

# Supporting Information

## Design and characterization of red fluorogenic push-pull chromophores holding great potential for bioimaging and biosensing

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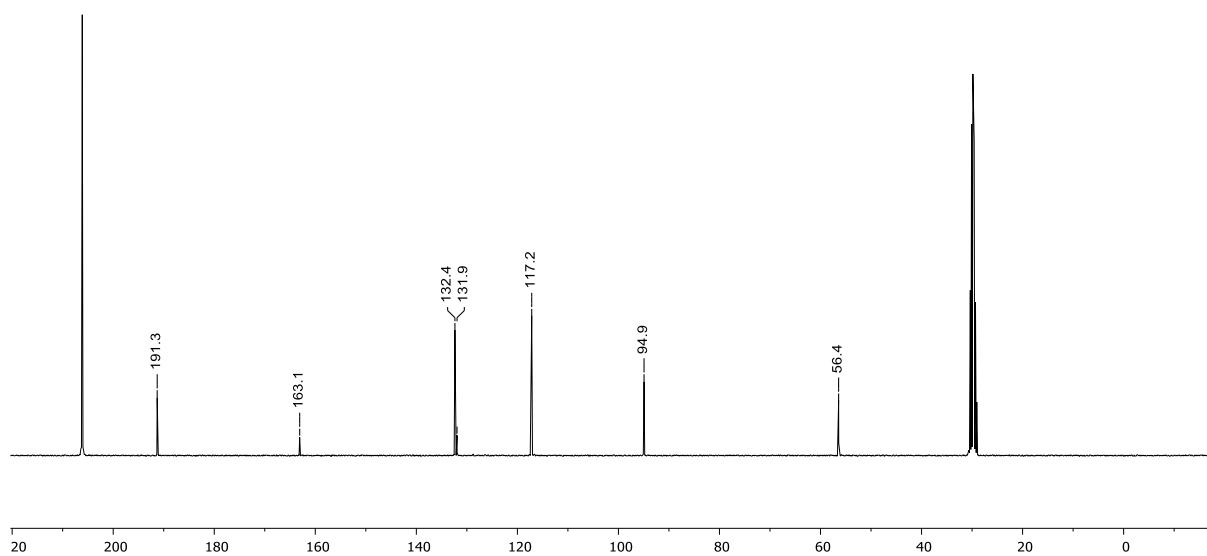
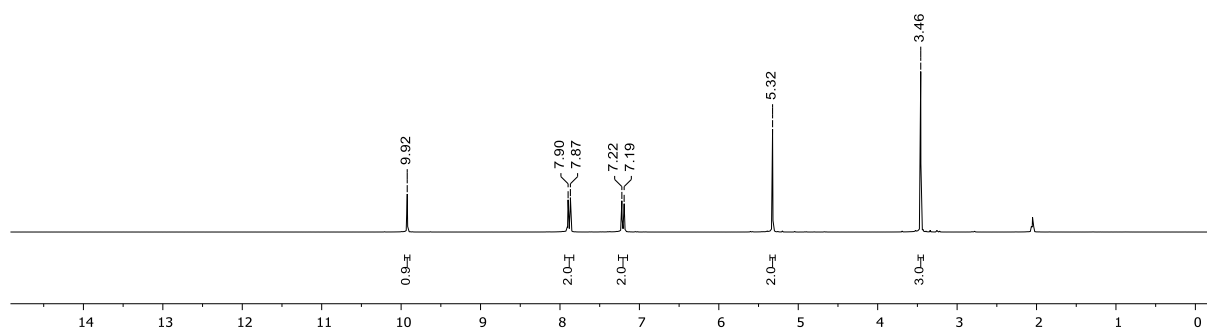
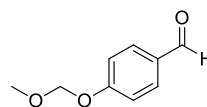
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<sup>1</sup> École Normale Supérieure, PSL Research University, UPMC Univ Paris 06, CNRS, Département de Chimie, PASTEUR, 24 rue Lhomond, 75005 Paris, France

