

Supporting Information

Rh-Catalyzed Cascade C-H Activation/Annulation of *N*-Hydroxybenzamides and Propargylic Acetates for Modular Access to Isoquinolones

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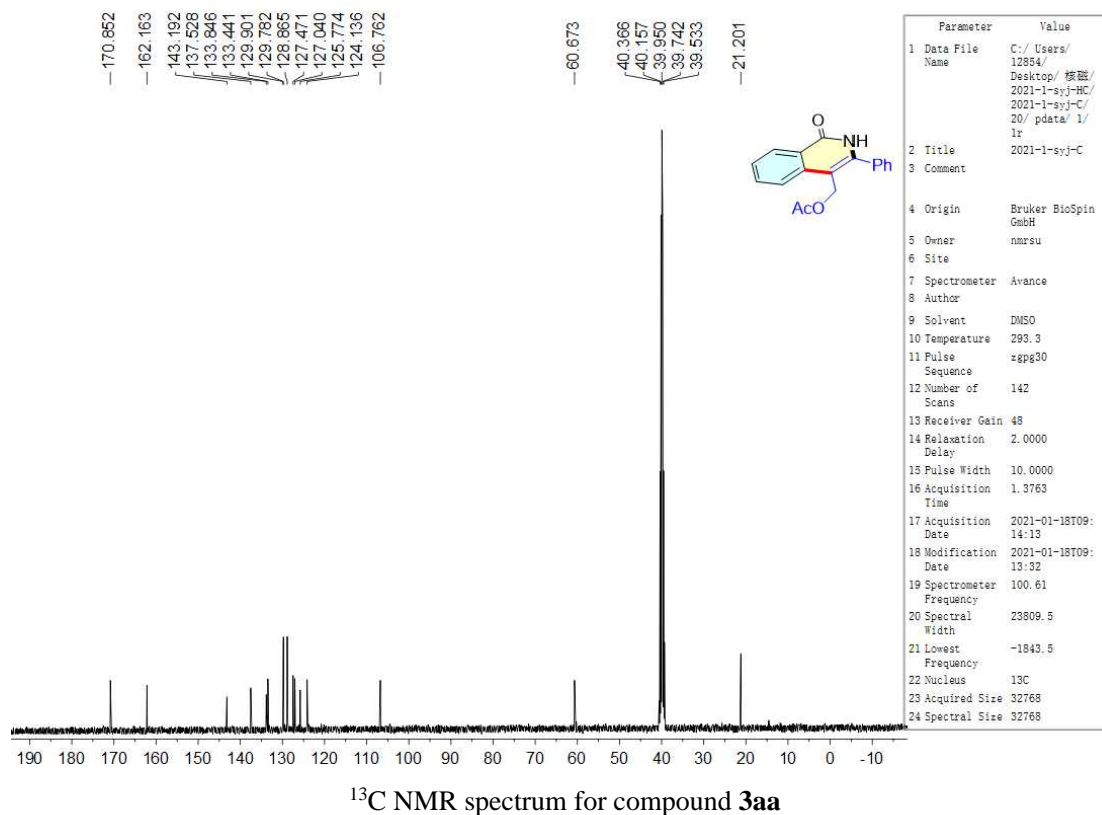
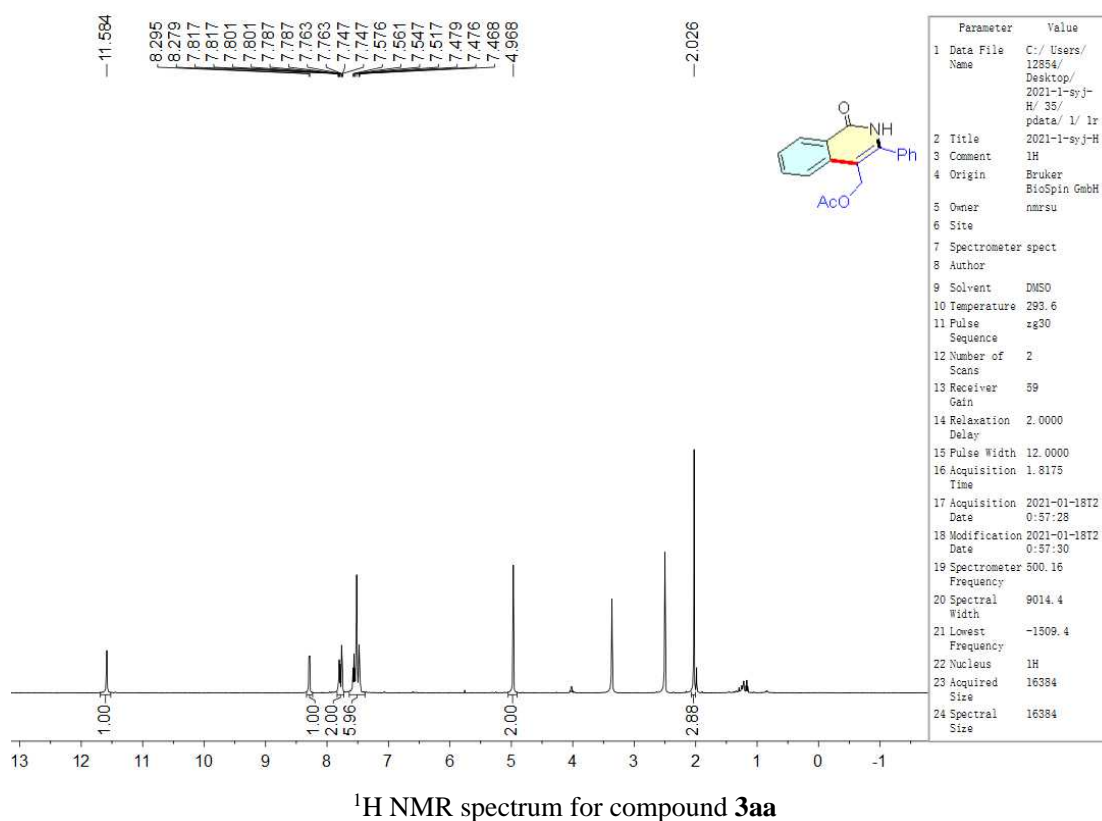
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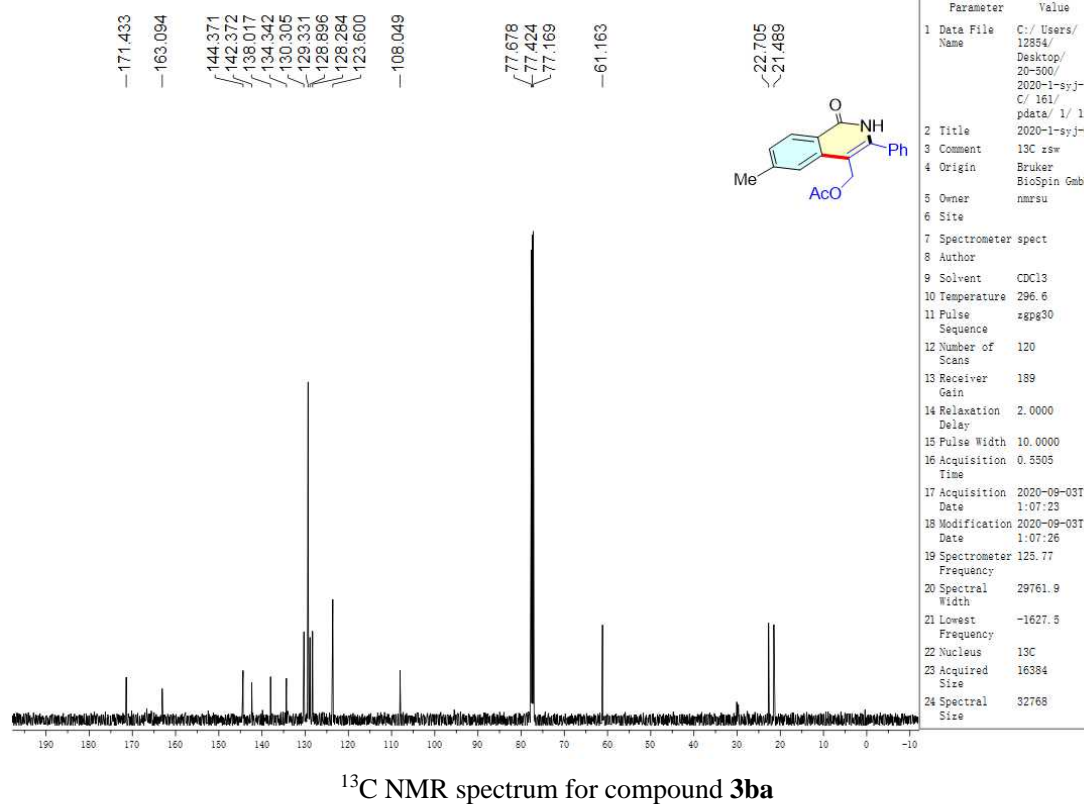
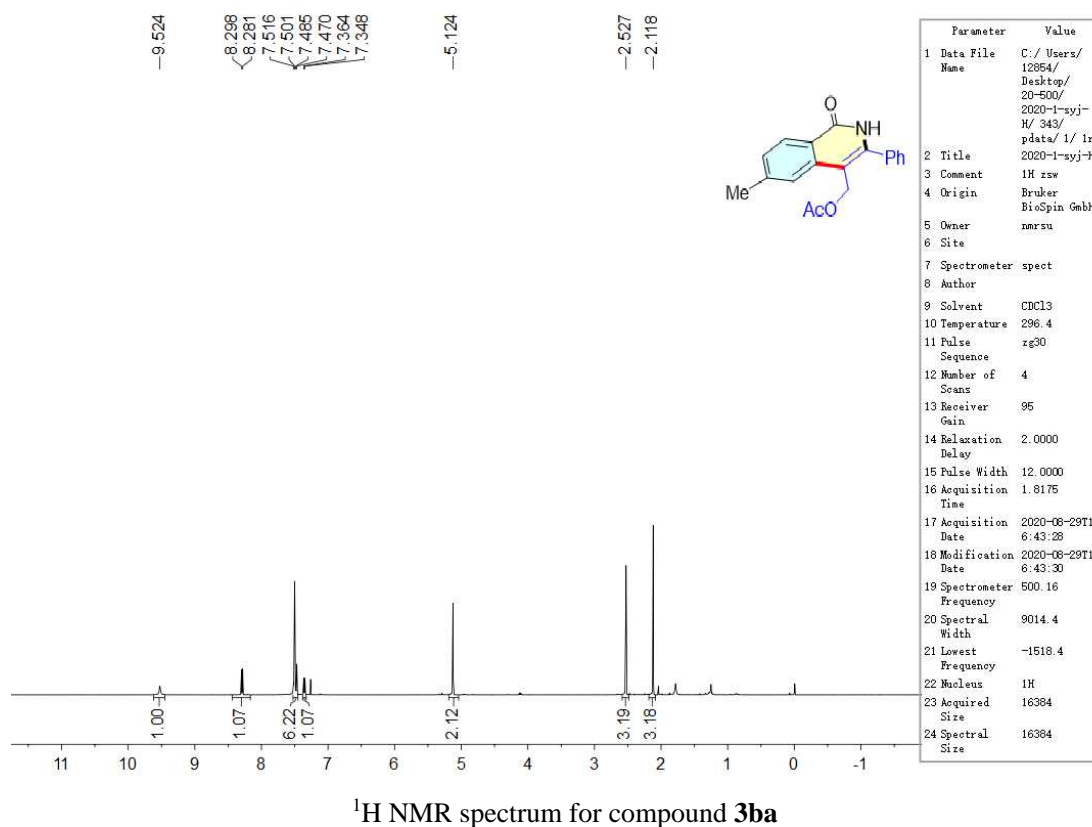
† These authors contributed equally to this work.

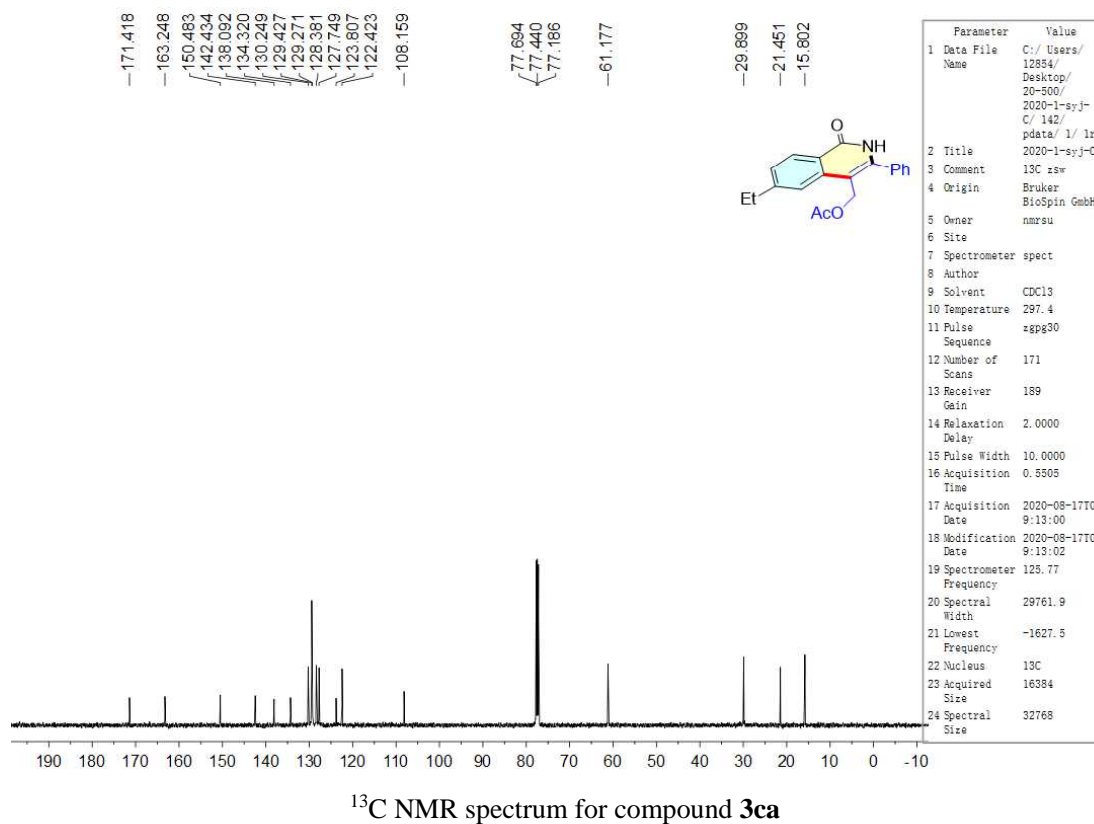
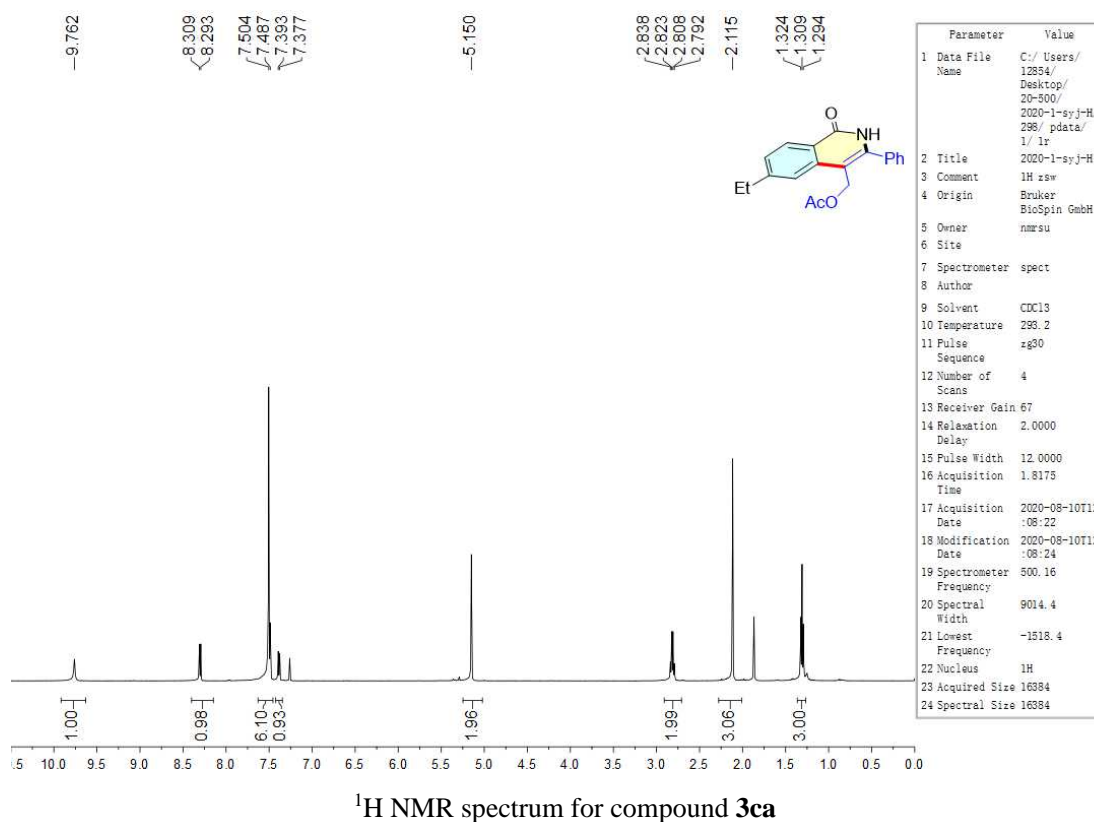
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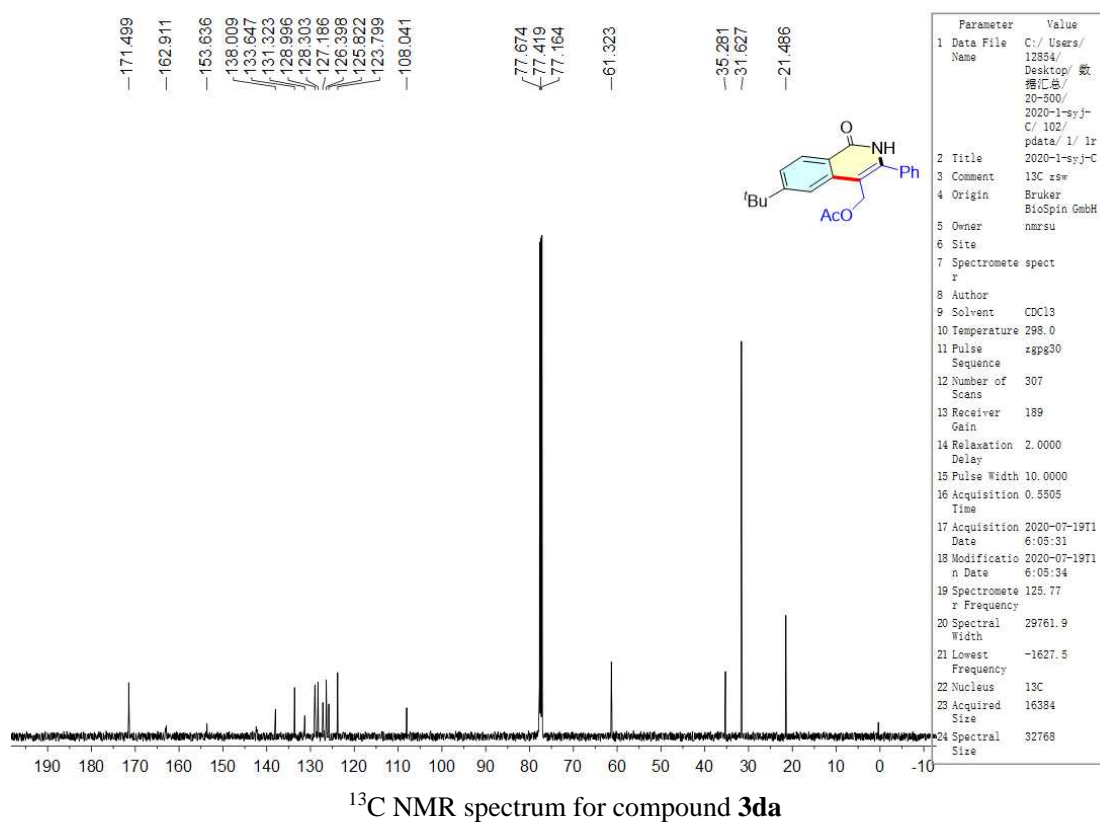
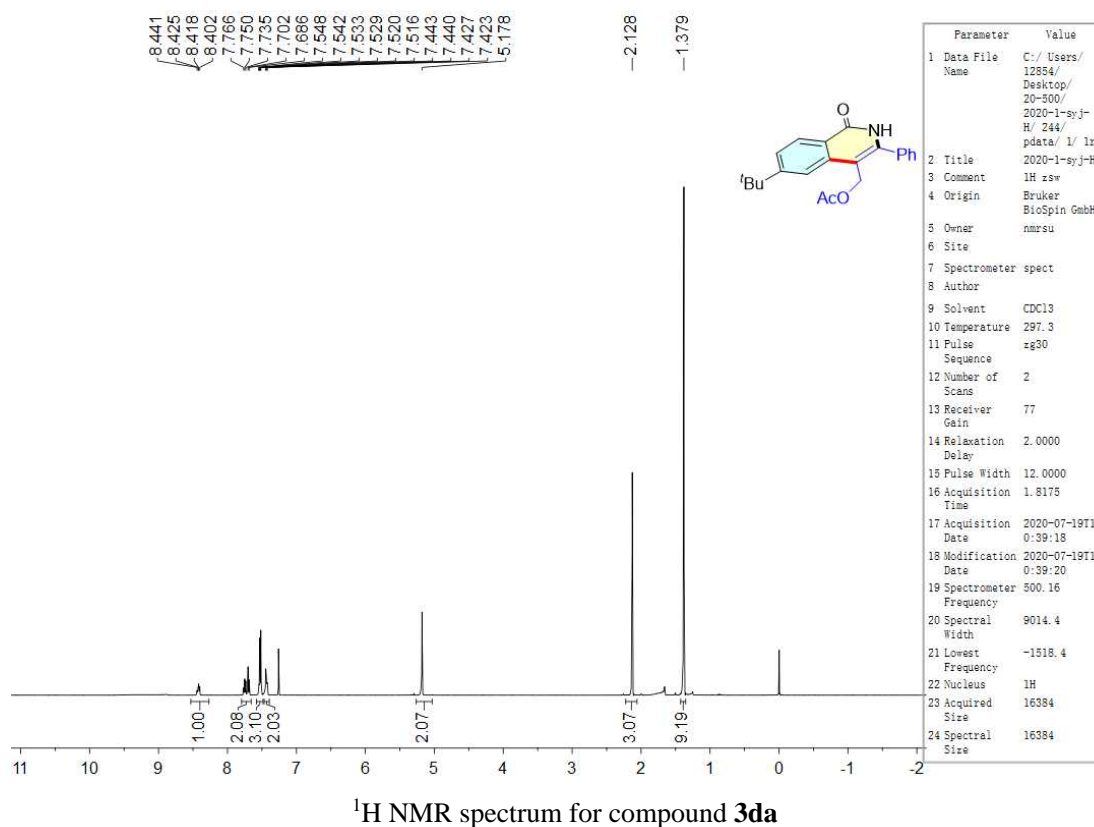
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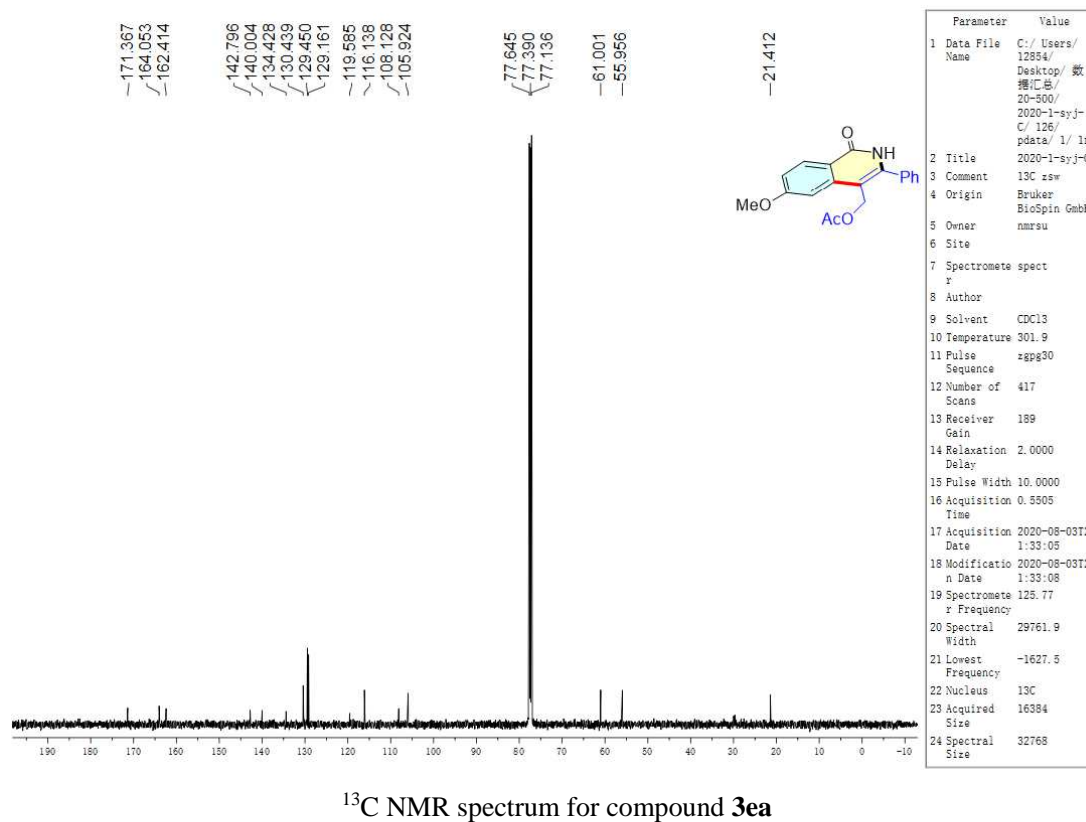
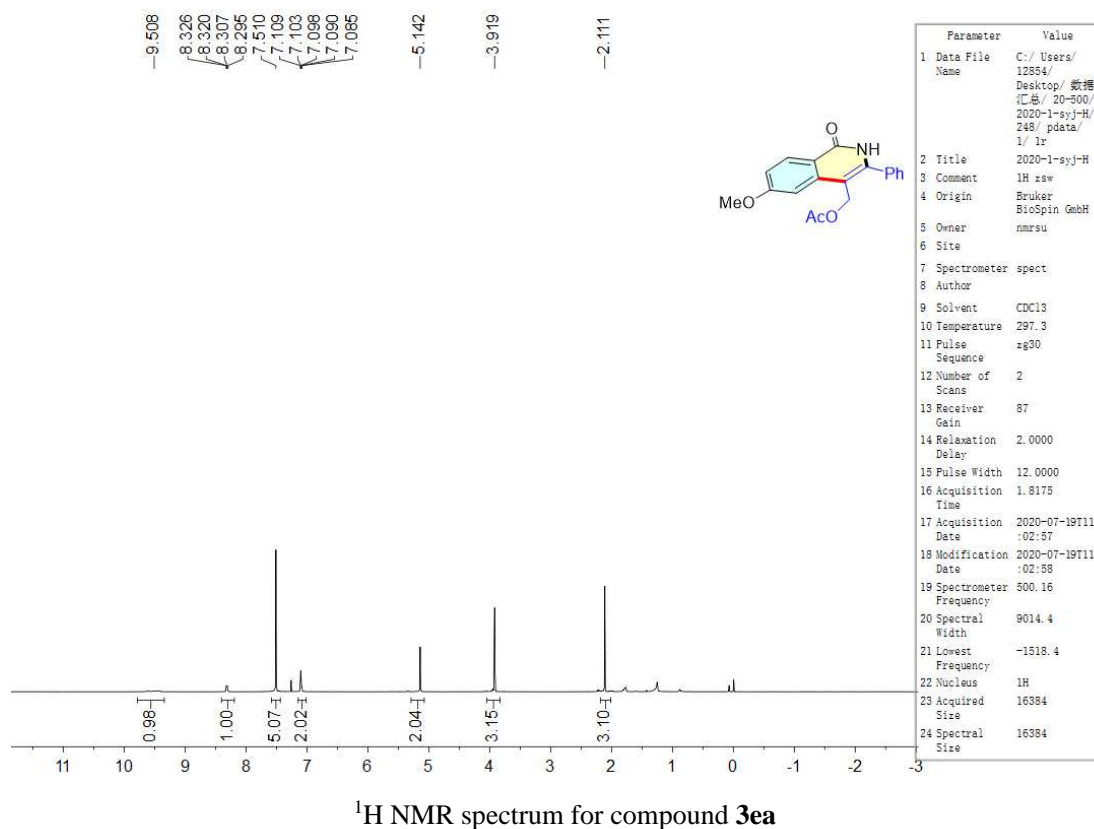
1. ^1H and ^{13}C NMR spectrum for all compounds

