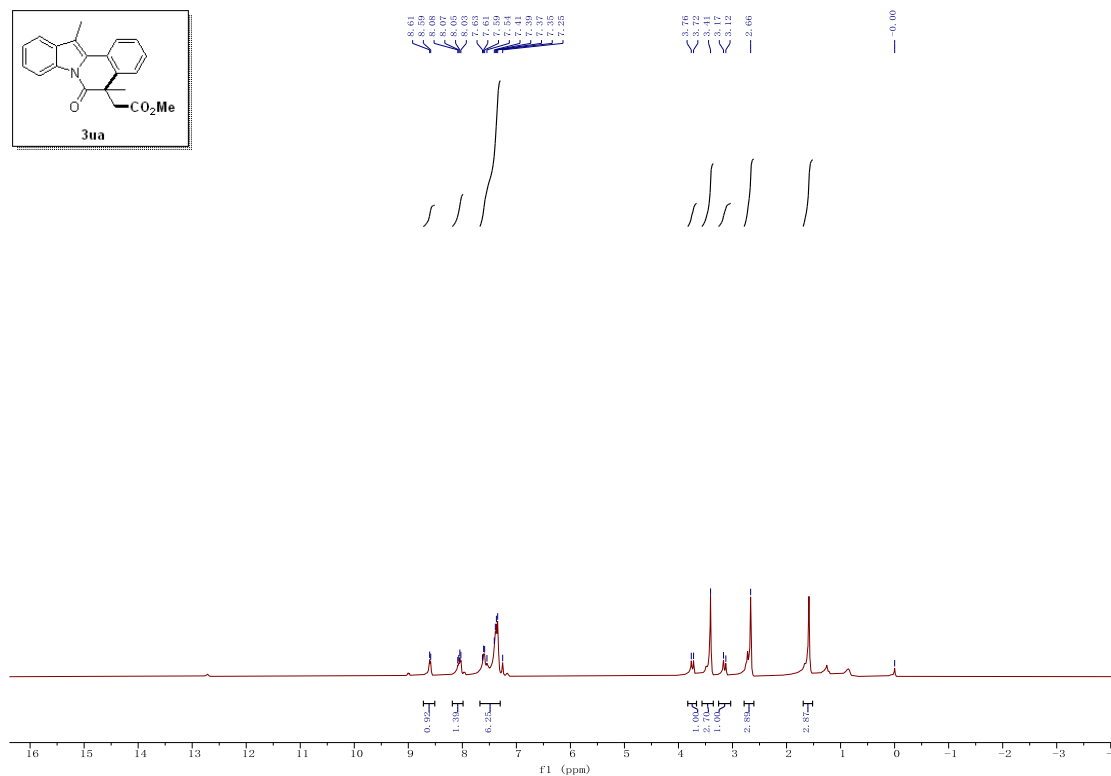
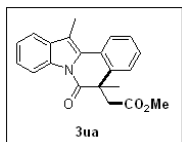
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