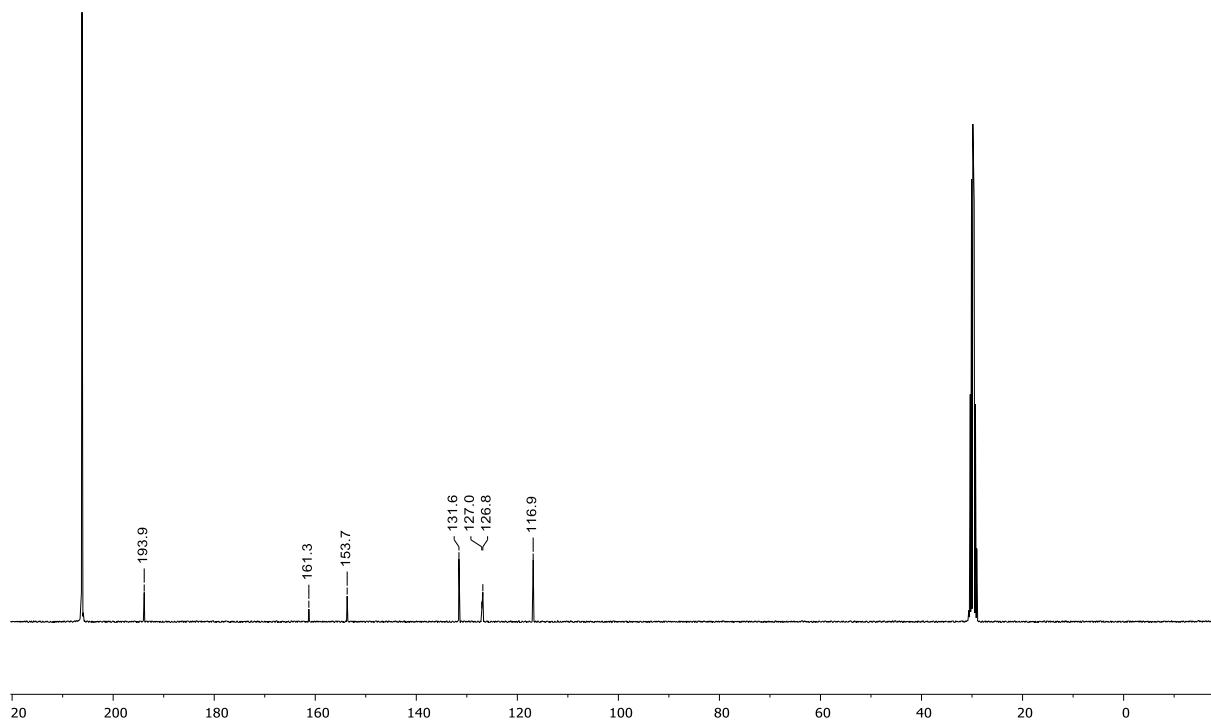
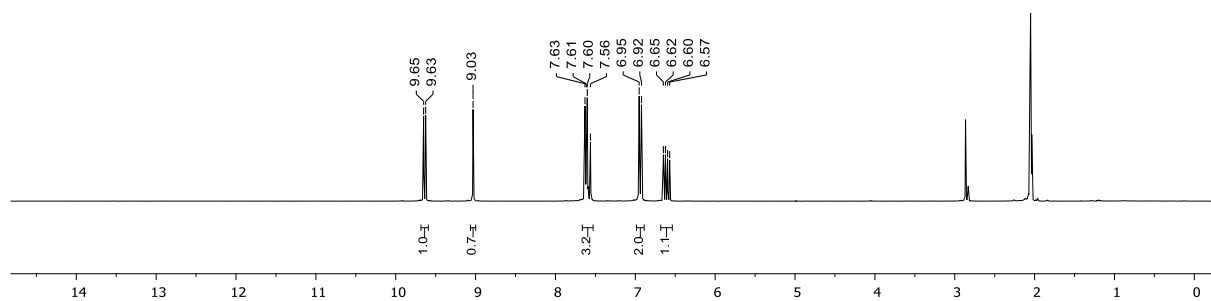
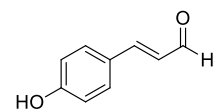
<sup>2</sup> Sorbonne Universités, UPMC Univ Paris 06, ENS, CNRS, PASTEUR, 75005 Paris, France

This file contains the NMR spectra of all the compounds described in this paper. For each compounds are given the <sup>1</sup>H NMR spectrum (Top spectrum) and the <sup>13</sup>C NMR spectrum (Bottom spectrum). NMR spectra were recorded on a AC Bruker spectrometer at 300 MHz for <sup>1</sup>H and 75 MHz for <sup>13</sup>C; chemical shifts are reported in ppm with protonated solvent as internal reference <sup>1</sup>H, CHD<sub>2</sub>COCD<sub>3</sub> in CD<sub>3</sub>COCD<sub>3</sub> 2.05 ppm, CHD<sub>2</sub>SOCD<sub>3</sub> in CD<sub>3</sub>SOCD<sub>3</sub> 2.50 ppm; <sup>13</sup>C, <sup>13</sup>CD<sub>3</sub>COCD<sub>3</sub> in CD<sub>3</sub>COCD<sub>3</sub> 29.84 ppm, <sup>13</sup>CD<sub>3</sub>SOCD<sub>3</sub> in CD<sub>3</sub>SOCD<sub>3</sub> 39.52 ppm.

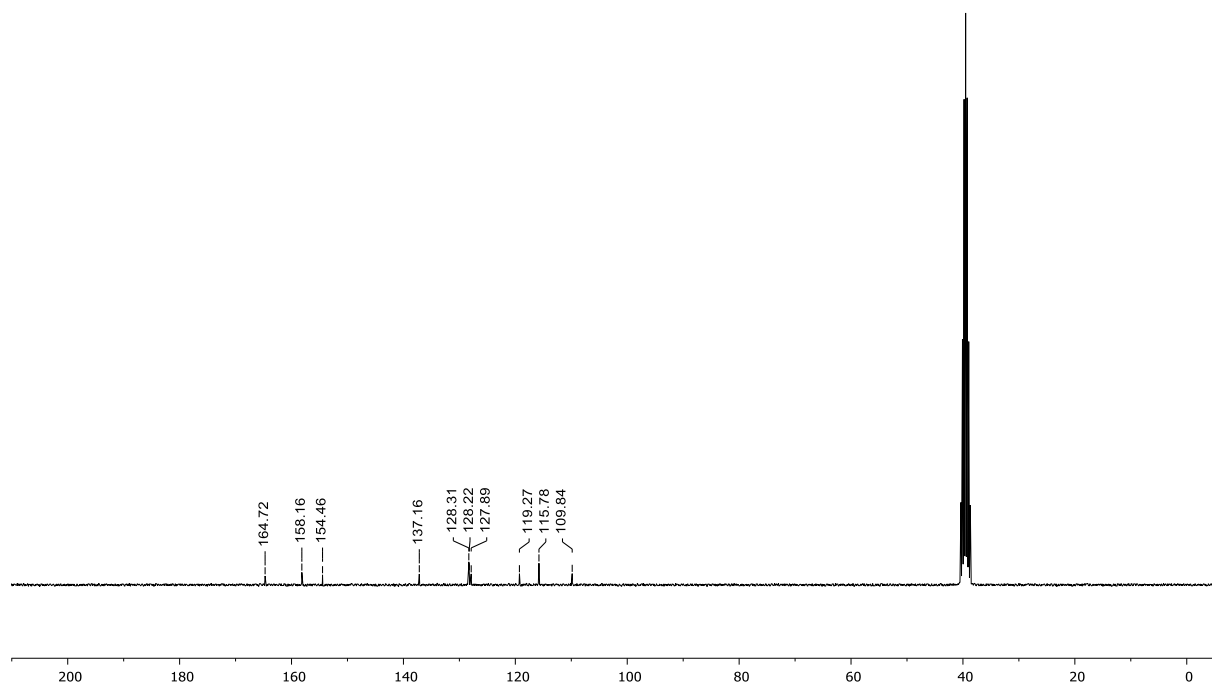
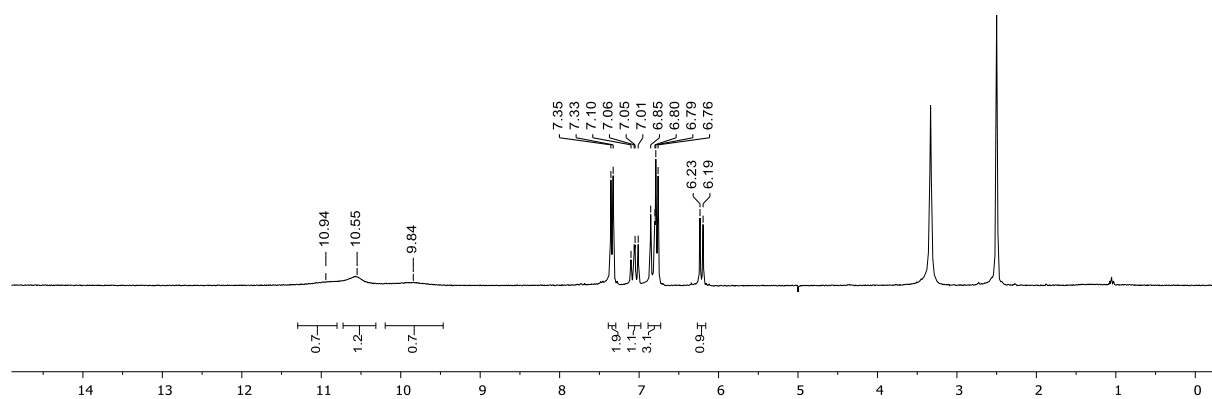
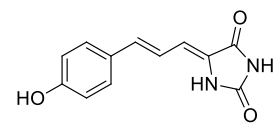
# 4-(methoxymethoxy)benzaldehyde



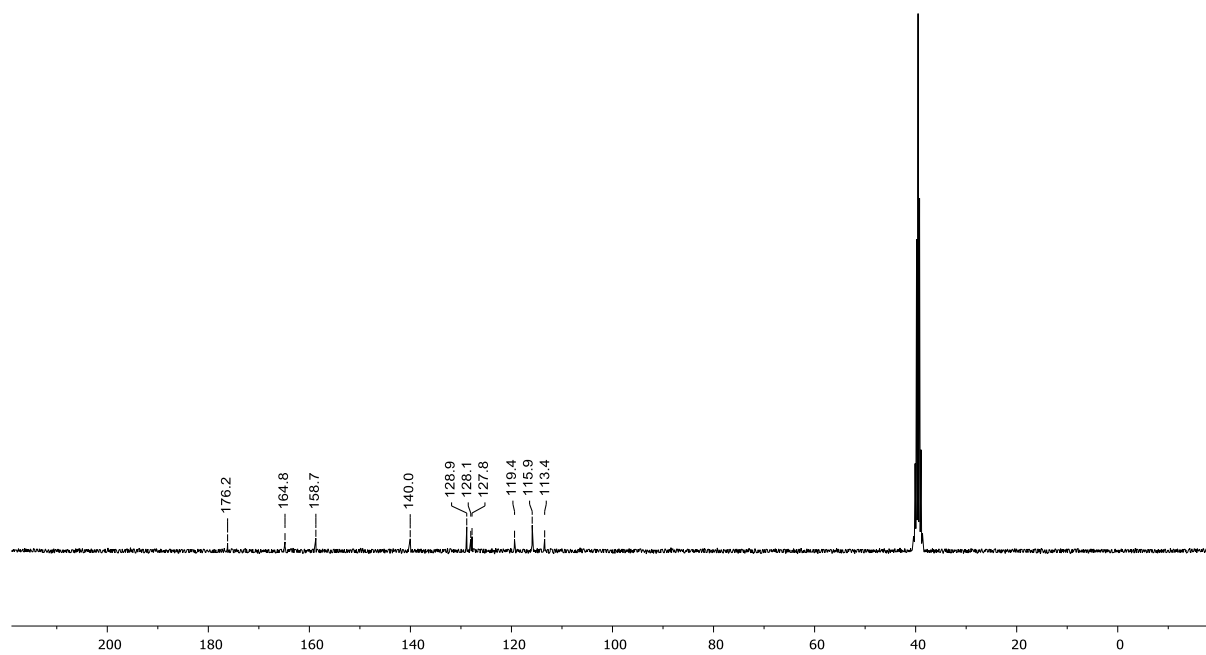
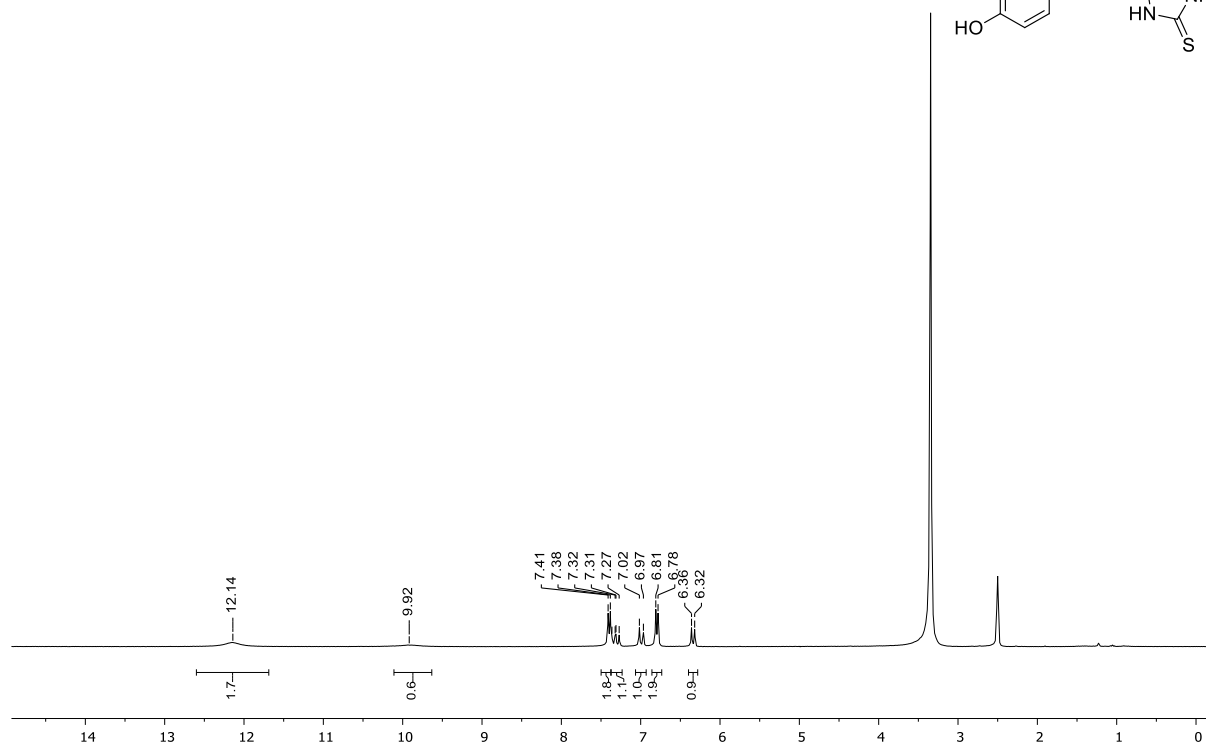
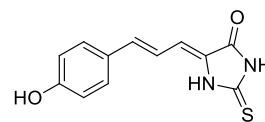
# 4-hydroxycinnamaldehyde (1)



