

Supplementary Material

Microwave-assisted synthesis of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)-[4-(substituted ethynyl)phenyl]methanones

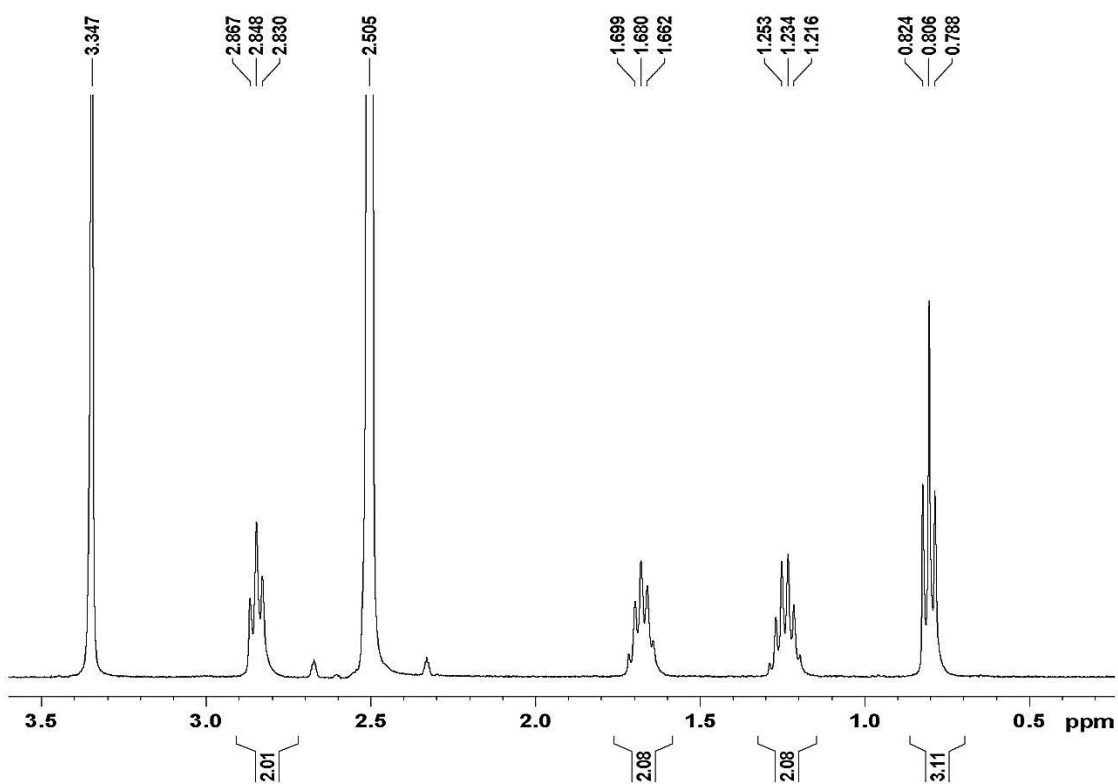
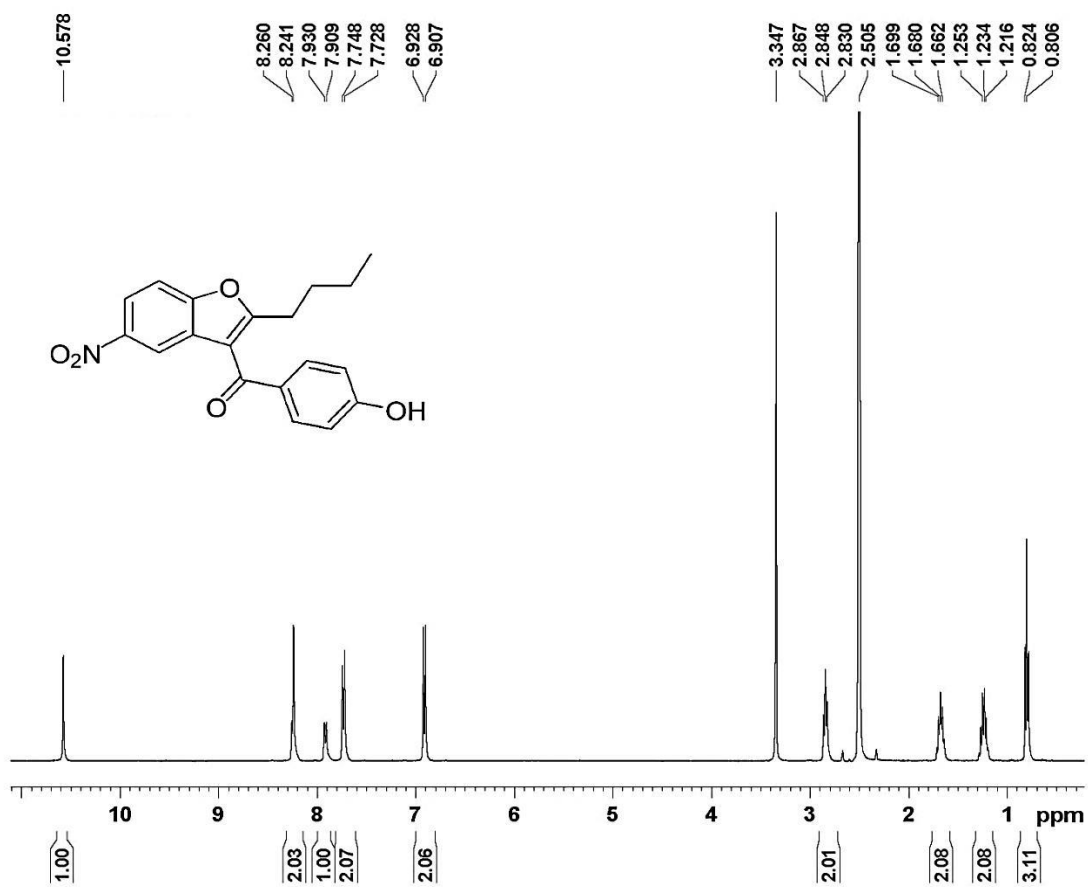
Nilesh D. Parmar, Sanjay D. Hadiyal, Vimal H. Kapupara, and Hitendra S. Joshi*

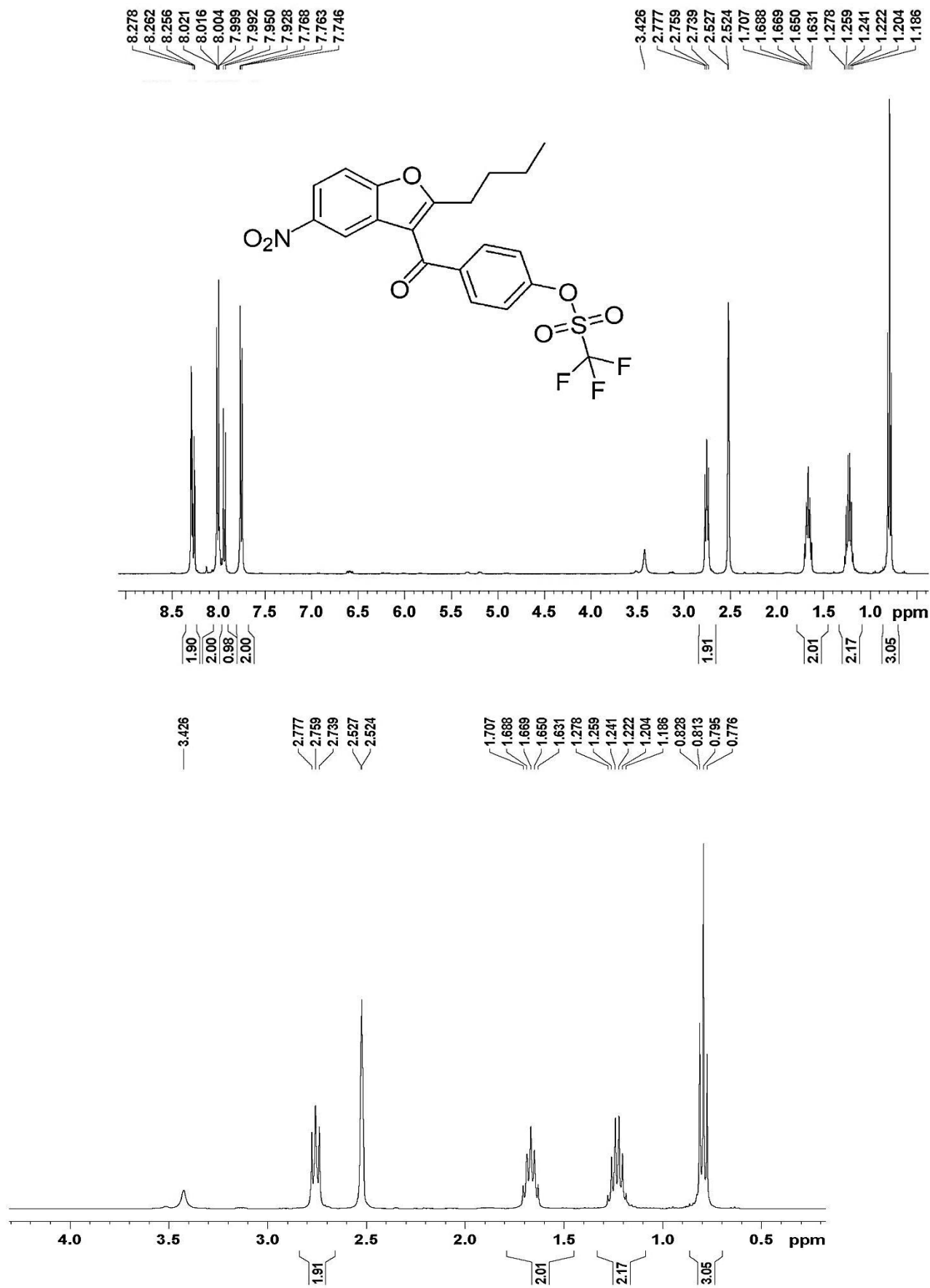
Department of Chemistry, Saurashtra University, Rajkot-360 005, Gujarat, India

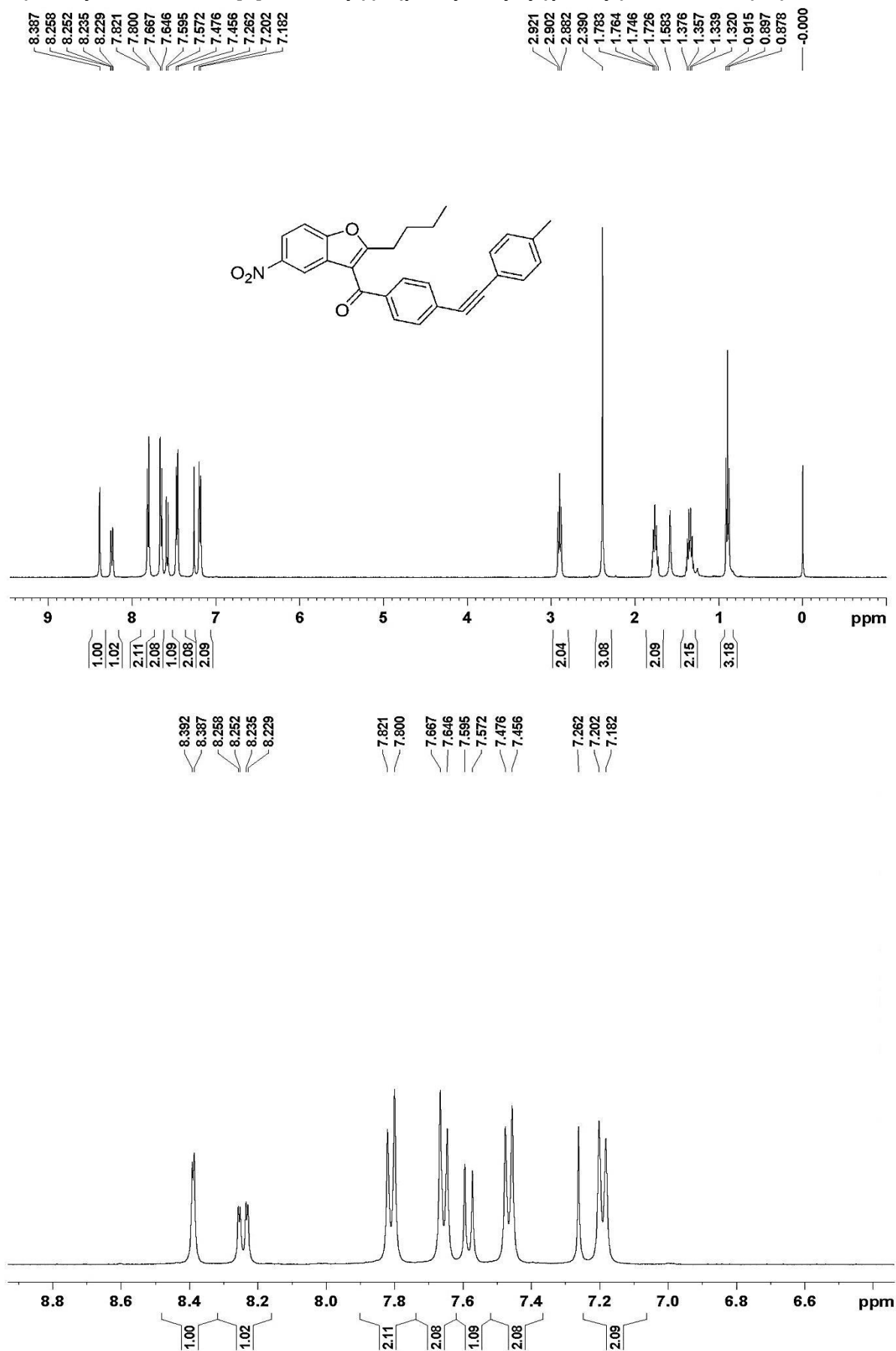
Email: parmarnilesh1117@gmail.com, drhsjoshichem@gmail.com