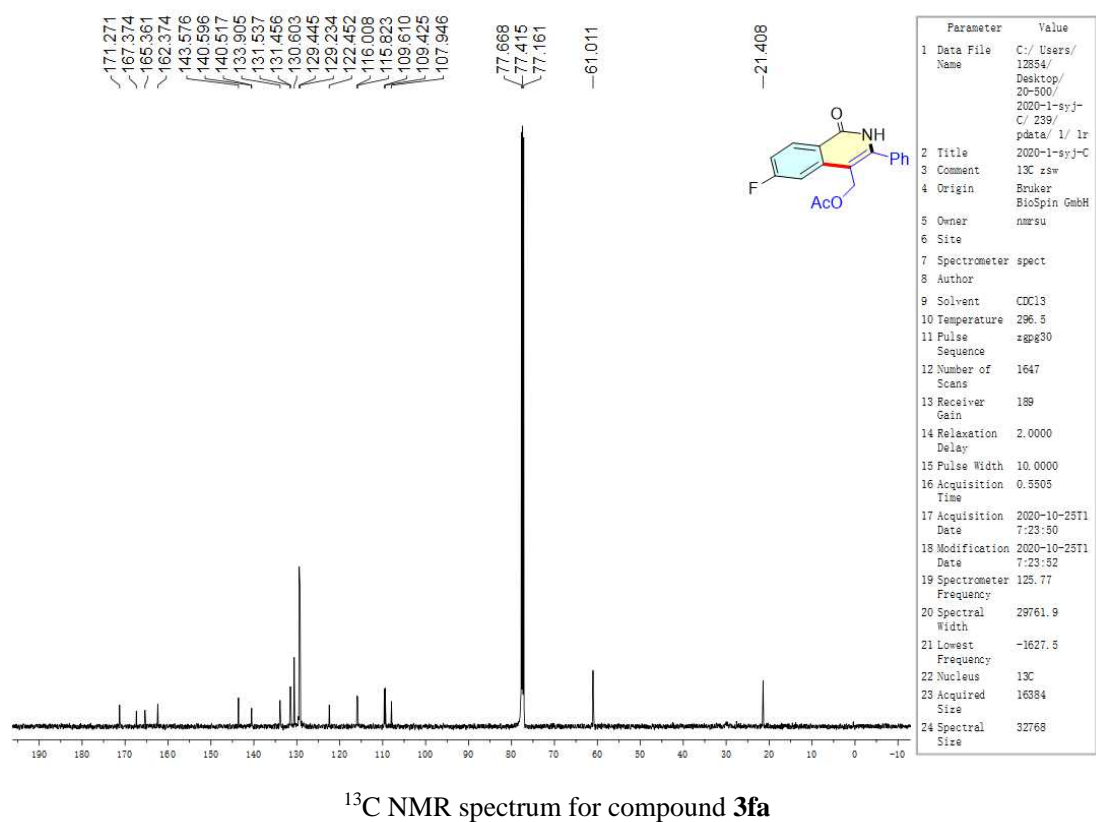
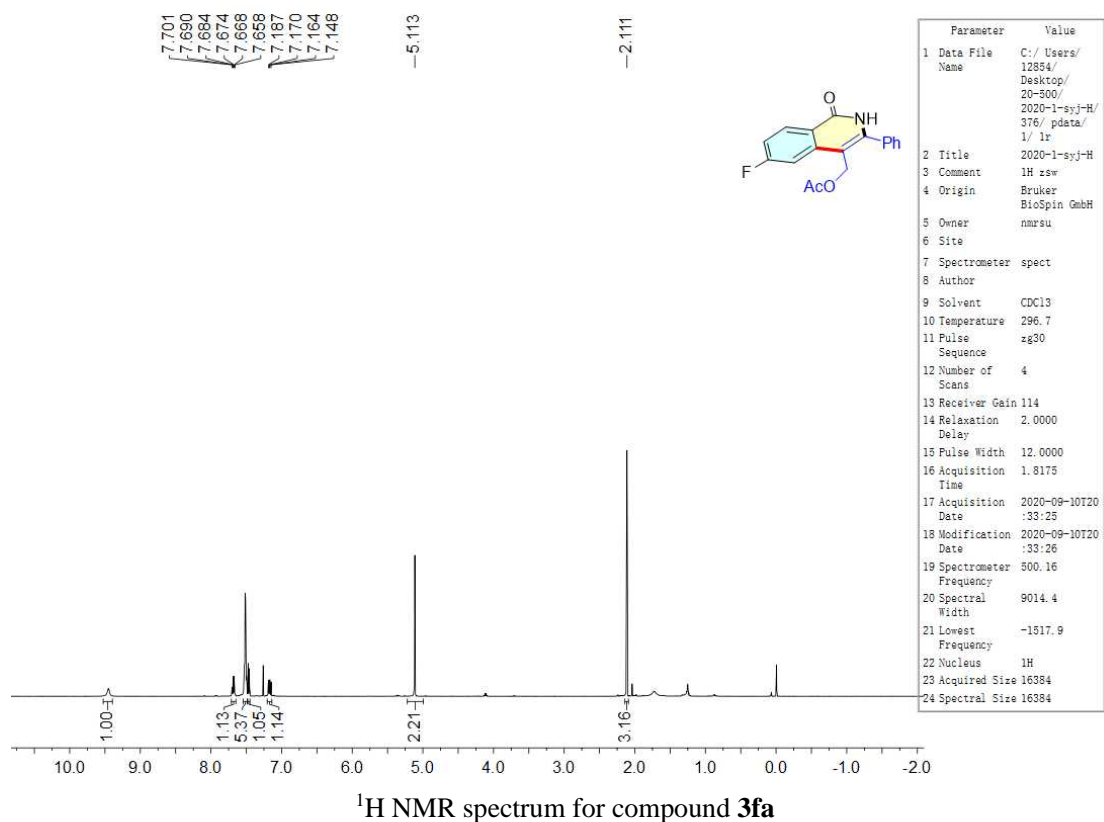


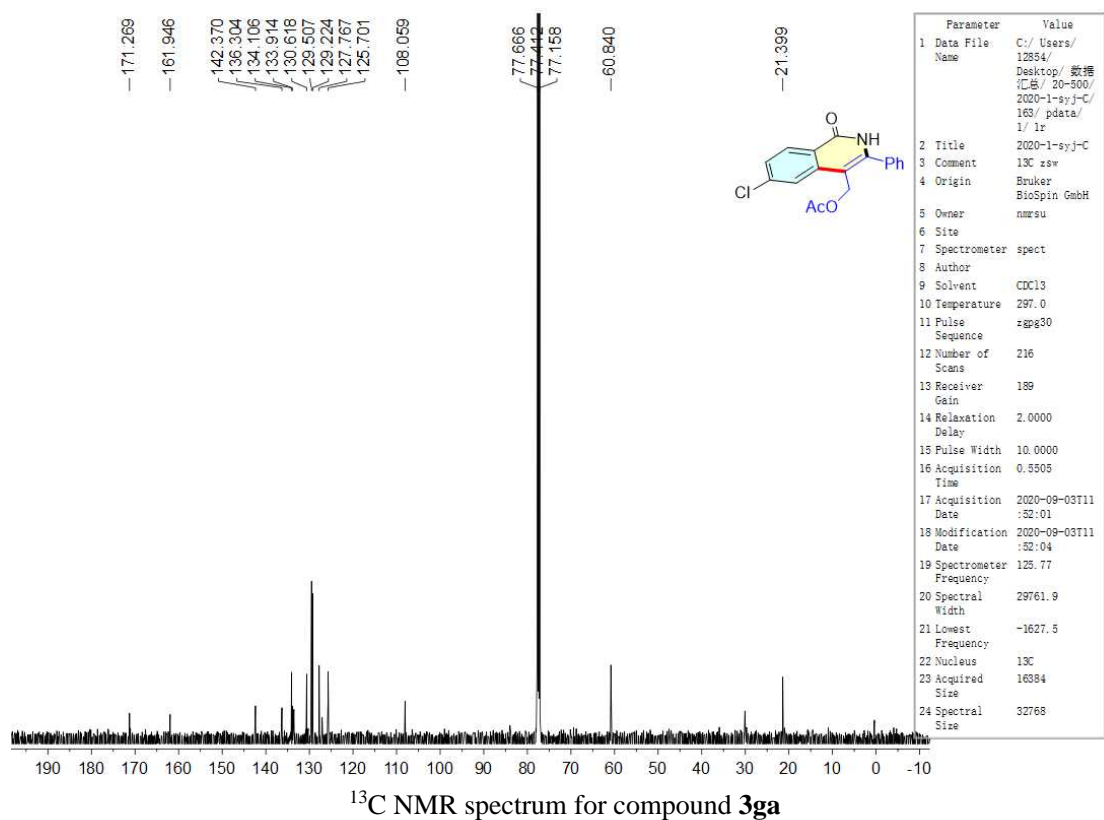
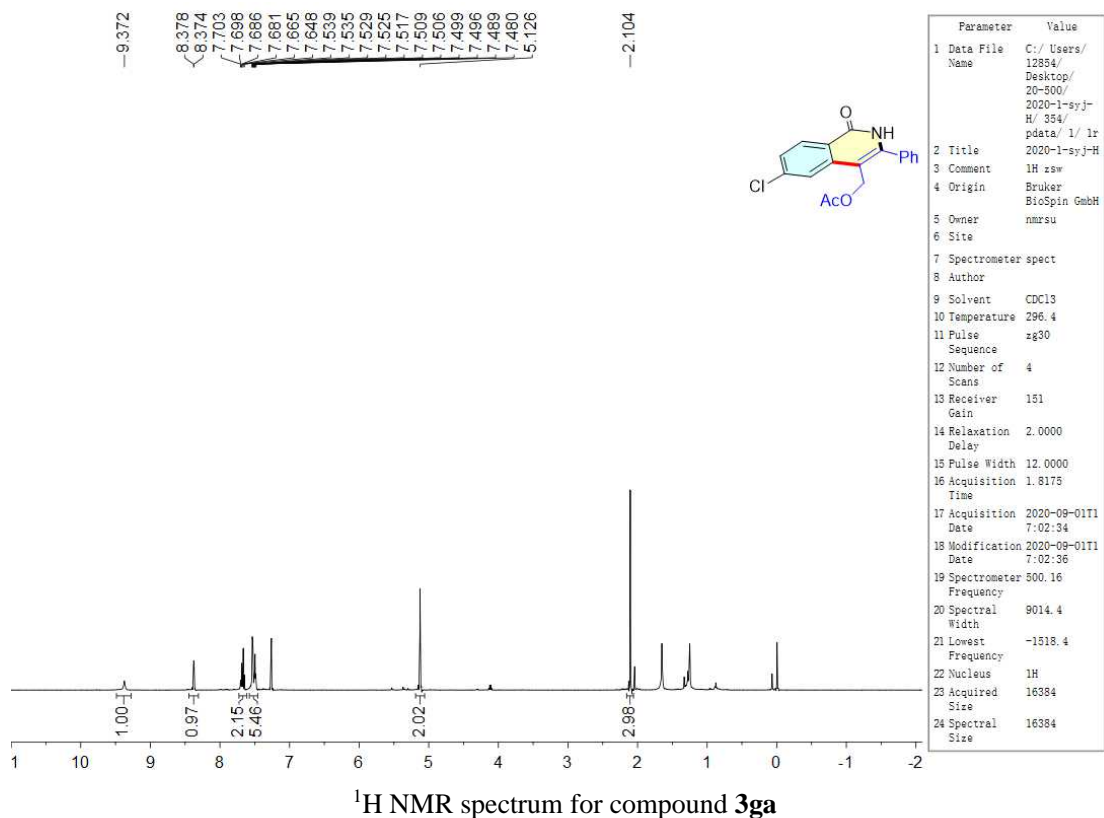


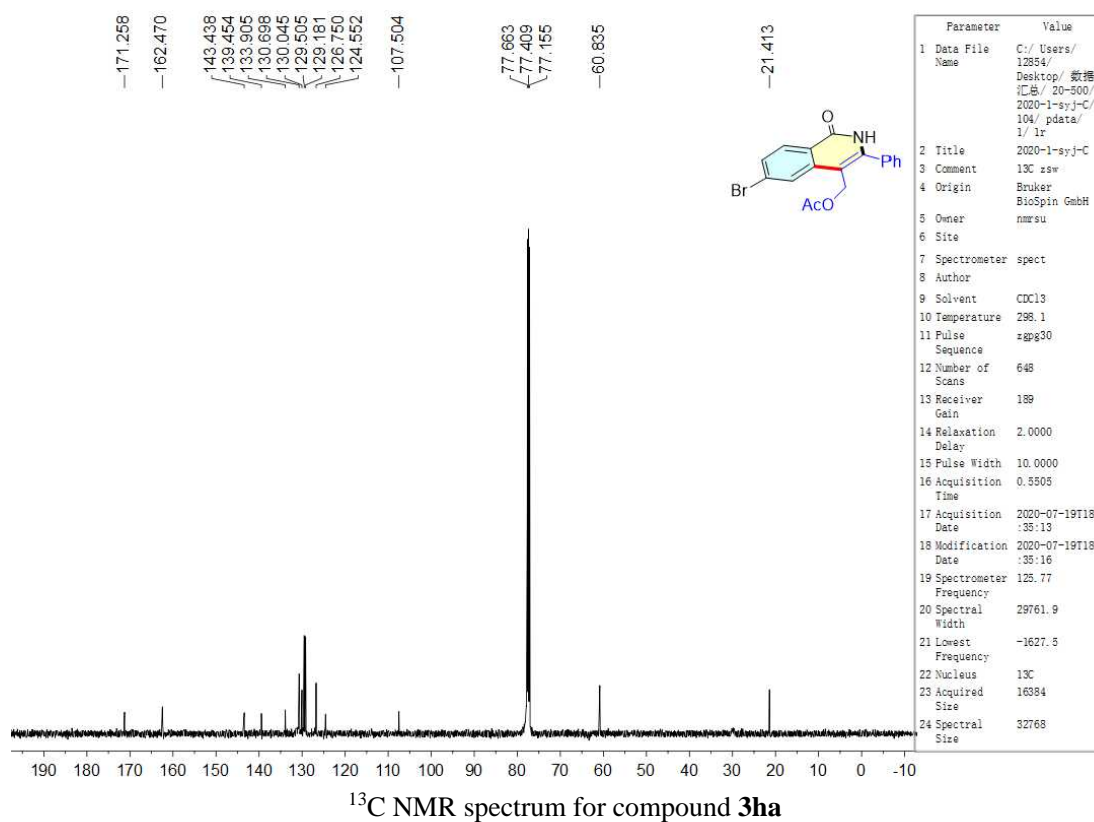
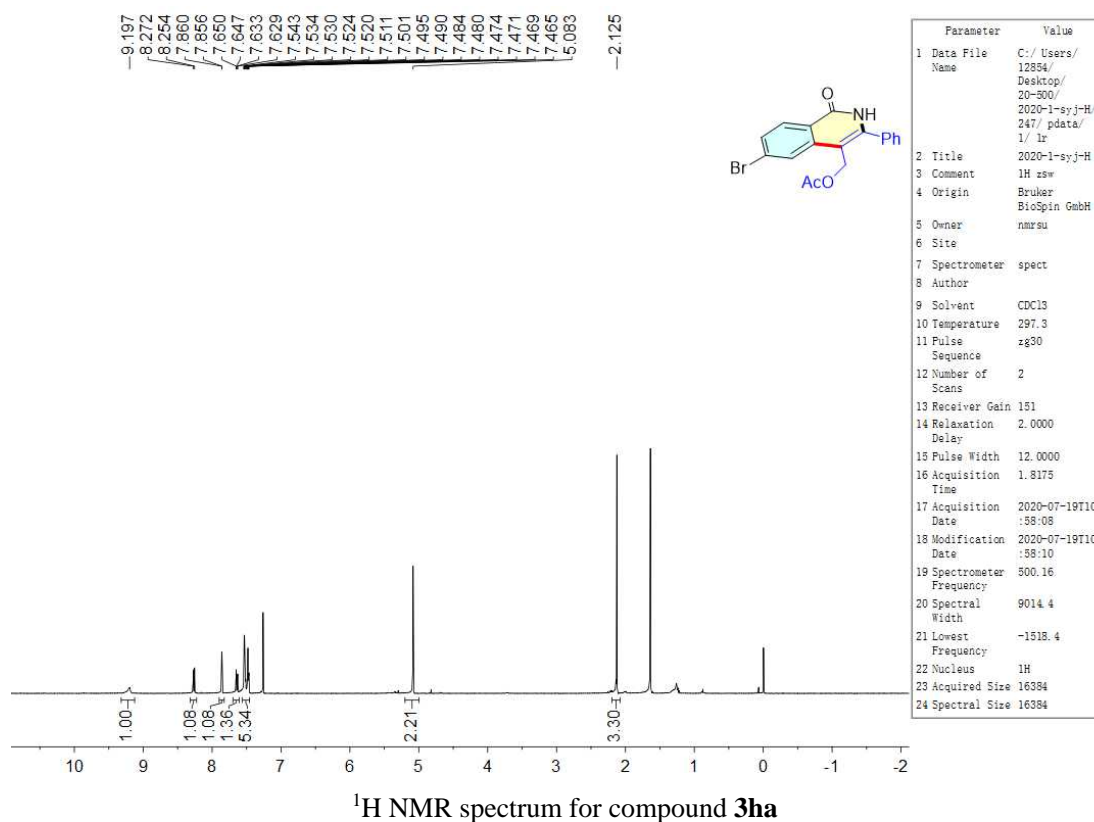


