Universitat Autònoma de Barcelona

Departament de Química

Facultat de Ciències

New Functional Ligands for the Preparation of Photoactive Nanoparticle-Based Materials

Laura Amorín Ferré

Ph.D. Thesis

Ph.D. in Chemistry

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Supervisors:

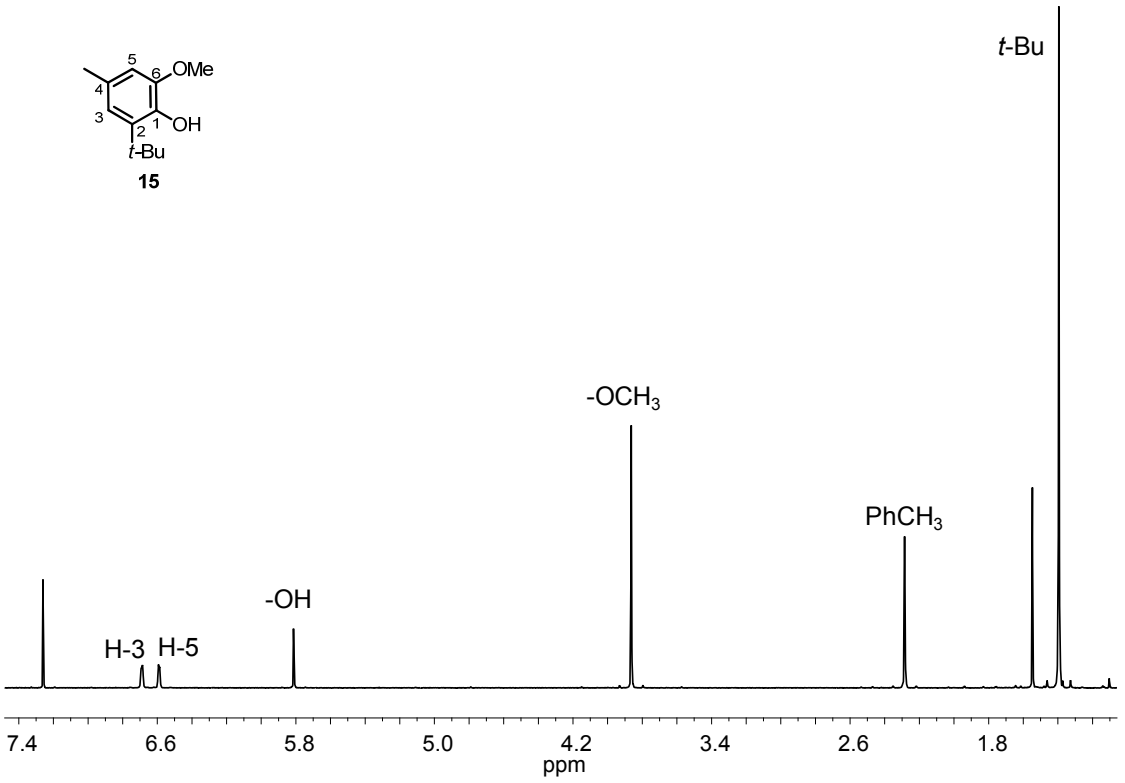
Dr. José Luis Bourdelande Fernández

Dr. Félix Busqué Sánchez

Dr. Jordi Hernando Campos

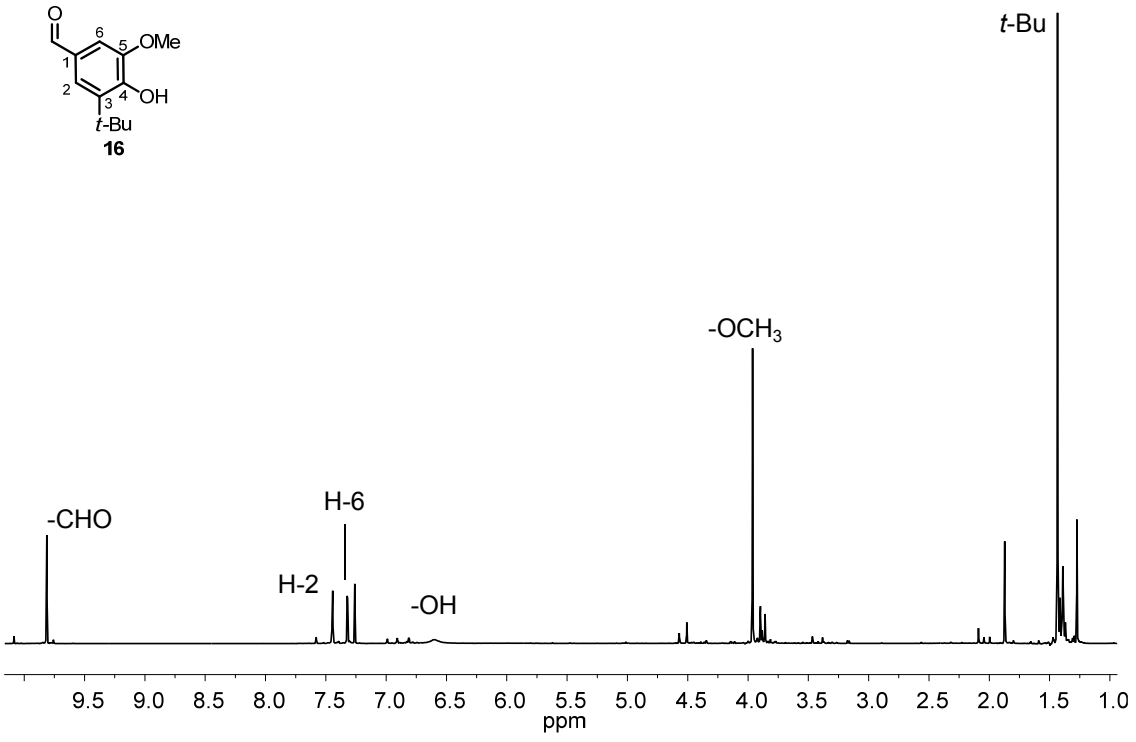