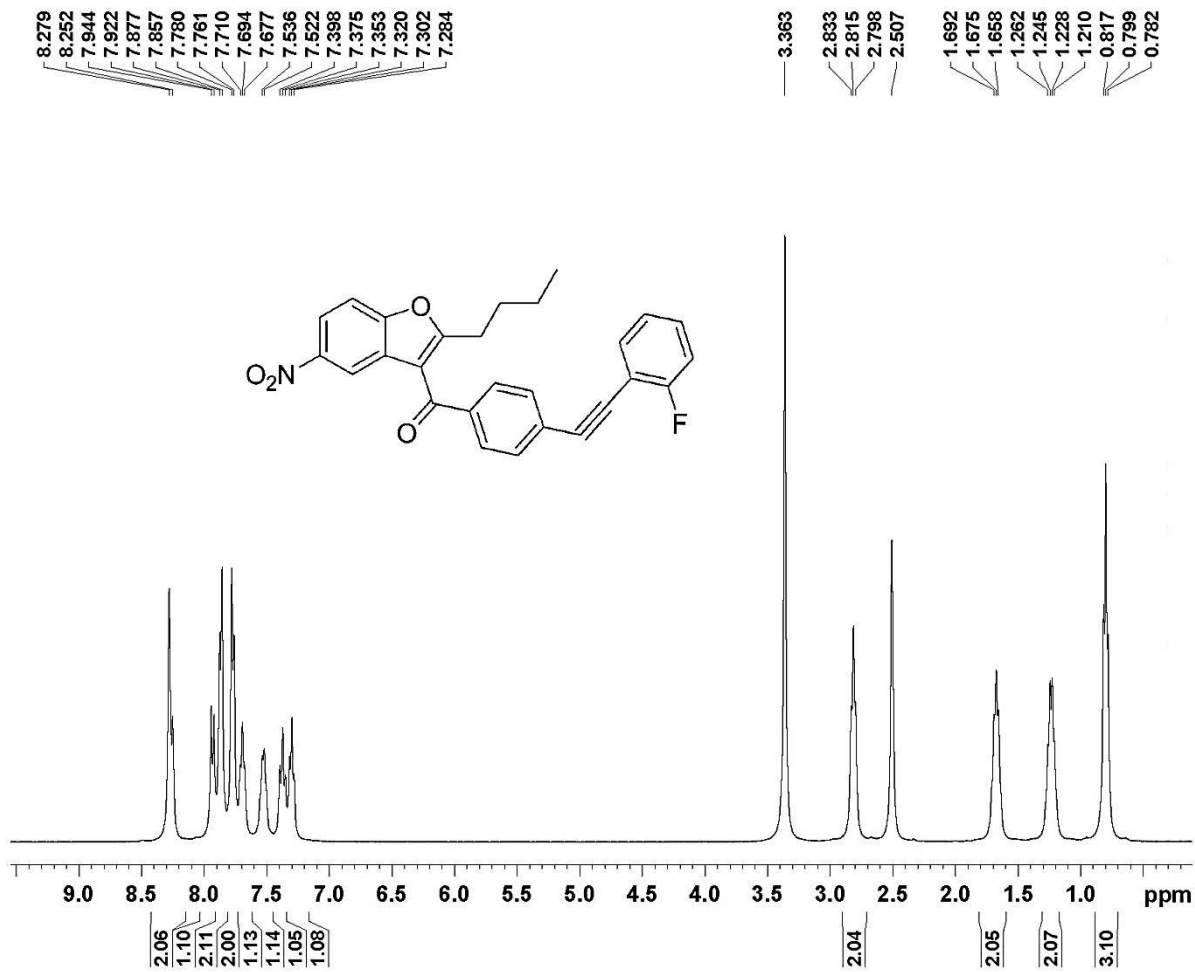
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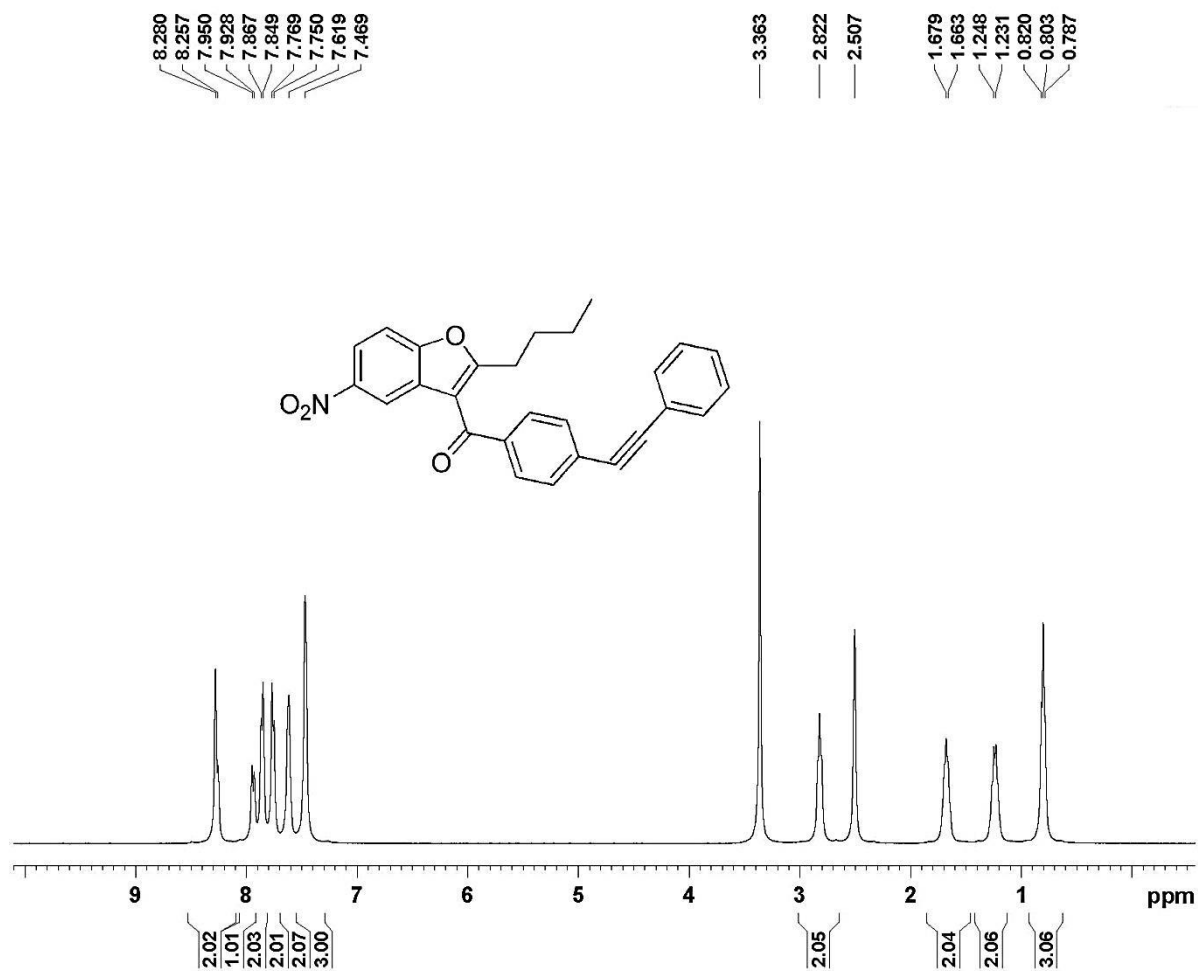
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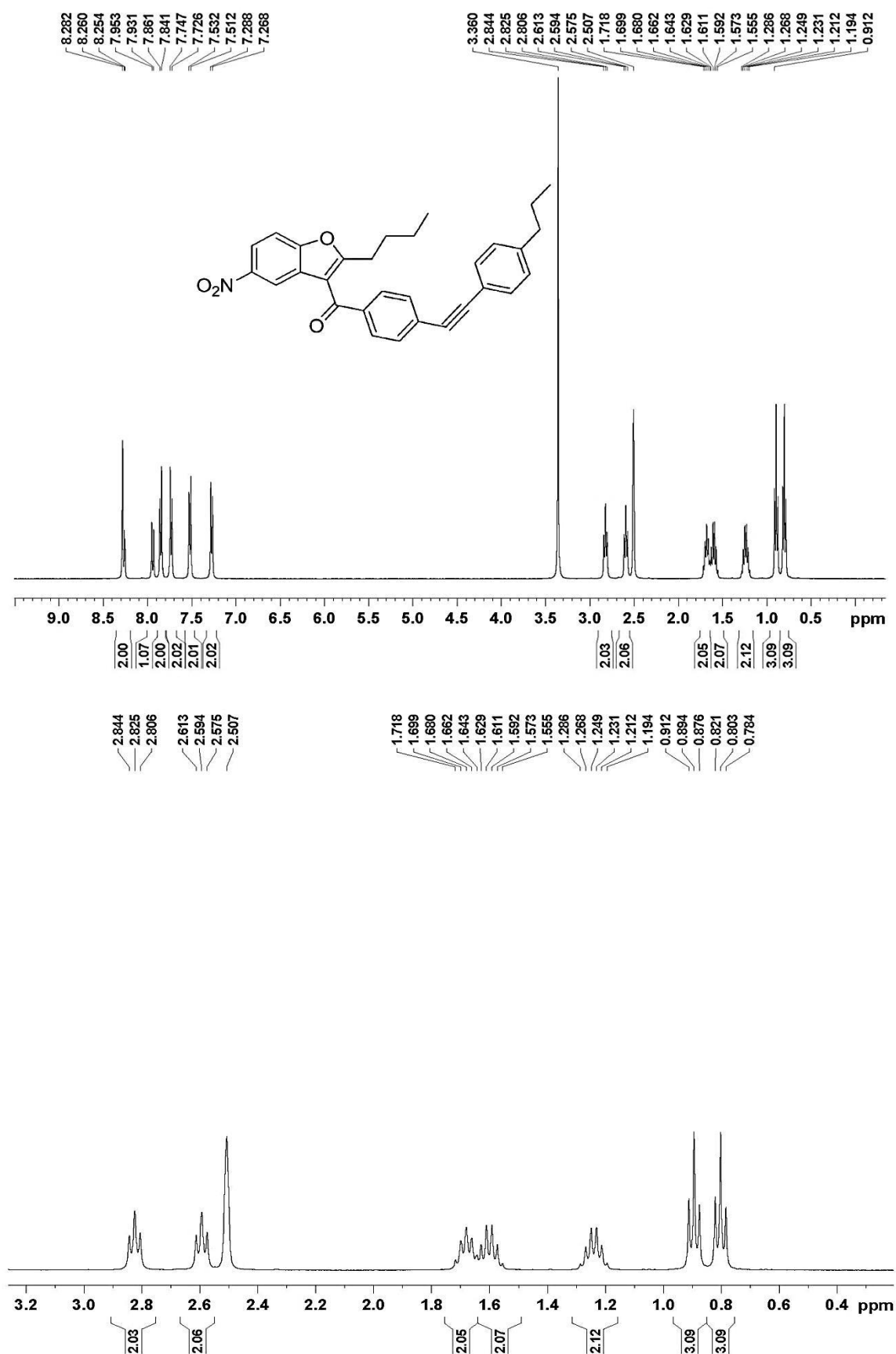
^1H NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-hydroxyphenyl)methanone (3)

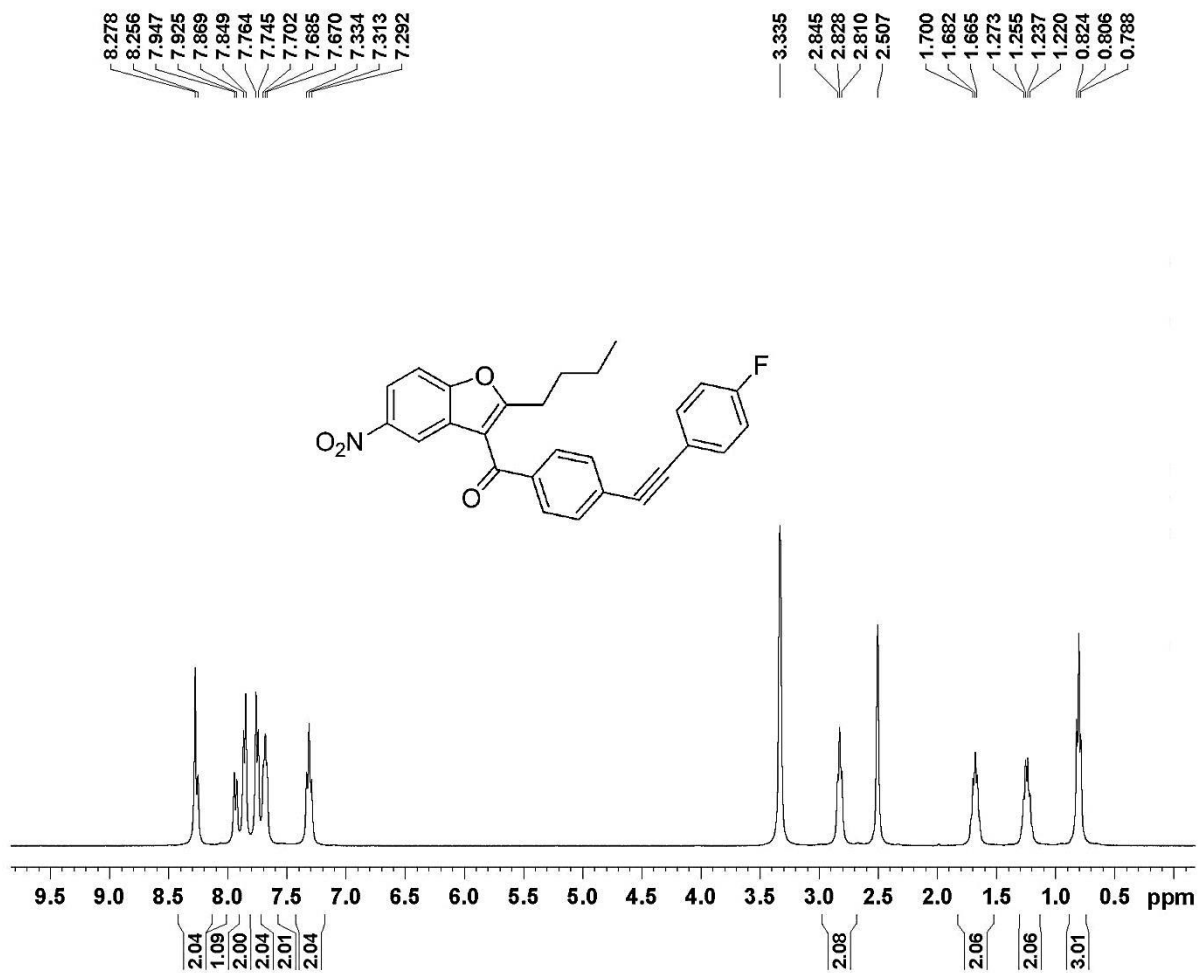
^1H NMR of 4-(2-butyl-5-nitrobenzo[*b*]furan-3-carbonyl)phenyl trifluoromethanesulfonate (4)

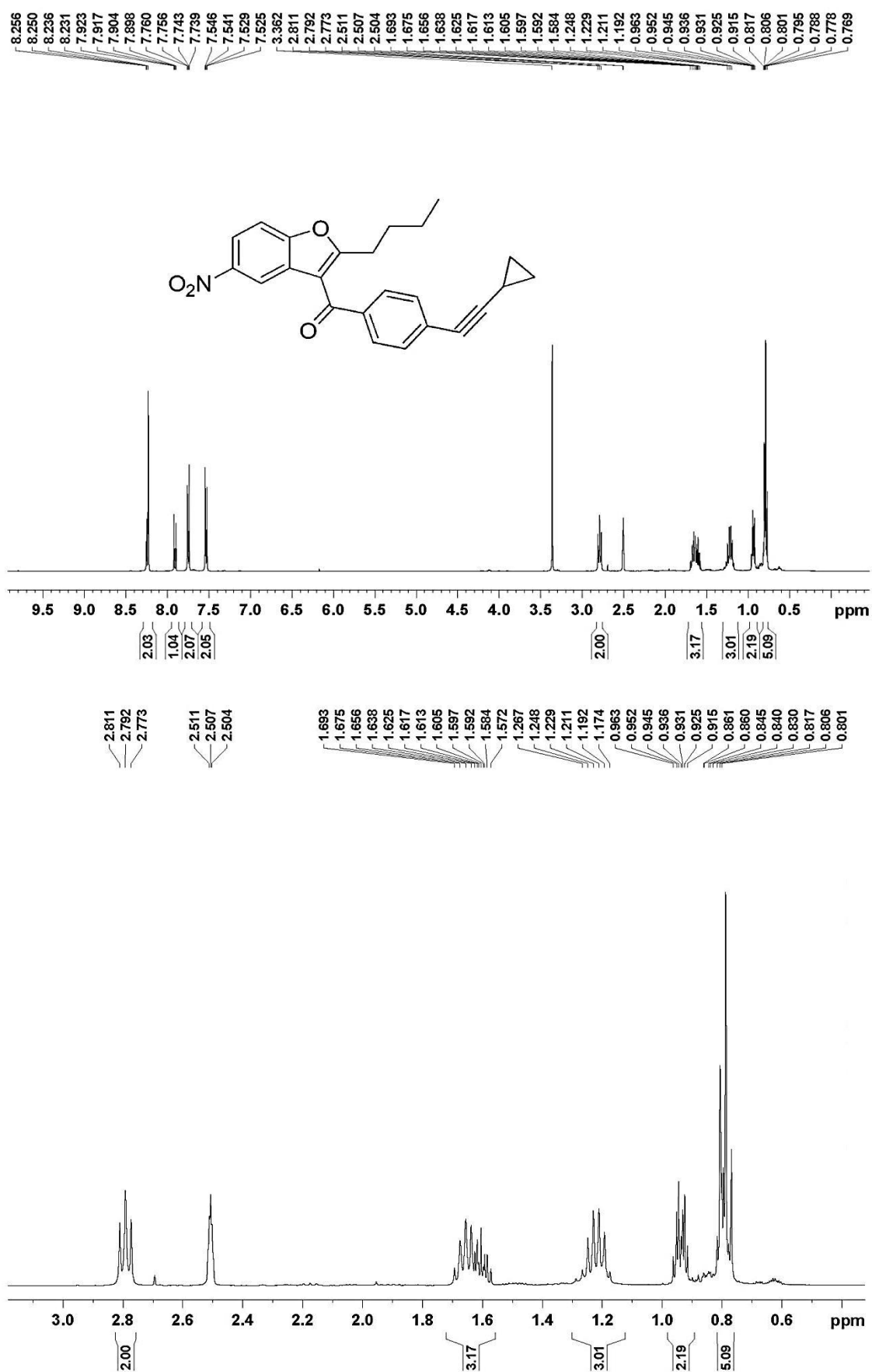
^1H NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(*p*-tolylethynyl)phenyl)methanone (5a):

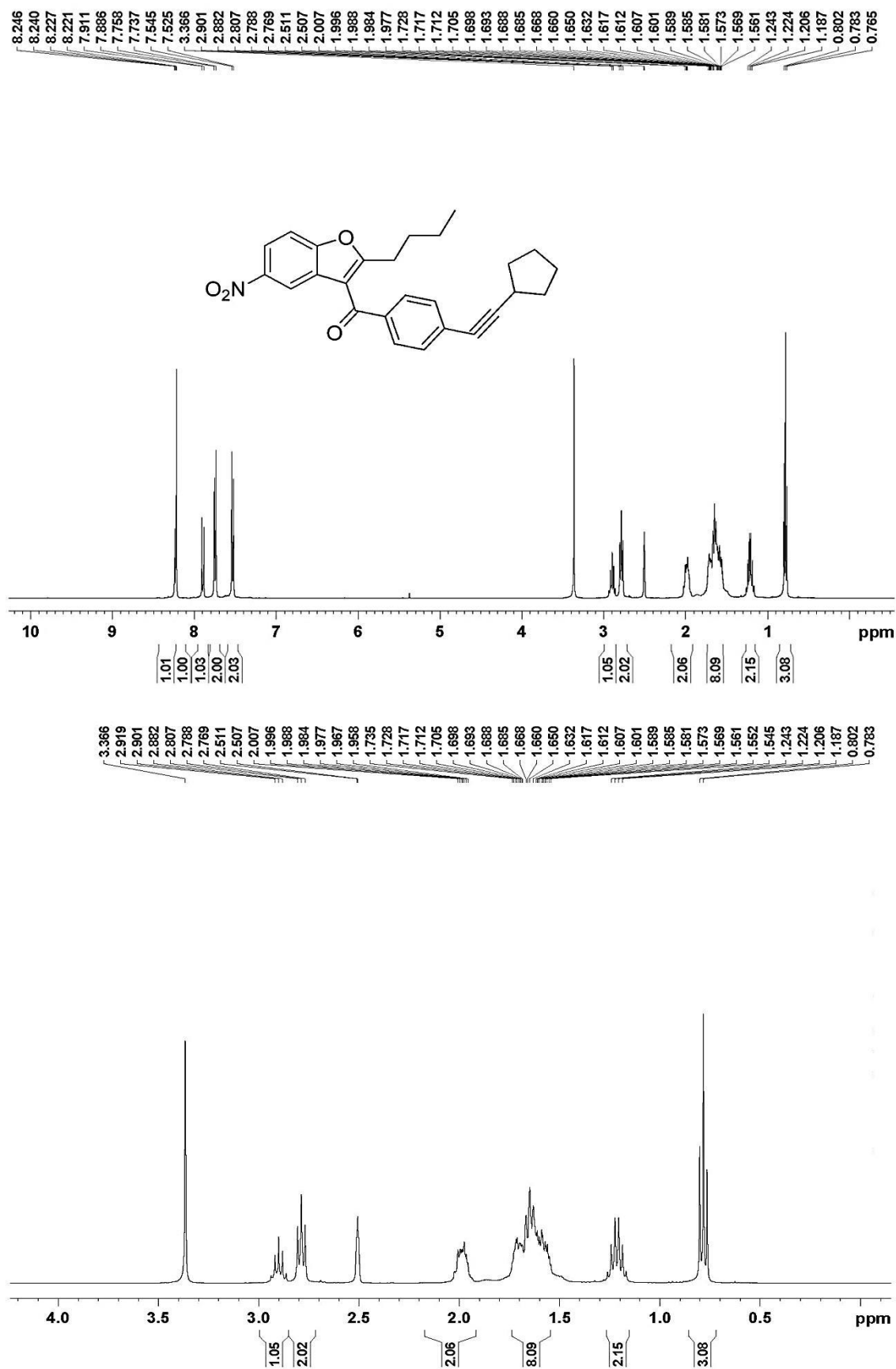
^1H NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-((2-fluorophenyl)ethynyl)phenyl)methanone (5b):

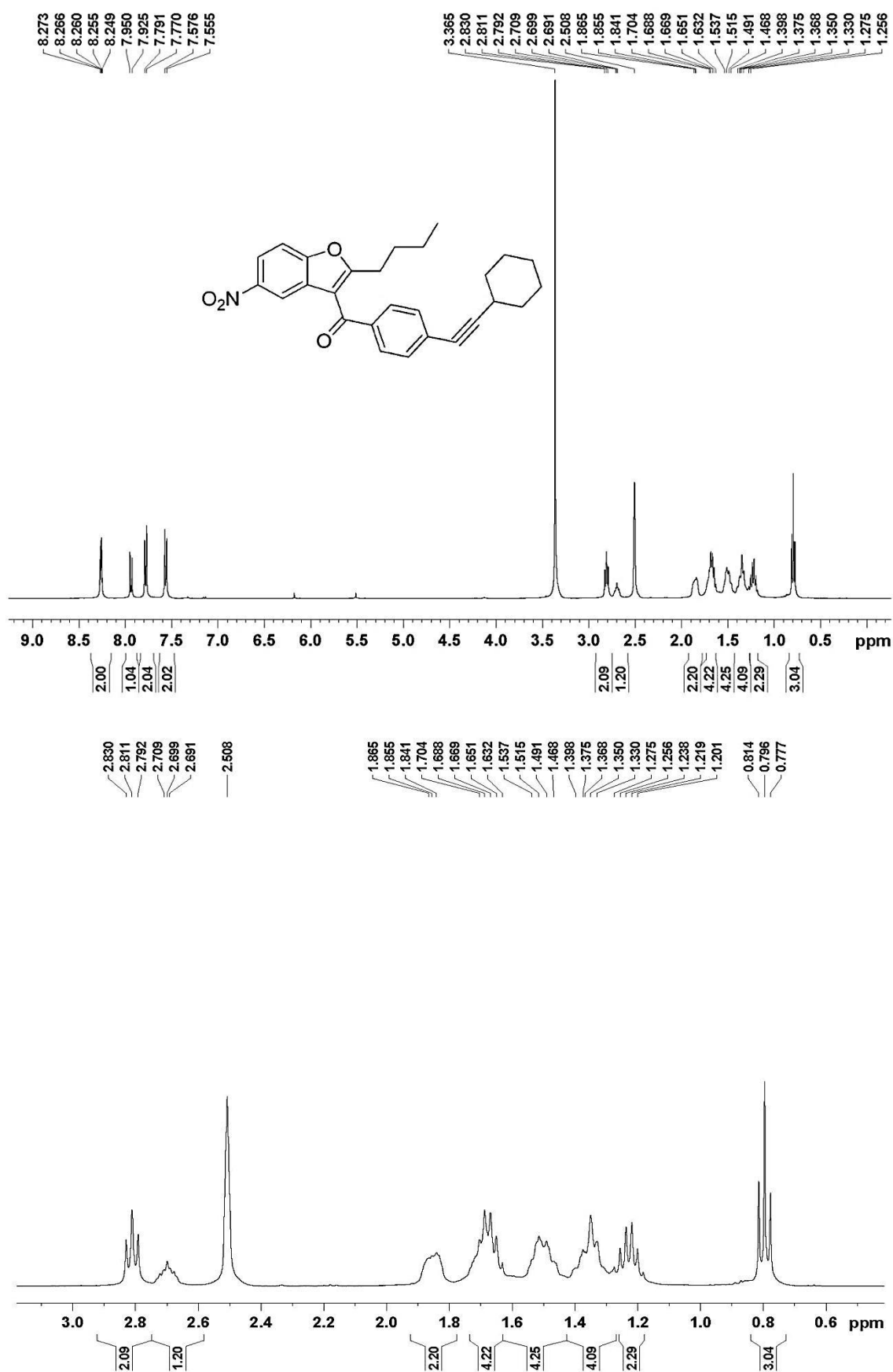
¹H NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(phenylethynyl)phenyl)methanone (5c):

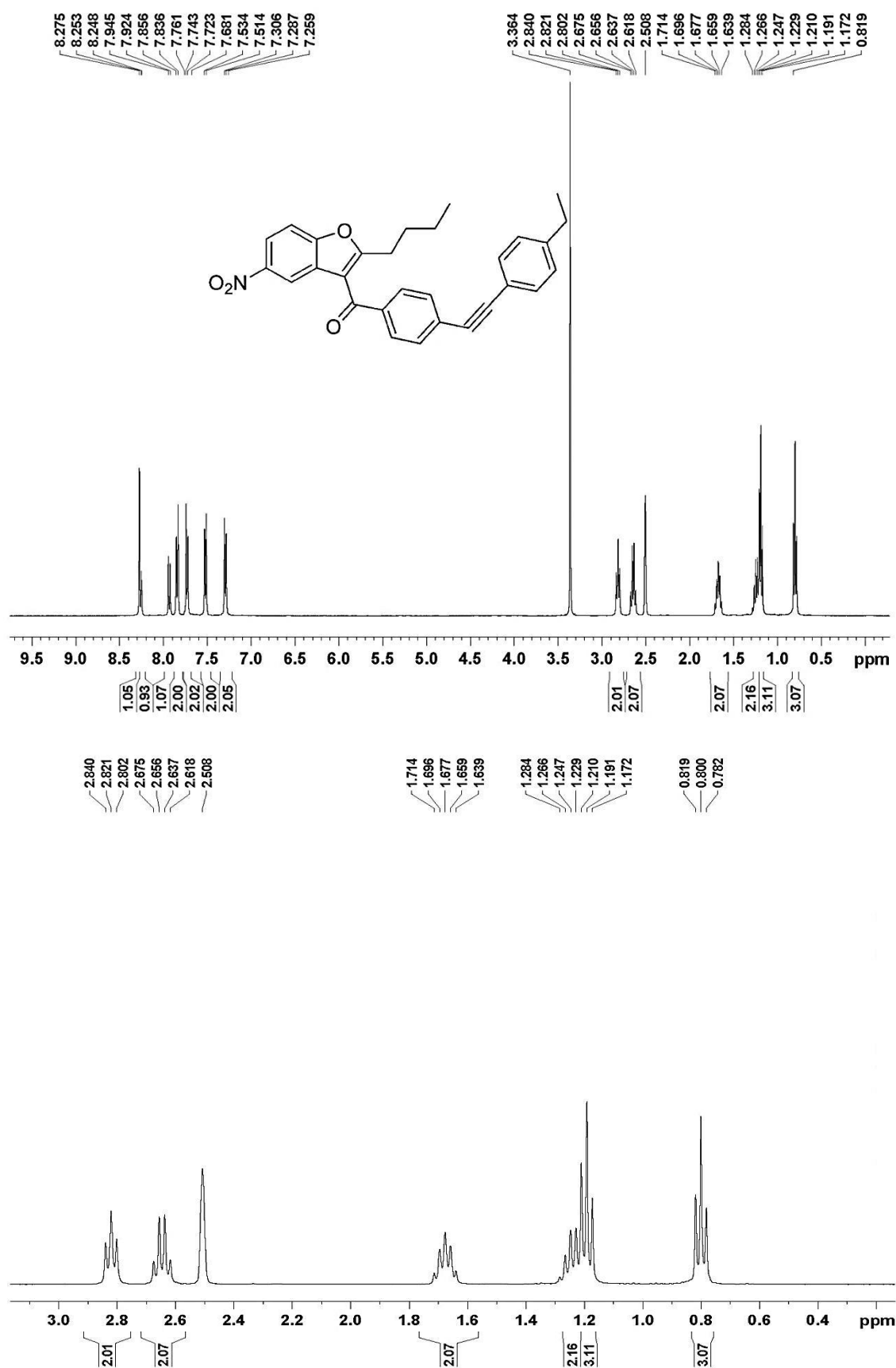
^1H NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-((4-propylphenyl)ethynyl)phenyl)-methanone (5d):