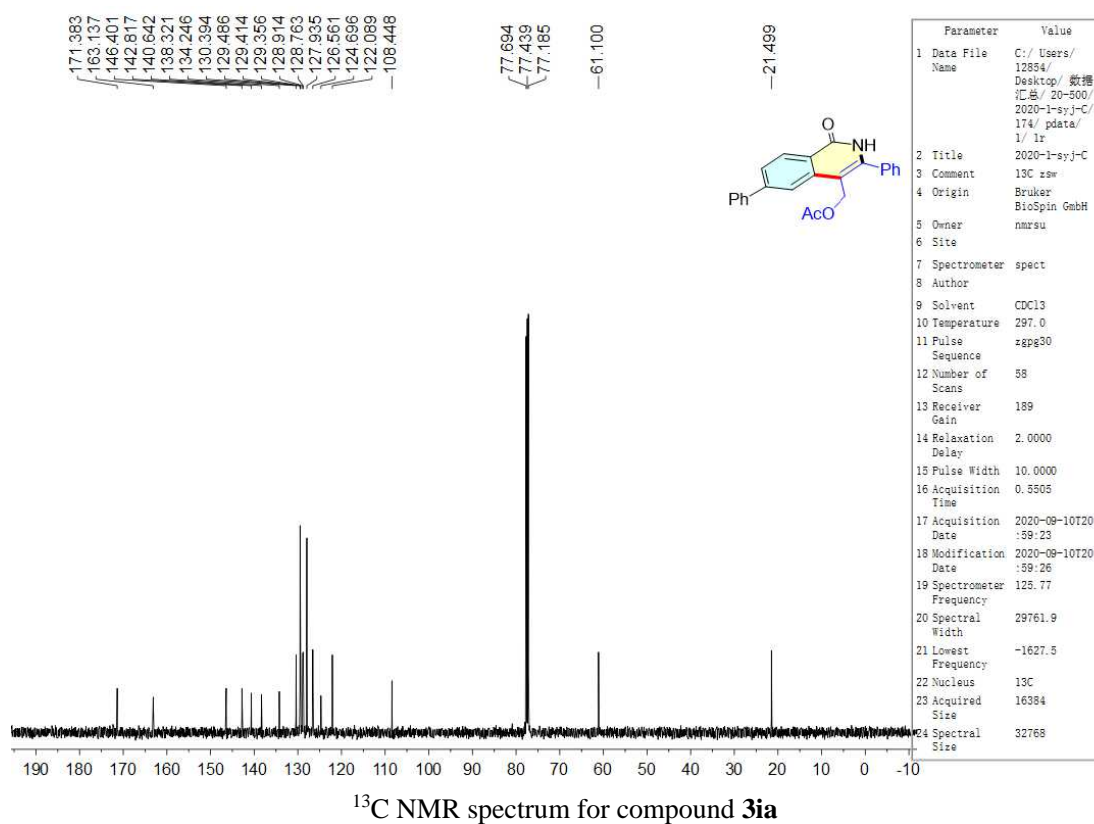
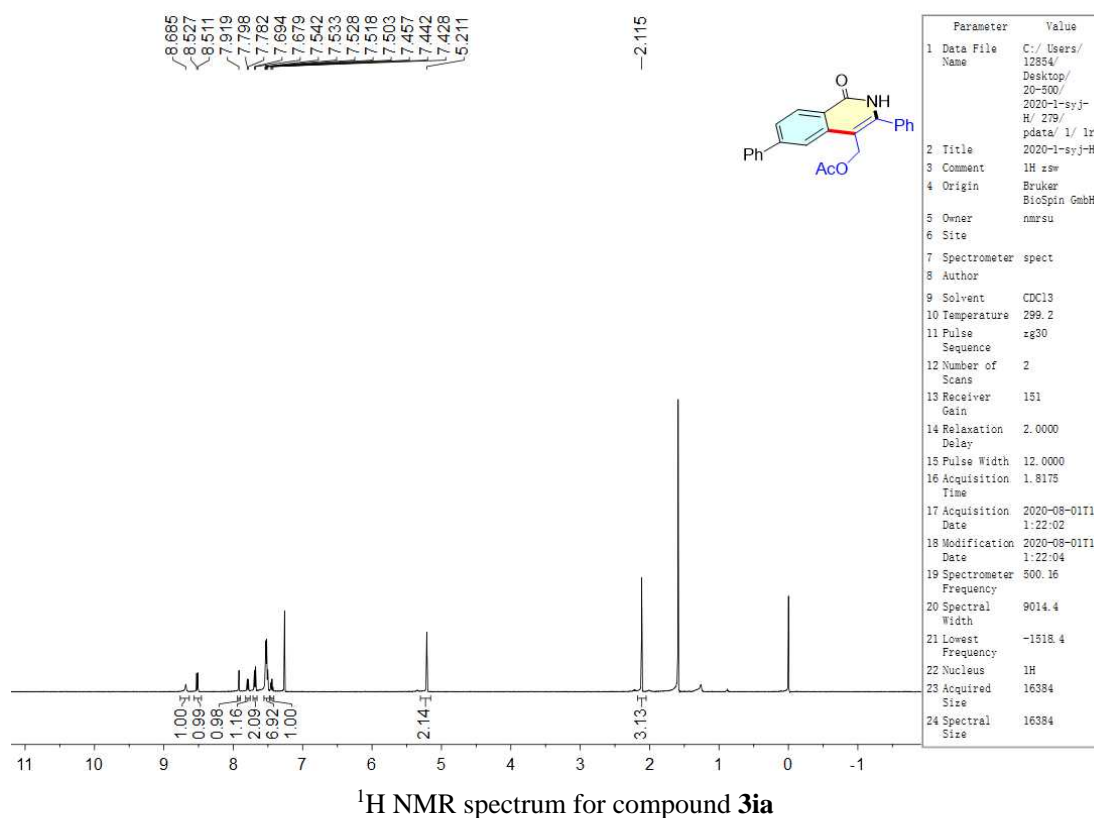


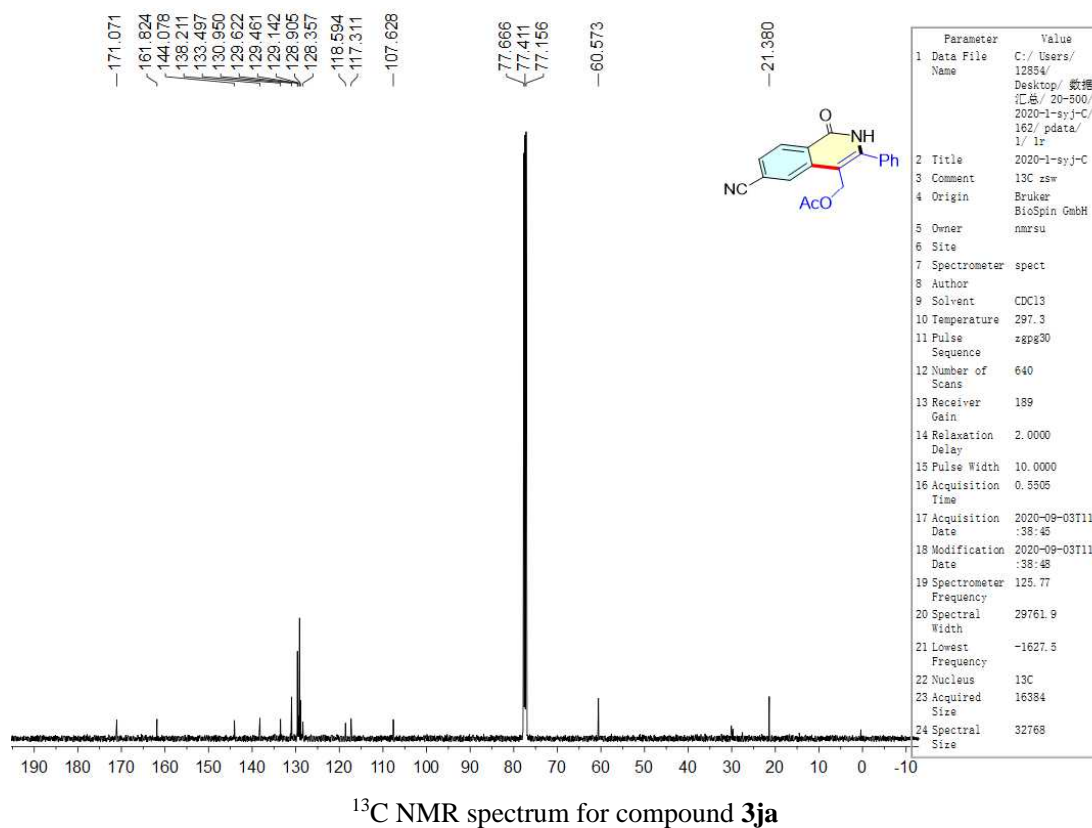
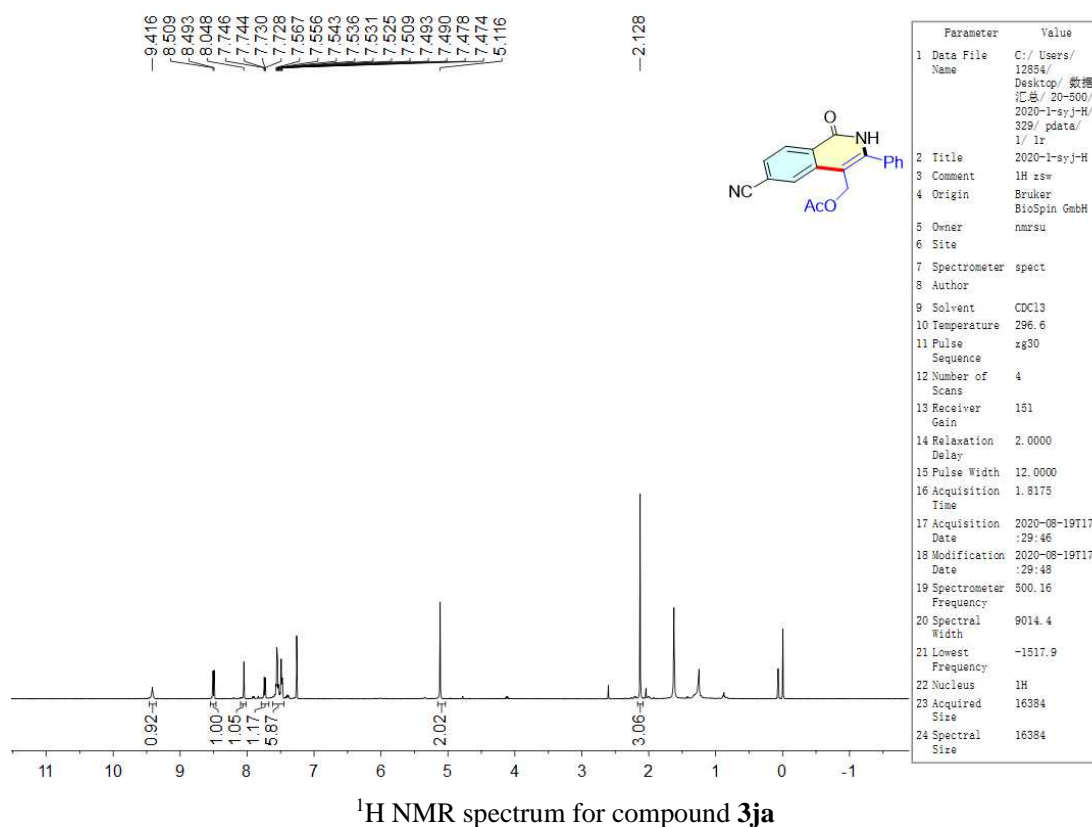


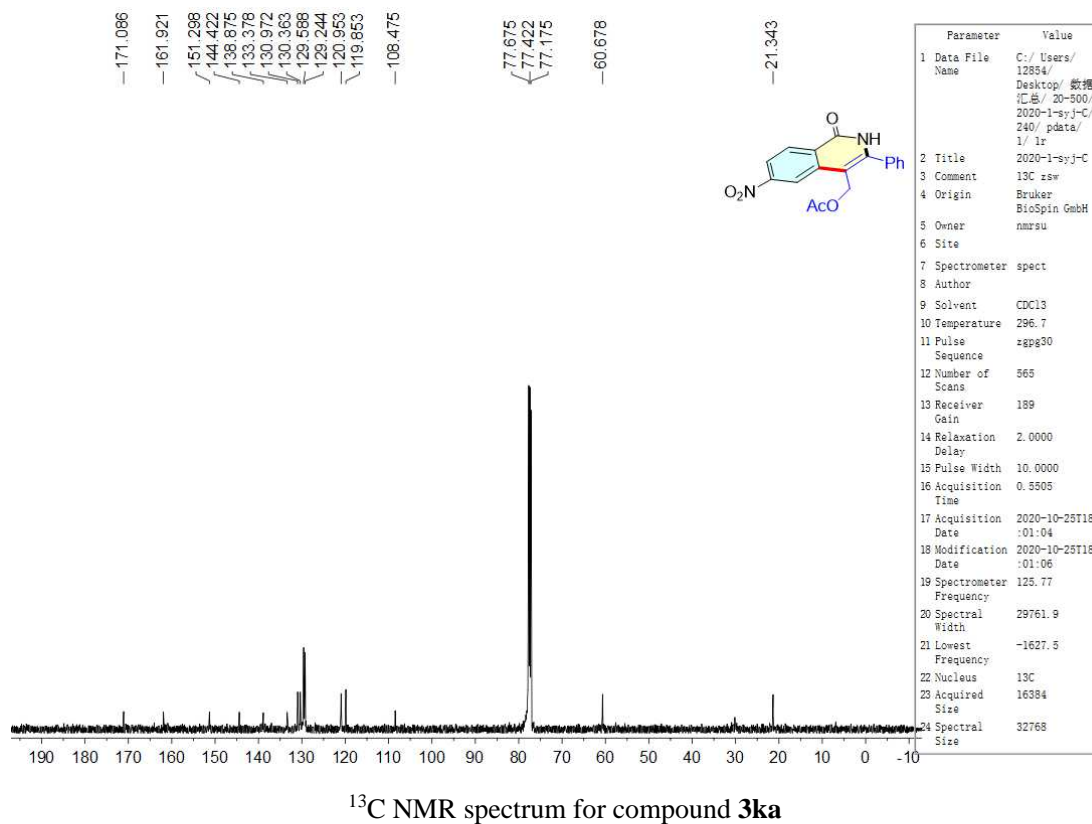
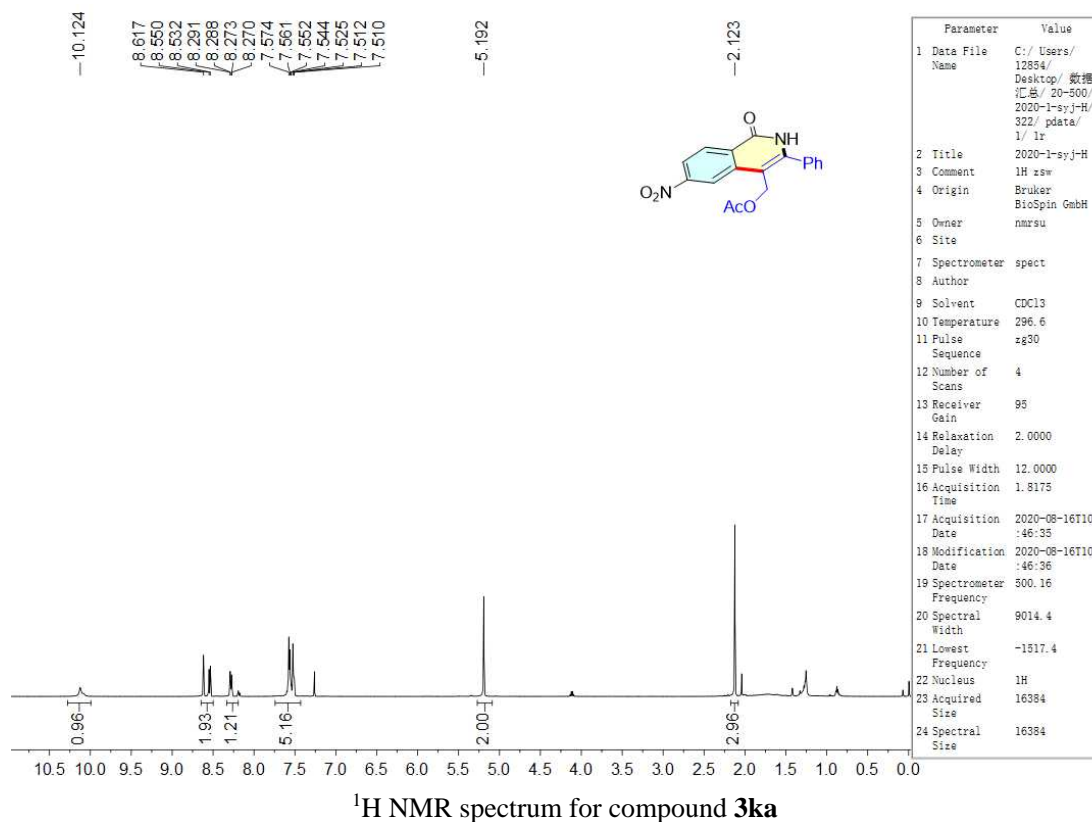


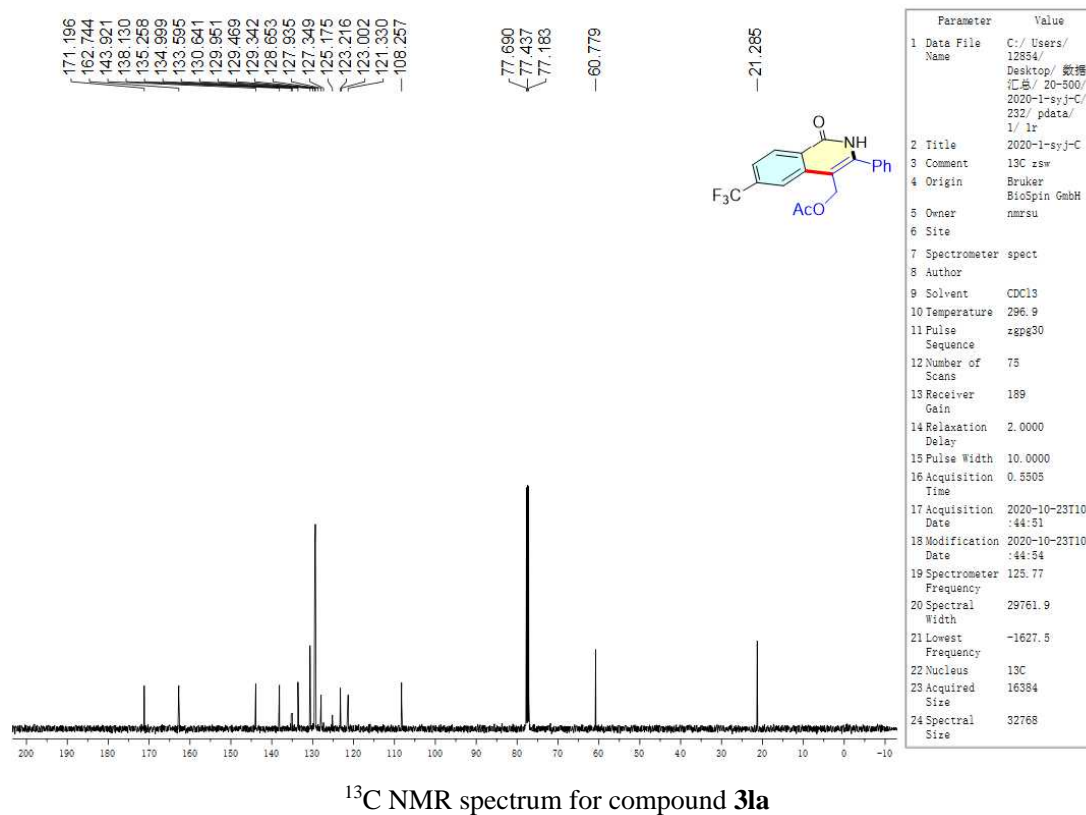
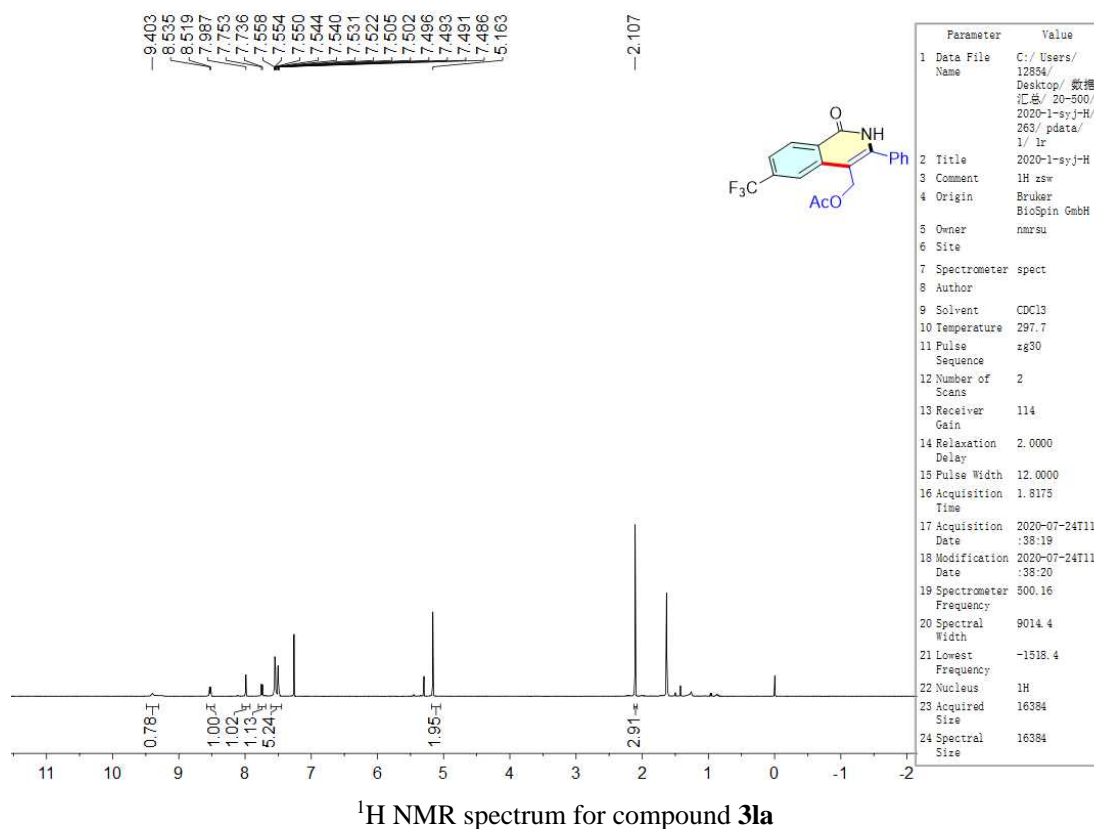


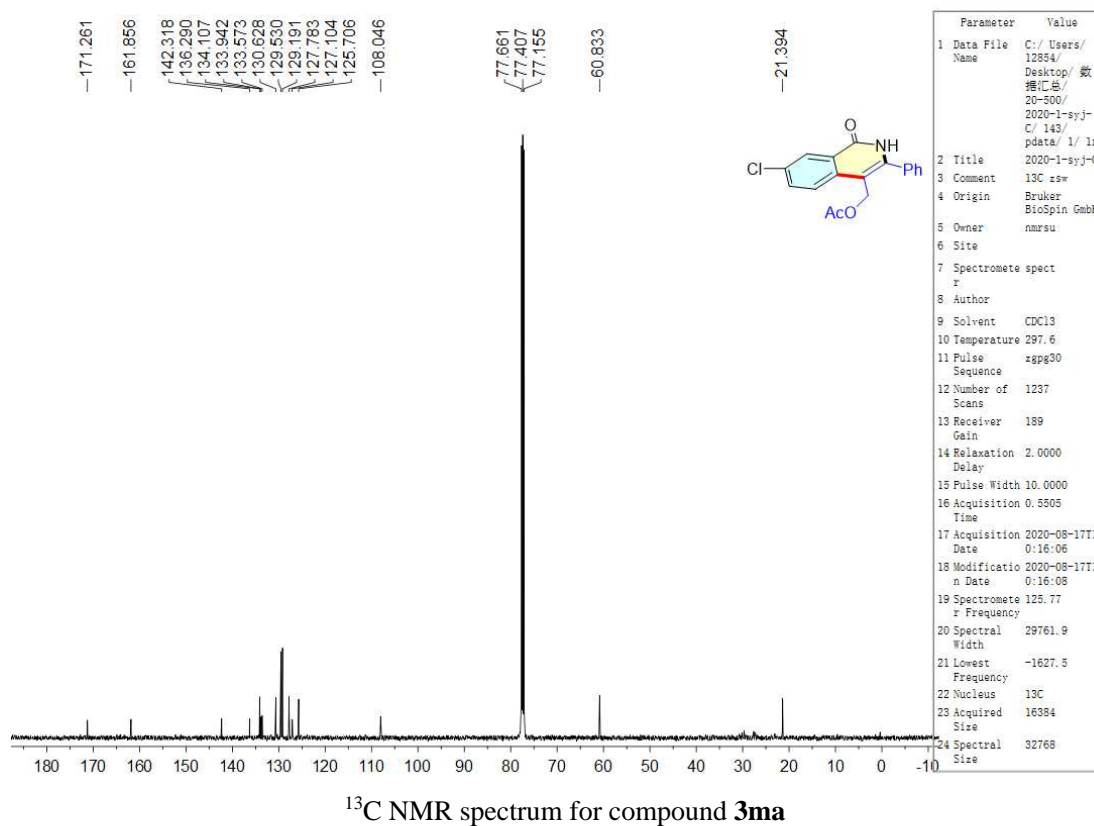
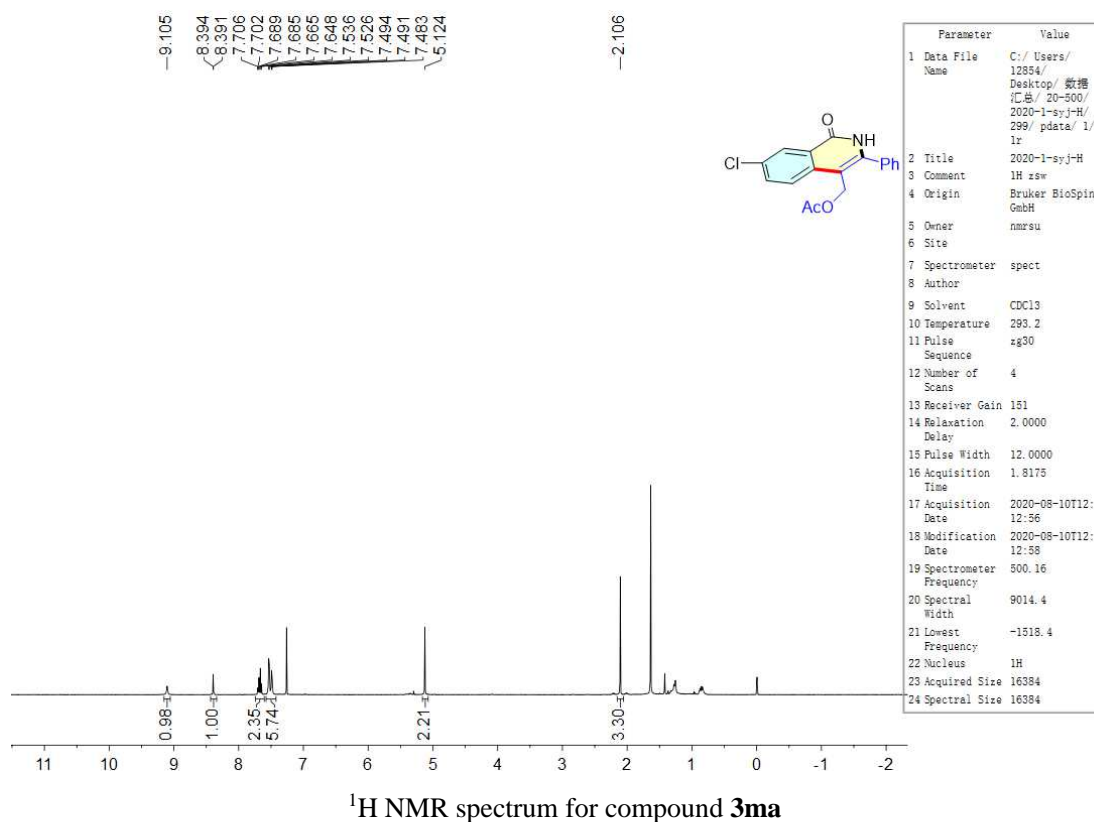


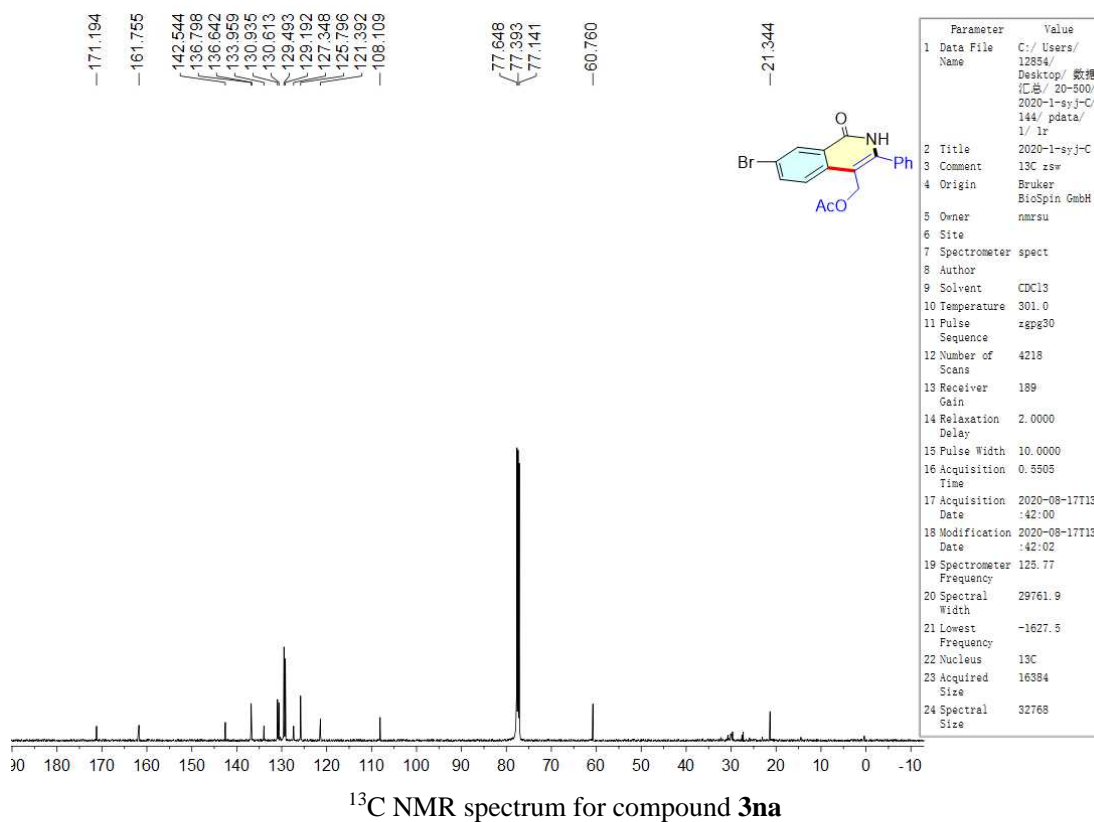
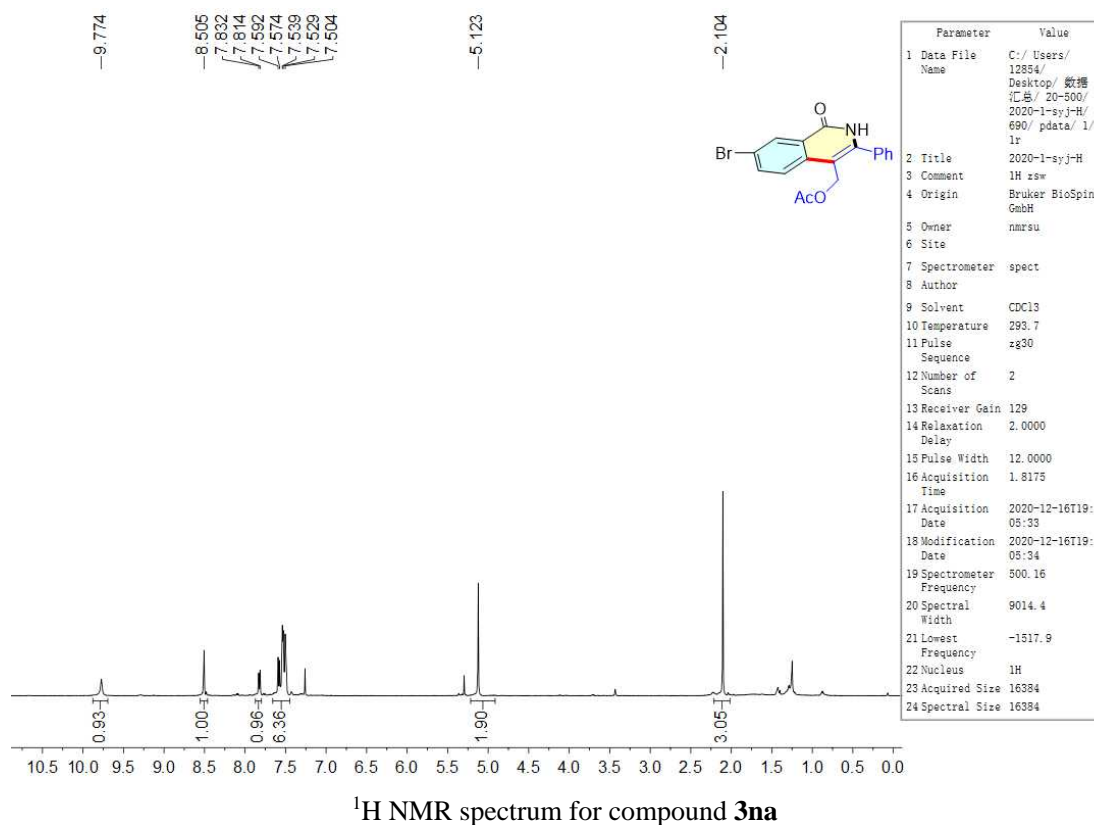


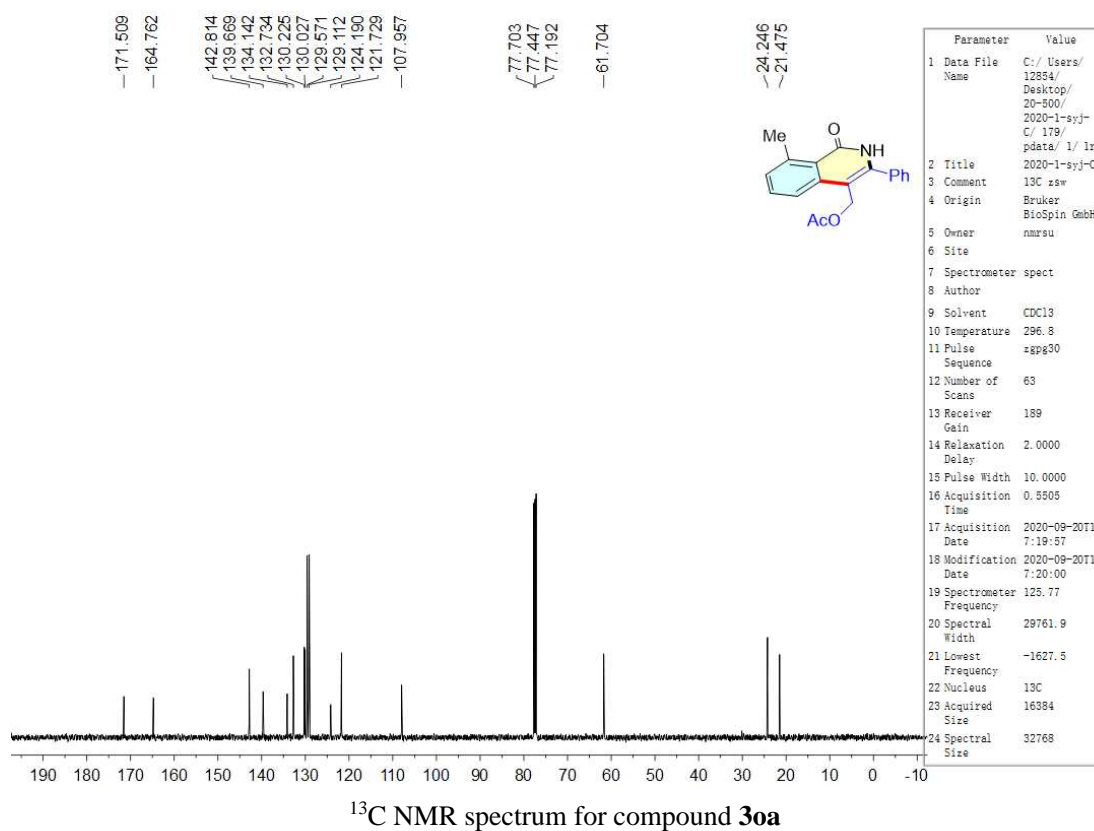
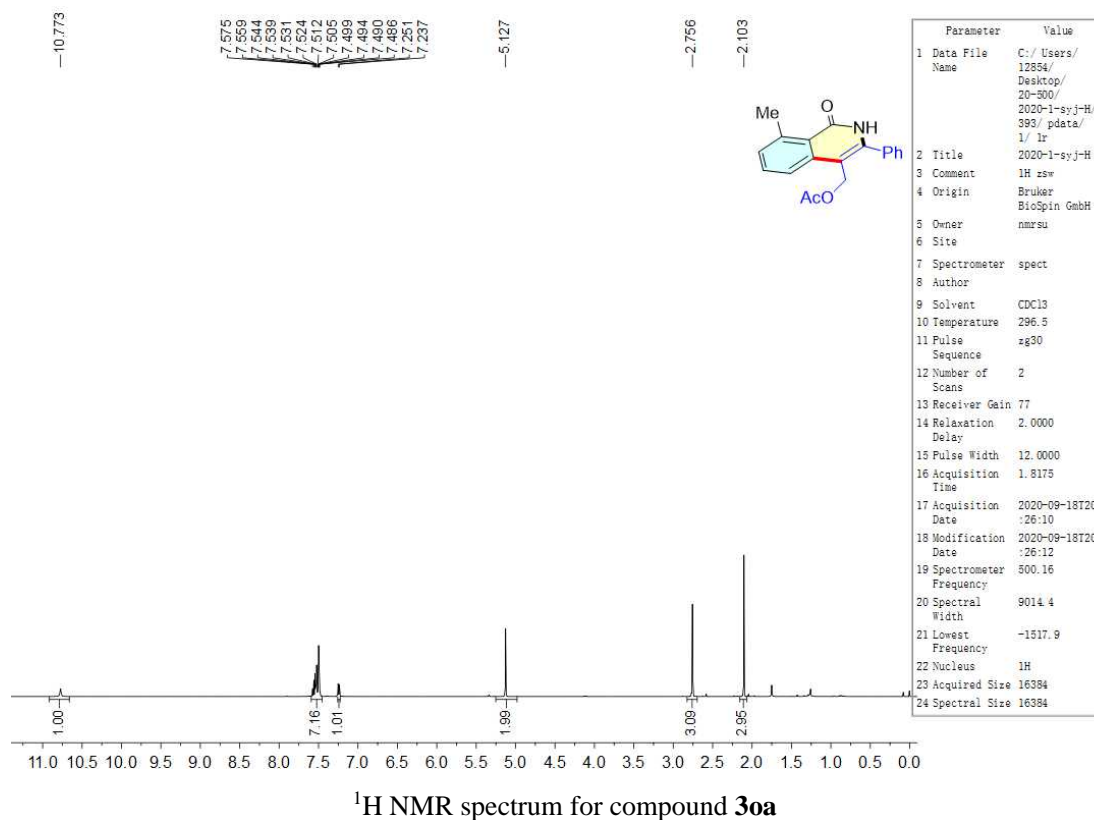


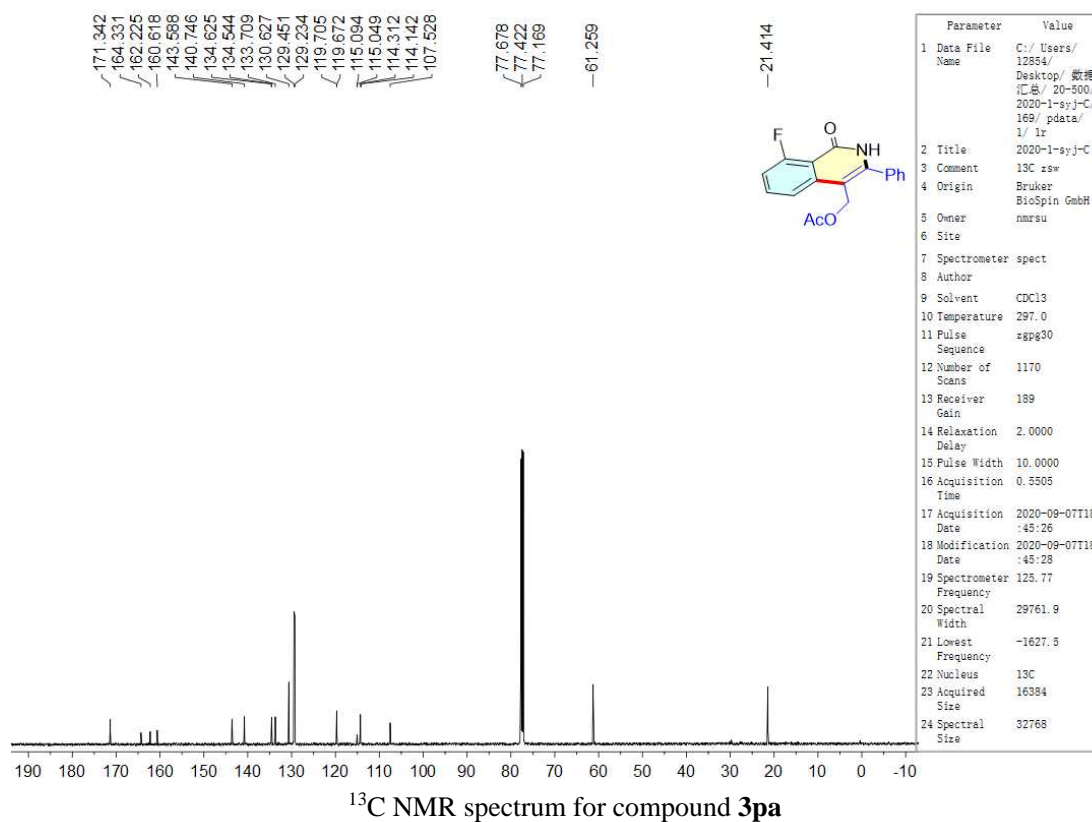
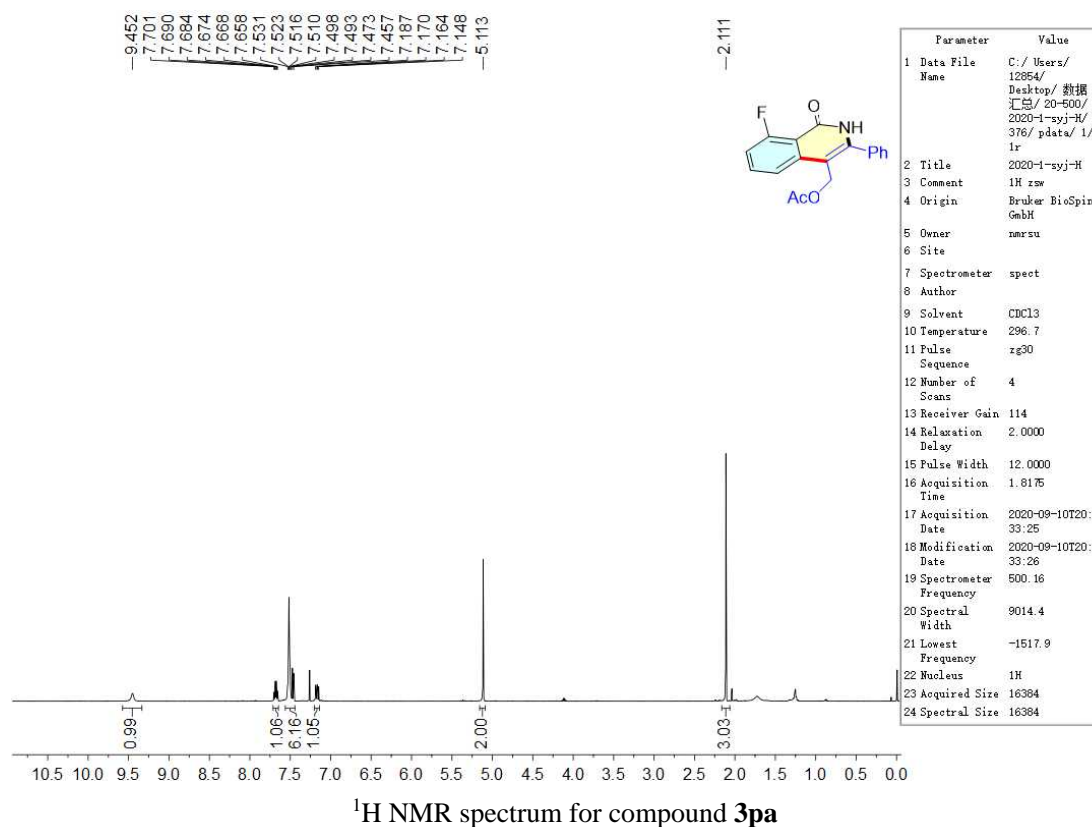