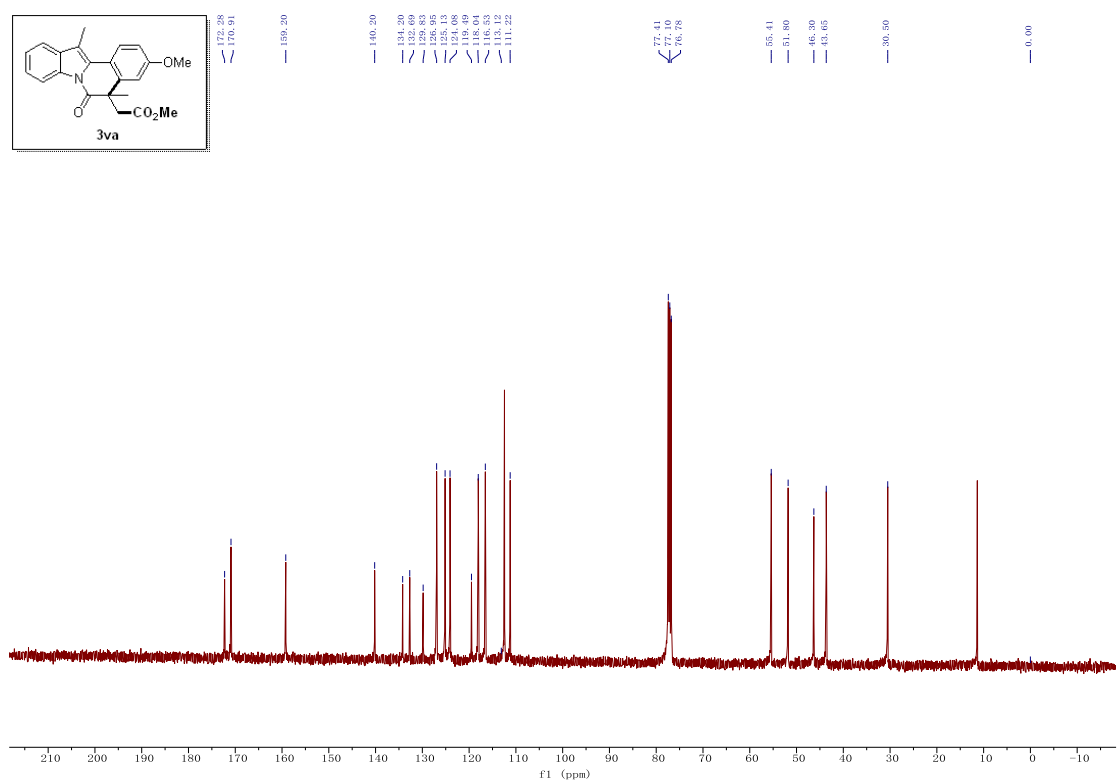
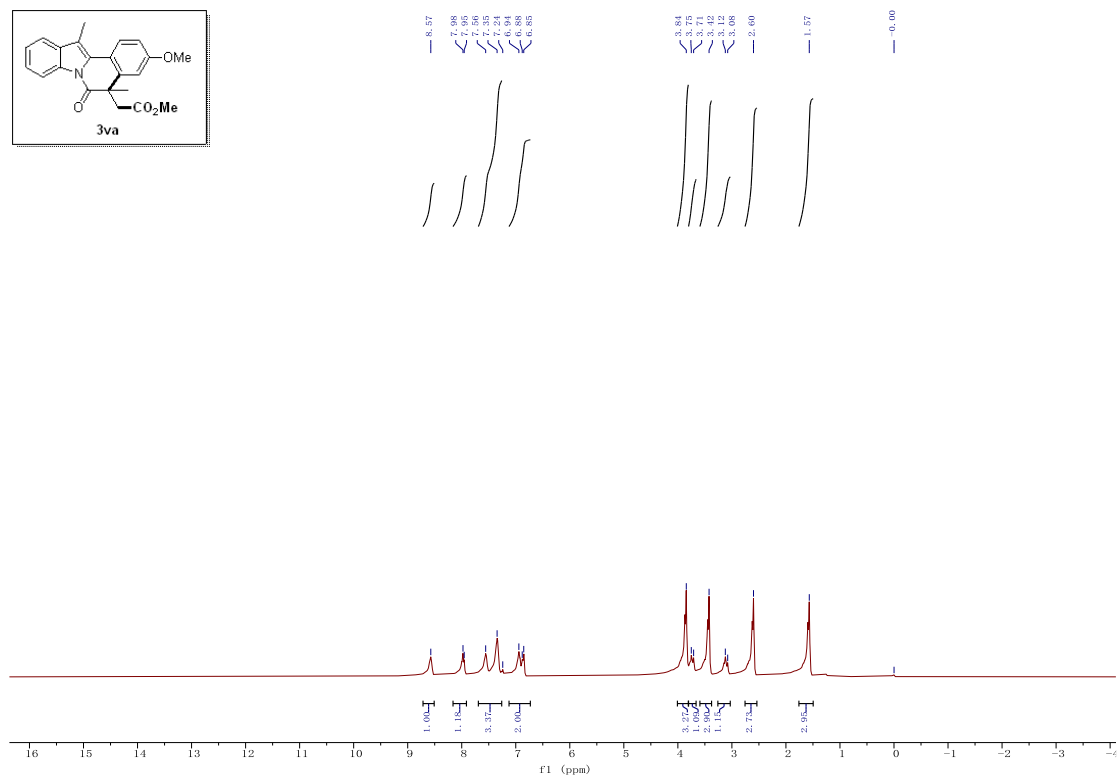
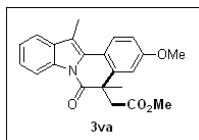