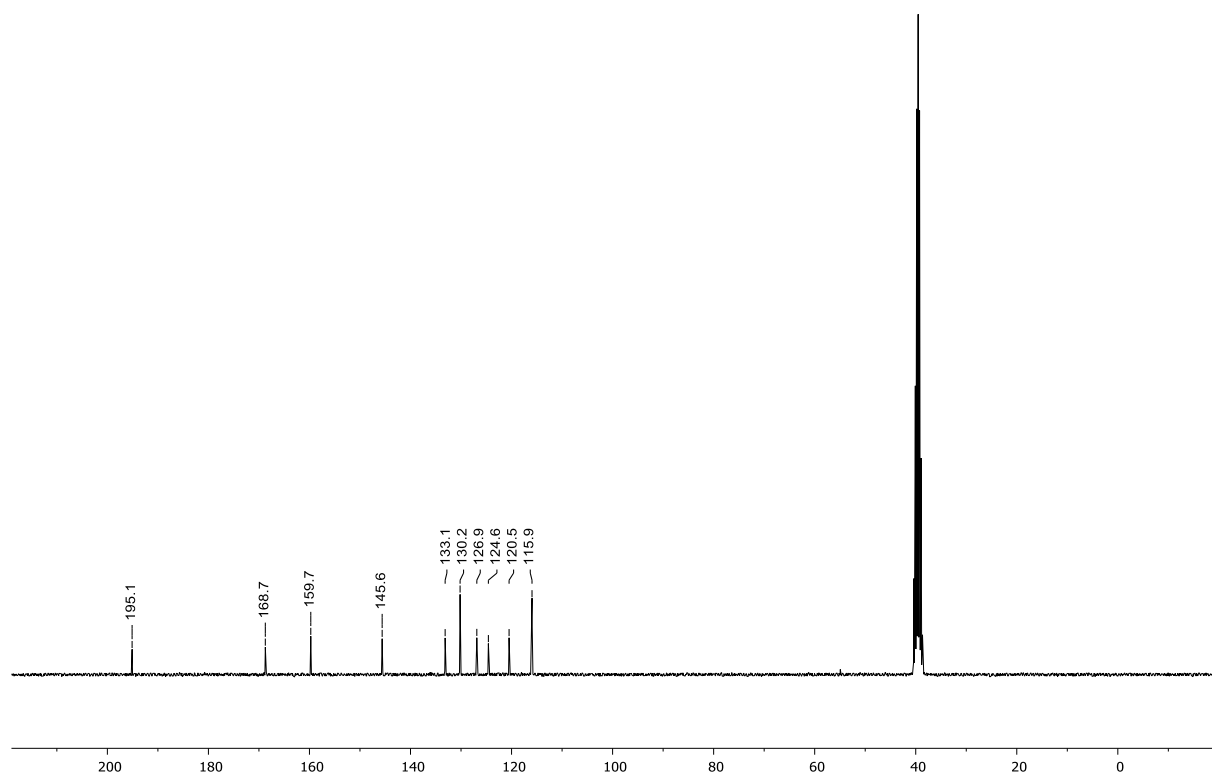
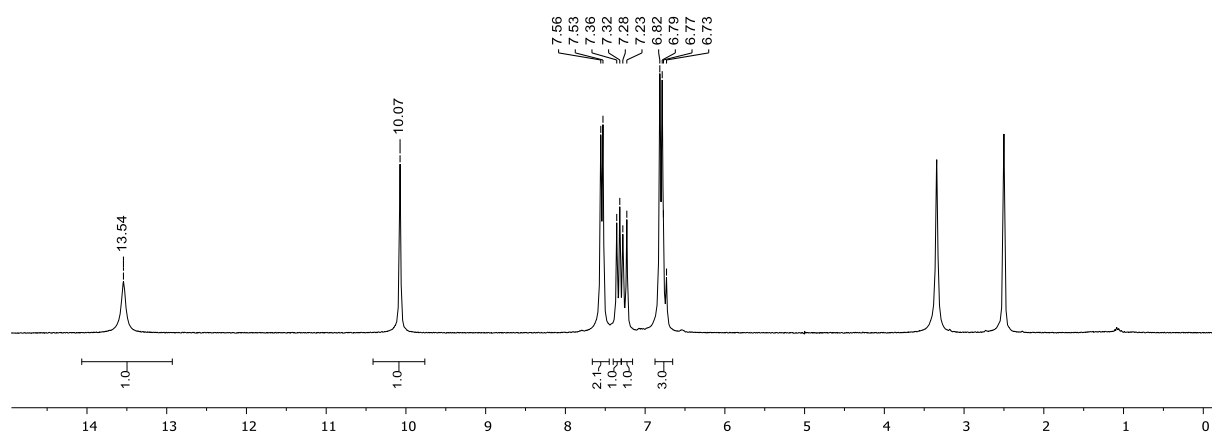
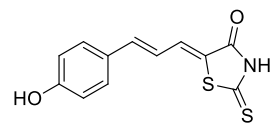
**(Z)-5-((E)-3-(4-hydroxyphenyl)allylidene)imidazolidine-2,4-dione (1a)**



