

# Facile Modular Synthesis of Jasmonoyl-L-Isoleucine Analogs Possessing a Pyrazolidin-3-one Core

Samuel Vizcaíno Páez,<sup>a</sup> Diego Durango Restrepo,<sup>b</sup> Christian Jürgen Müller,<sup>c</sup> Matthias Breuning<sup>c\*</sup> and Wiston Quiñones Fletcher<sup>a\*</sup>

<sup>a</sup> Química orgánica de productos naturales, Universidad de Antioquia, Medellín, 050010, Antioquia, Colombia

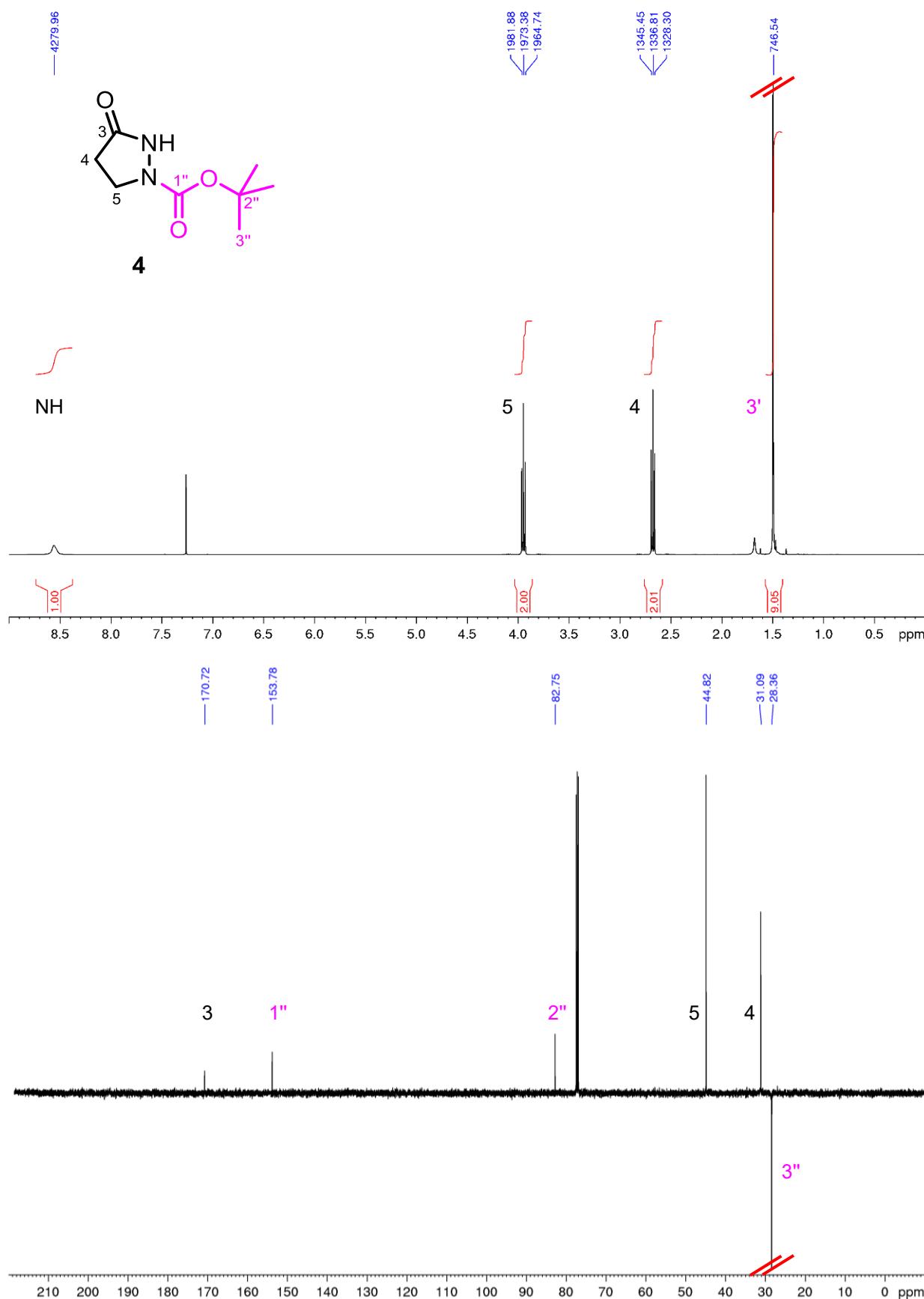
<sup>b</sup> Química de productos naturales y los alimentos, Universidad Nacional de Colombia, Medellín, 050034, Antioquia, Colombia

<sup>c</sup> Department of Chemistry, University of Bayreuth, Universitätsstraße 30, 95447 Bayreuth, Germany

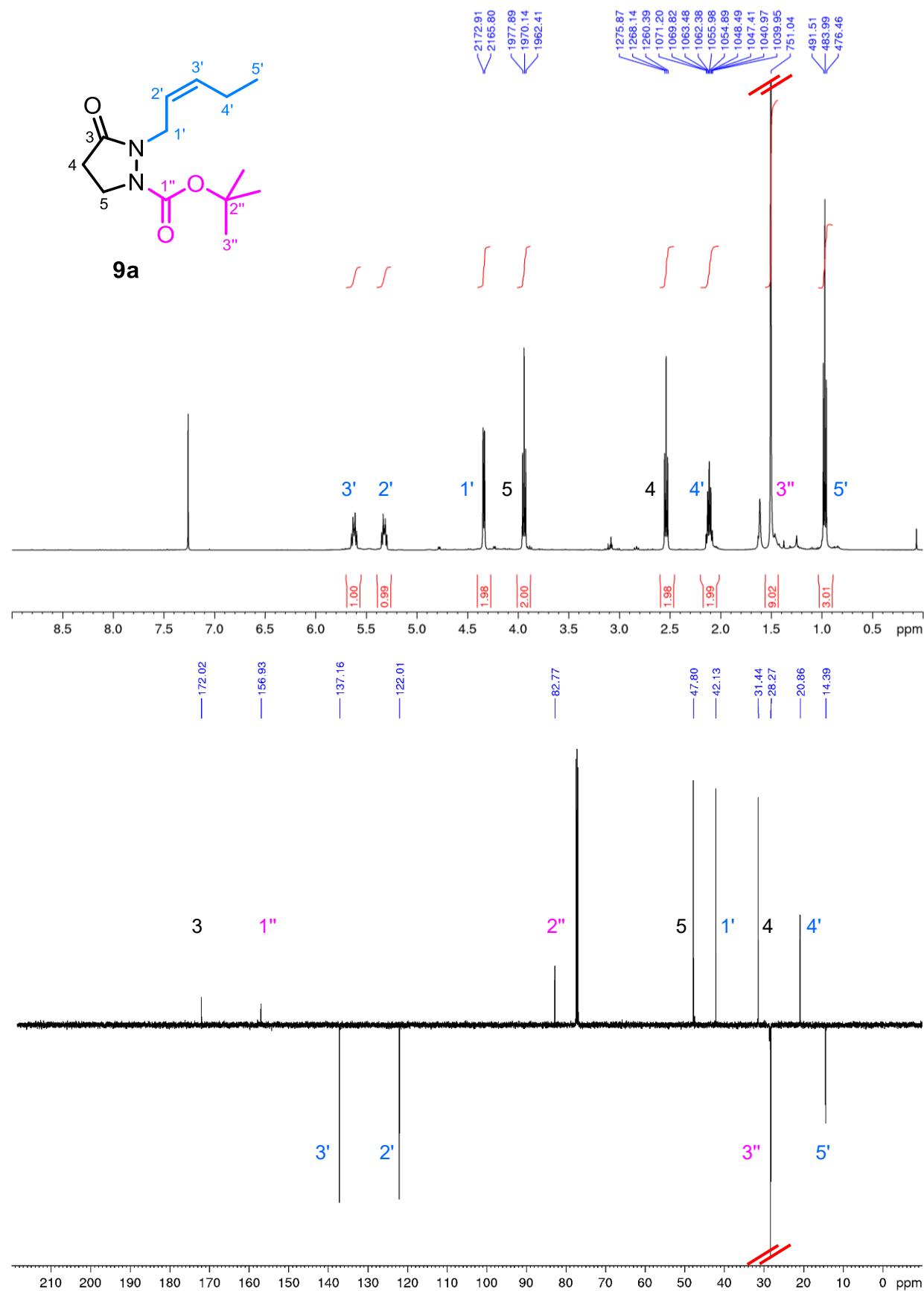
## NMR spectra

The spectra are given in the same order as in the experiments described in the main text. All signal assignments in the <sup>1</sup>H and <sup>13</sup>C NMR data were made on basis of 2D NMR spectra (COSY, HSQC, HMBC).

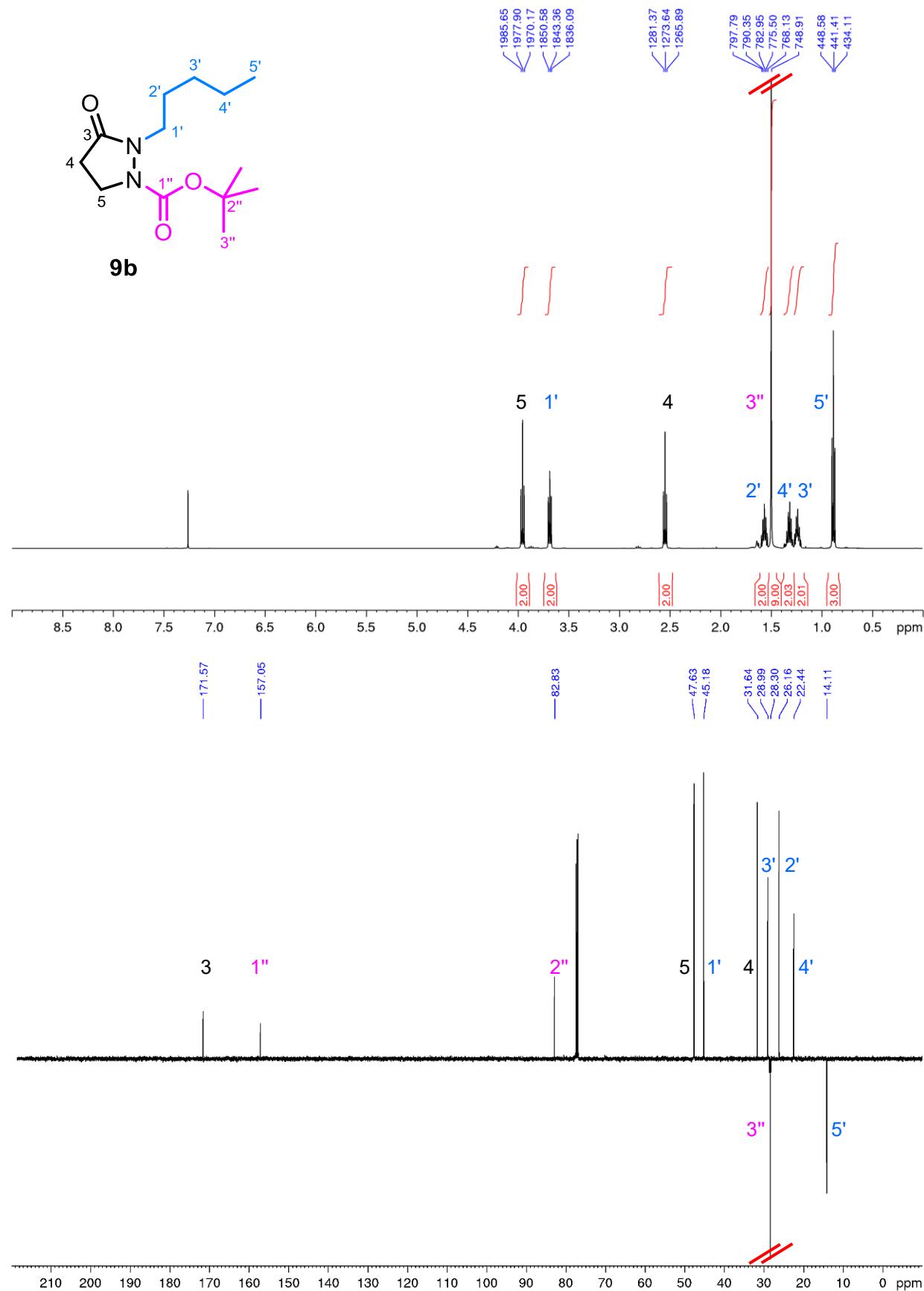
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **4**:



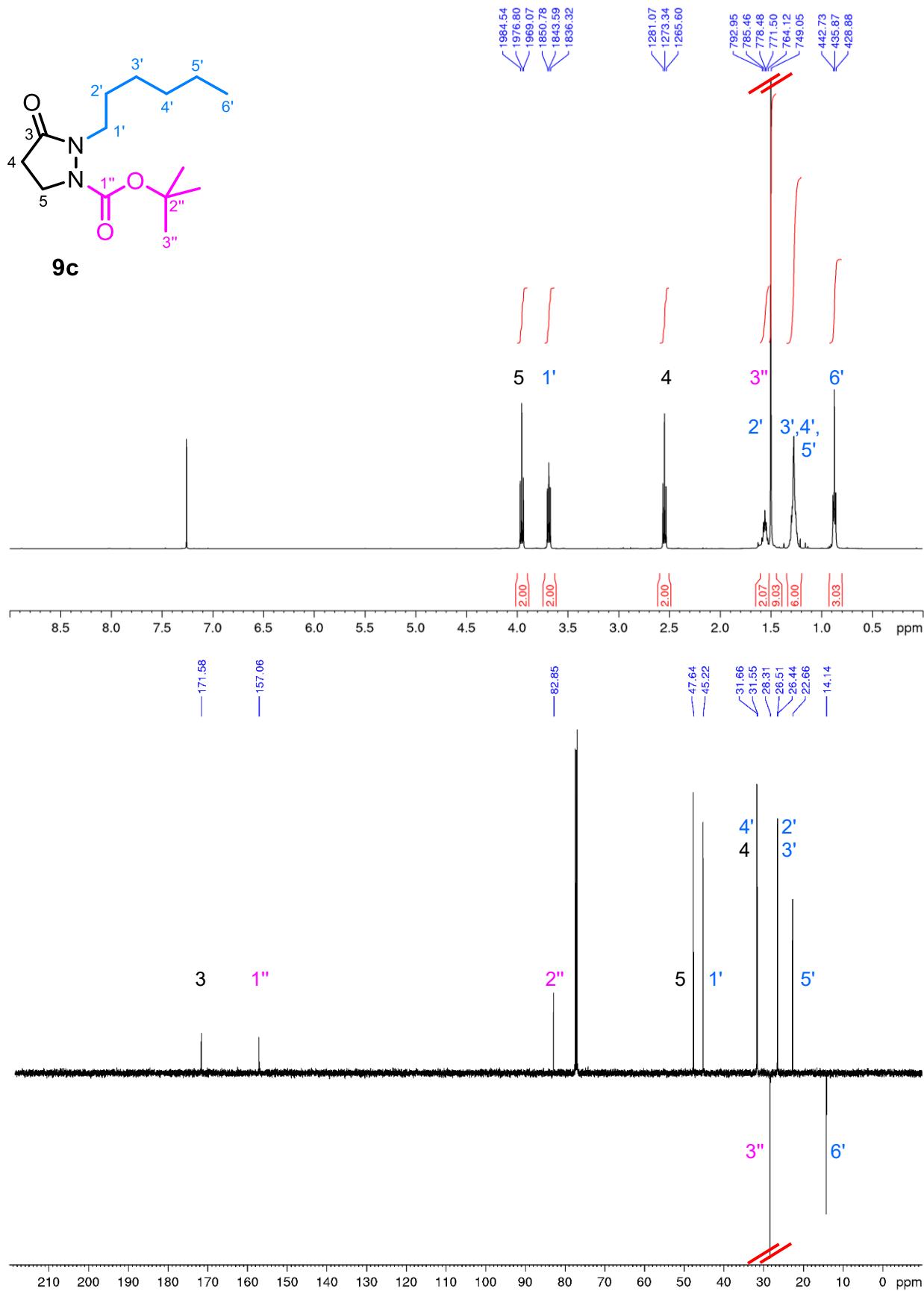
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **9a**:



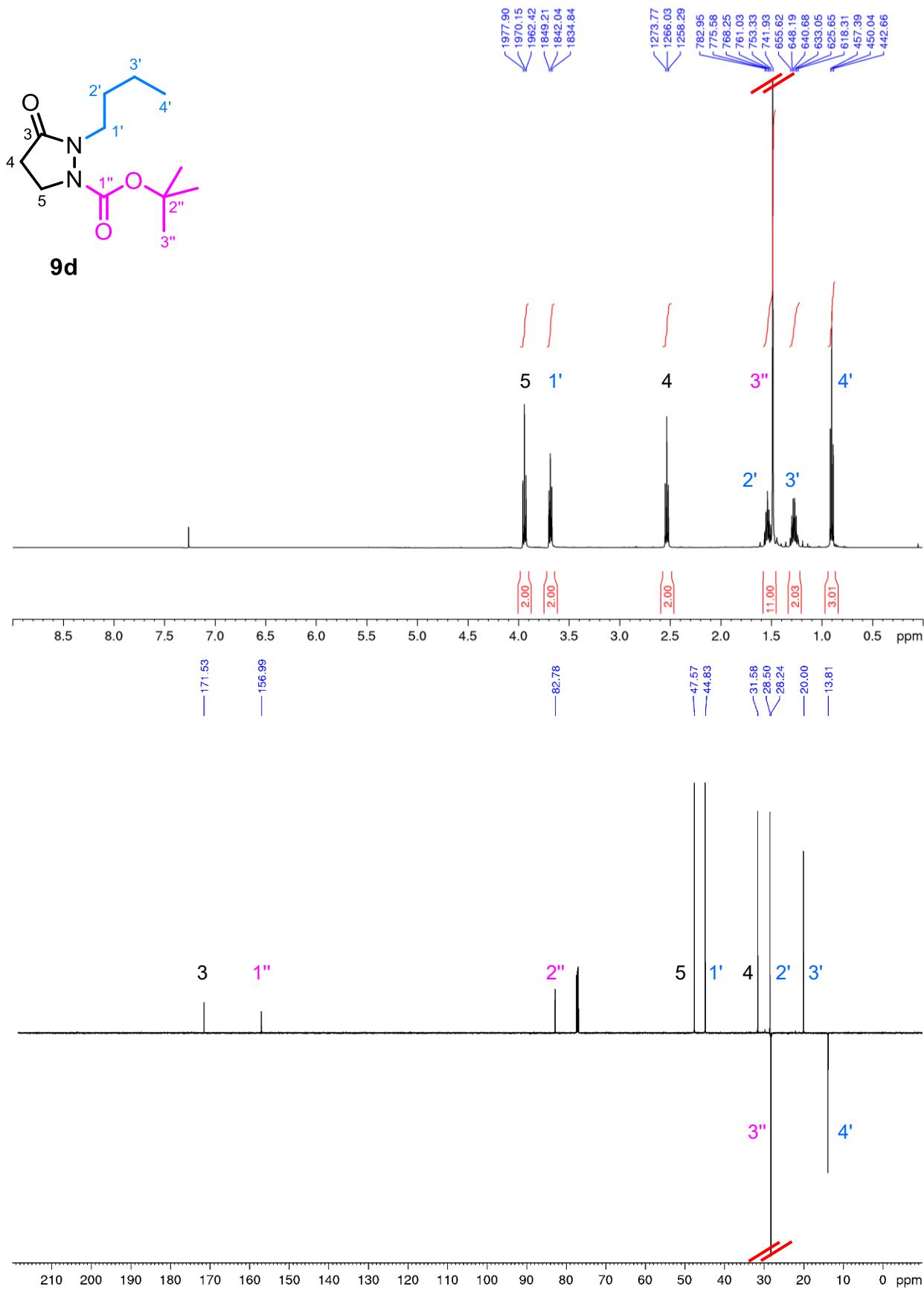
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **9b**:



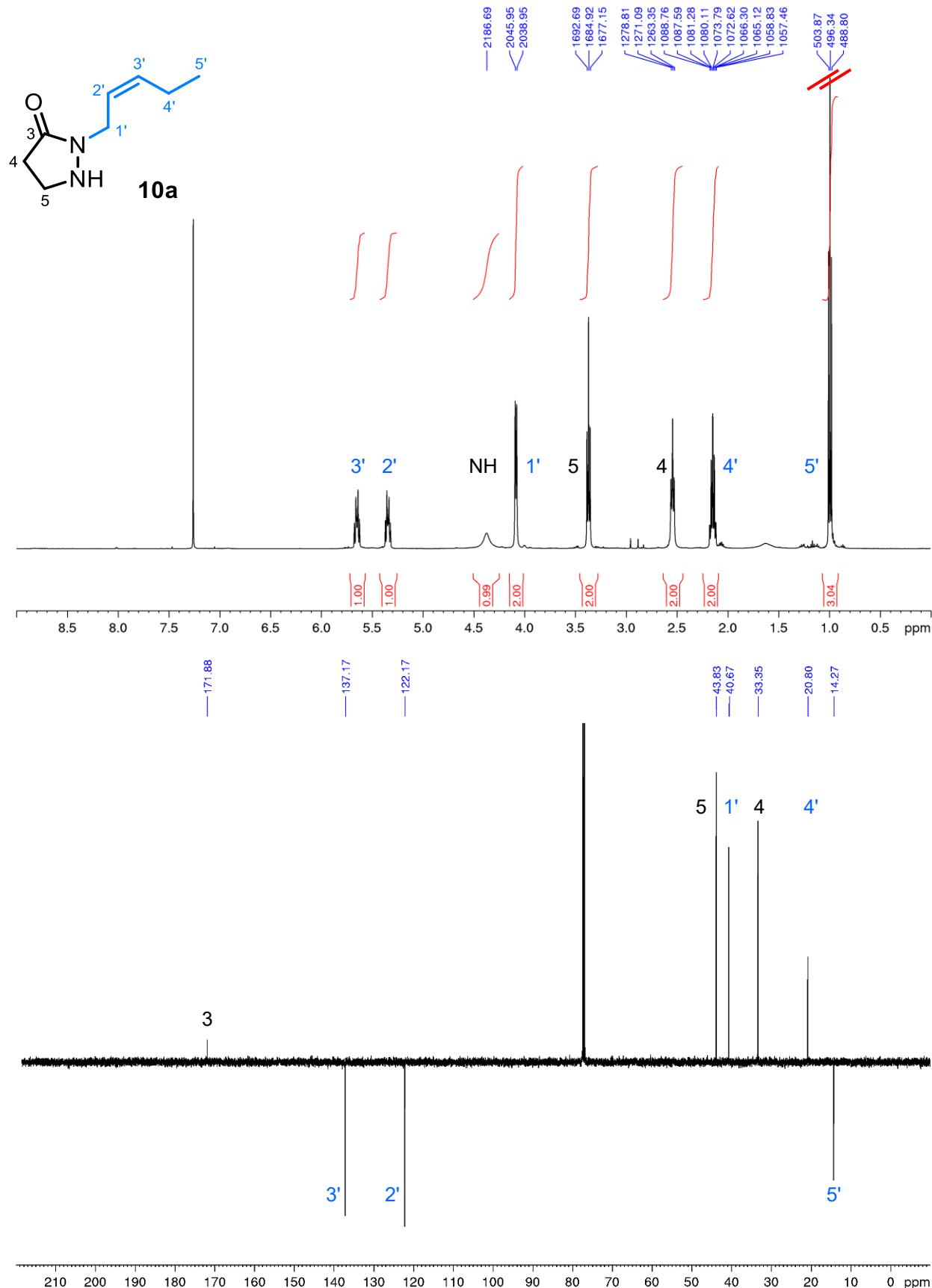
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **9c**:



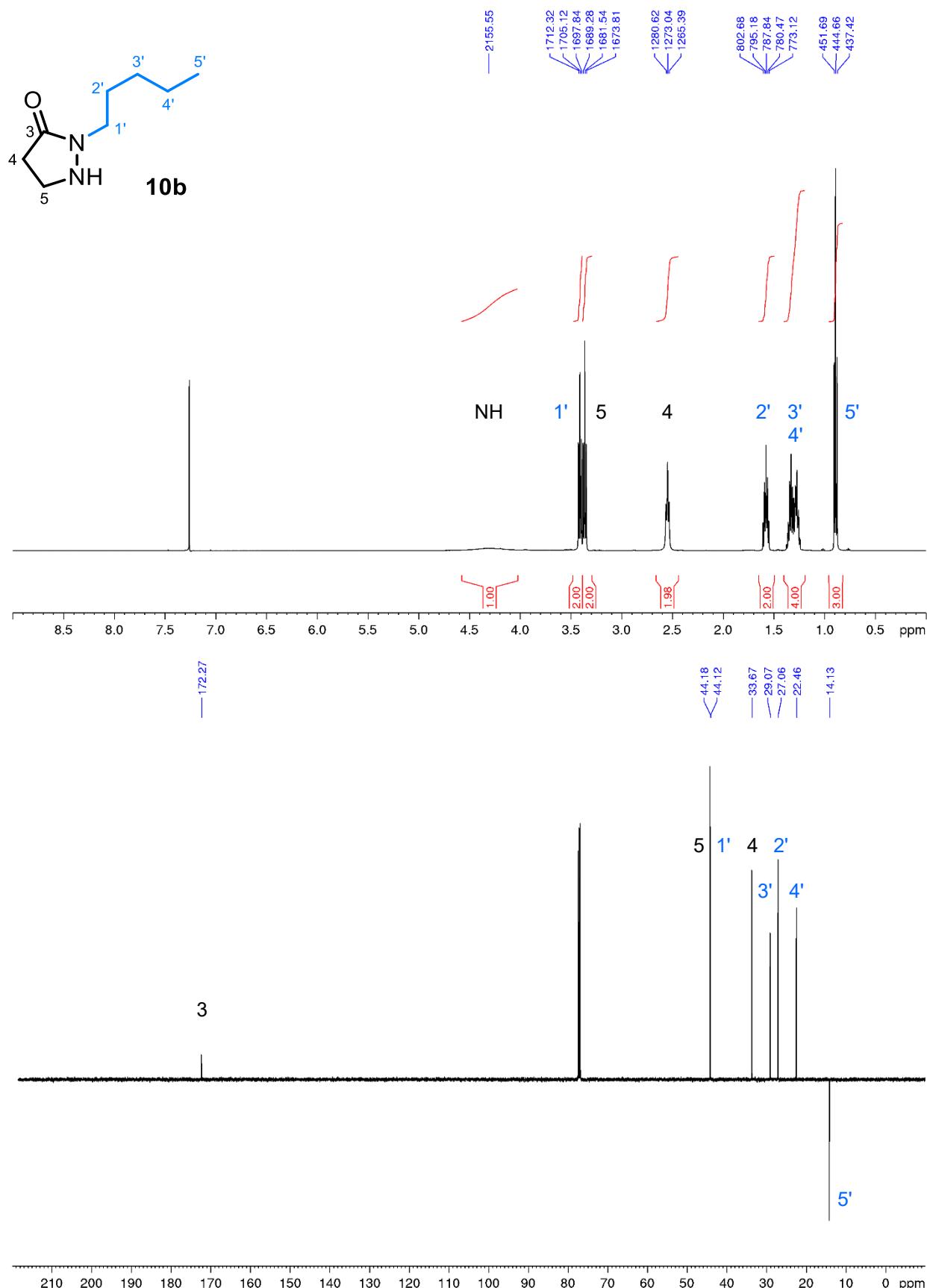
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **9d**:



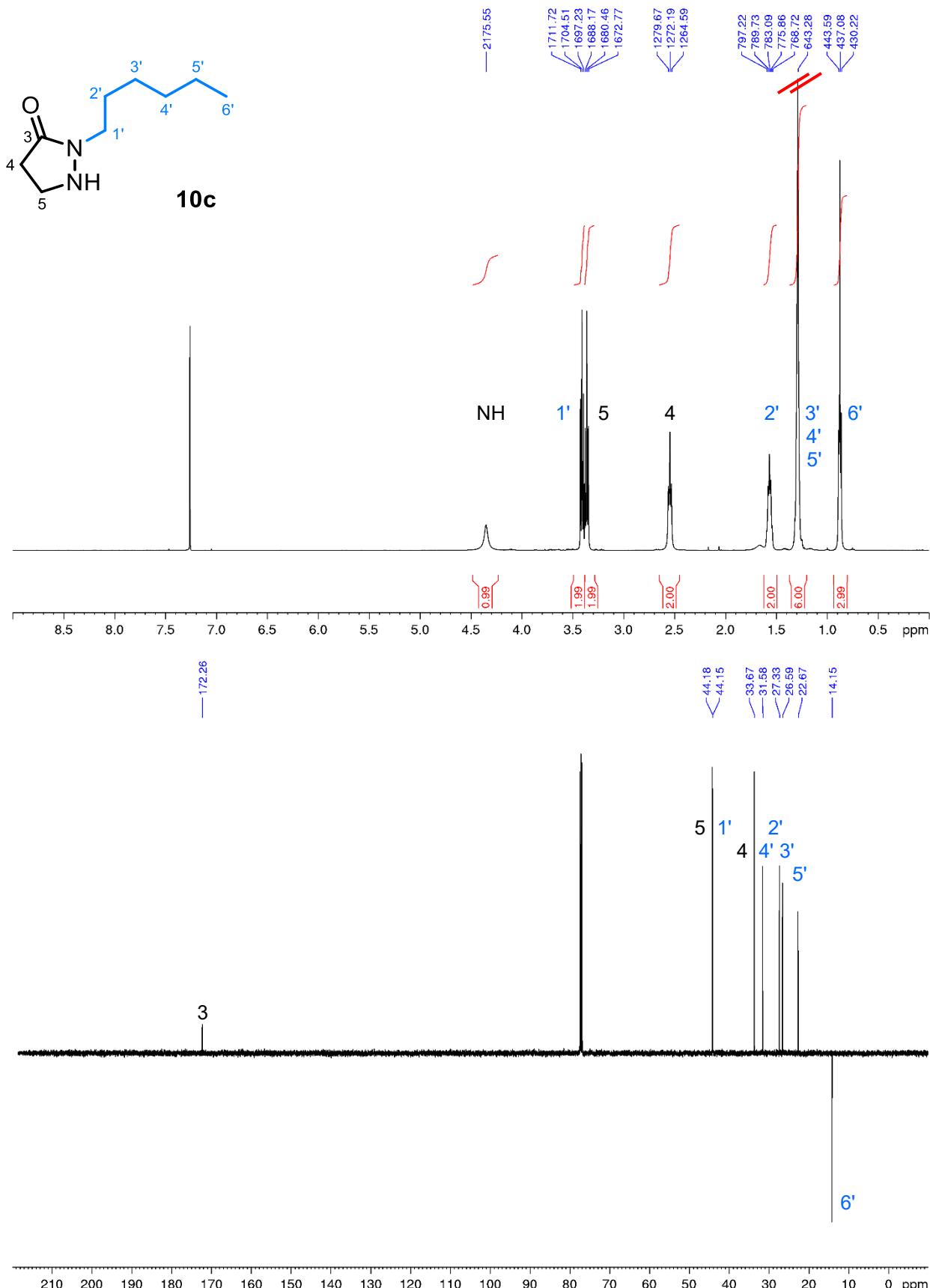
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **10a**:



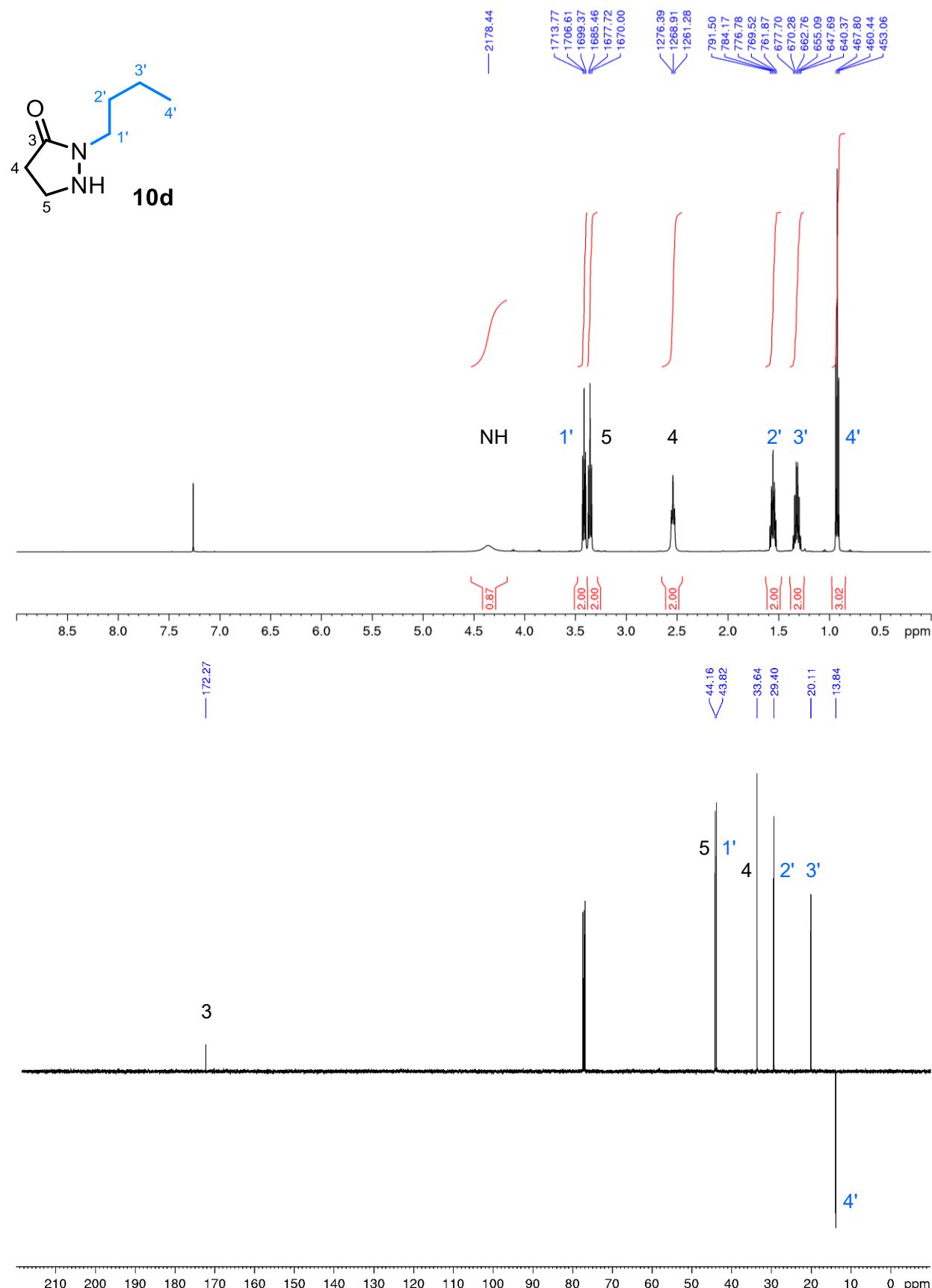
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **10b**:



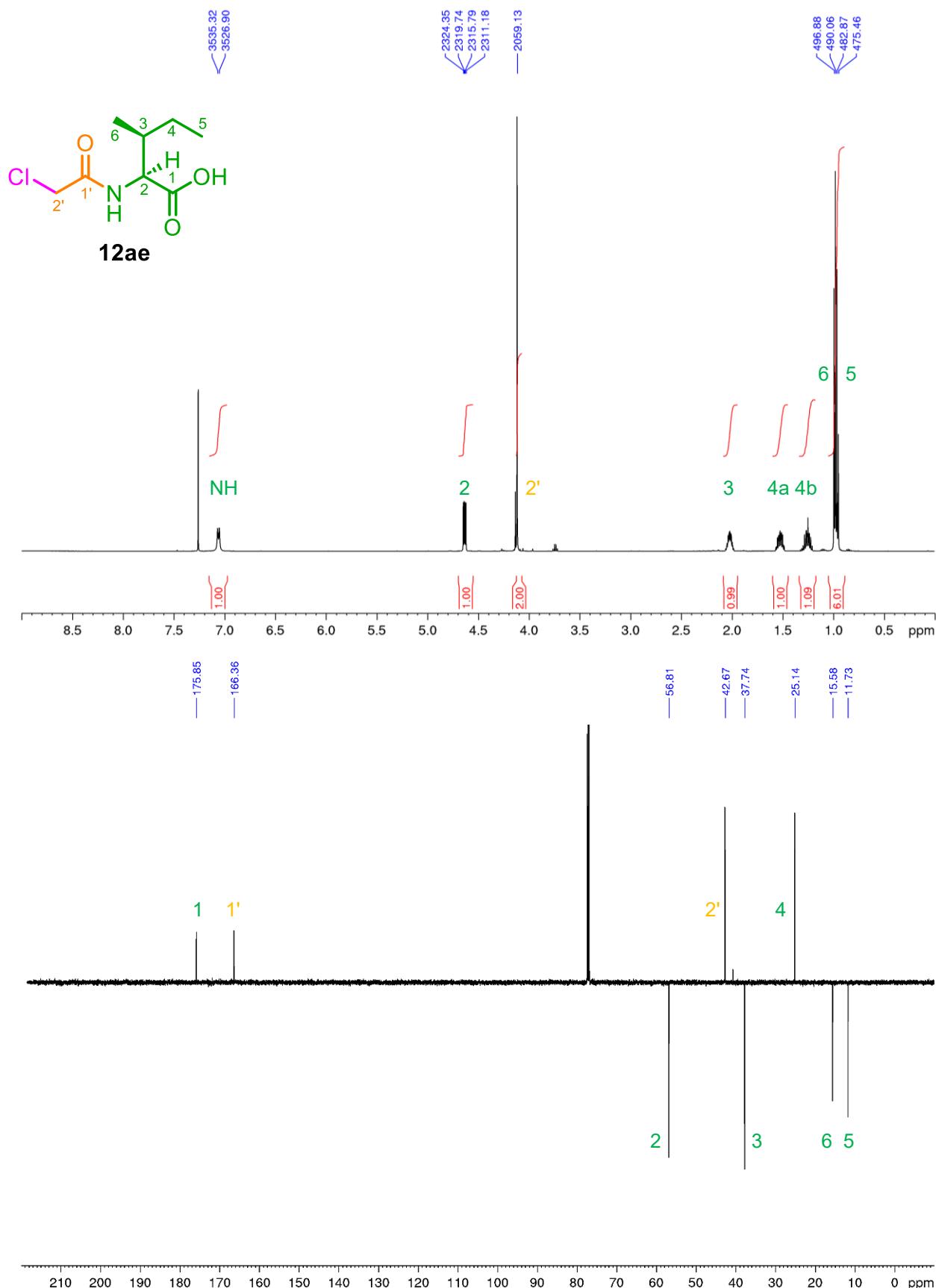
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **10c**:



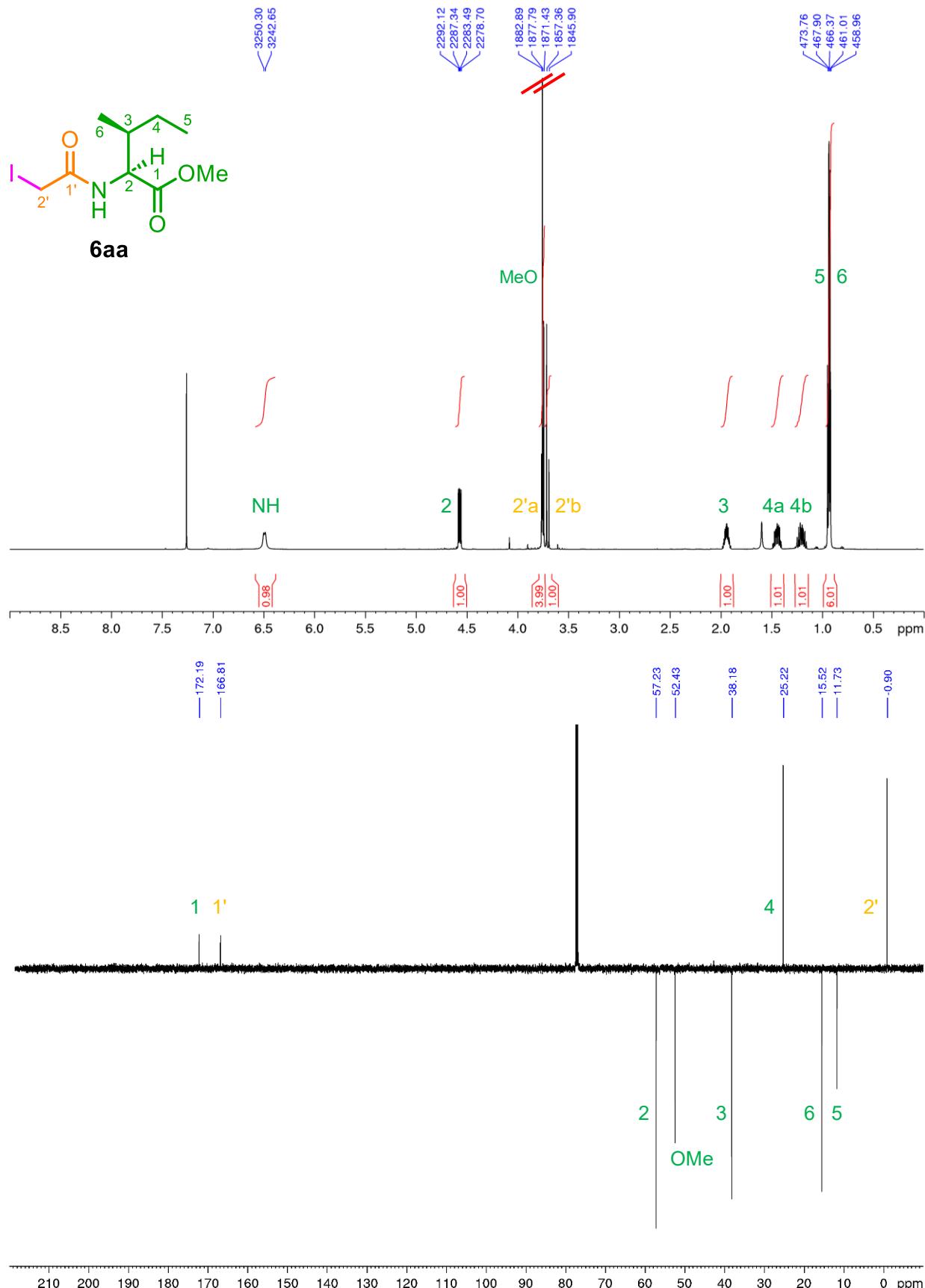
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **10d**:



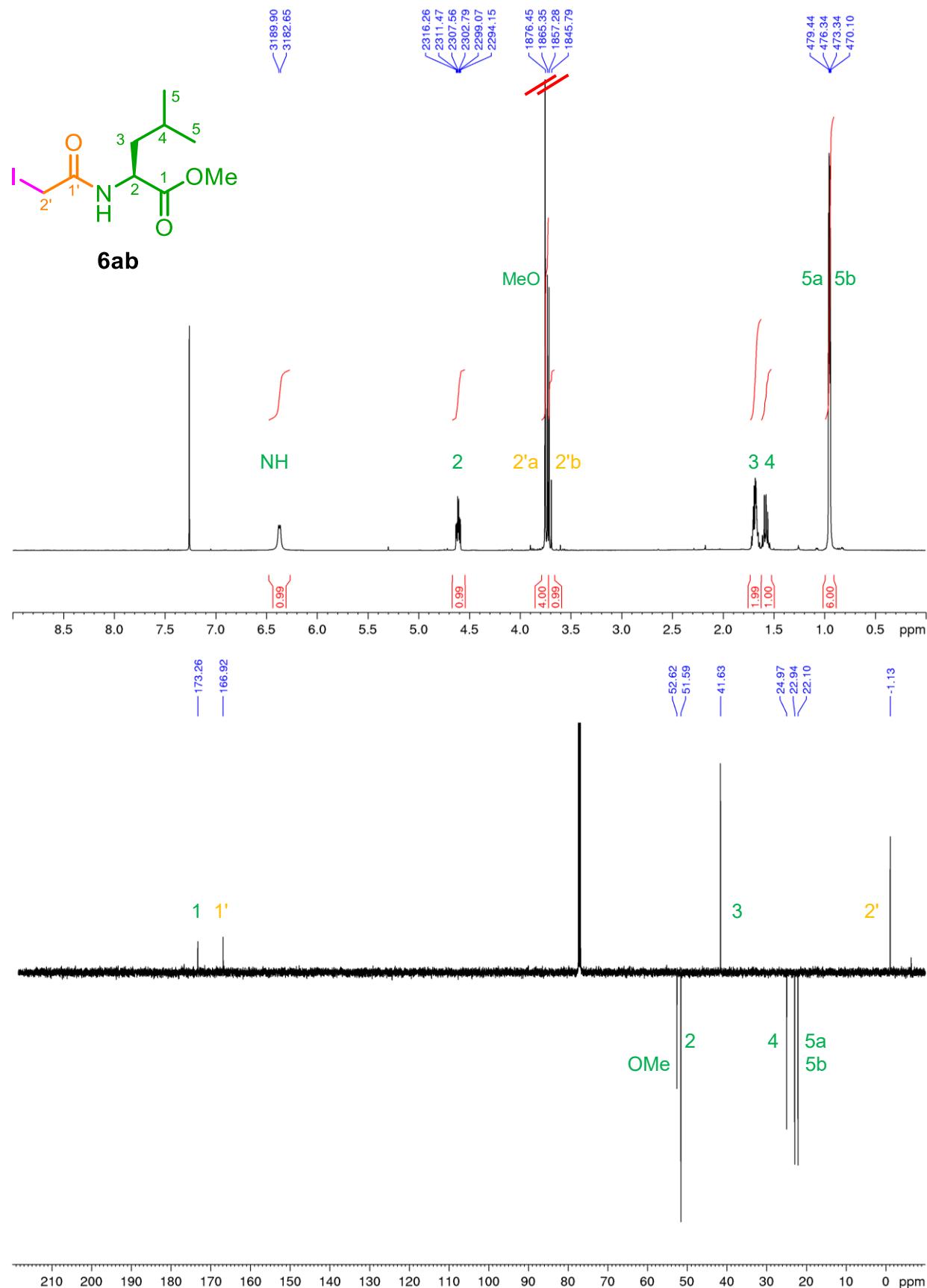
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **12ae**:



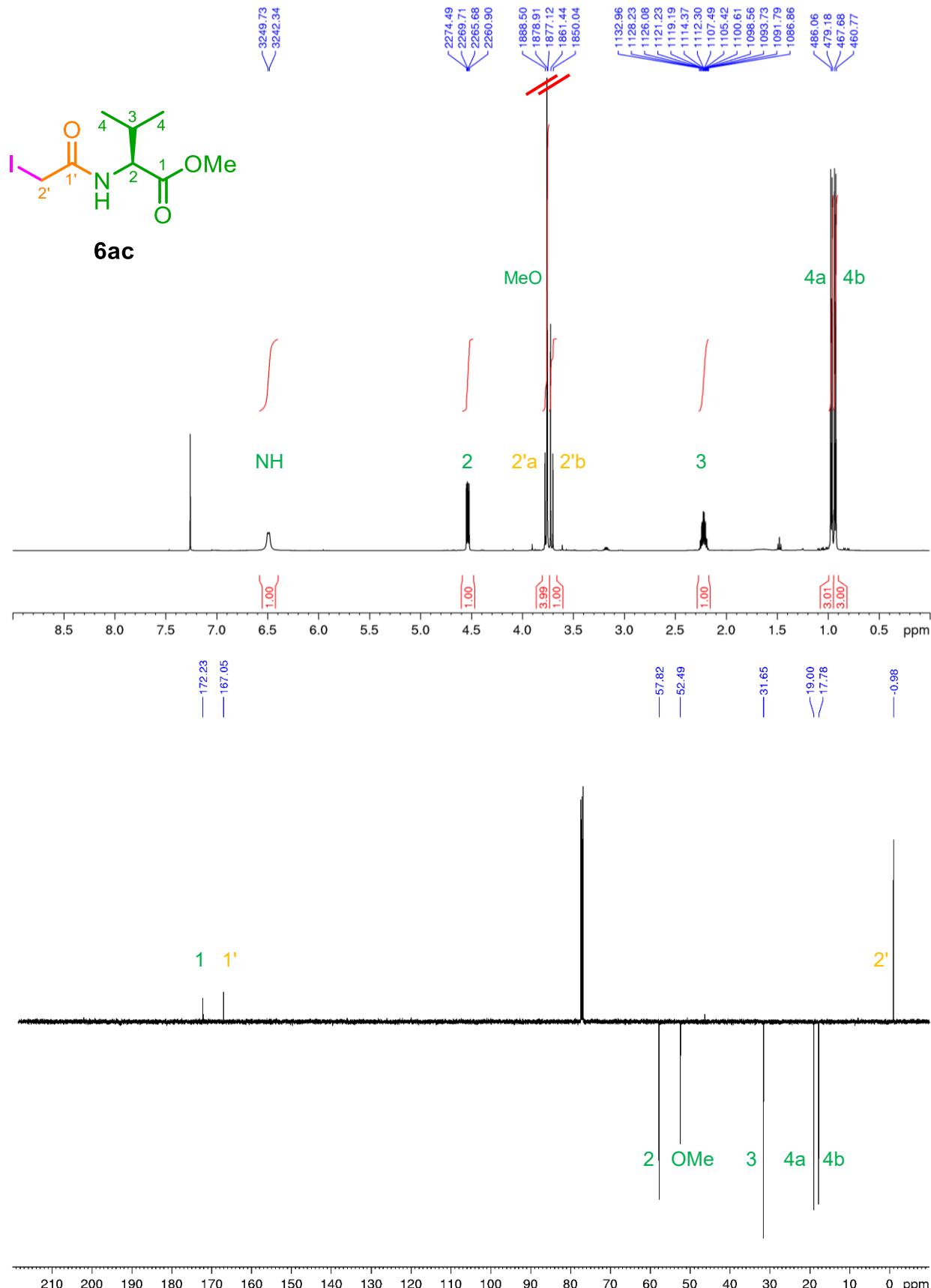
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **6aa**:



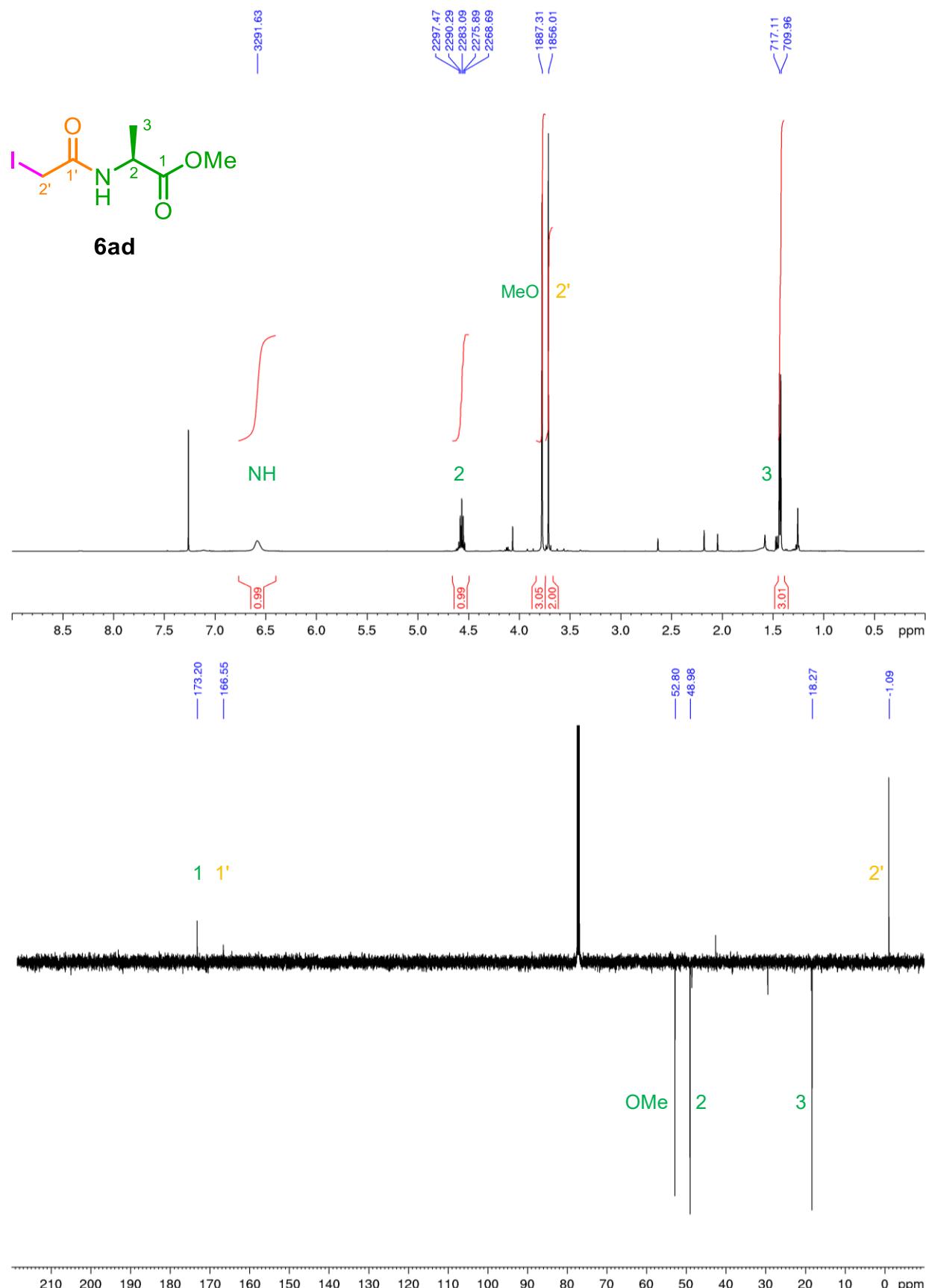
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **6ab**:



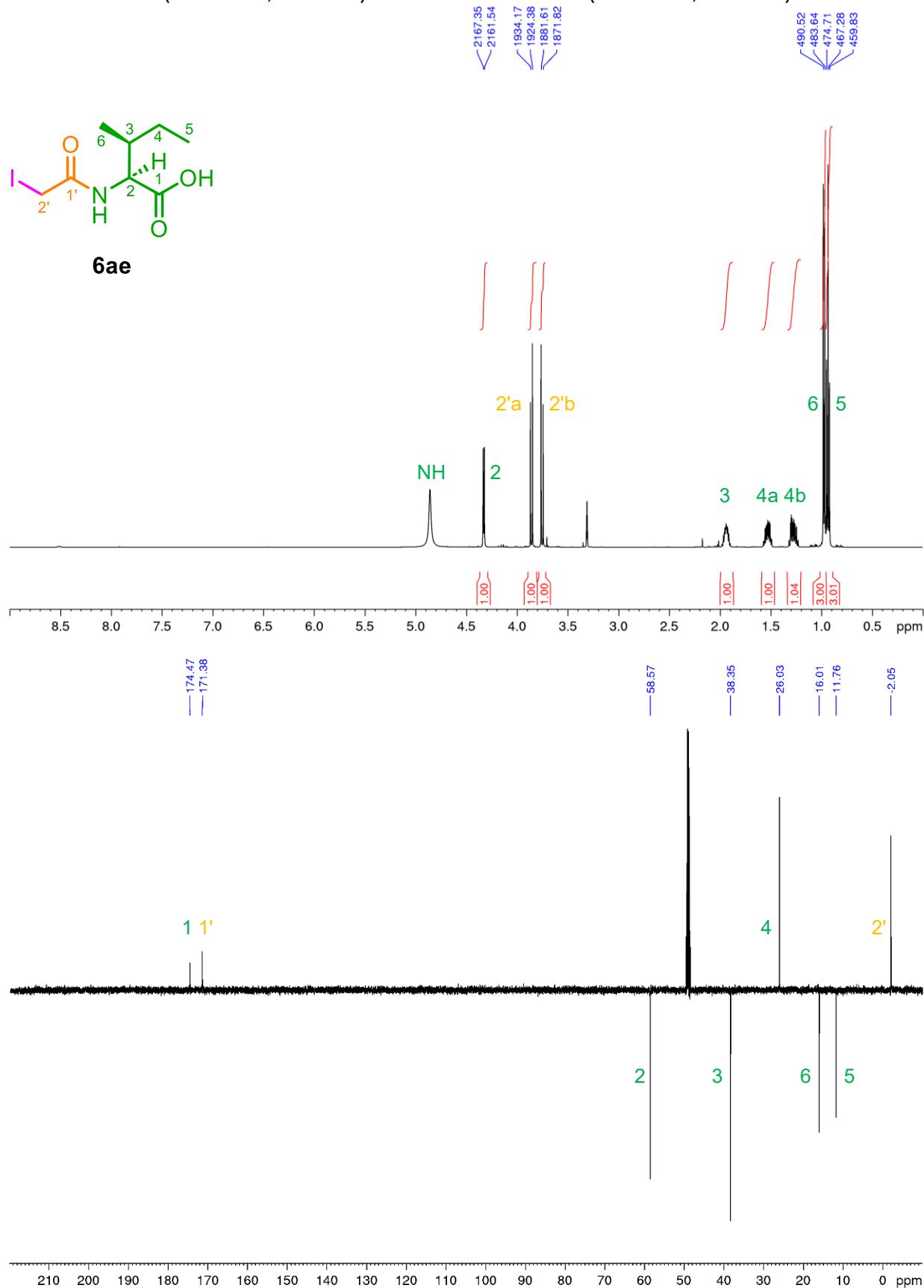
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **6ac**:



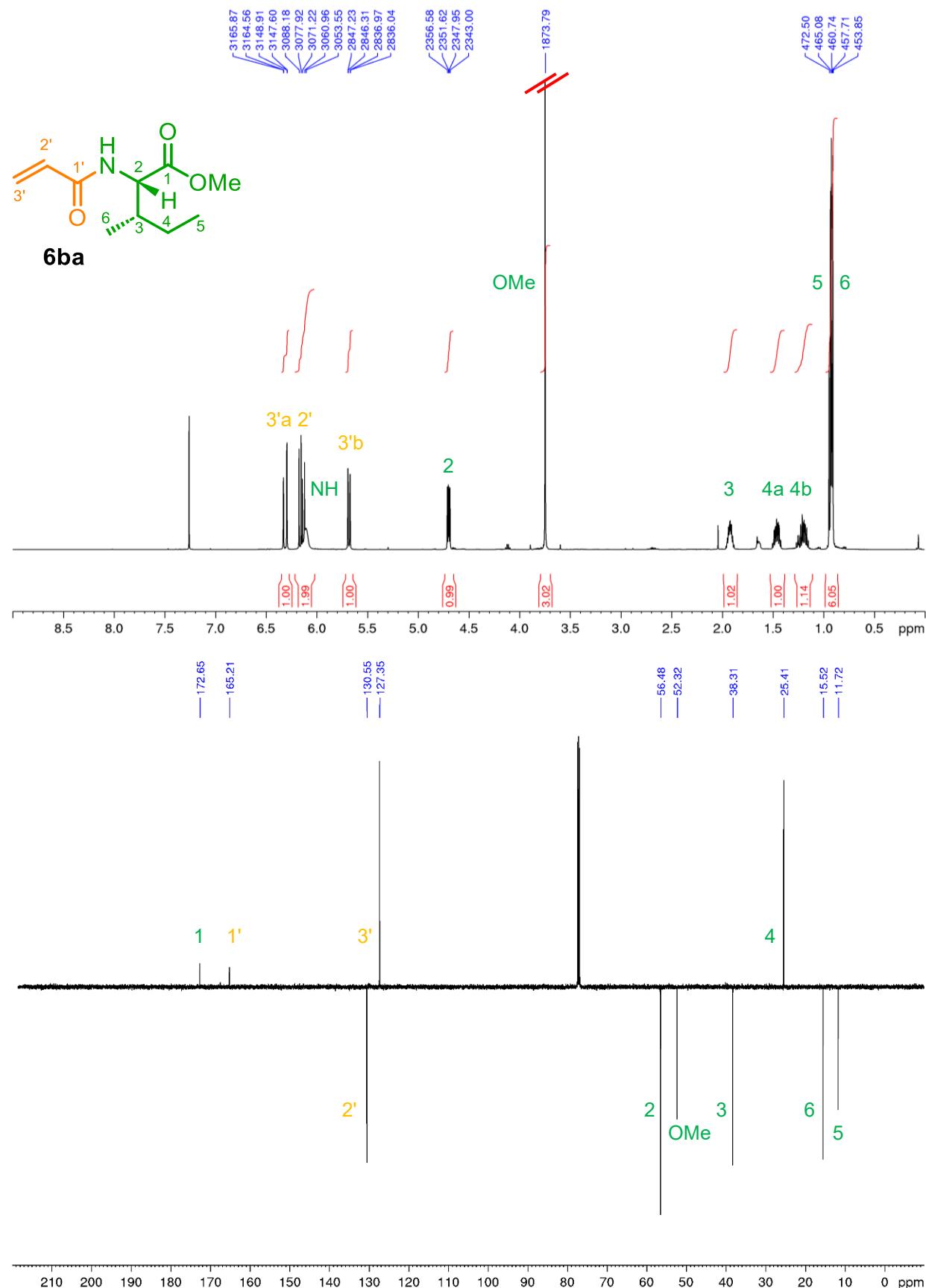
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **6ad**:



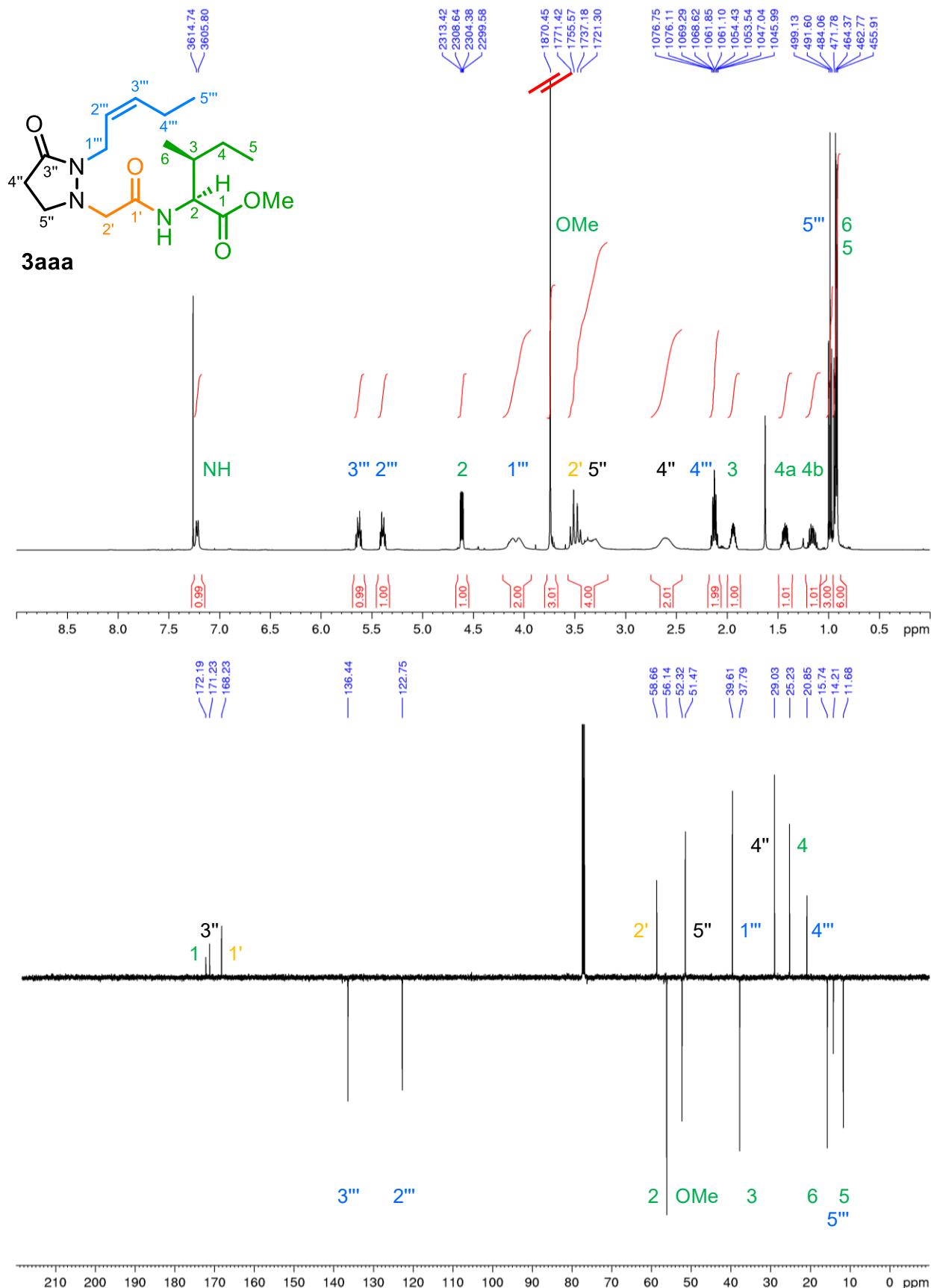
<sup>1</sup>H NMR (500 MHz, CD<sub>3</sub>OD) and <sup>13</sup>C Jmod NMR (125 MHz, CD<sub>3</sub>OD) of **6ae**:



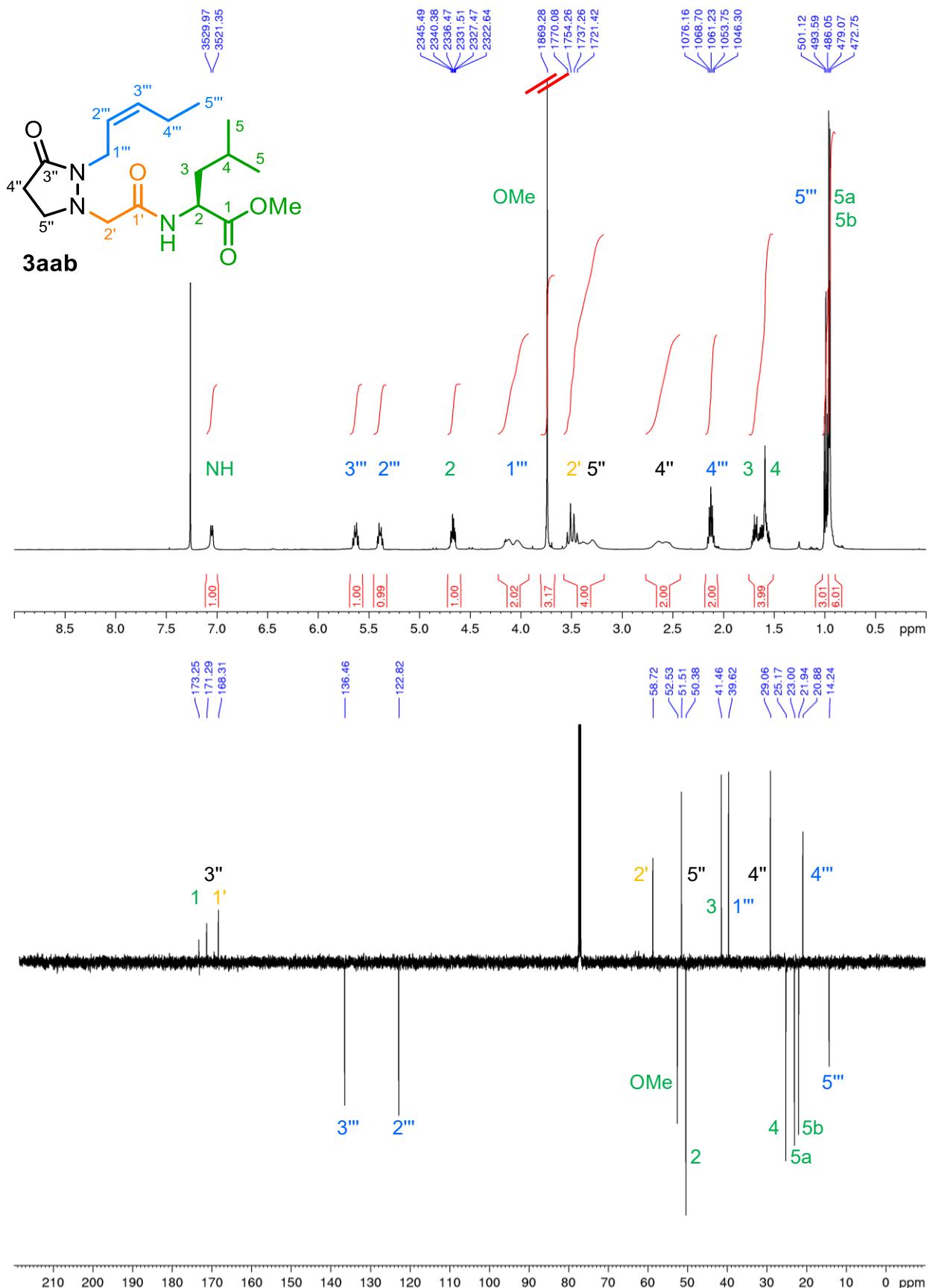
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **6ba**:



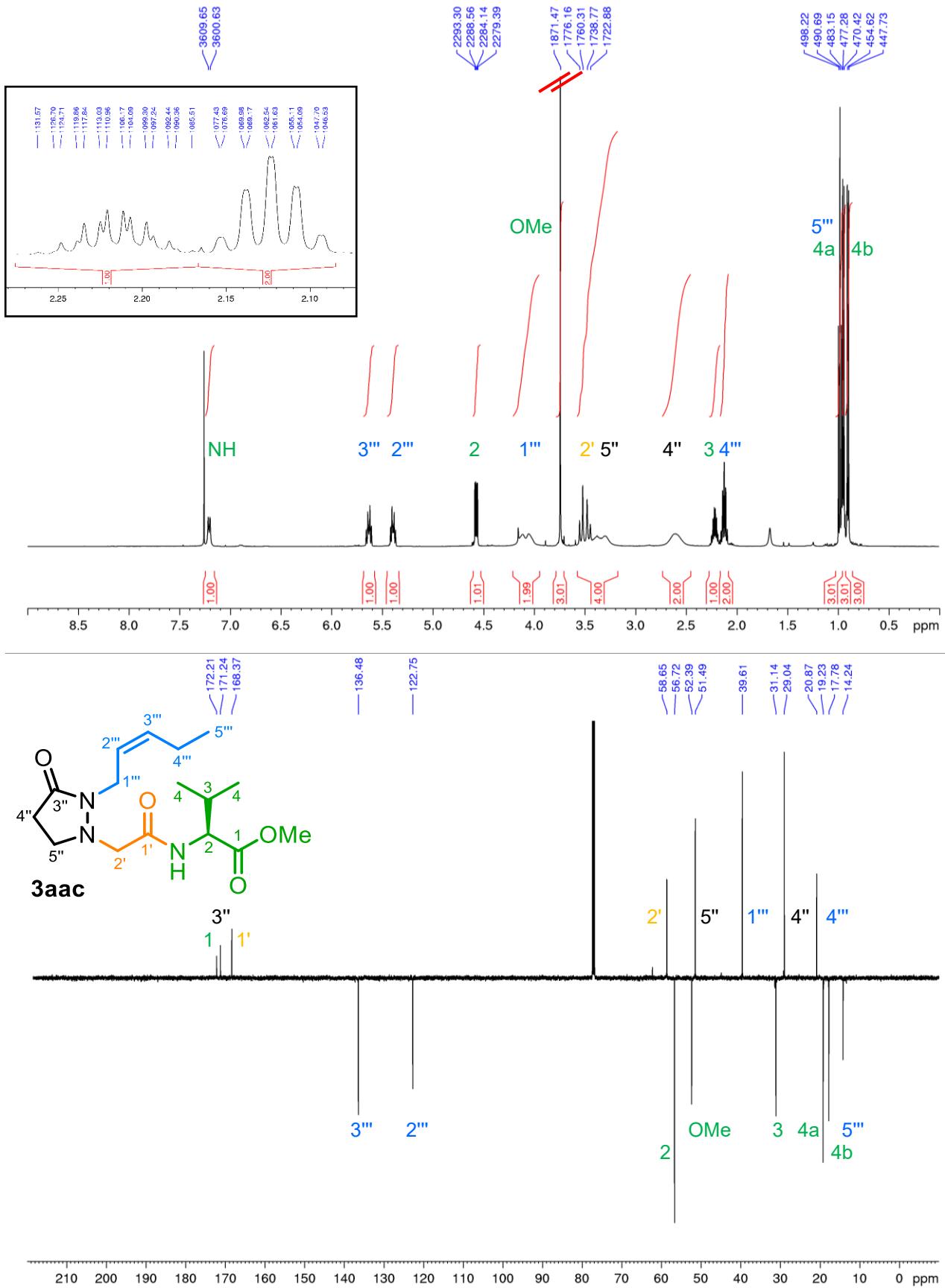
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of 3aaa:



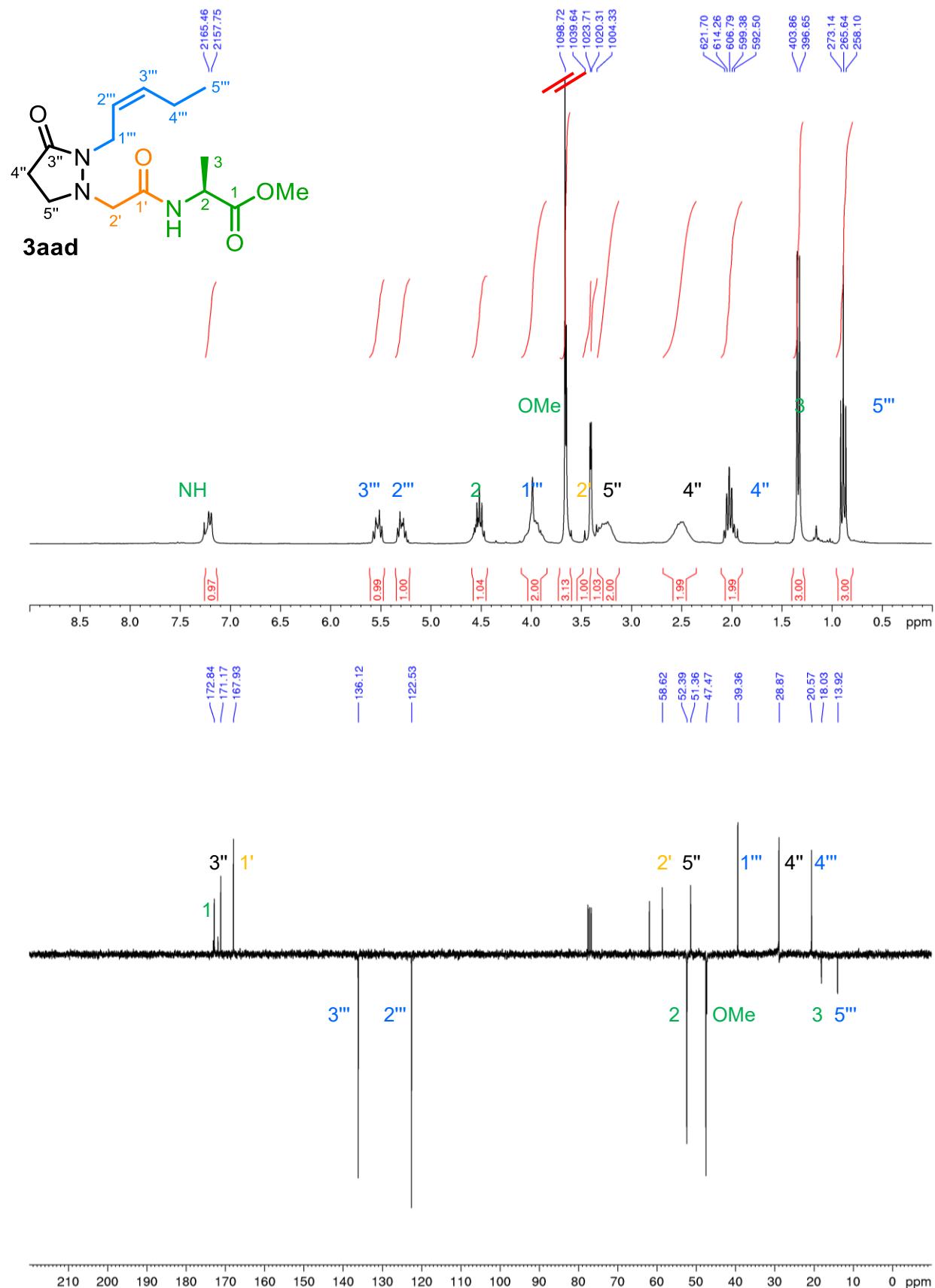
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of 3aab:



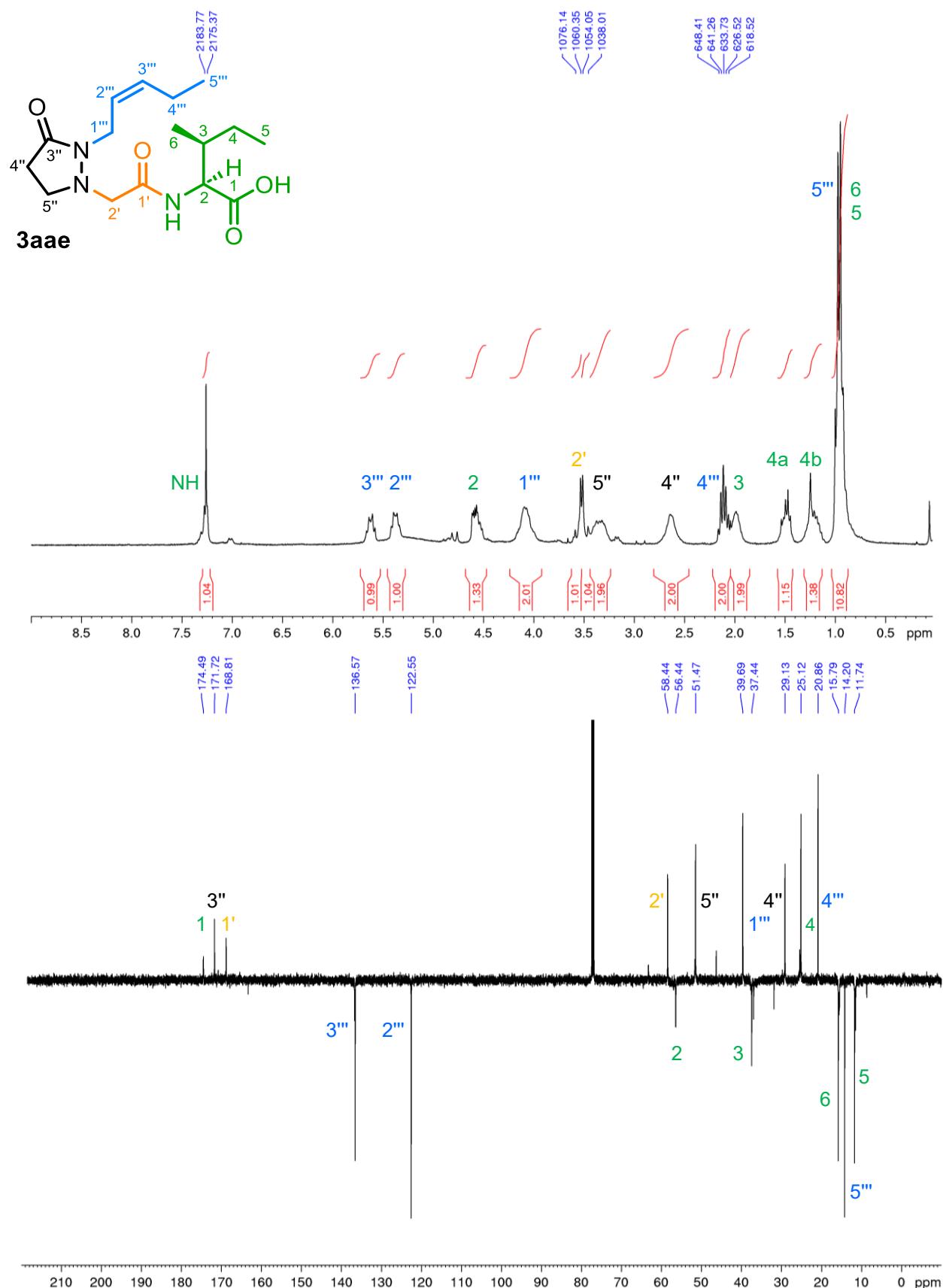
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **3aac**:



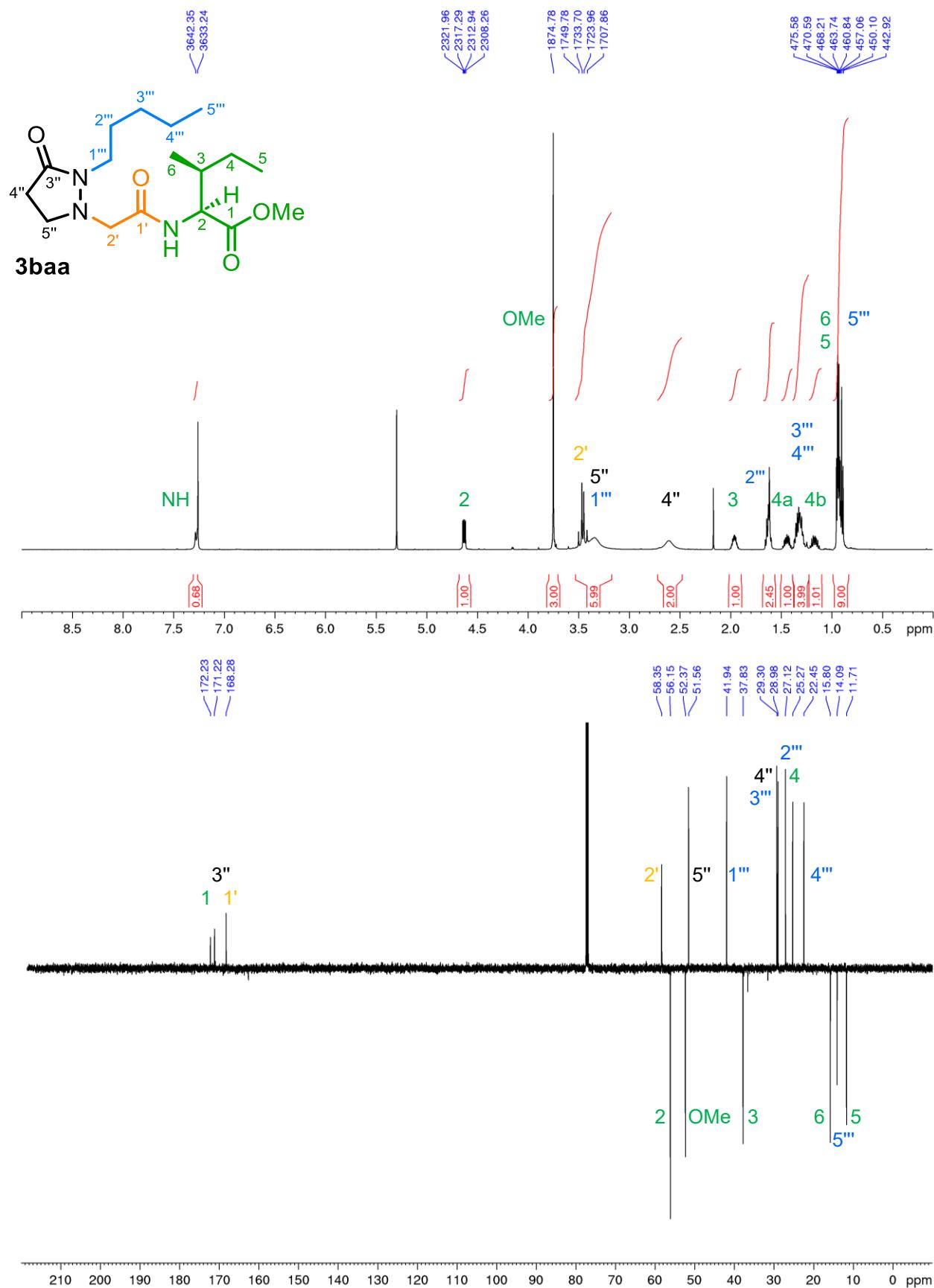
<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (75 MHz, CDCl<sub>3</sub>) of **3aad**:



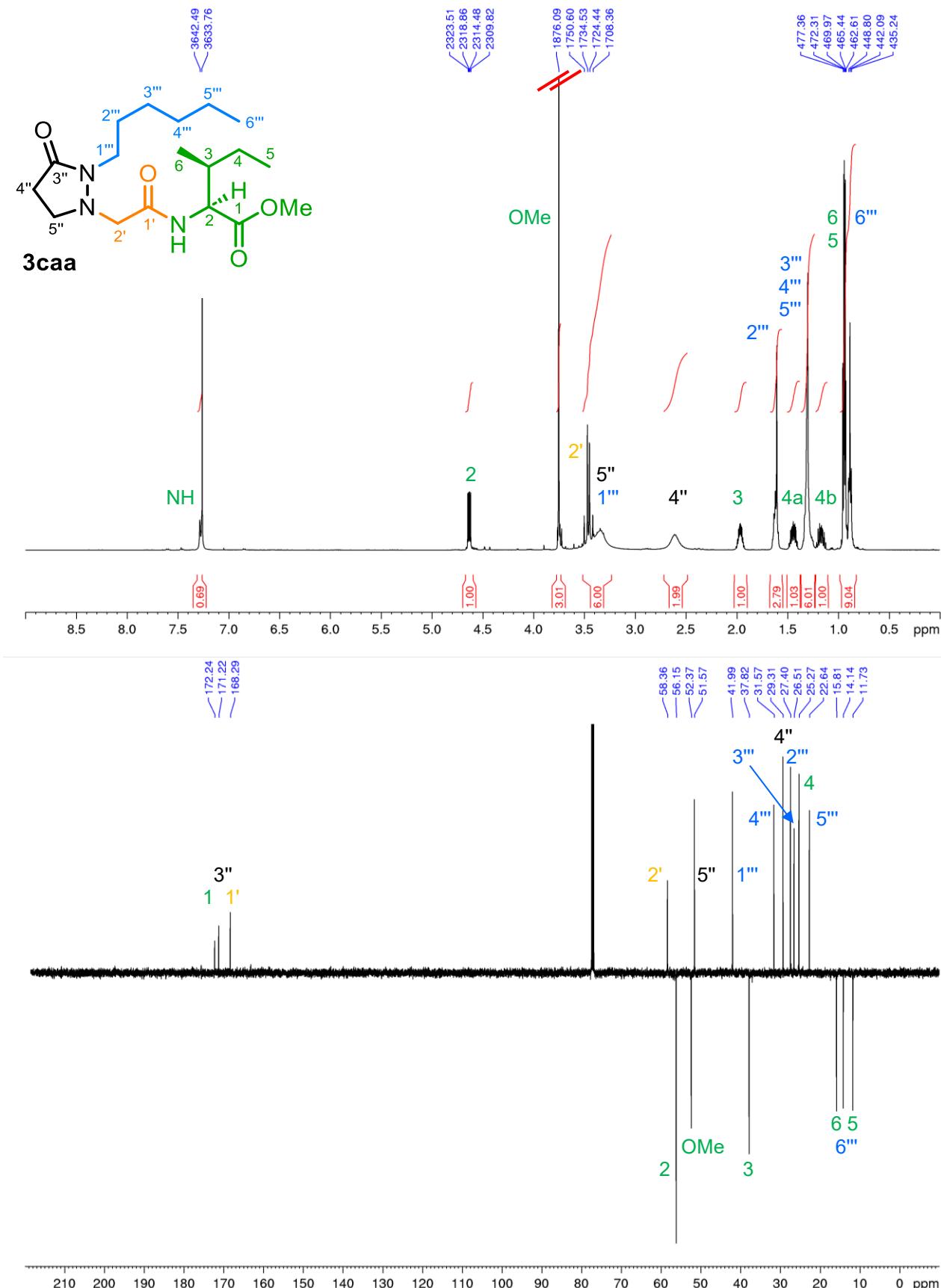
<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of 3aae:



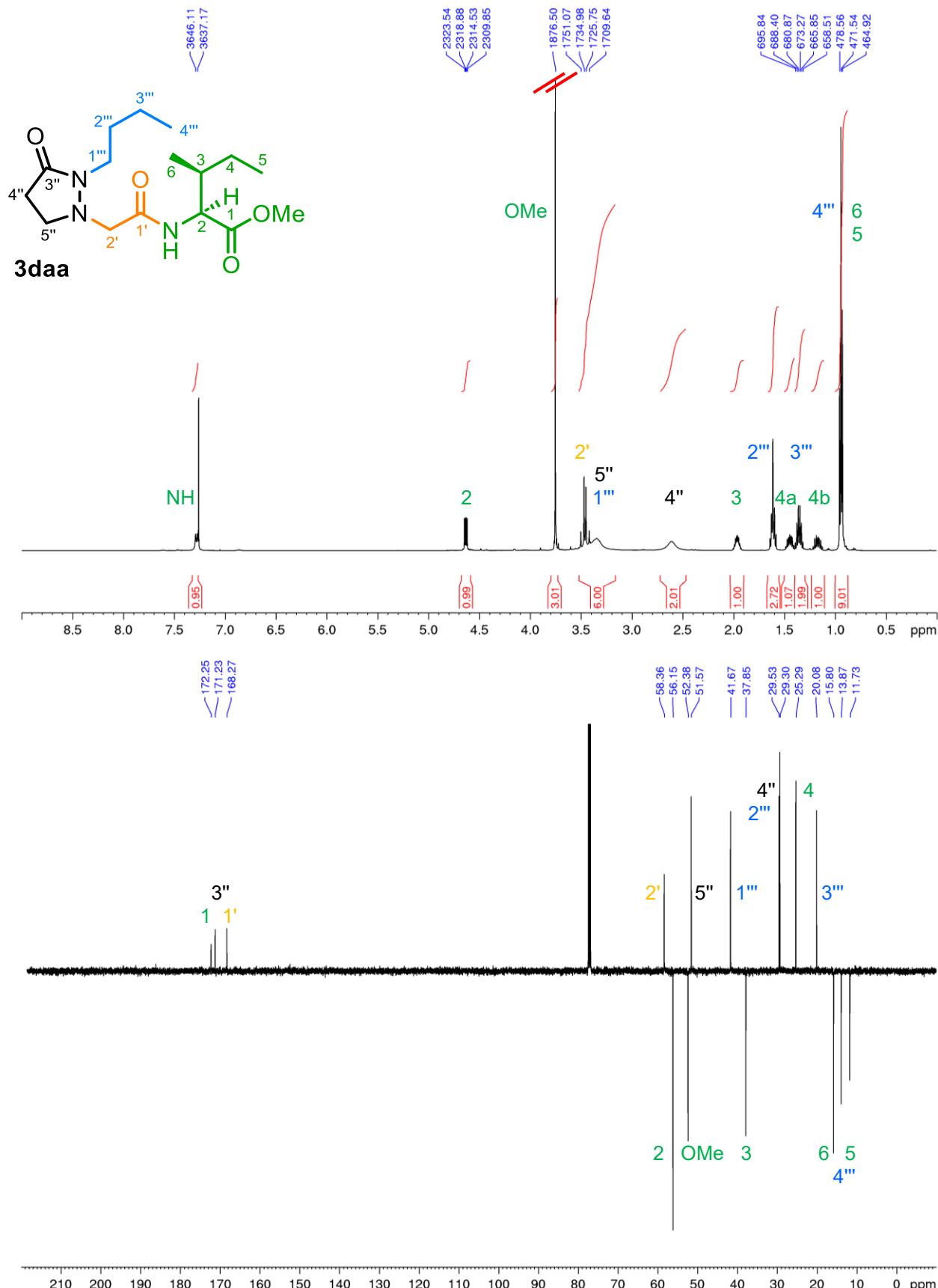
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **3baa**:



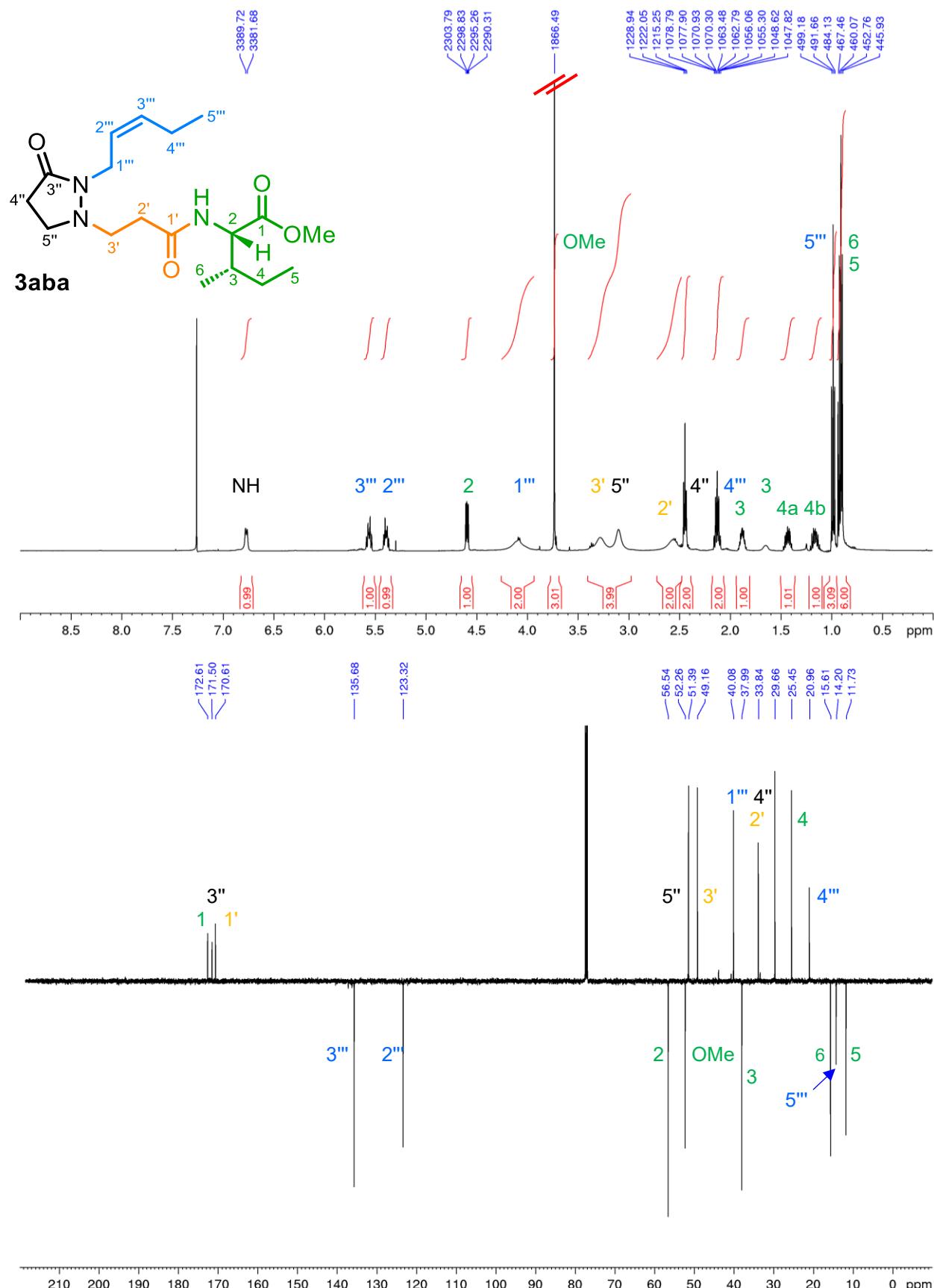
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of 3caa:



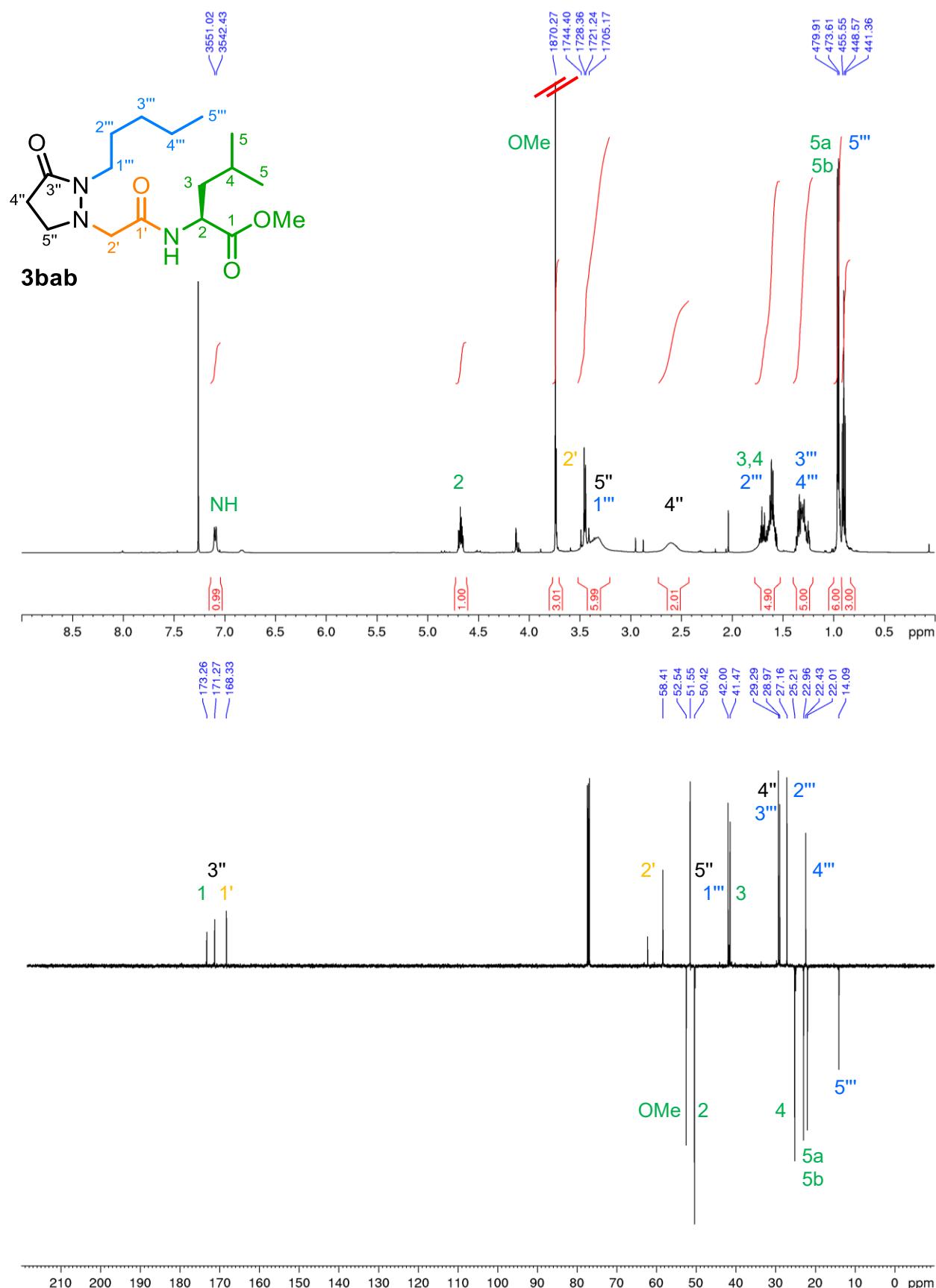
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of 3daa:



<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **3aba**:



<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (125 MHz, CDCl<sub>3</sub>) of **3bab**:



<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>) and <sup>13</sup>C Jmod NMR (75 MHz, CDCl<sub>3</sub>) of **3bac**:

