

Supporting Information

Cosolvent-Promoted O-Benzoylation with Silver(I) Oxide: Synthesis of 1'-Benzoylated Sucrose Derivatives, Mechanistic Studies, and Scope Investigation

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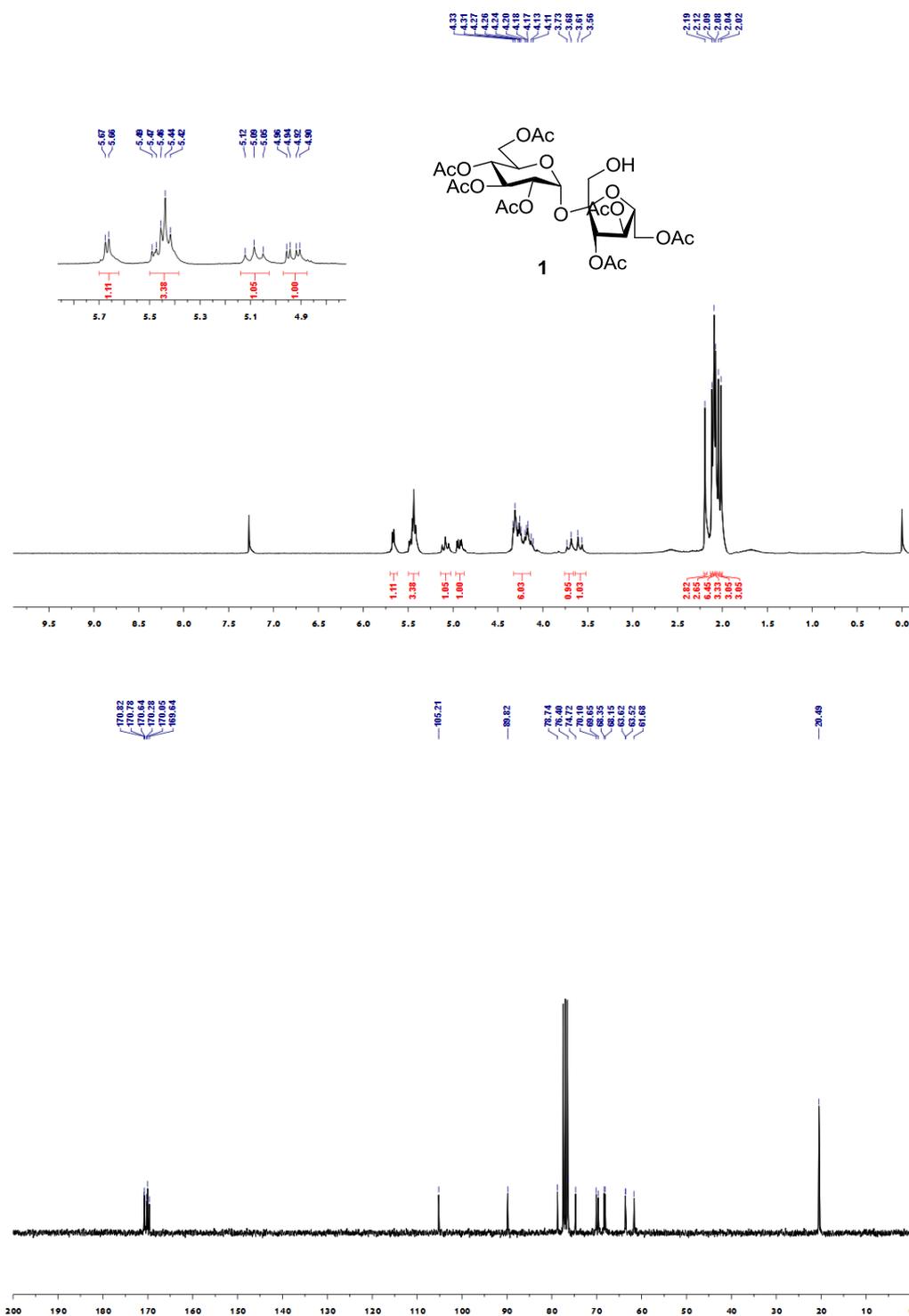
* E-mail: lei870610@gmail.com (L. Wang)

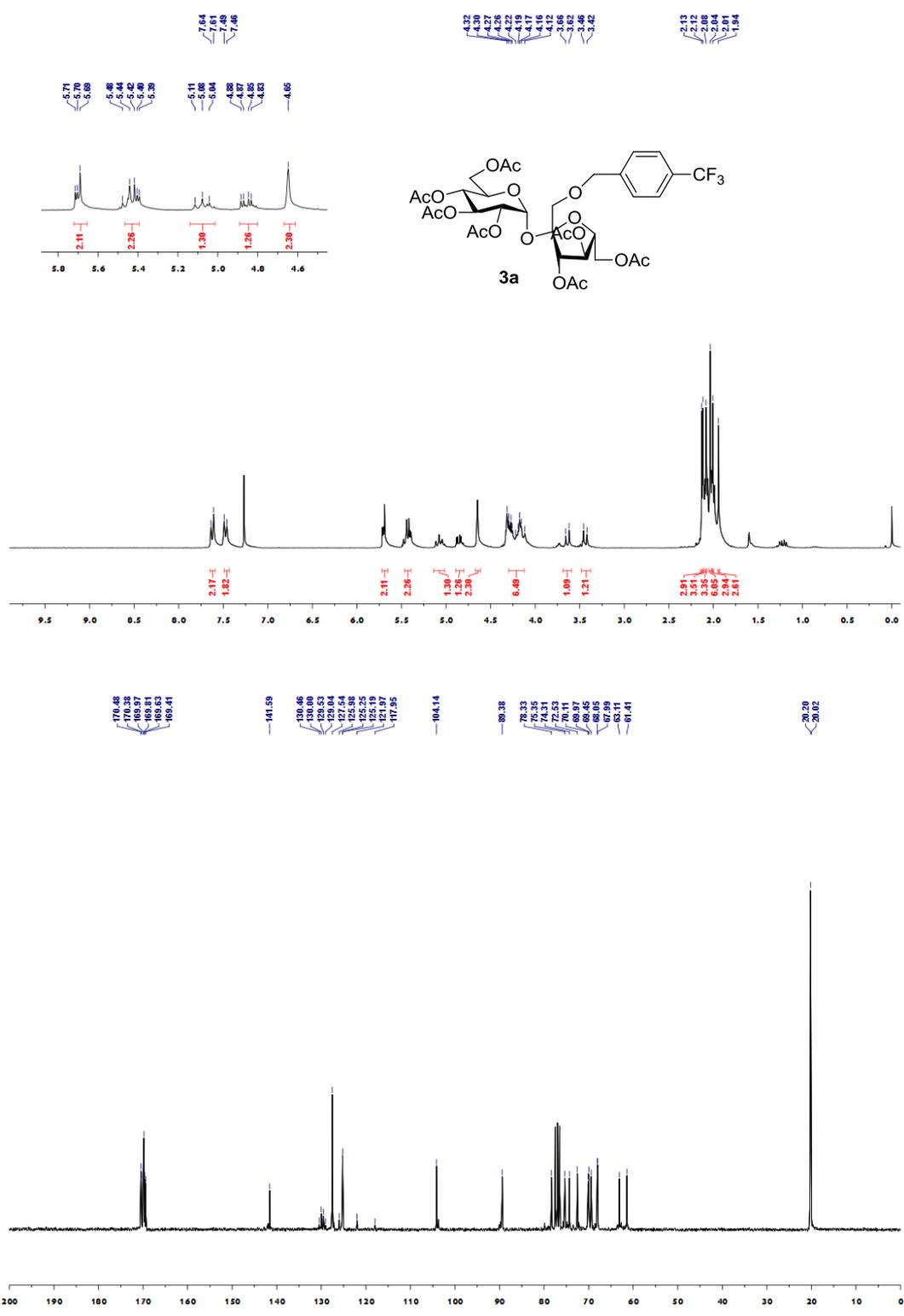
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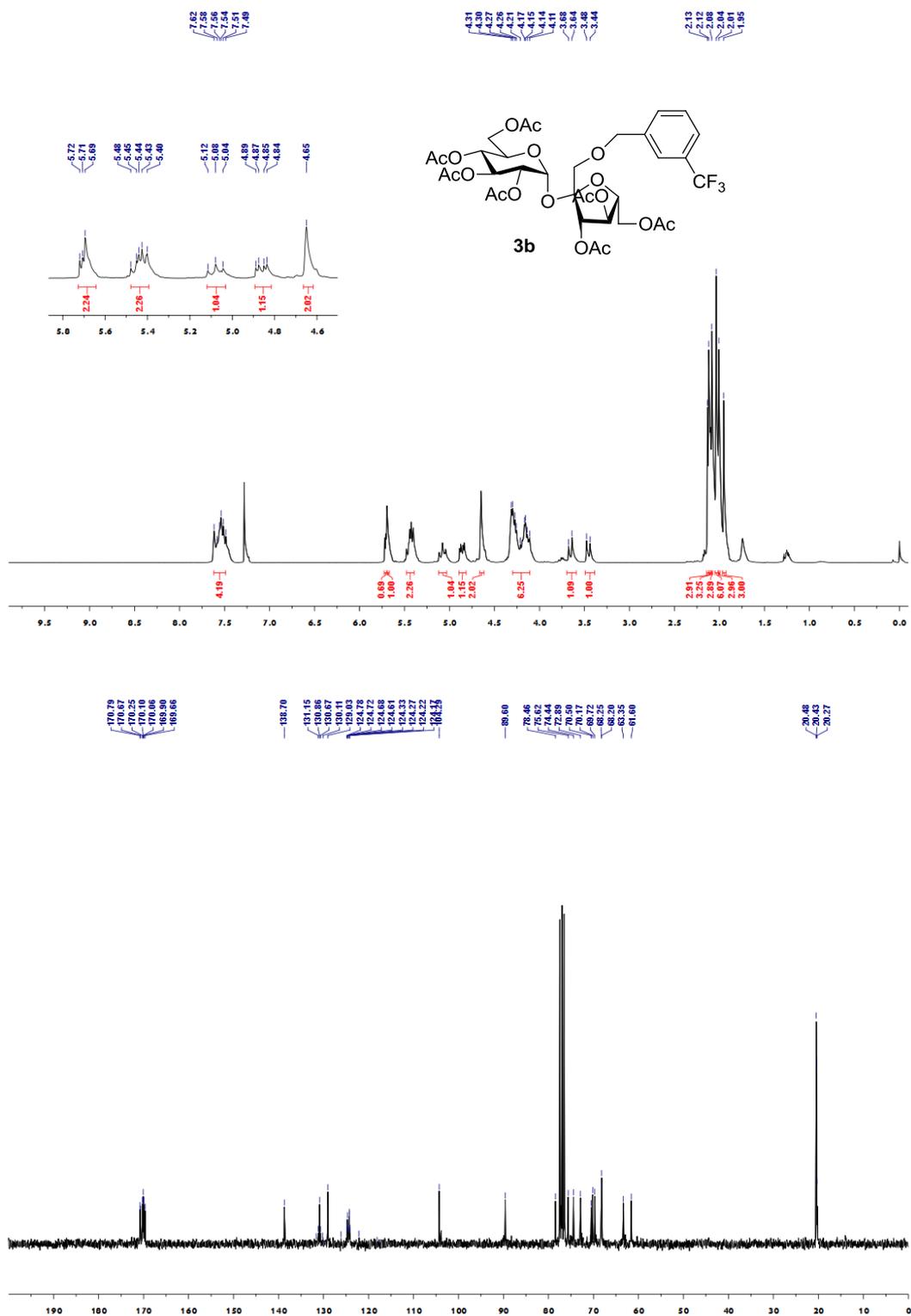
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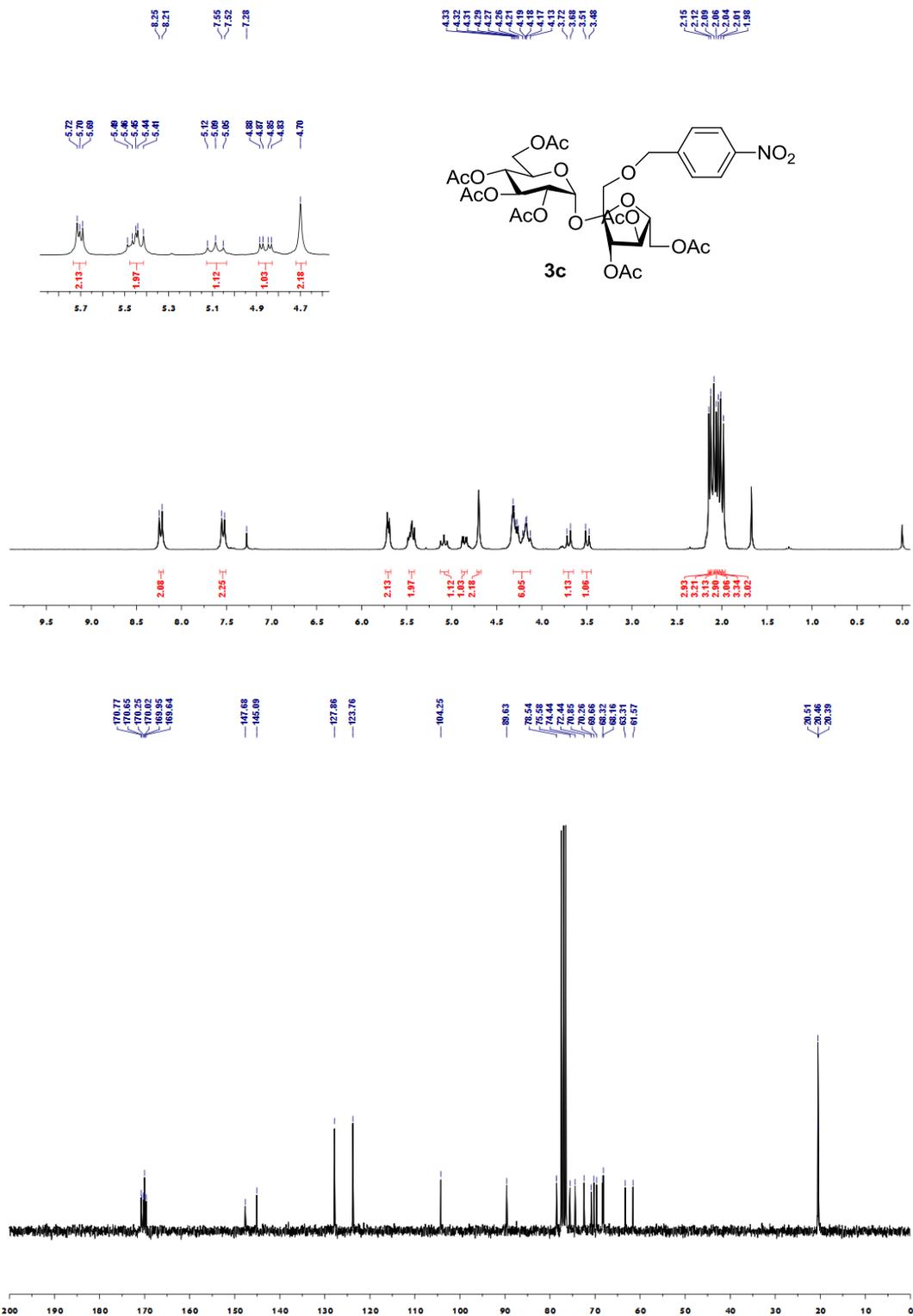
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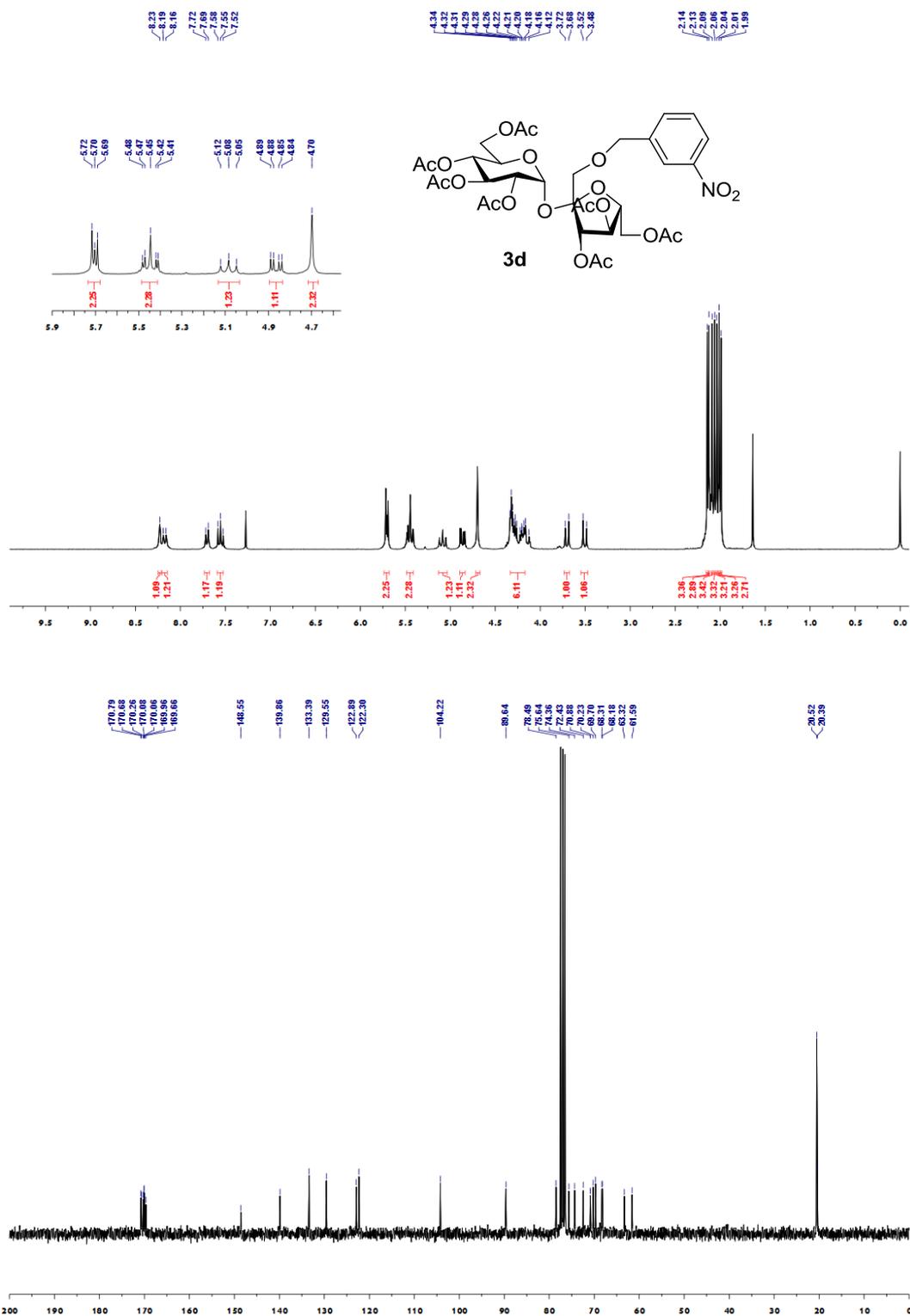
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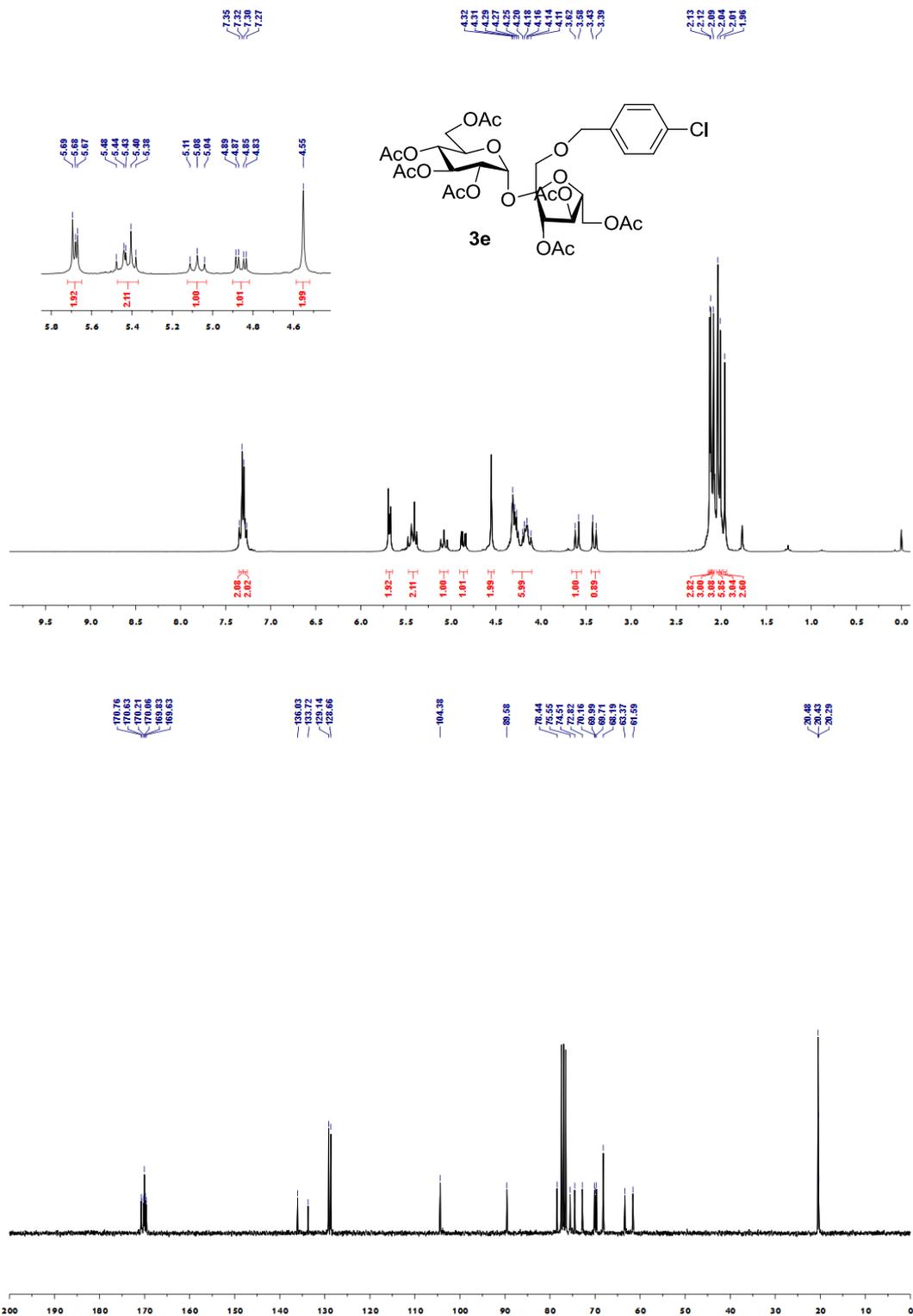


