

Supporting Information

Reductive Insertion of Sulfur Dioxide for the Synthesis of Trifluoromethyl thiolsulphonates Through One-pot Reaction of Aniline and Trifluoromethanesulfanylamide

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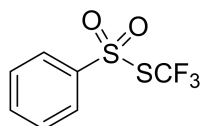
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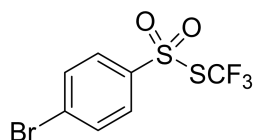
1. General experimental methods (S2).
2. ¹⁹F, ¹H and ¹³C NMR spectra of compound **3** (S7-S46).

General experimental methods:

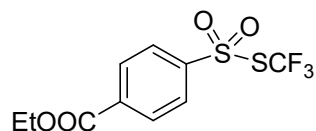
Unless otherwise stated, all commercial reagents and solvents were used without additional purification. All solvents were dried and distilled according to standard procedures. Flash column chromatography was performed using silica gel (60-Å pore size, 32–63µm, standard grade). Analytical thin-layer chromatography was performed using glass plates pre-coated with 0.25 mm 230–400 mesh silica gel impregnated with a fluorescent indicator (254 nm). Thin layer chromatography plates were visualized by exposure to ultraviolet light. Organic solutions were concentrated on rotary evaporators at ~20Torr (house vacuum) at 25–35°C. Commercial reagents and solvents were used as received. Nuclear magnetic resonance (NMR) spectra are recorded in parts per million from internal tetramethylsilane on the δ scale.



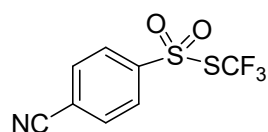
S-trifluoromethyl benzenesulfonylthioate (**3a**)^[1]



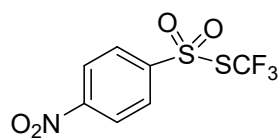
S-trifluoromethyl 4-bromobenzenesulfonylthioate (**3b**)^[1]



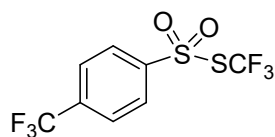
Ethyl 4-(trifluoromethylthiosulfonyl)benzoate (**3c**)



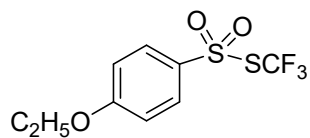
S-trifluoromethyl 4-cyanobenzenesulfonylthioate (**3d**)^[1]



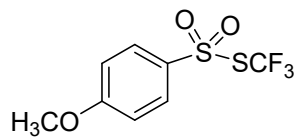
S-trifluoromethyl 4-nitrobenzenesulfonylthioate (**3e**)^[1]



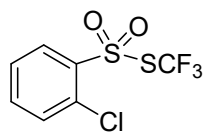
S-trifluoromethyl 4-(trifluoromethyl)benzenesulfonylthioate (**3f**)



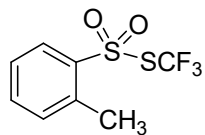
S-trifluoromethyl 4-ethoxybenzenesulfonylthioate (**3g**)



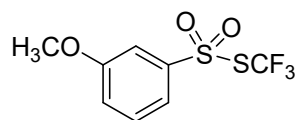
S-trifluoromethyl 4-methoxybenzenesulfonylthioate (**3h**)^[1]



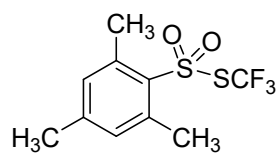
S-trifluoromethyl 2-chlorobenzenesulfonylthioate (**3i**)



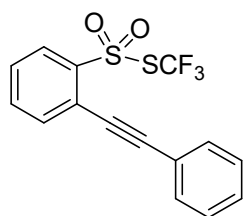
S-trifluoromethyl 2-methylbenzenesulfonylthioate (**3j**)



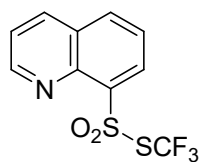
S-trifluoromethyl 3-methoxybenzenesulfonothioate (**3k**)



S-trifluoromethyl 2,4,6-trimethylbenzenesulfonothioate (**3l**)



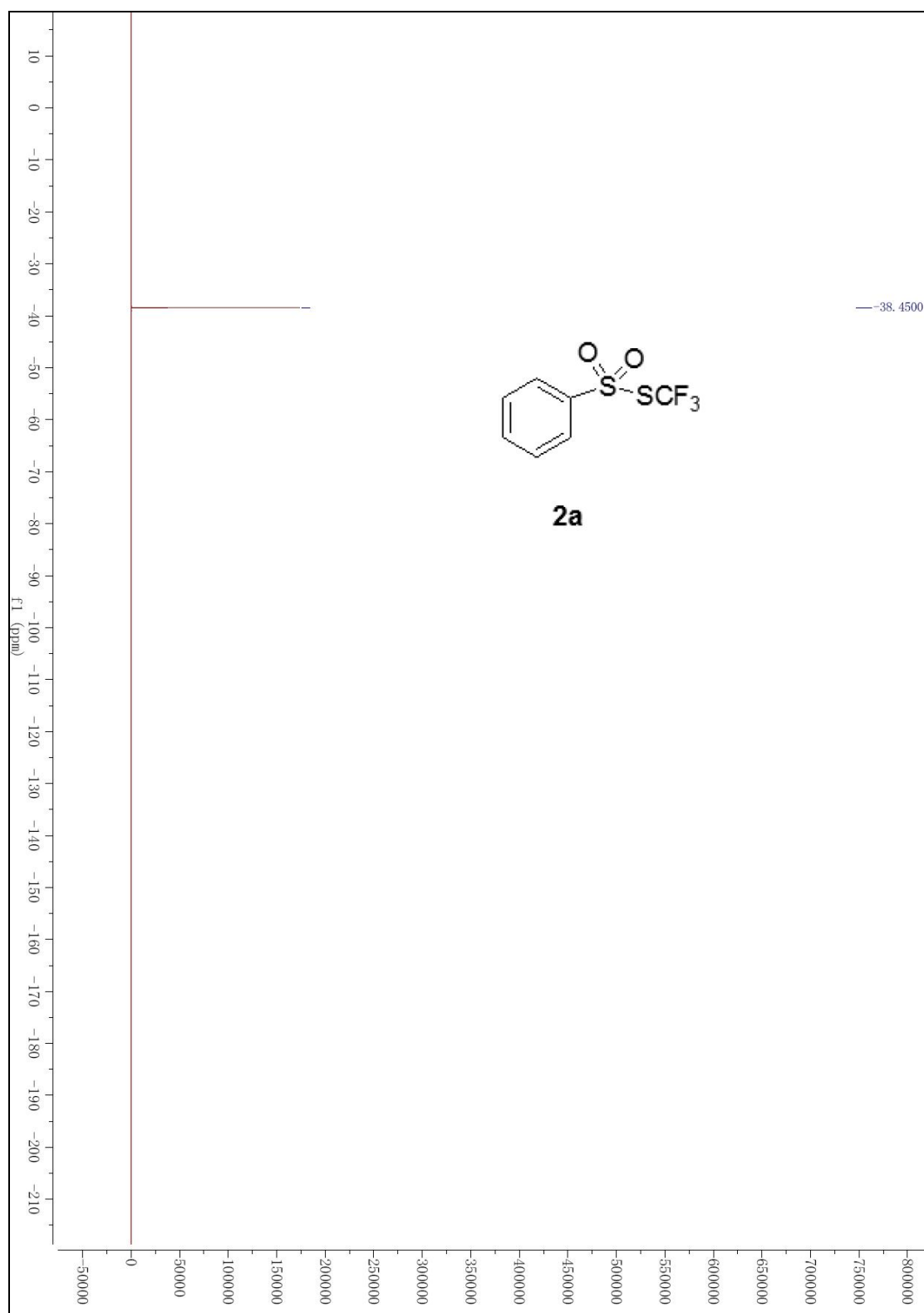
S-trifluoromethyl 2-(2-phenylethynyl)benzenesulfonothioate (**3m**)

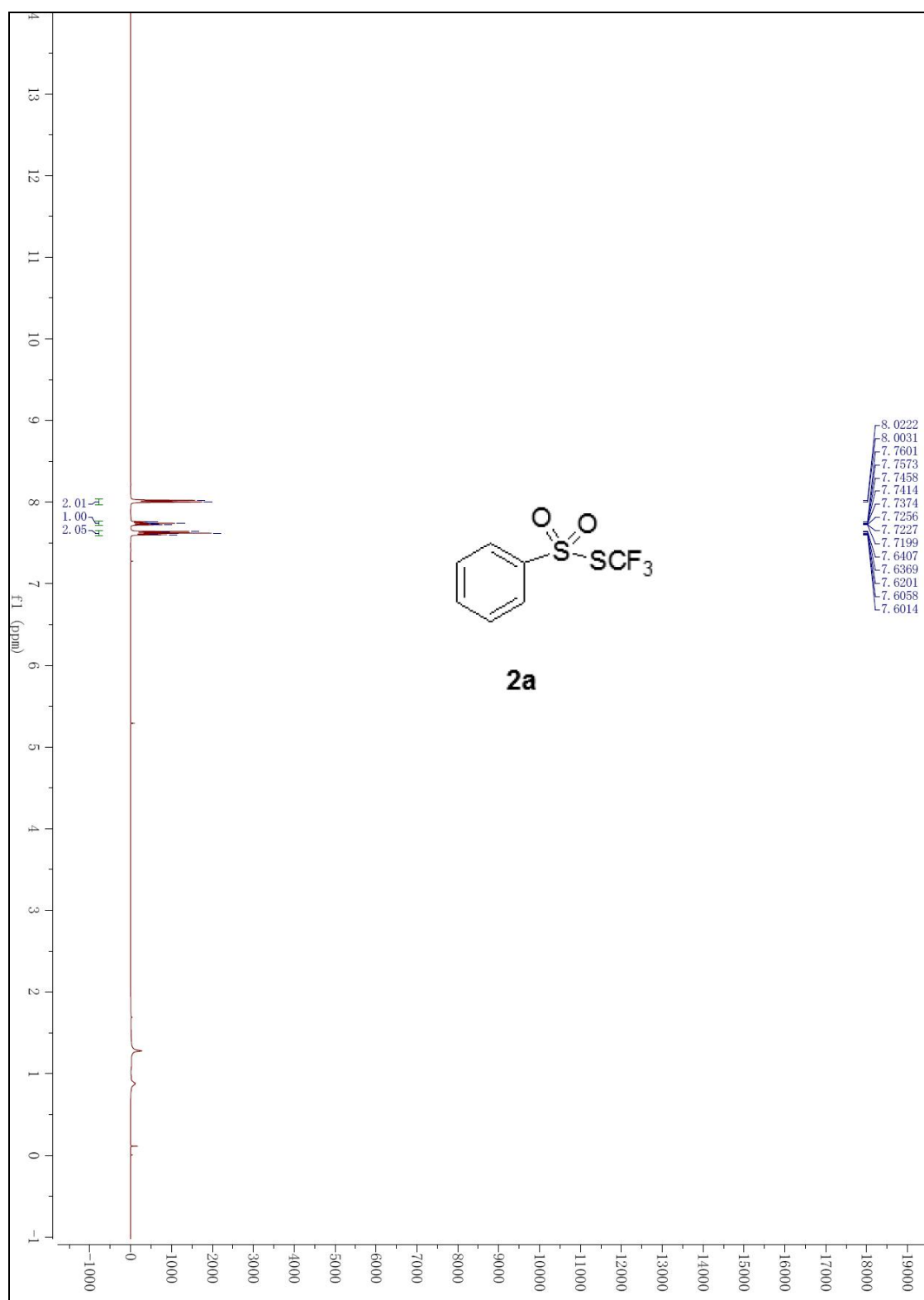


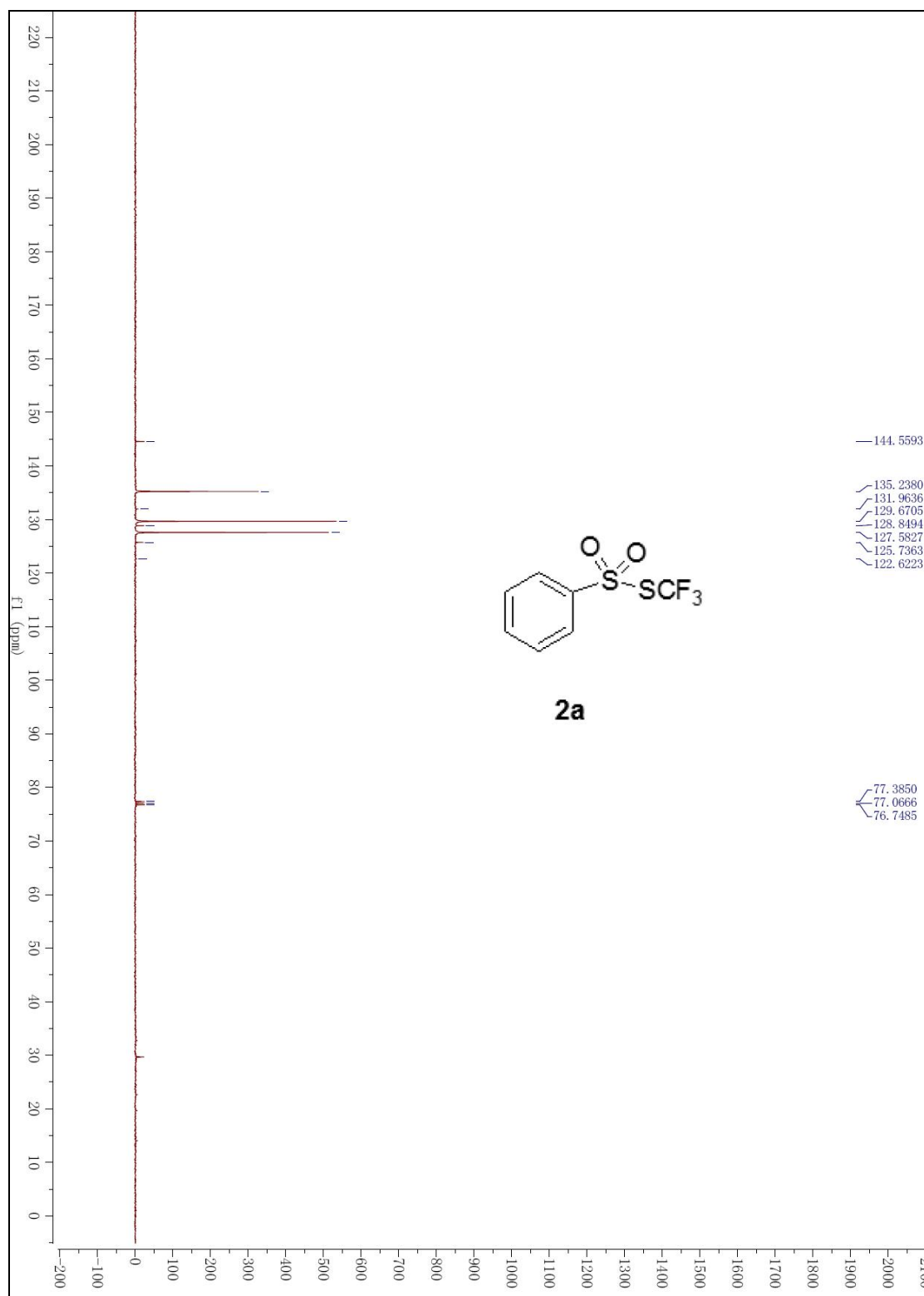
S-trifluoromethyl quinoline-8-sulfonothioate **8**^[1]

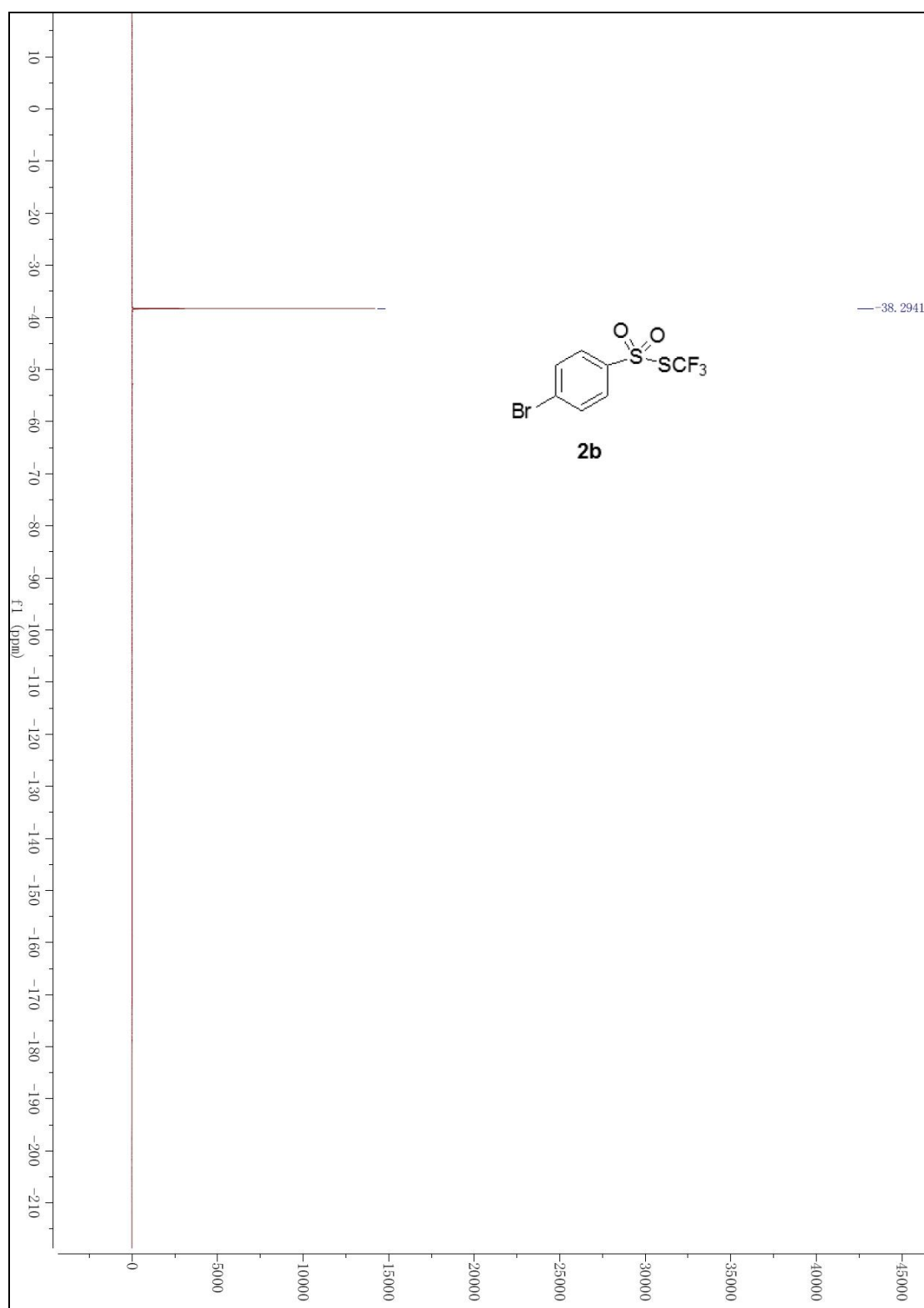
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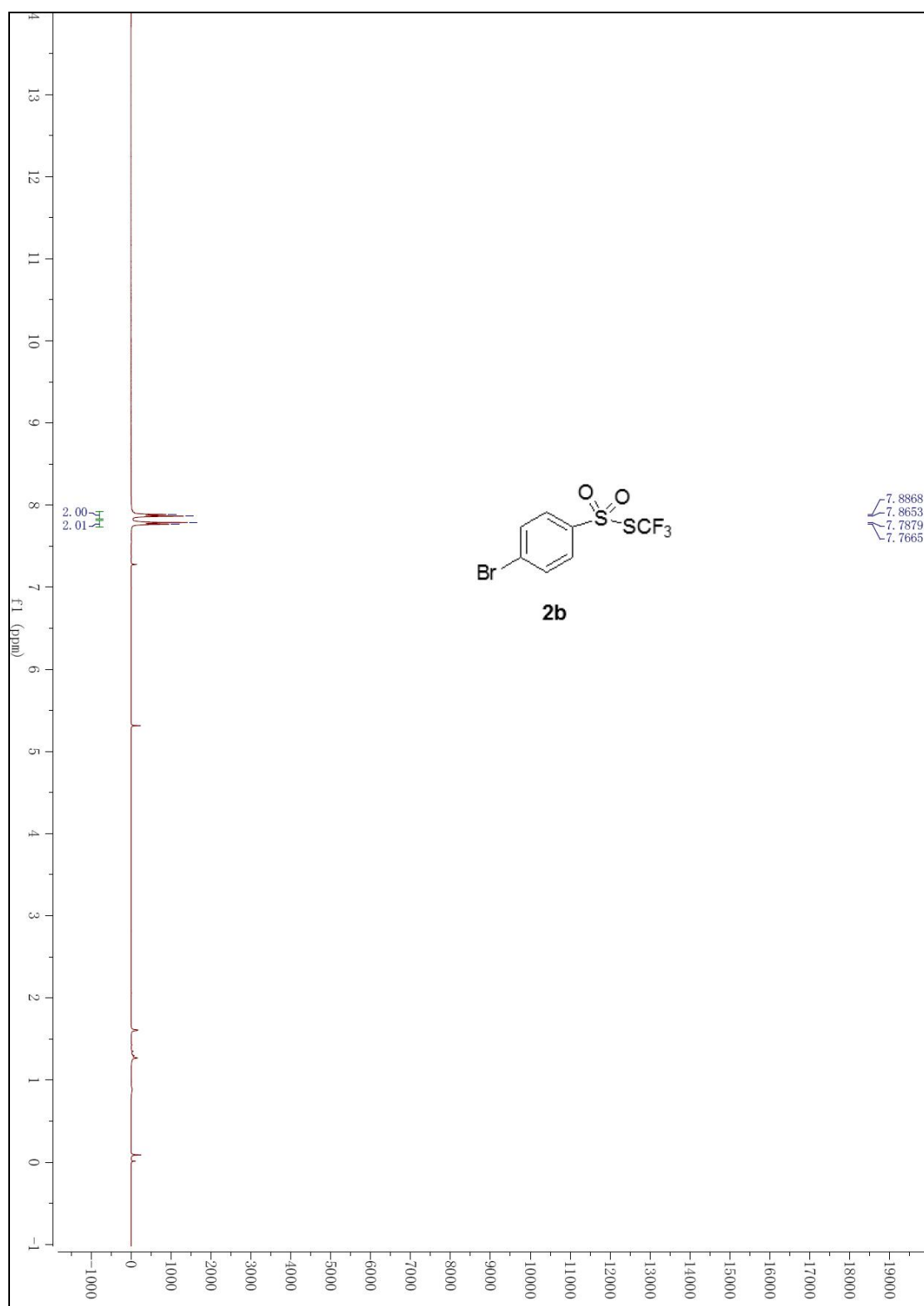
1. X. Shao, C. Xu, L. Lu, Q. Shen, *J. Org. Chem.* **2015**, 80, 3012.

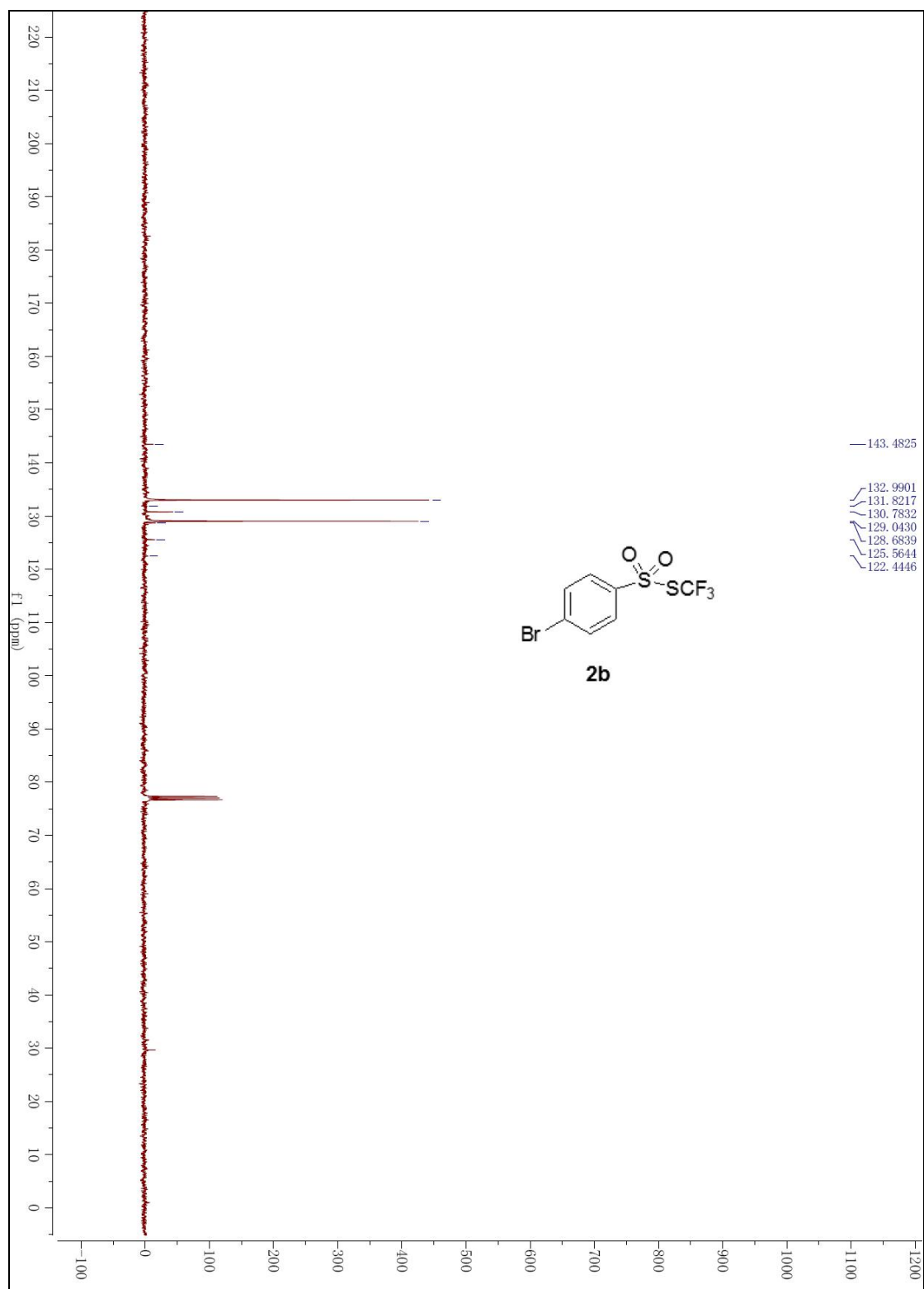


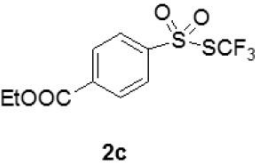


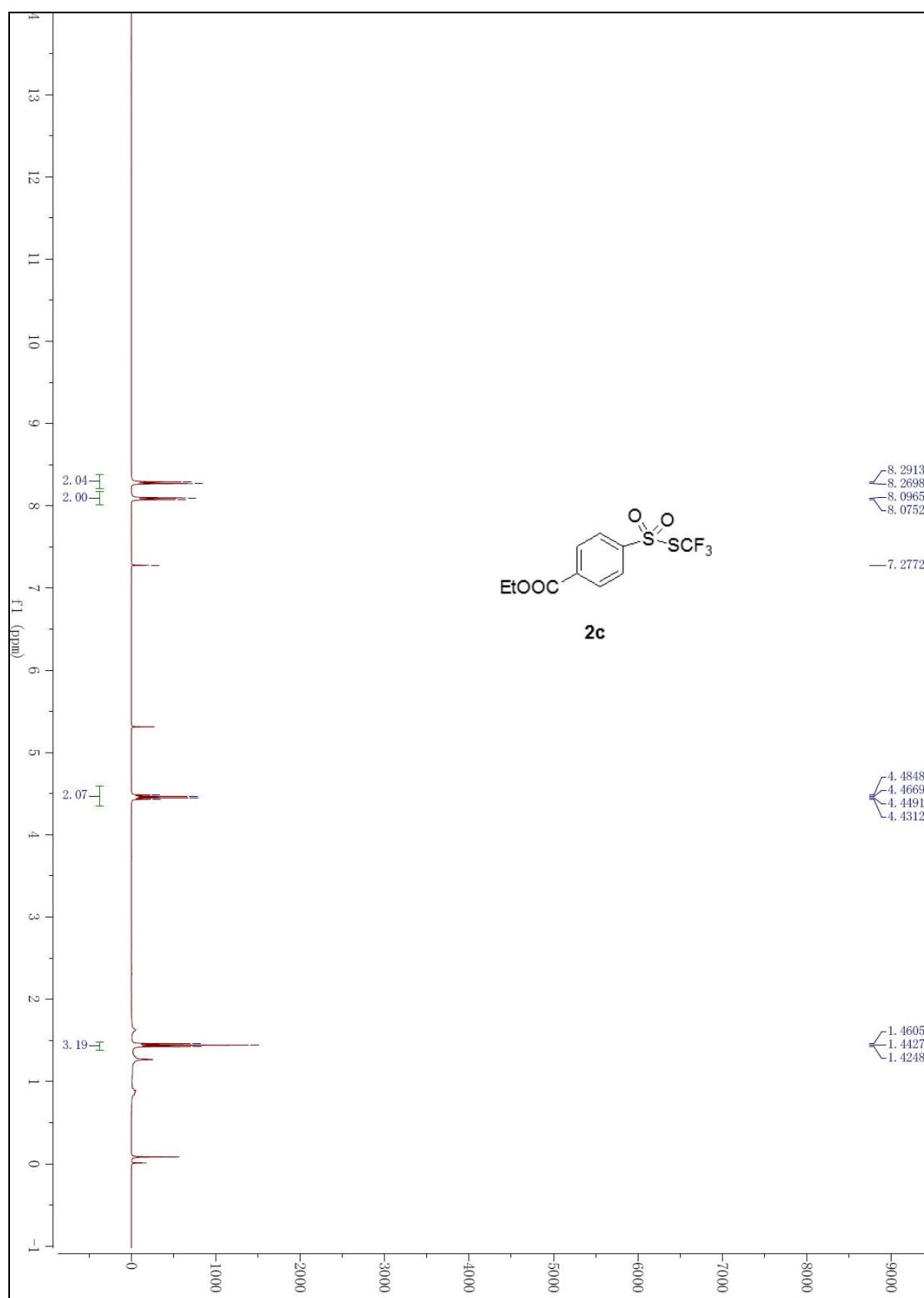


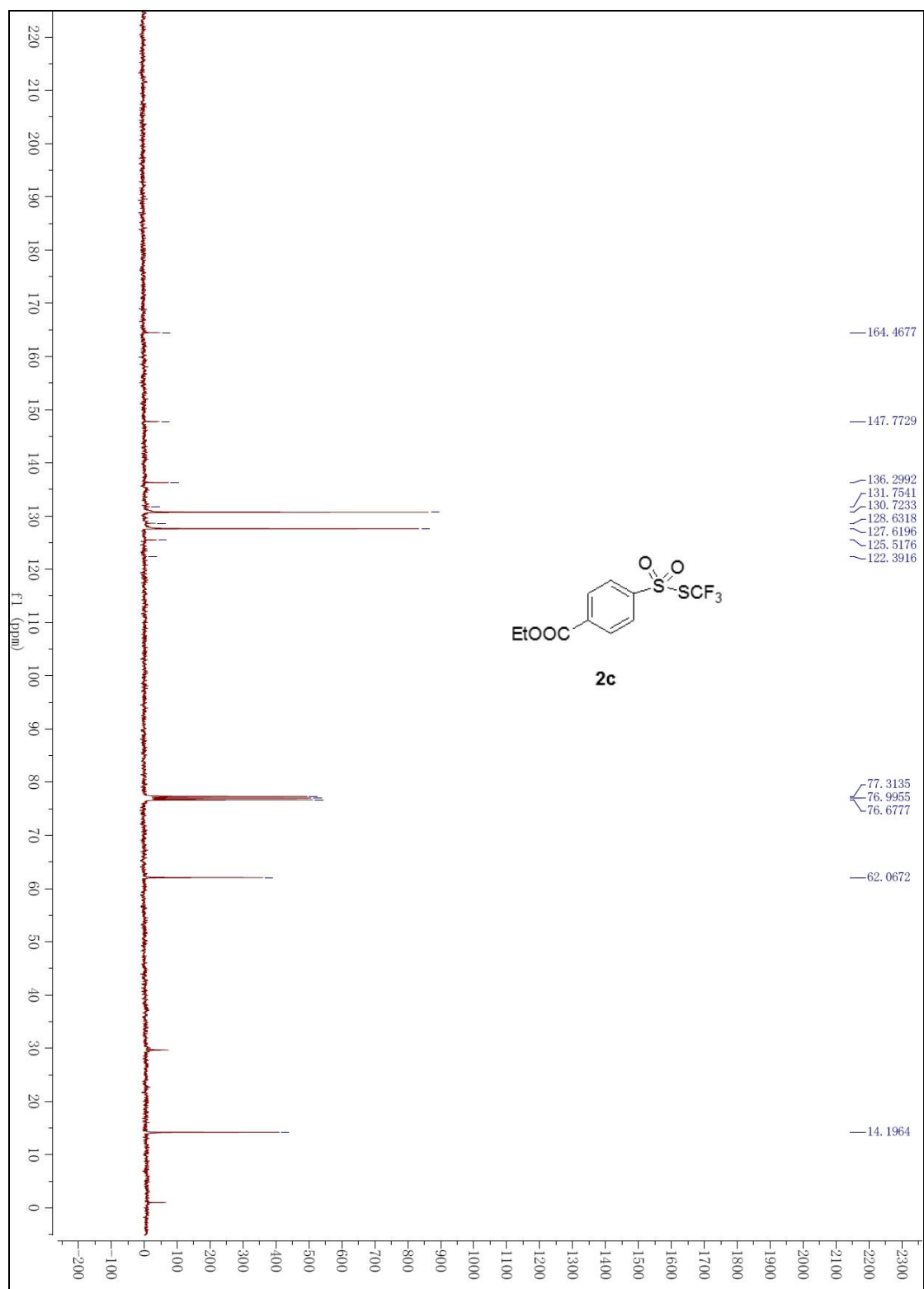


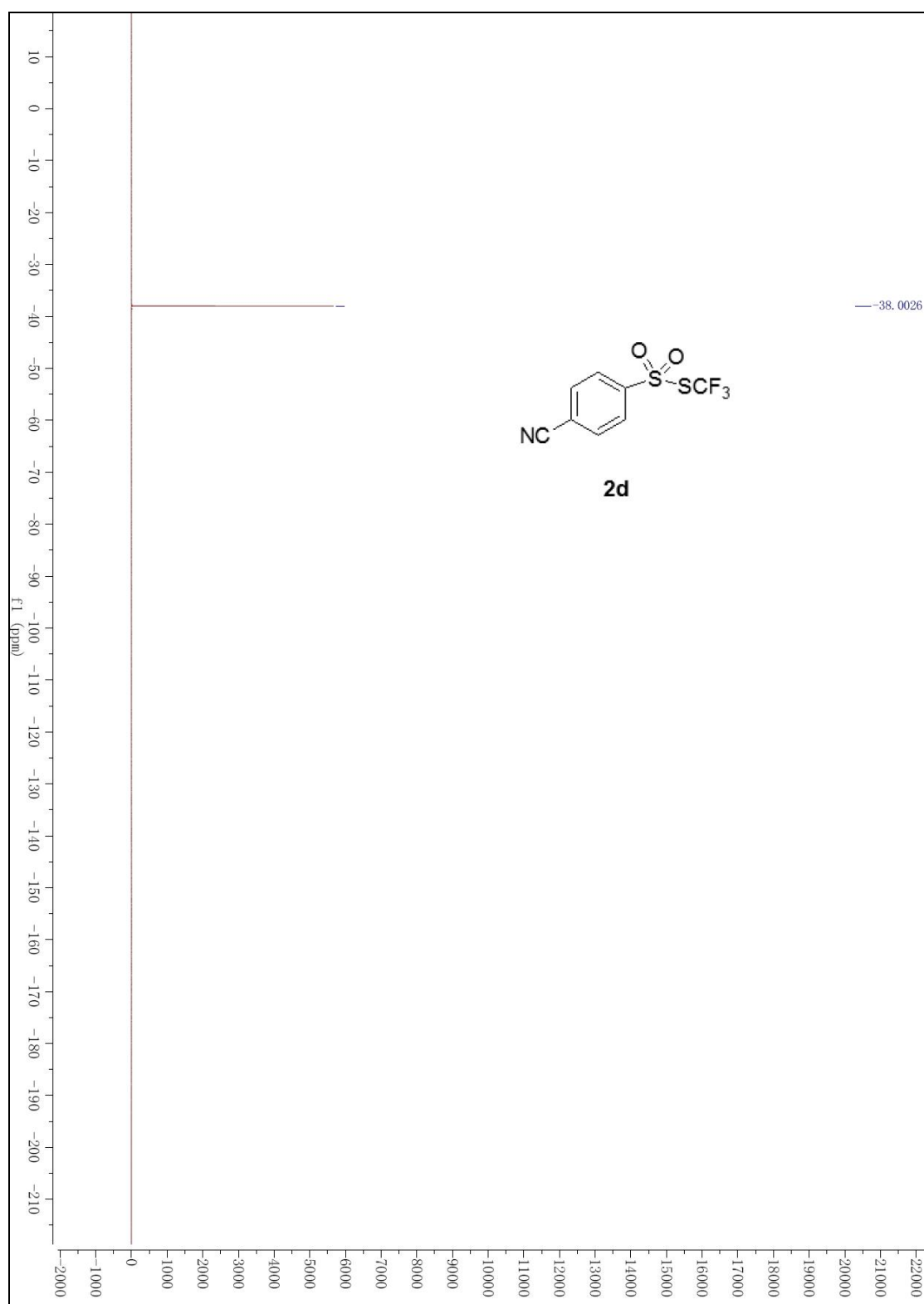


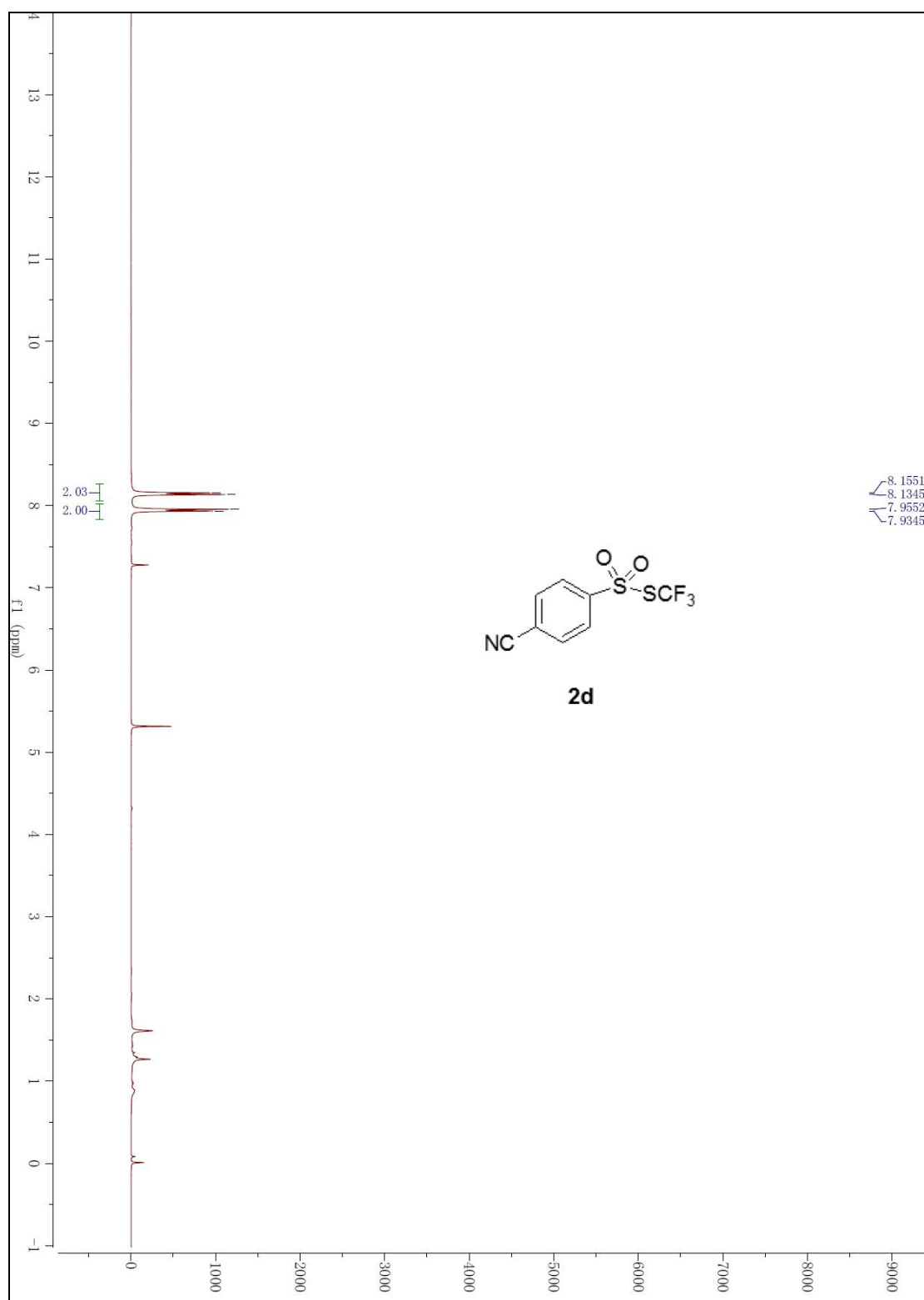