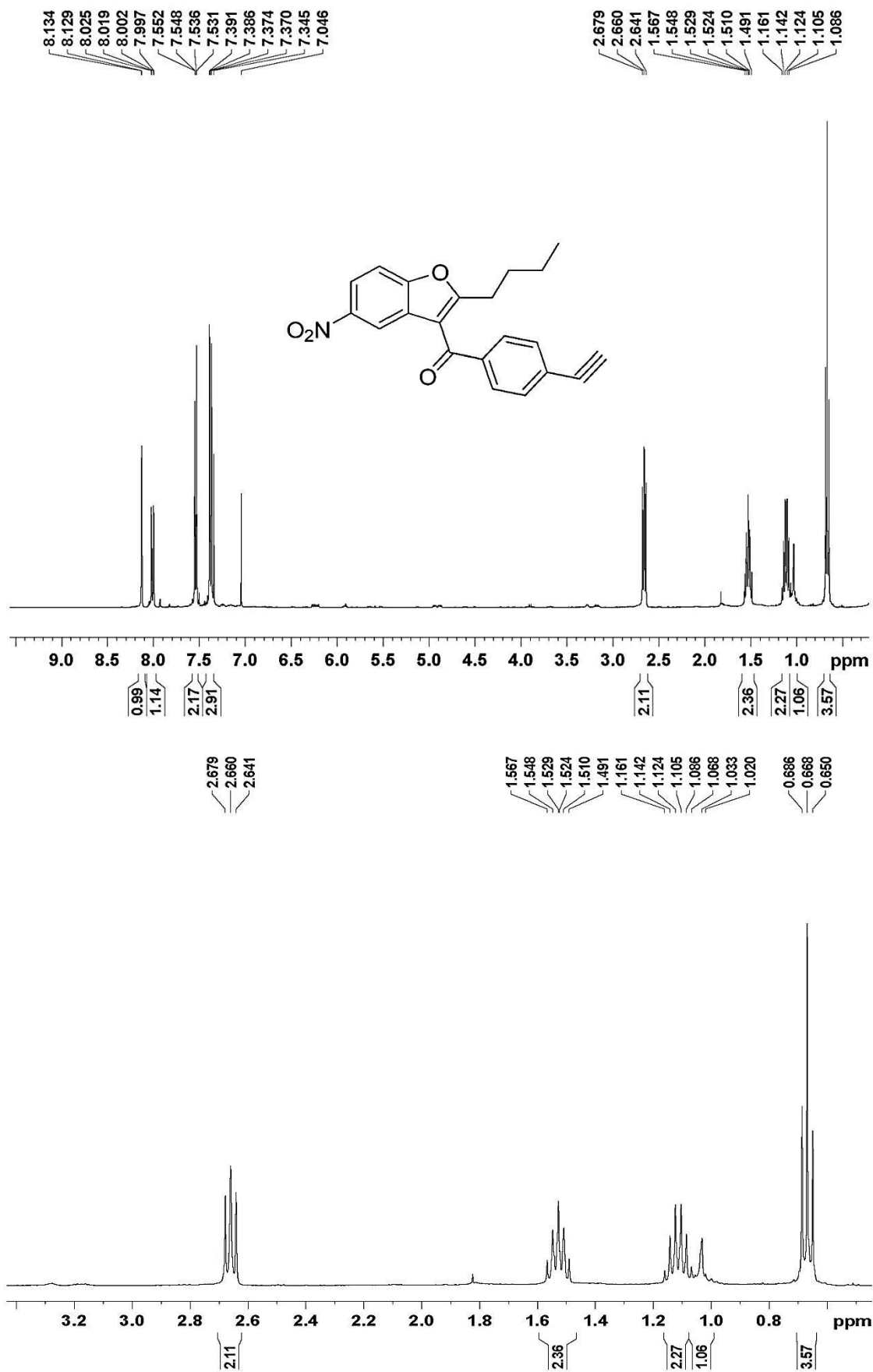
¹H NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-((4-fluorophenyl)ethynyl)phenyl)methanone (5e):

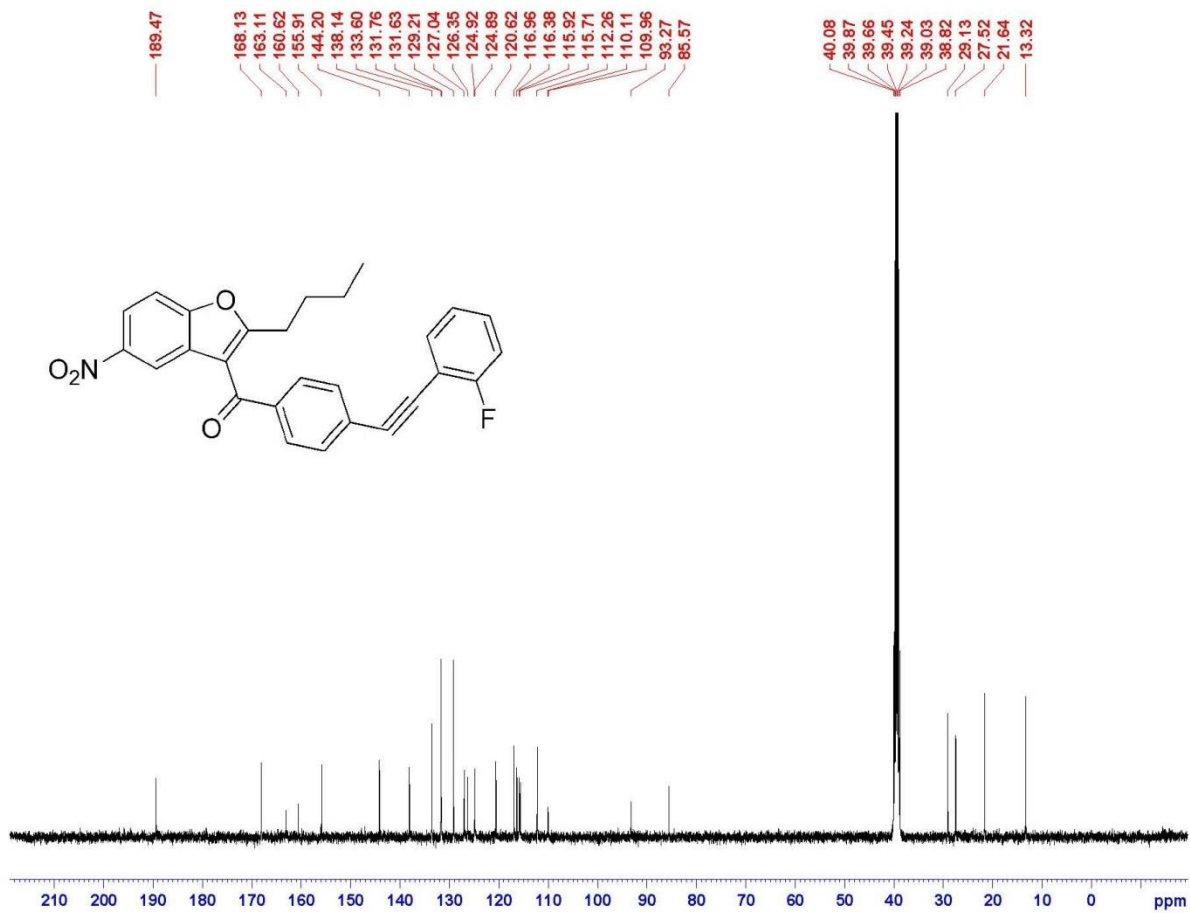
¹H NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(cyclopropylethynyl)phenyl)methanone (5f):

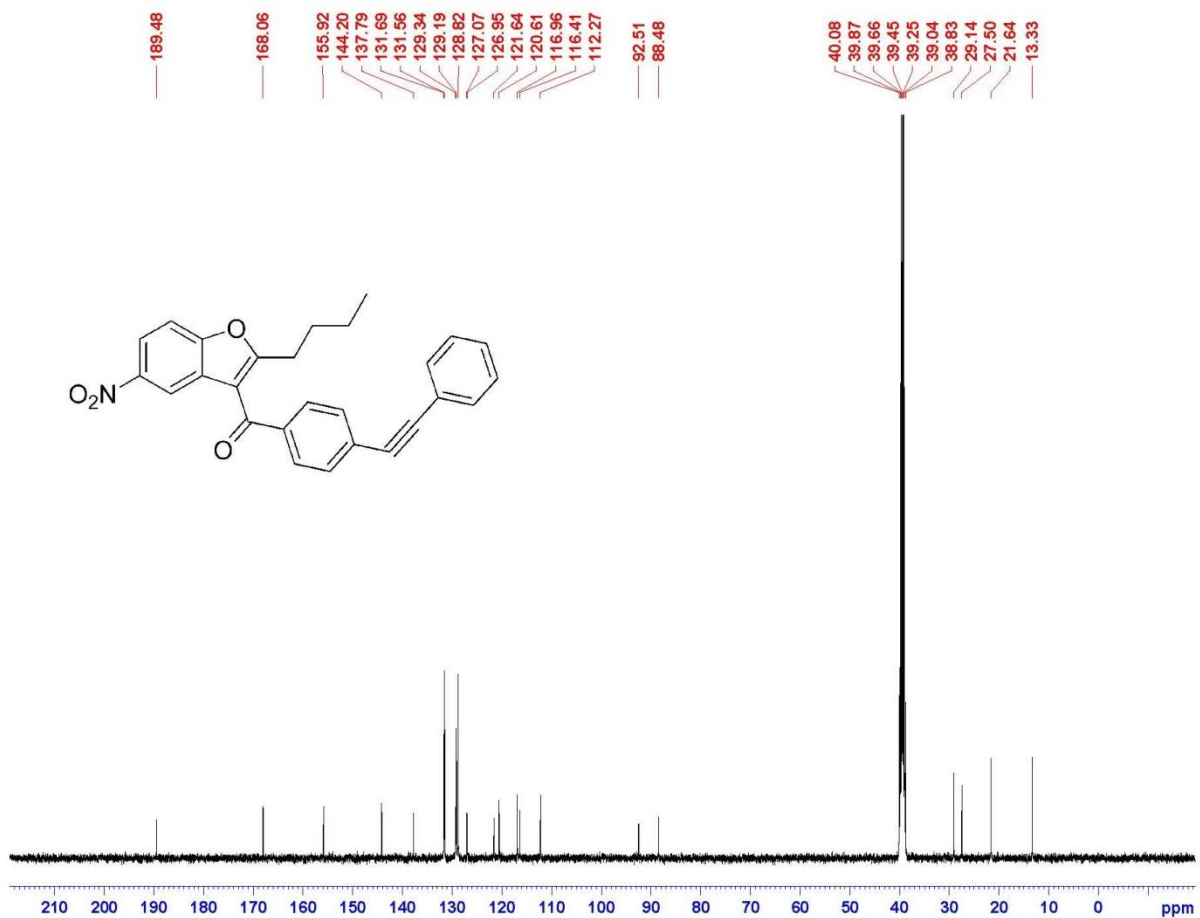
¹H NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(cyclopentylethynyl)phenyl)methanone (5g):

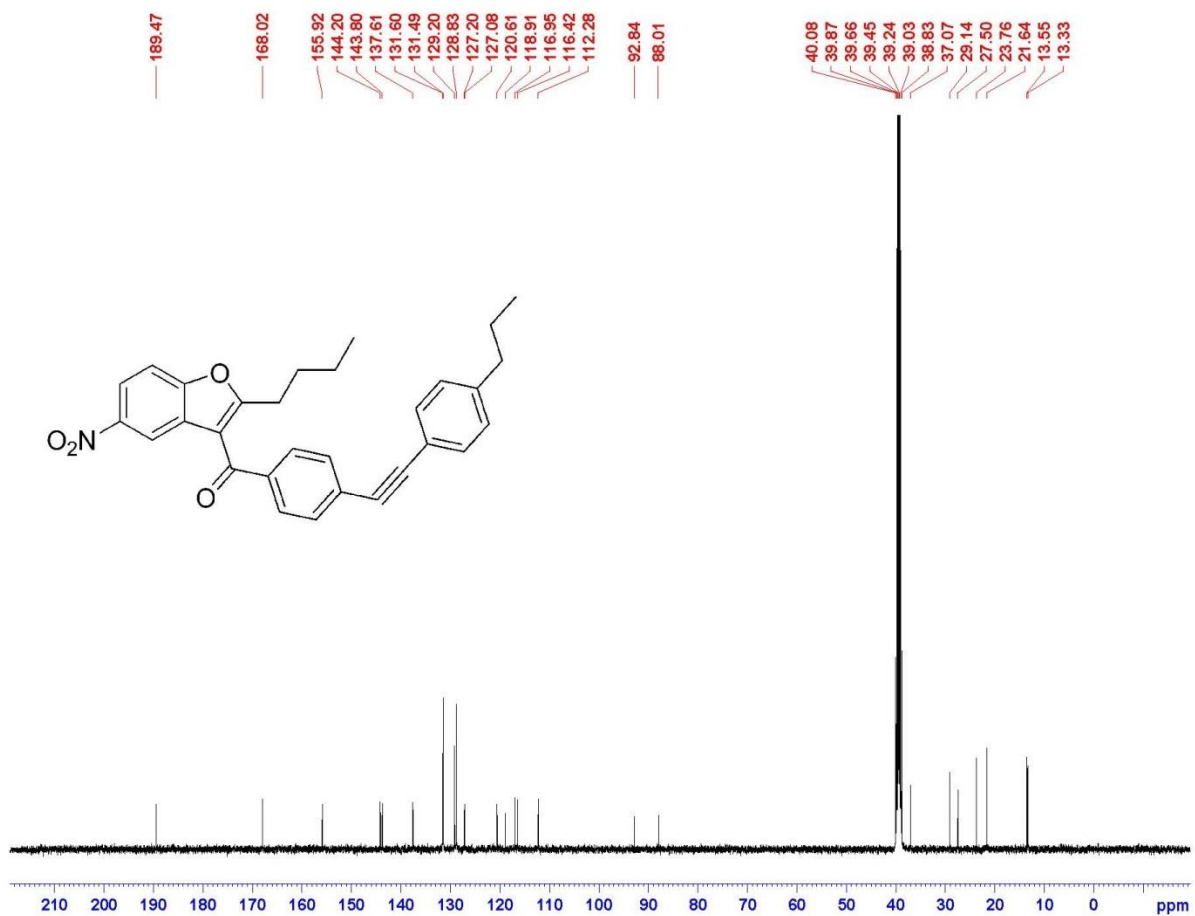
¹H NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(cyclohexylethynyl)phenyl)methanone (5h):

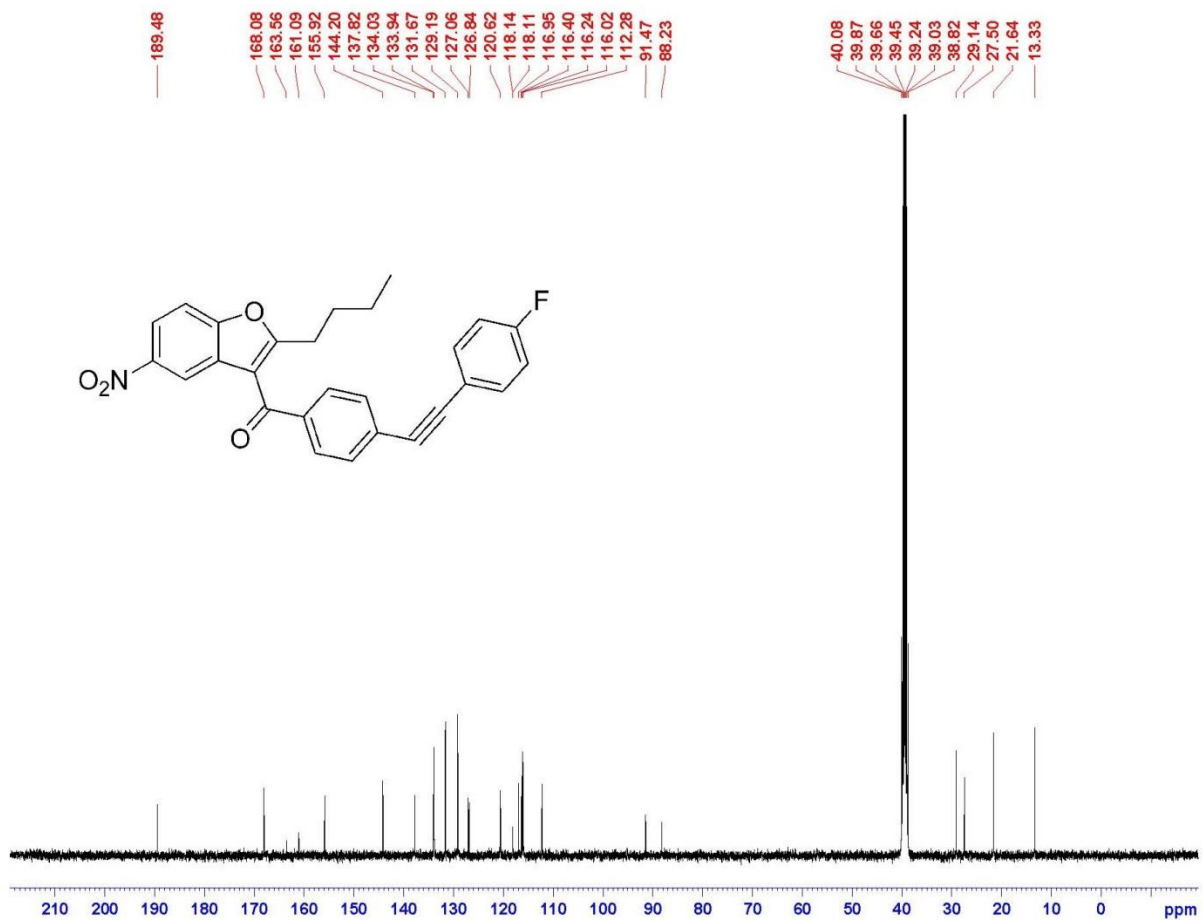
¹H NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-((4-ethylphenyl)ethynyl)phenyl)methanone (5j):

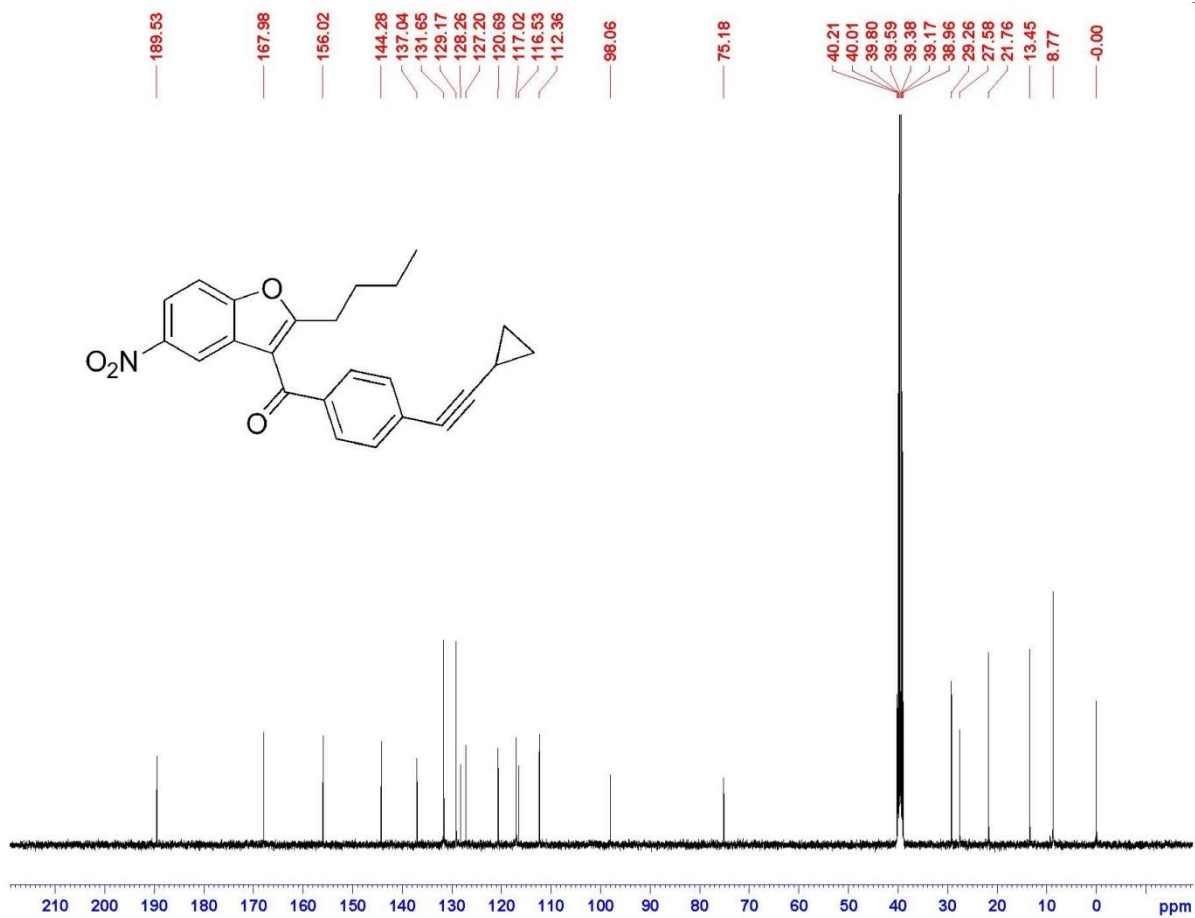
^1H NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-ethynylphenyl)methanone (5k):

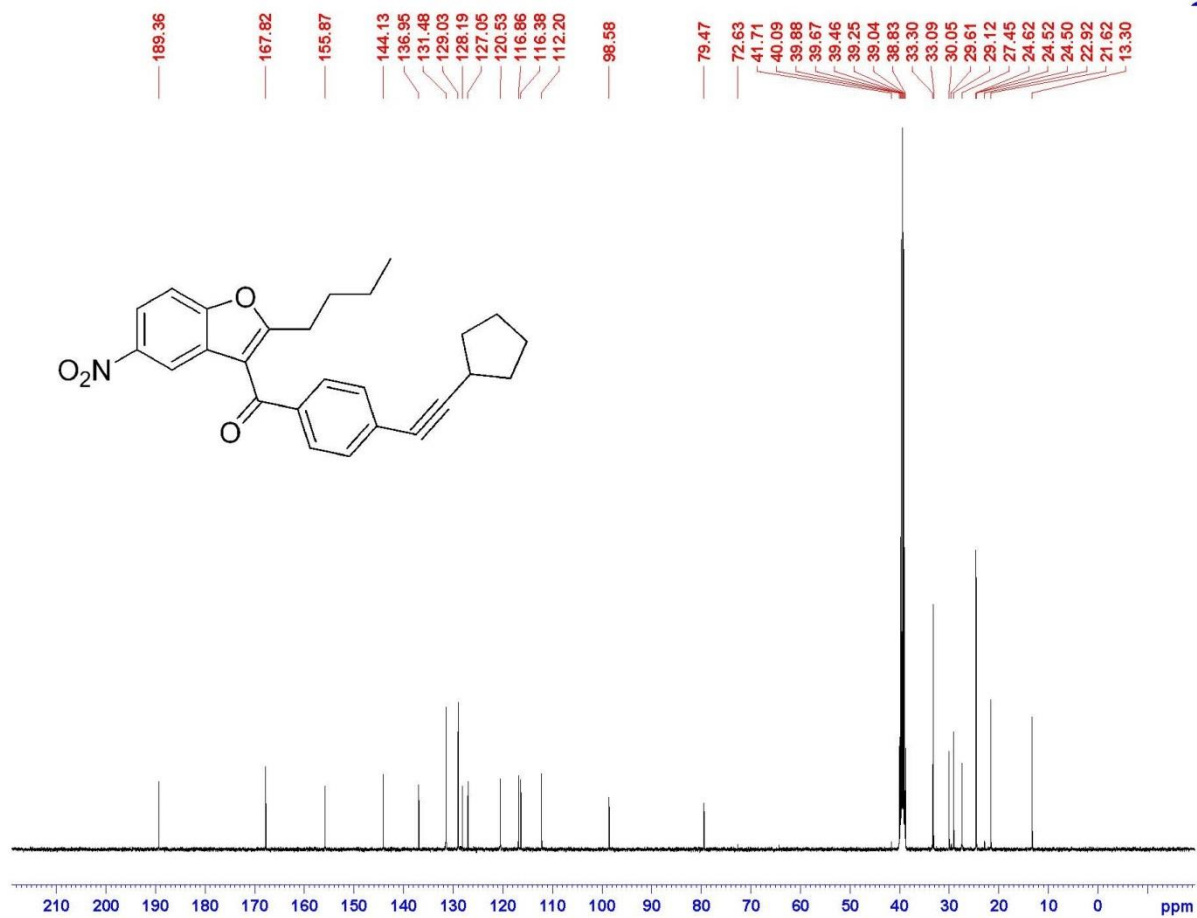
^{13}C NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-((2-fluorophenyl)ethynyl)phenyl)-methanone (5b):

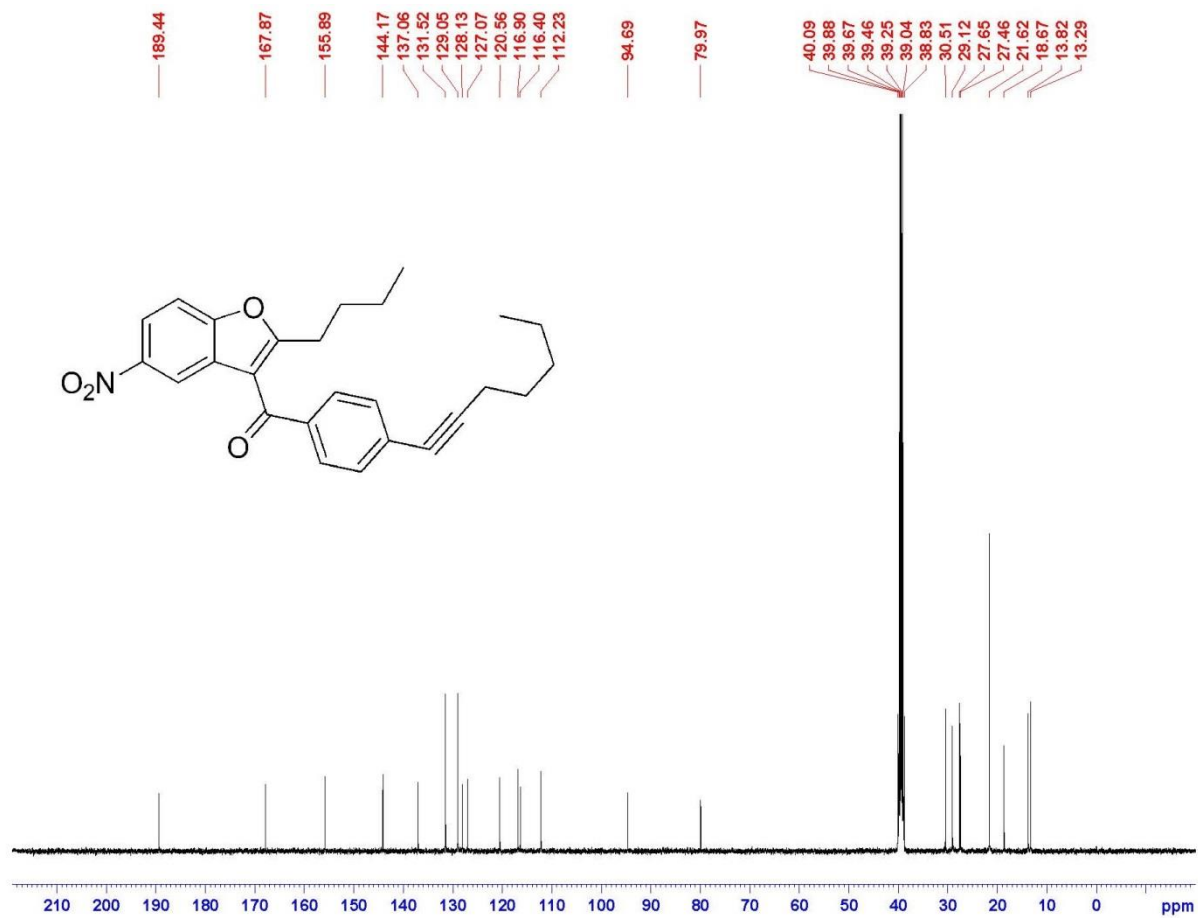
^{13}C NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(phenylethynyl)phenyl)methanone (5c):

¹³C NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-((4-propylphenyl)ethynyl)phenyl)-methanone (5d):

¹³C NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-((4-fluorophenyl)ethynyl)phenyl)-methanone (5e):

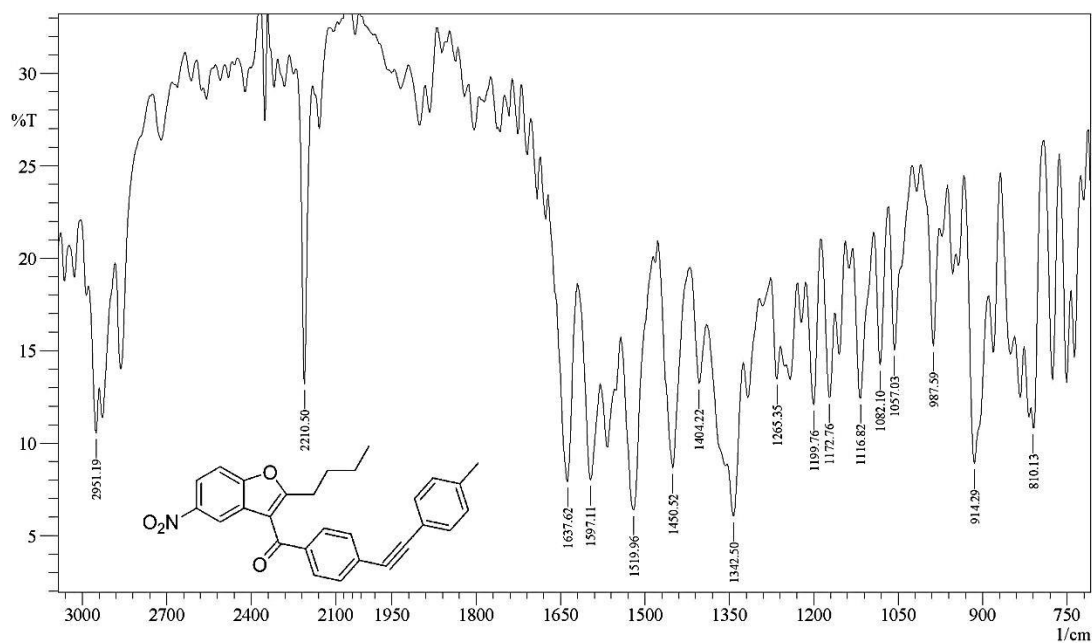
^{13}C NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(cyclopropylethynyl)phenyl)methanone (5f):

^{13}C NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(cyclopentylethynyl)phenyl)methanone (5g):

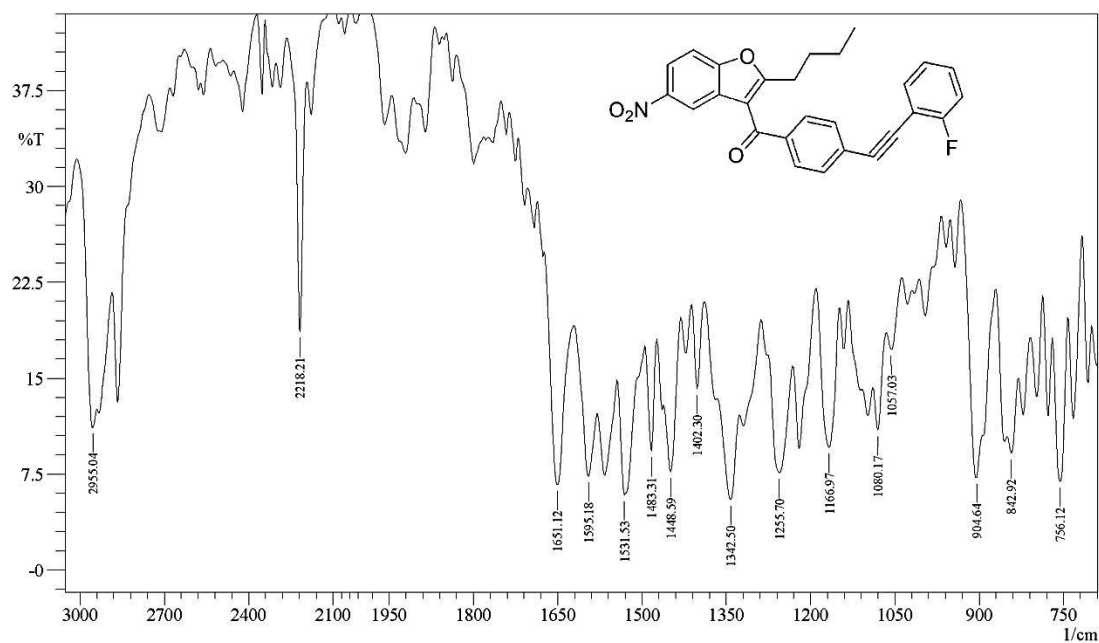
^{13}C NMR of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(hept-1-yn-1-yl)phenyl)methanone (5i):

IR spectrum of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(*p*-tolylethynyl)phenyl)methanone (5a):

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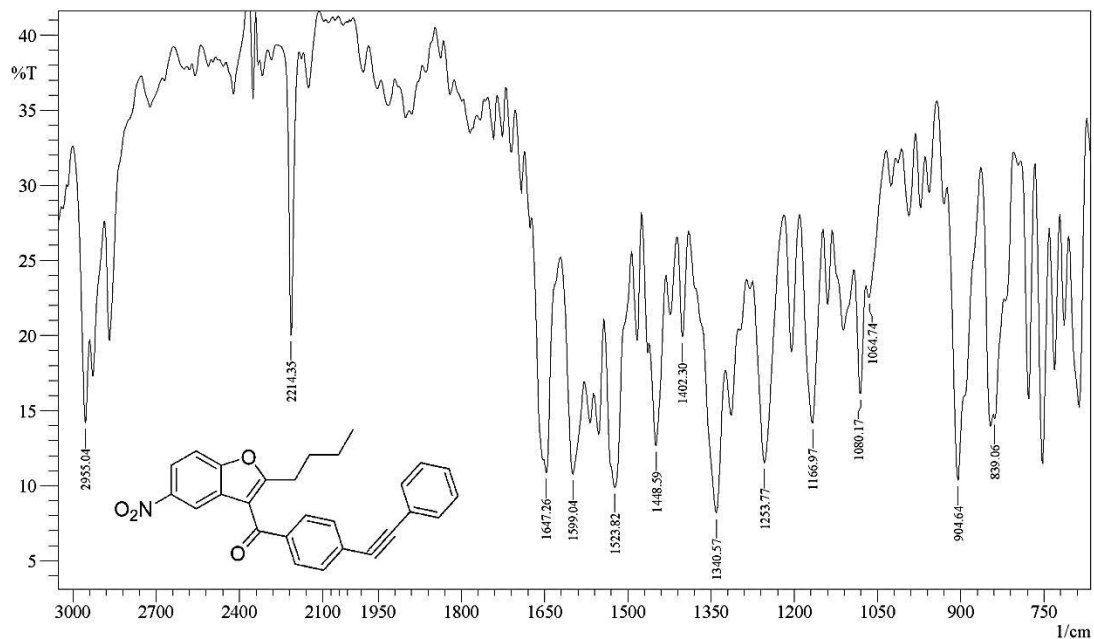
IR spectrum of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-((2-fluorophenyl)ethynyl)phenyl)-methanone (5b):

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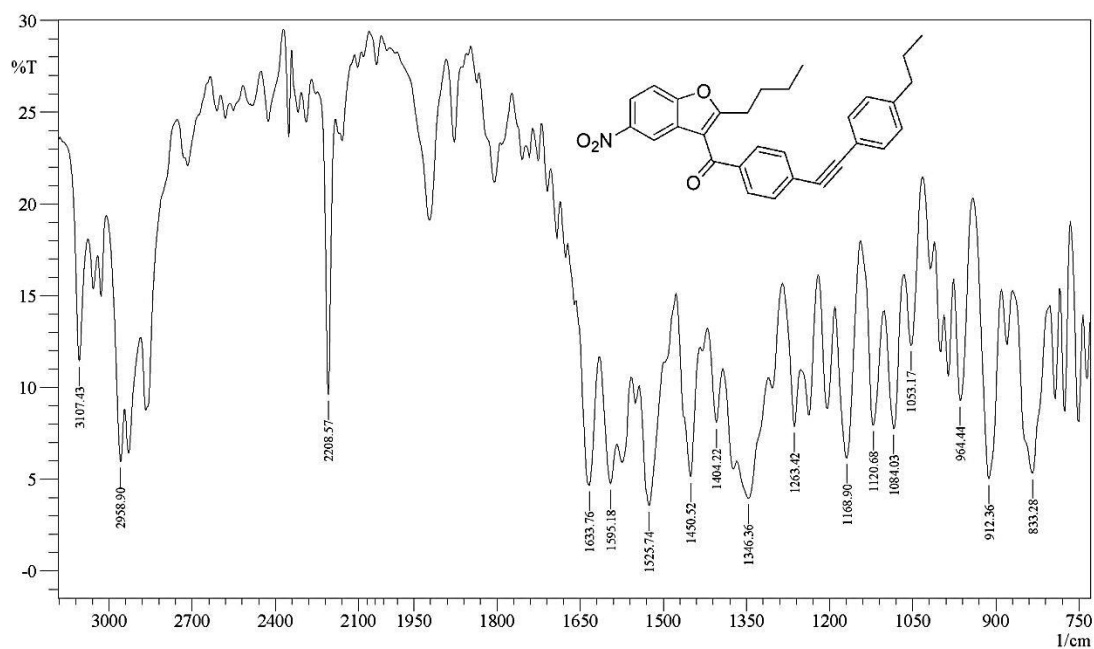
IR spectrum of (2-butyl-5-nitrobenzo[b]furan-3-yl)(4-(phenylethynyl)phenyl)methanone (5c):

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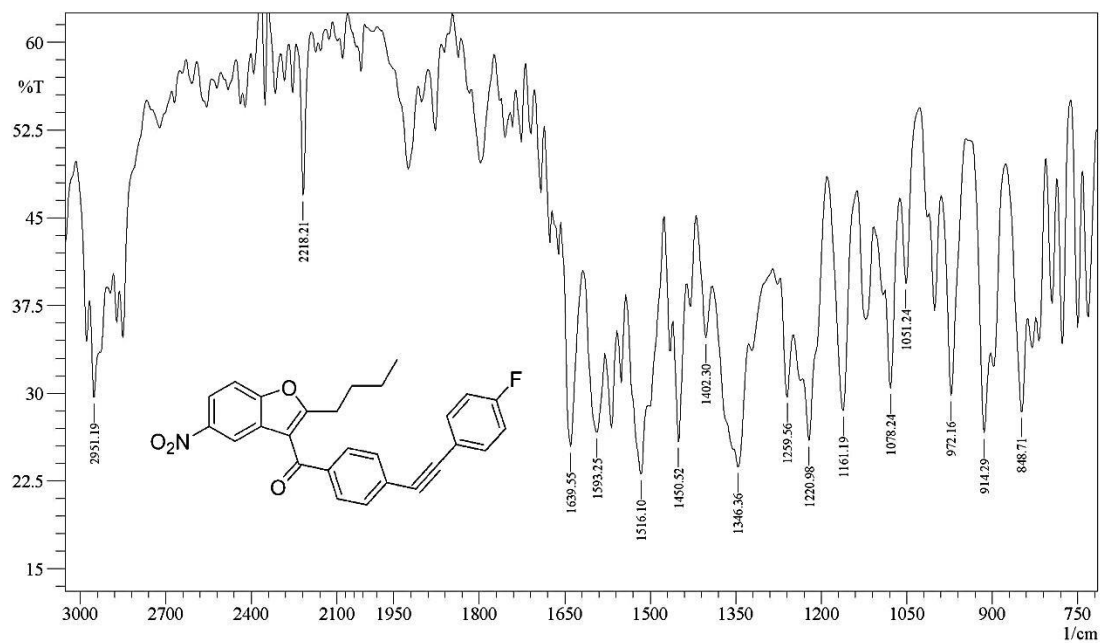
IR spectrum of (2-butyl-5-nitrobenzo[b]furan-3-yl)(4-((4-propylphenyl)ethynyl)phenyl)-methanone (5d):

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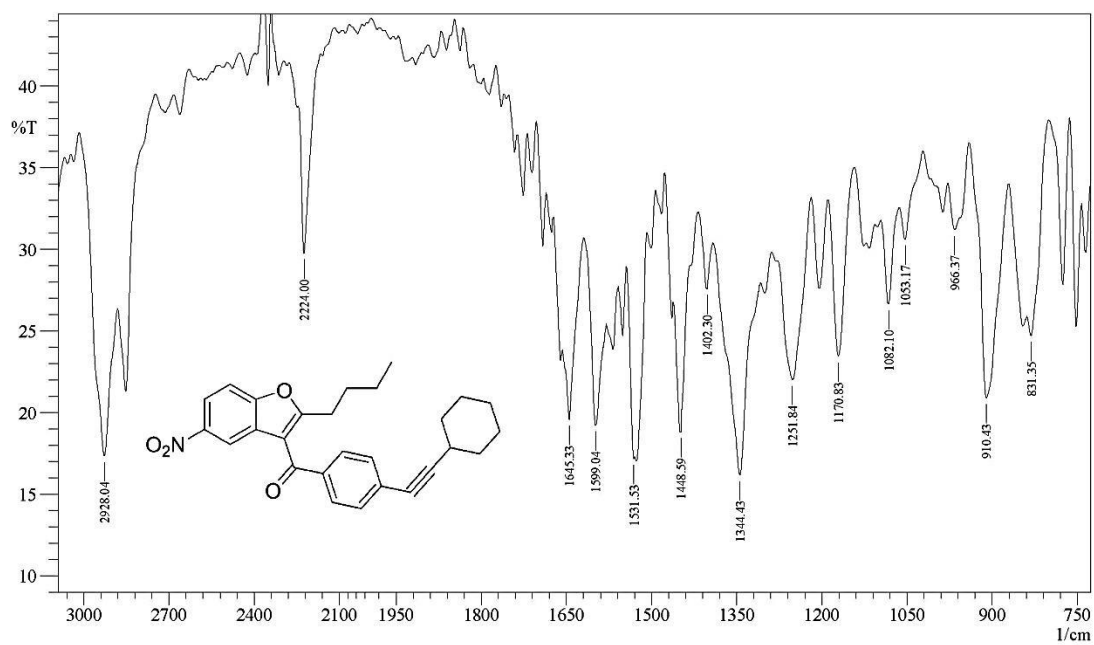


IR spectrum of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-((4-fluorophenyl)ethynyl)phenyl)-methanone (5e):

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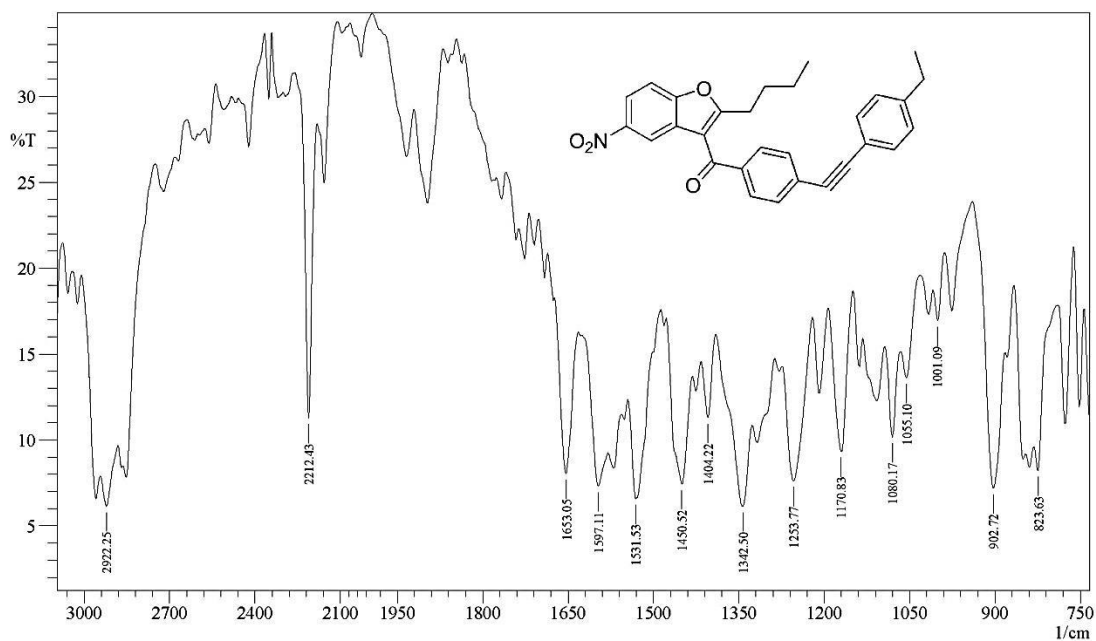
IR spectrum of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(cyclohexylethynyl)phenyl)methanone (5h):