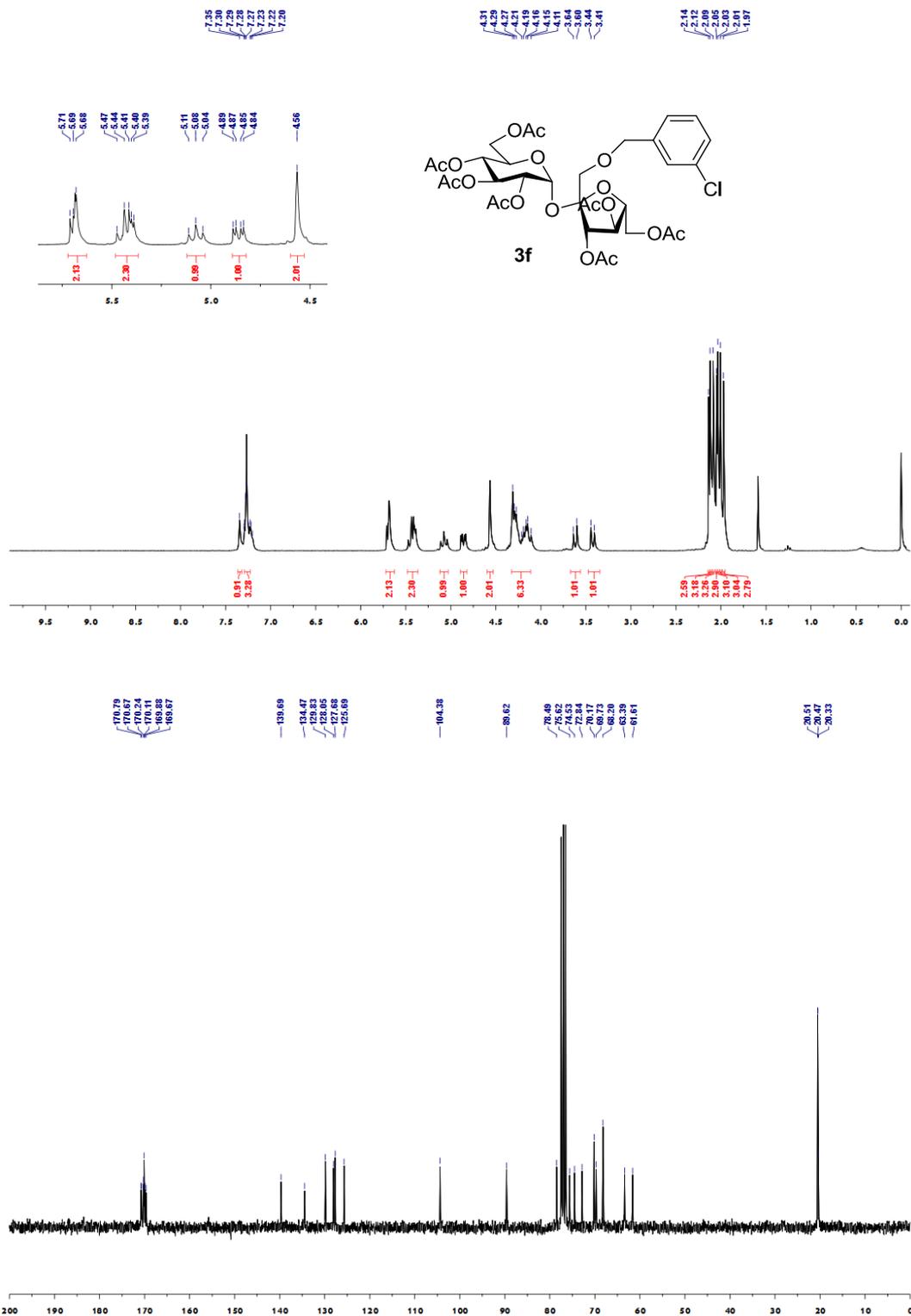


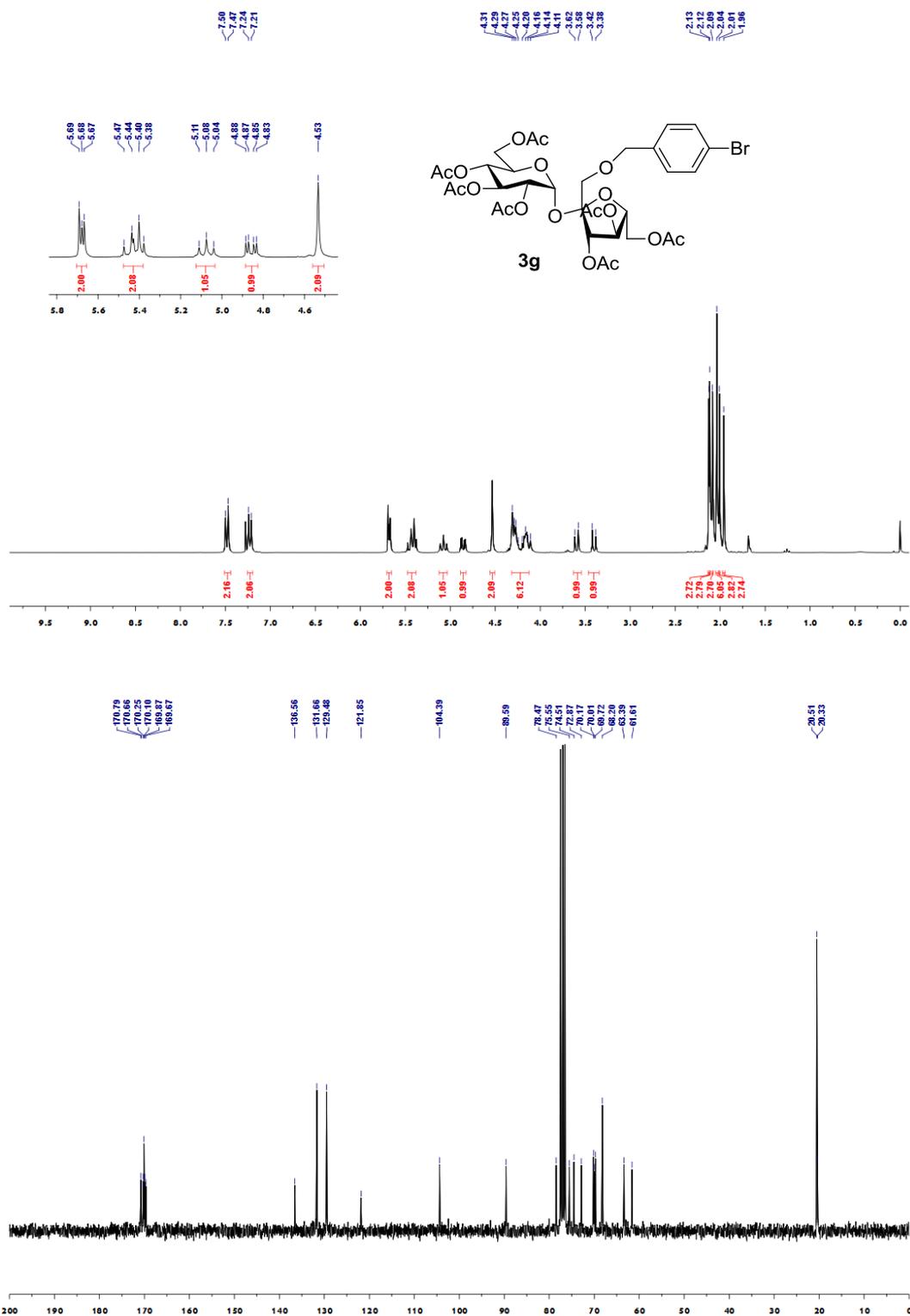


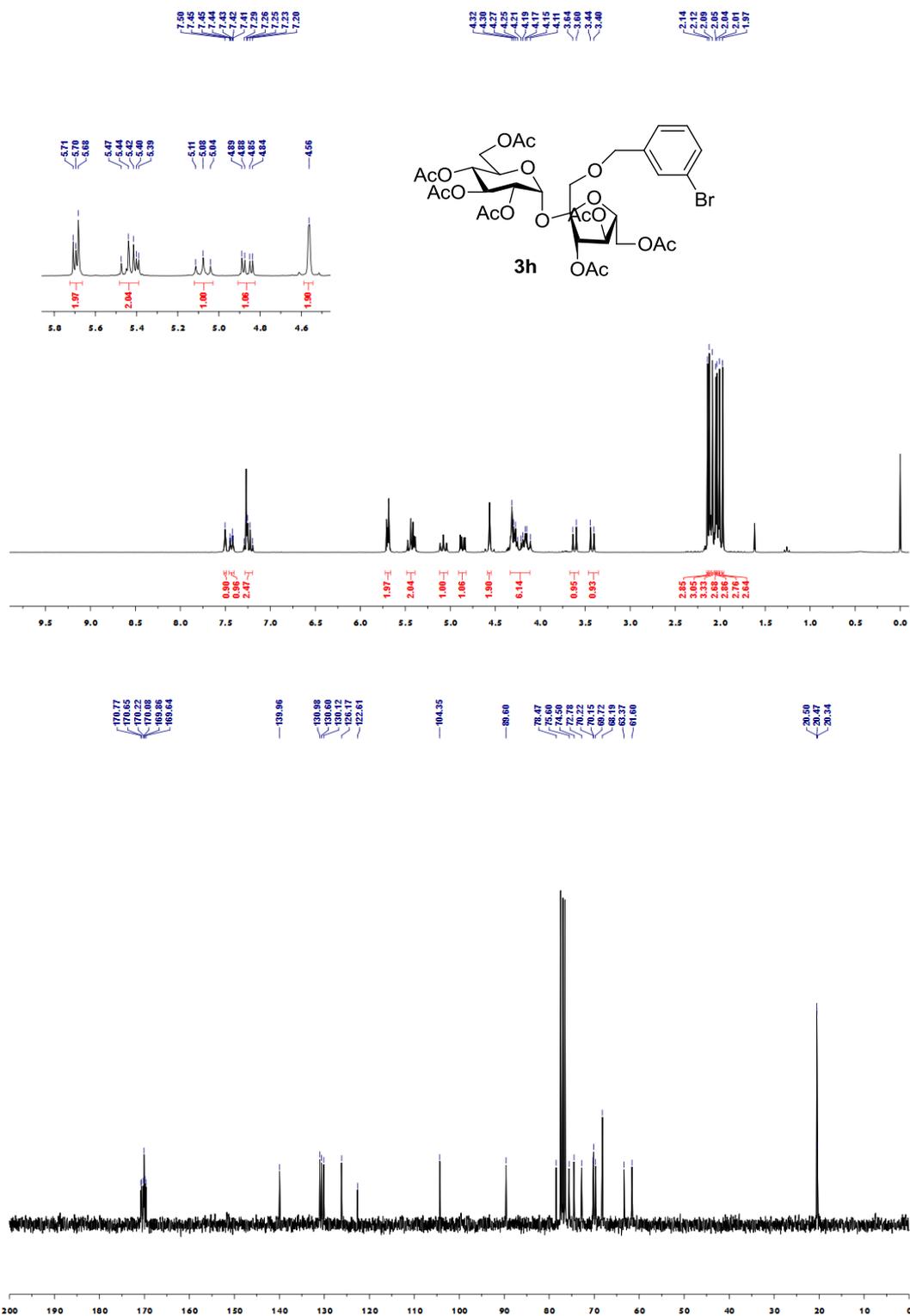


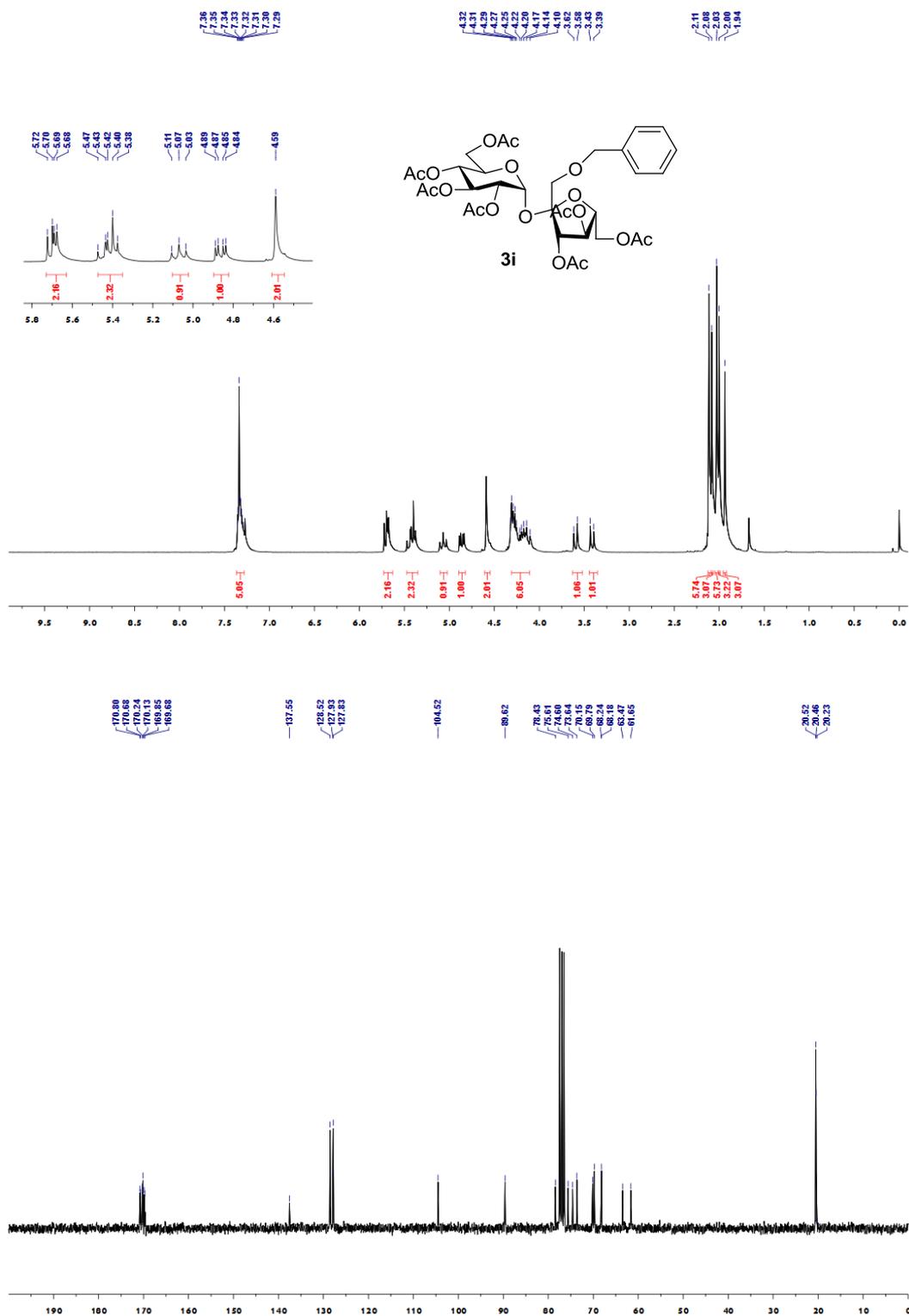


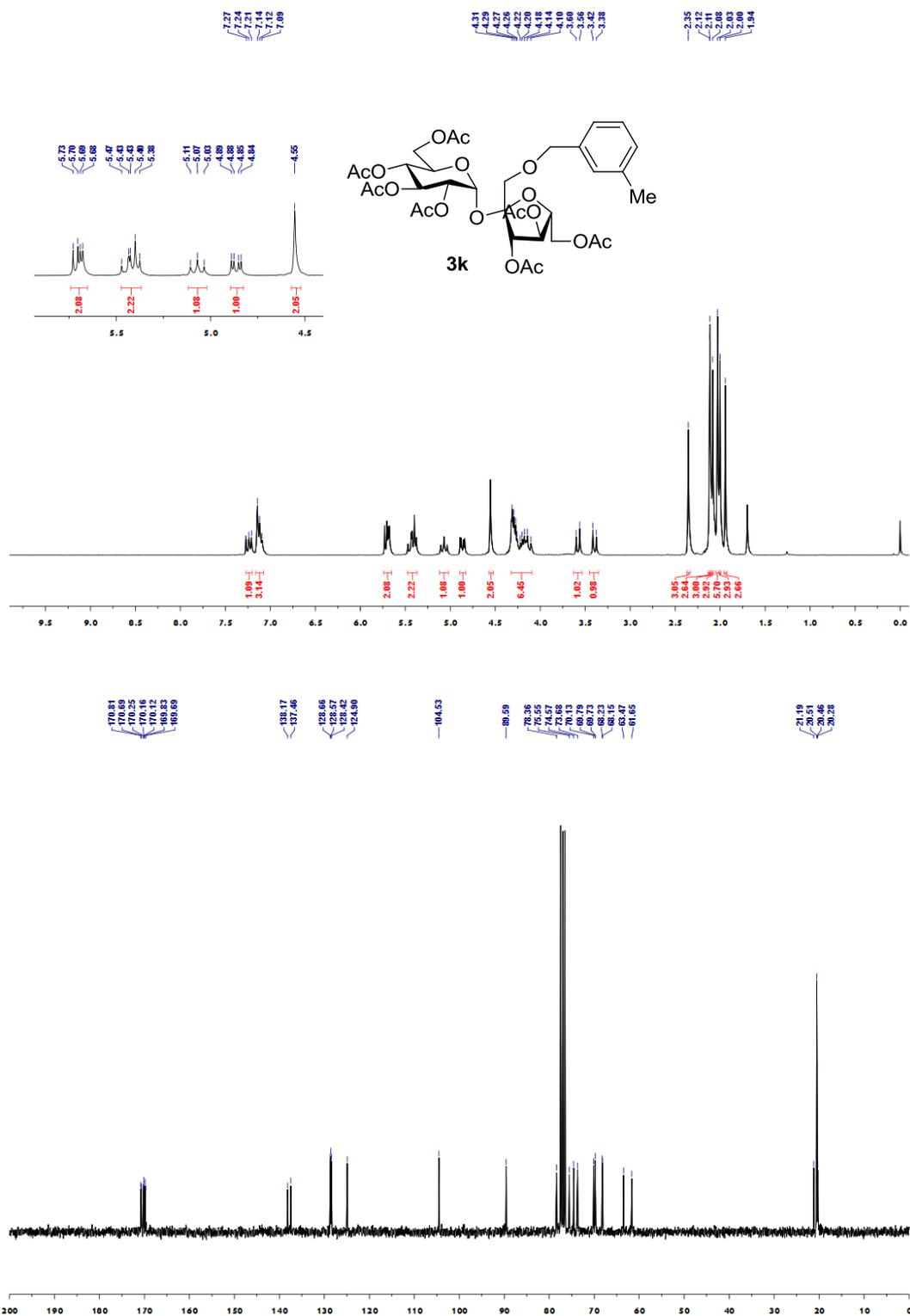


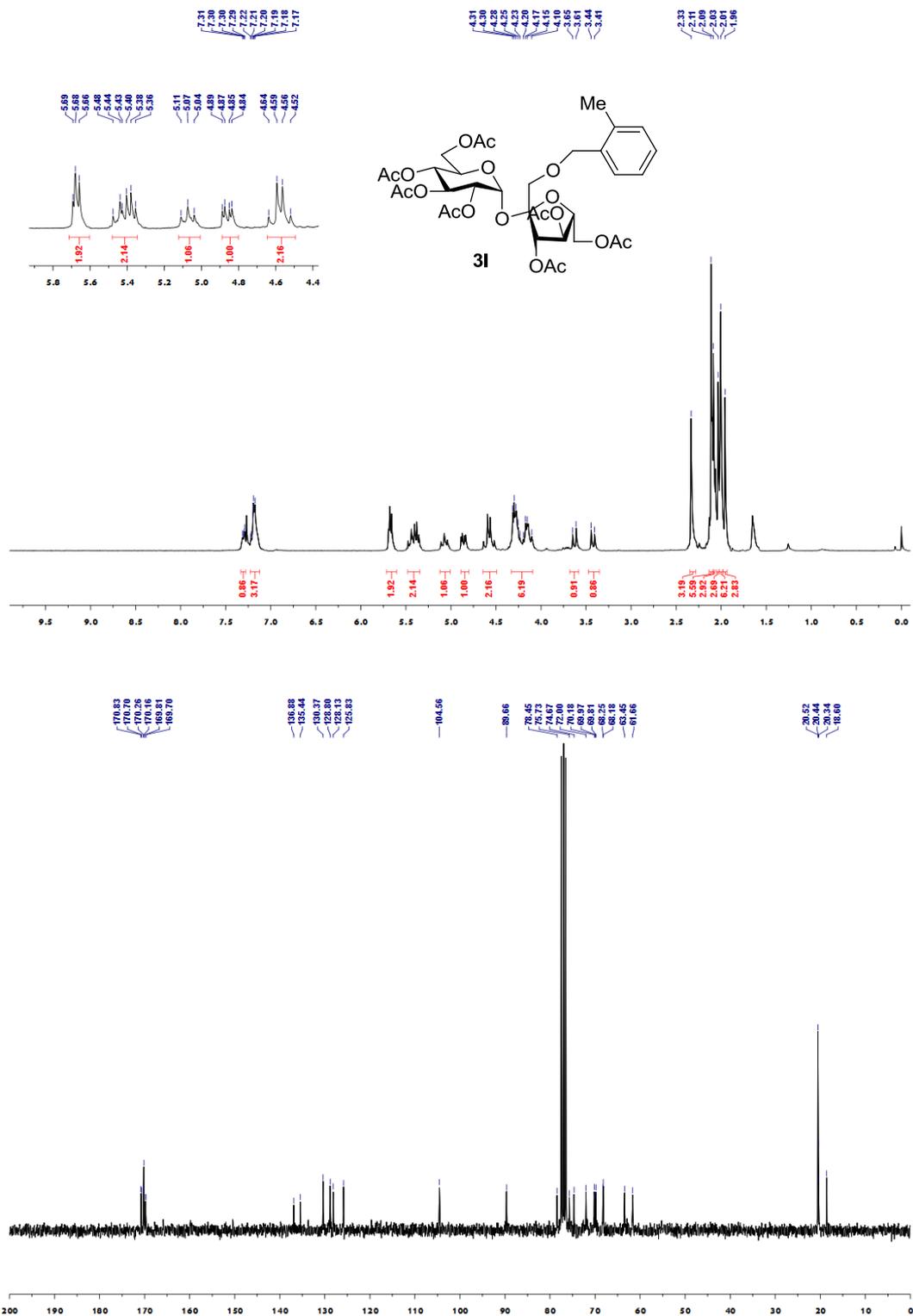


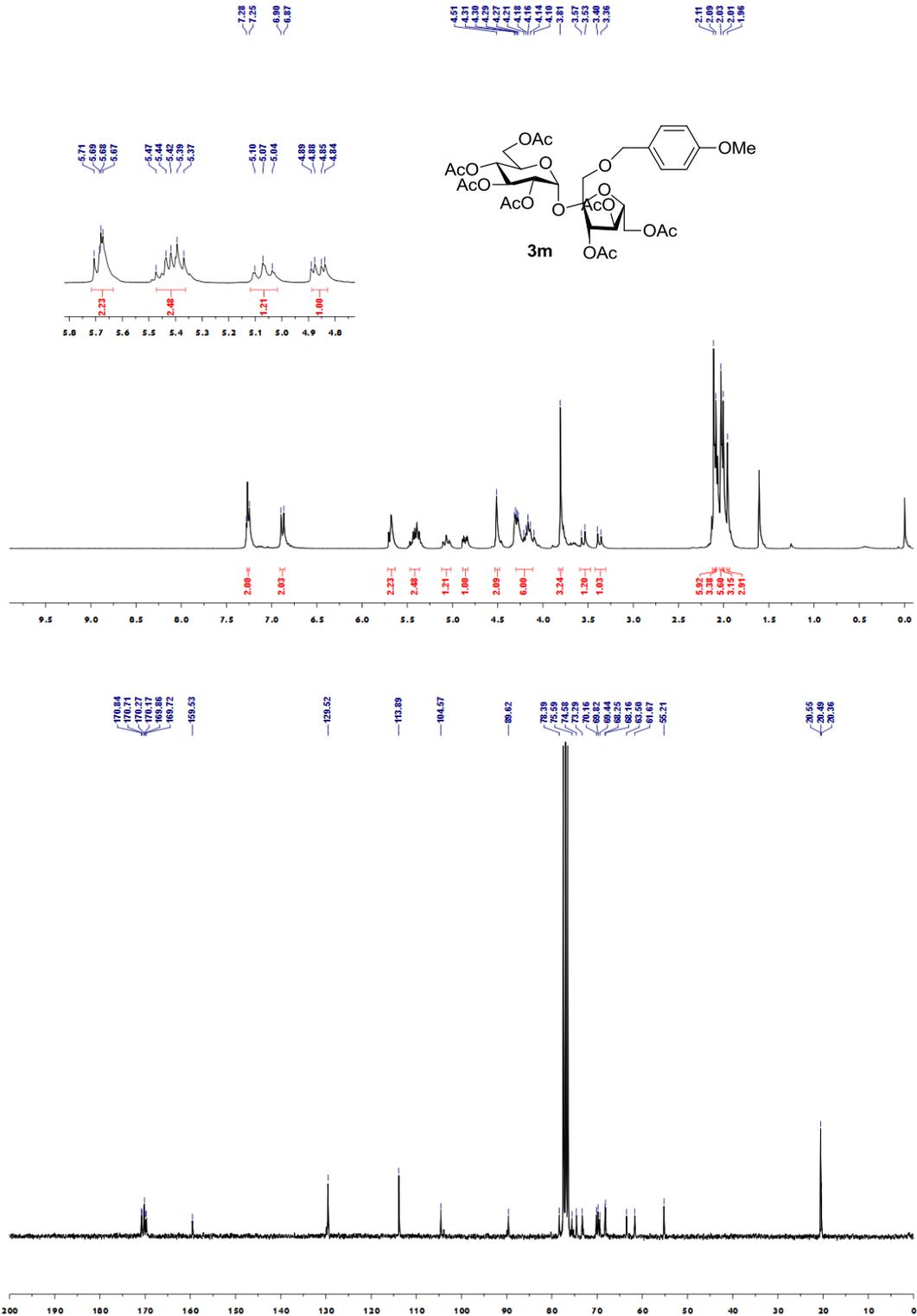


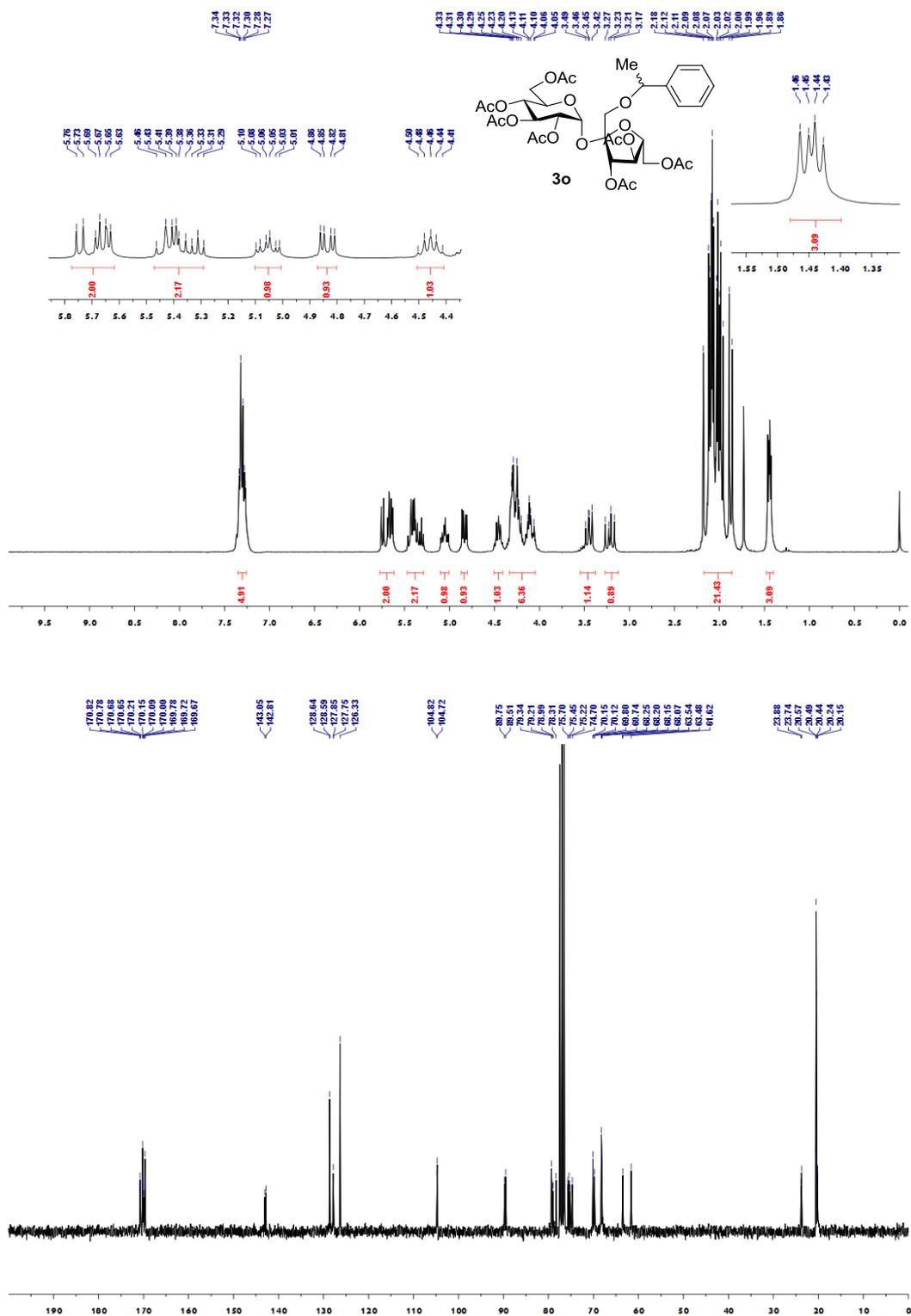


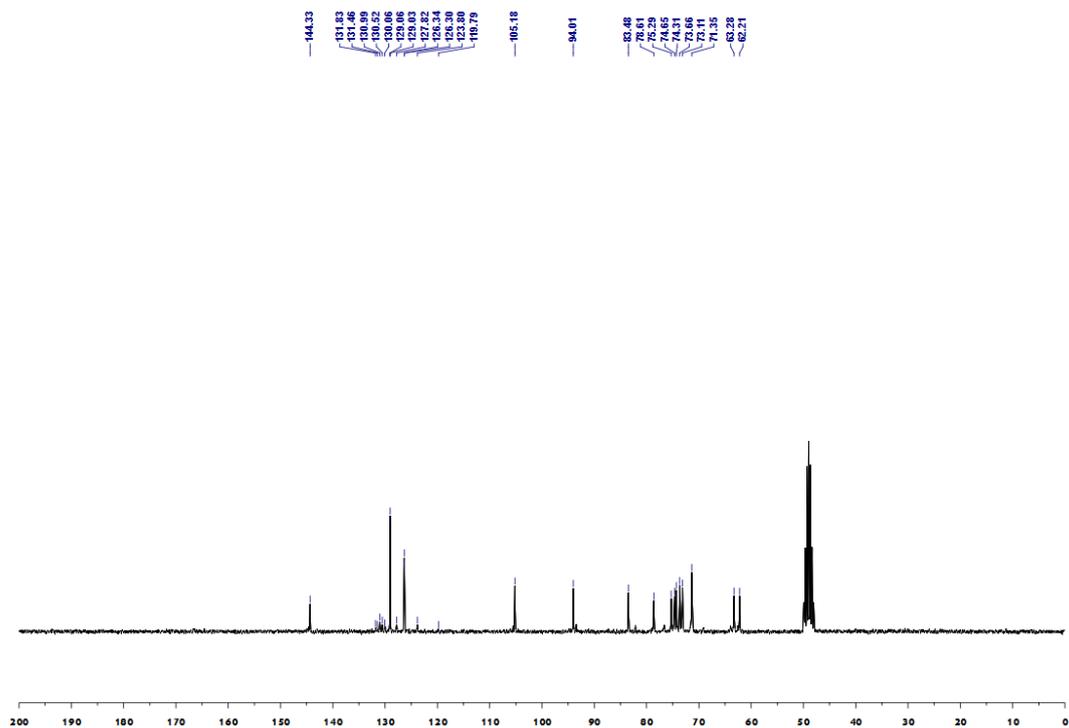
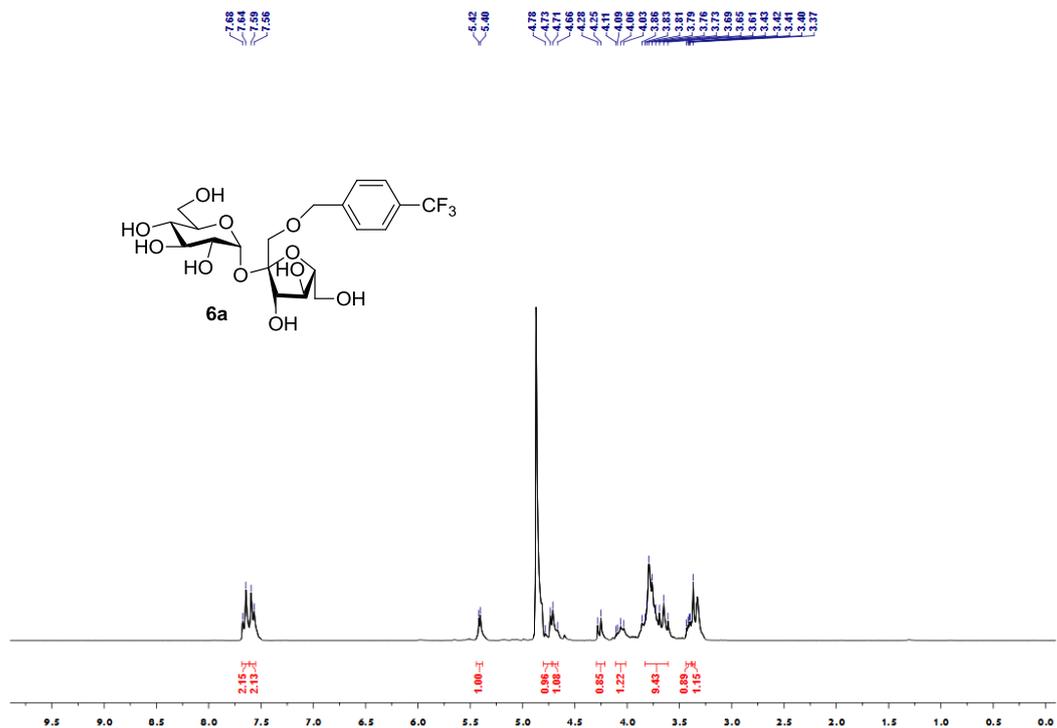


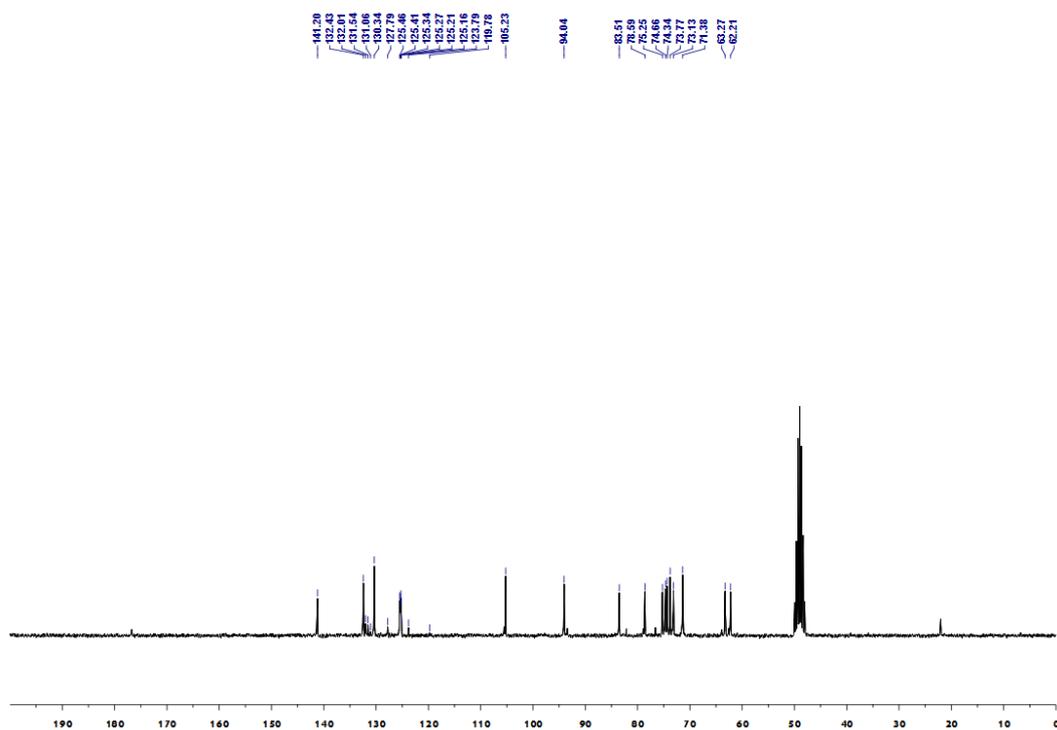
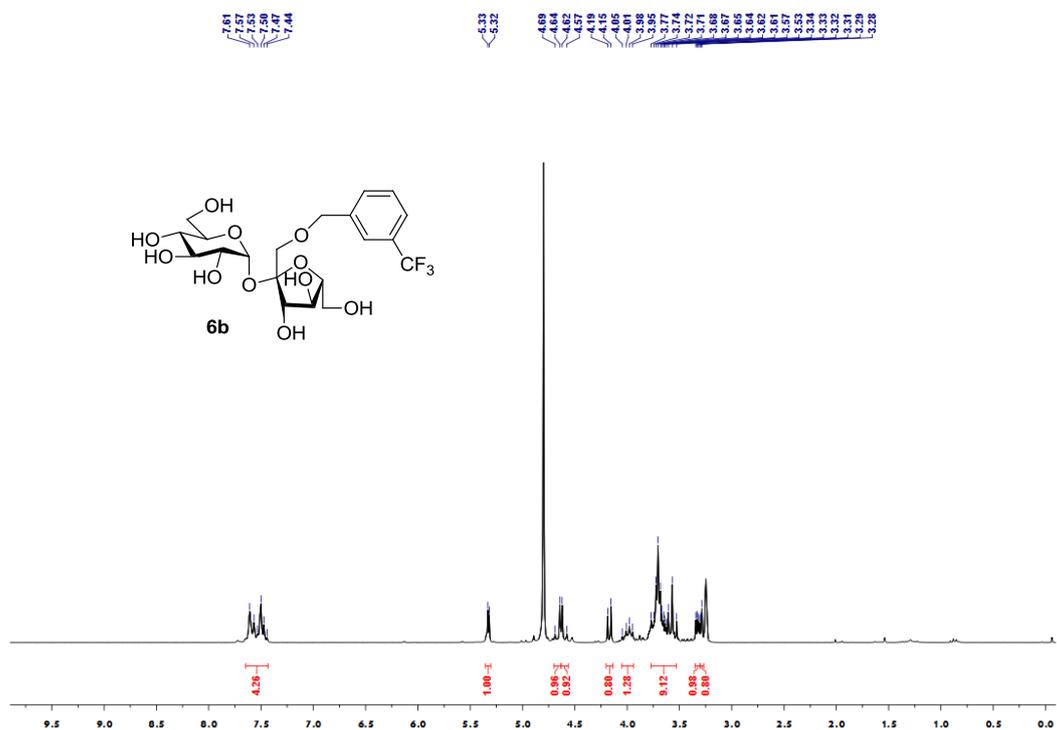


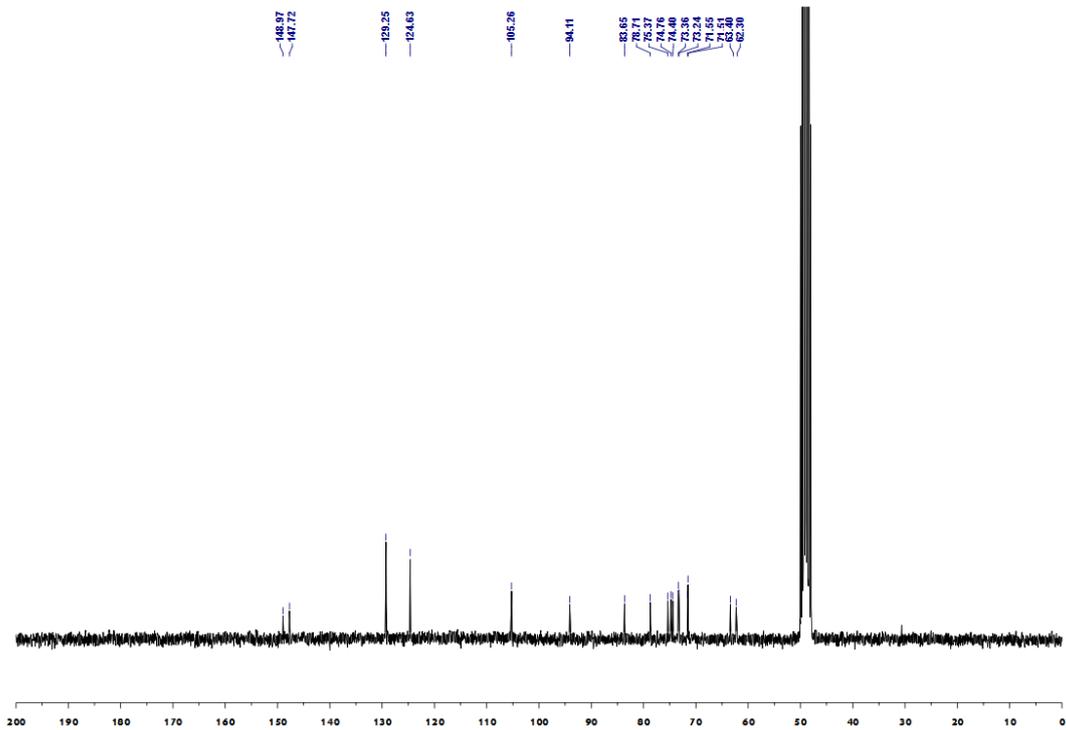
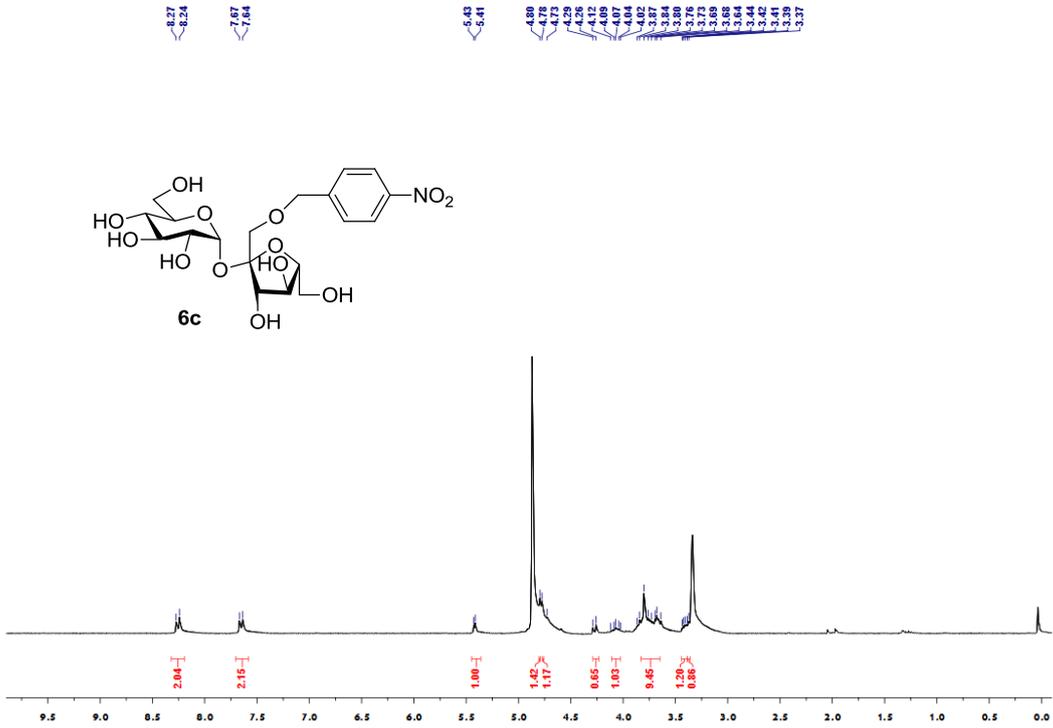
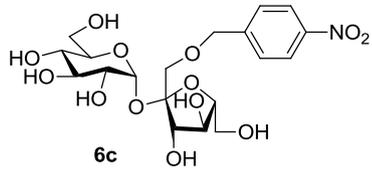


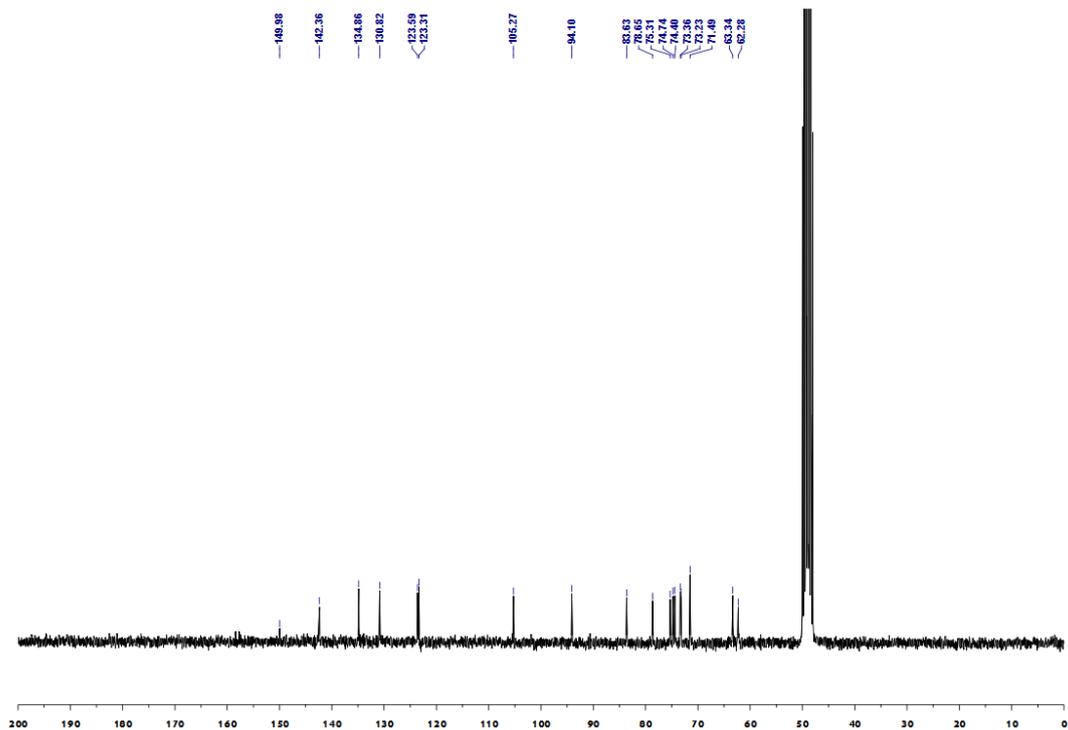
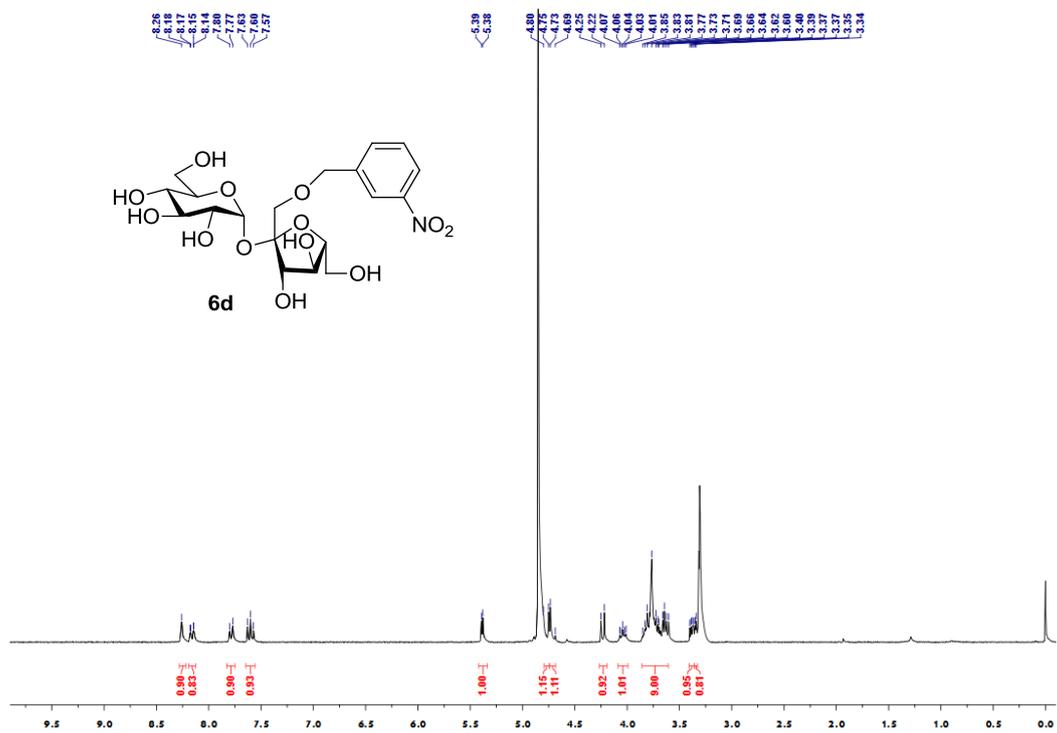


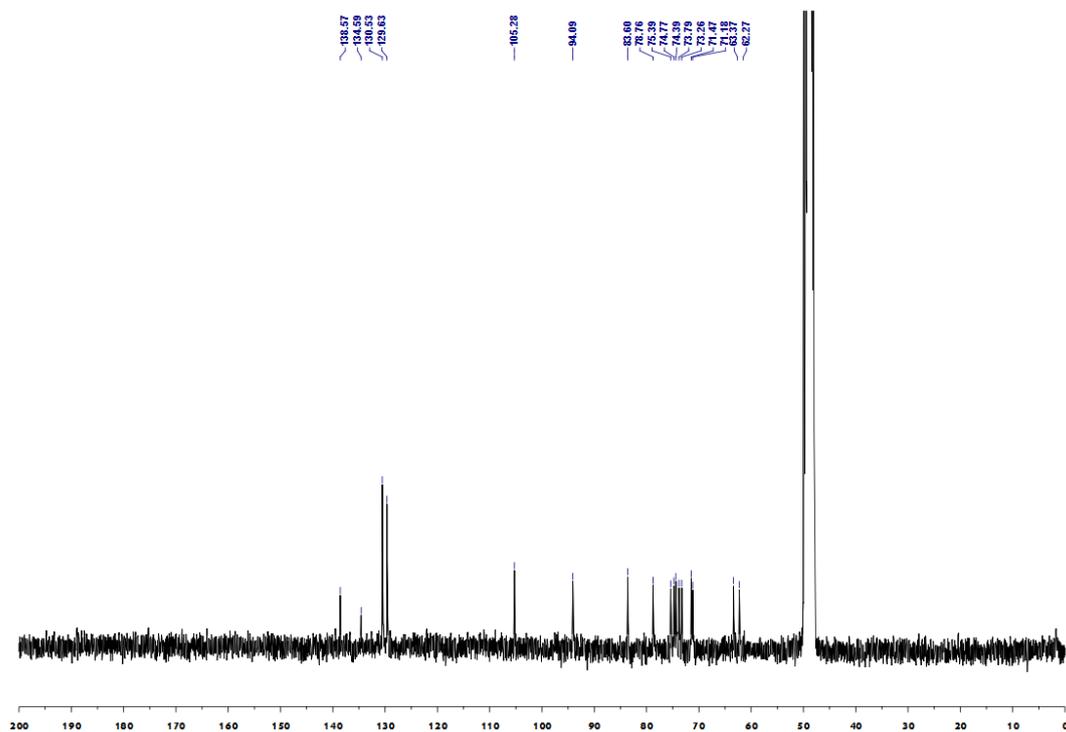
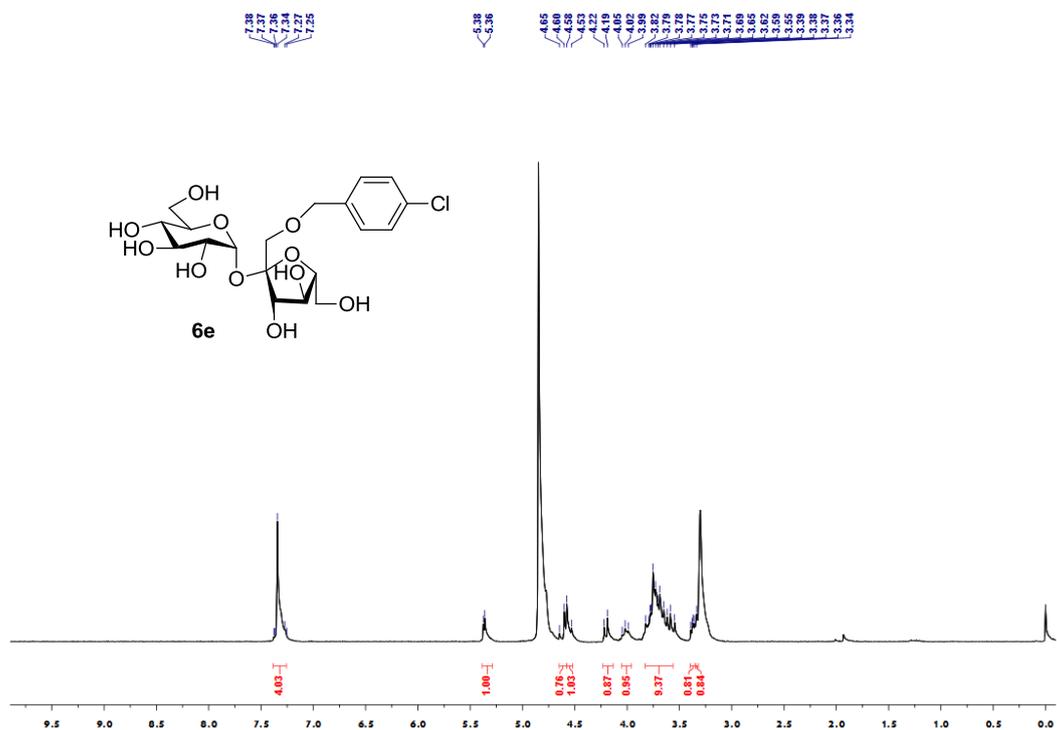


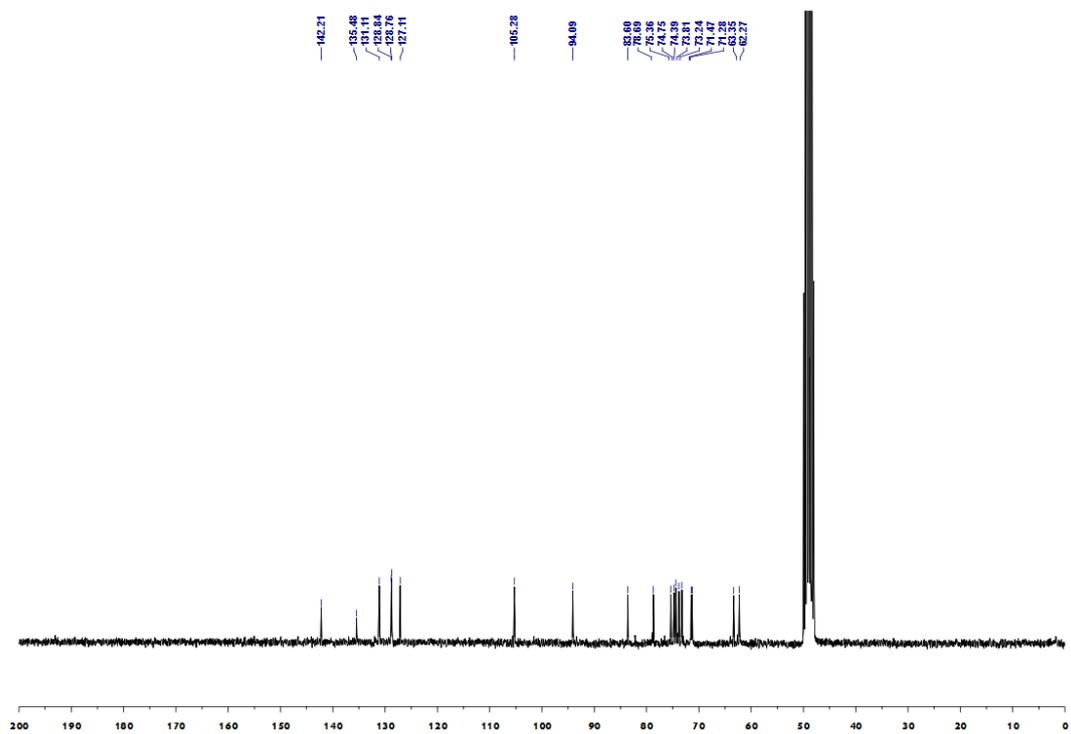
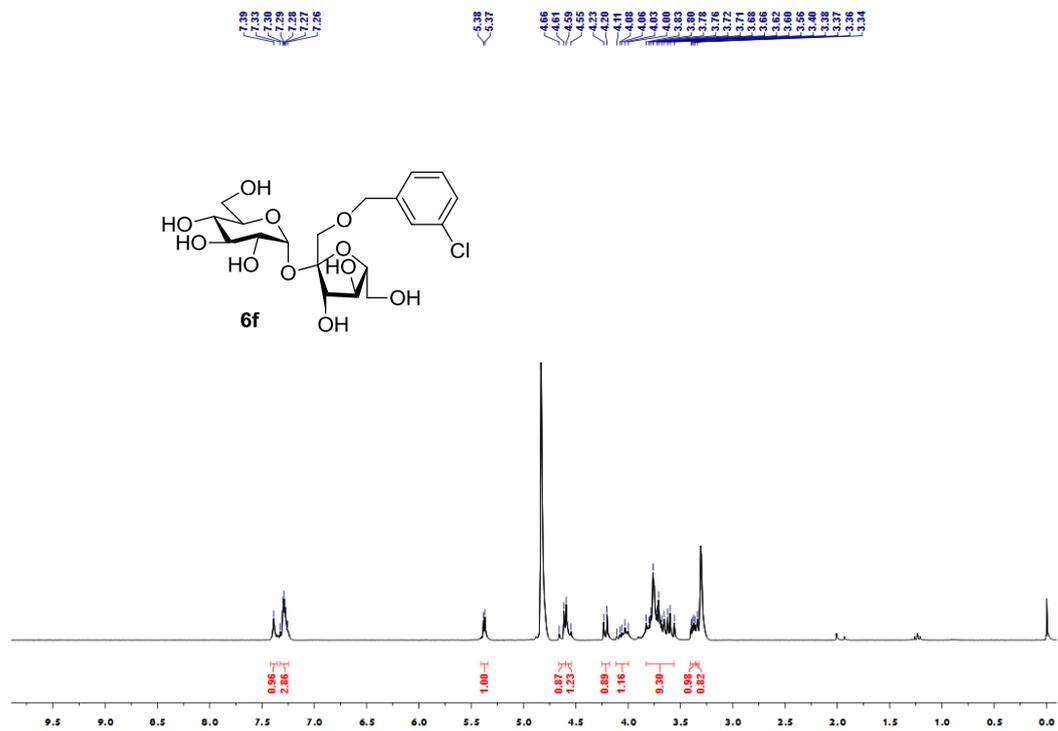


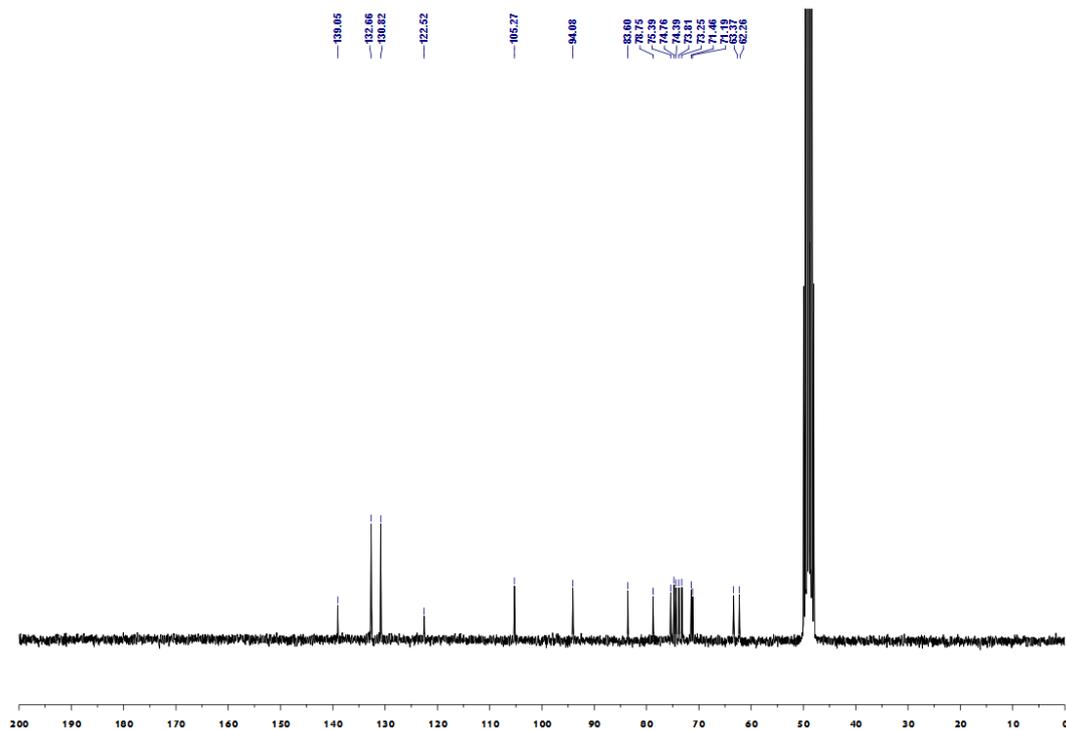
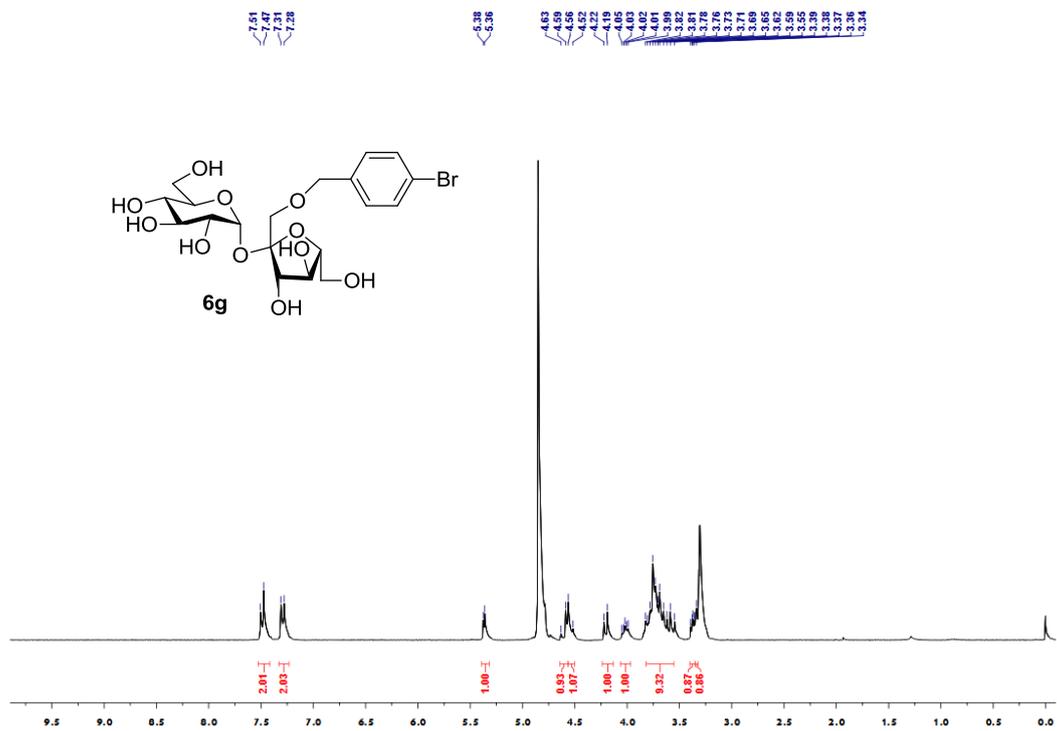


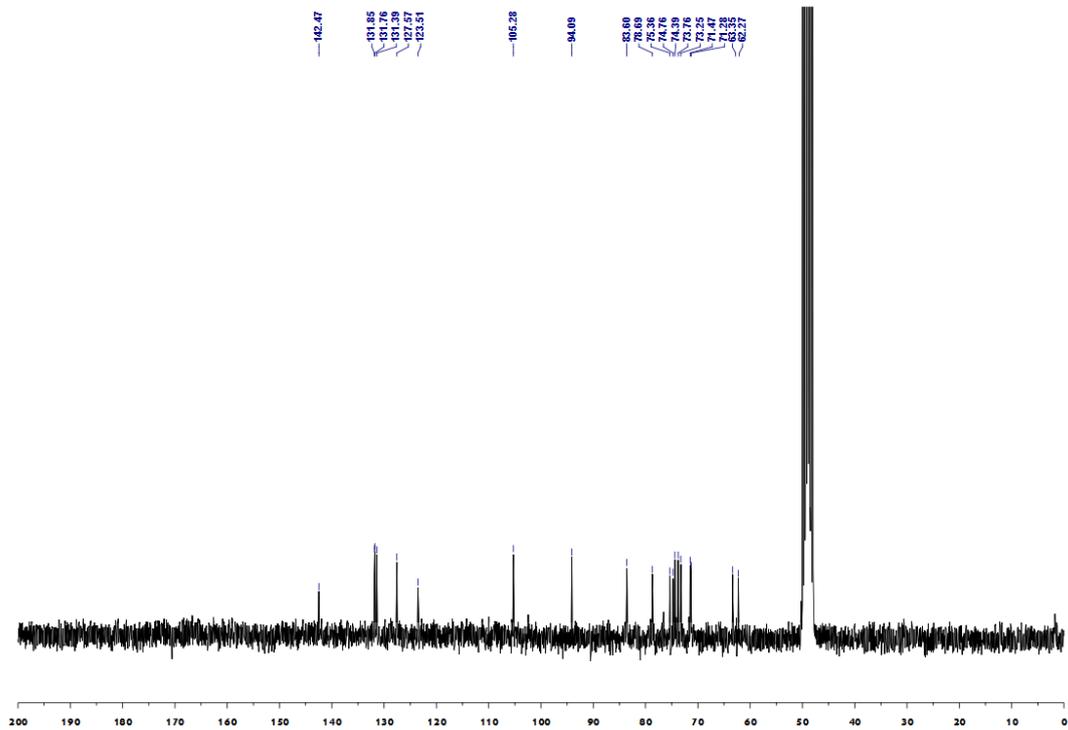
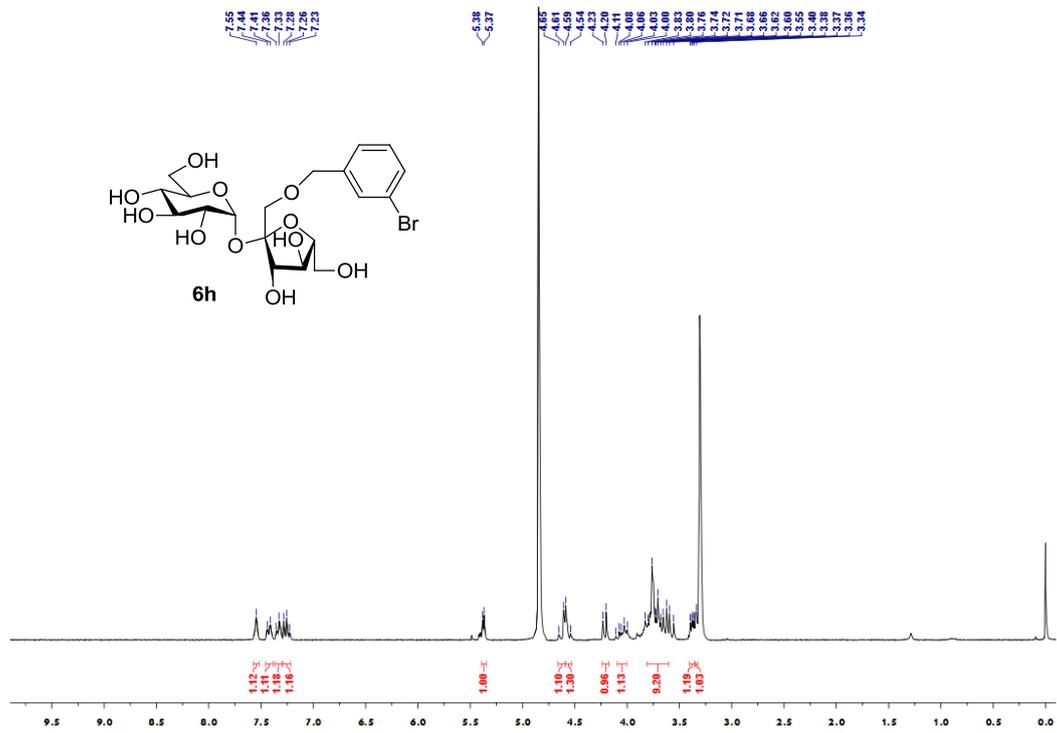