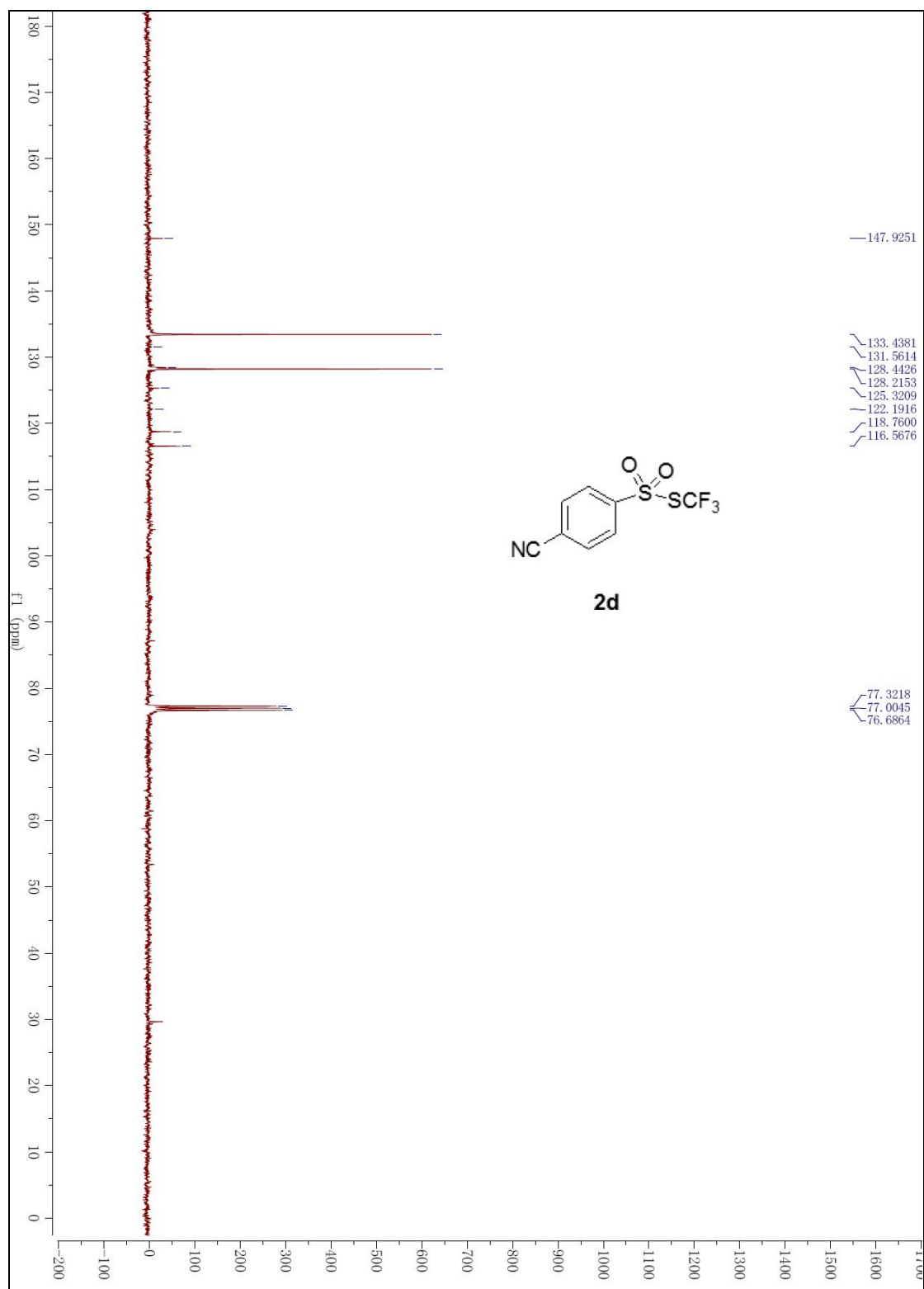


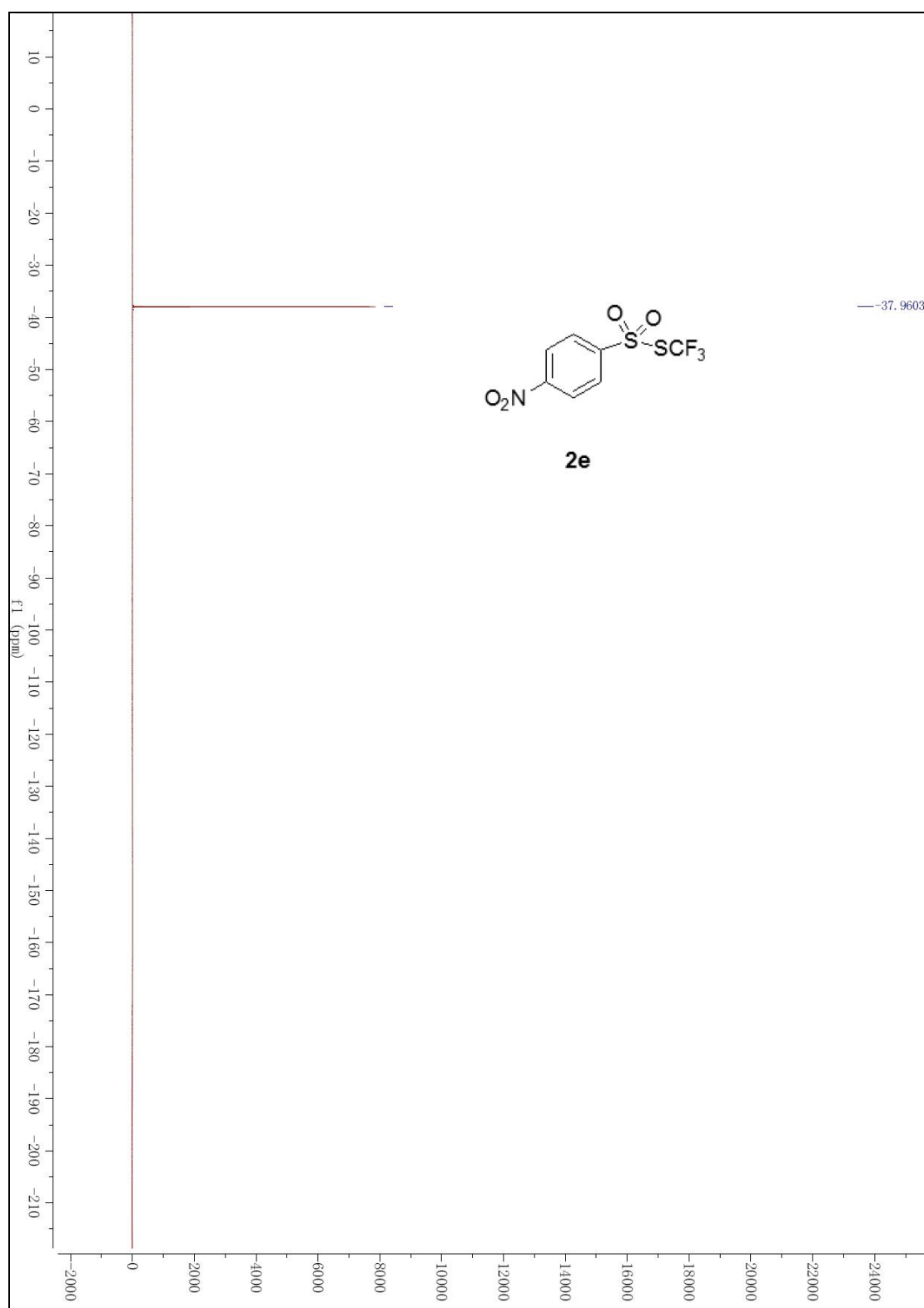


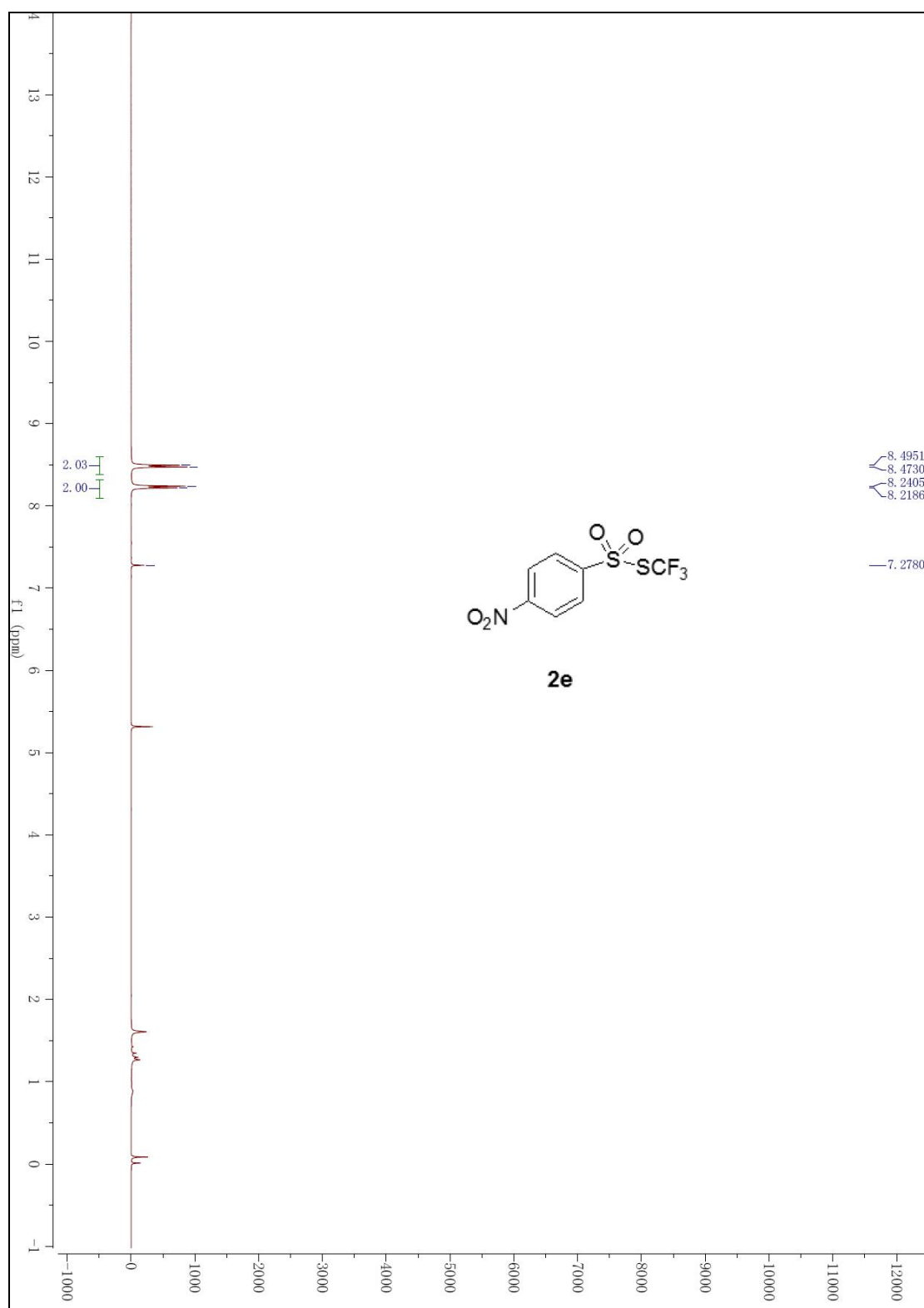


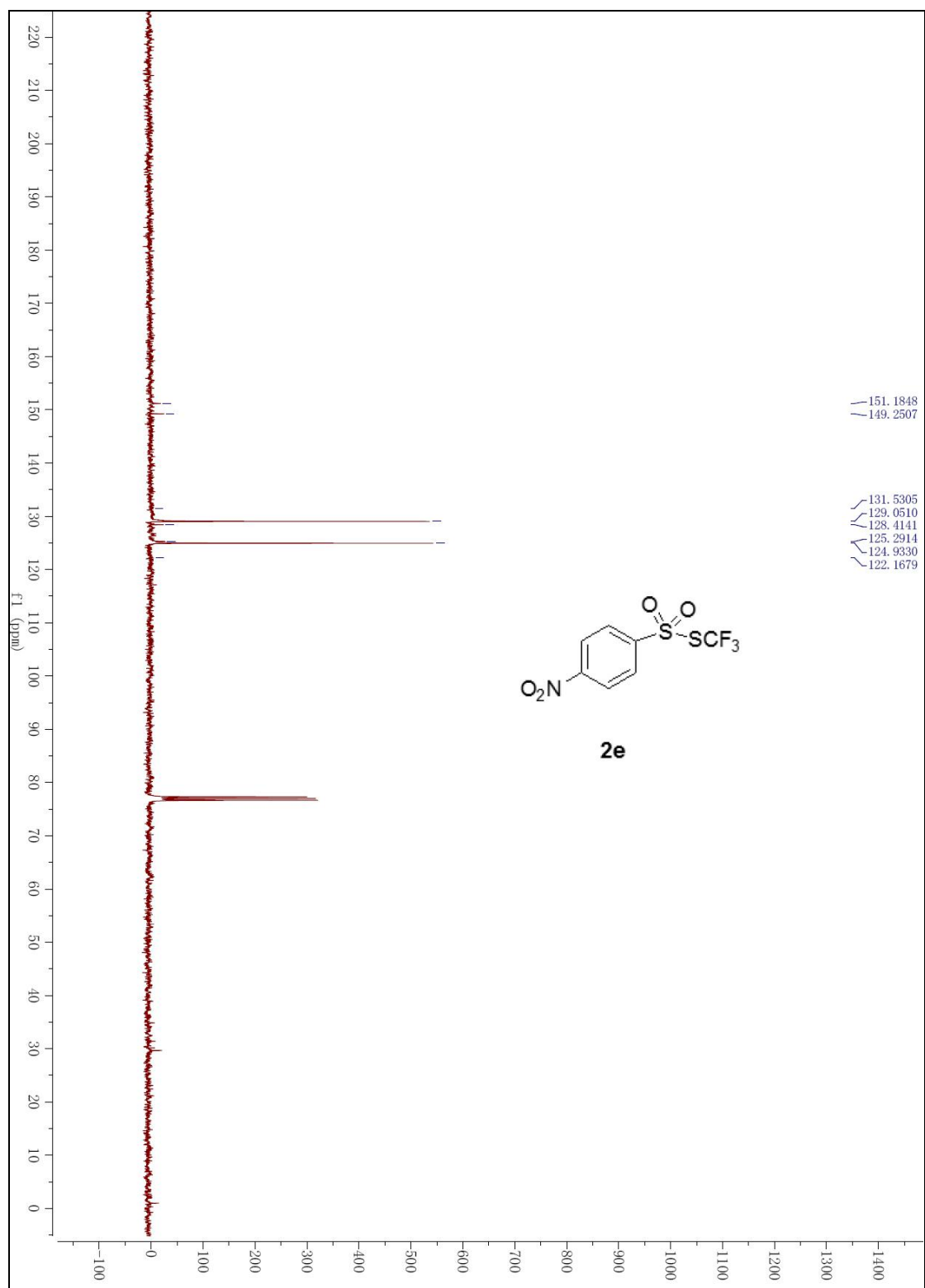


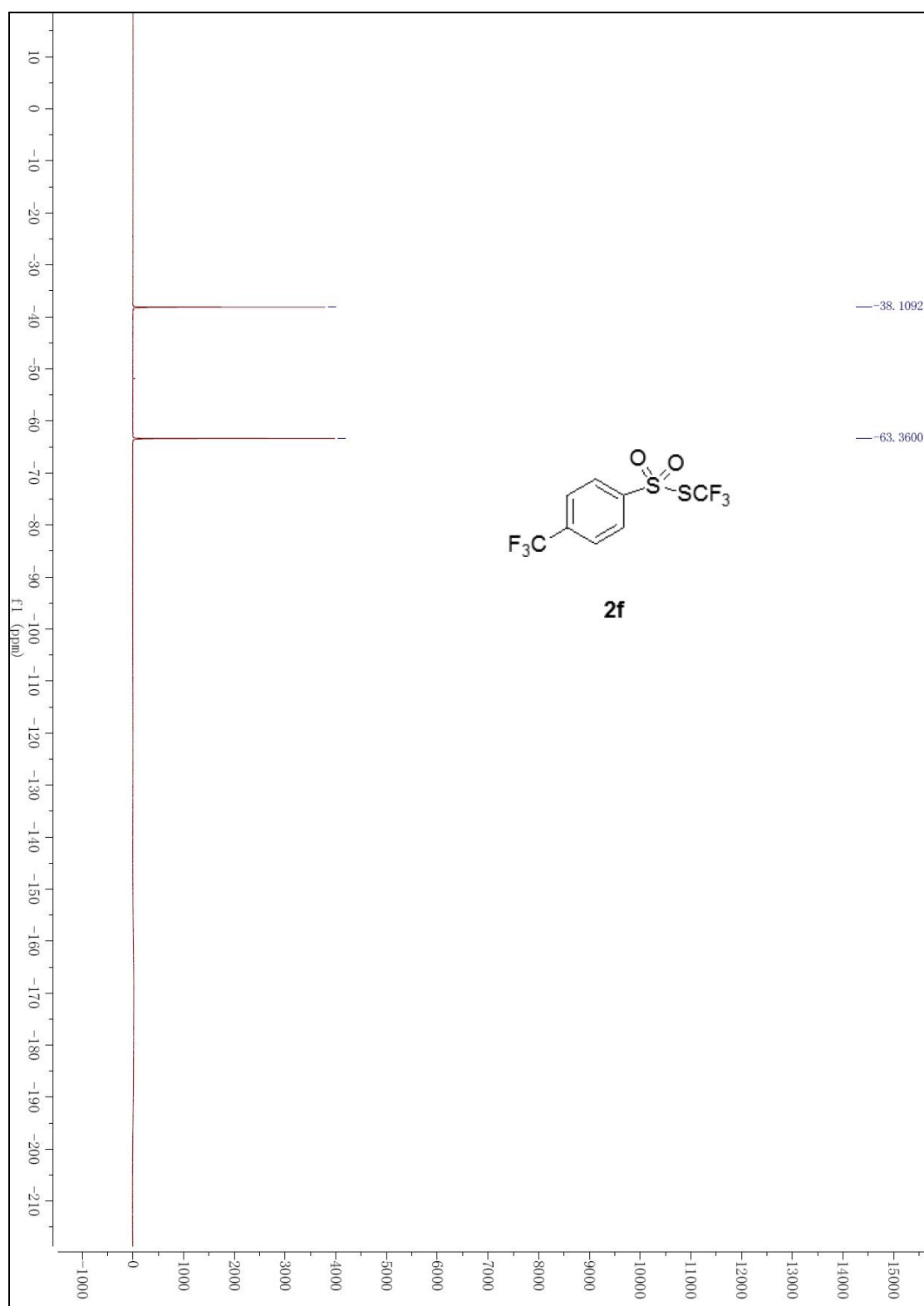