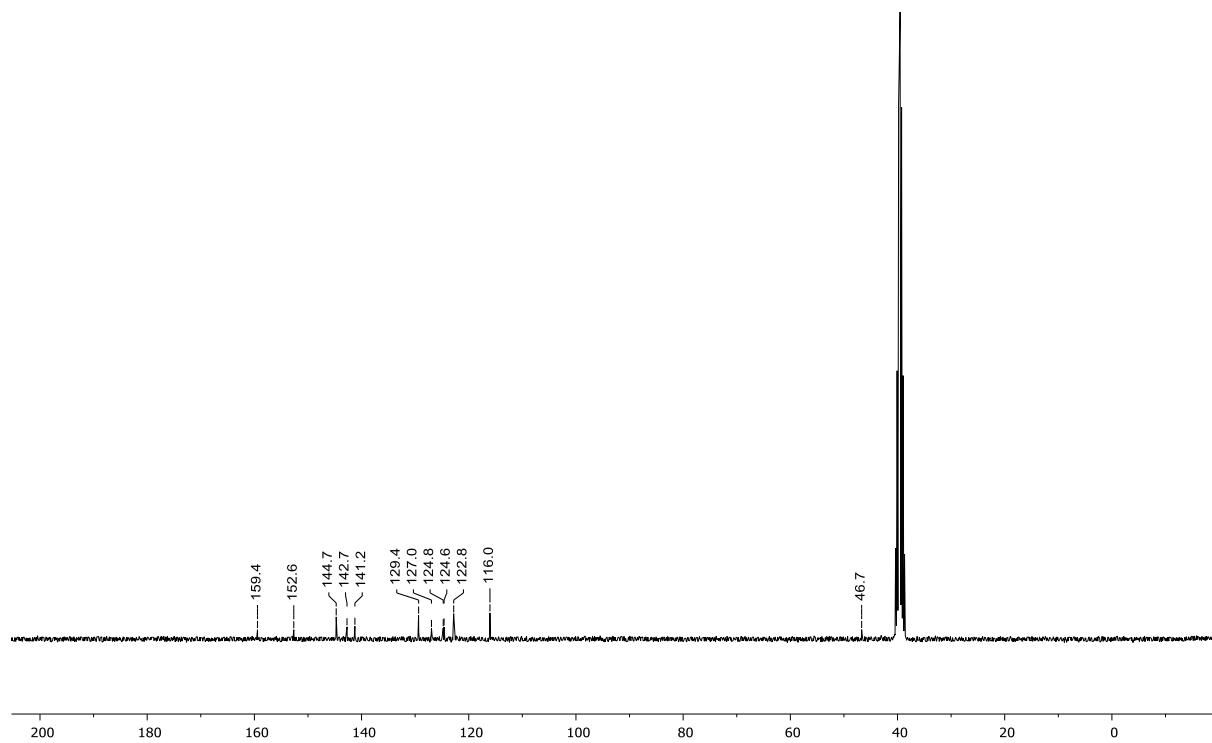
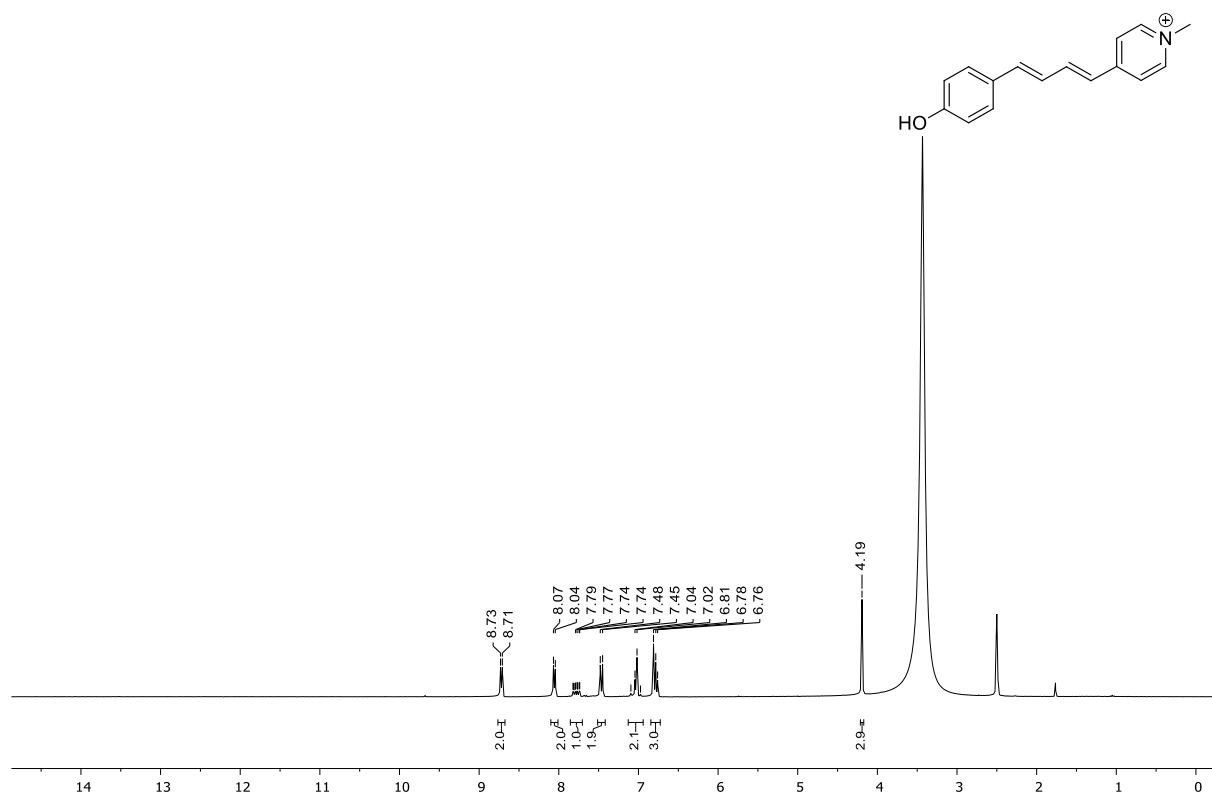
**(Z)-5-((E)-3-(4-hydroxyphenyl)allylidene)-2-thioxoimidazolidin-4-one (1b)**