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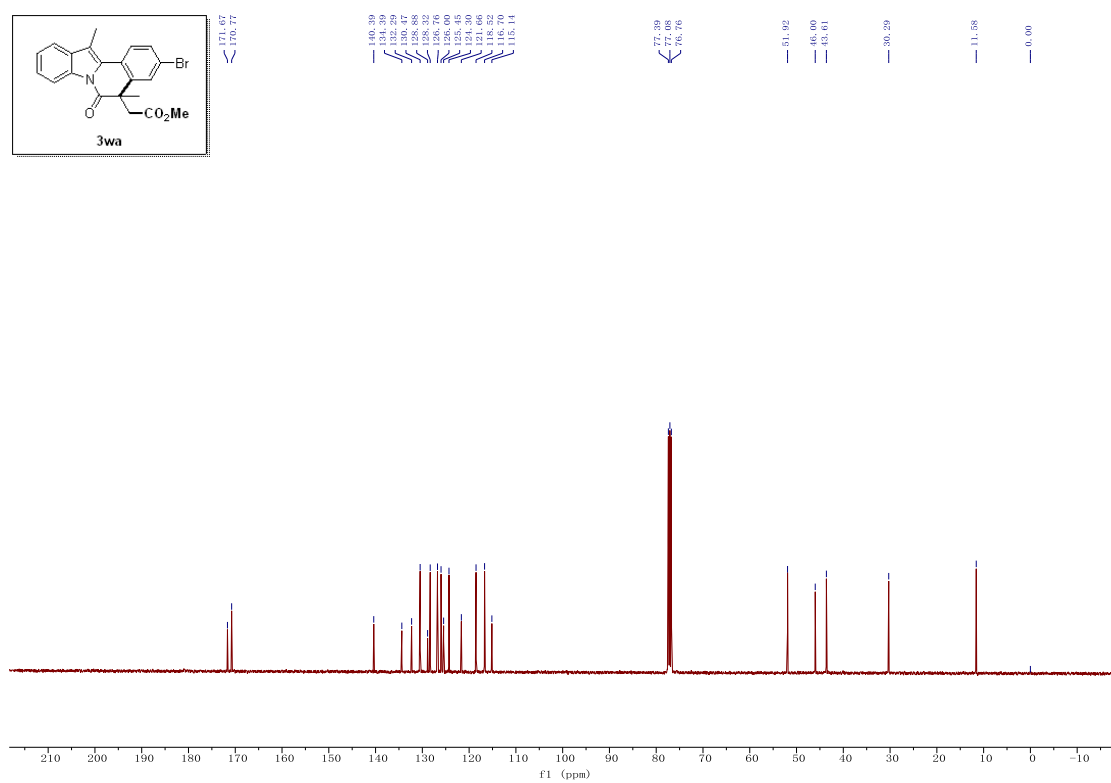