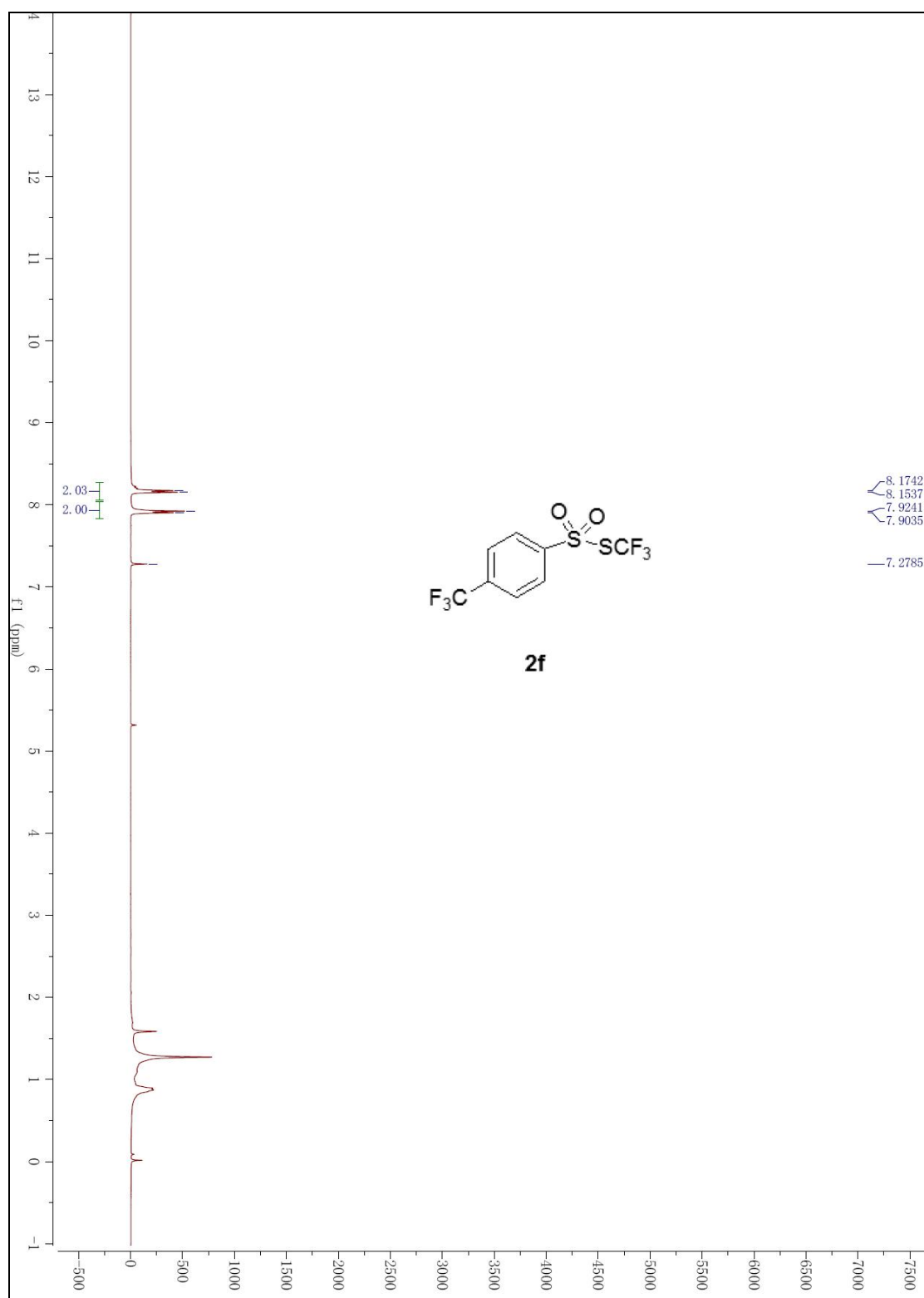


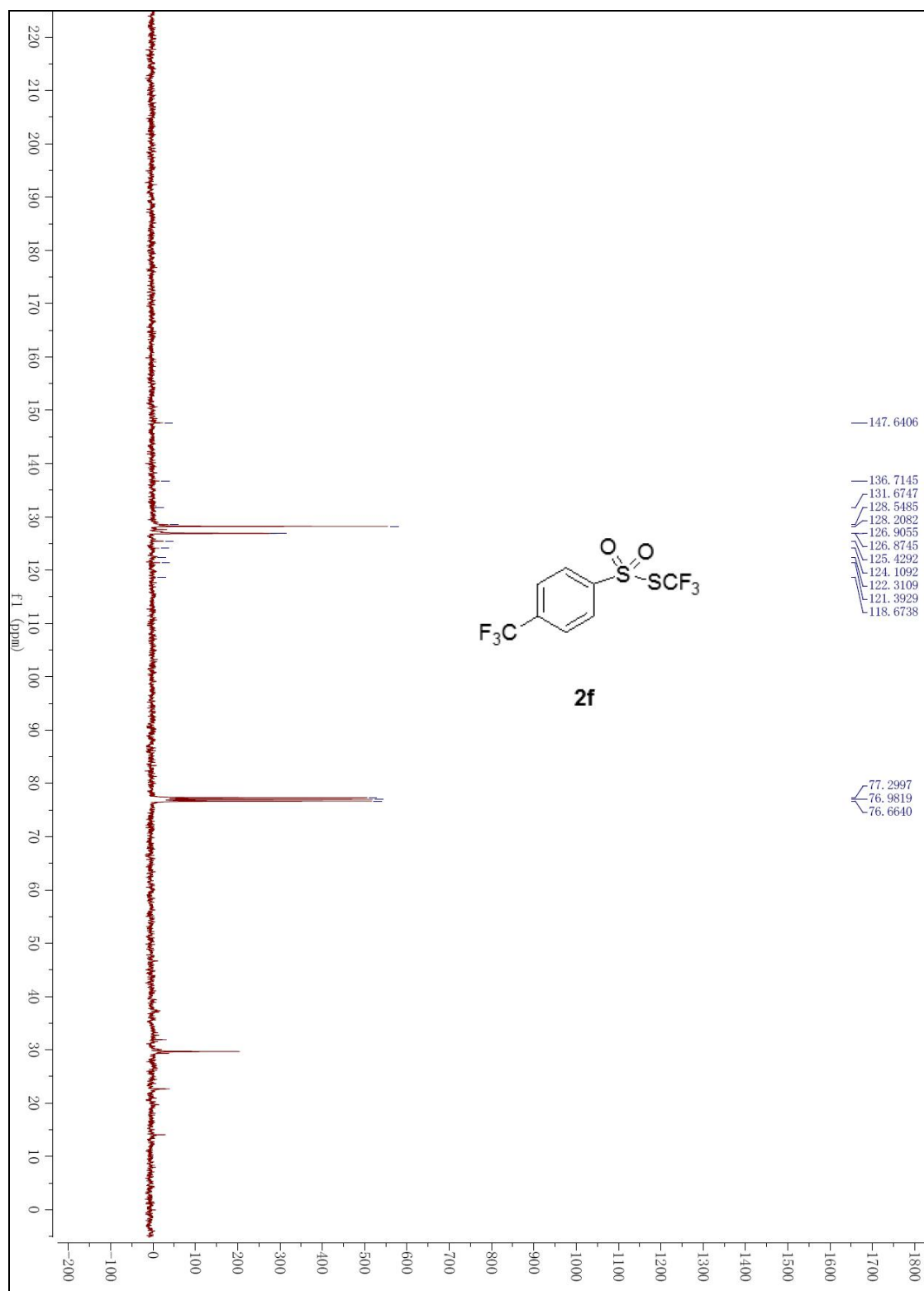


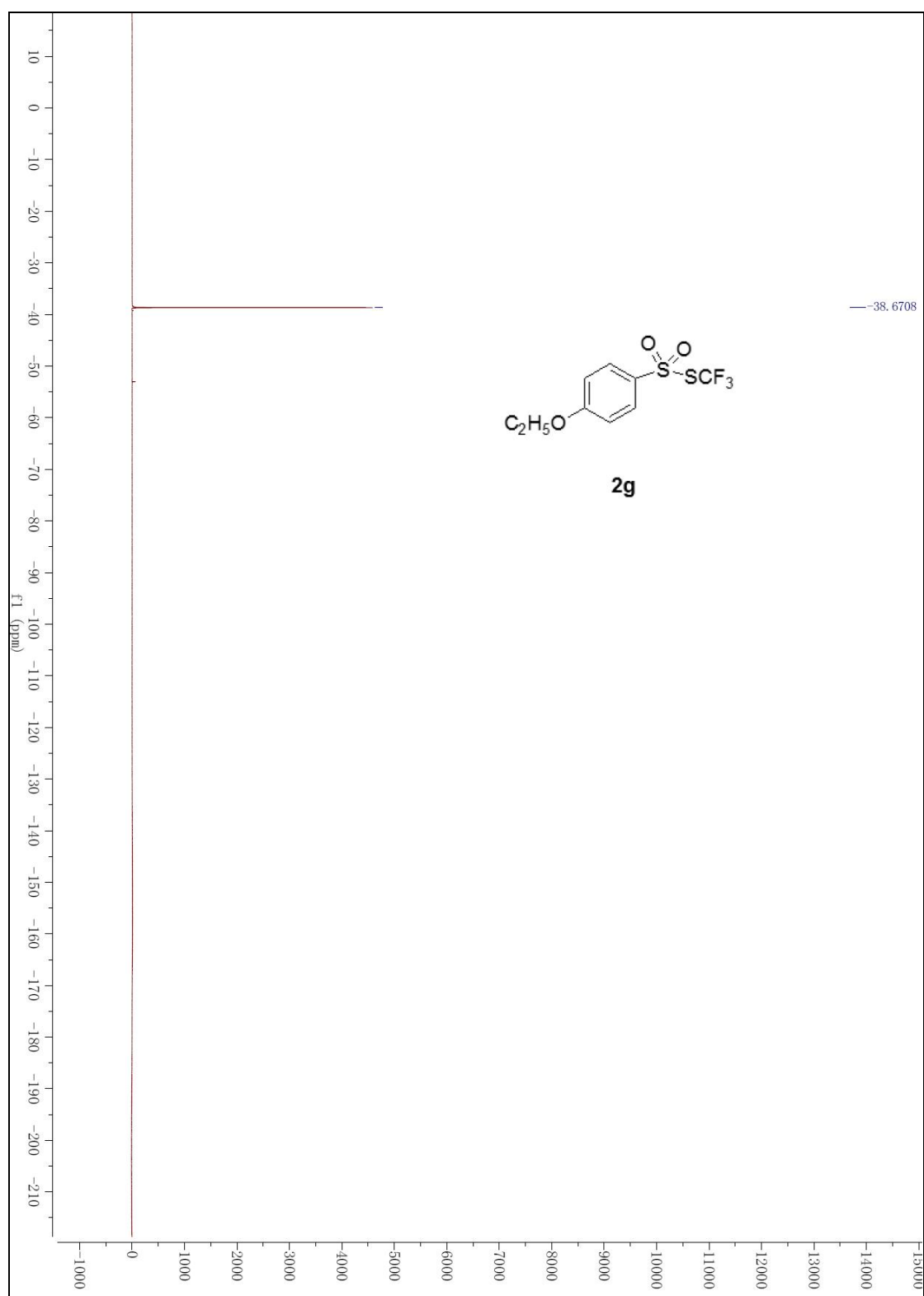


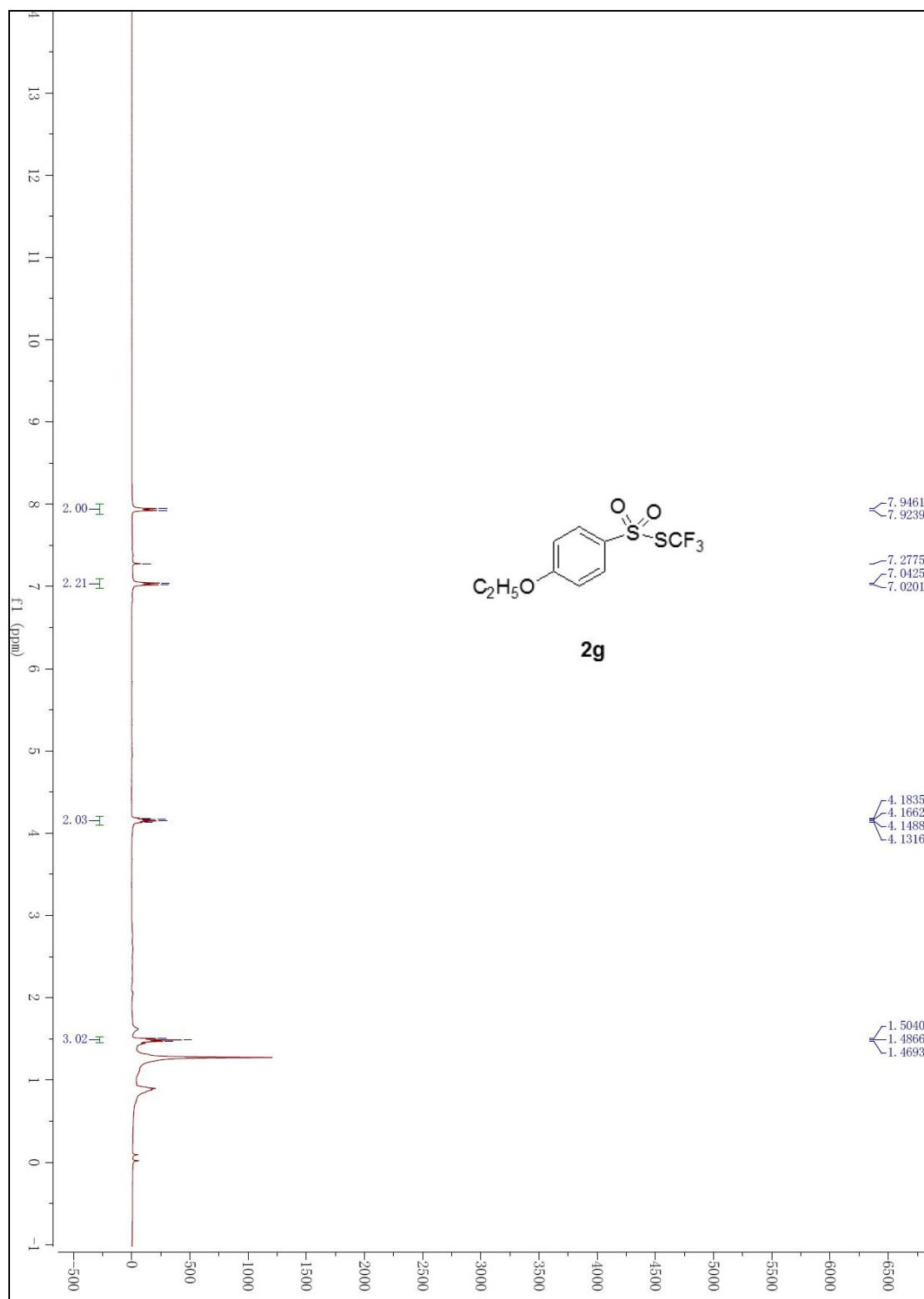


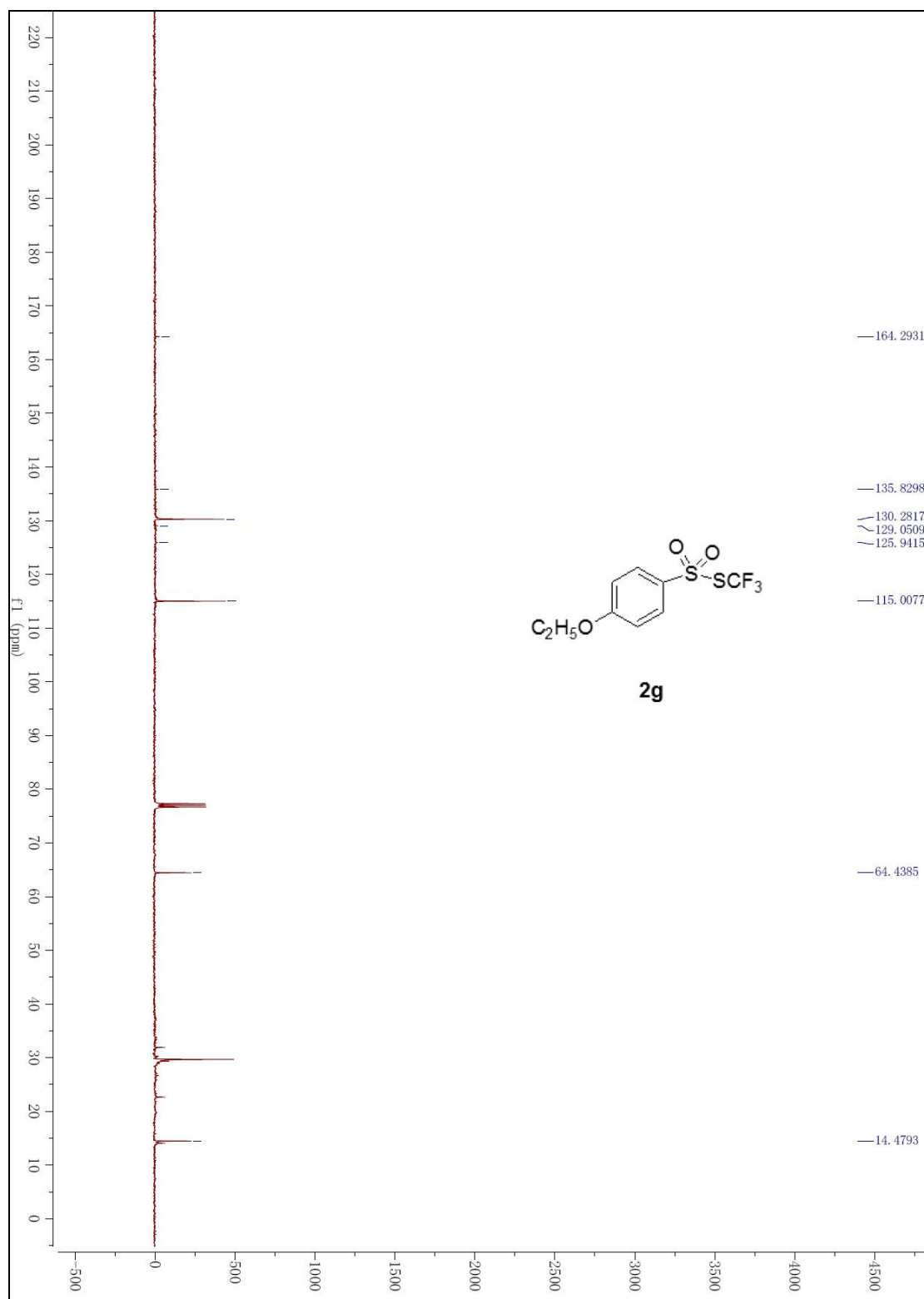


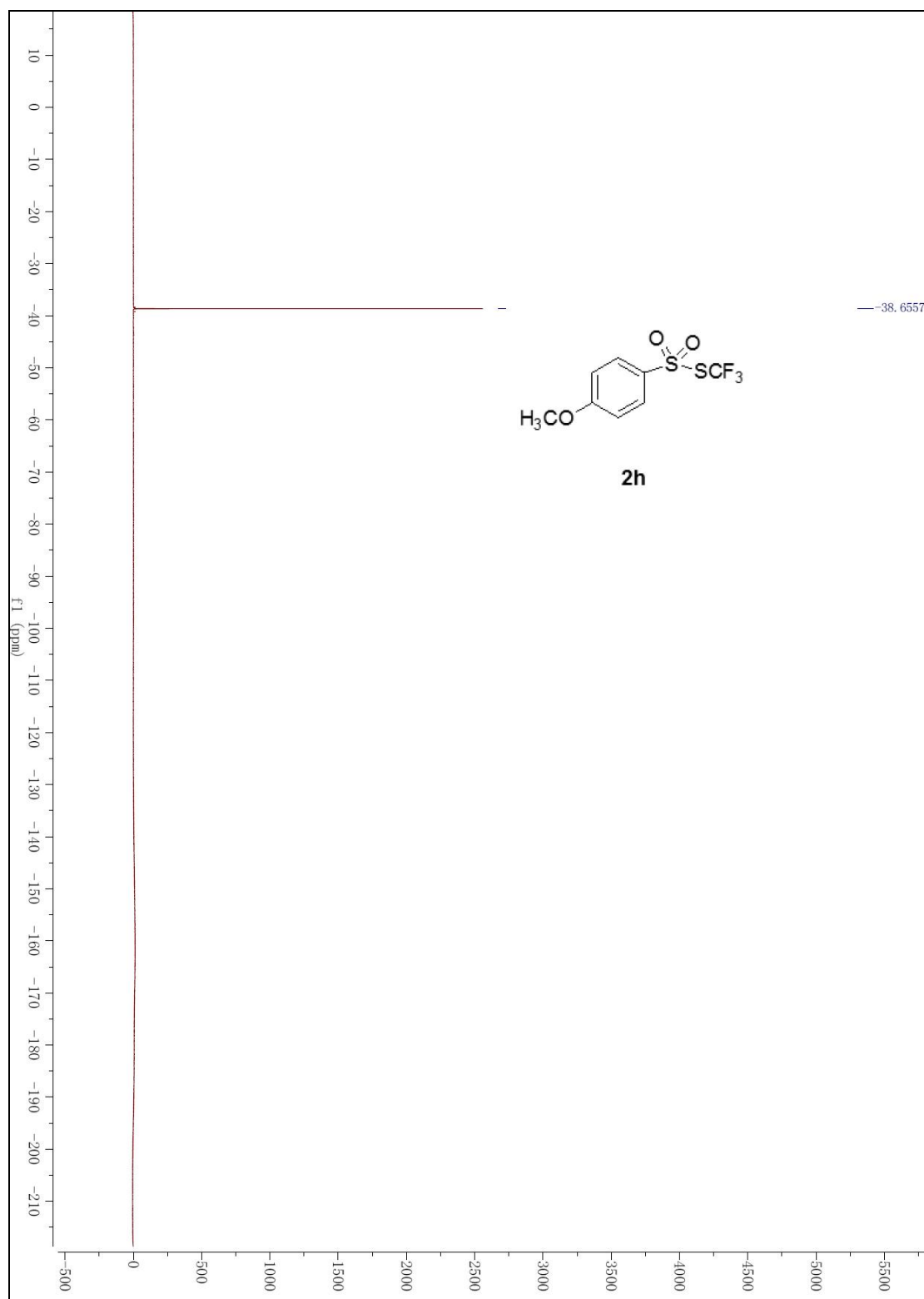