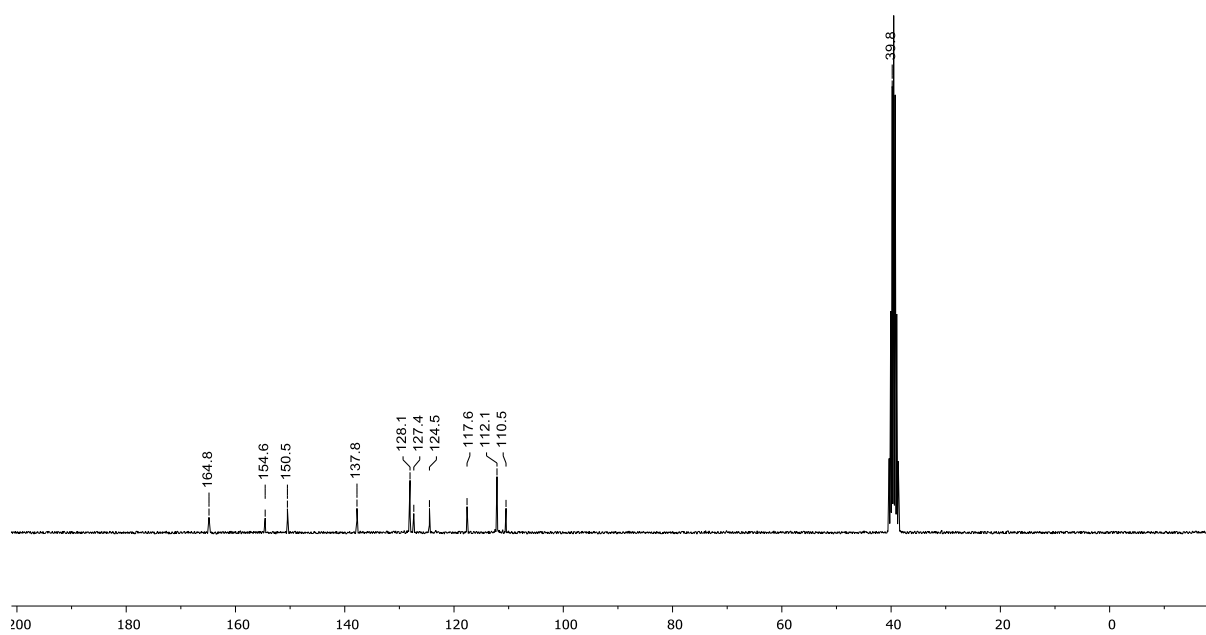
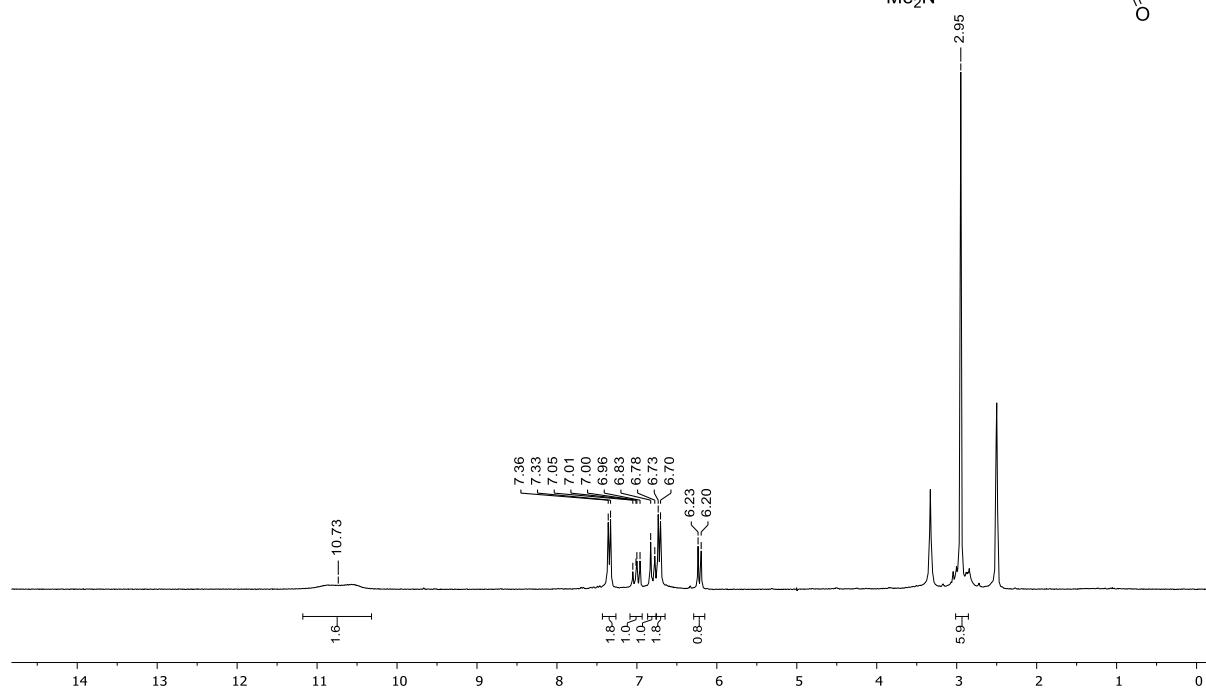
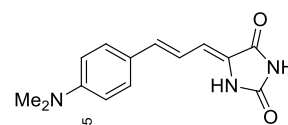
**(Z)-5-((E)-3-(4-hydroxyphenyl)allylidene)-2-thioxothiazolidin-4-one (1c)**