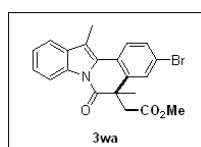
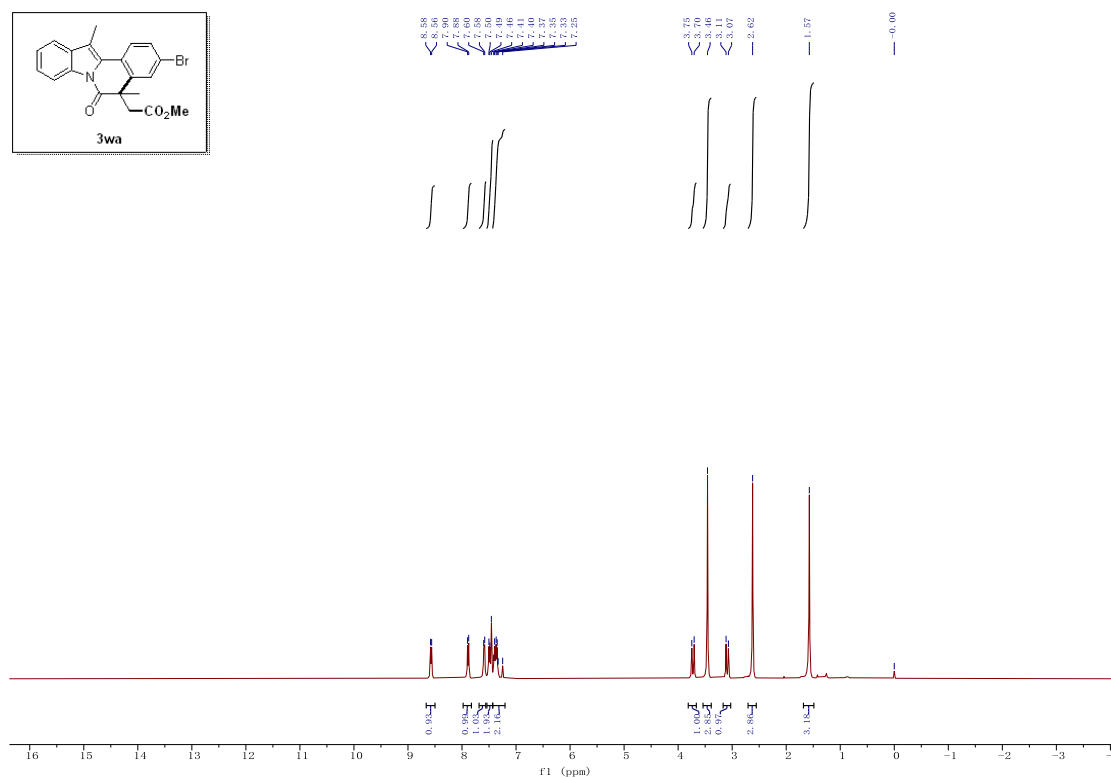
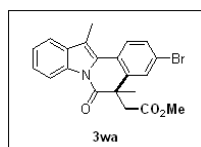