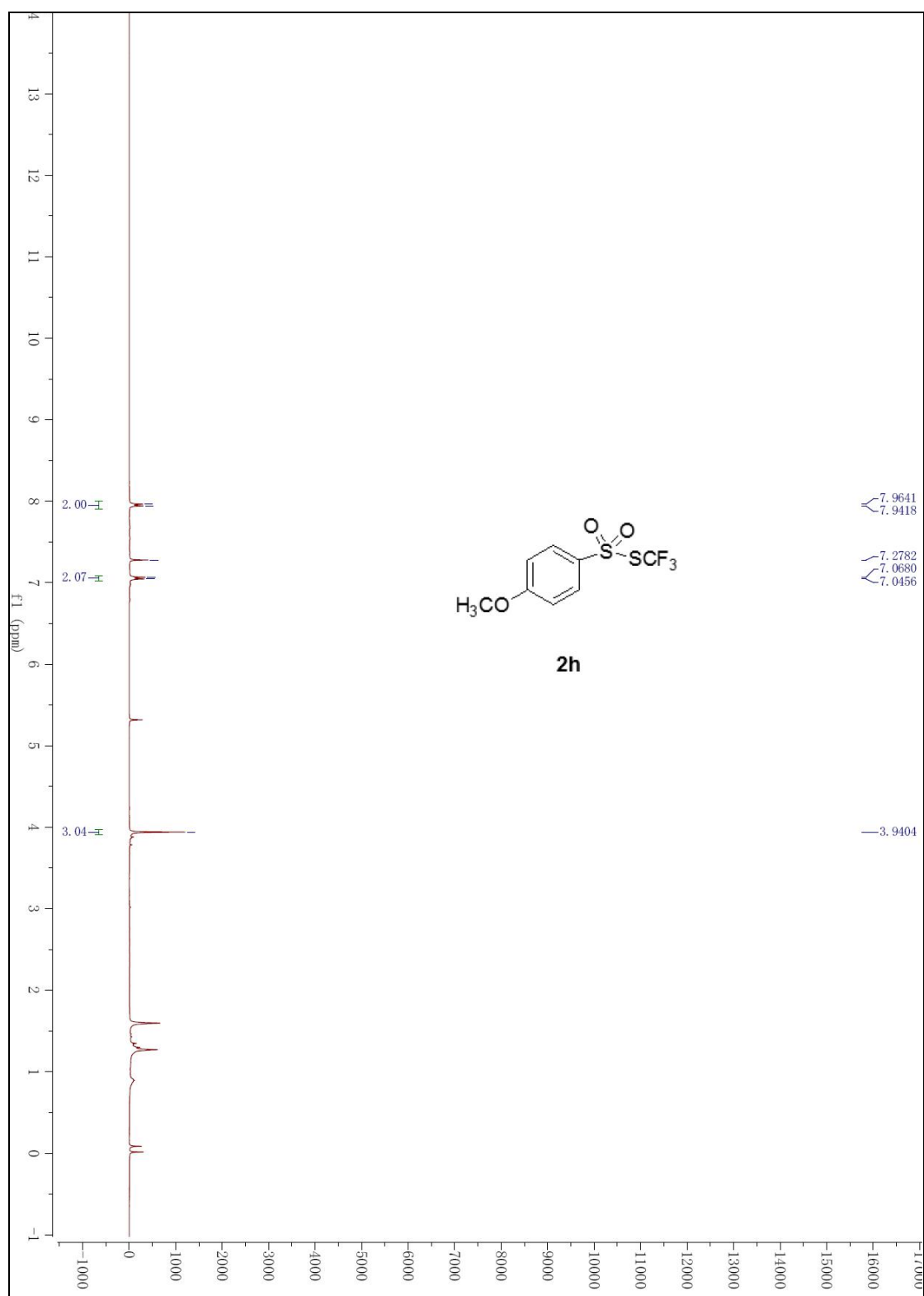


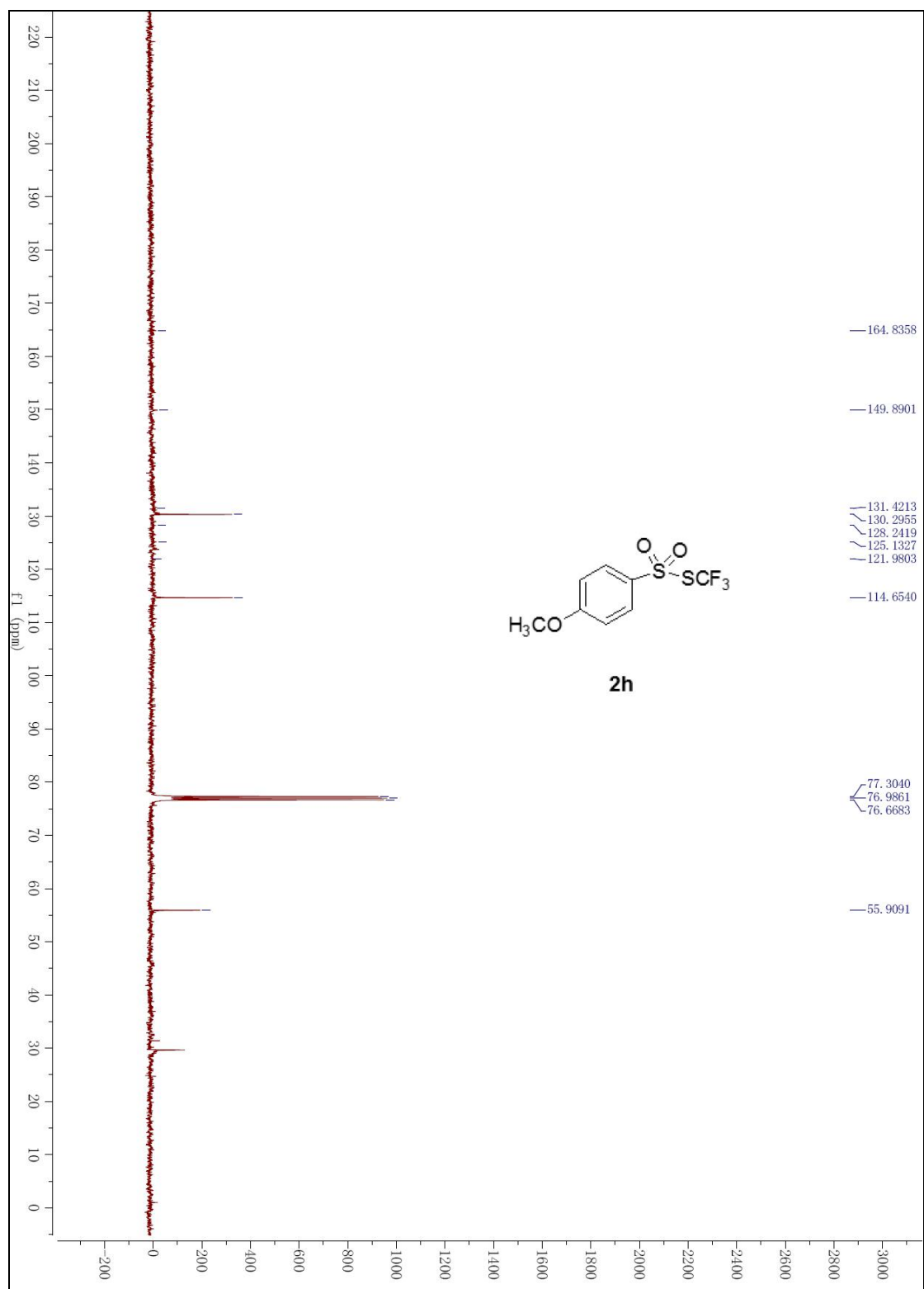


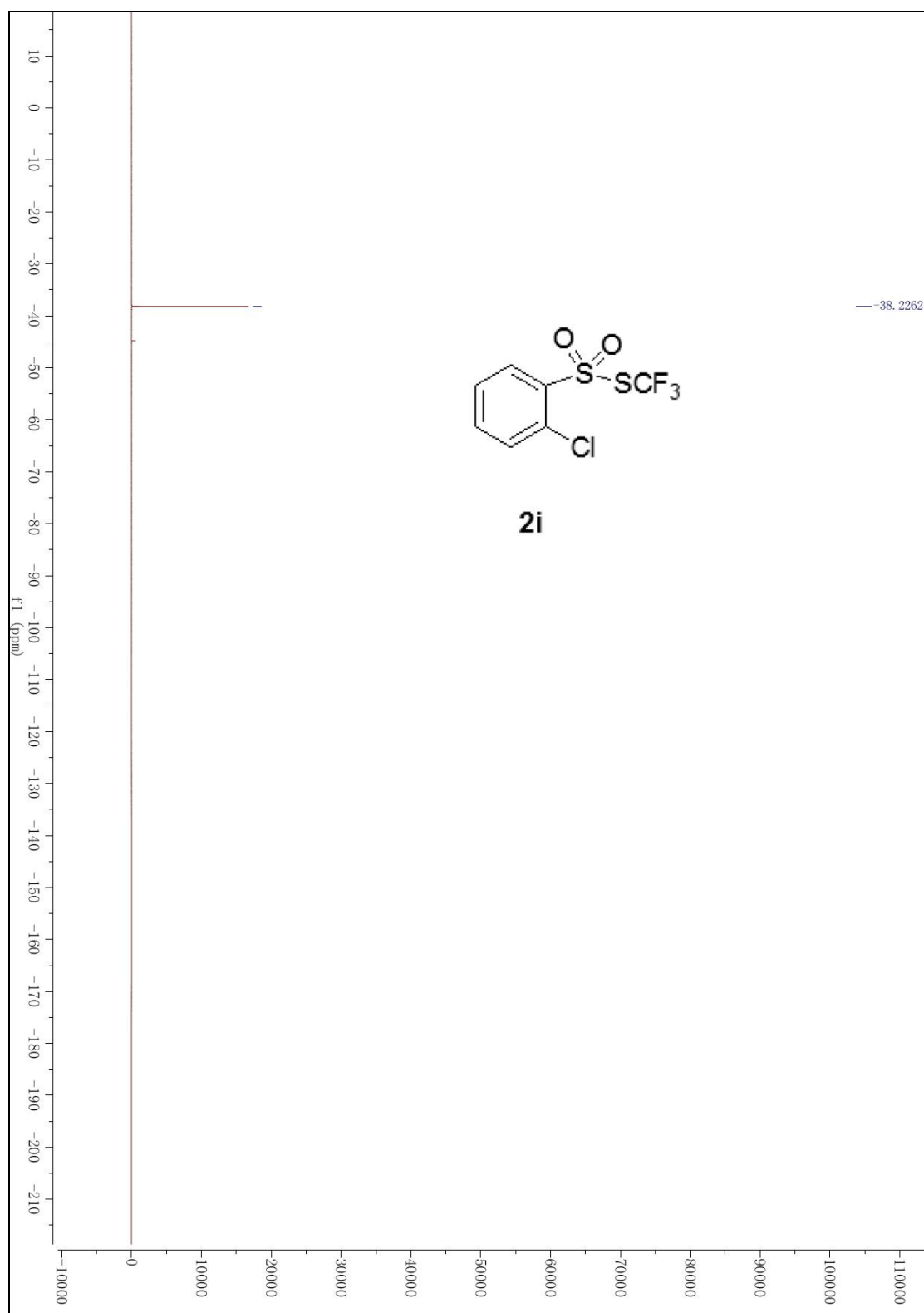


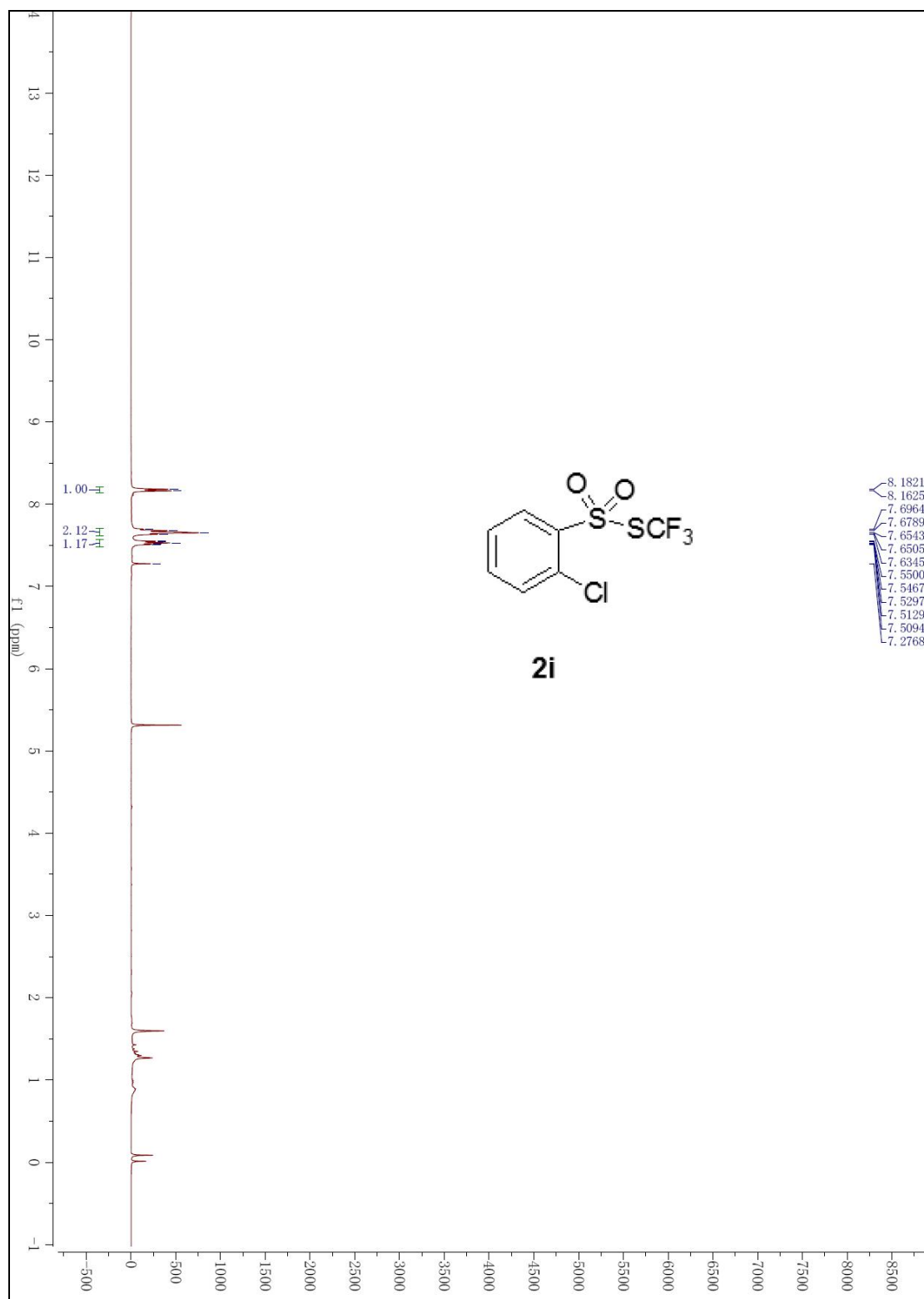


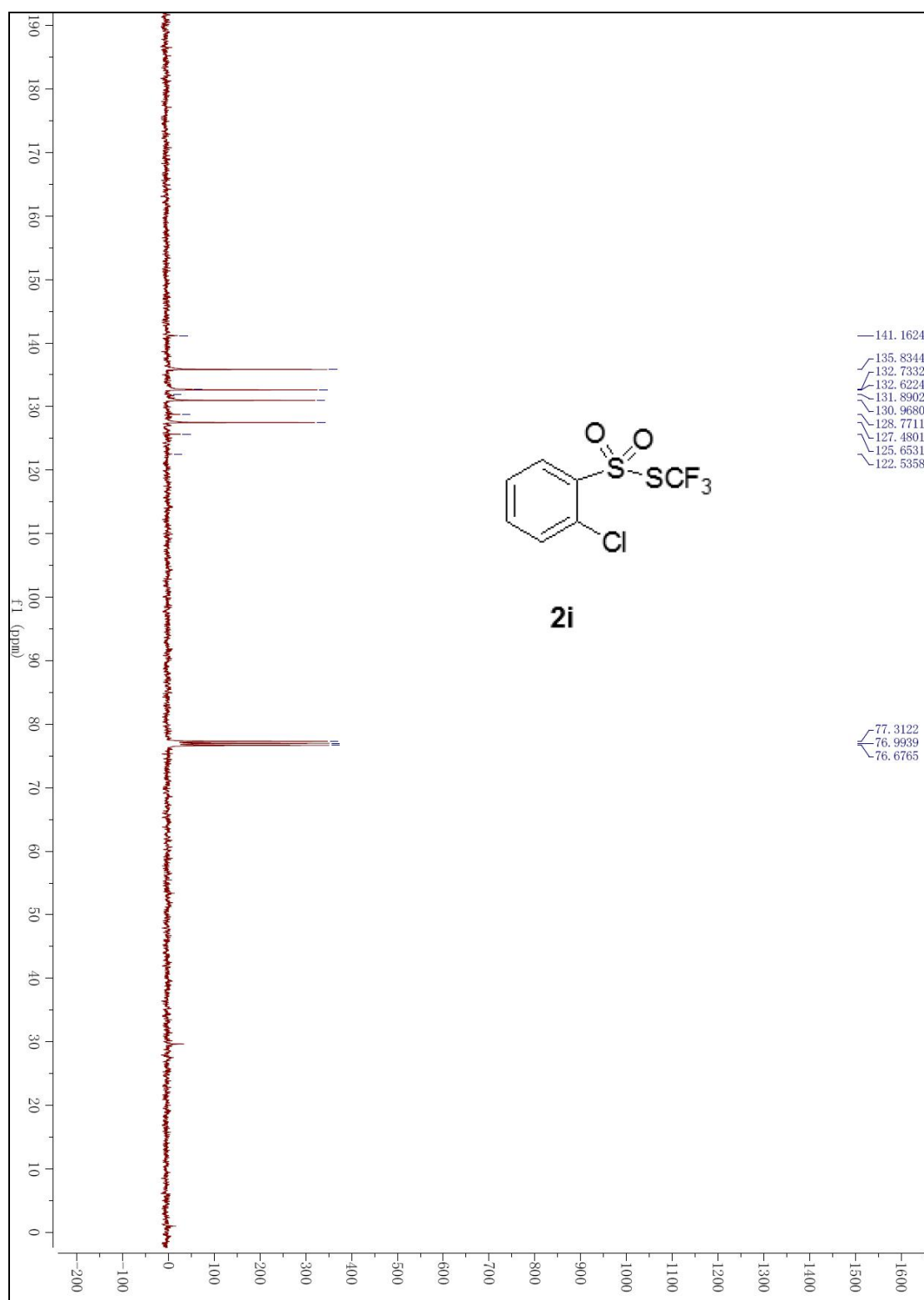