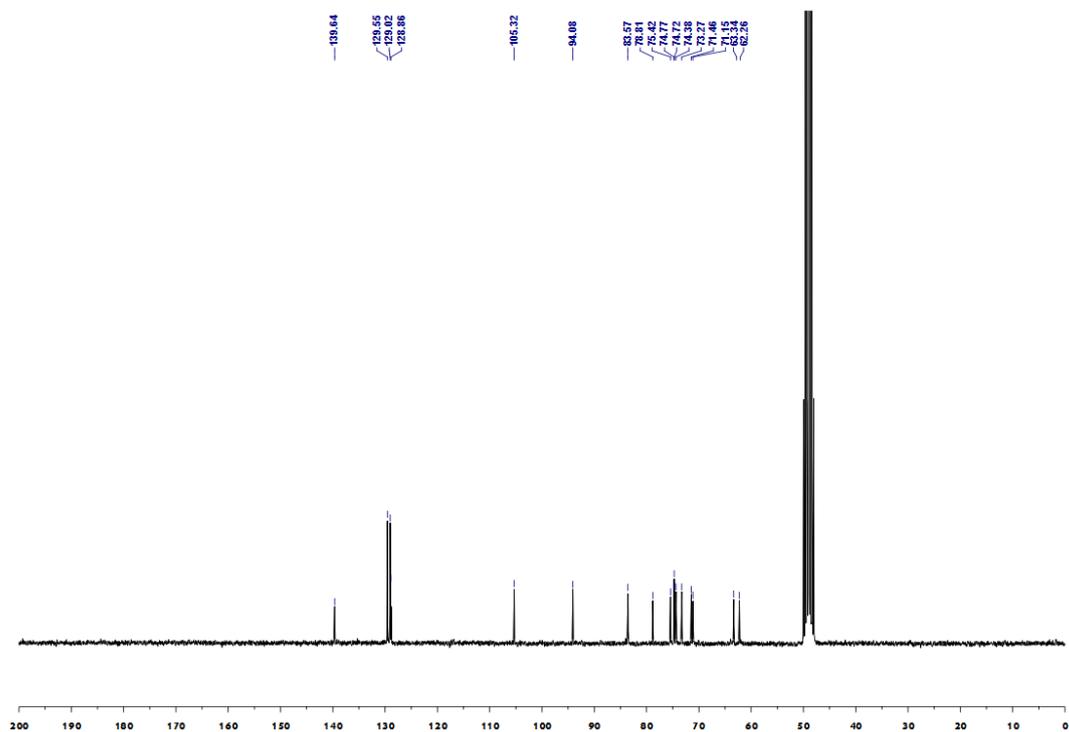
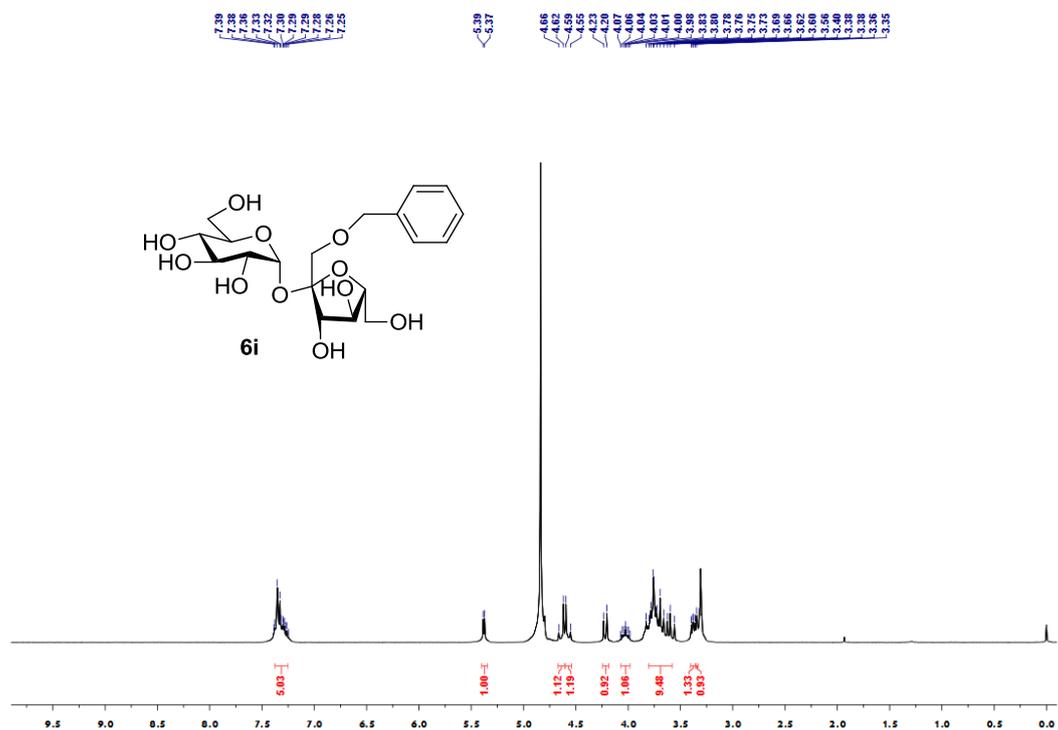


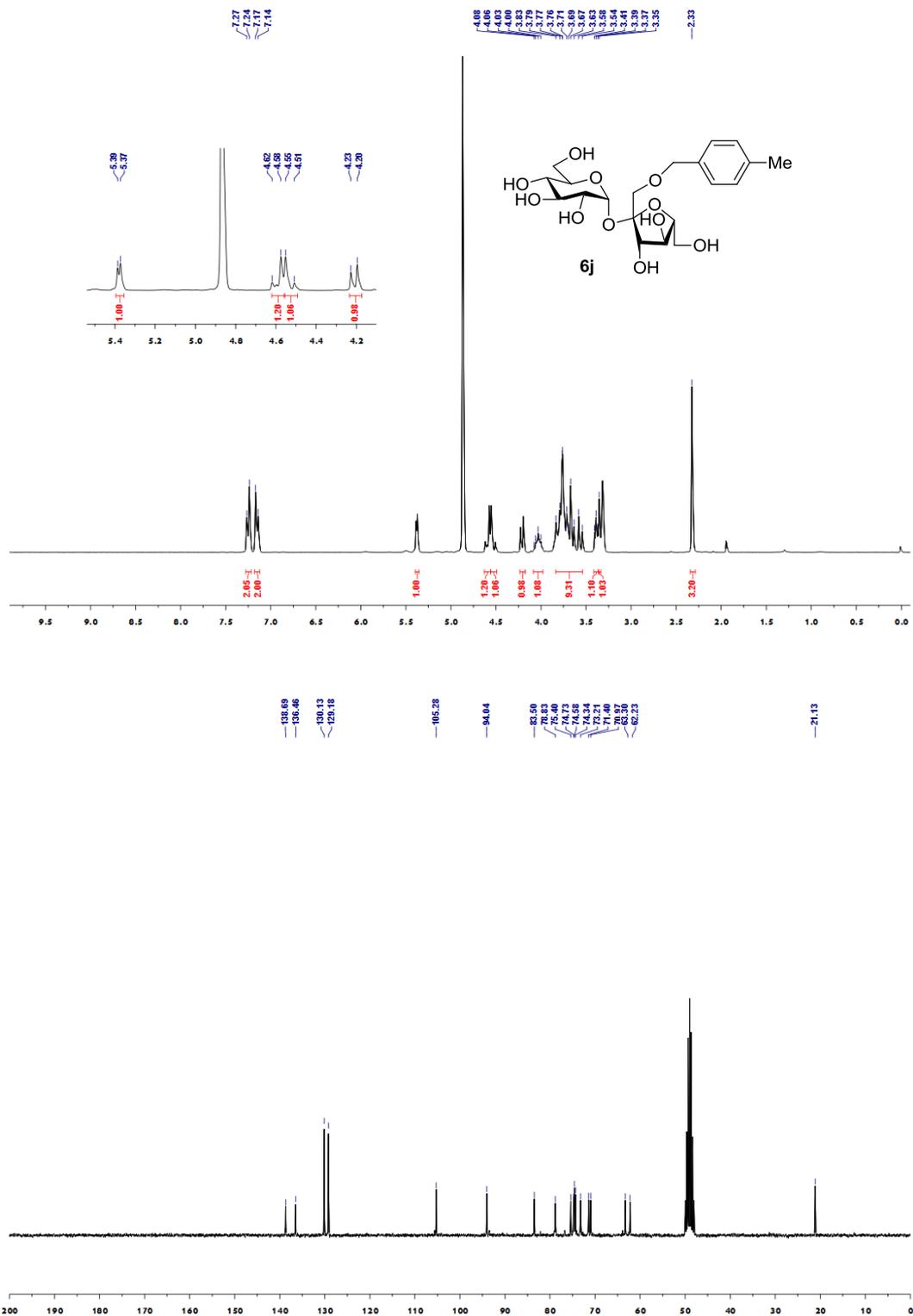


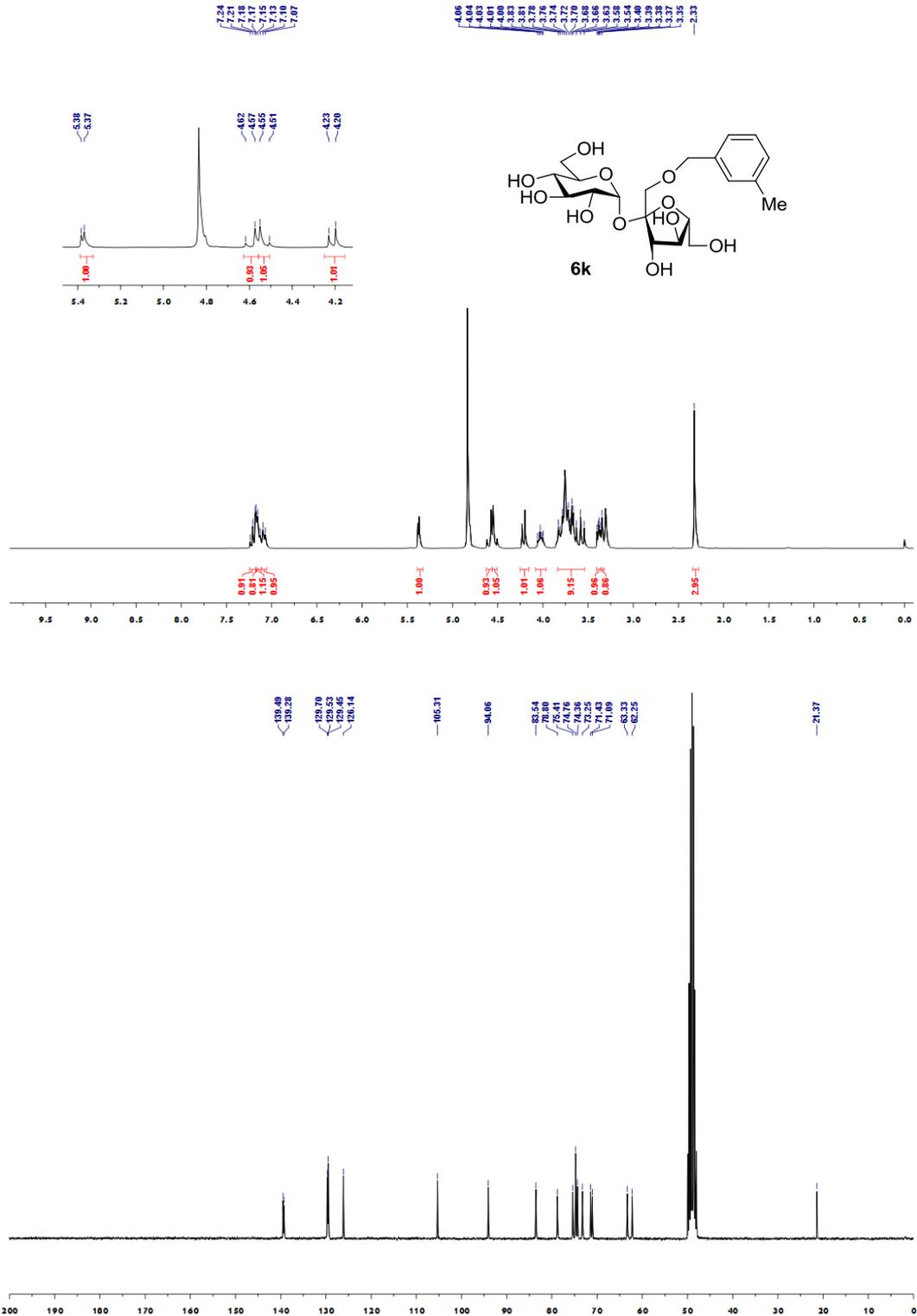


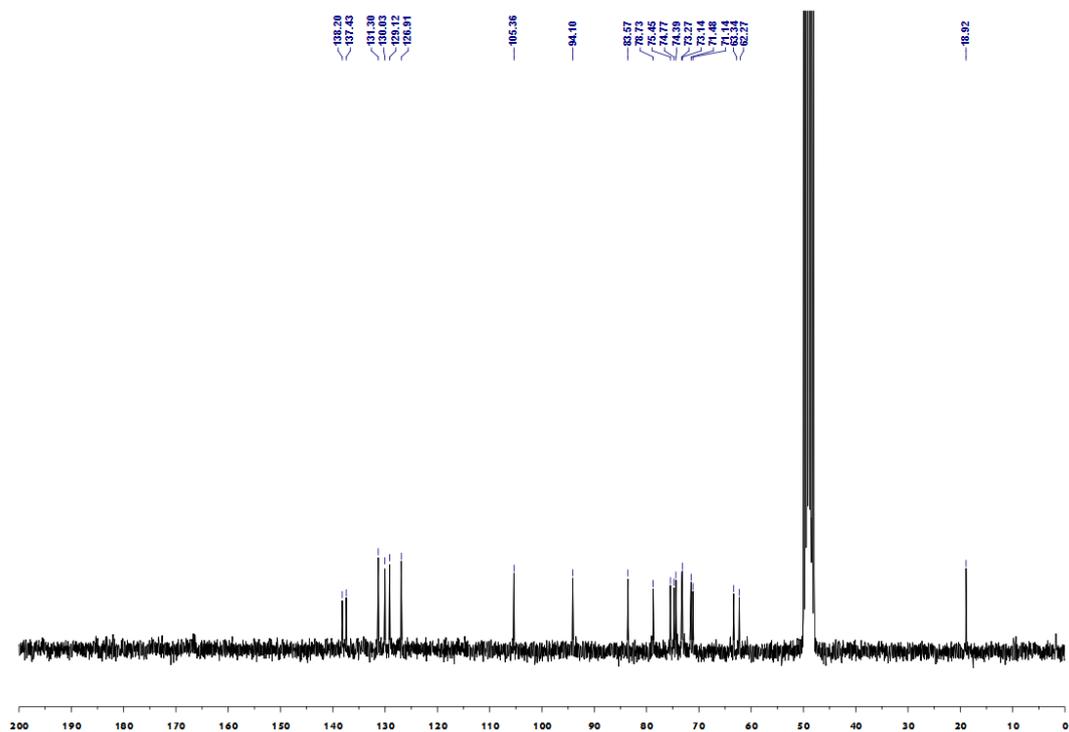
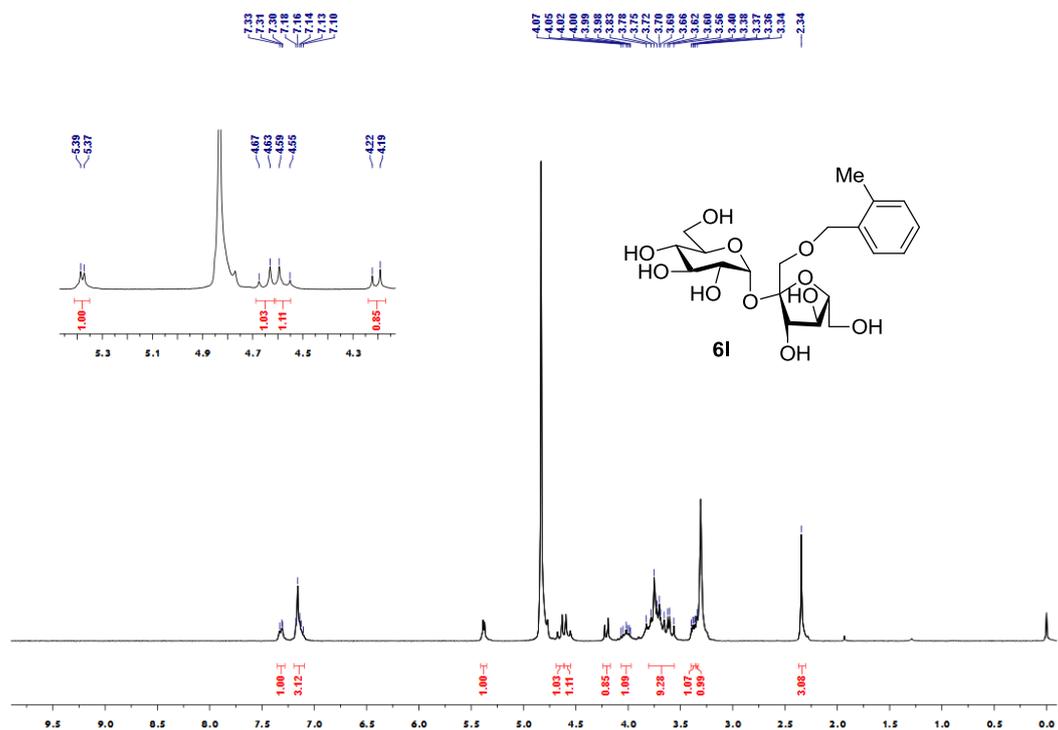


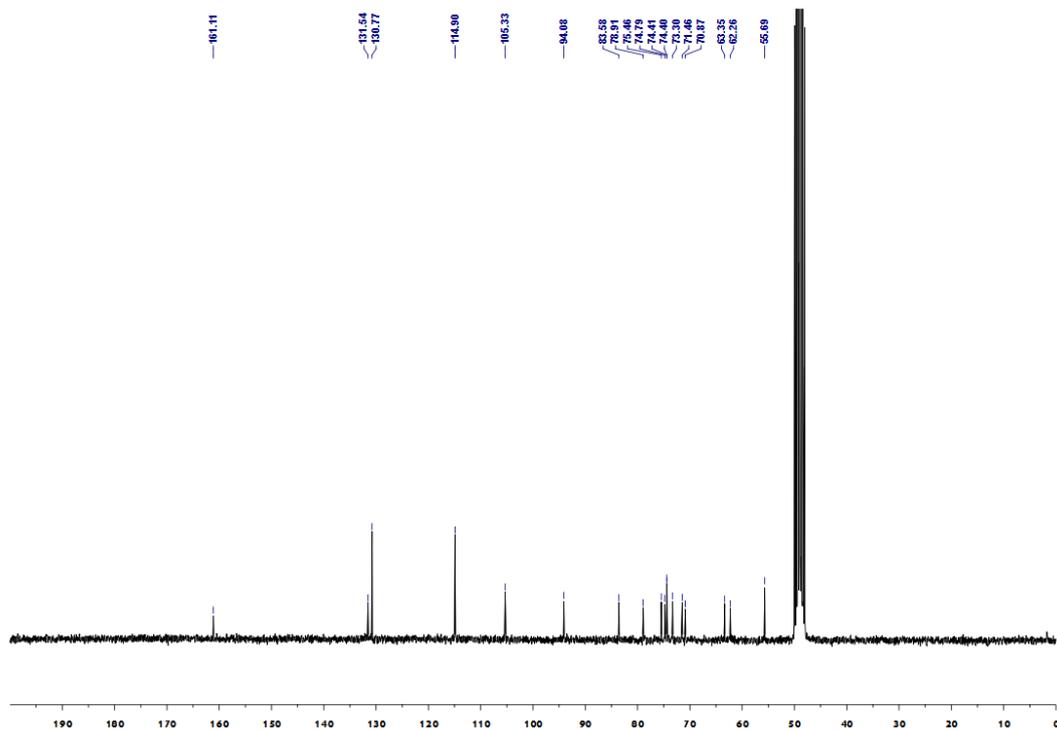
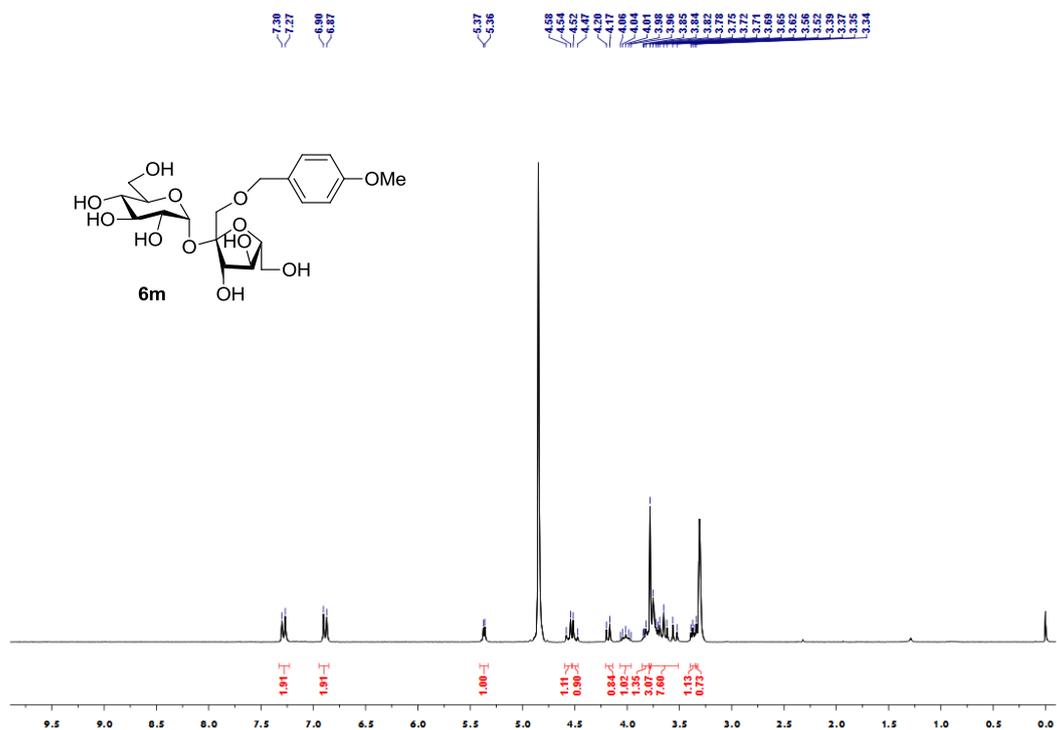


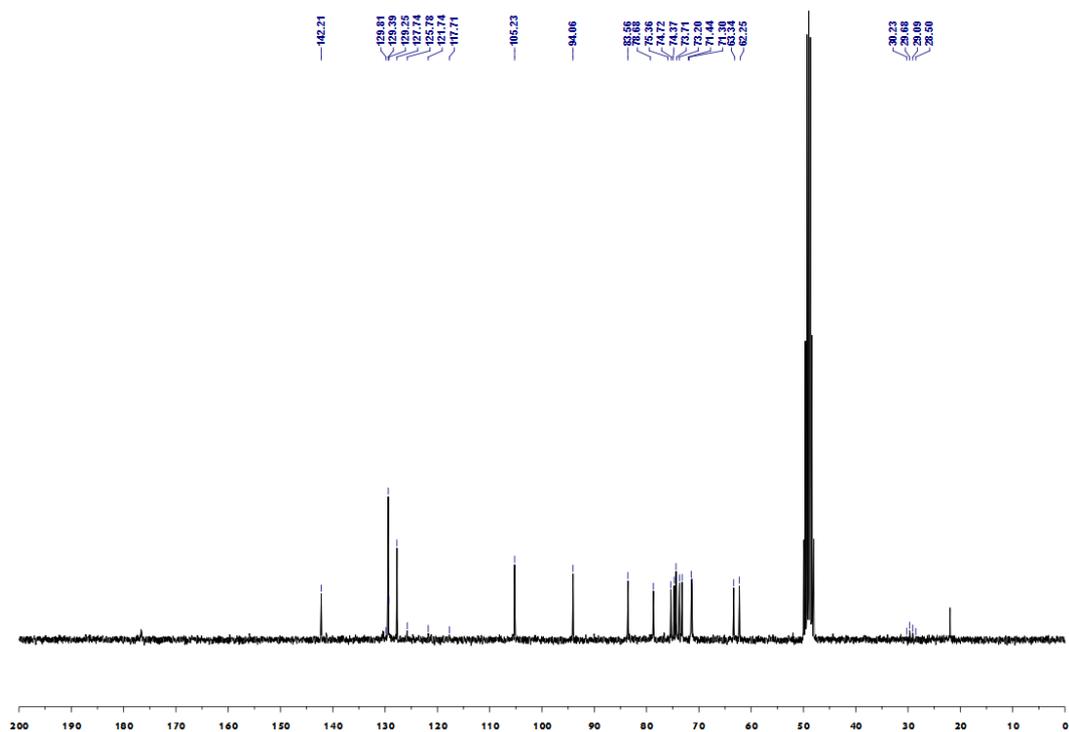
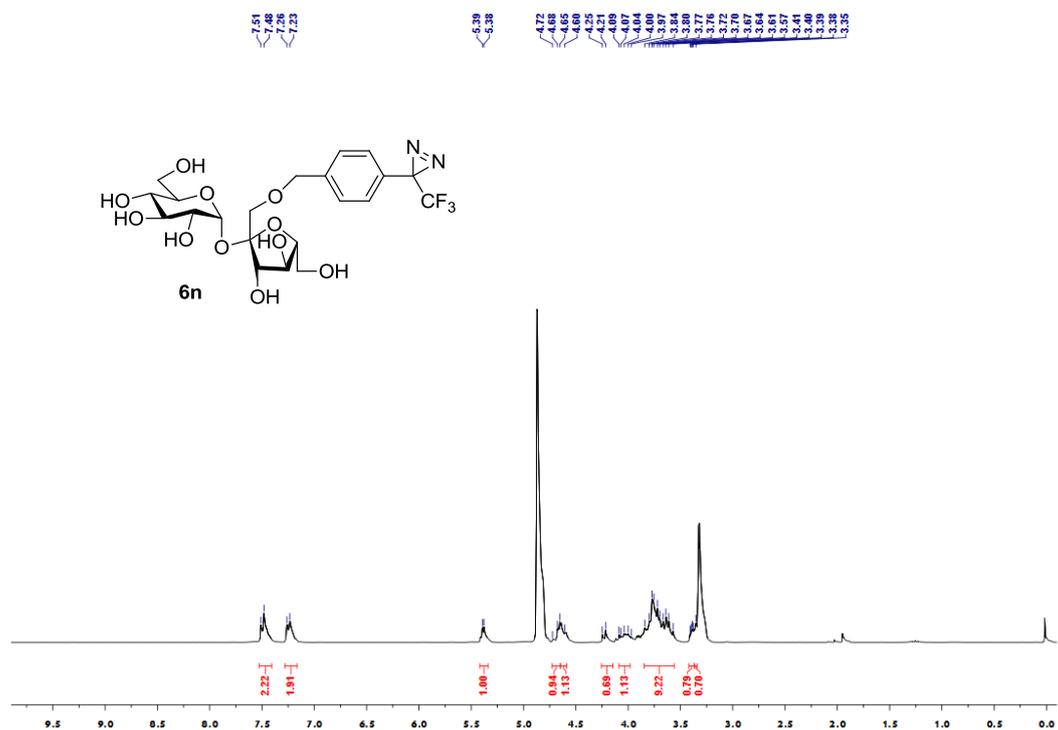