**4-((1E,3E)-4-(4-hydroxyphenyl)buta-1,3-dien-1-yl)-1-methylpyridin-1-ium iodide (1d)**

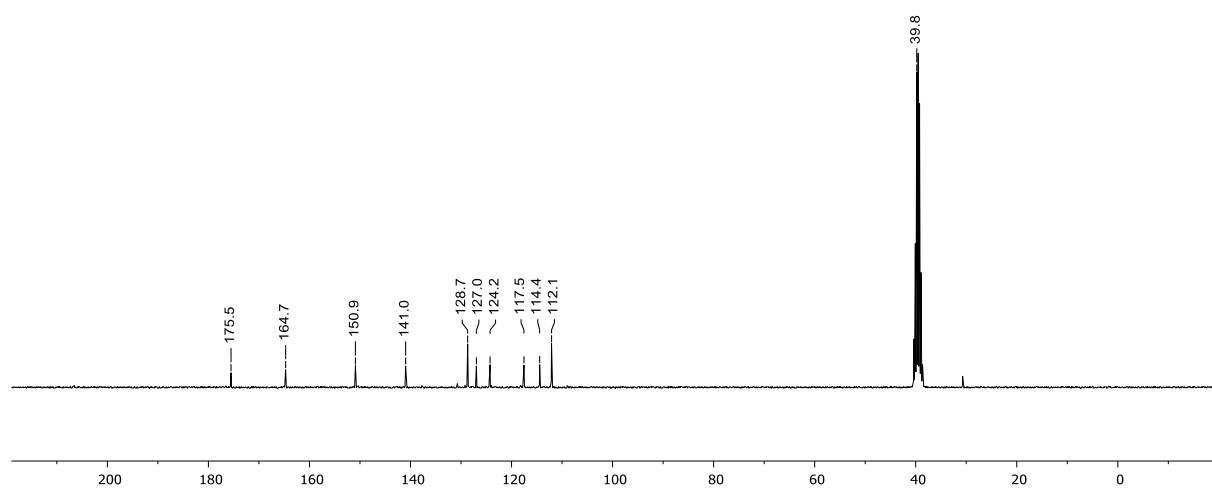
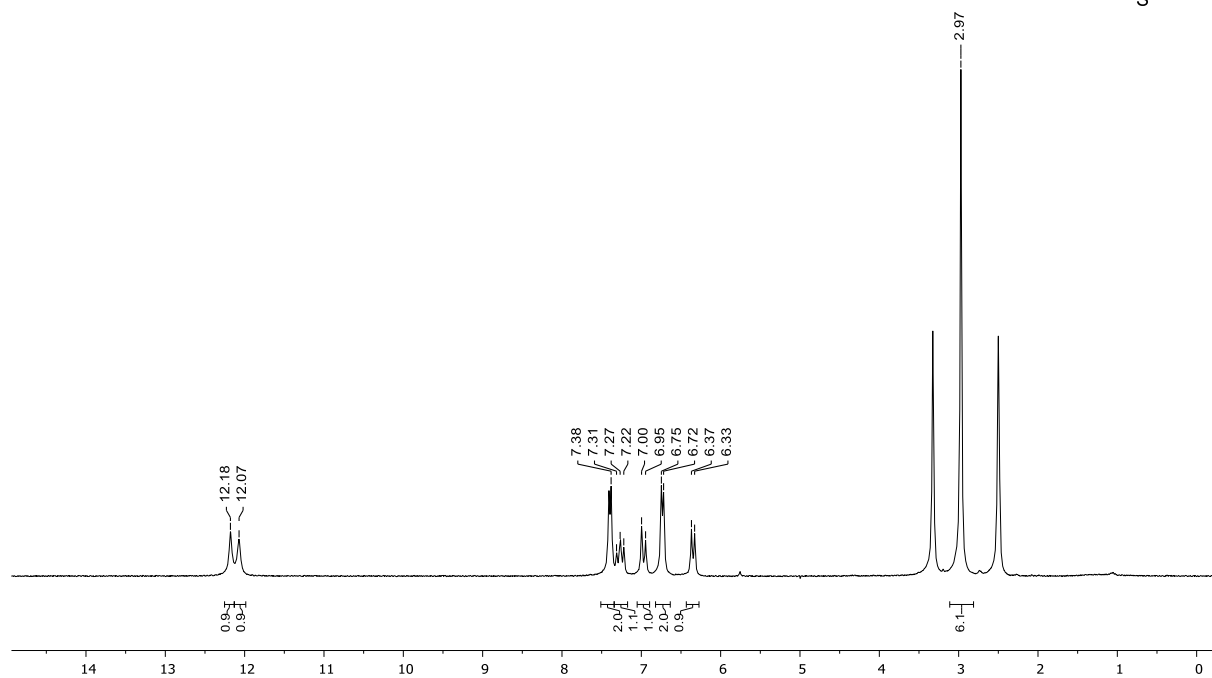
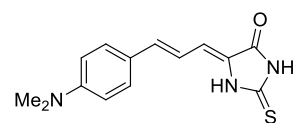