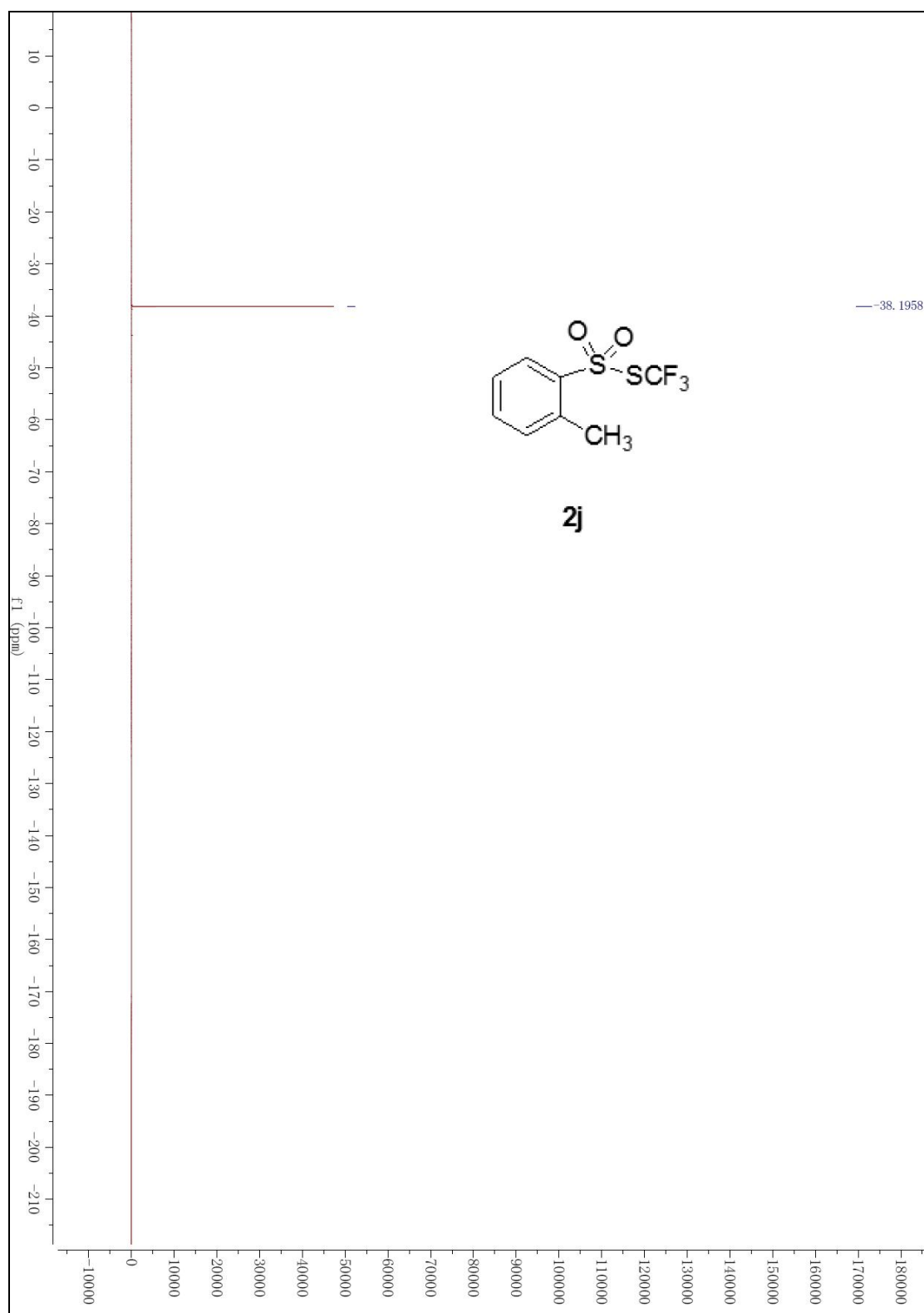


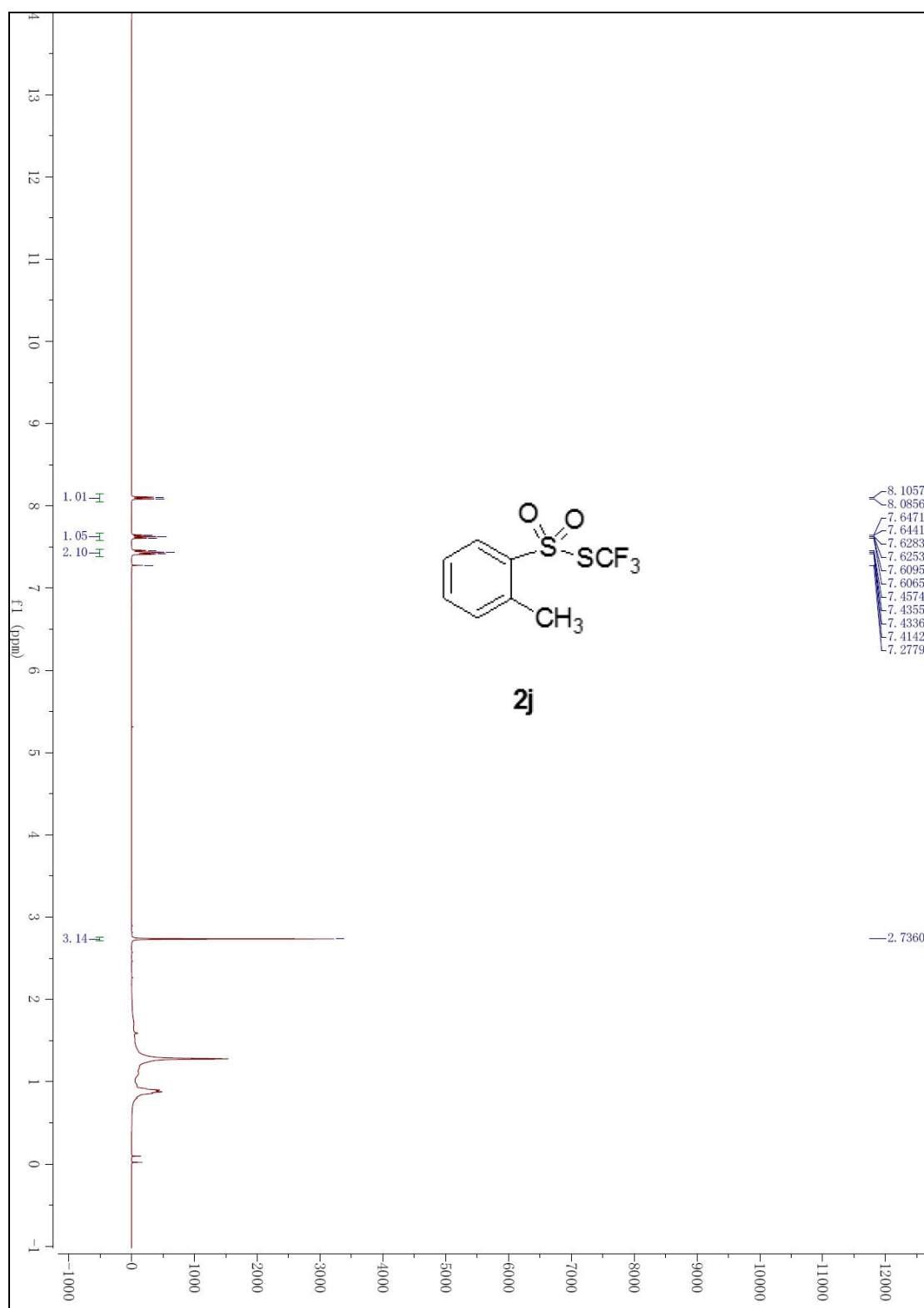


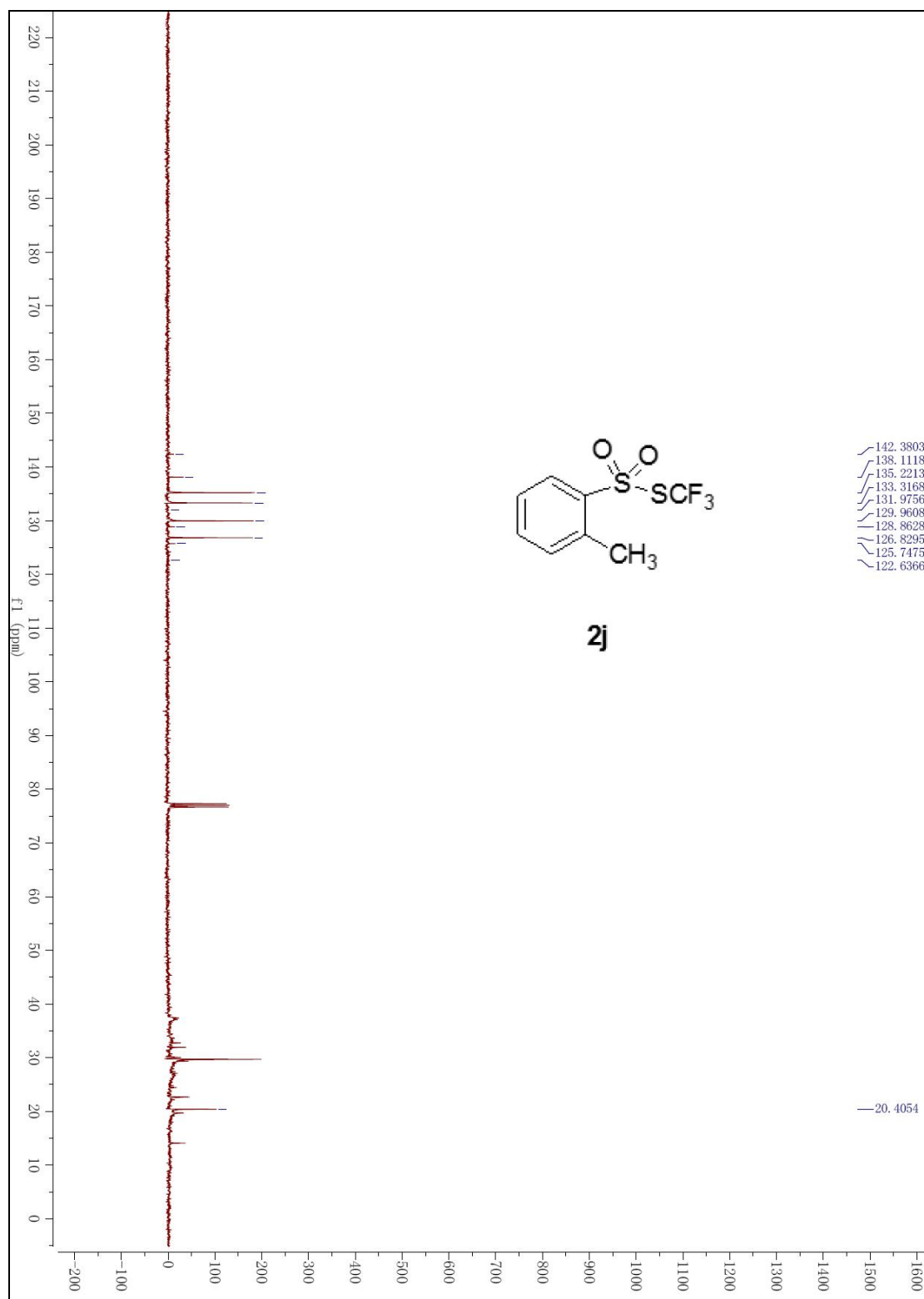


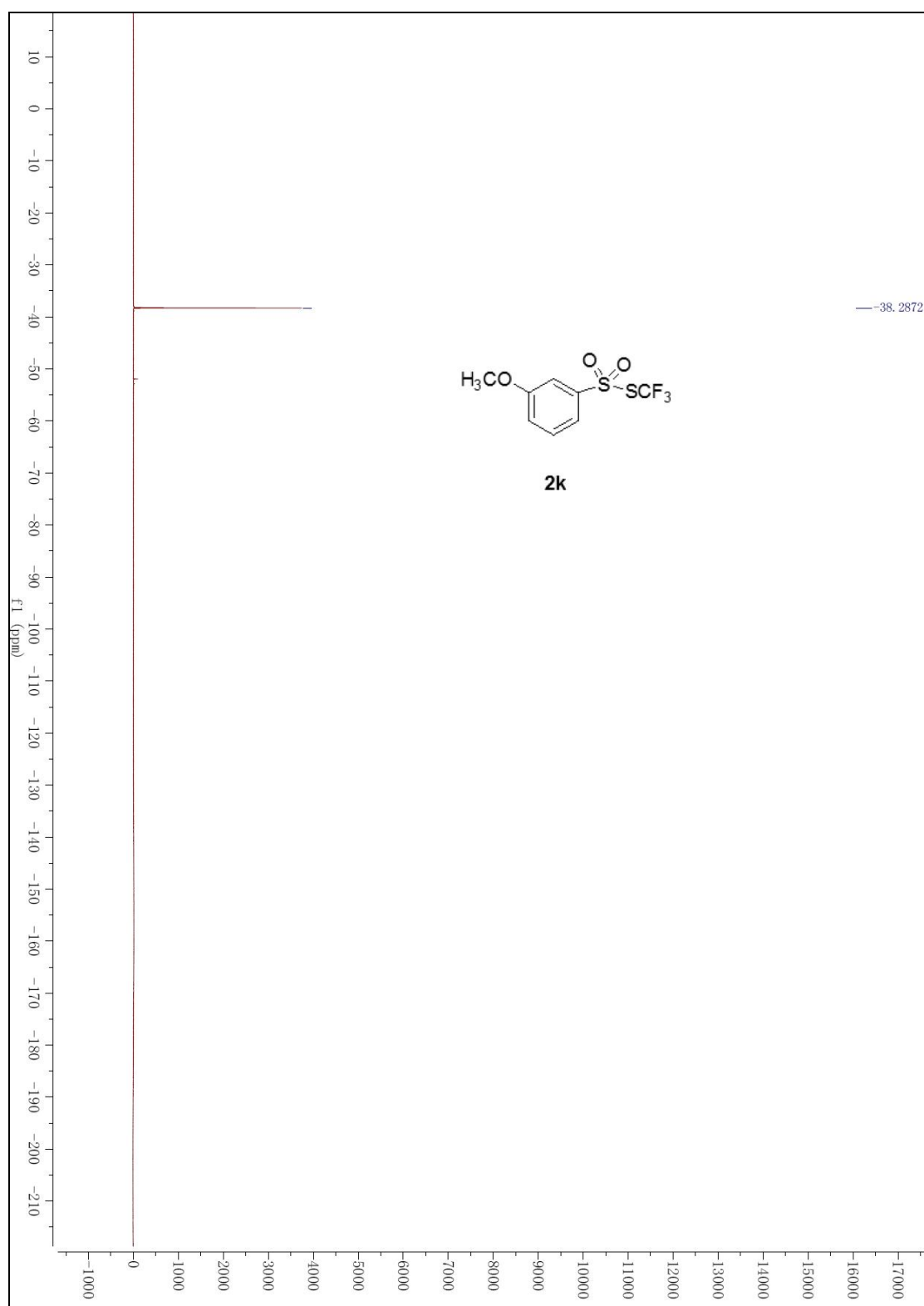


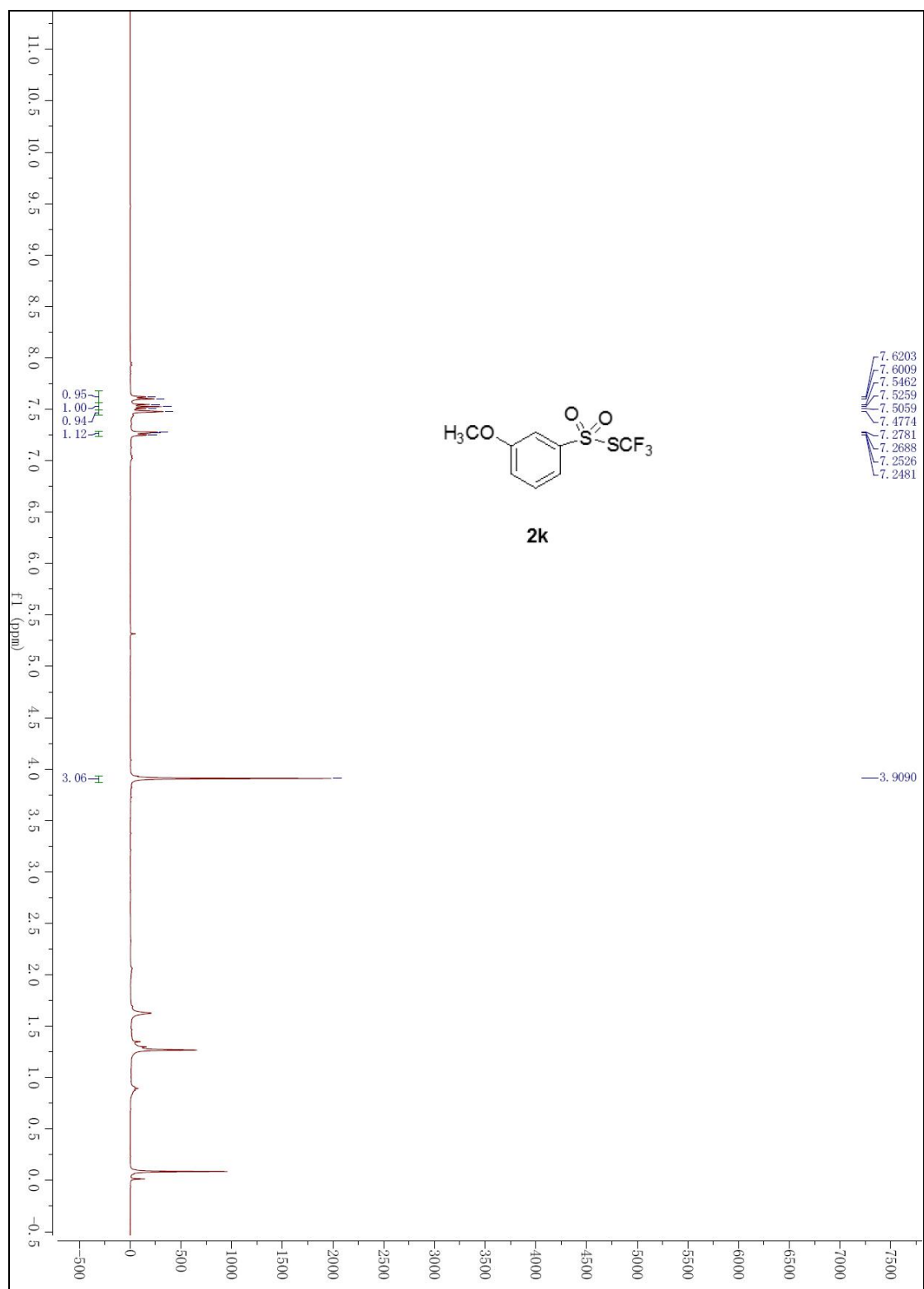


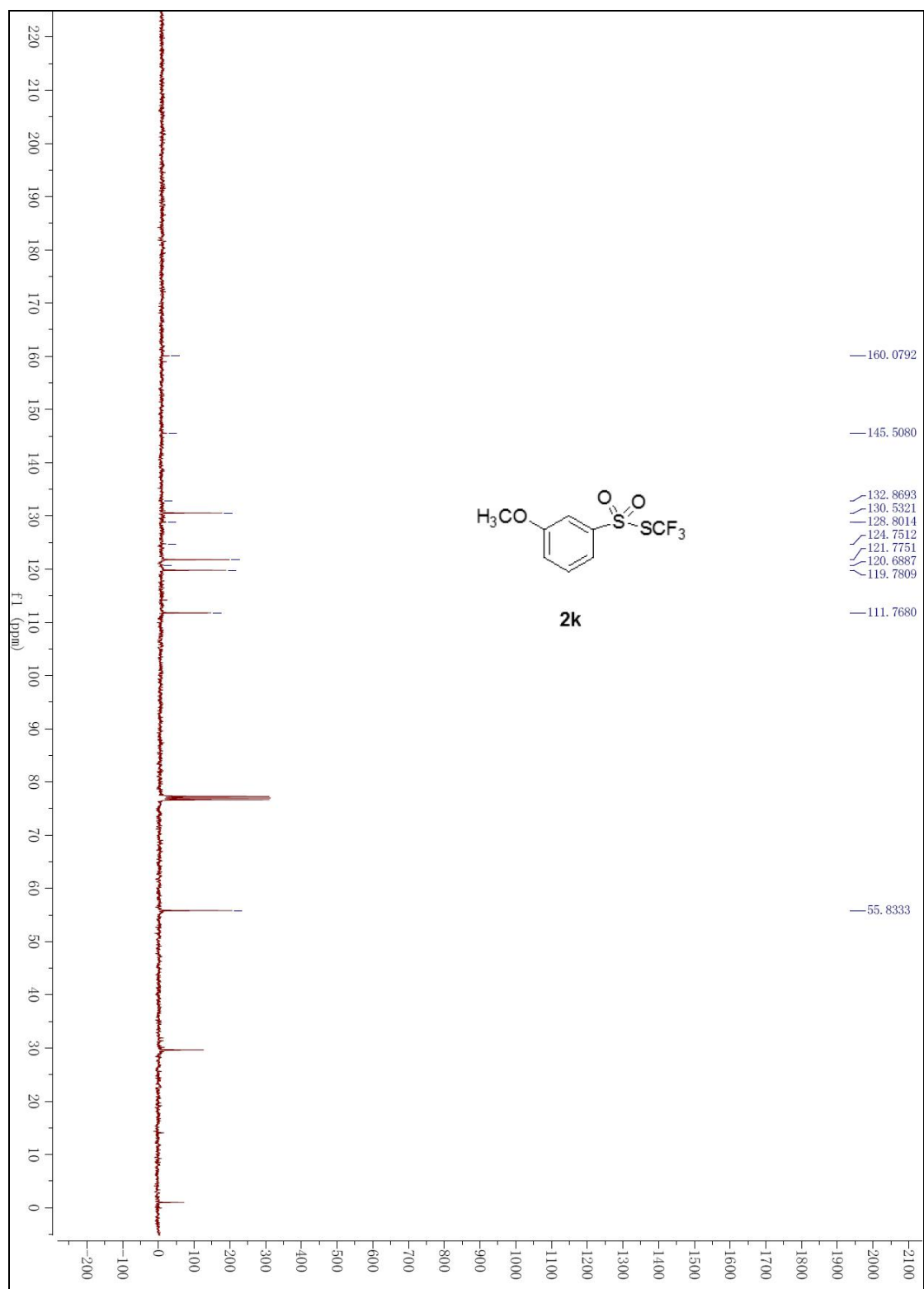