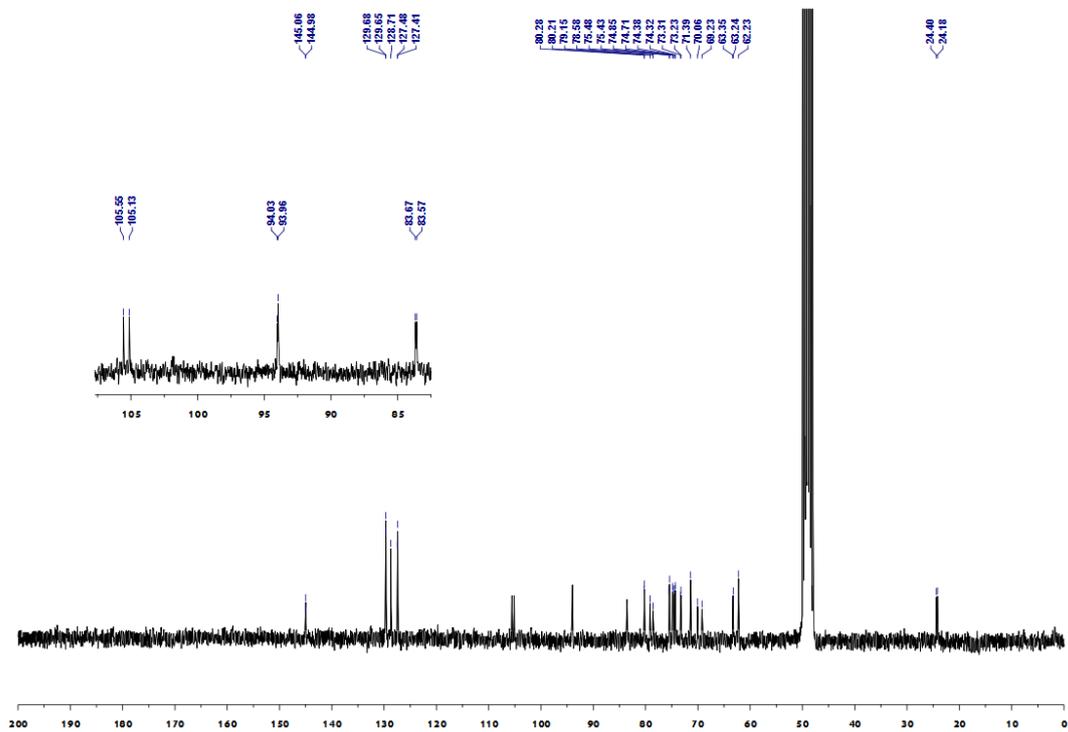
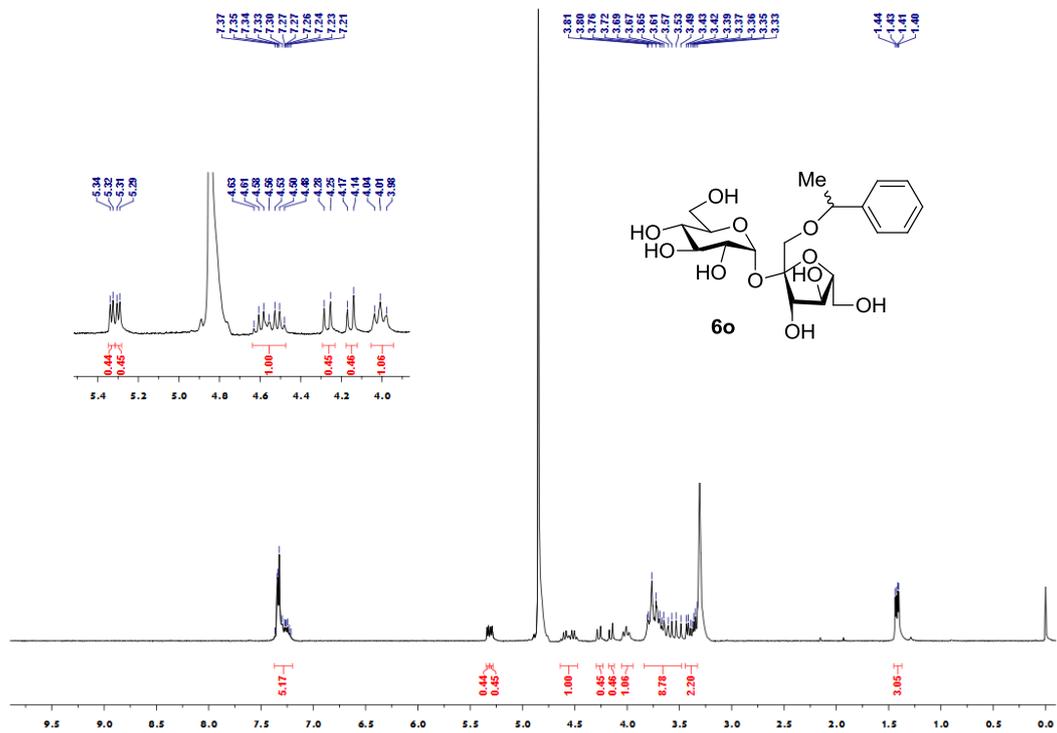


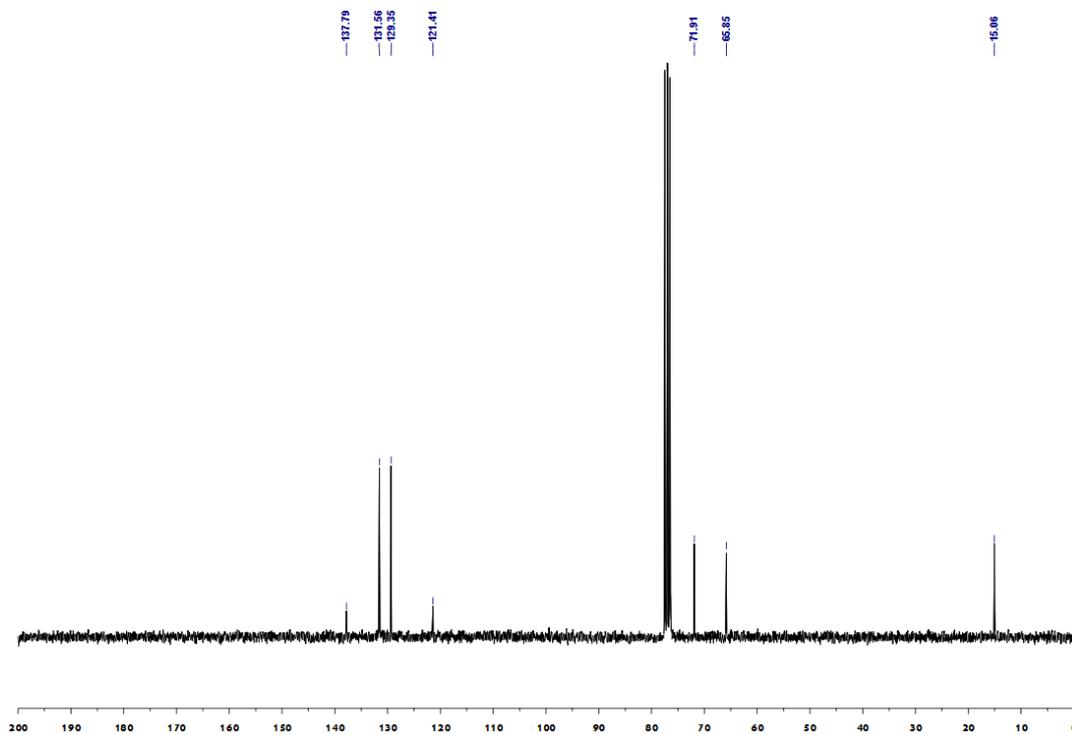
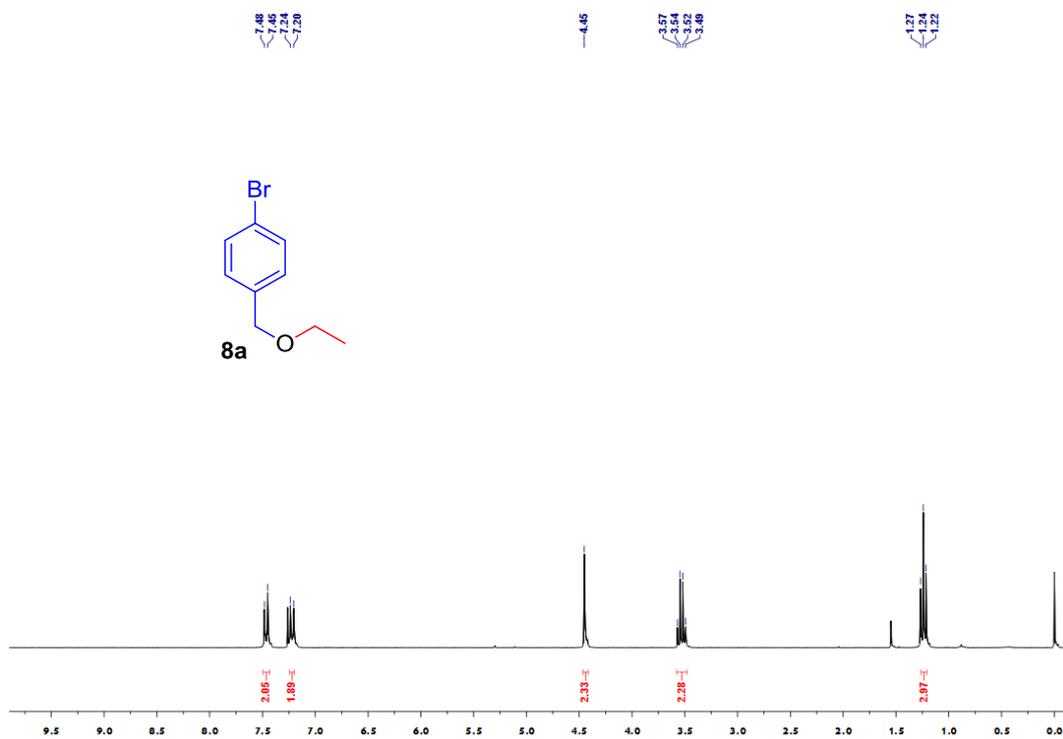


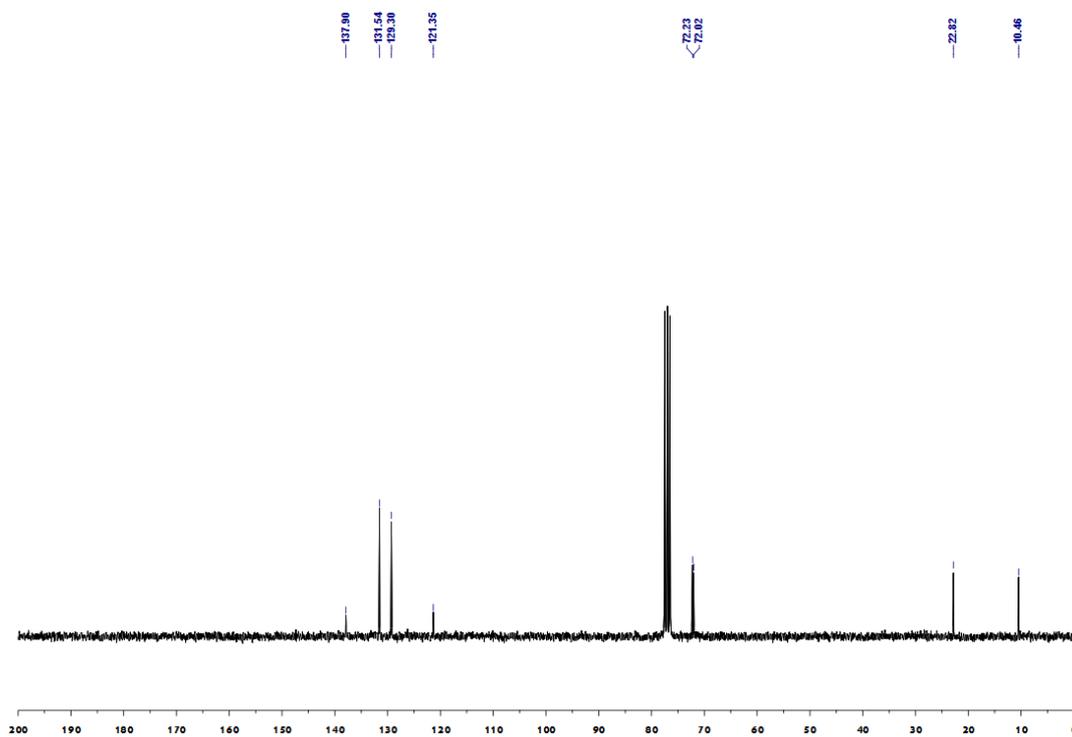
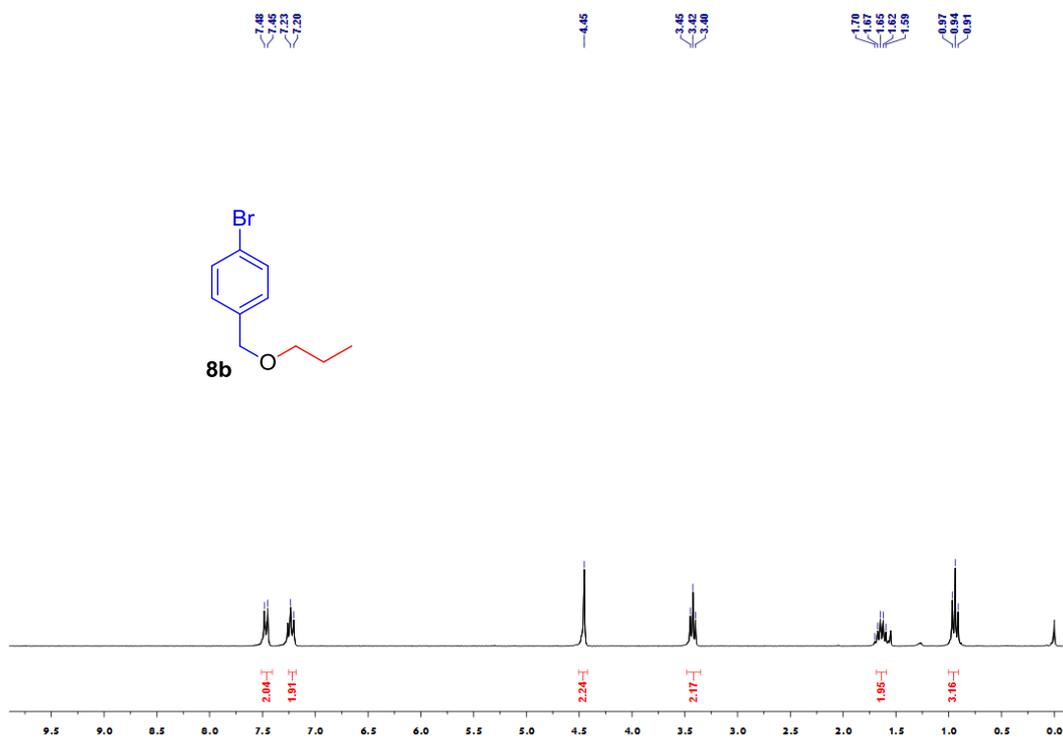
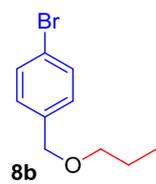


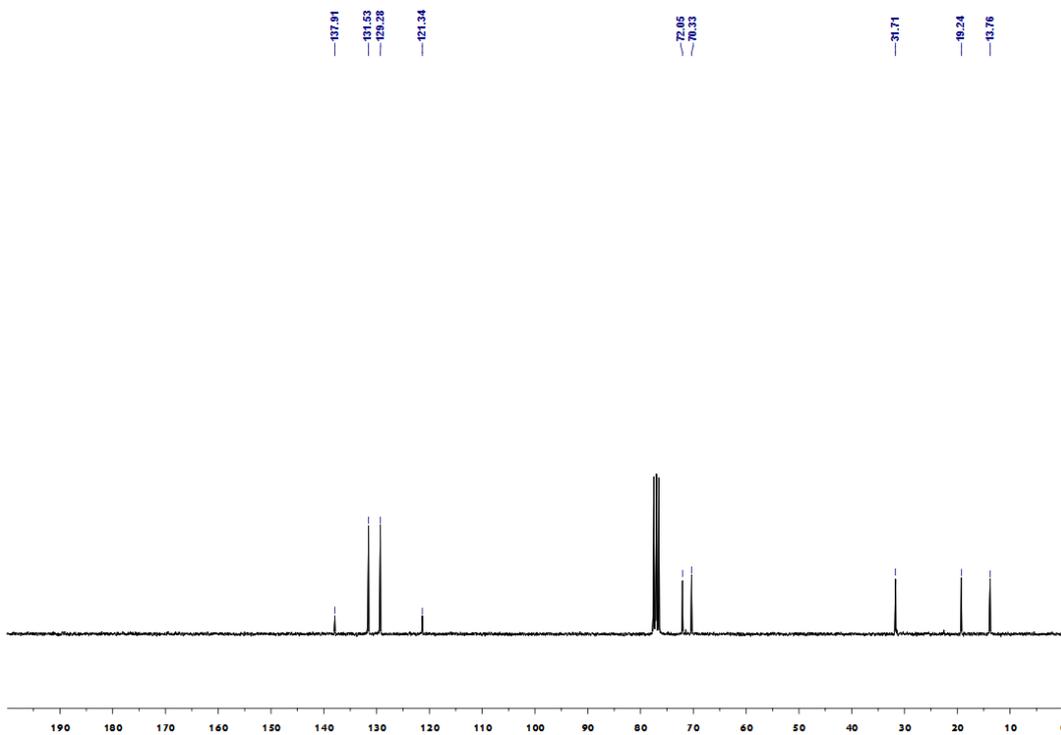
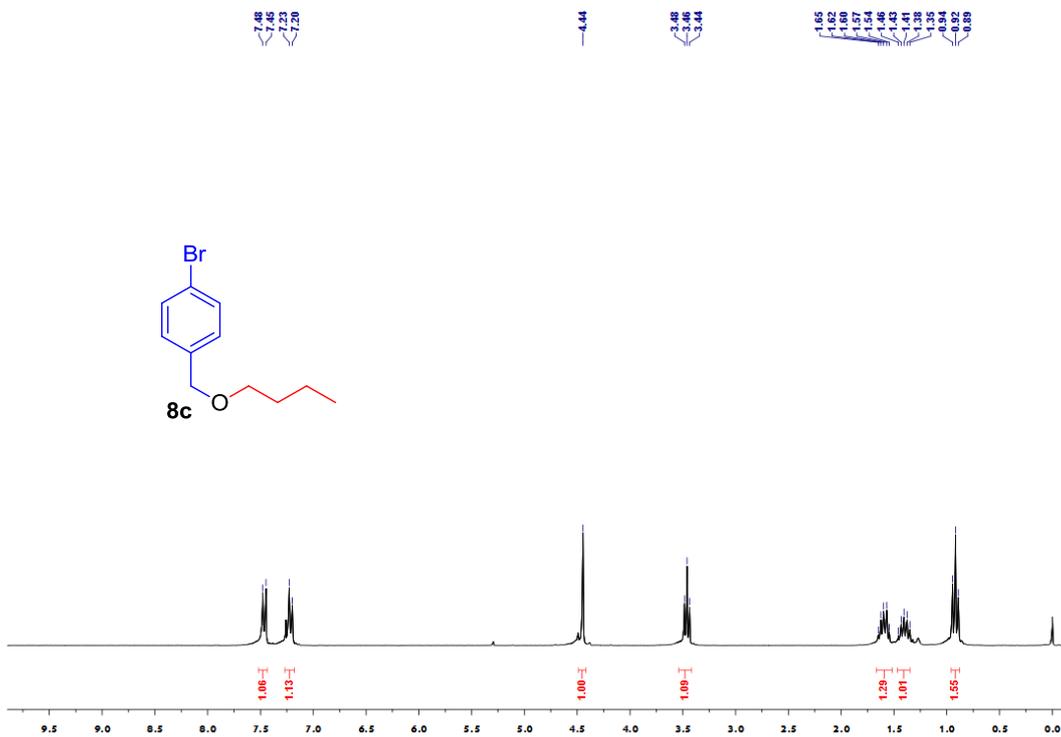
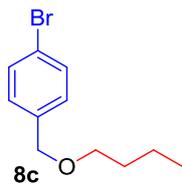


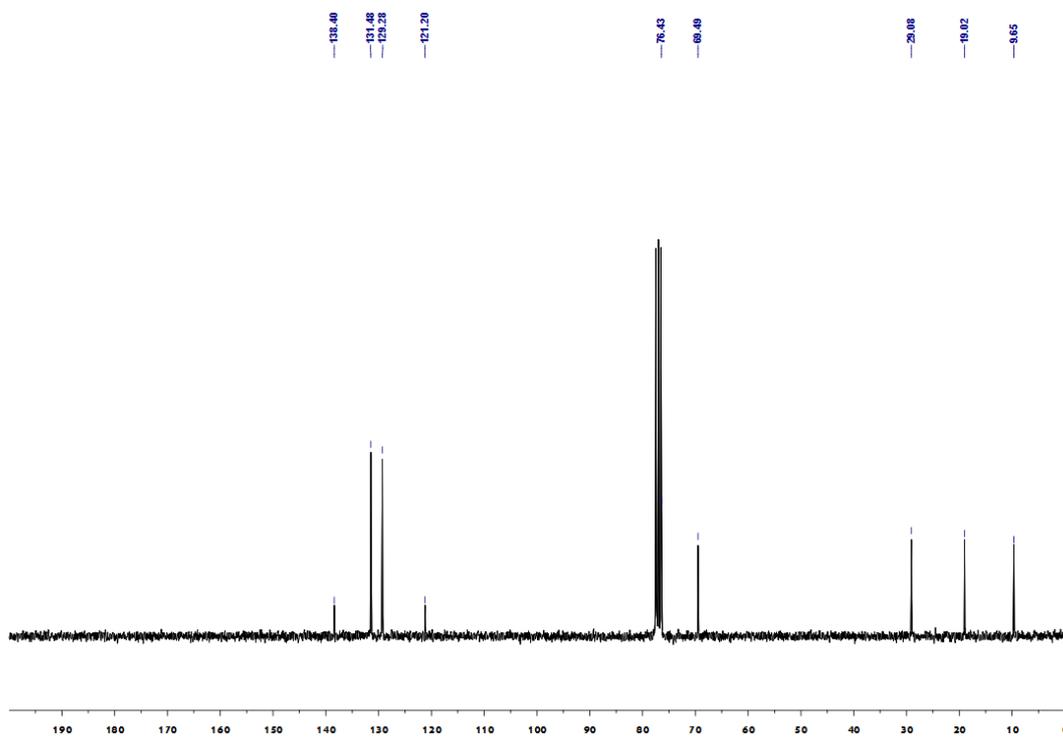
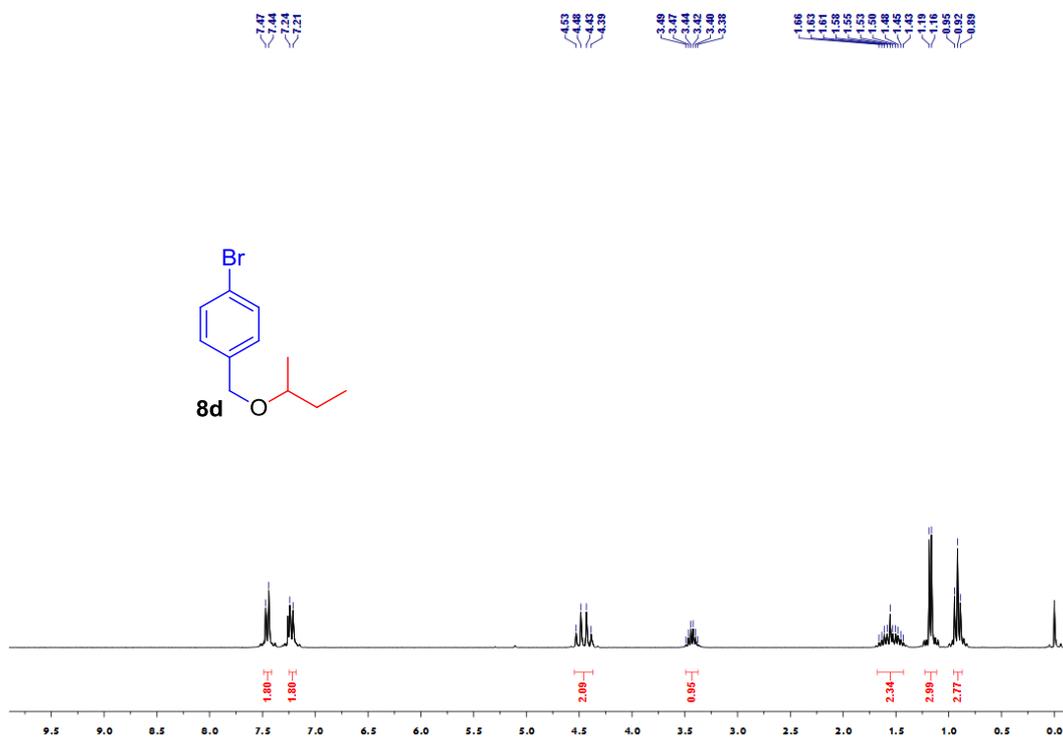
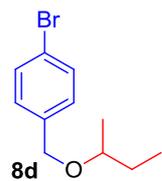


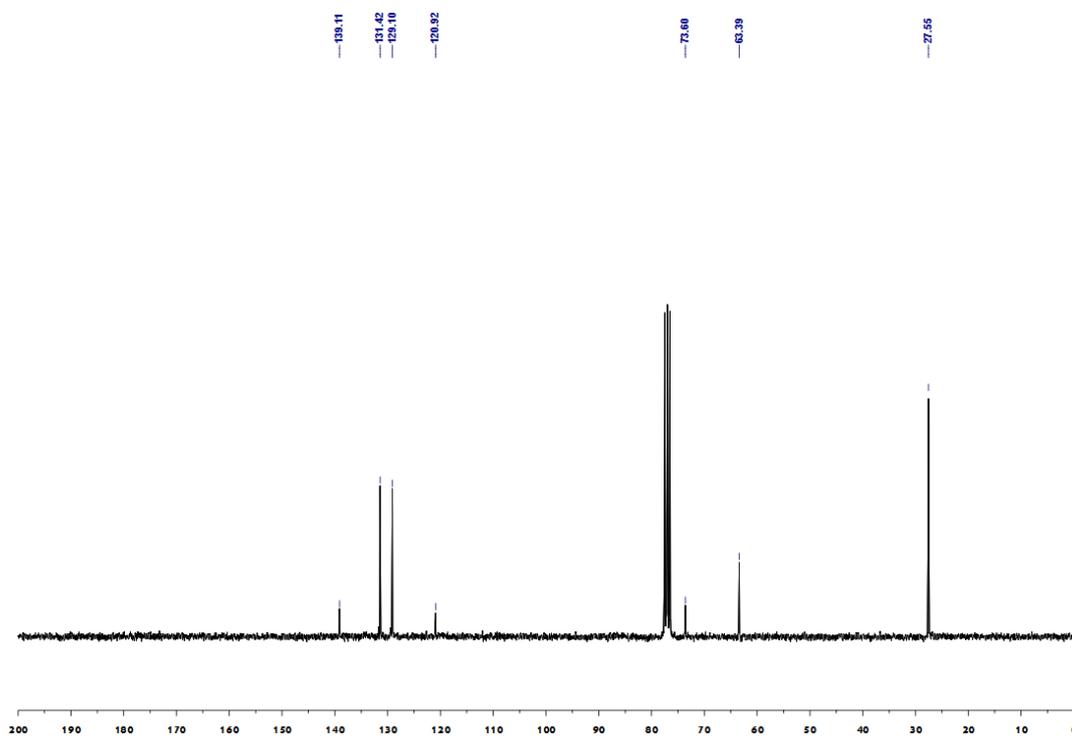
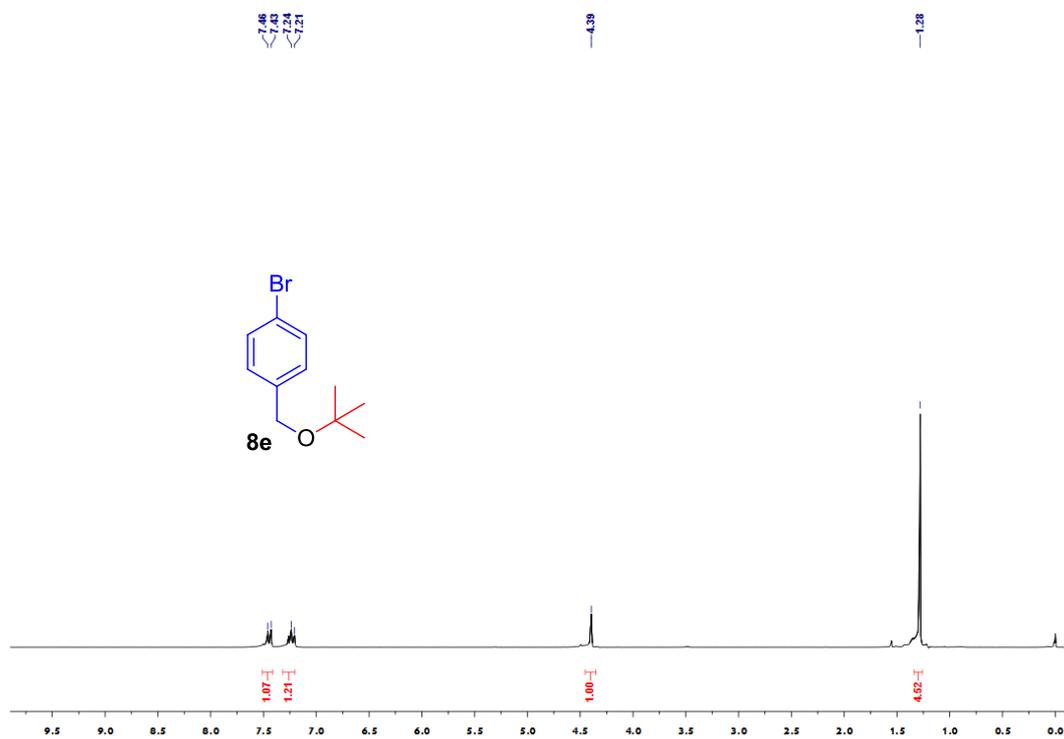