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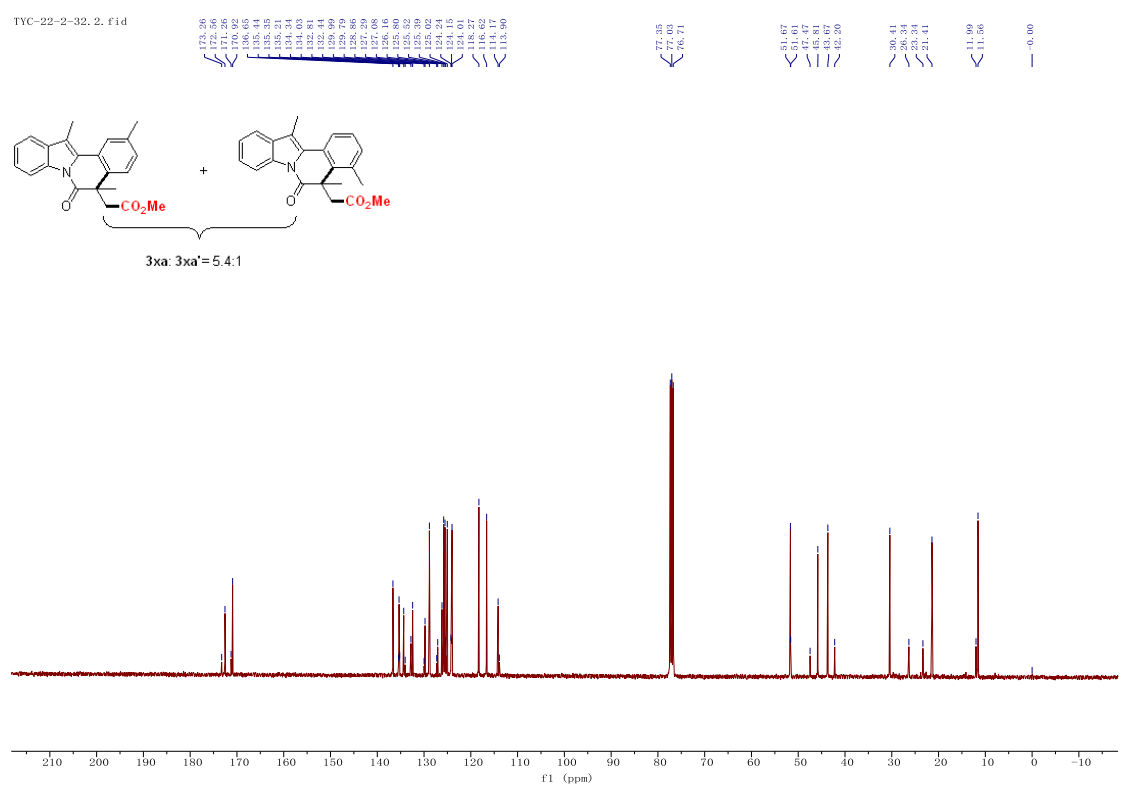
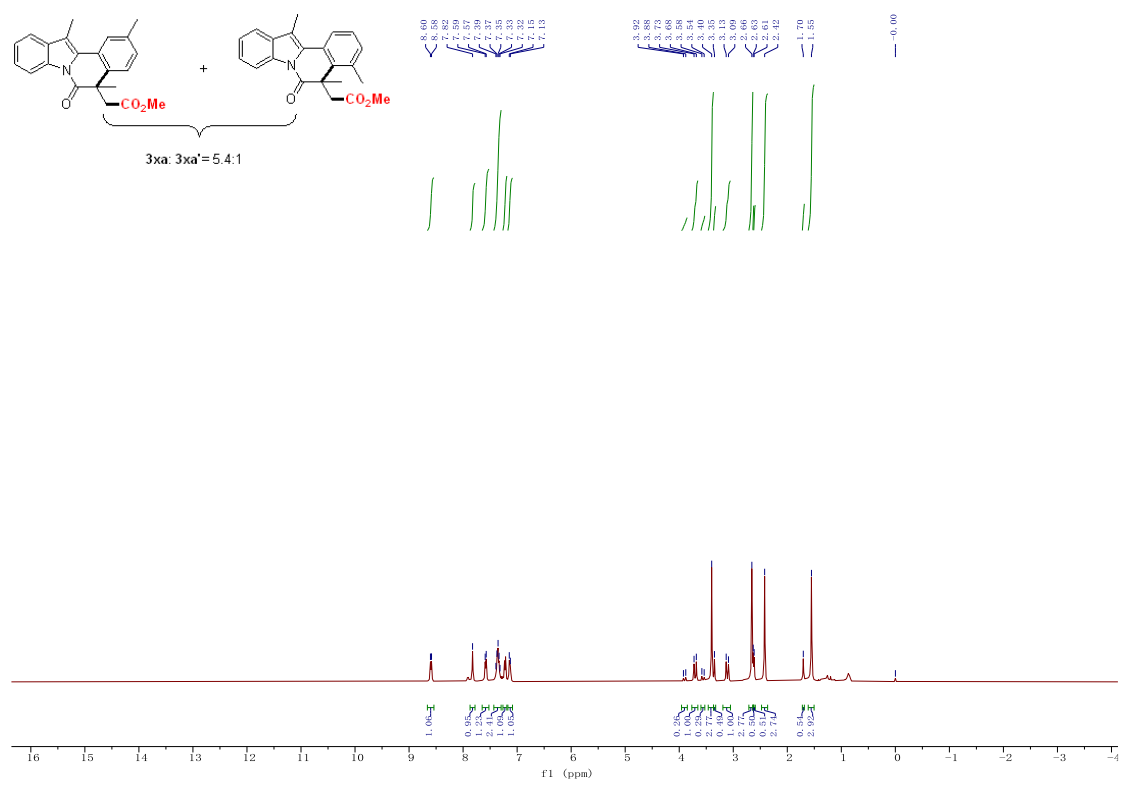


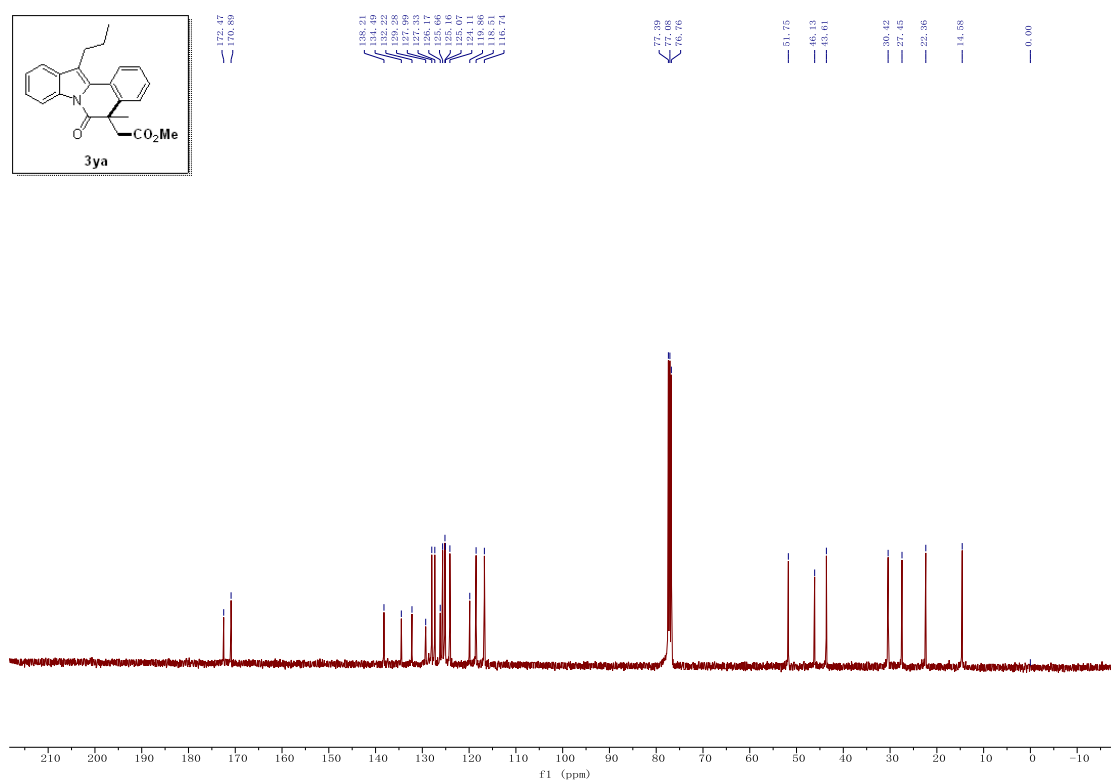
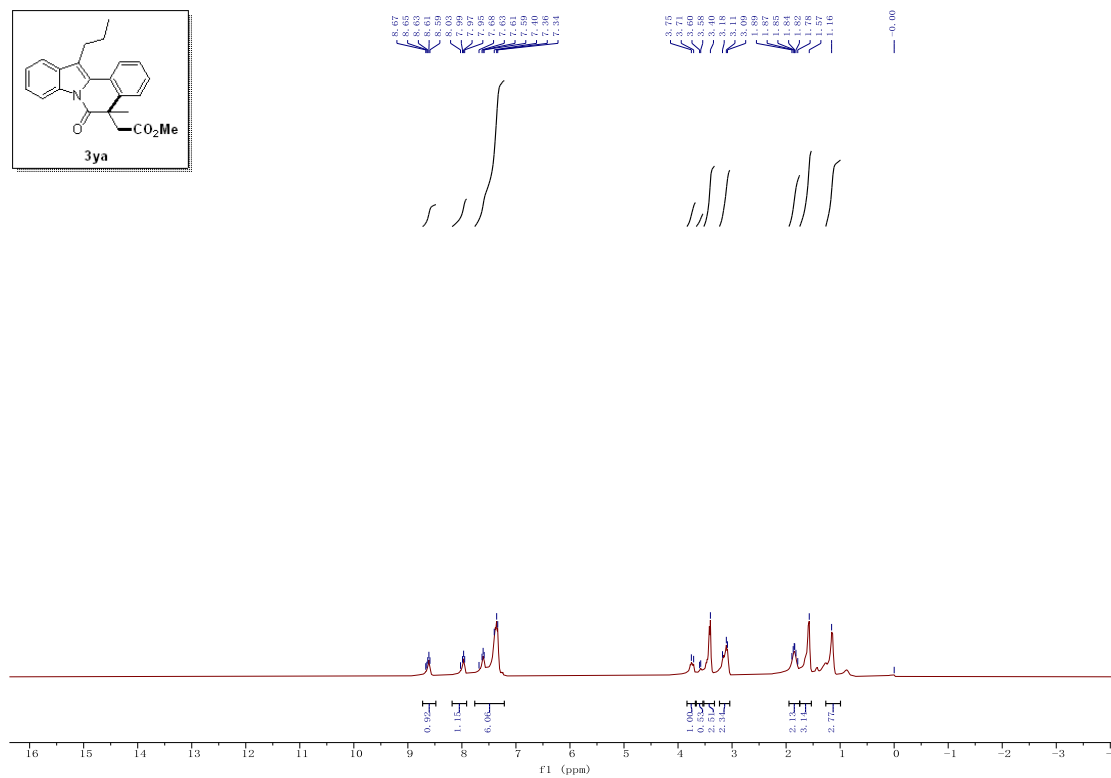
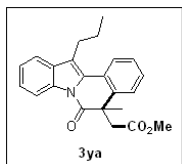