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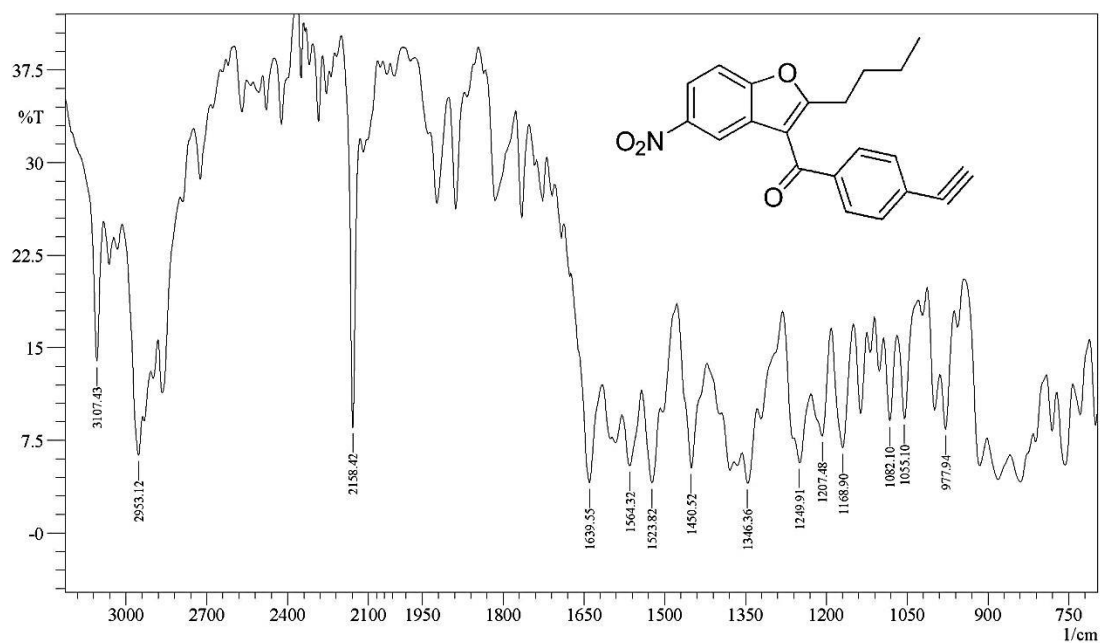


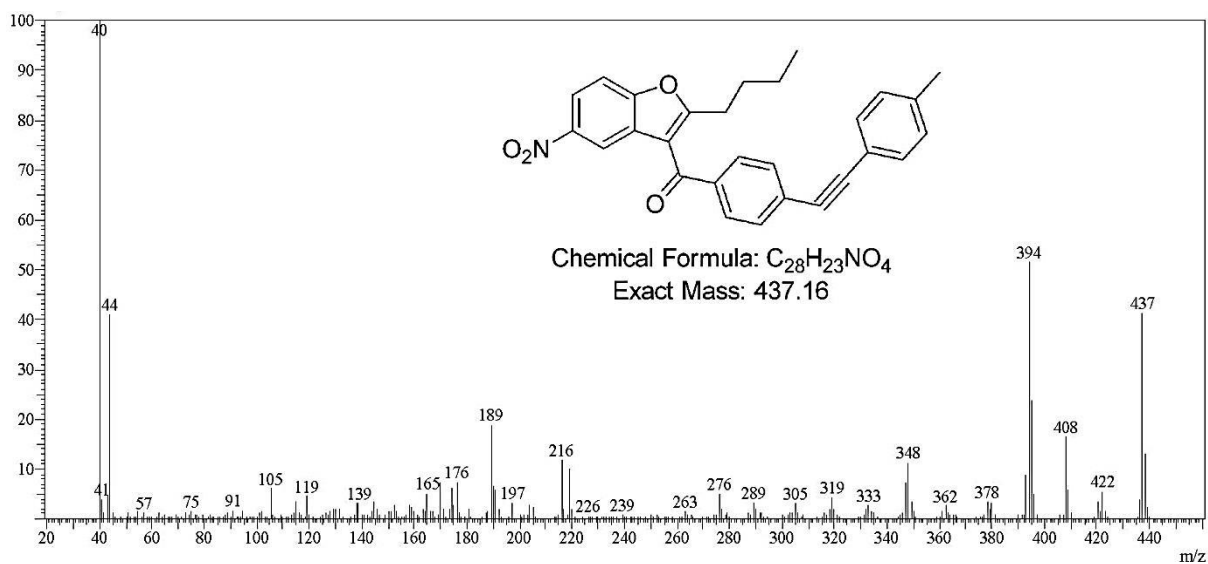
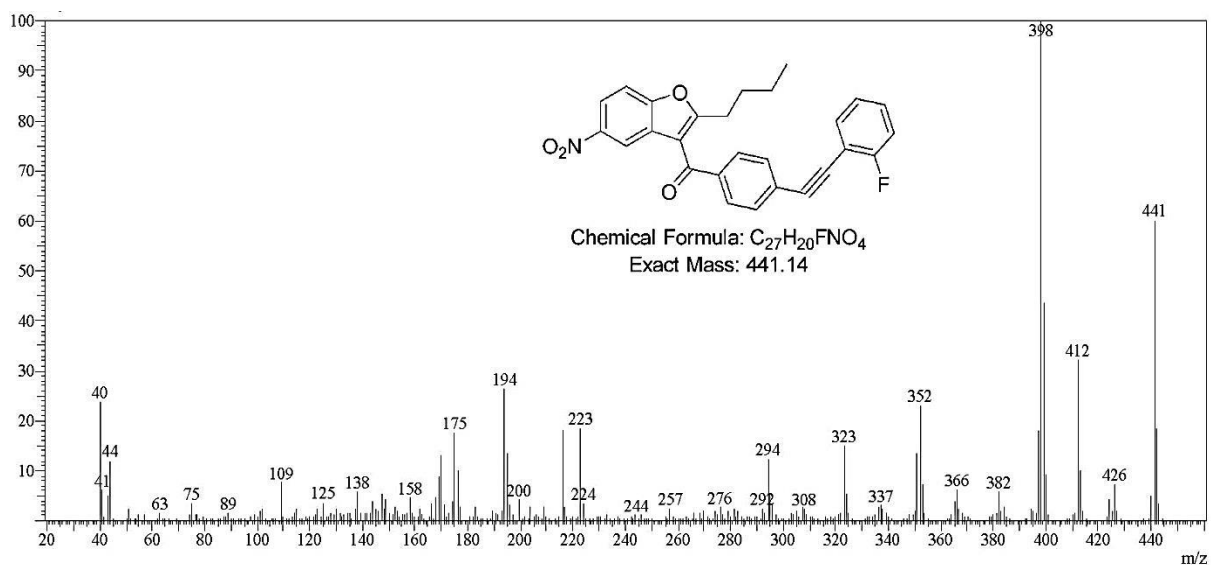
IR spectrum of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-((4-ethylphenyl)ethynyl)phenyl)-methanone (5j):

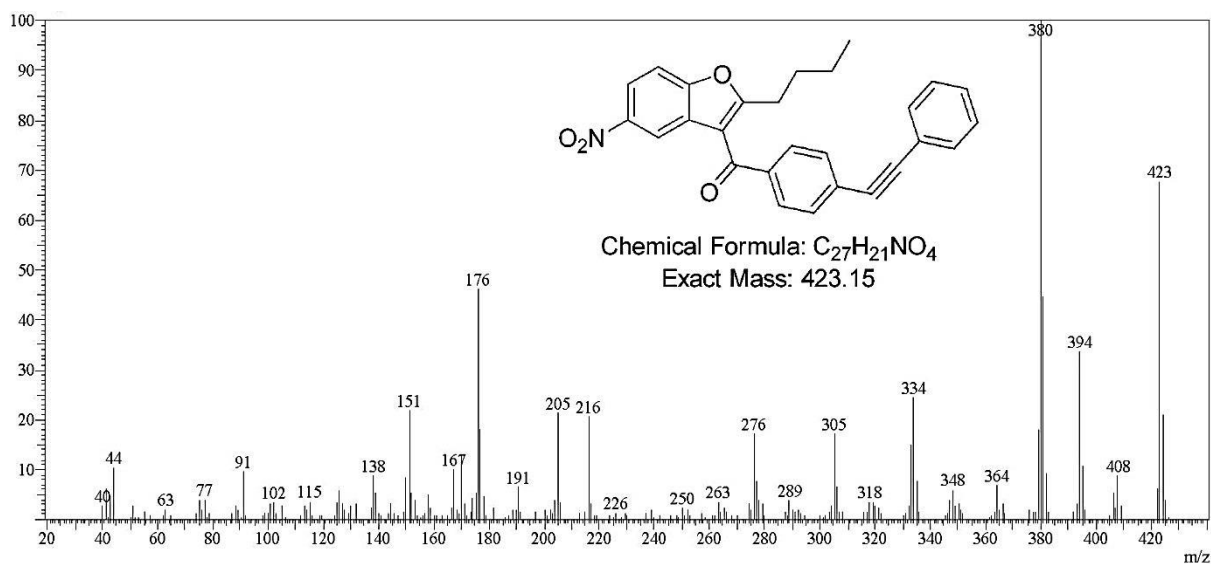
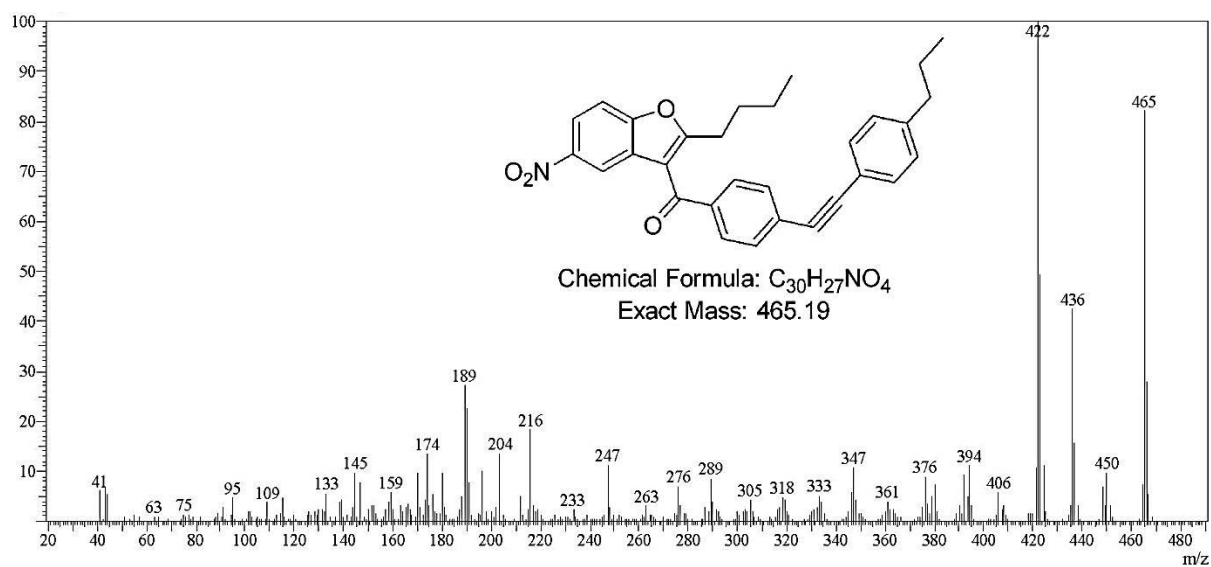
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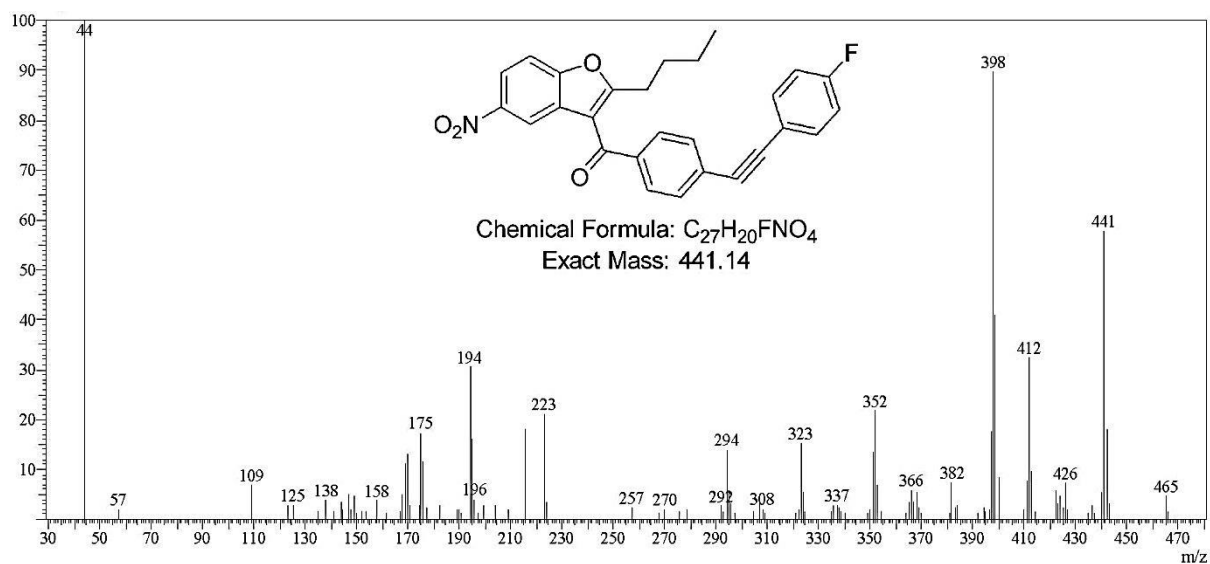
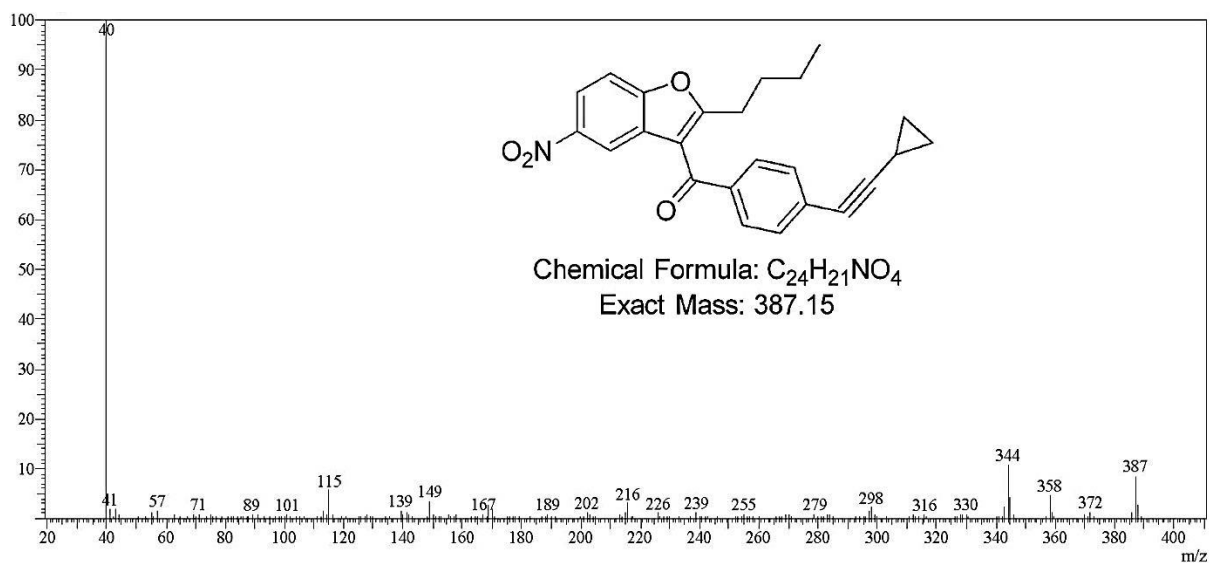
IR spectrum of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-ethynylphenyl)methanone (5k):