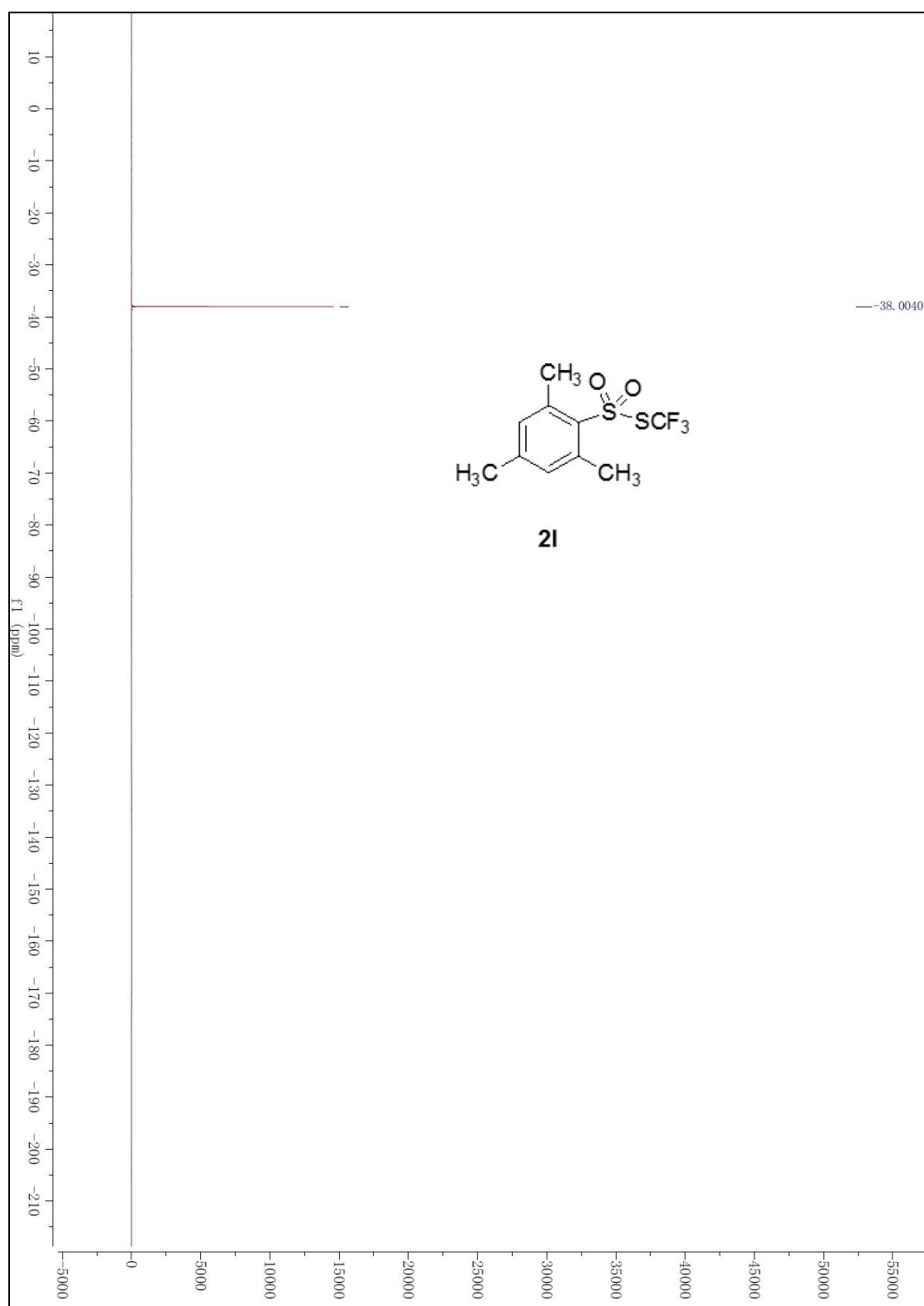


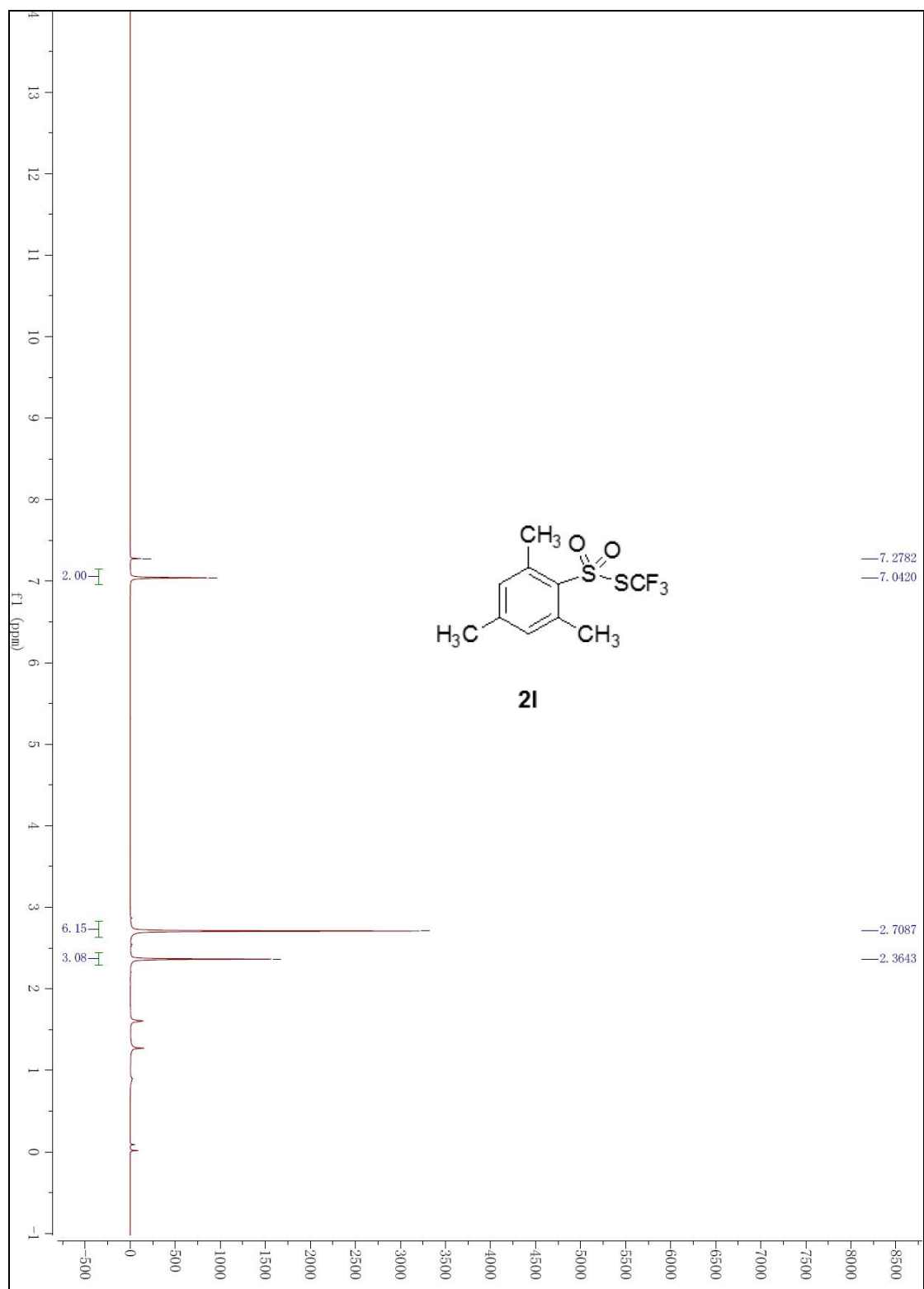


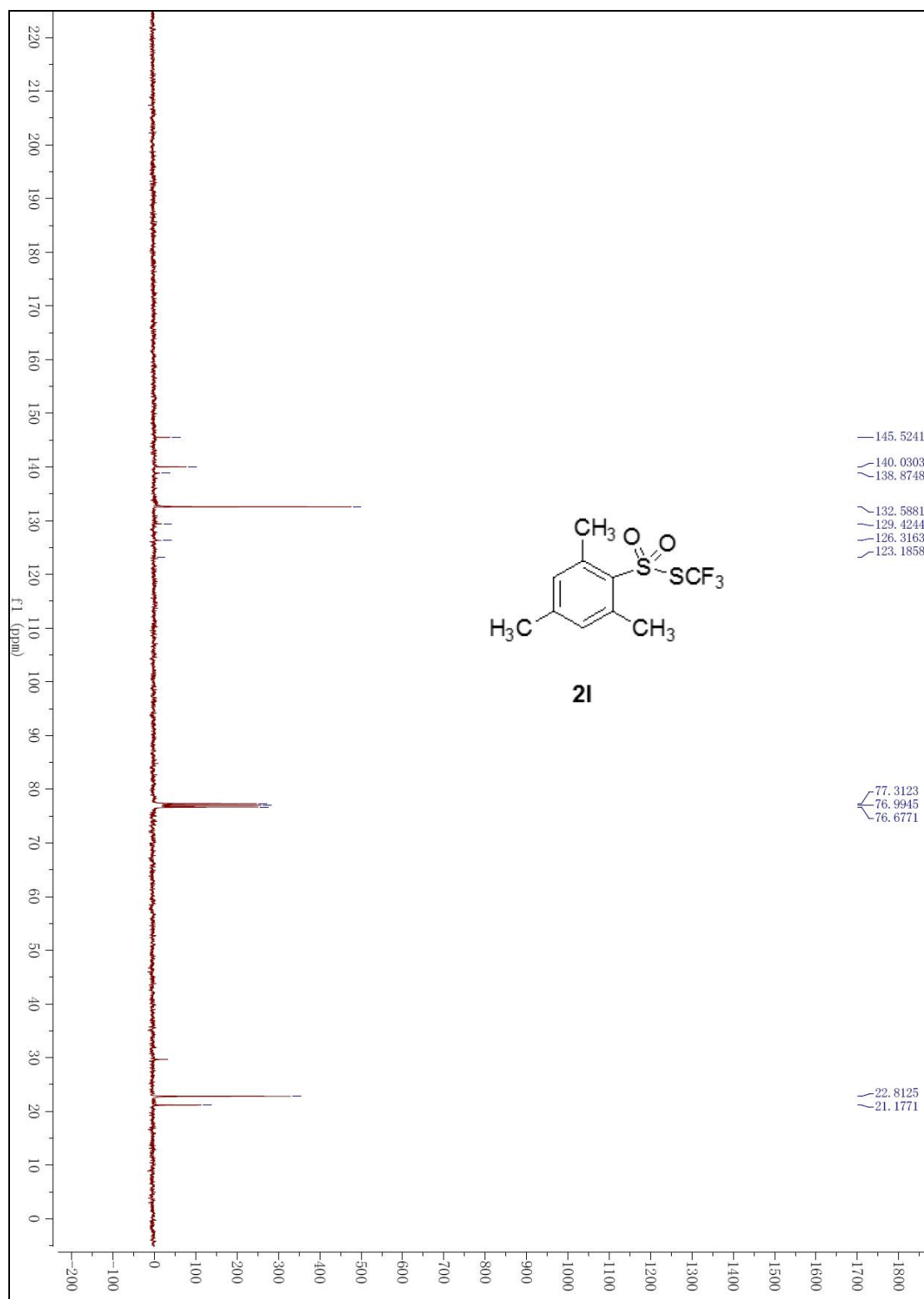


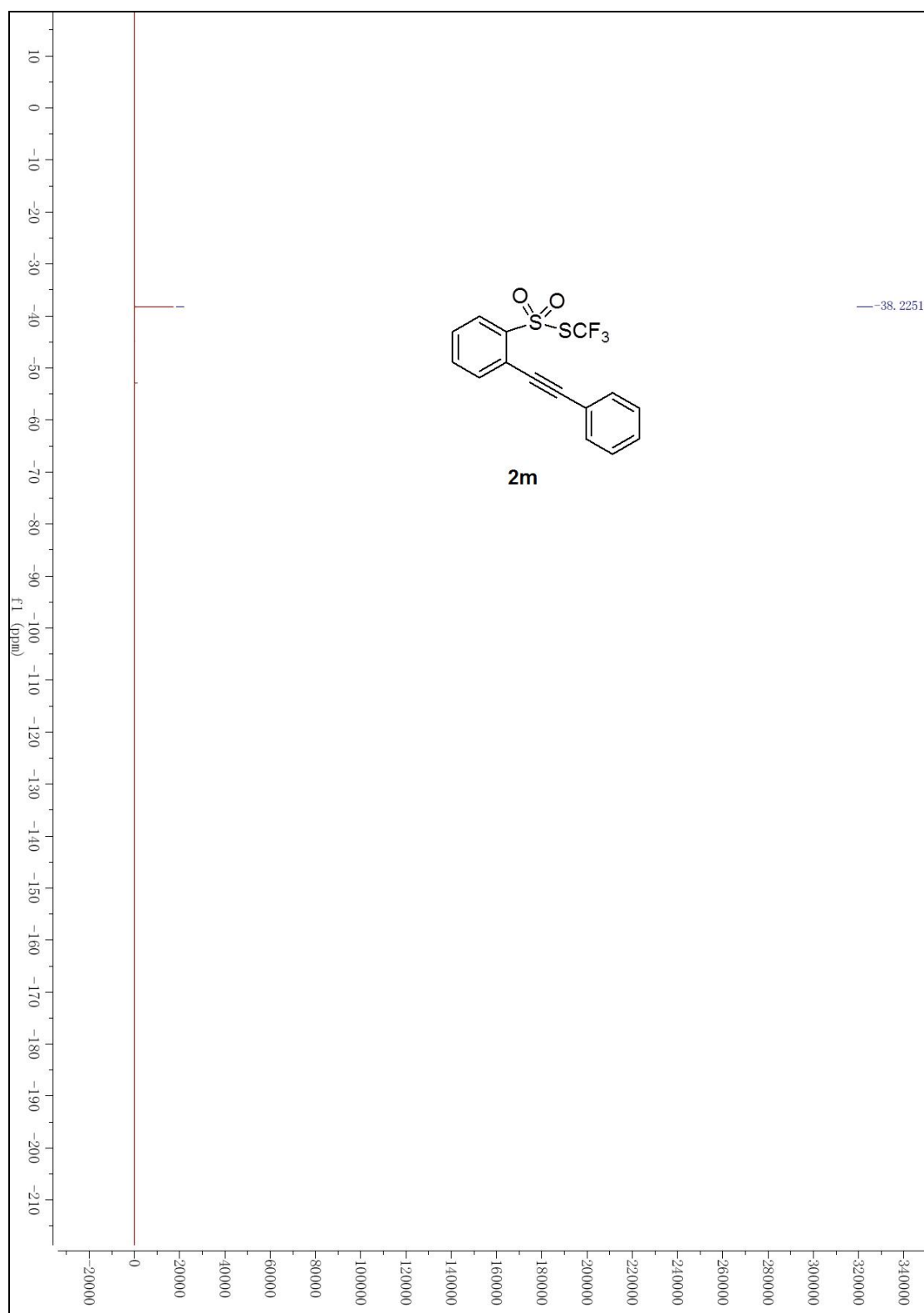


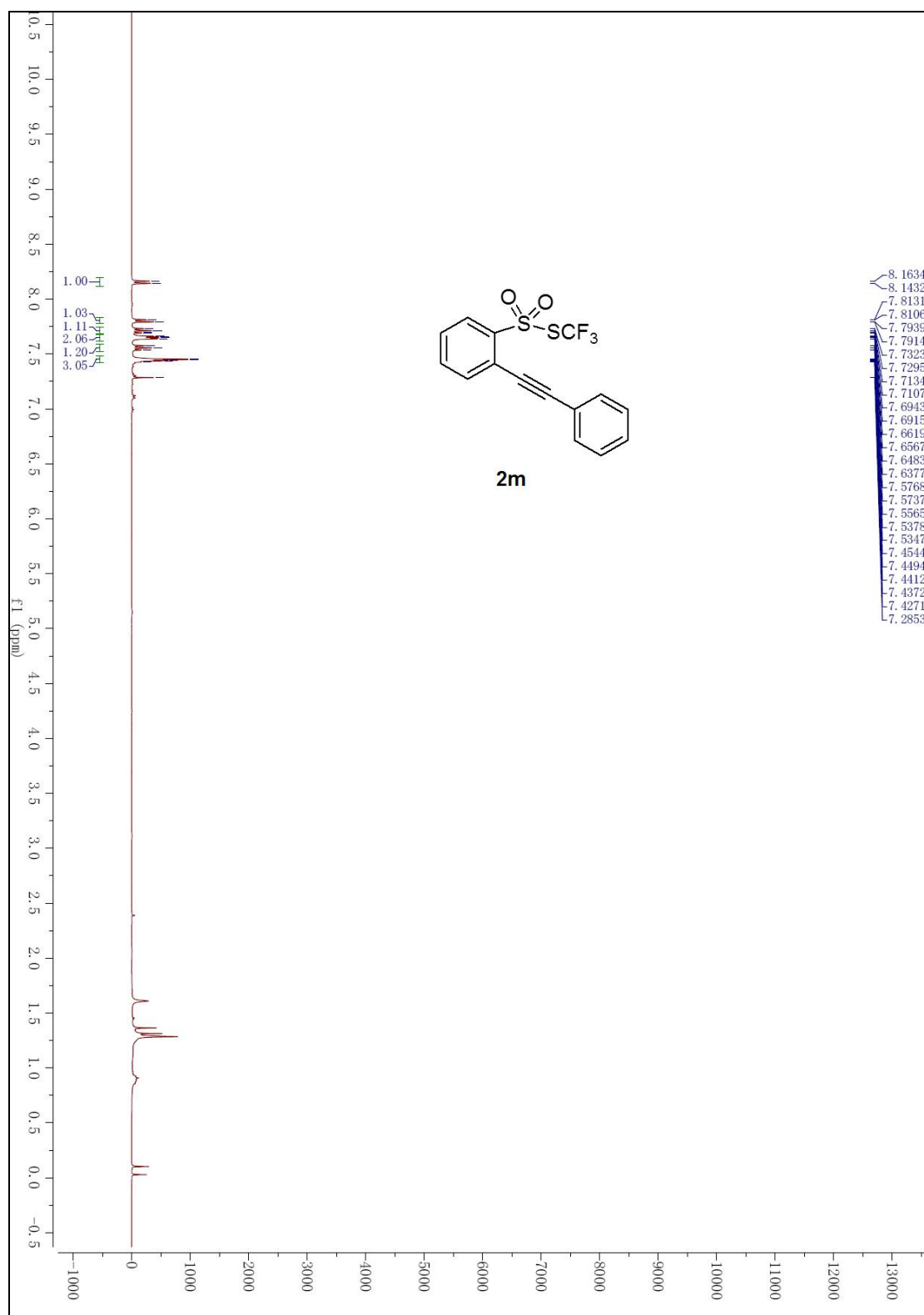


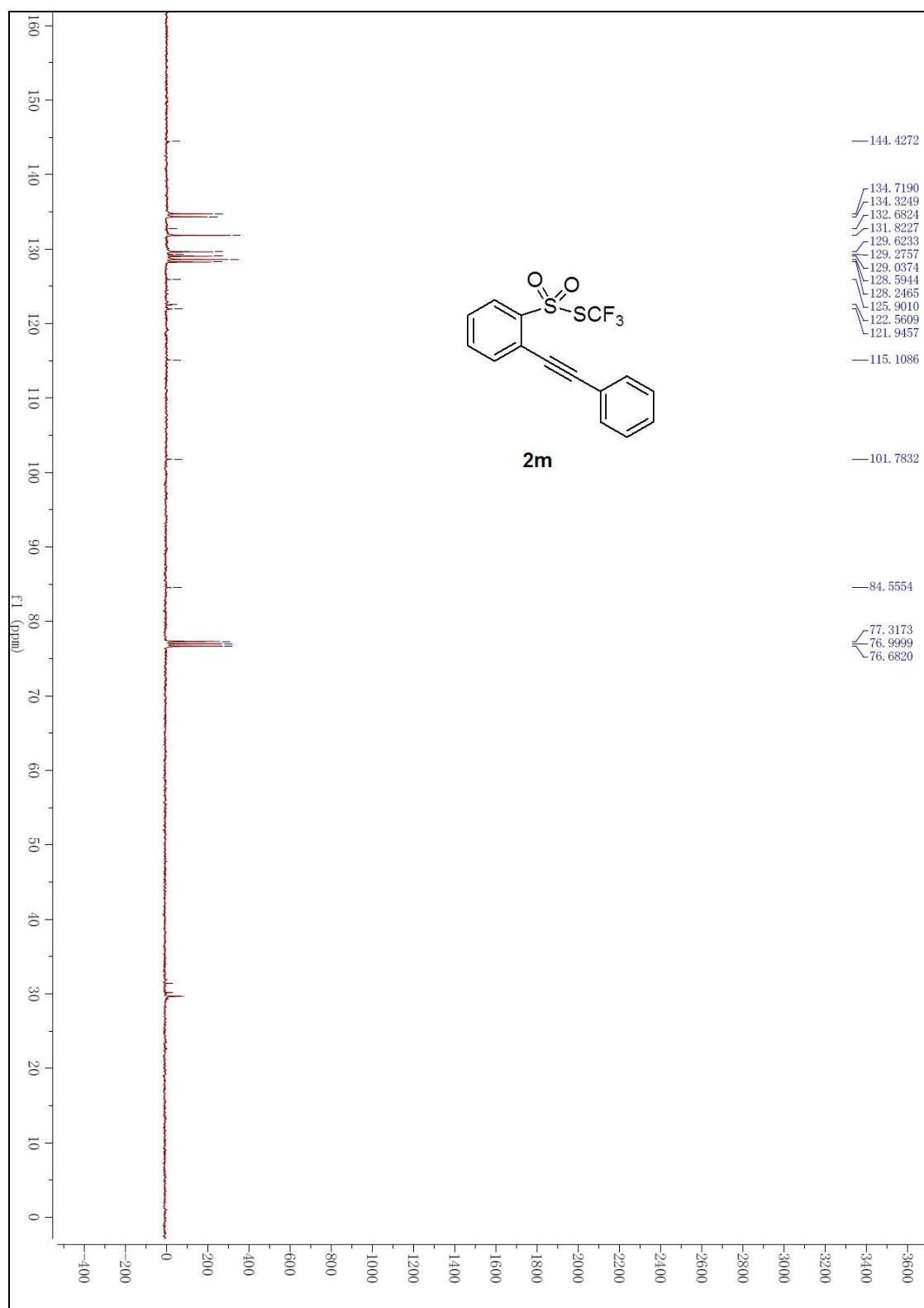