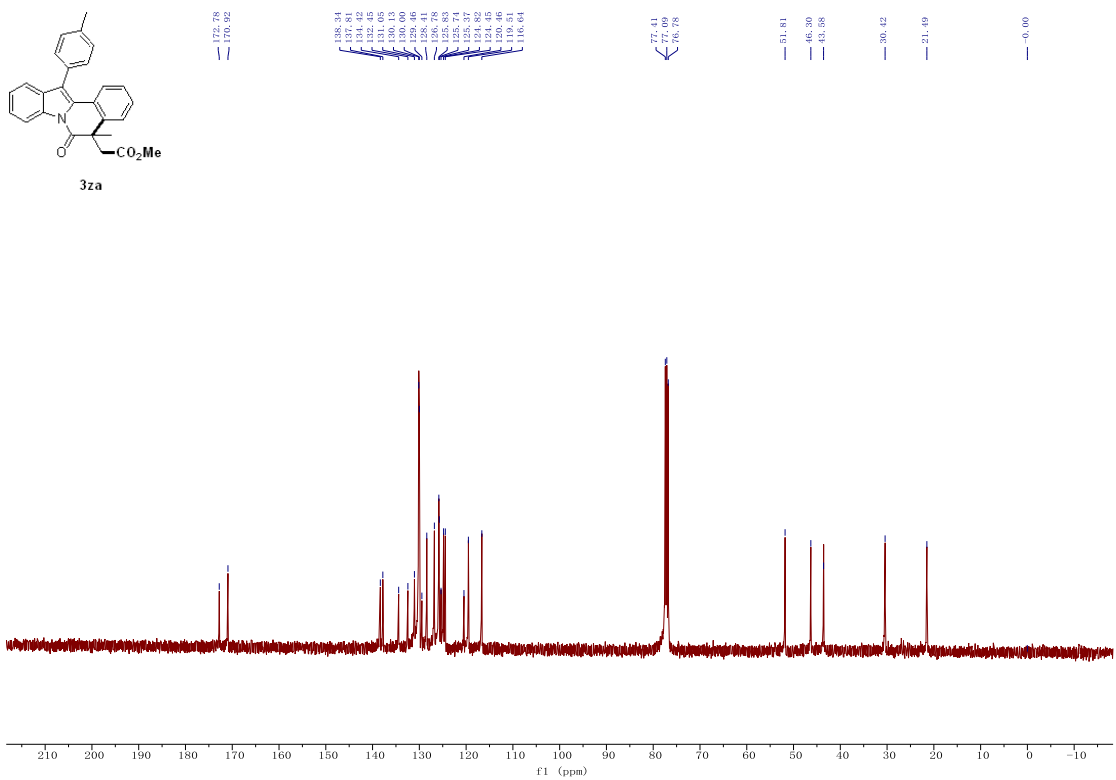
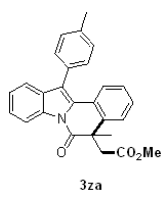
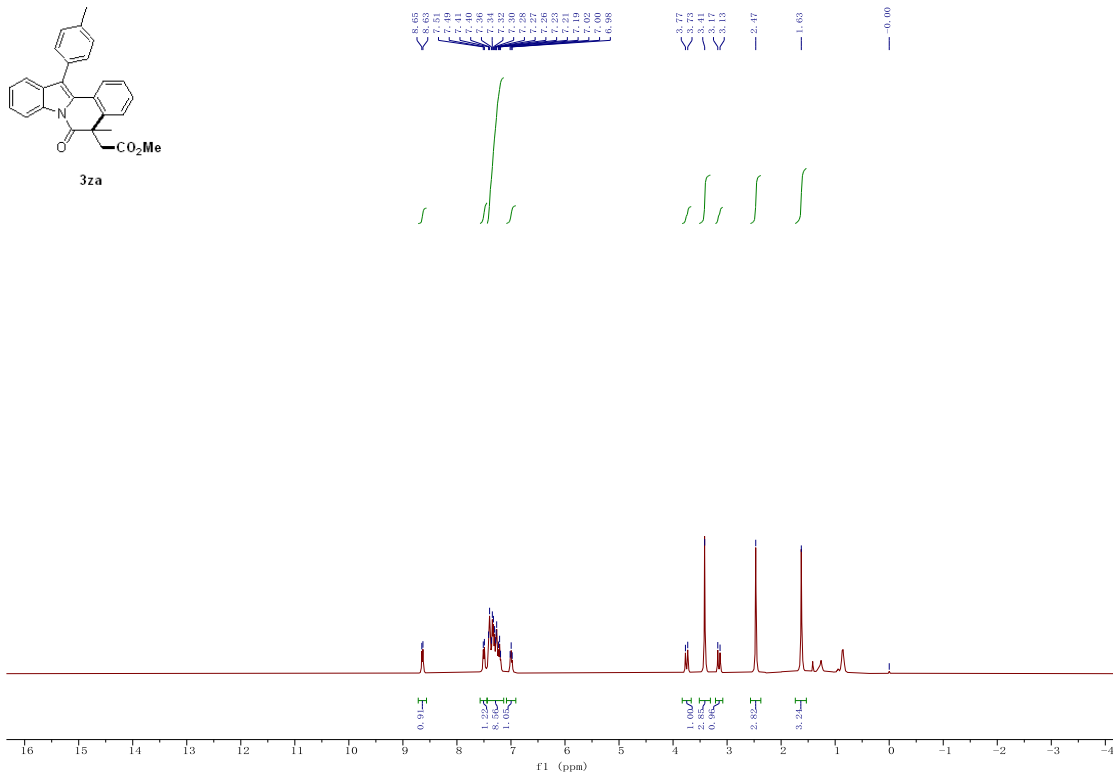
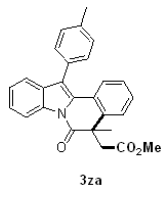