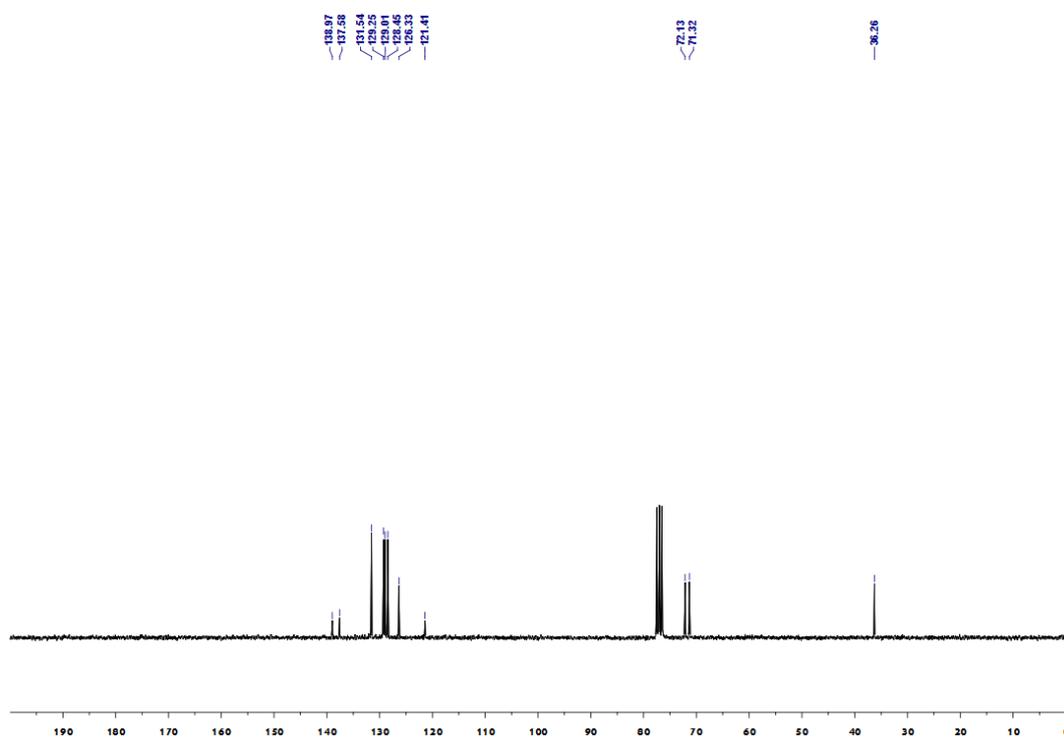
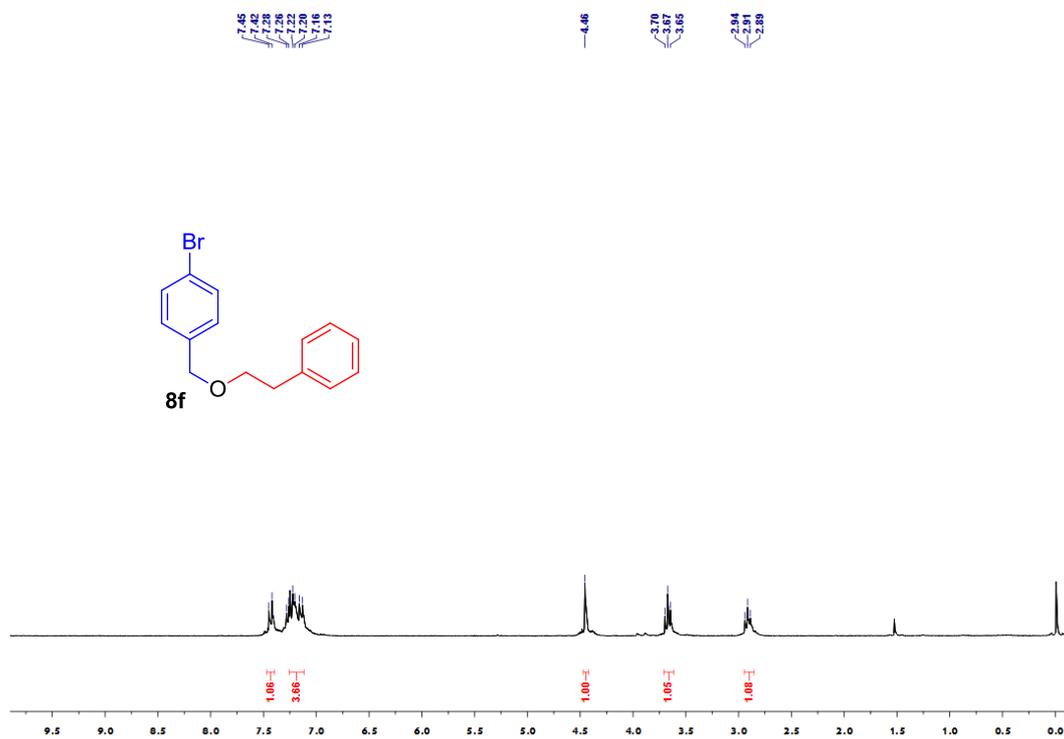


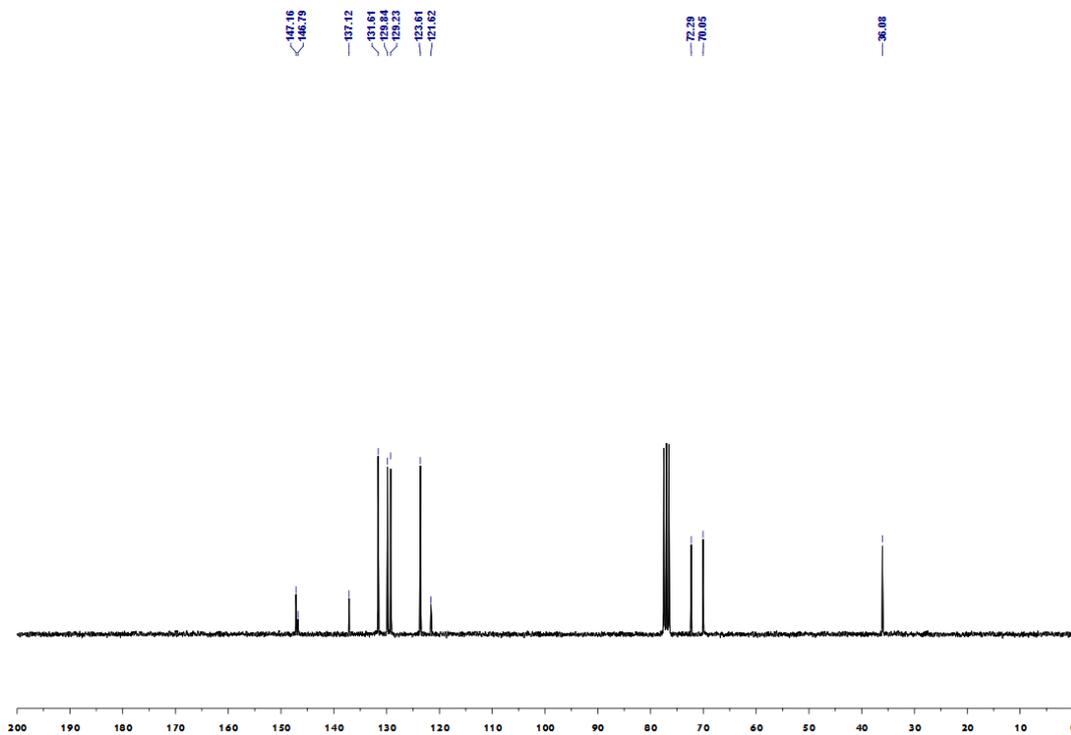
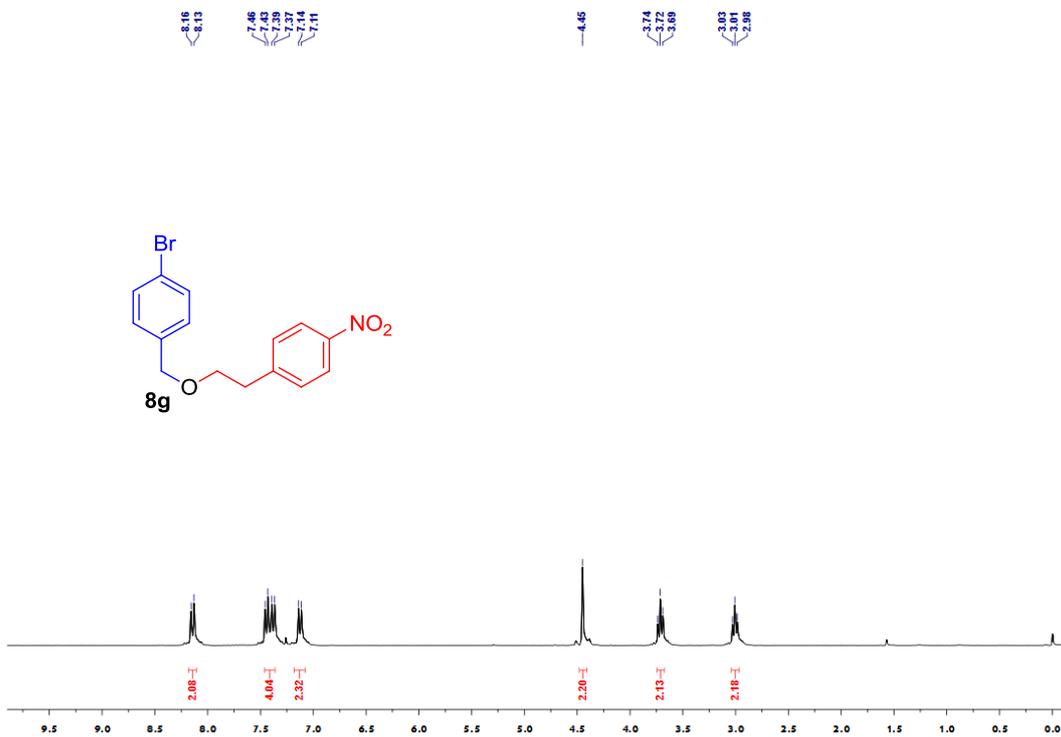
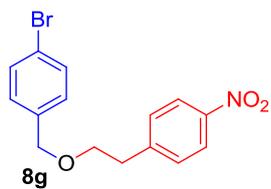


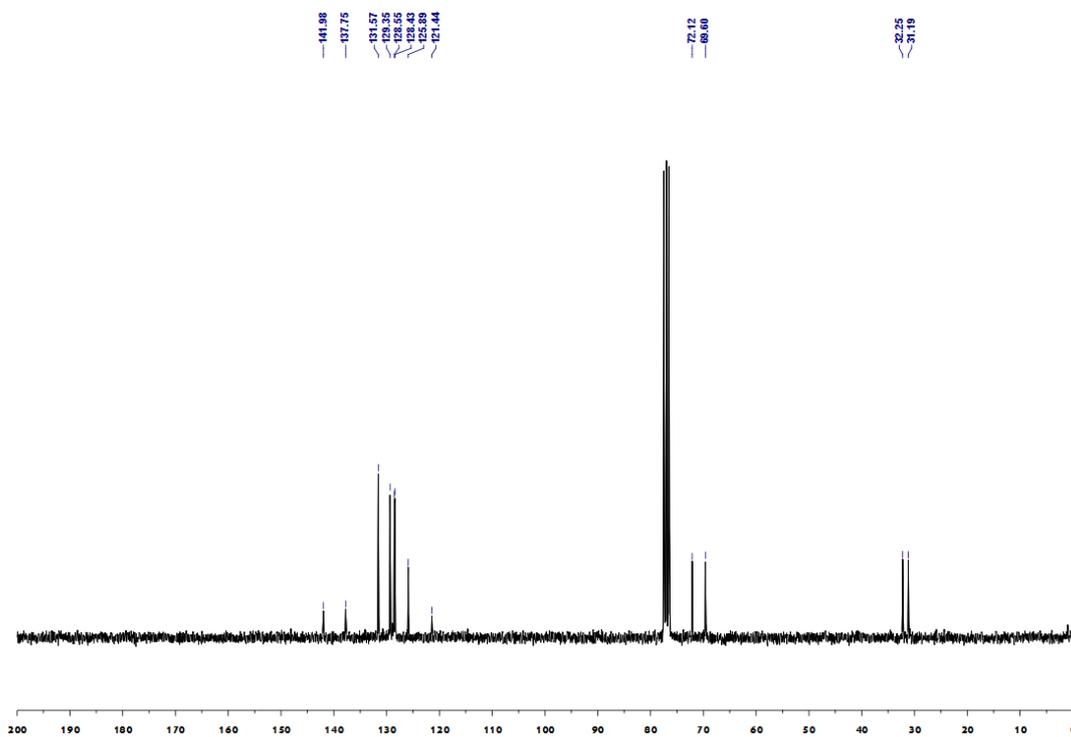
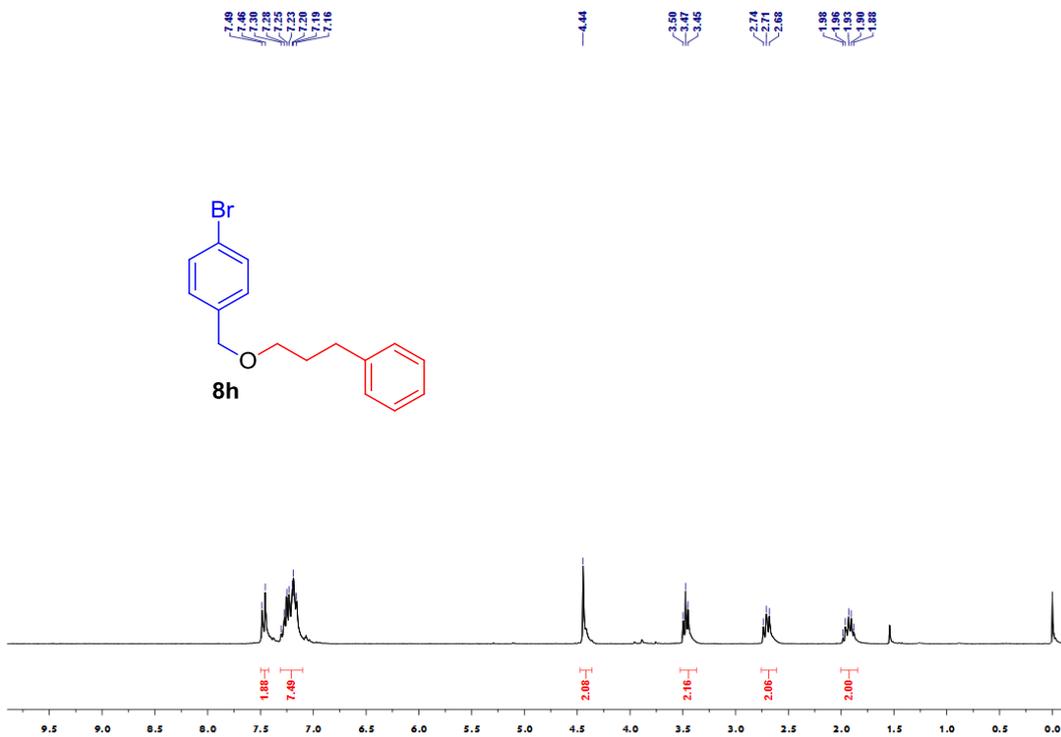
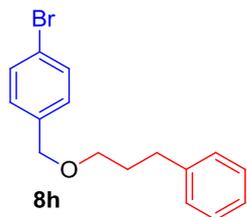


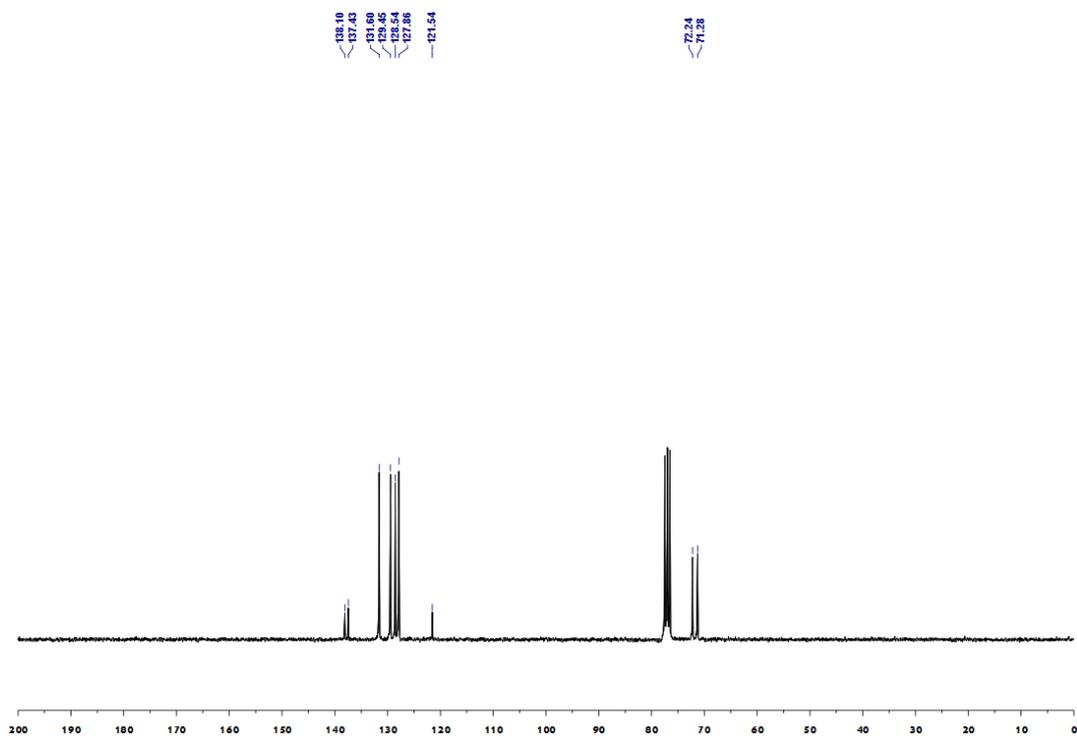
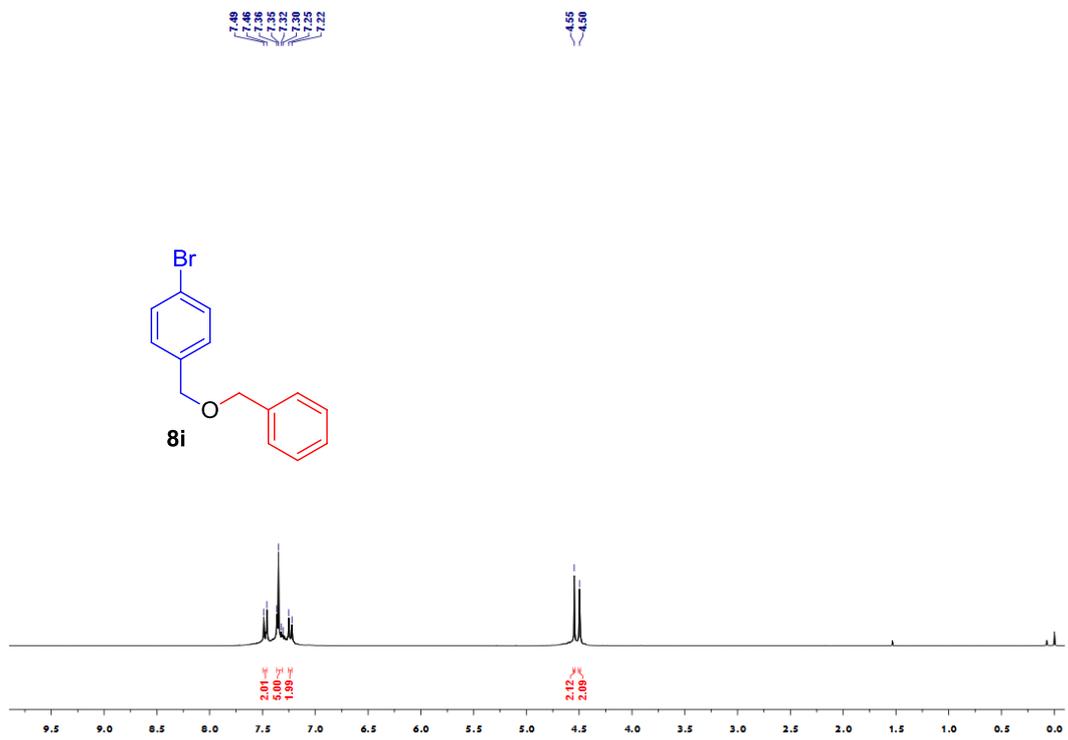




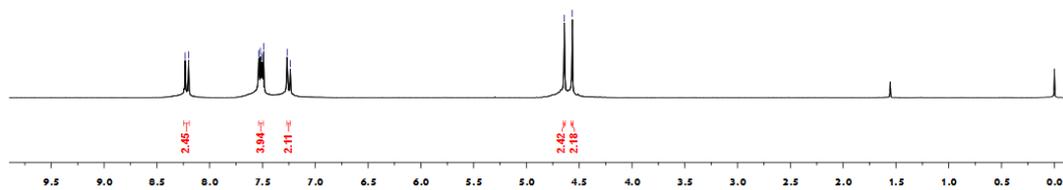
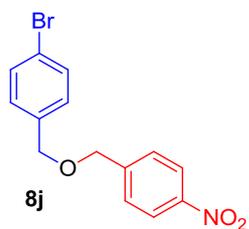




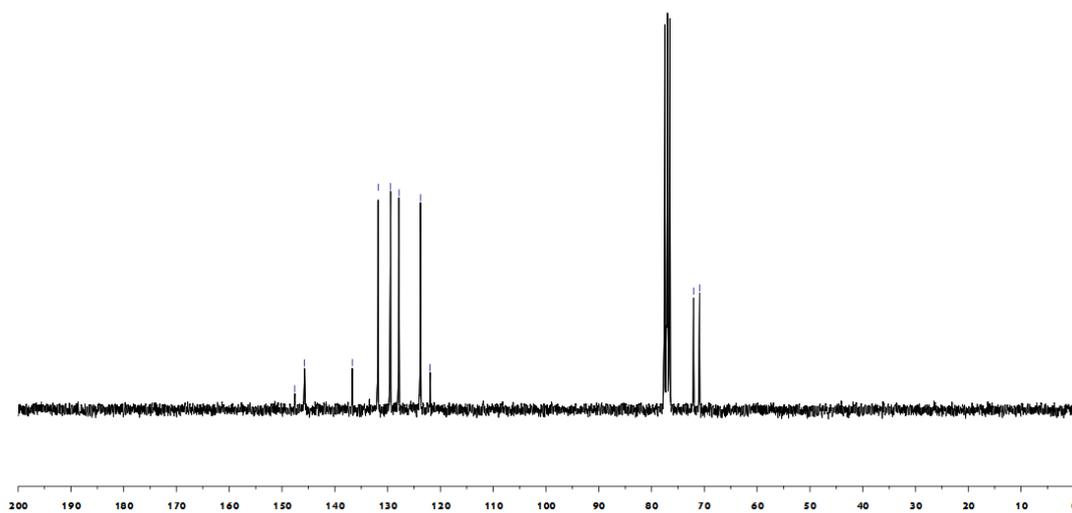


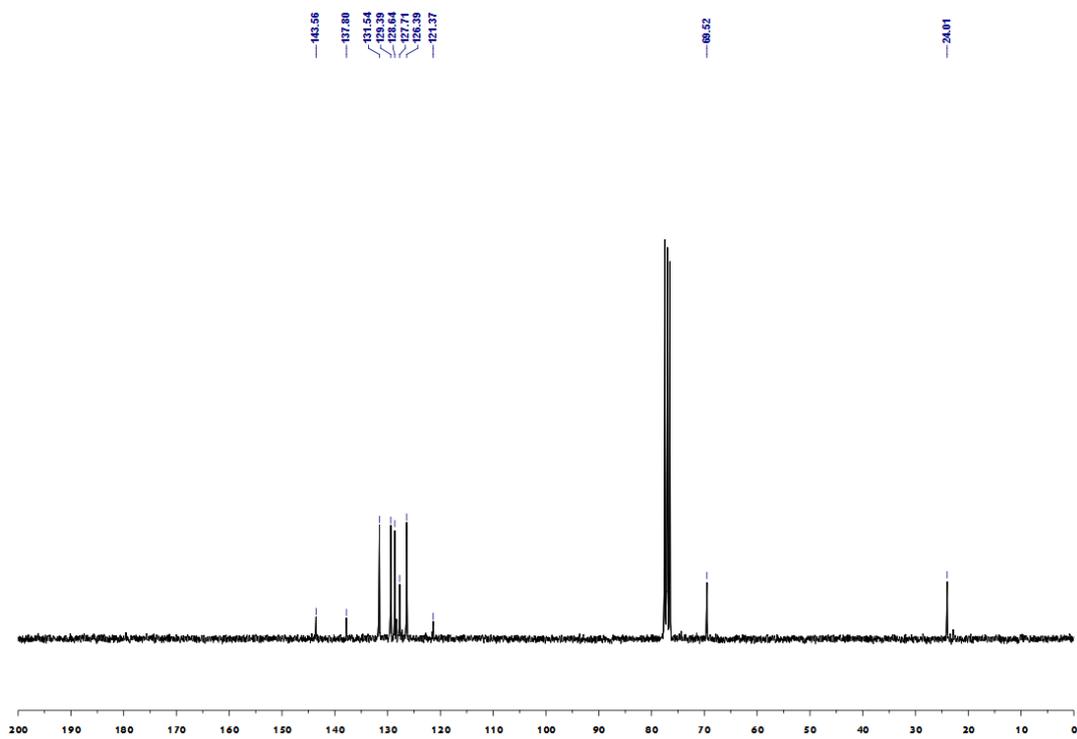
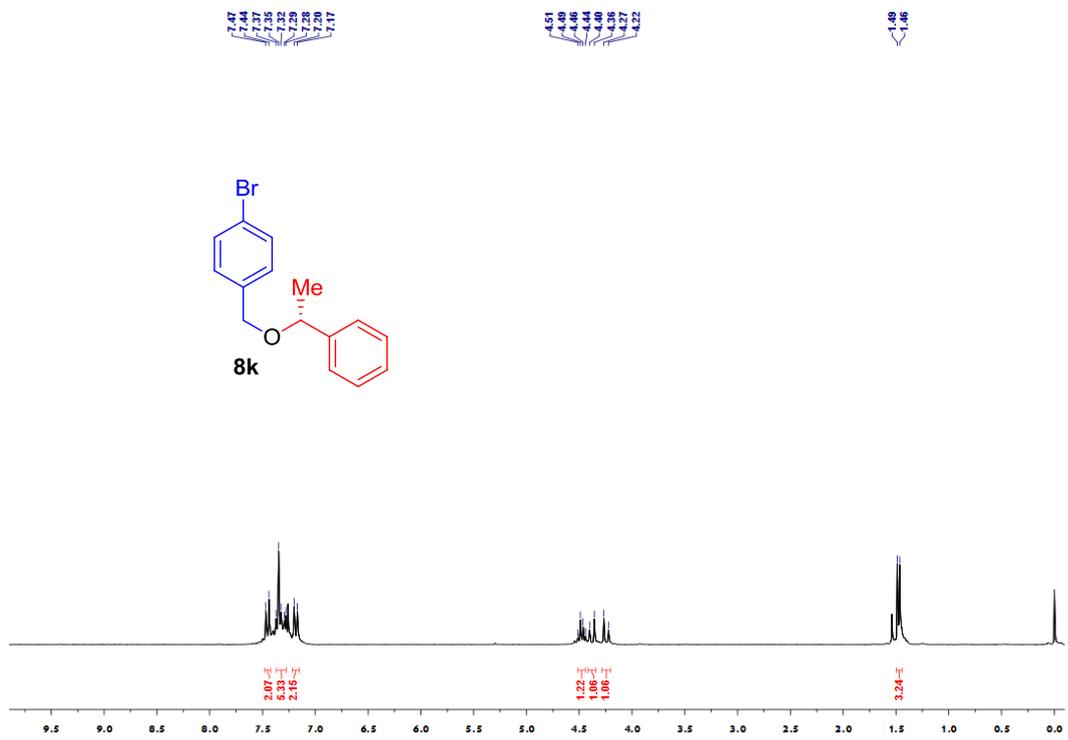


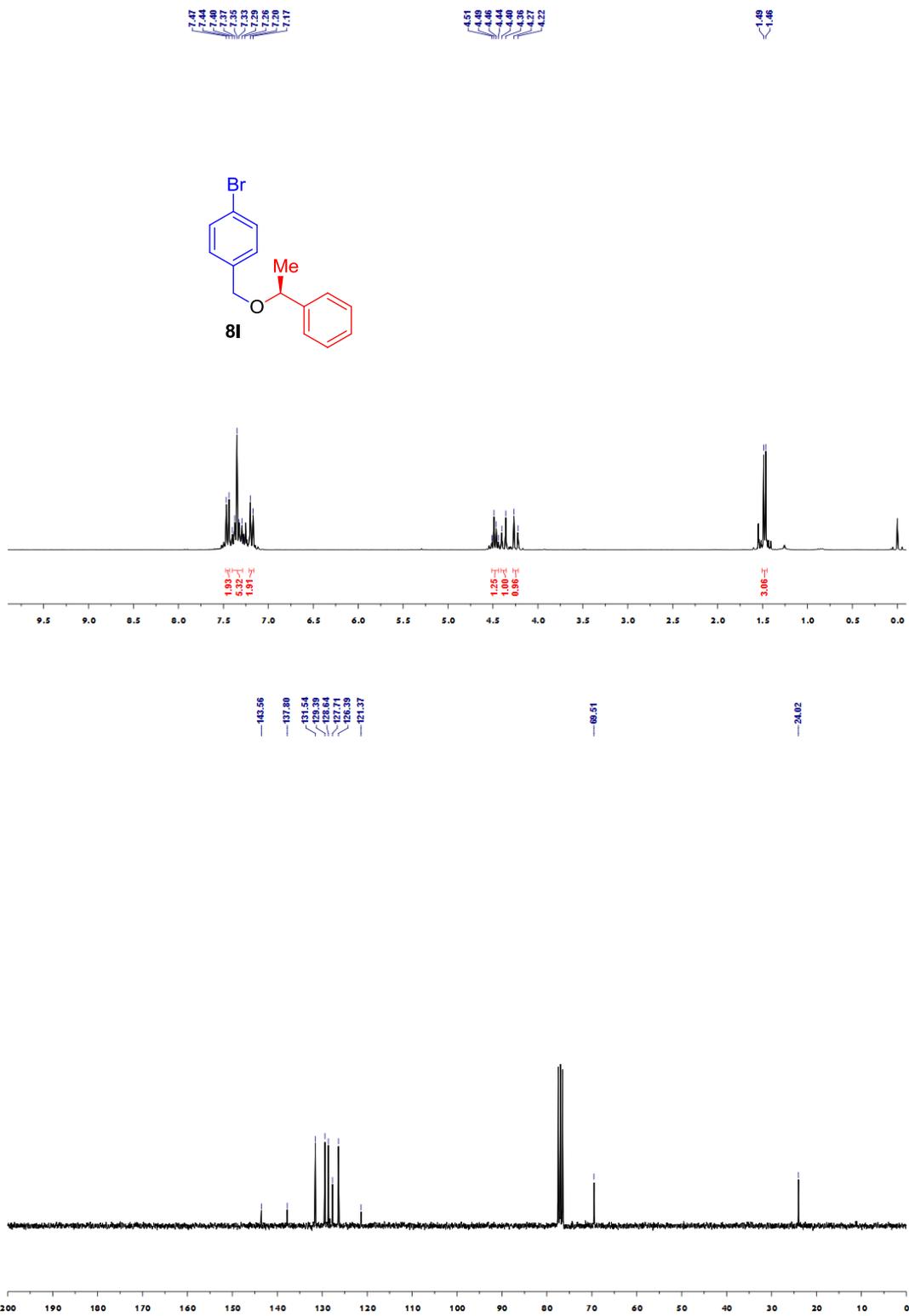
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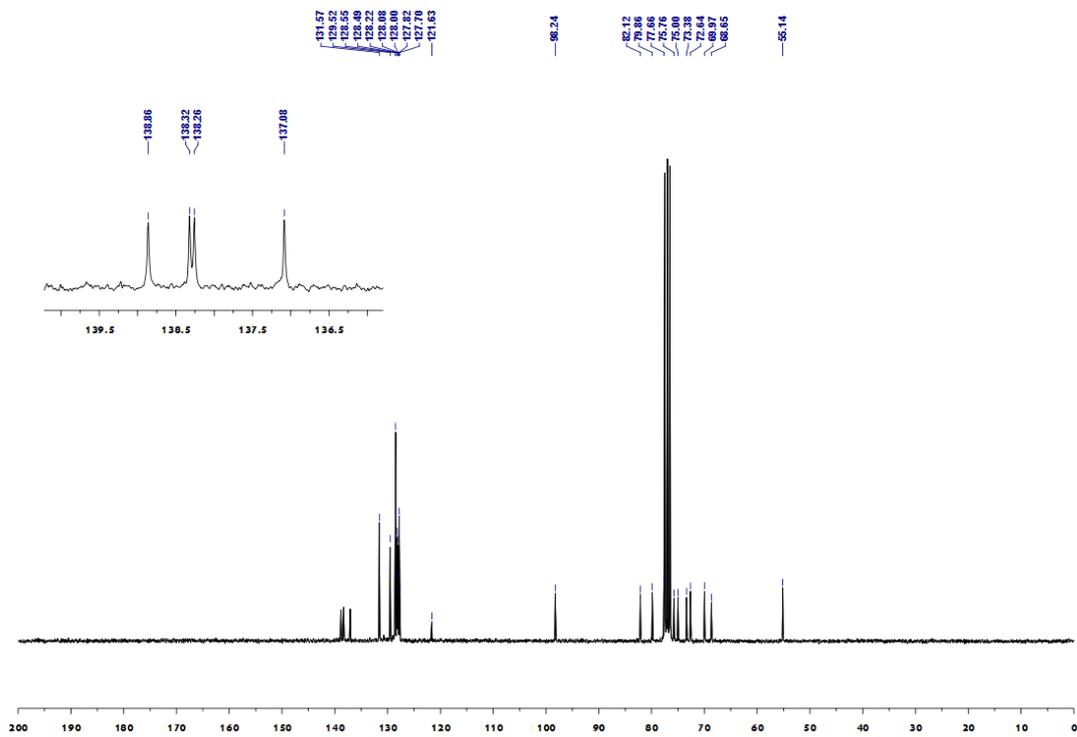
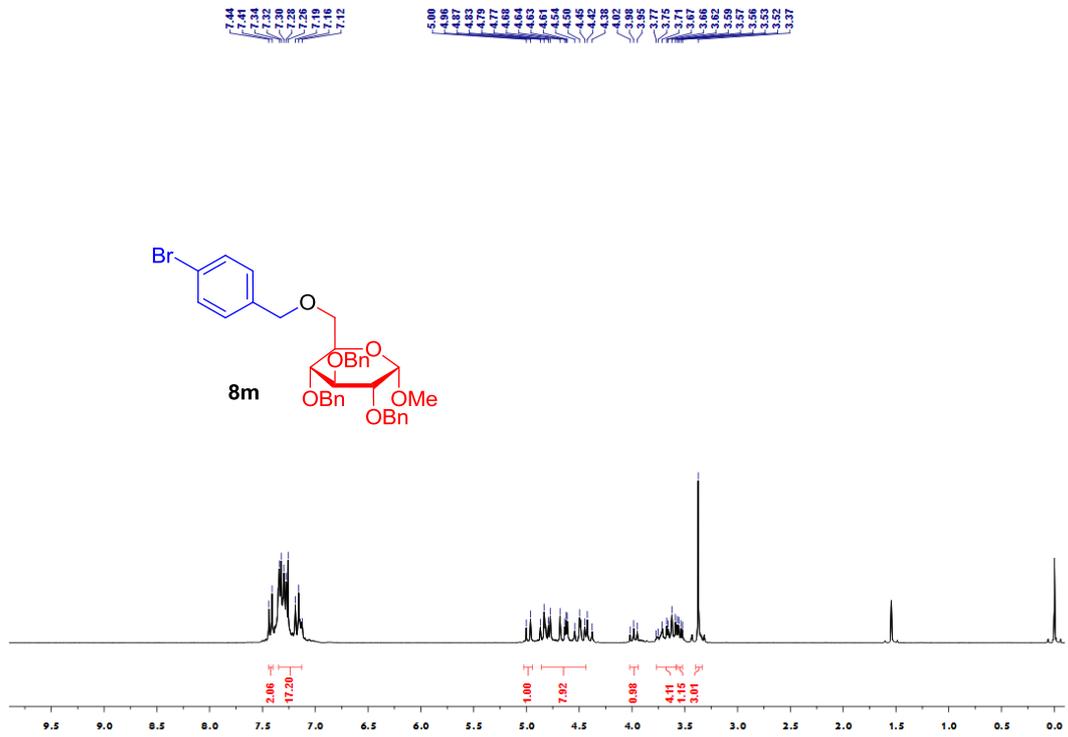


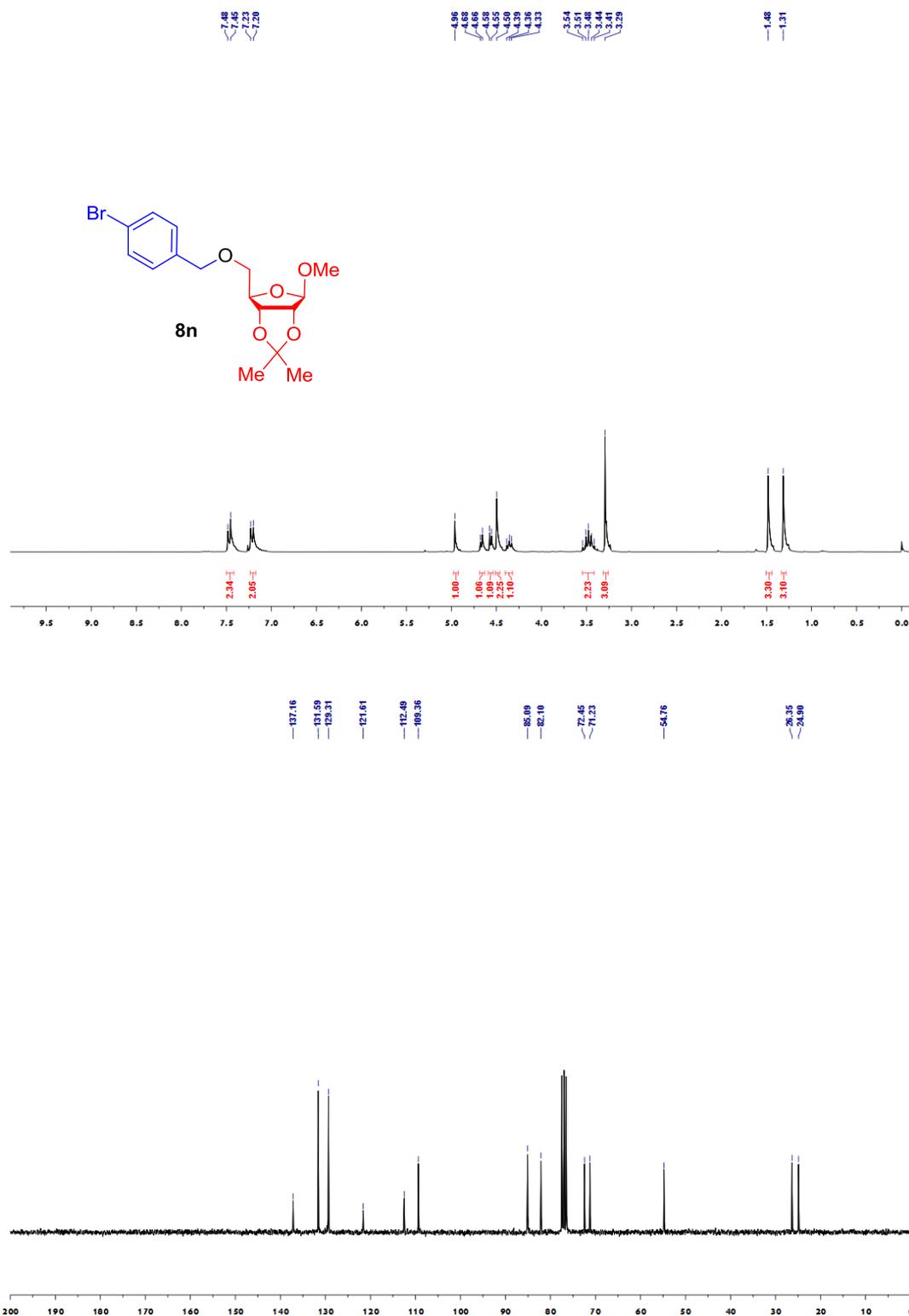
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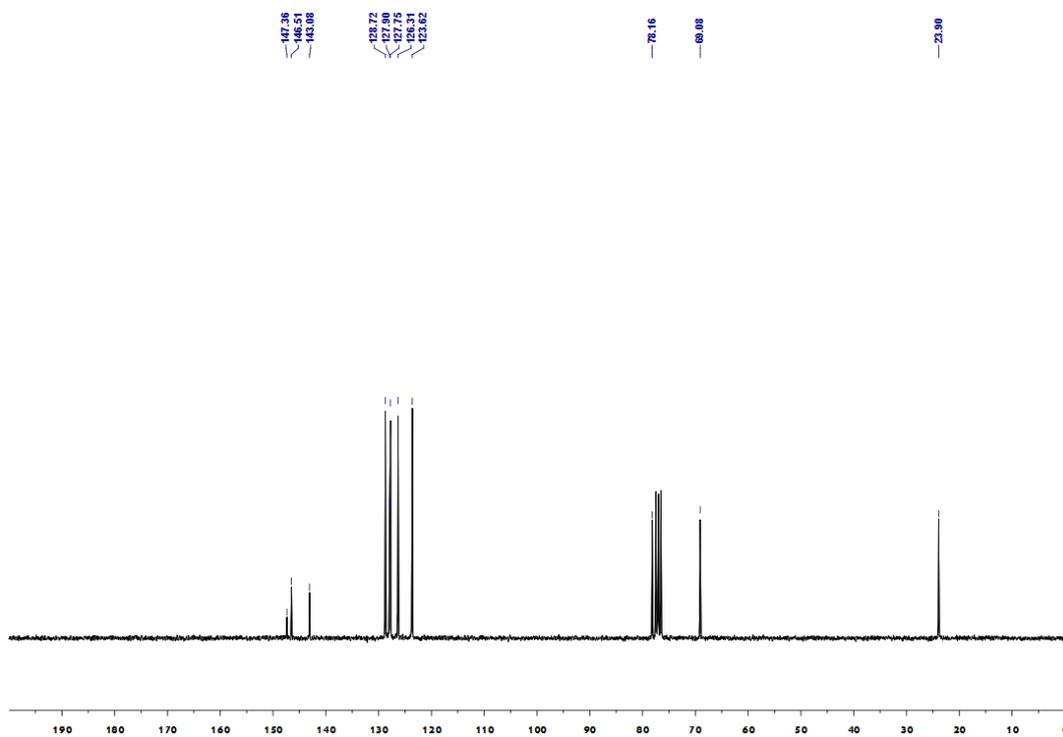
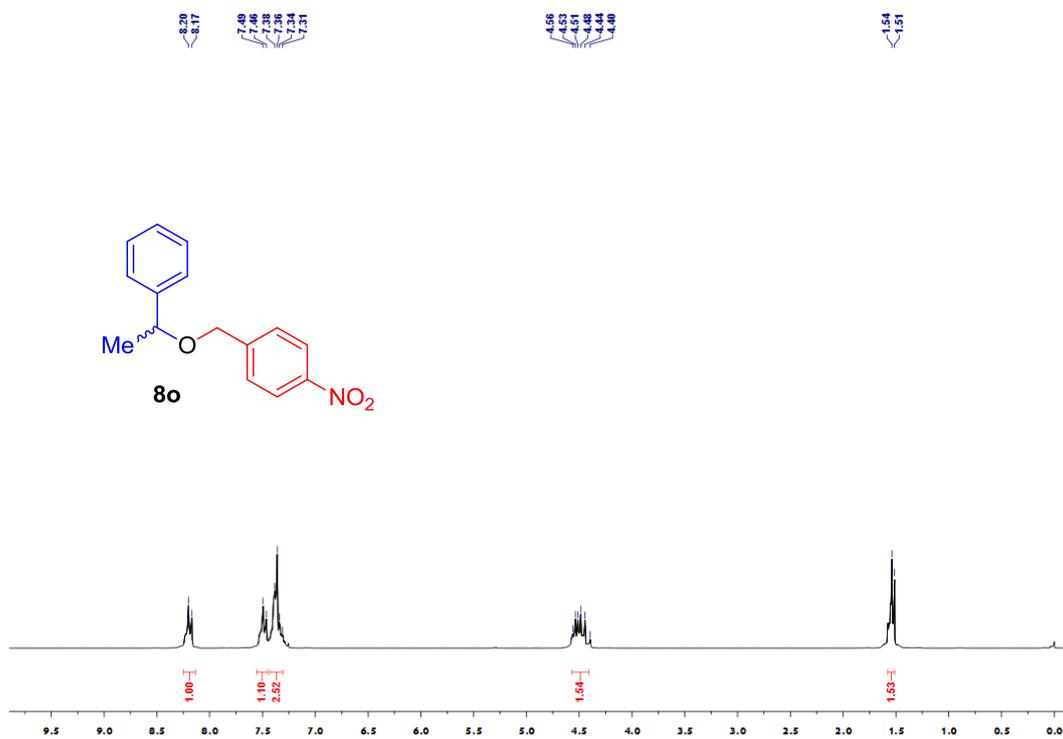


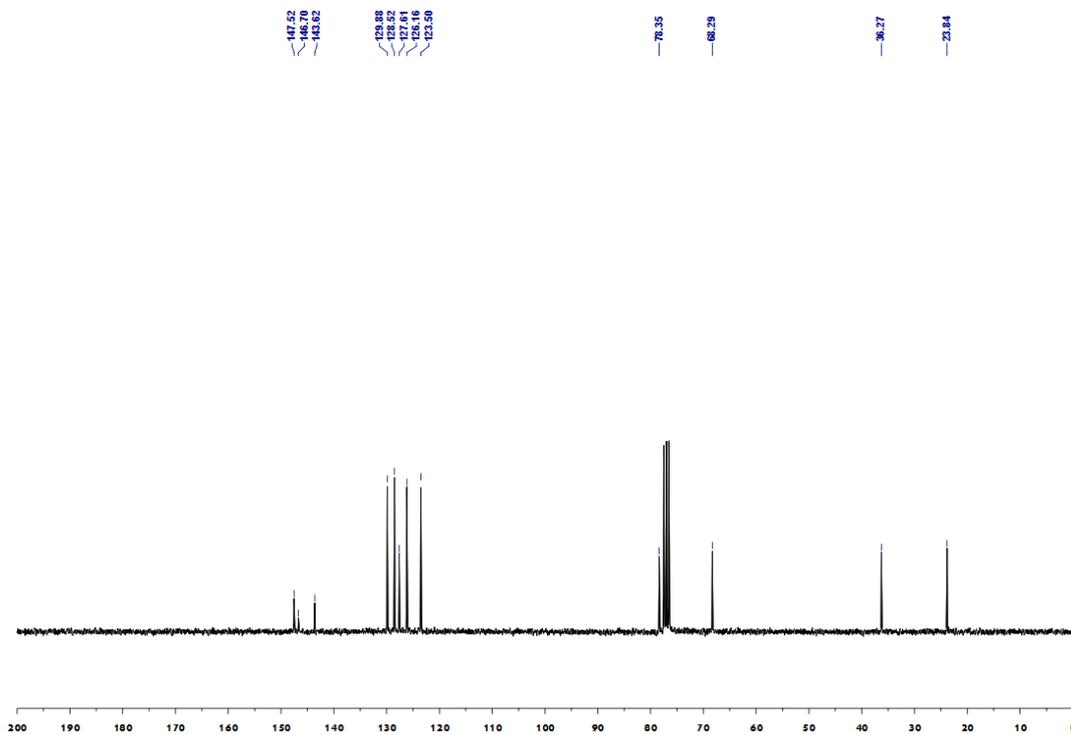
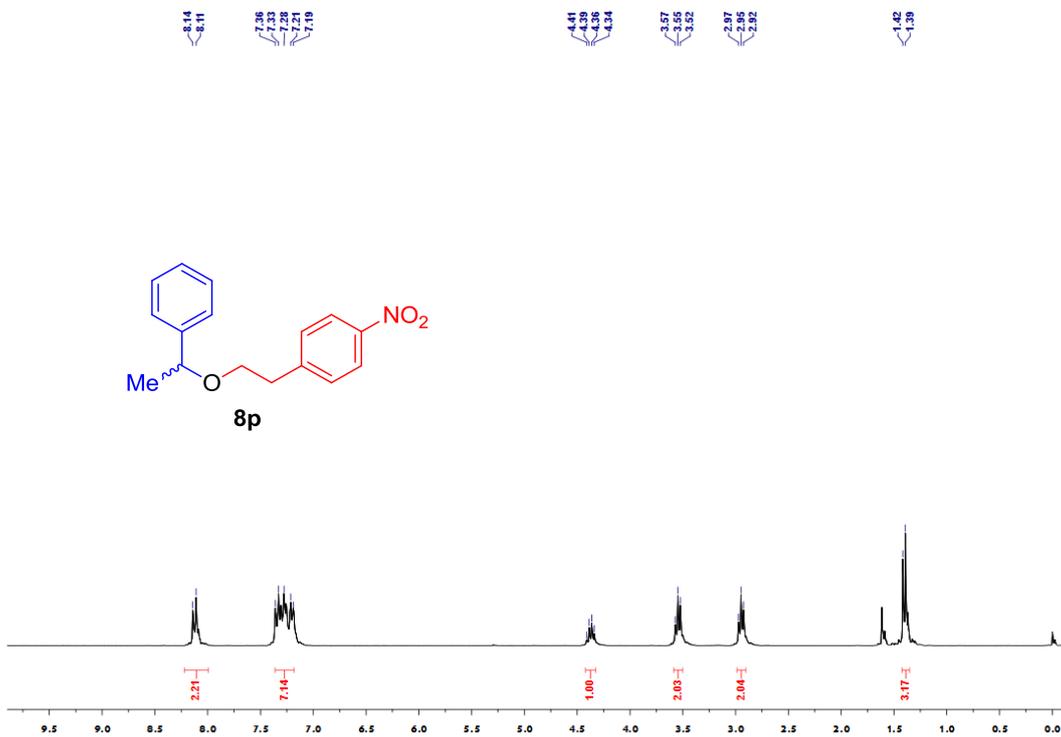
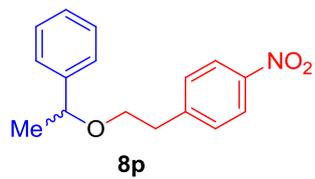


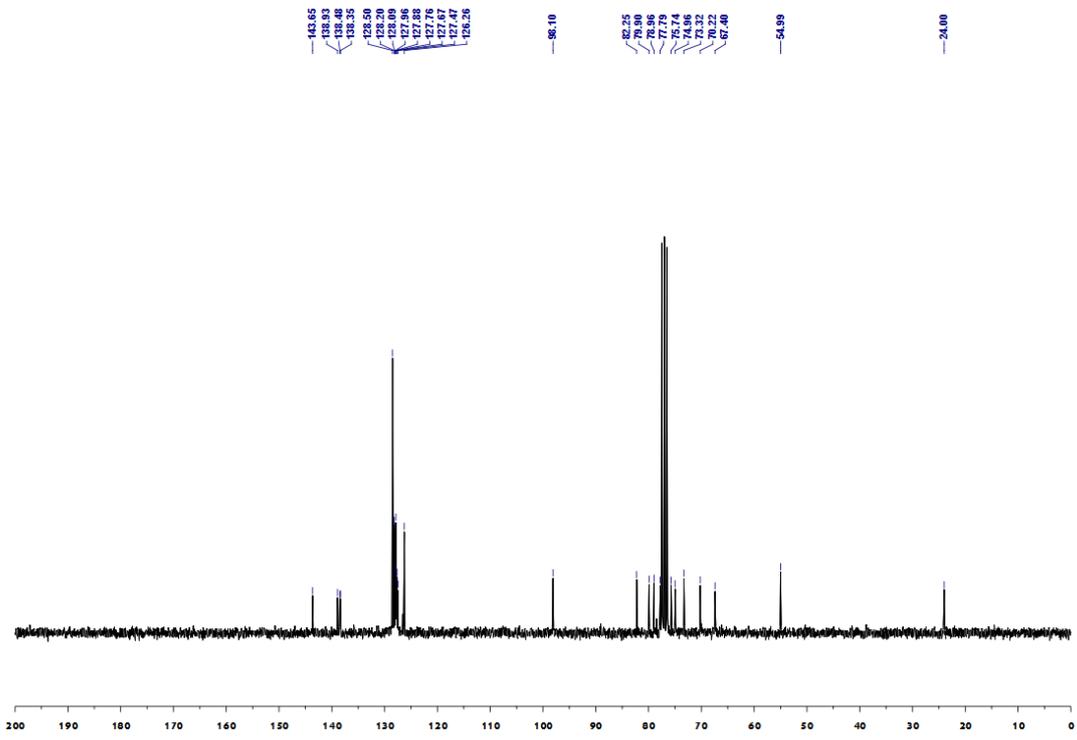
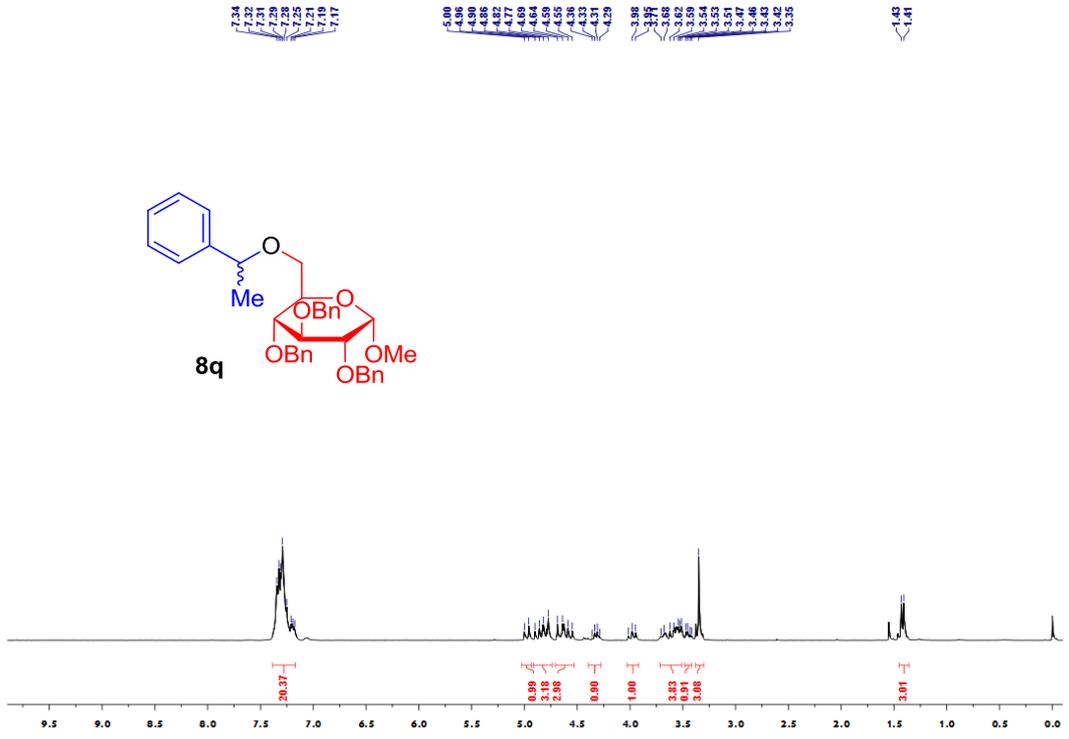