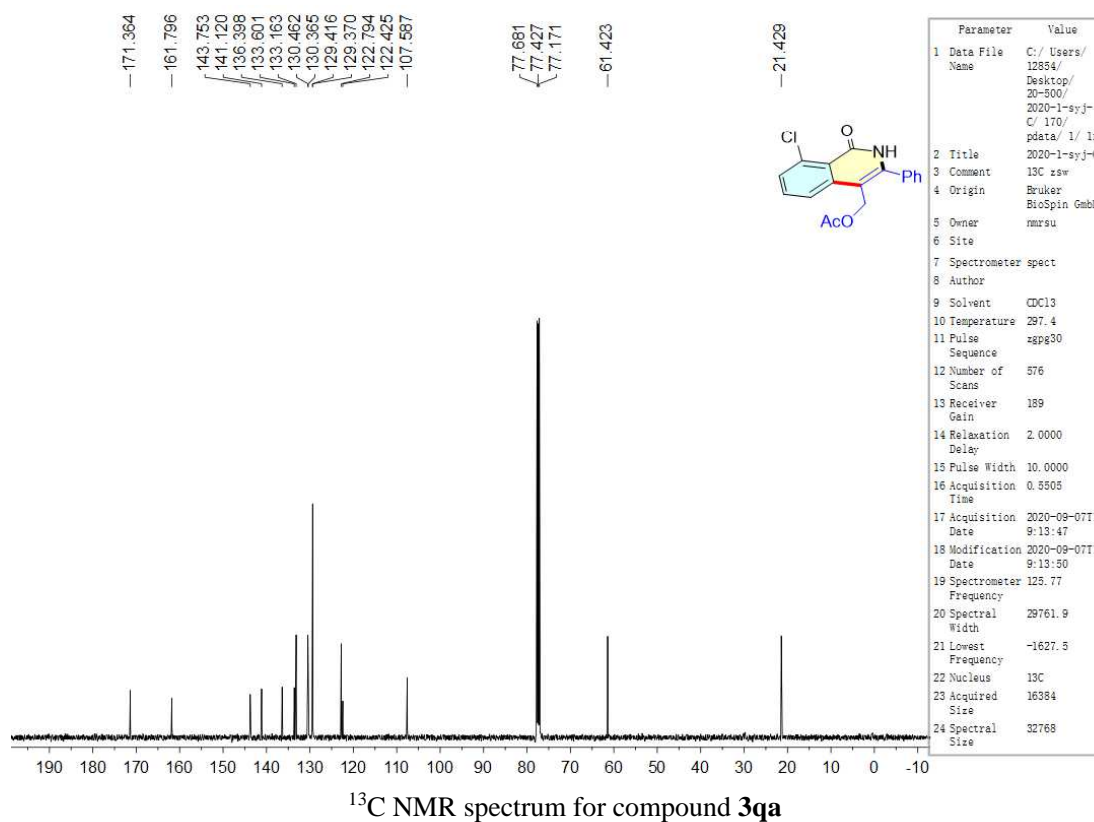
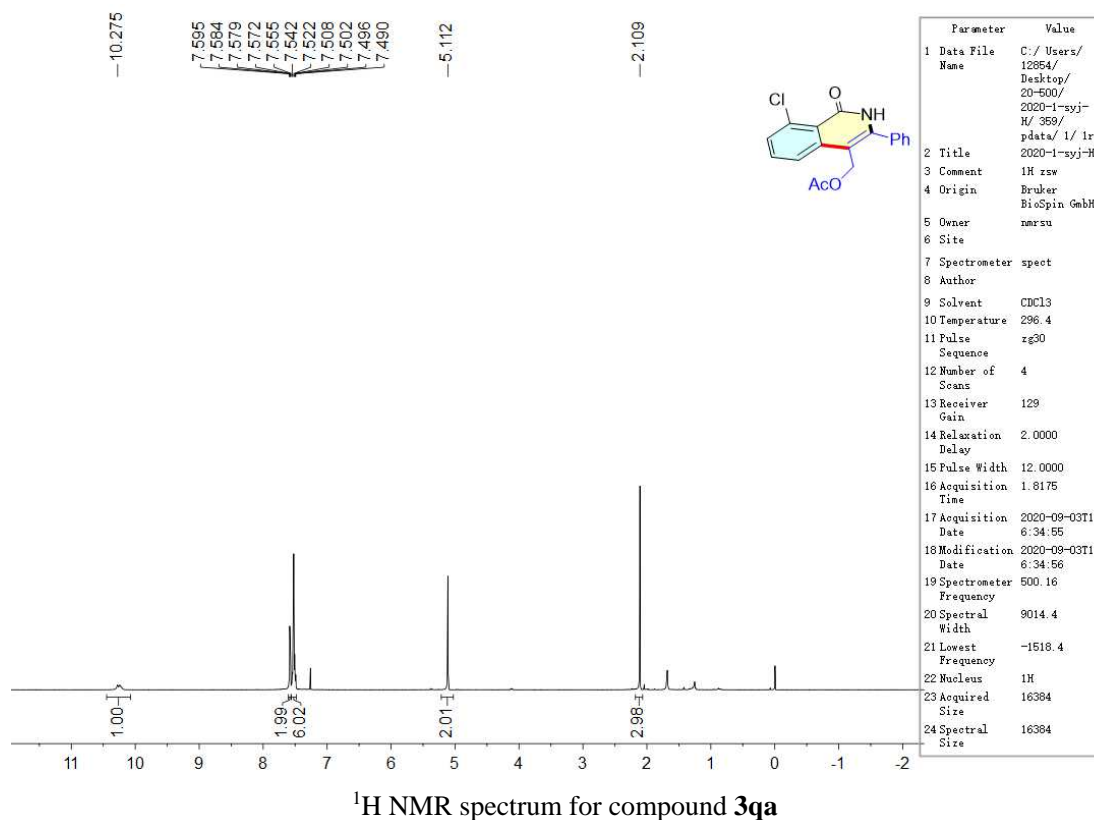


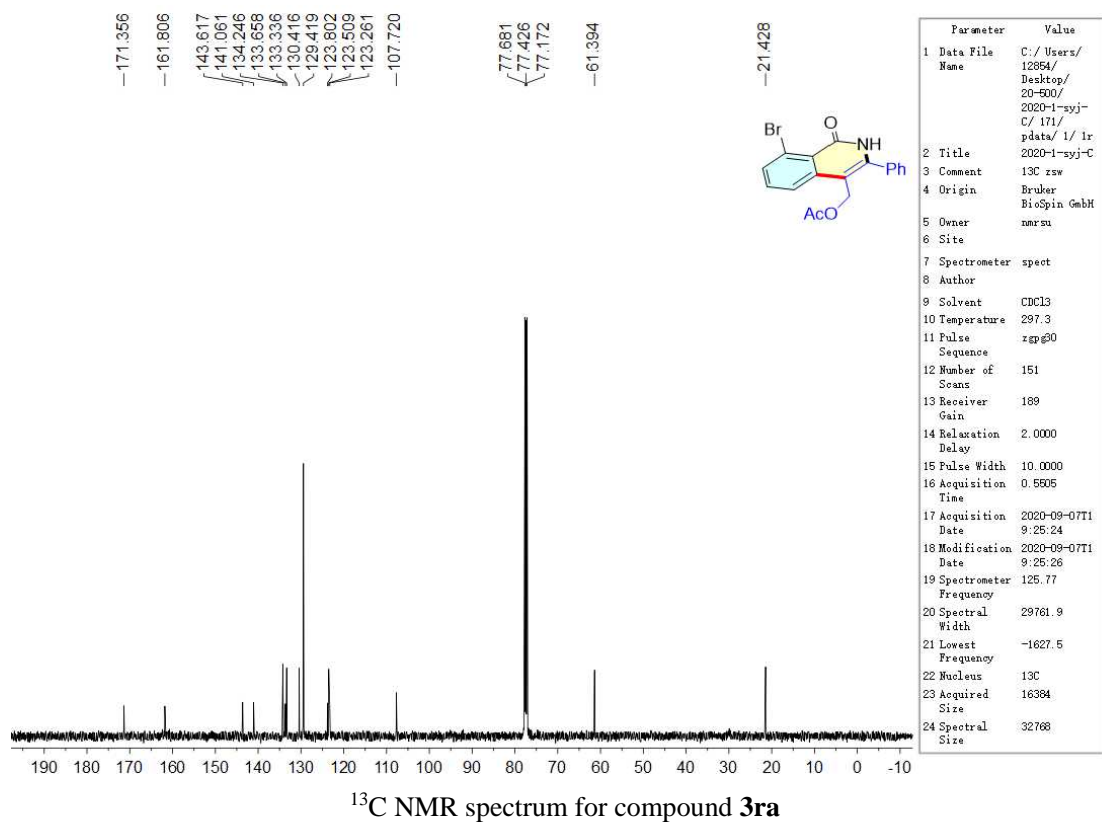
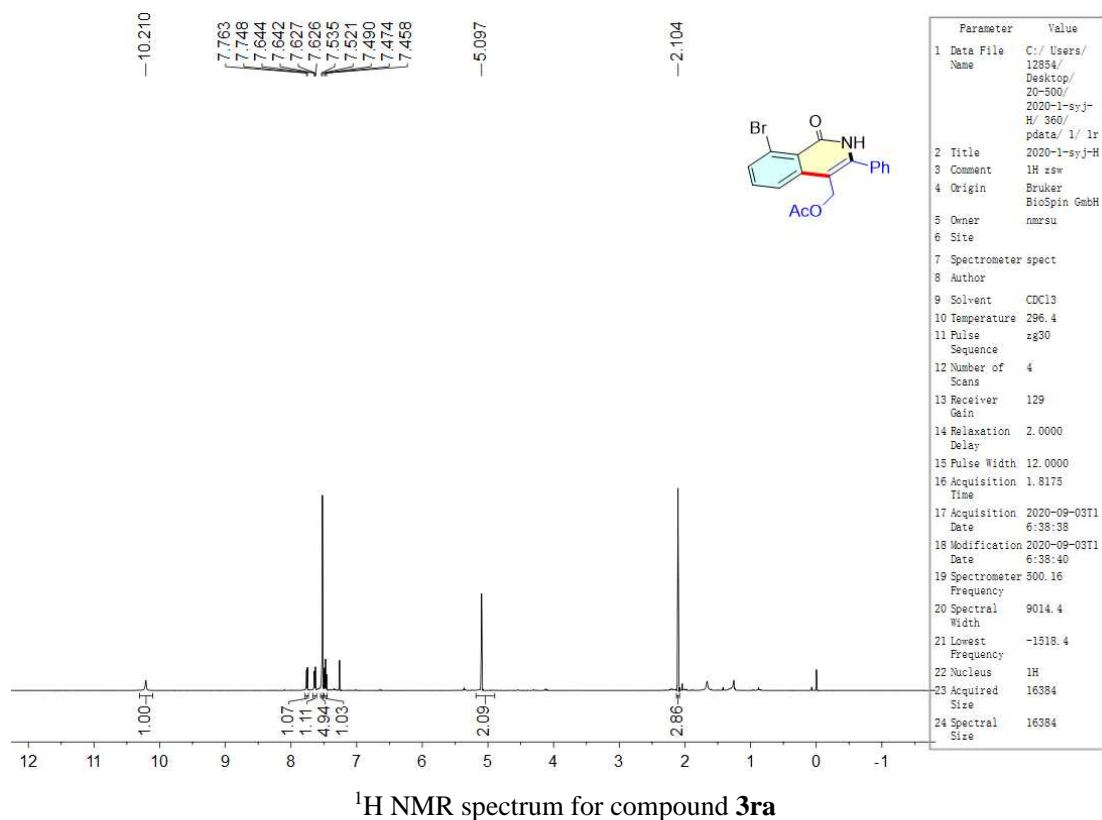


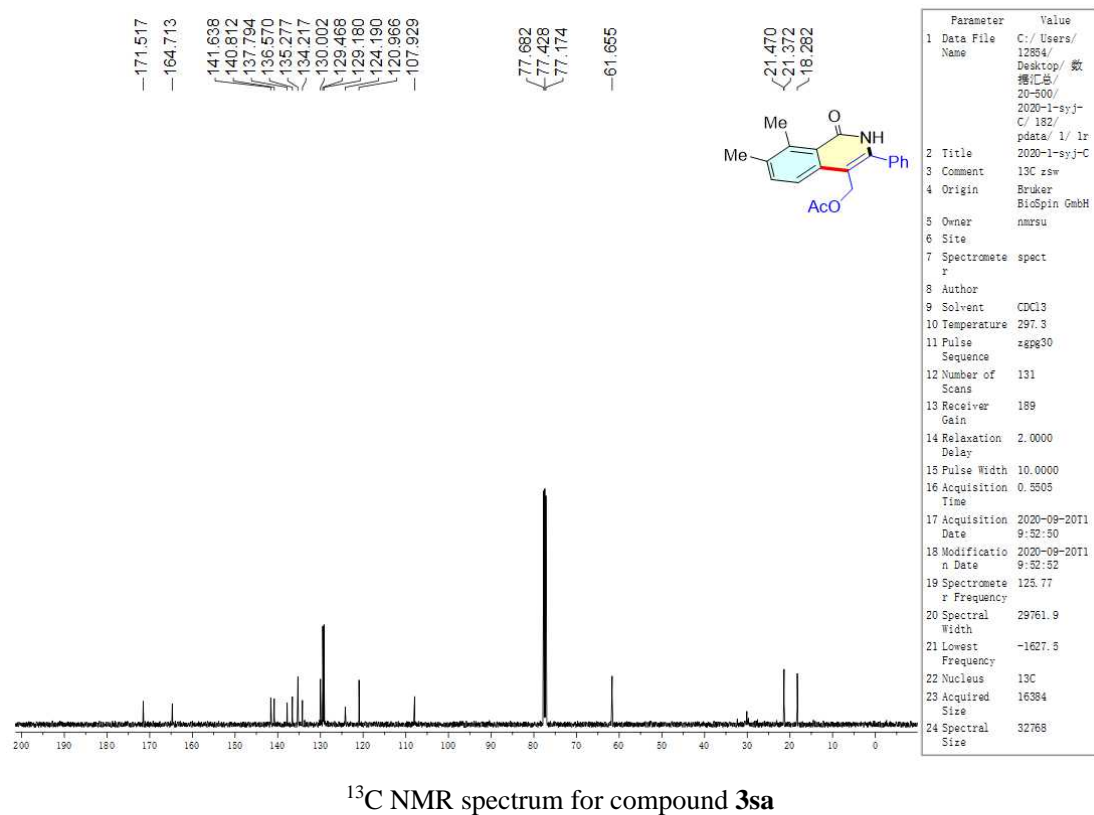
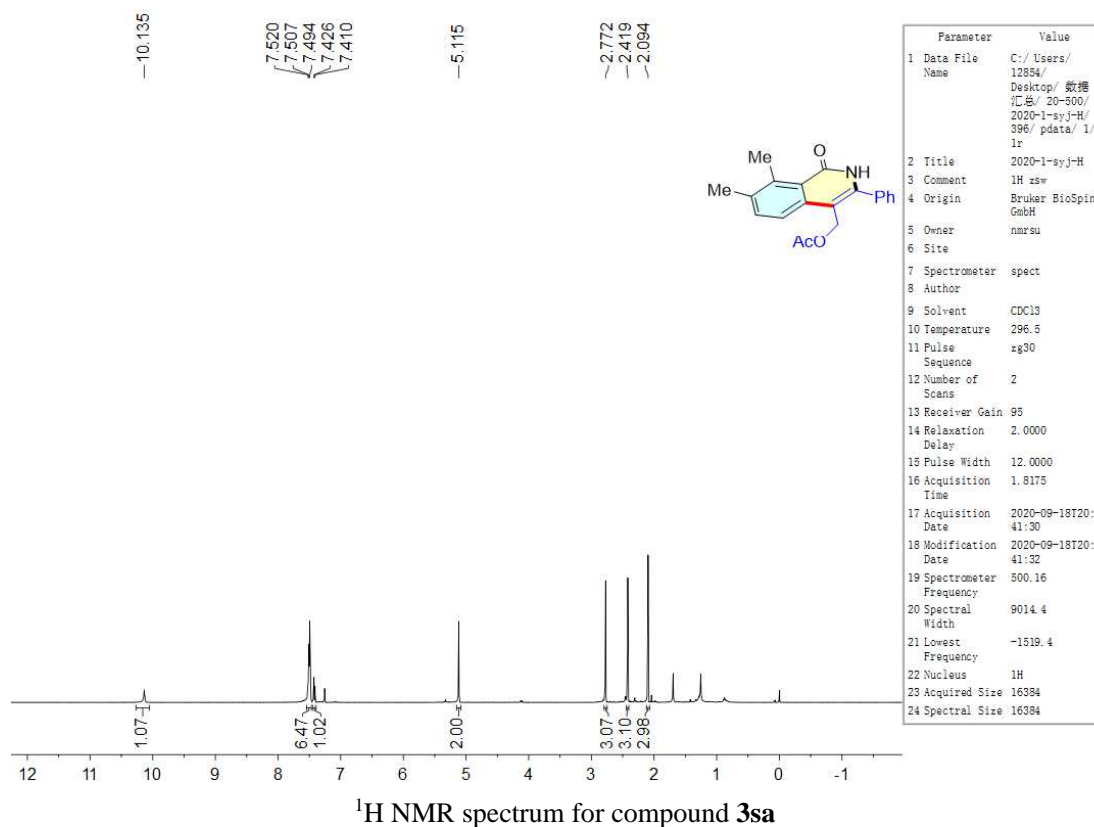


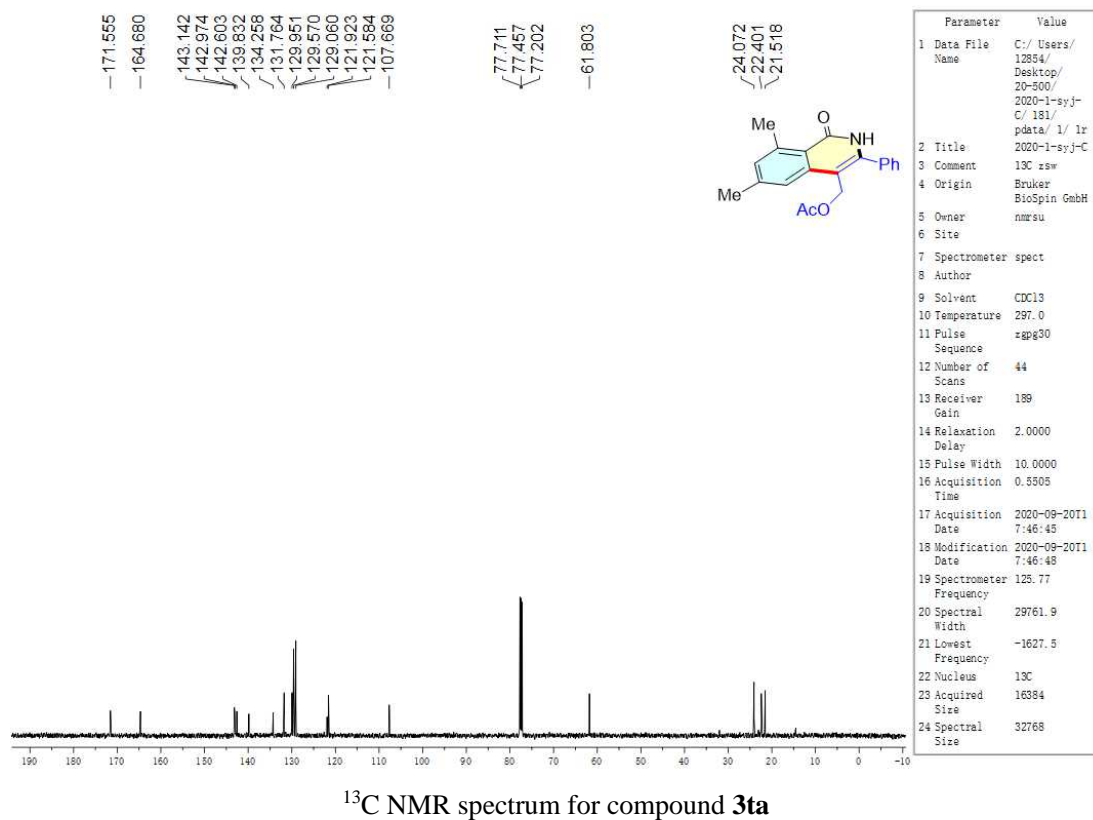
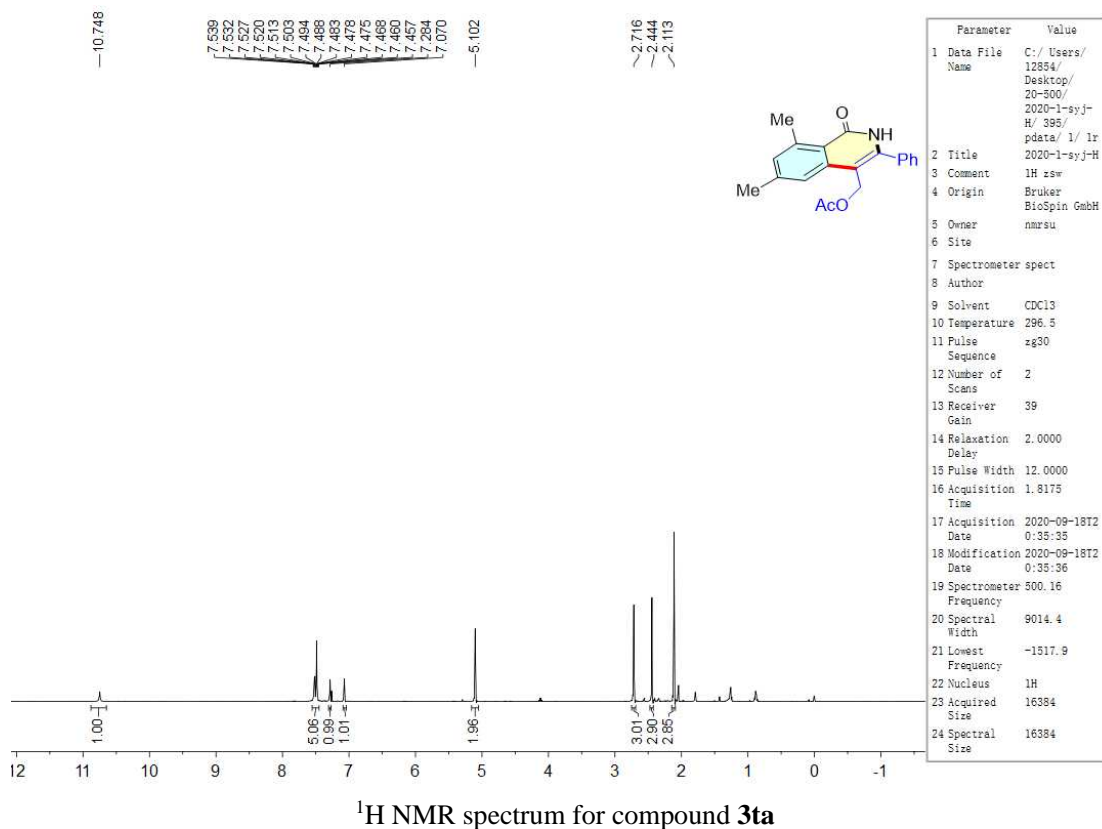