**(Z)-5-((E)-3-(4-(dimethylamino)phenyl)allylidene)imidazolidine-2,4-dione (2a)**

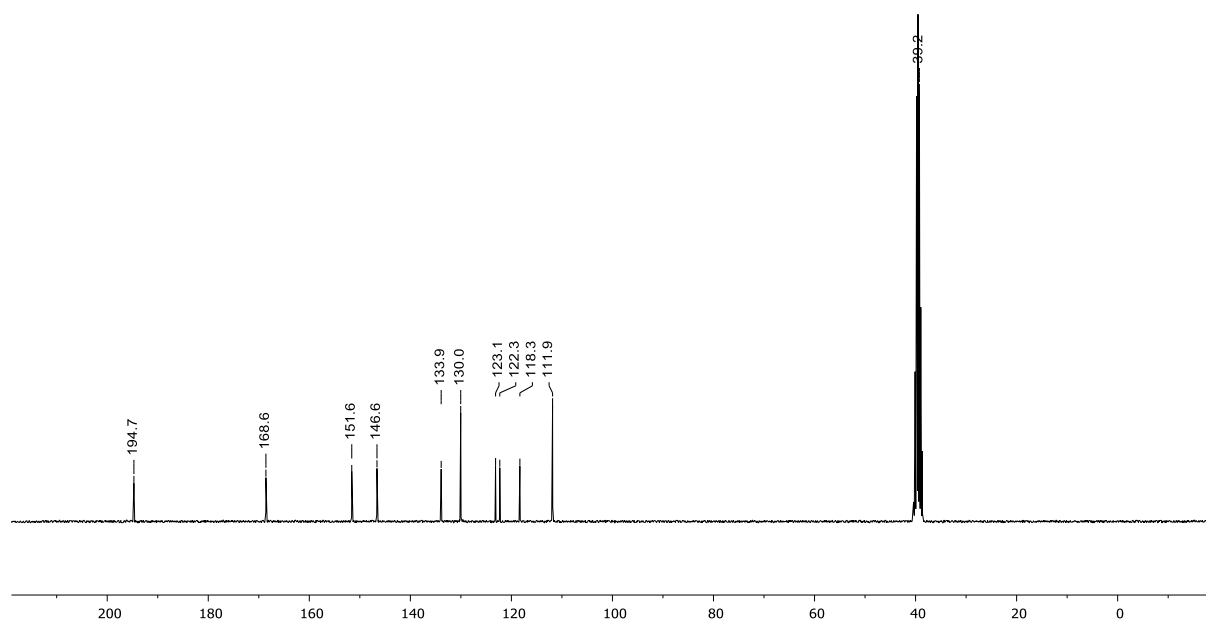
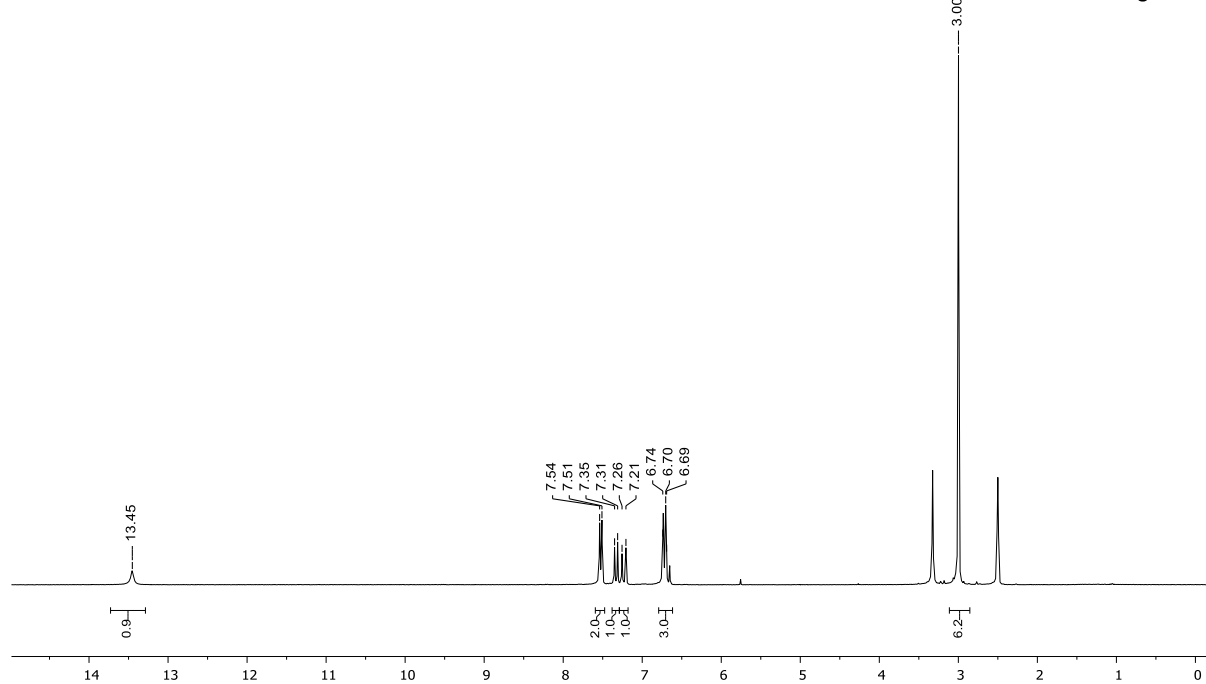
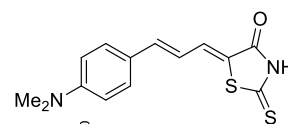




**(Z)-5-((E)-3-(4-(dimethylamino)phenyl)allylidene)-2-thioxoimidazolidin-4-one (2b)**



**(Z)-5-((E)-3-(4-(dimethylamino)phenyl)allylidene)-2-thioxothiazolidin-4-one (2c)**



**4-((1E,3E)-4-(4-(dimethylamino)phenyl)buta-1,3-dien-1-yl)-1-methylpyridin-1-ium iodide (2d)**