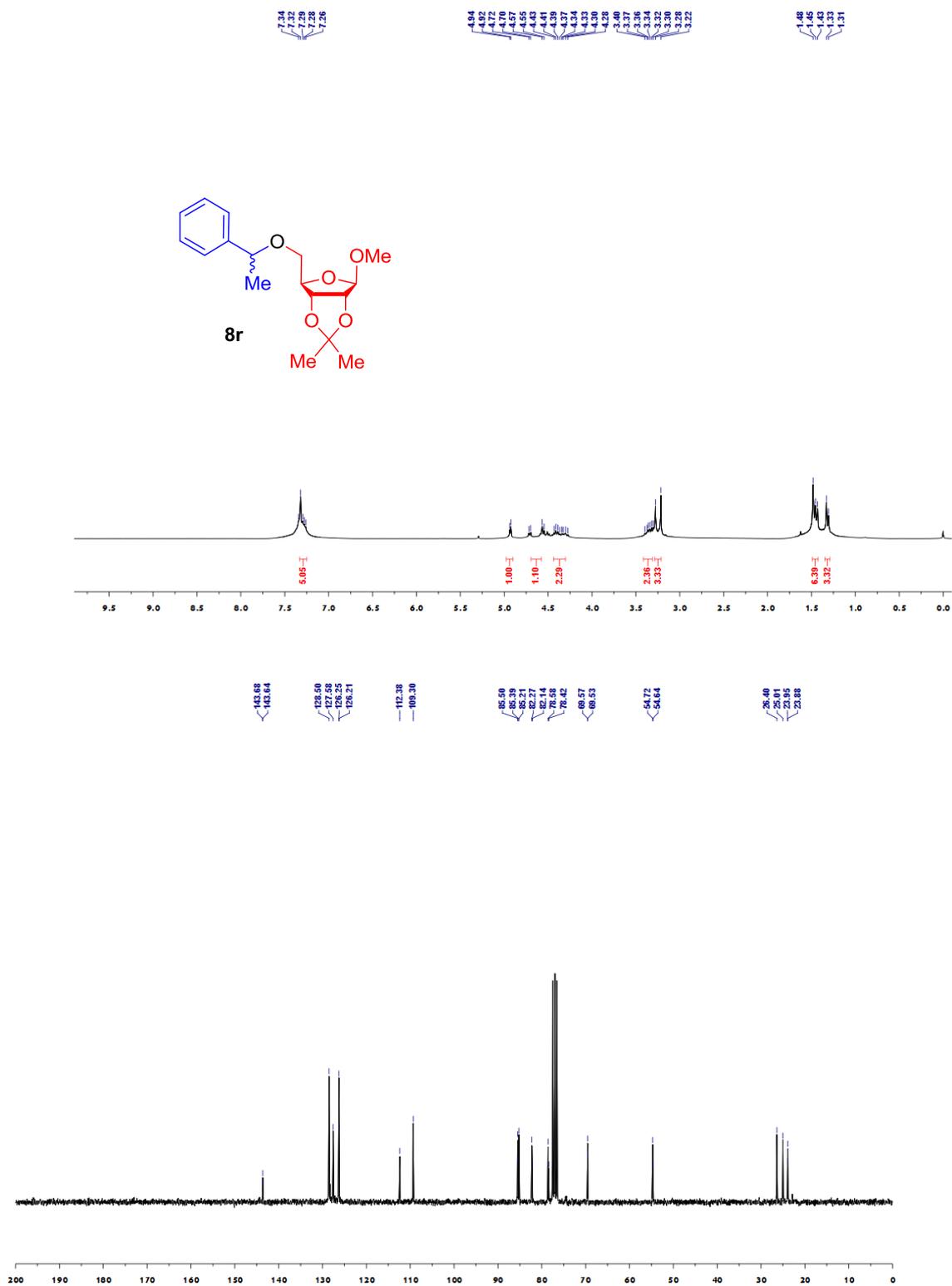


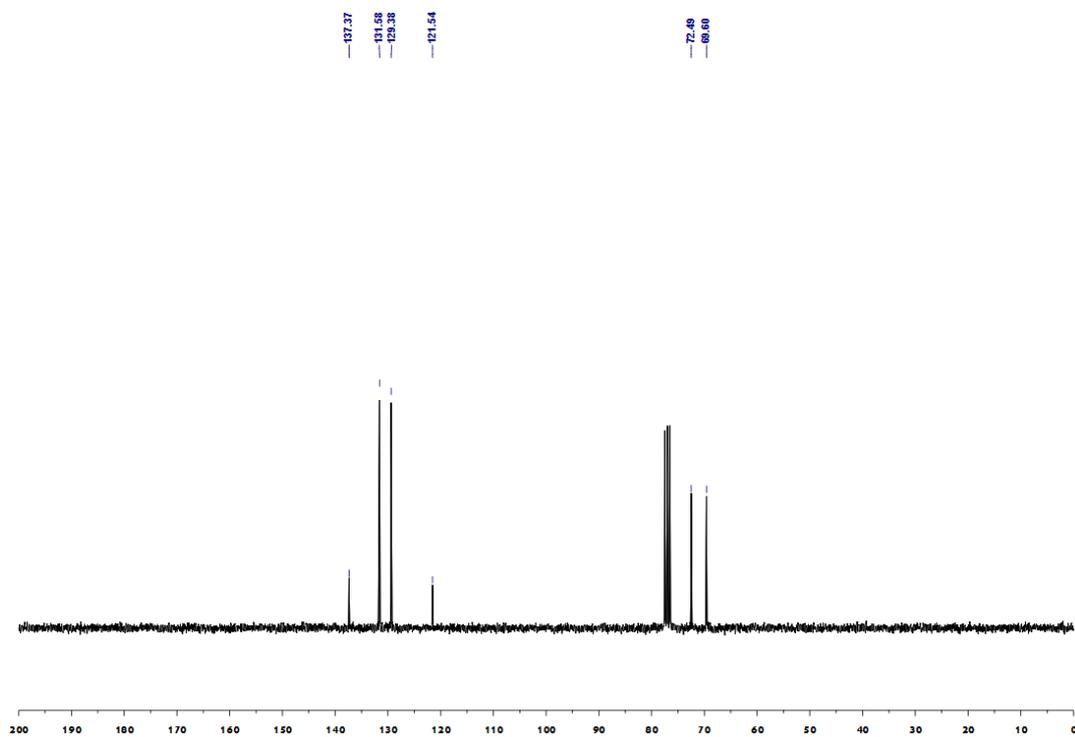
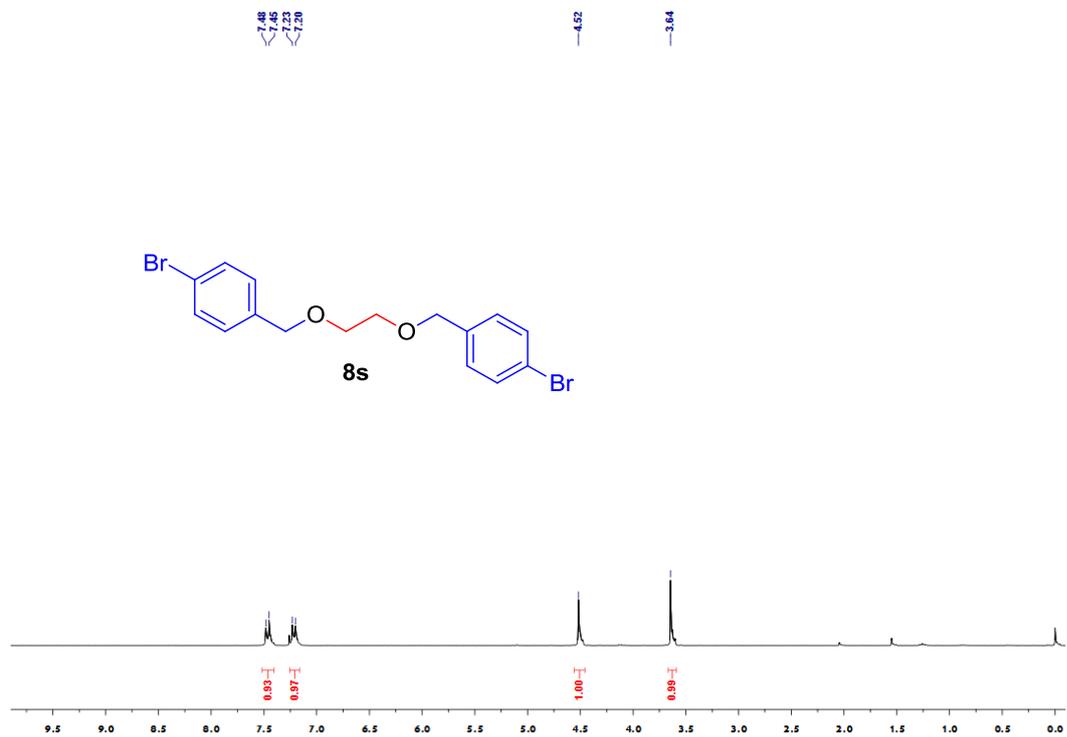


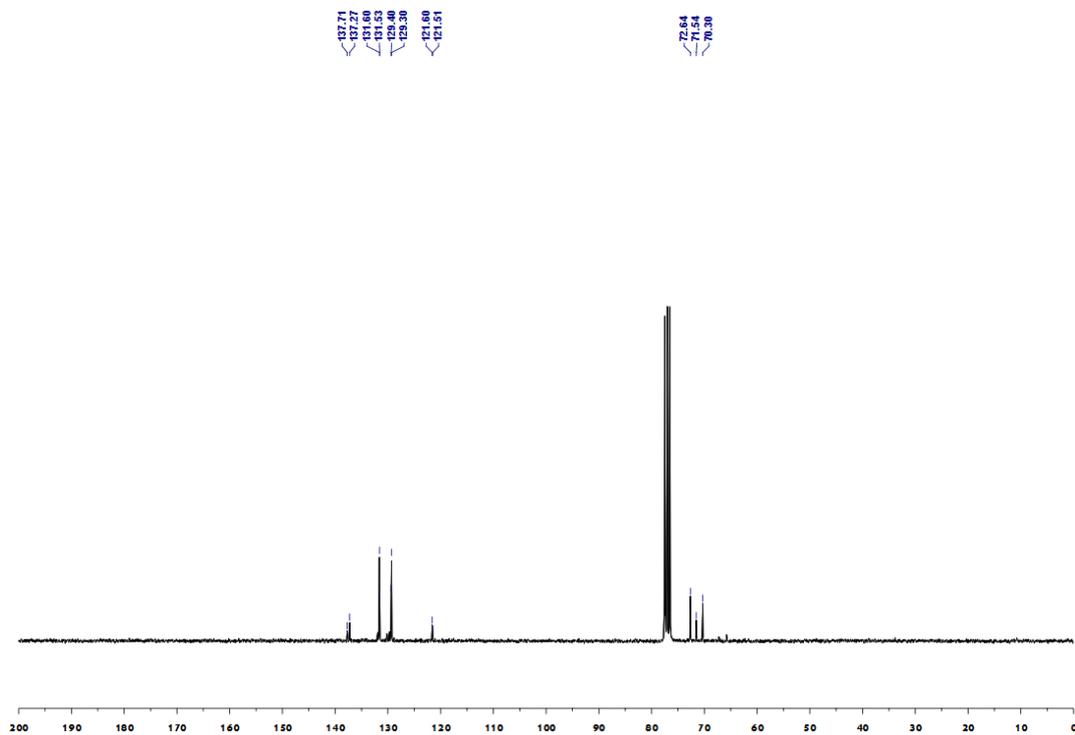
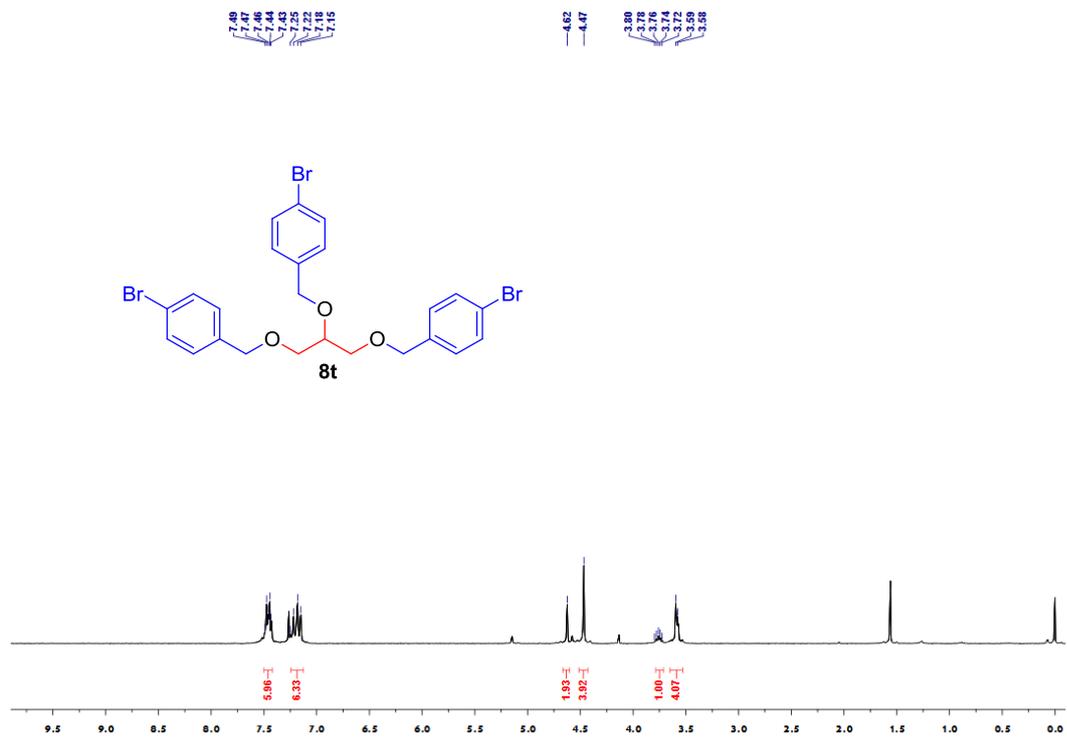






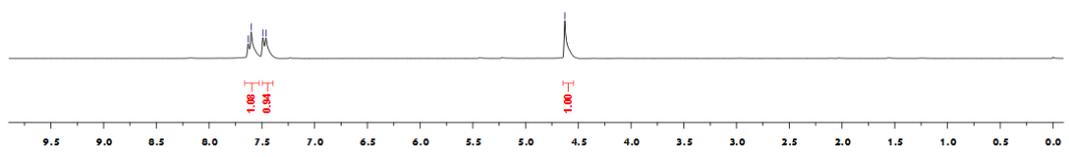
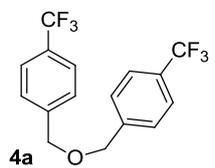






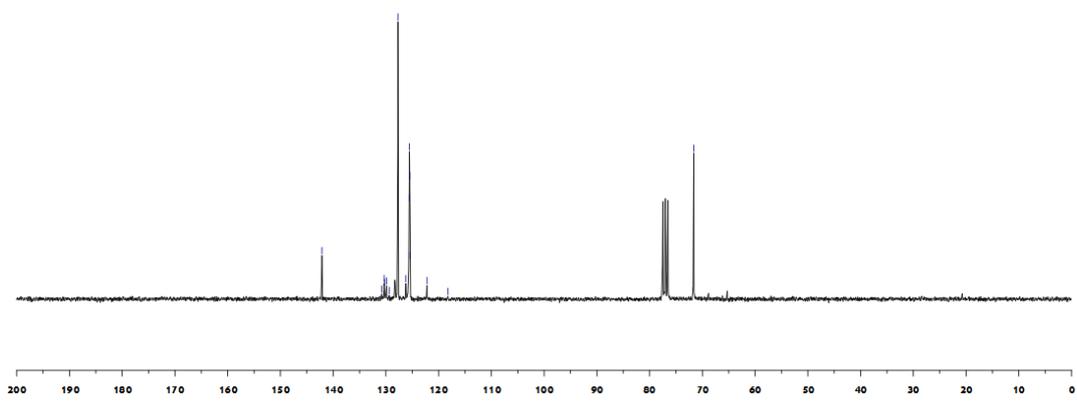
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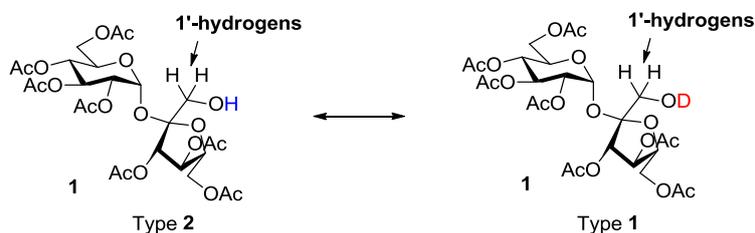


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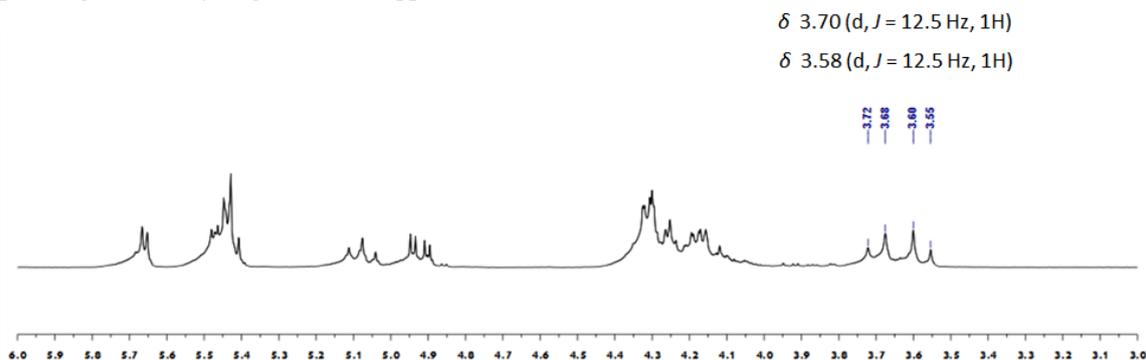
71.64



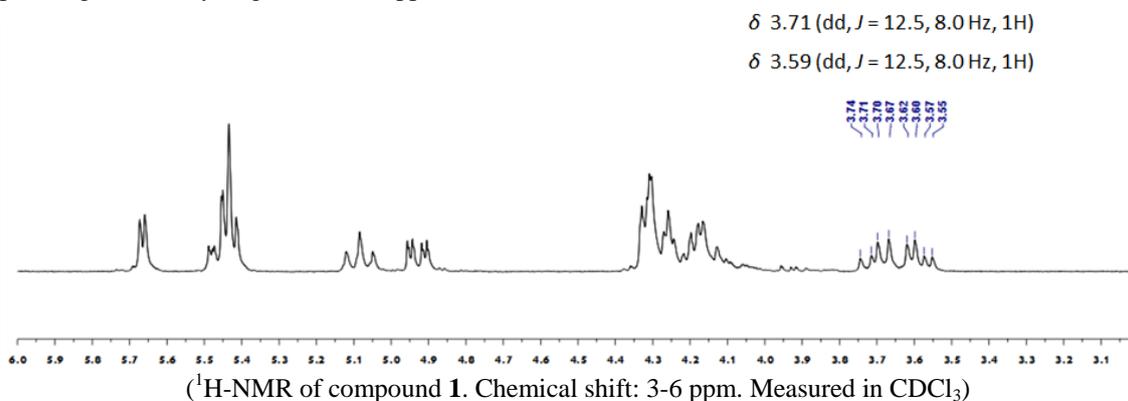
Two types of ^1H -NMR for 1'-hydrogens of compound **1**



Type **1** (signal of 1'-hydrogens: 3.5-3.8 ppm)

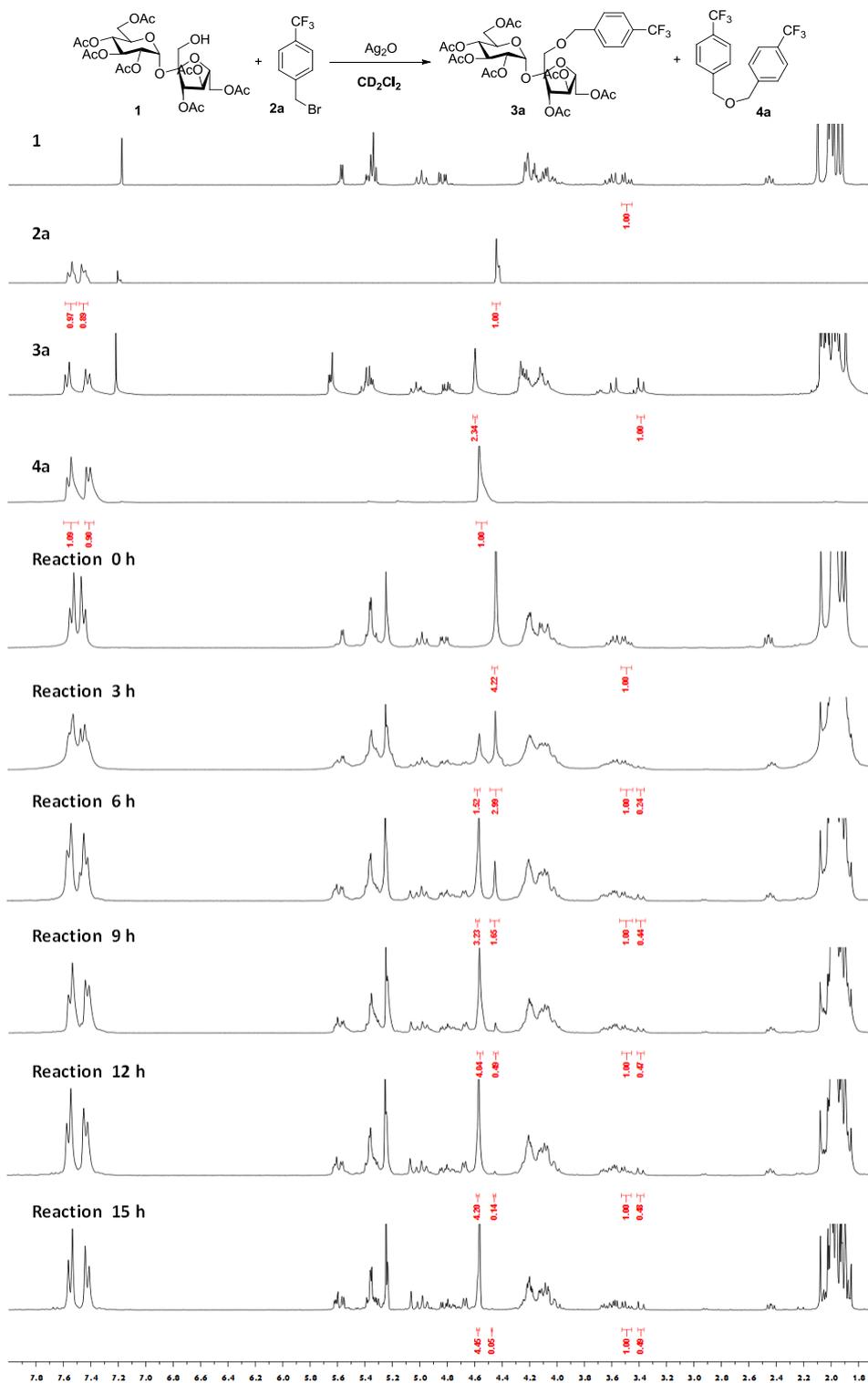


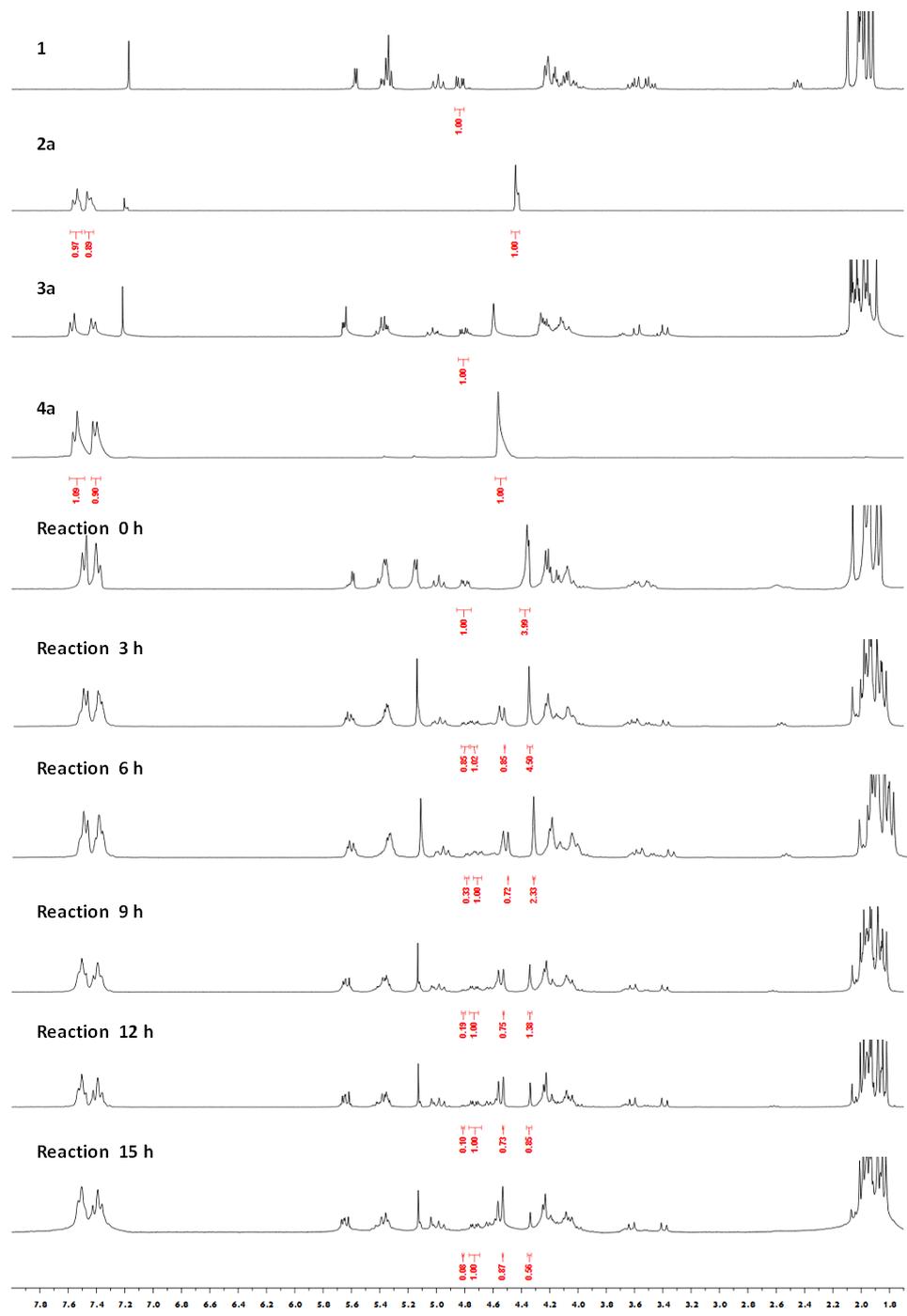
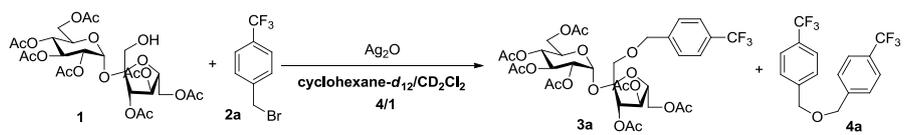
Type **2** (signal of 1'-hydrogens: 3.5-3.8 ppm)



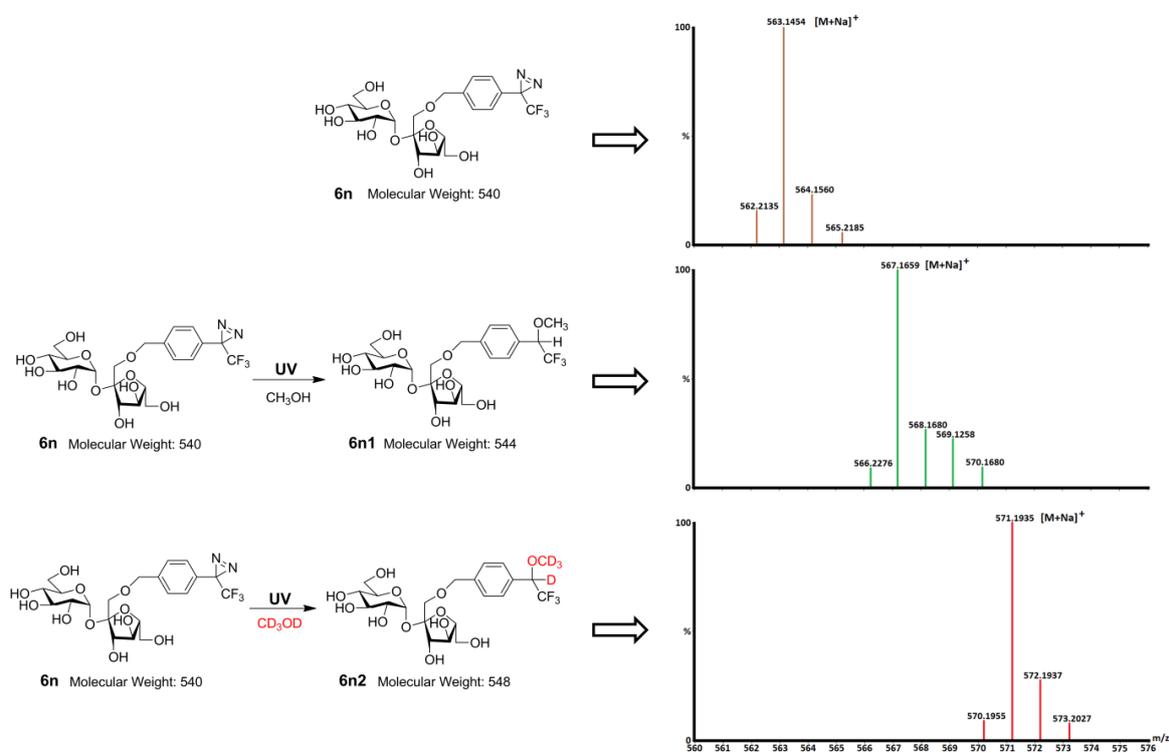
Previous report (*Carbohydr. Res.* 1991, 222, 121-129) provided the same ^1H -NMR data as type **1**. While, type **2** was always obtained during the measurement by CDCl_3 in this study. The difference between type **1** and **2** should be possibly derived from the deuterium exchange occurred at 1'-hydroxyl in the presence of some active proton containing reagents (D_2O , etc) existed in CDCl_3 or introduced during the measurement. (With the addition of one drop of D_2O , type **2** can be converted to type **1**)

Kinetic investigation of benzylation of 1 by Ag₂O in CD₂Cl₂ and deuterated cosolvent

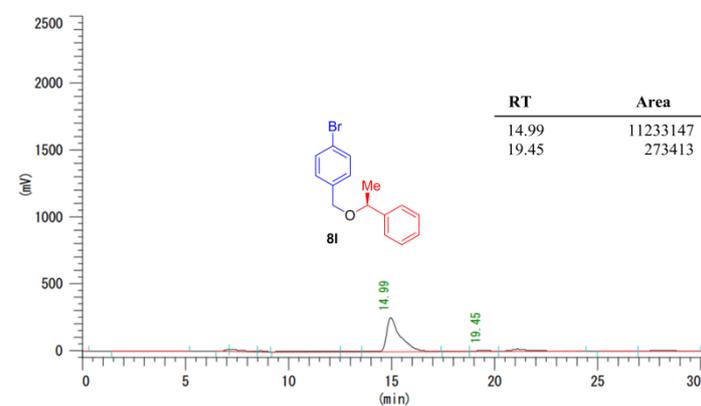
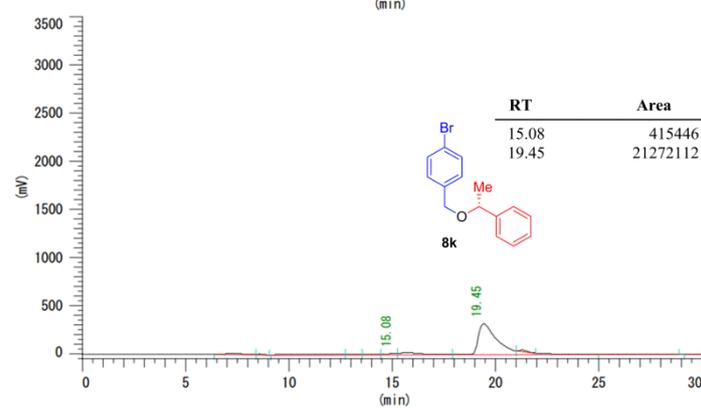
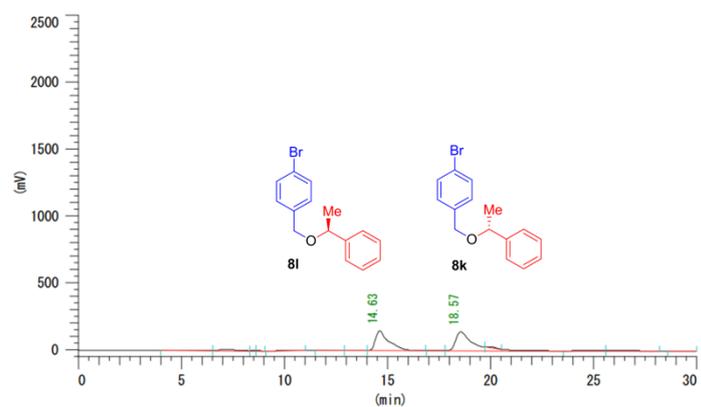




Mass spectra of 6n after irradiation for 10 min in CH₃OH or CD₃OD



HPLC analysis data for compounds **8k** and **8l**



HPLC (Chiralcel OJ column, *n*-hexane/*i*-PrOH=85:15, 0.5 mL/min, 210 nm),

8k: t_R (major) = 19.45 min, t_R (minor) = 15.08 min; ee = 96%

8l: t_R (major) = 14.99 min, t_R (minor) = 19.45 min; ee = 95%