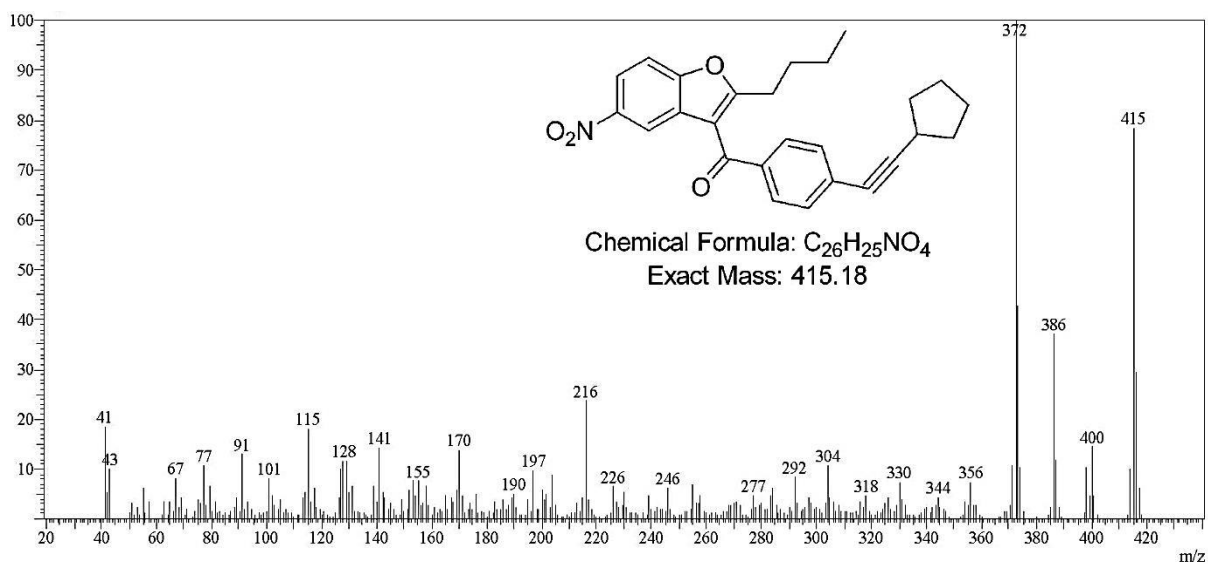
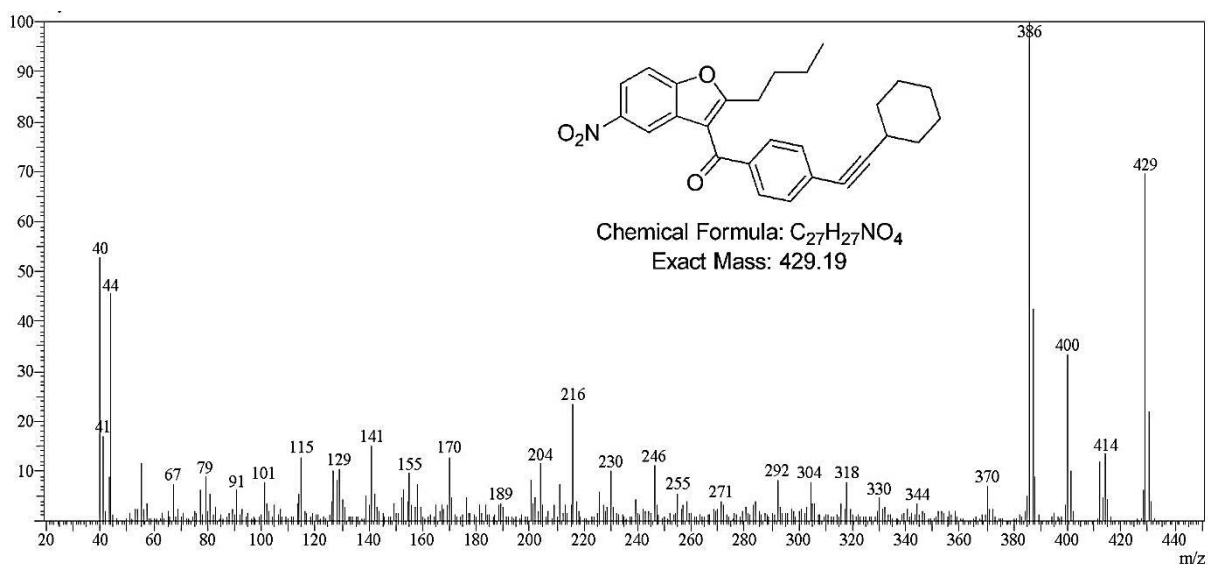
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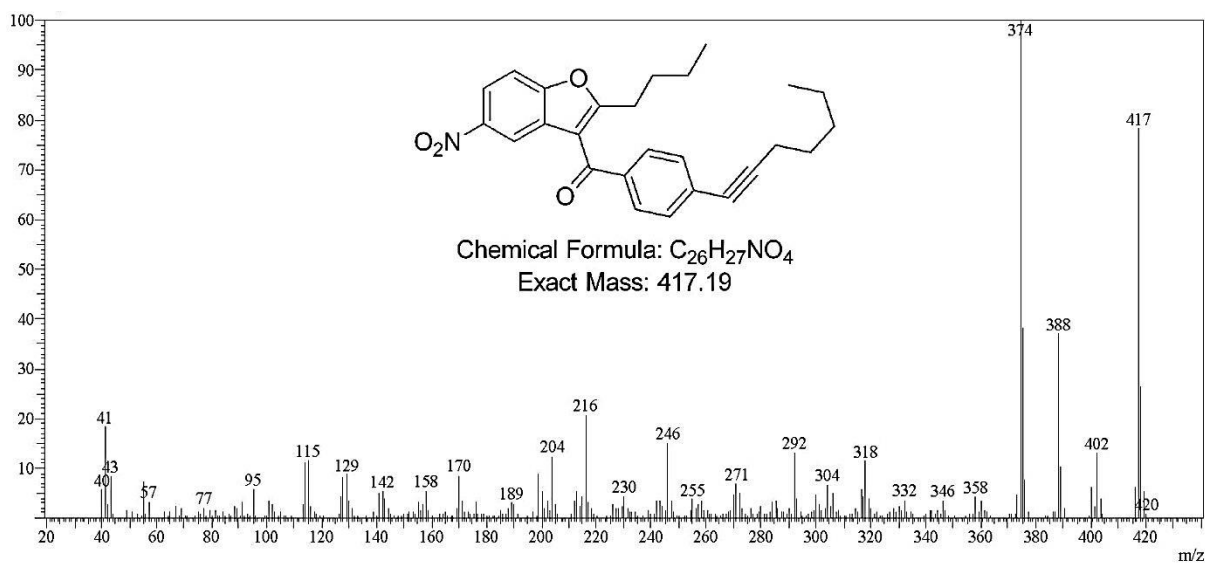
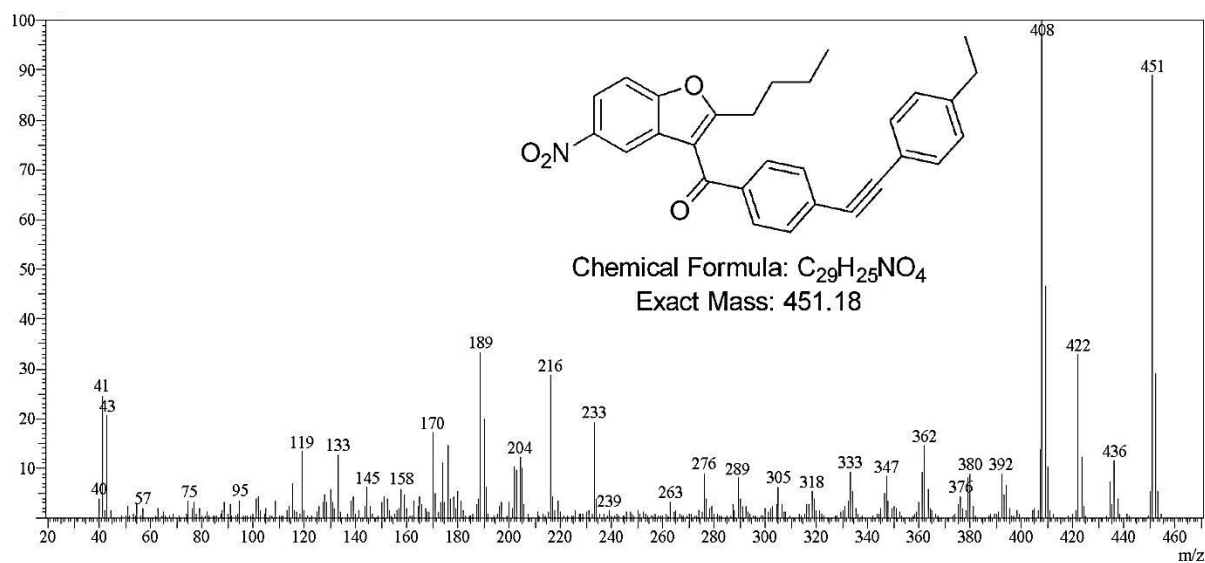


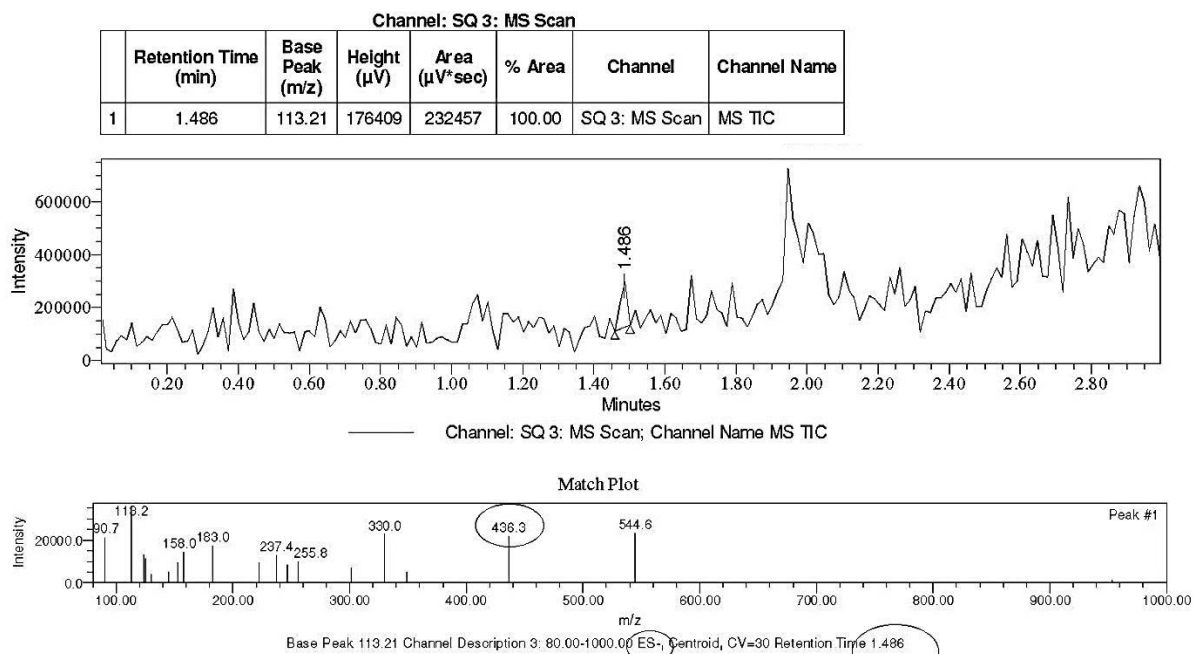
MS Spectra of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(*p*-tolylethynyl)phenyl)methanone (5a):MS Spectra of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-((2-fluorophenyl)ethynyl)phenyl)-methanone (5b):

MS Spectra of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(phenylethynyl)phenyl)methanone (5c):MS Spectra of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-((4-propylphenyl)ethynyl)phenyl)-methanone (5d):

MS Spectra of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-((4-fluorophenyl)ethynyl)phenyl)-methanone (5e):MS Spectra of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(cyclopropylethynyl)phenyl)methanone (5f):

MS Spectra of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(cyclopentylethynyl)phenyl)methanone (5g):MS Spectra of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(cyclohexylethynyl)phenyl)methanone (5h):

MS Spectra of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(hept-1-yn-1-yl)phenyl)methanone (5i):MS Spectra of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-((4-ethylphenyl)ethynyl)phenyl)-methanone (5j):

LCMS spectra of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-(*p*-tolylethynyl)phenyl)methanone (5a):LCMS spectra of (2-butyl-5-nitrobenzo[*b*]furan-3-yl)(4-((2-fluorophenyl)ethynyl)phenyl)-methanone (5b):