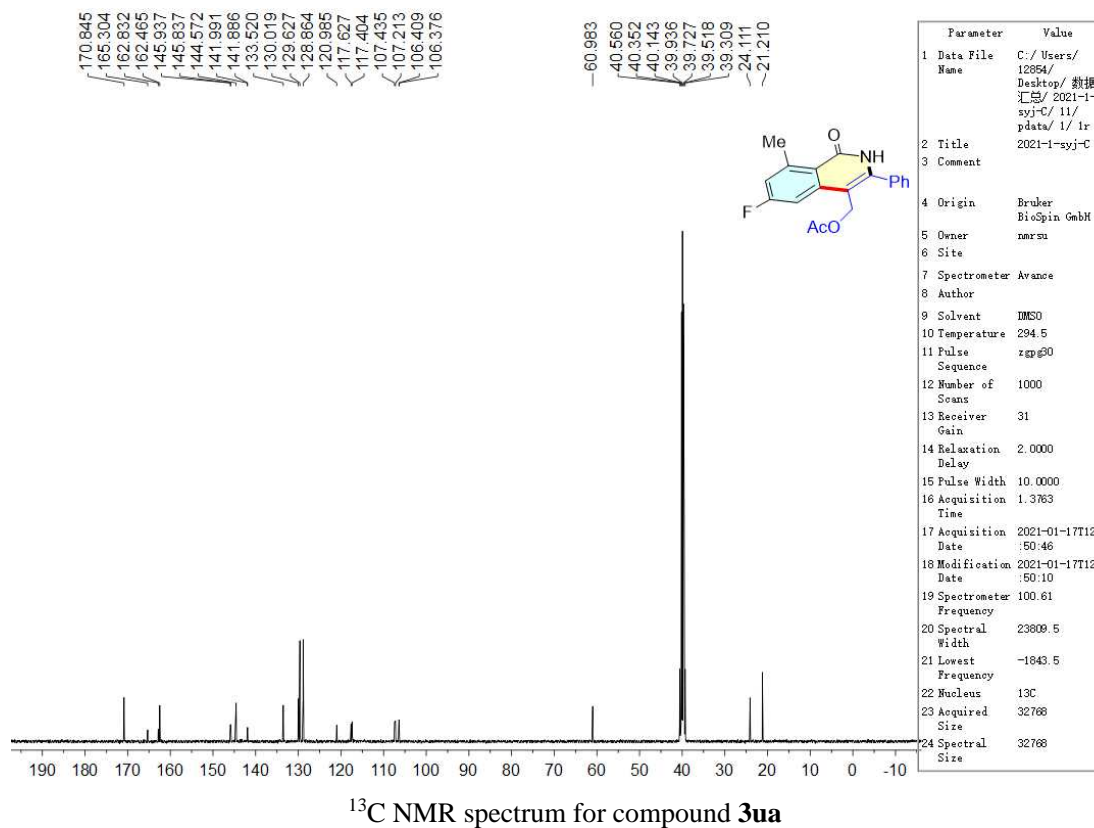
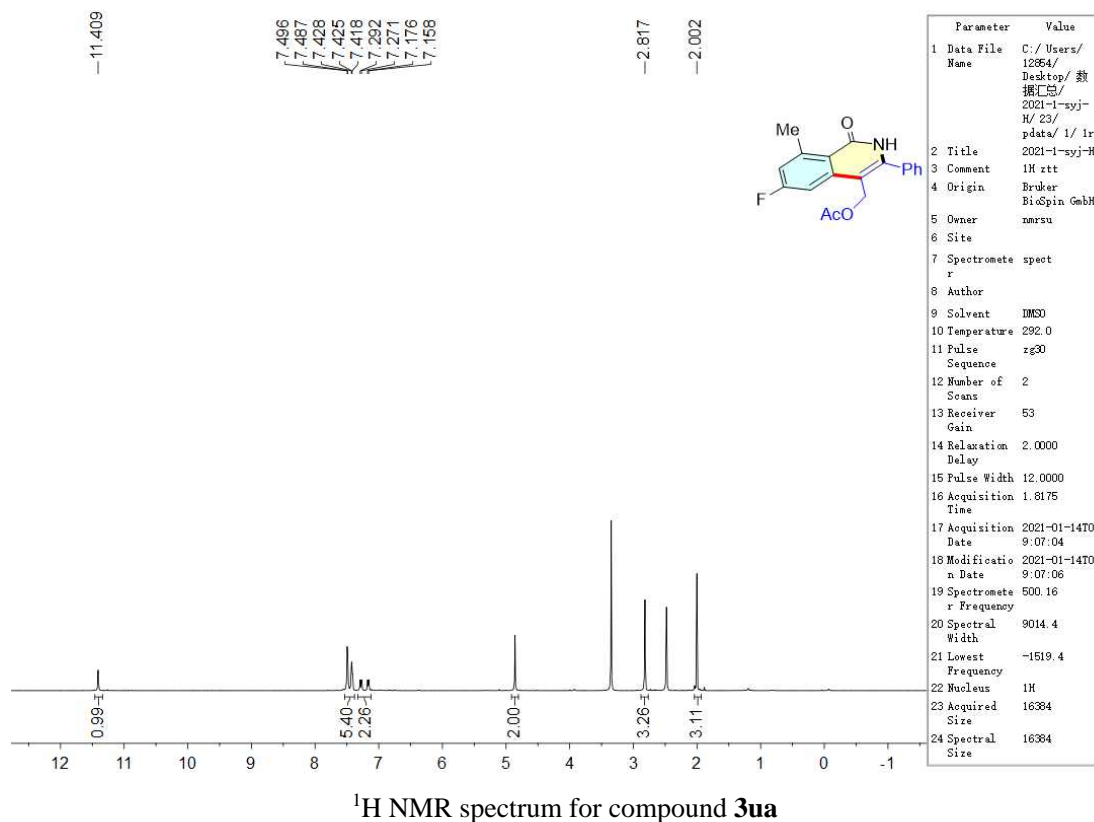


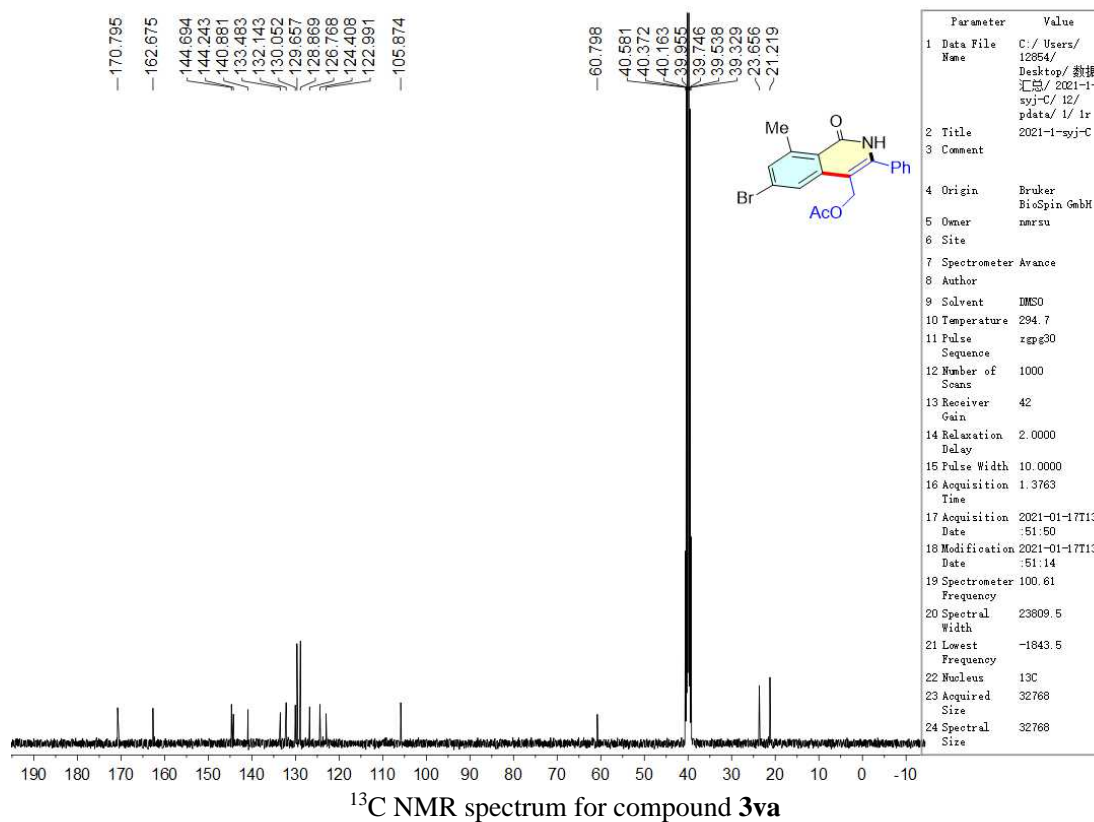
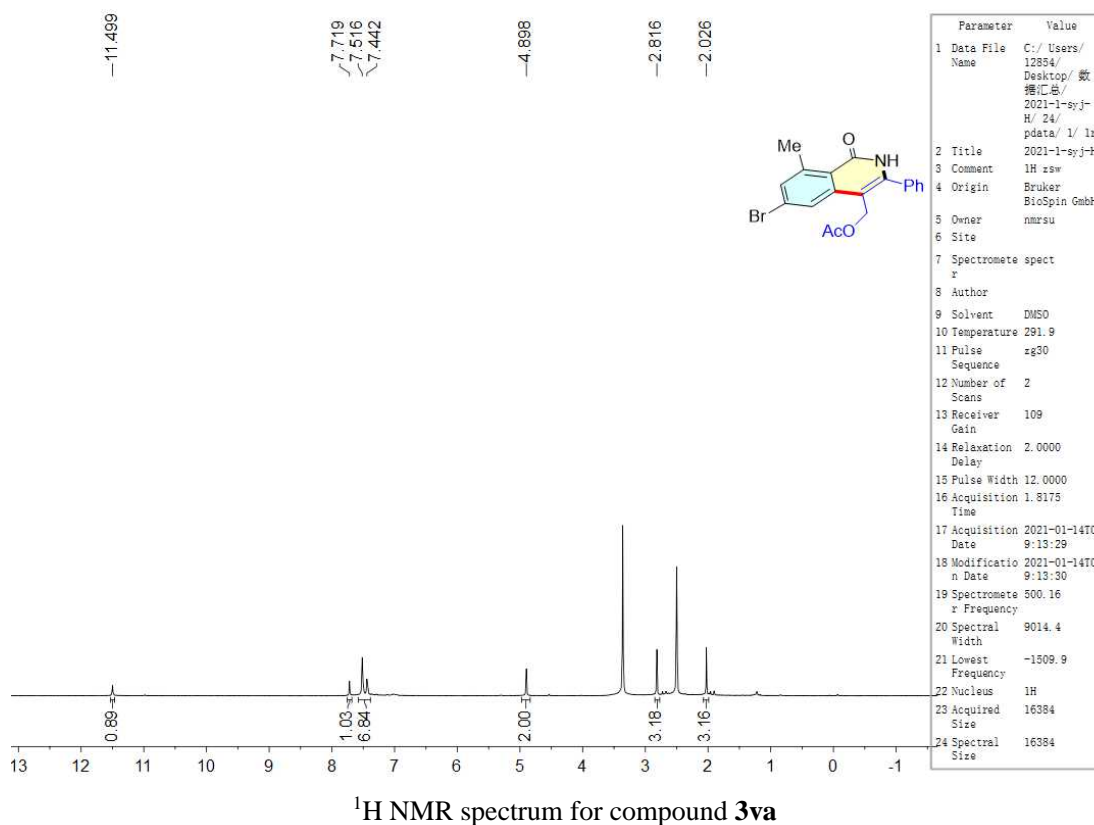


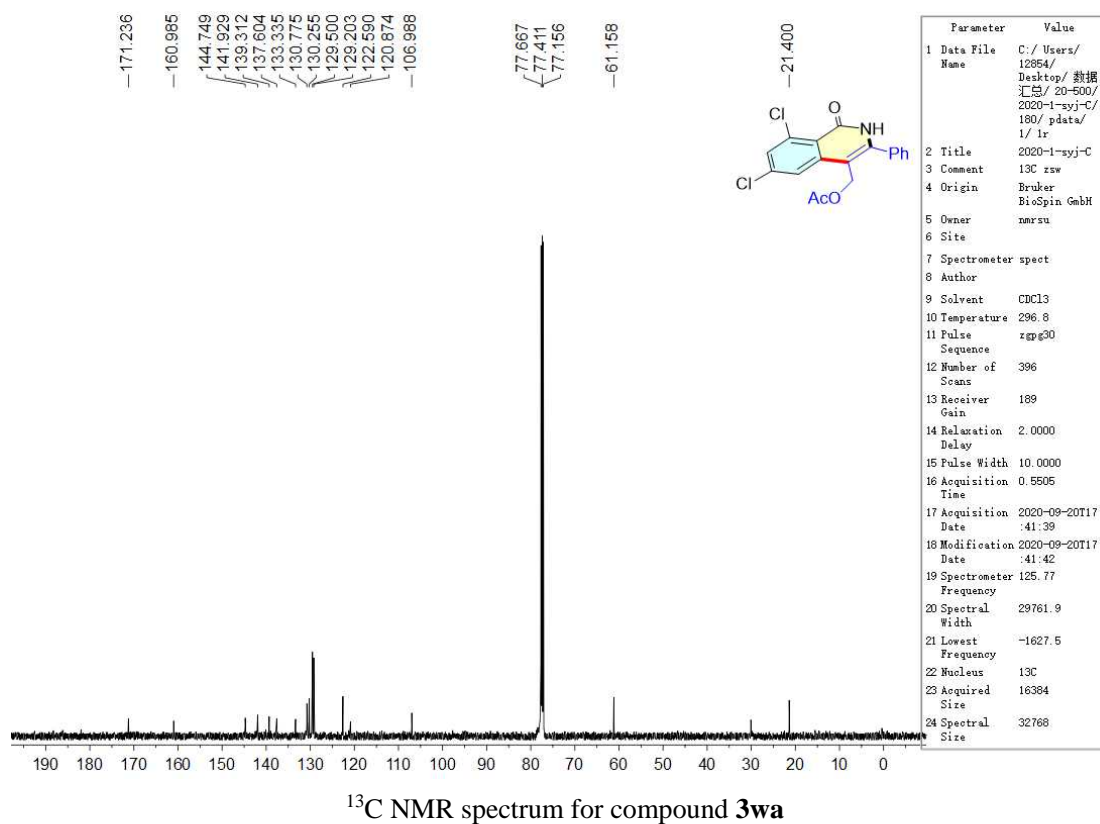
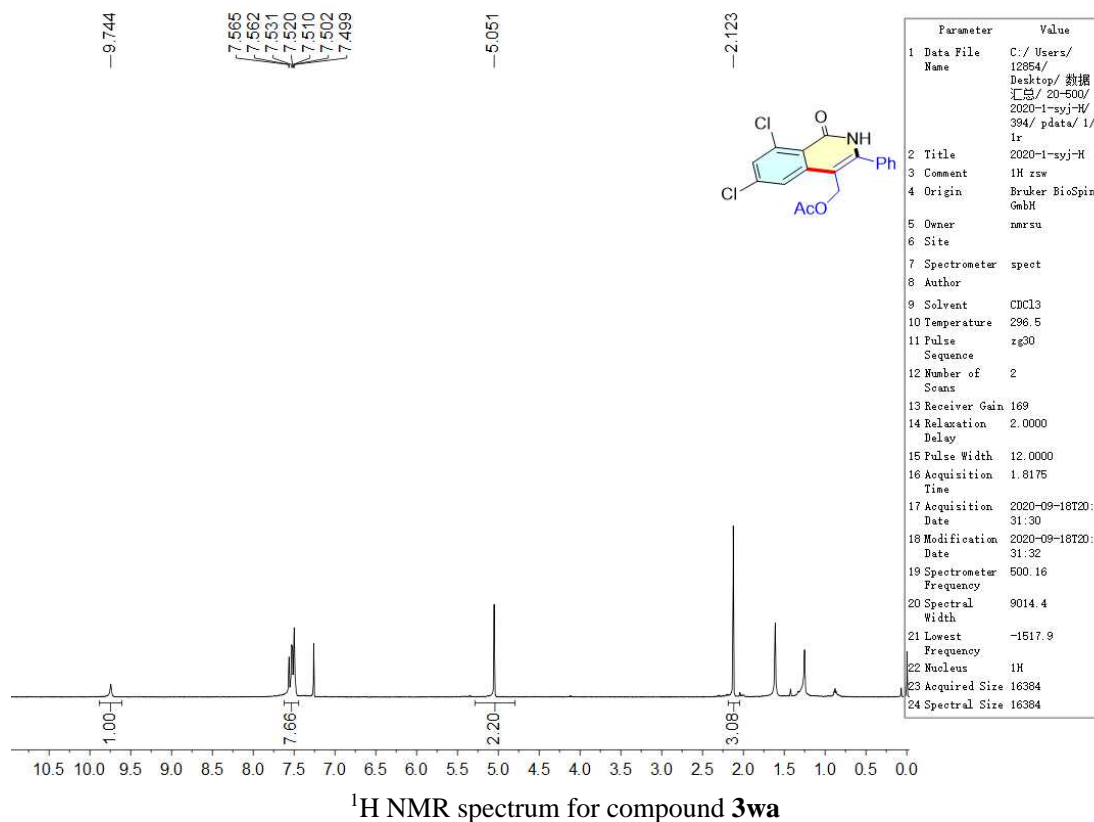


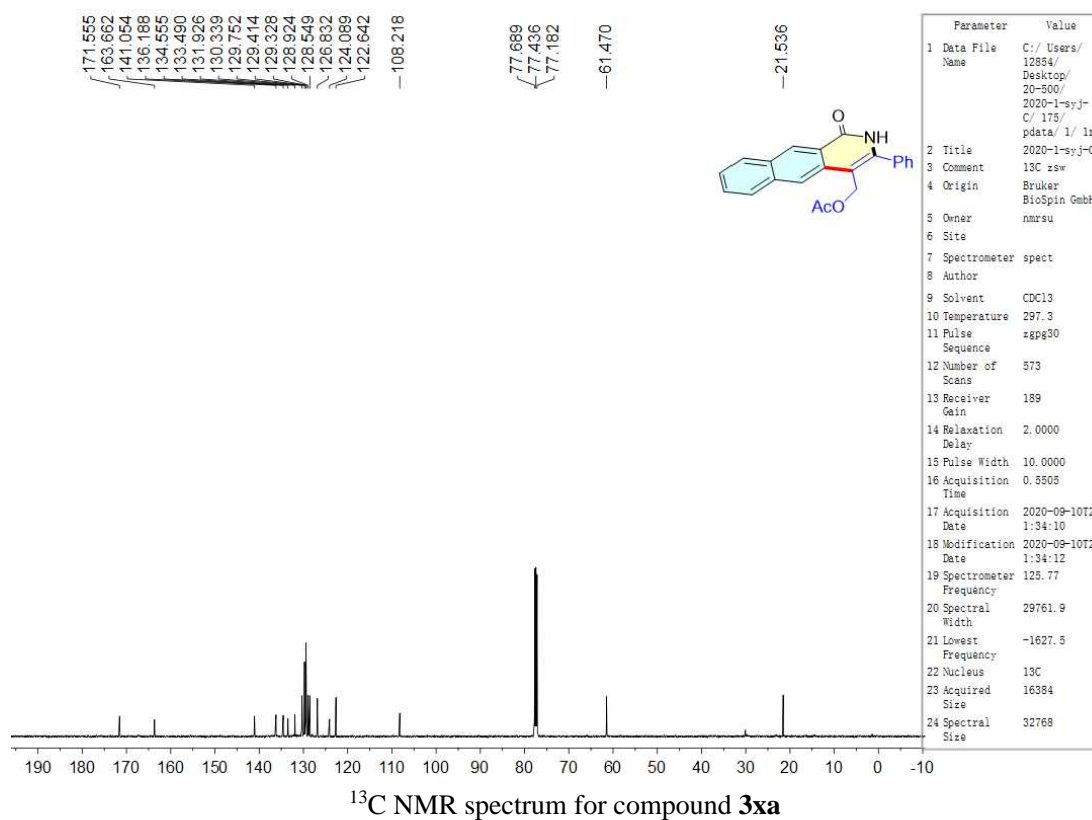
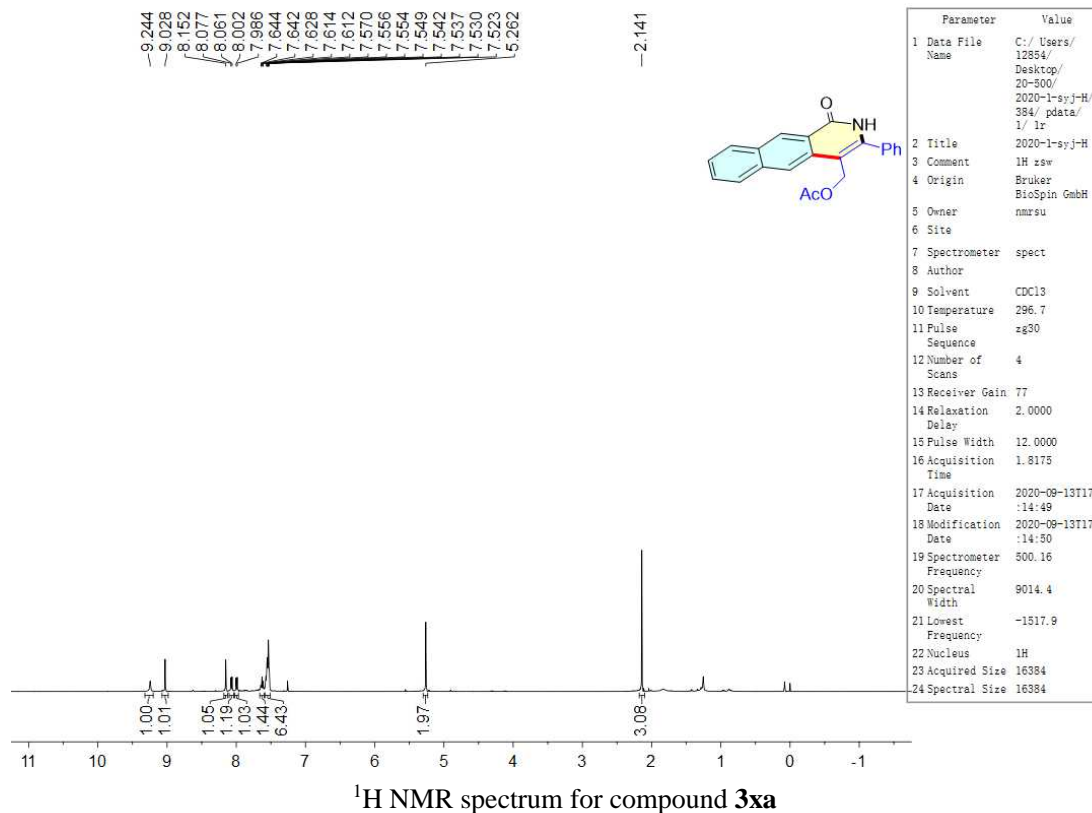