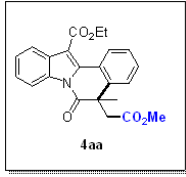










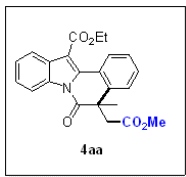
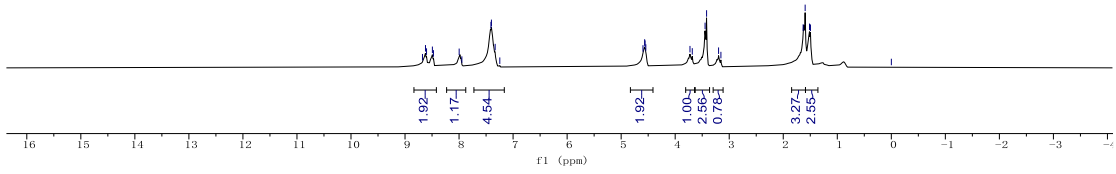


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7.00  
7.35

4.69  
4.57  
4.56  
3.73  
3.65  
3.62  
3.15

1.63  
1.51  
1.51

0.00



173.11  
170.62  
165.78

139.31  
136.89  
136.30  
130.01  
129.01  
127.15  
126.23  
124.43  
123.64  
116.51  
110.50

77.42  
77.10  
76.78

61.27

51.87  
46.62  
43.38

30.10

14.40

0.00