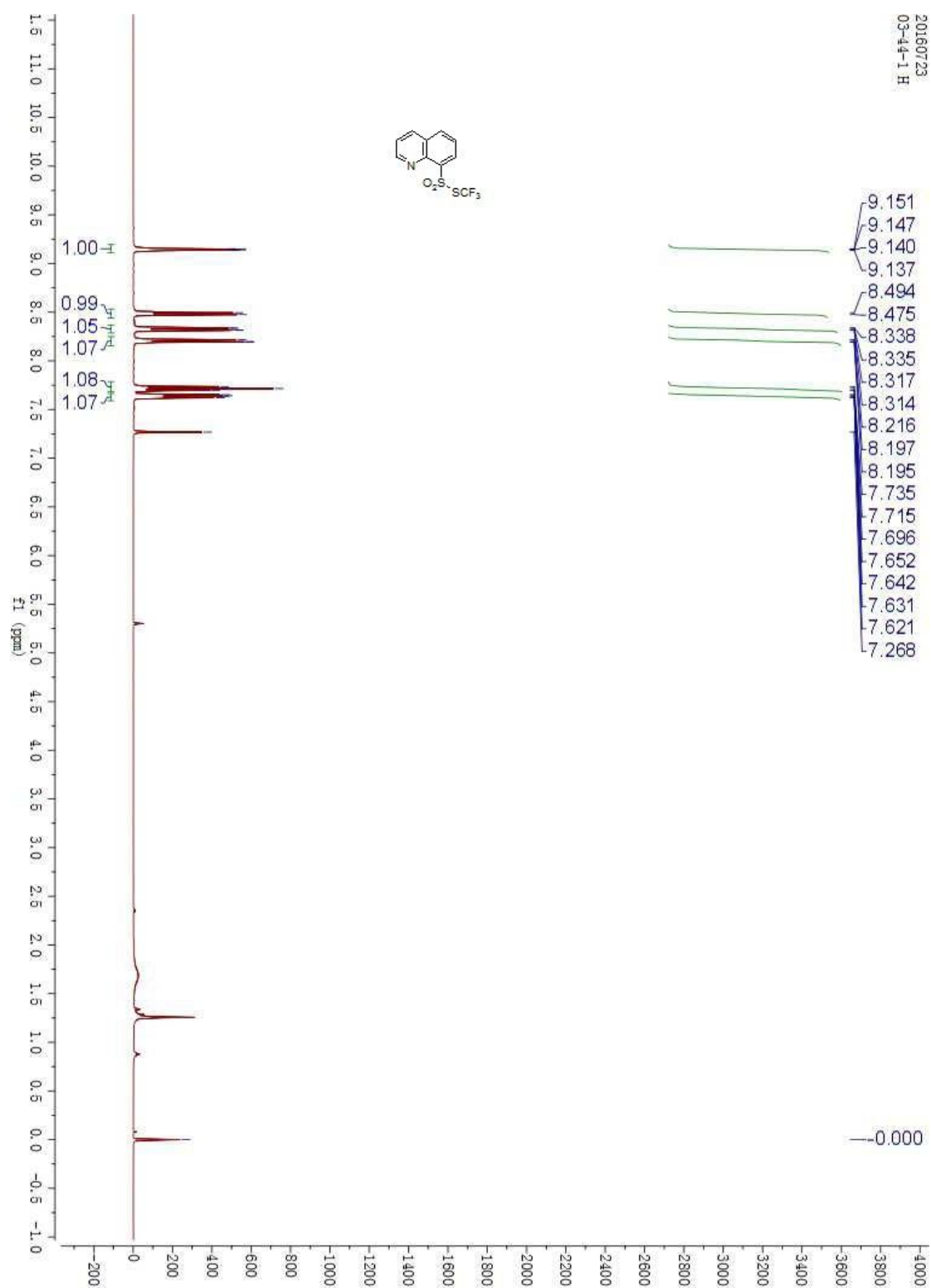
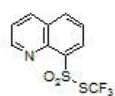




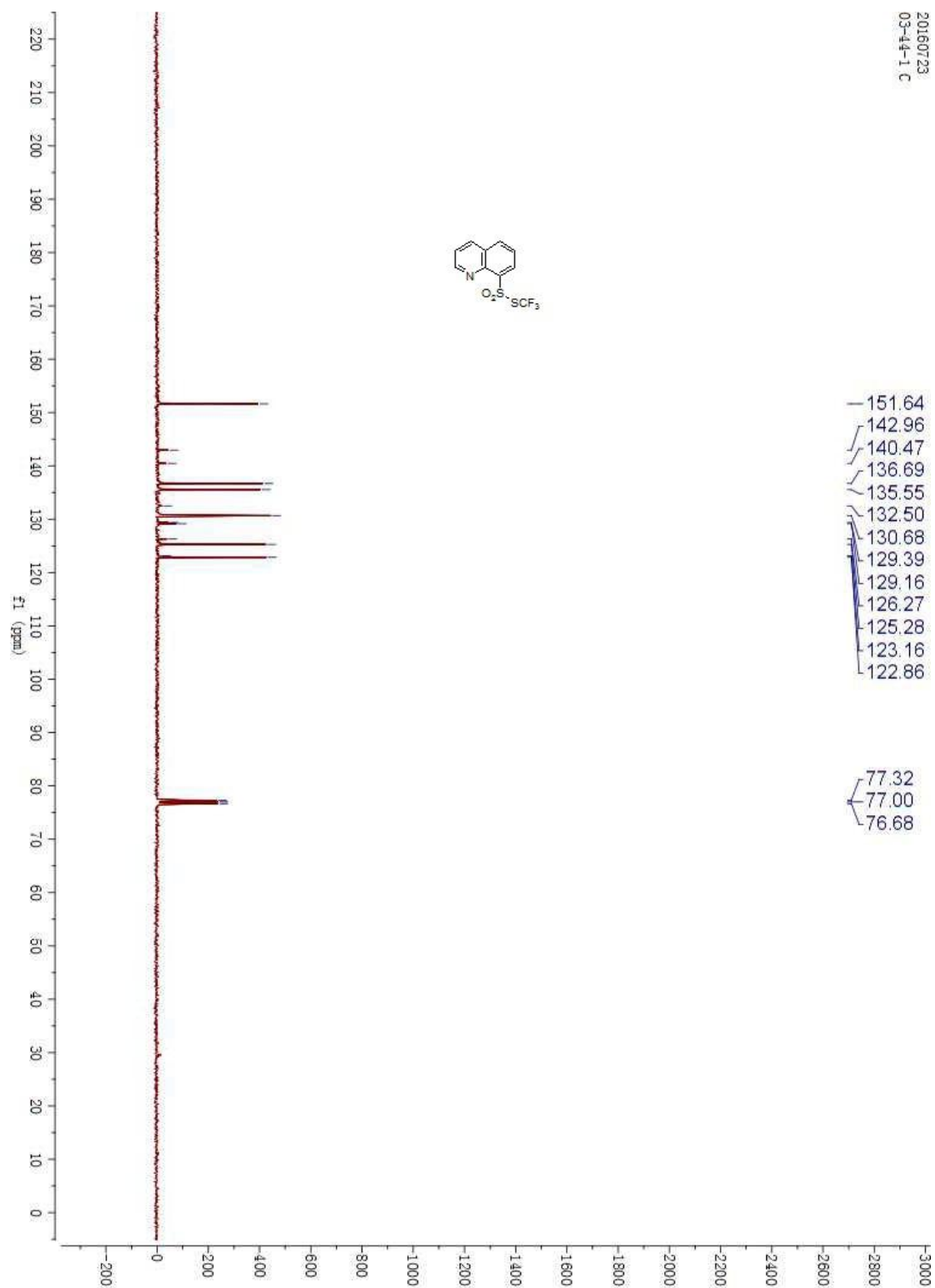
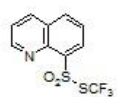




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