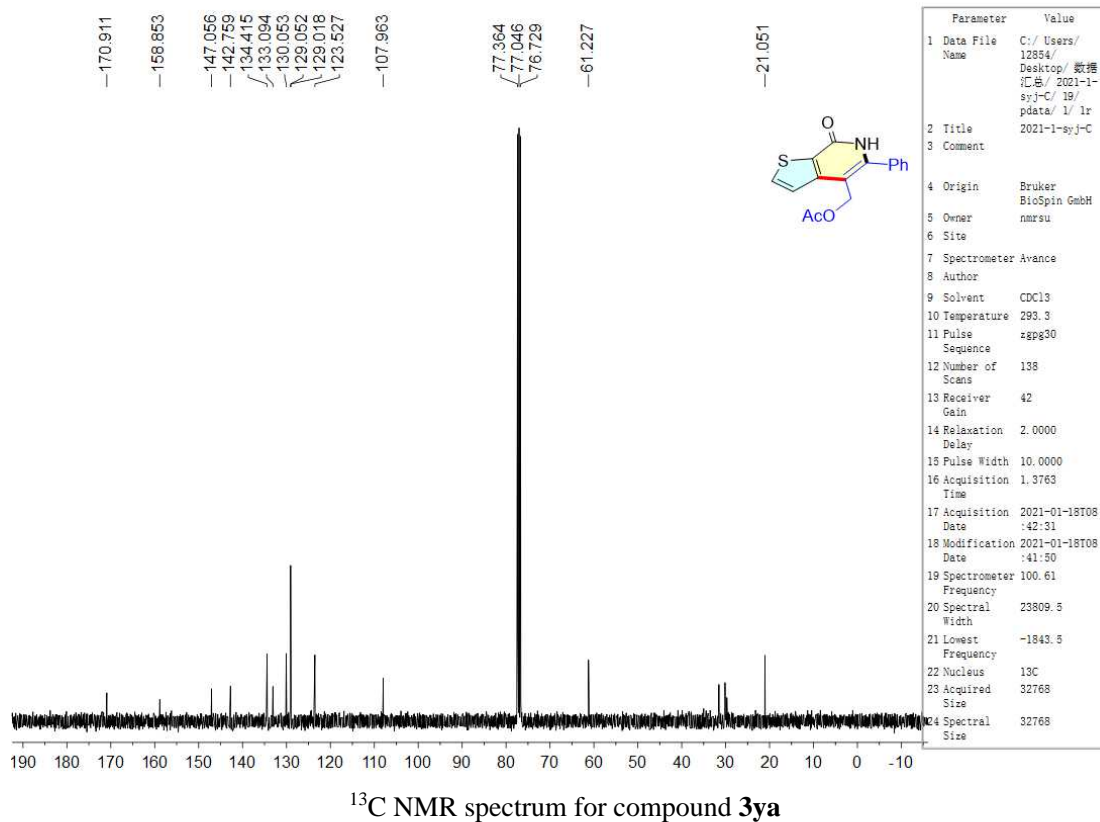
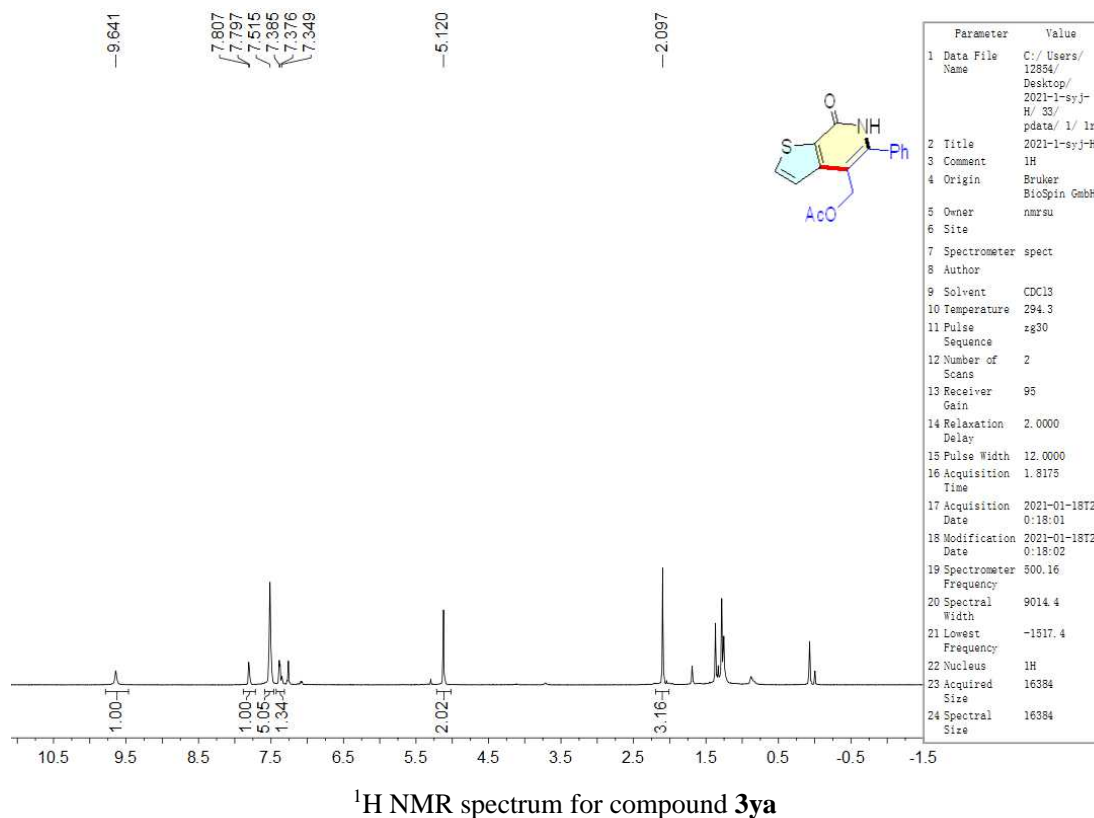


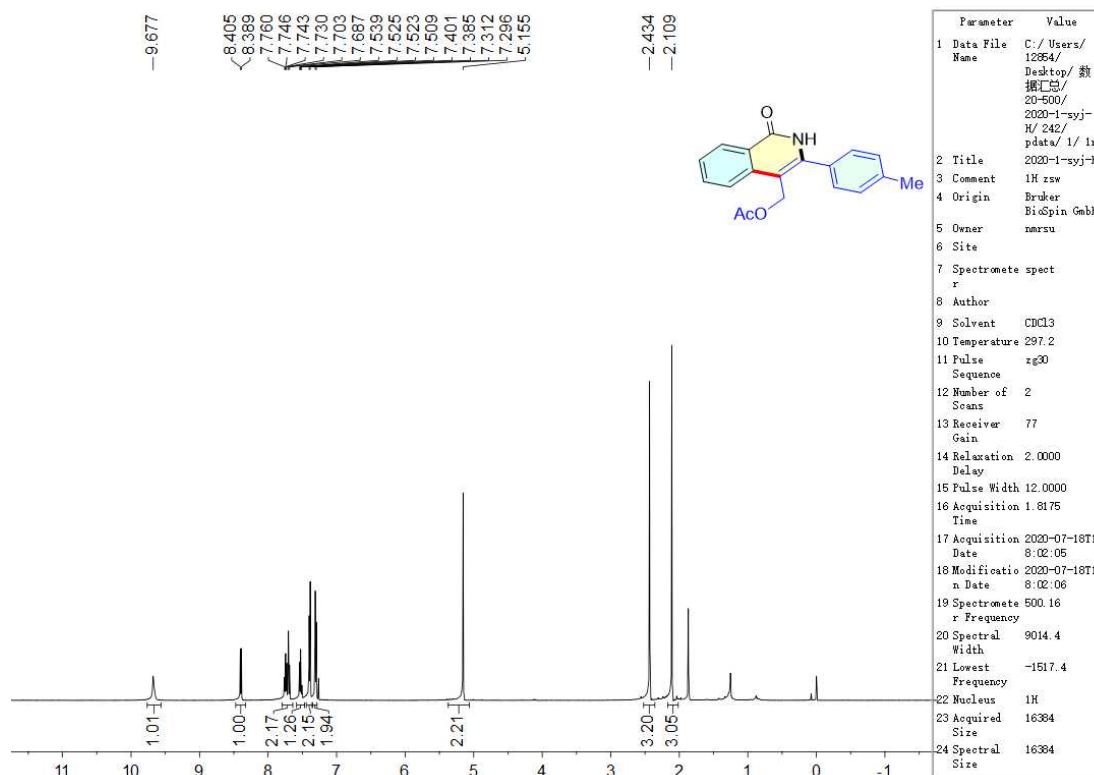




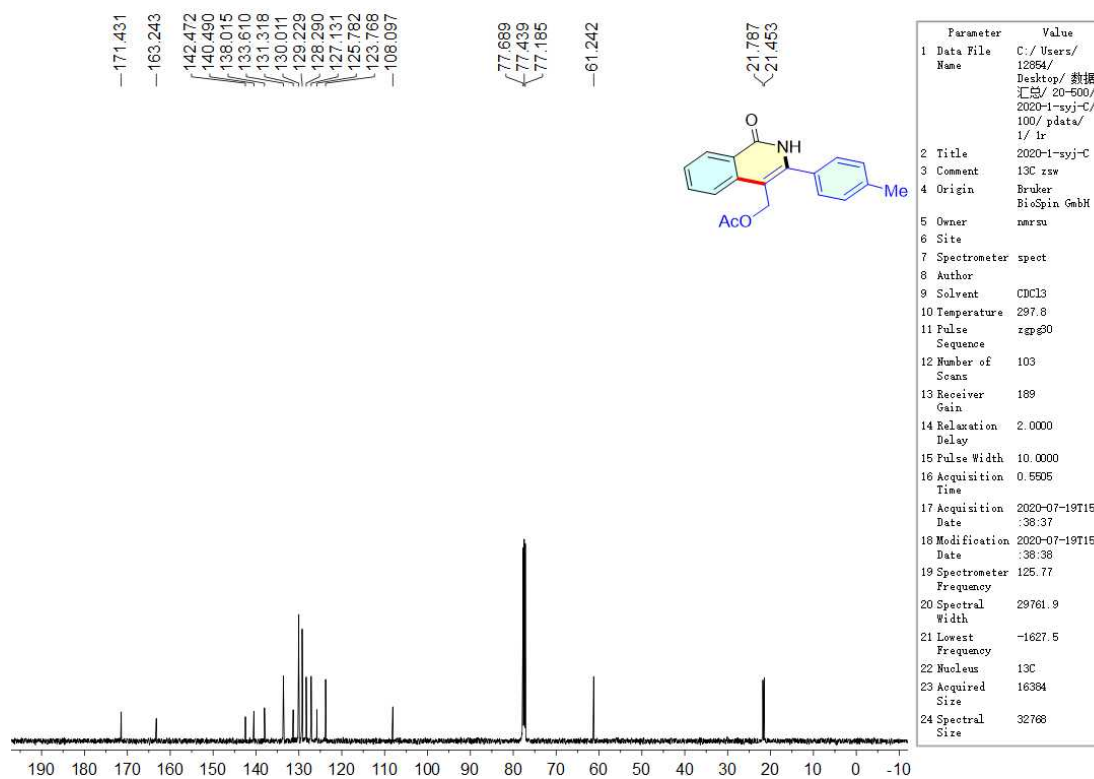




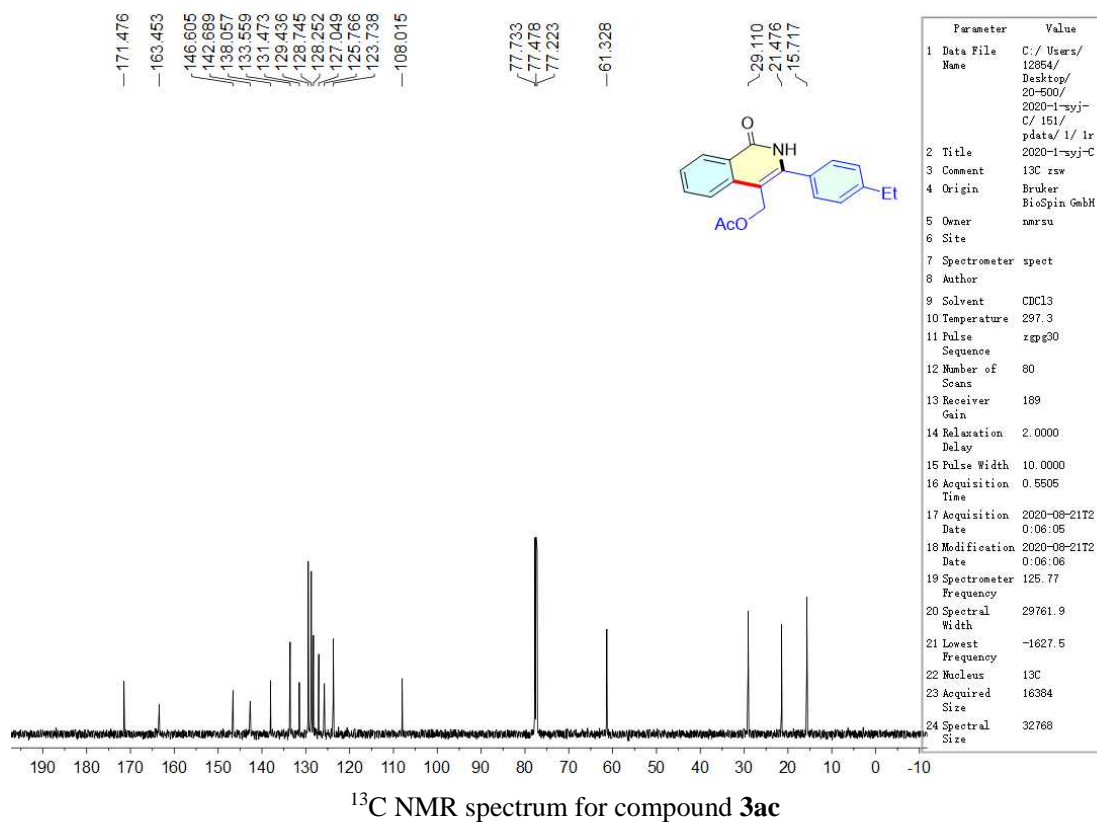
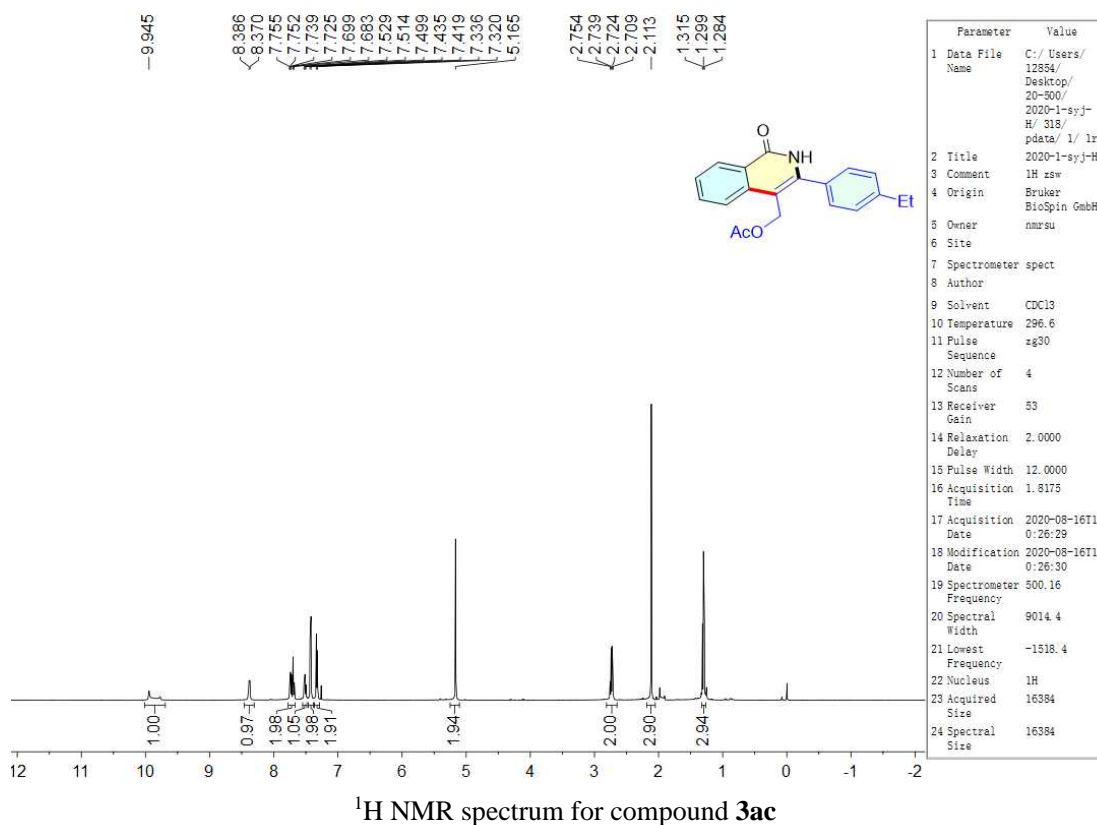


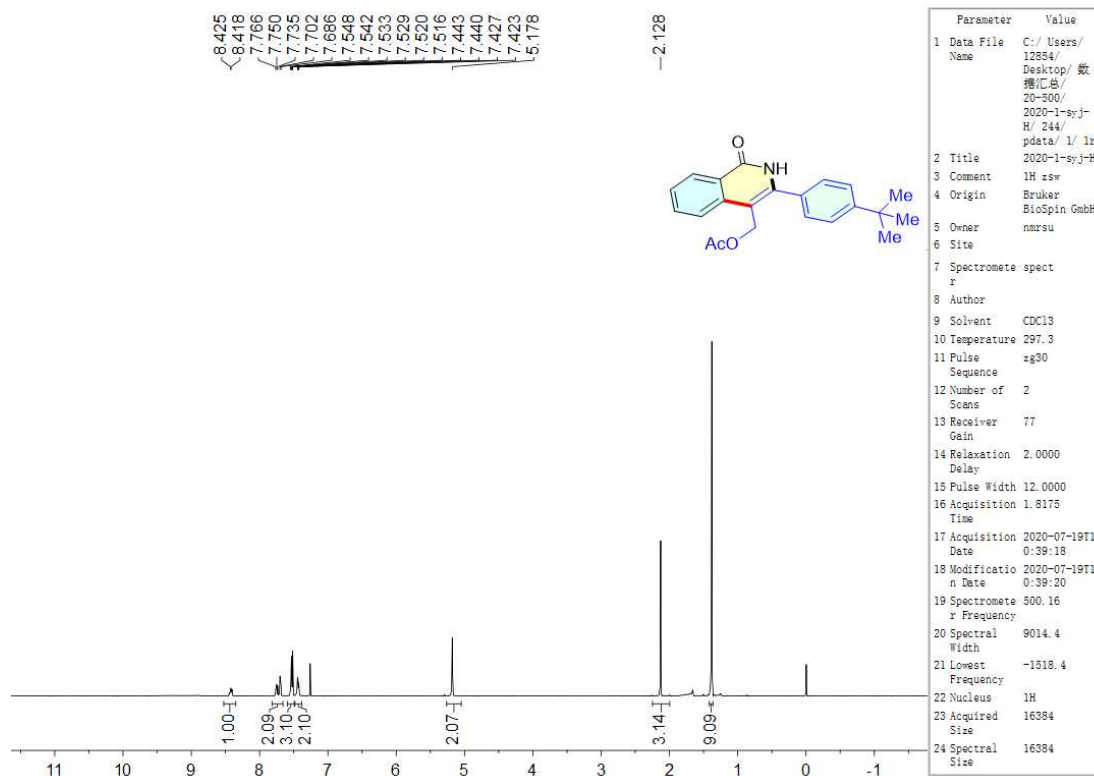


¹H NMR spectrum for compound **3ab**

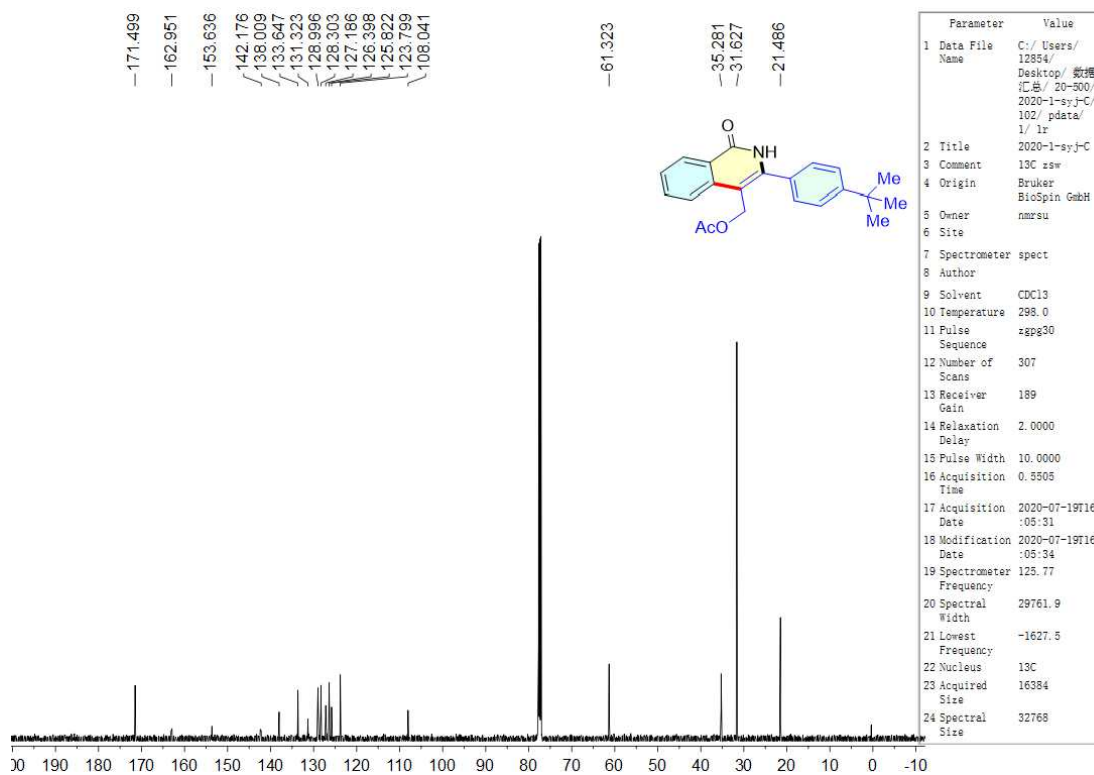


¹³C NMR spectrum for compound **3ab**

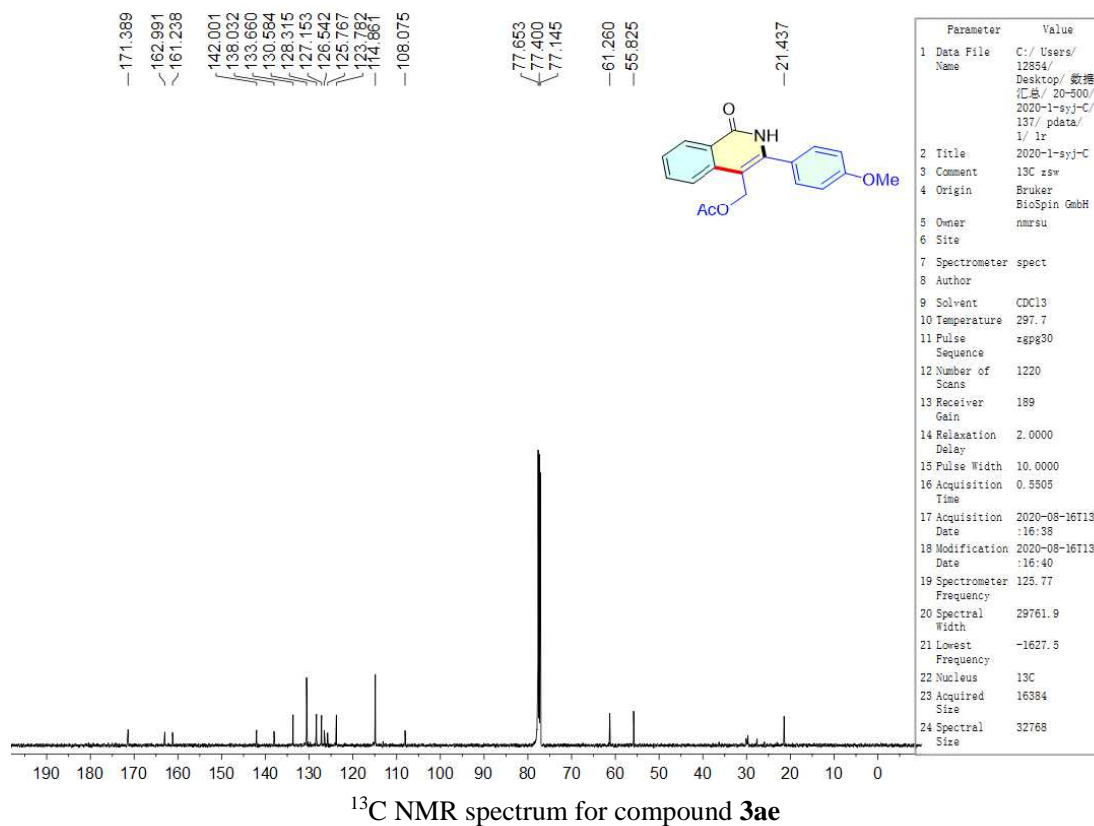
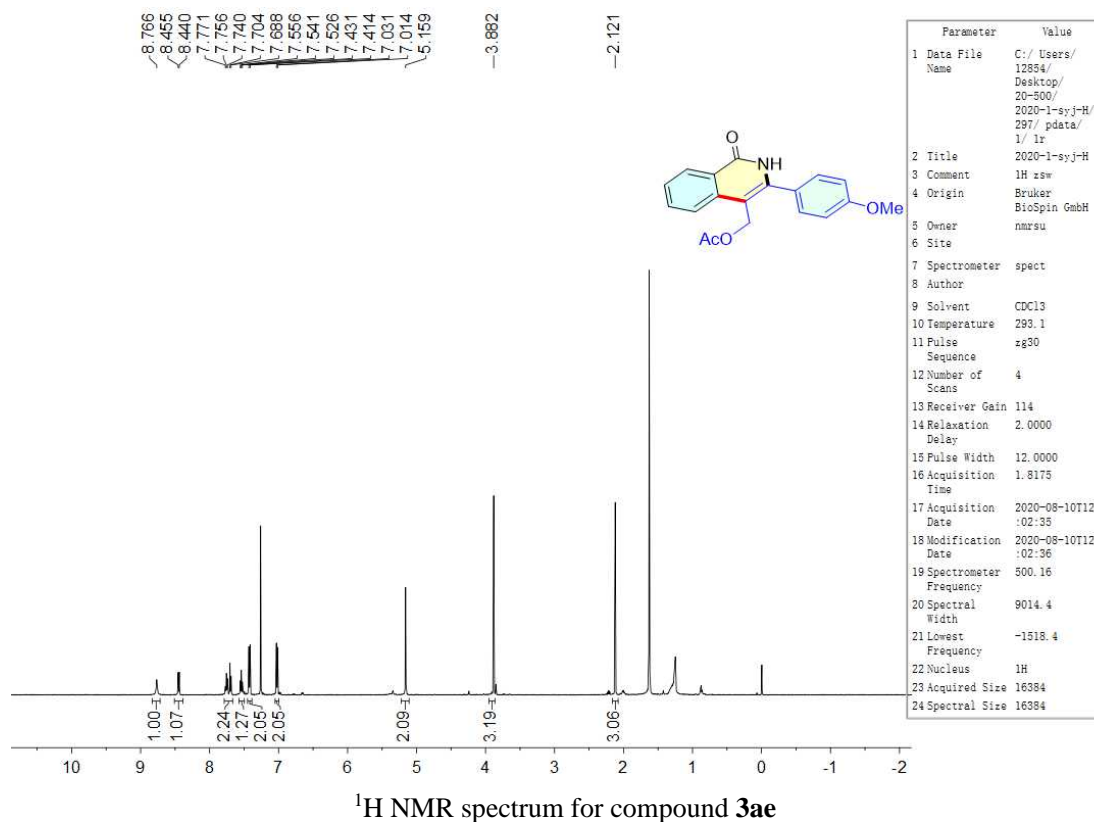


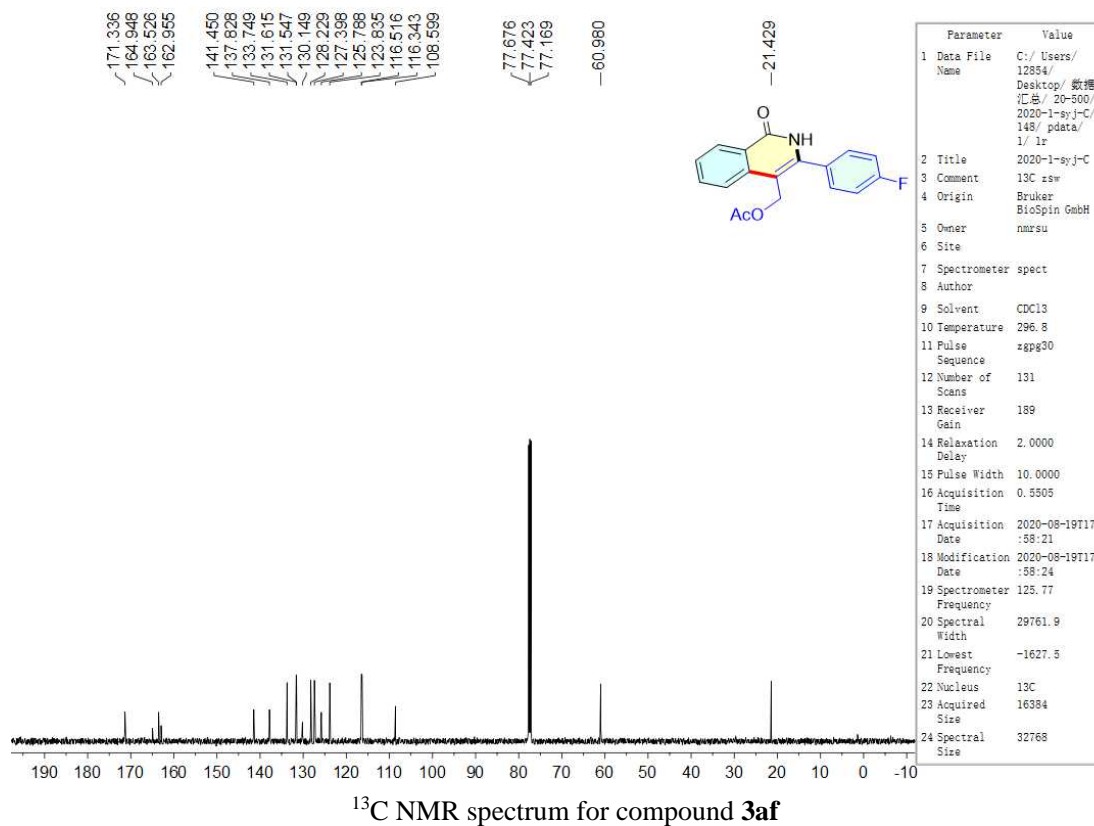
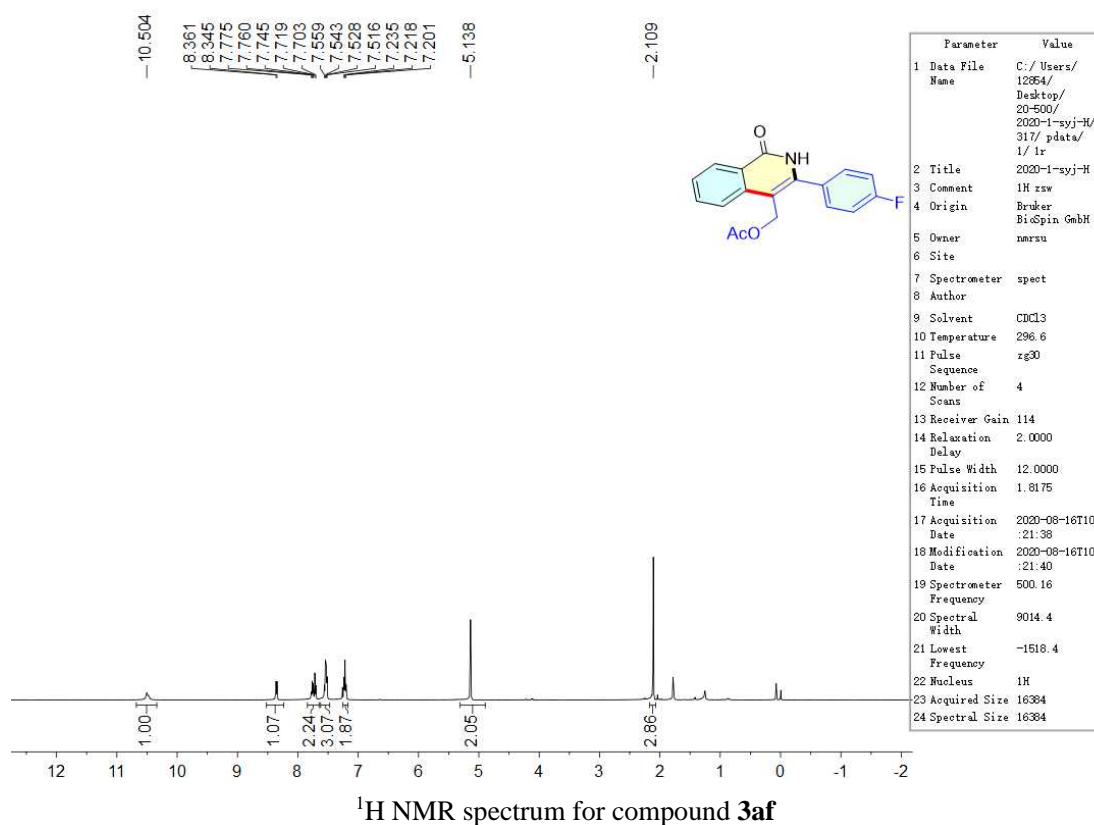


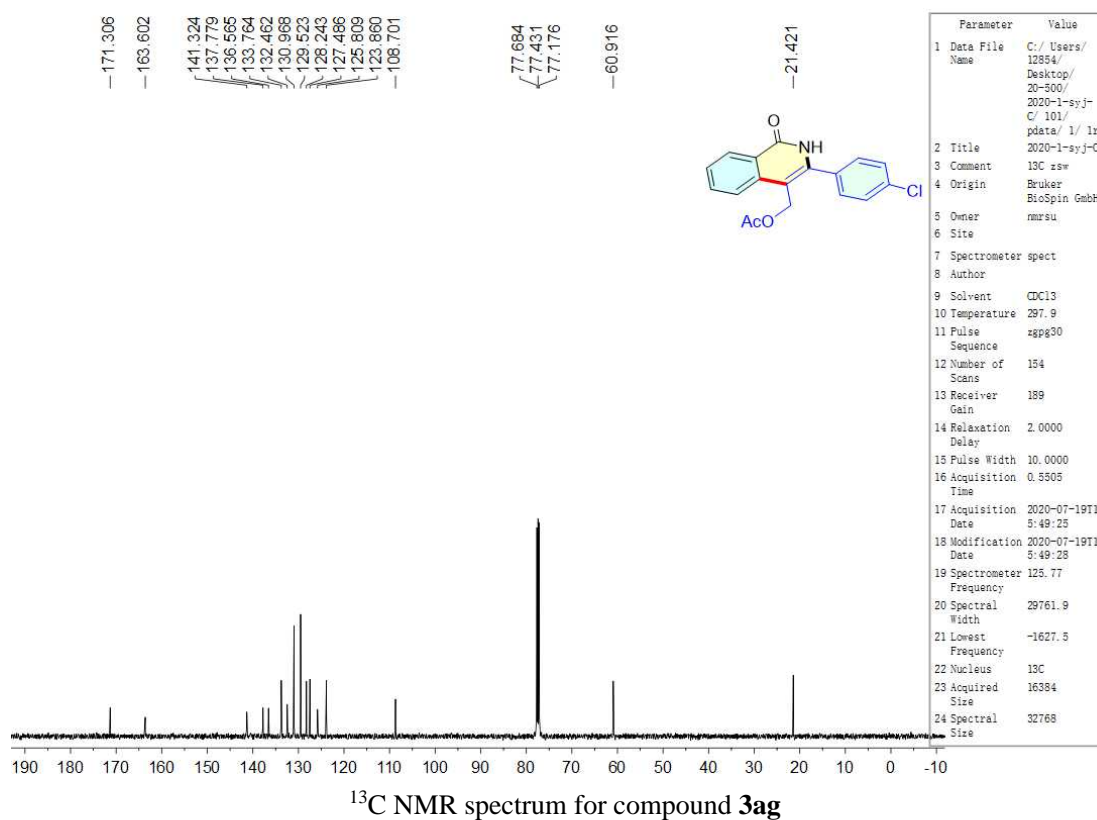
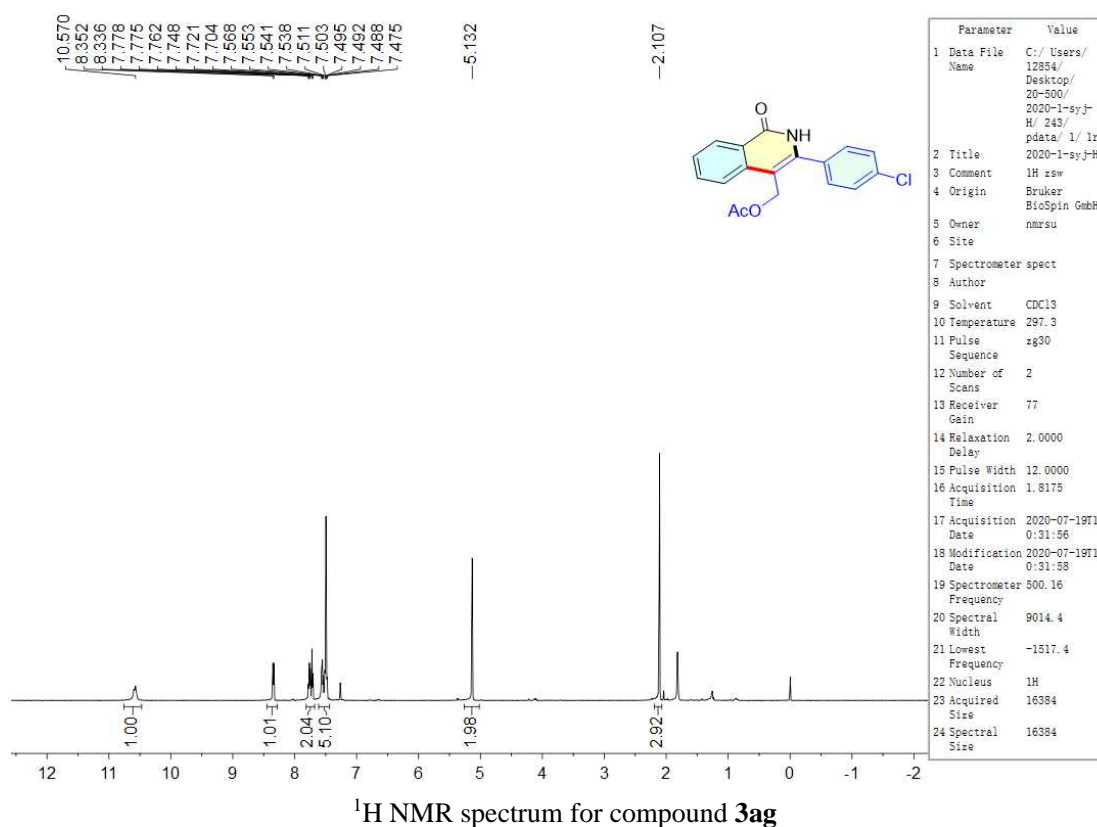
¹H NMR spectrum for compound **3ad**

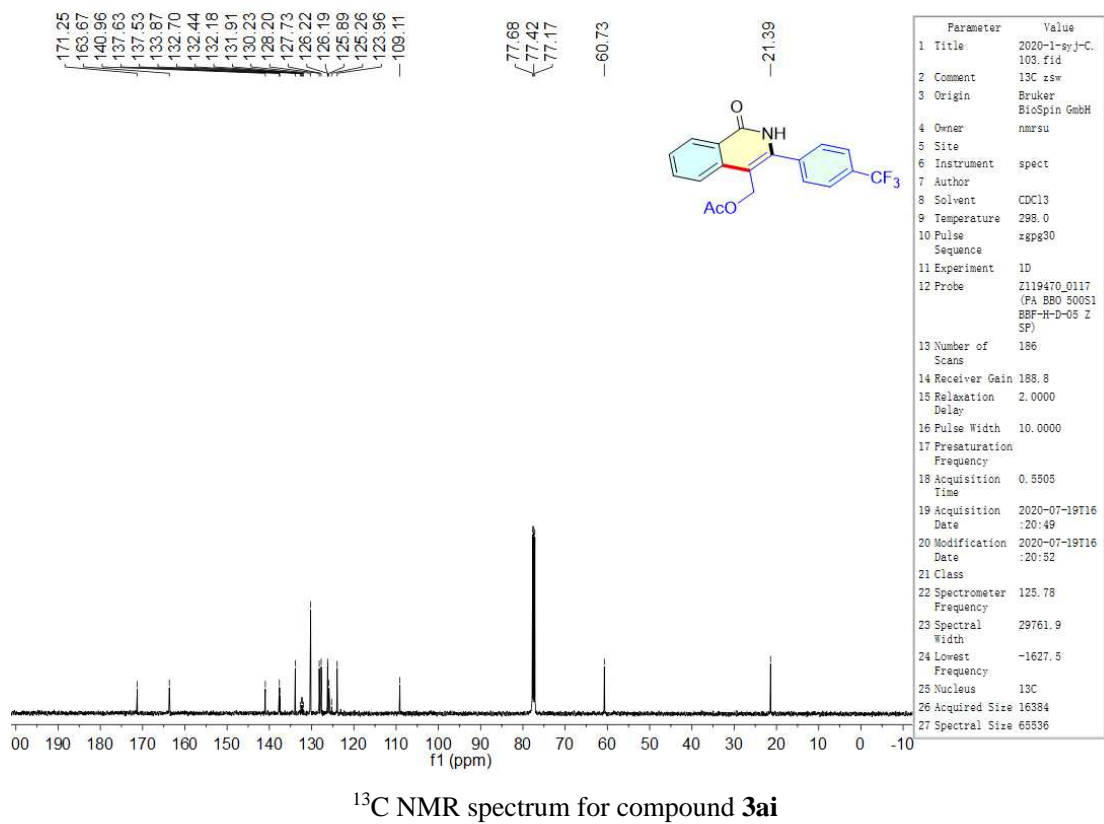
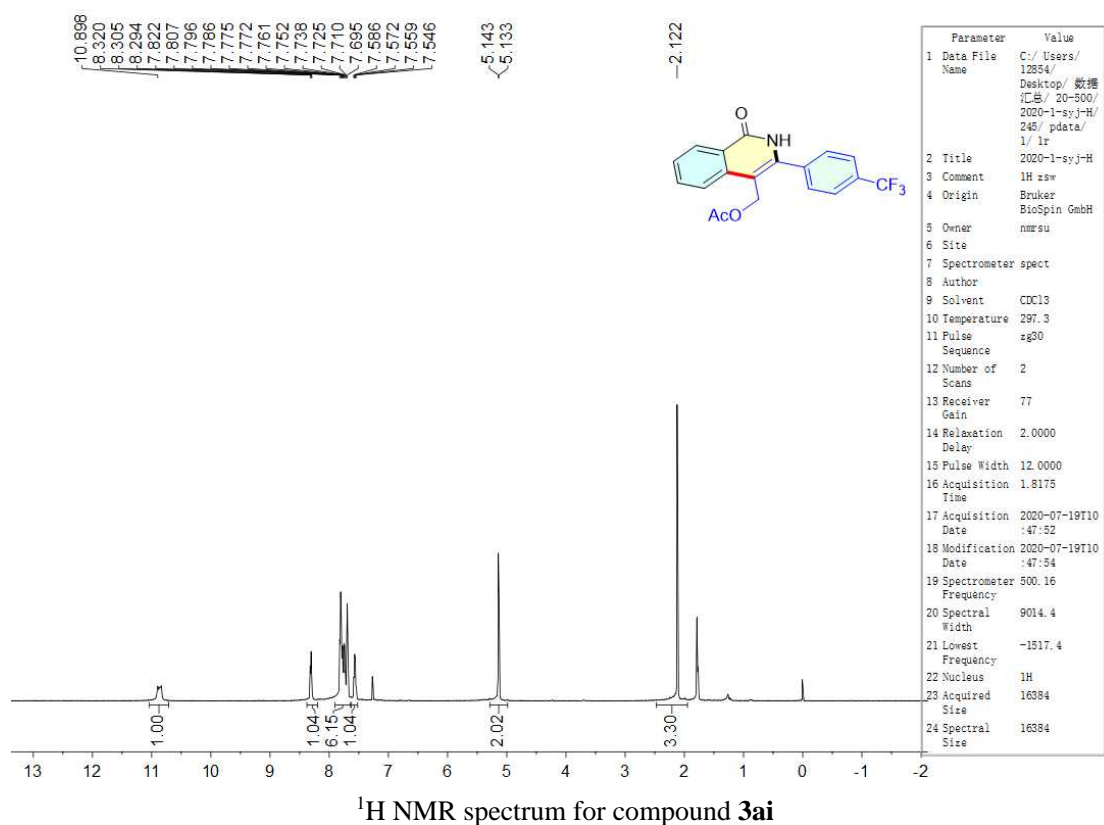


¹³C NMR spectrum for compound **3ad**

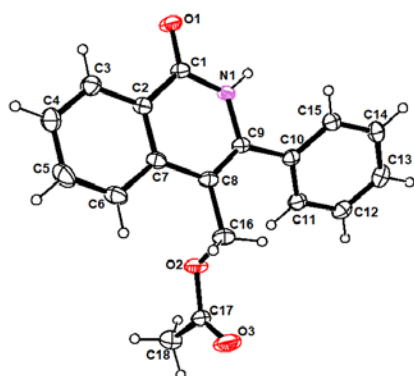








2. X-ray crystal data of compound **3aa**



The purified compound **3aa** is dissolved in a mixed solvent of ethyl acetate and n-Hexane, and placed in a dark cabinet to slowly evaporate. After several days, a colourless bulk crystal was obtained. The X-ray crystal-structure determinations were obtained on a Bruker Smart CCD APEX-2 diffractometer (graphite-monochromated Mo $K\alpha$ radiation, $\lambda=0.71073$ nm) at 293.15 K.

Figure S1. ORTEP drawing of compound **3aa** (CCDC 2220211) (30% probability for the thermal ellipsoid).

Table S1. Crystal data and structure refinement for compound **3aa**

CCDC number	2220211
Identification code	mo_20200722b_0m
Empirical formula	C ₁₈ H ₁₅ N O ₃
Formula weight	293.31
Temperature	300.00 K
Wavelength	0.71073 Å
Crystal system	monoclinic
Space group	P2 ₁ /c
Unit cell dimensions	a = 15.2877(12) Å $\alpha = 90^\circ$. b = 5.3060(4) Å $\beta = 99.569(3)^\circ$. c = 18.1471(14) Å $\gamma = 90^\circ$.
Volume	1451.55(19) Å ³
Z	4
Density (calculated)	1.342 g/cm ³
Absorption coefficient	0.092 mm ⁻¹
F(000)	616.0
Crystal size	0.15 × 0.11 × 0.1 mm ³
2 θ range for data collection	5.668 to 55.002°.
Index ranges	-19 ≤ h ≤ 19, -6 ≤ k ≤ 6, -23 ≤ l ≤ 23
Reflections collected	32608
Independent reflections	3312 [R(int) = 0.0848, R(sigma) = 0.0381]
Data/restraints/parameters	3312/0/200
Goodness-of-fit on F ²	1.031
Final R indices [I > 2sigma(I)]	R1 = 0.0501, wR2 = 0.1091
Final R indices (all data)	R1 = 0.0907, wR2 = 0.1278
Largest diff. peak and hole	0.18 and -0.23 e.Å ⁻³