Spectral appendices

A.I. New functional ligands for investigating drug release mechanisms



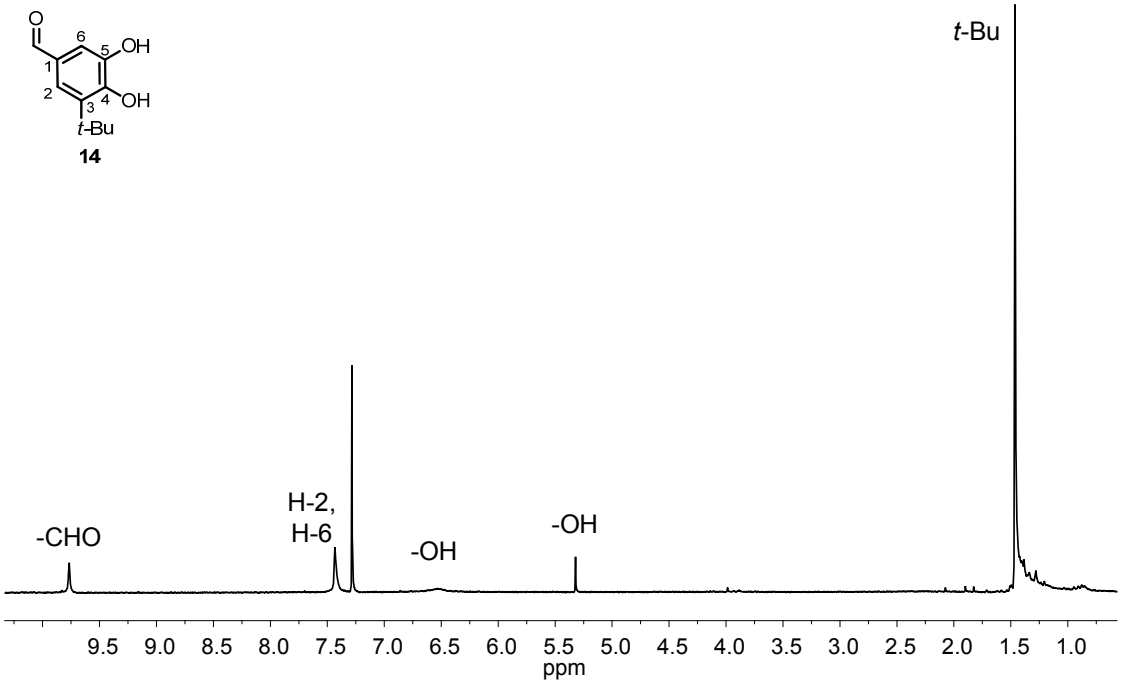
15

^{1}H NMR ($CDCl_3$, 250 MHz)

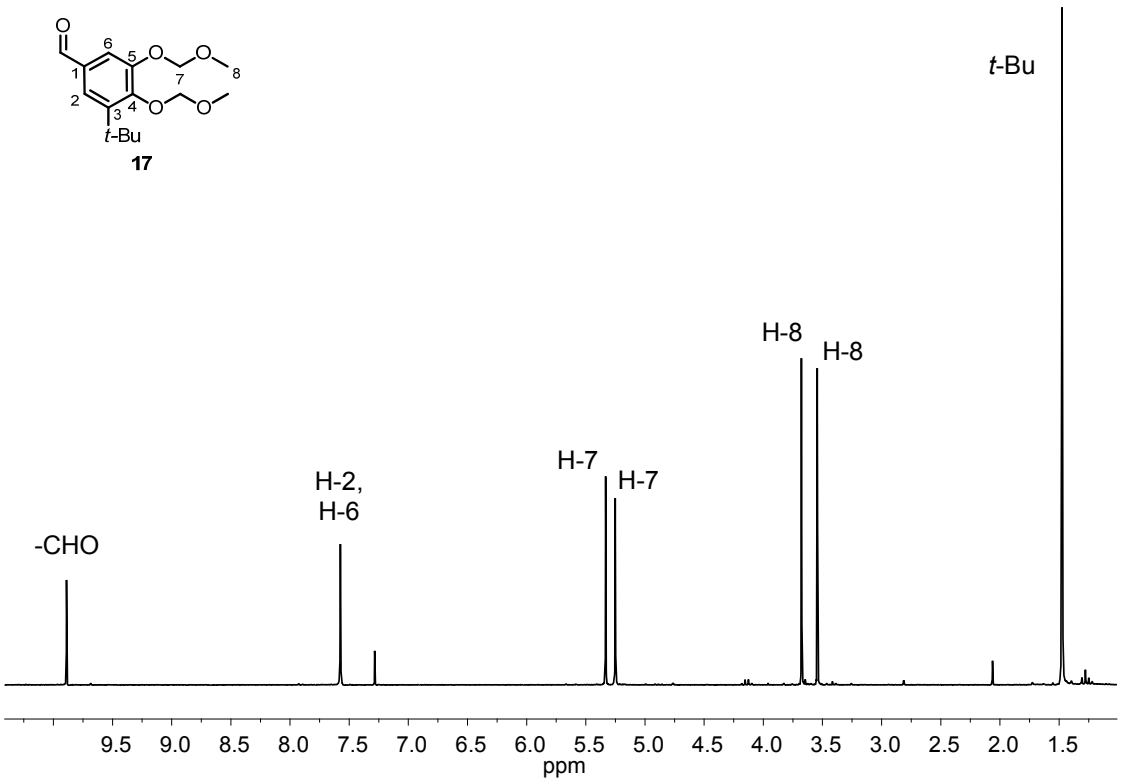


16

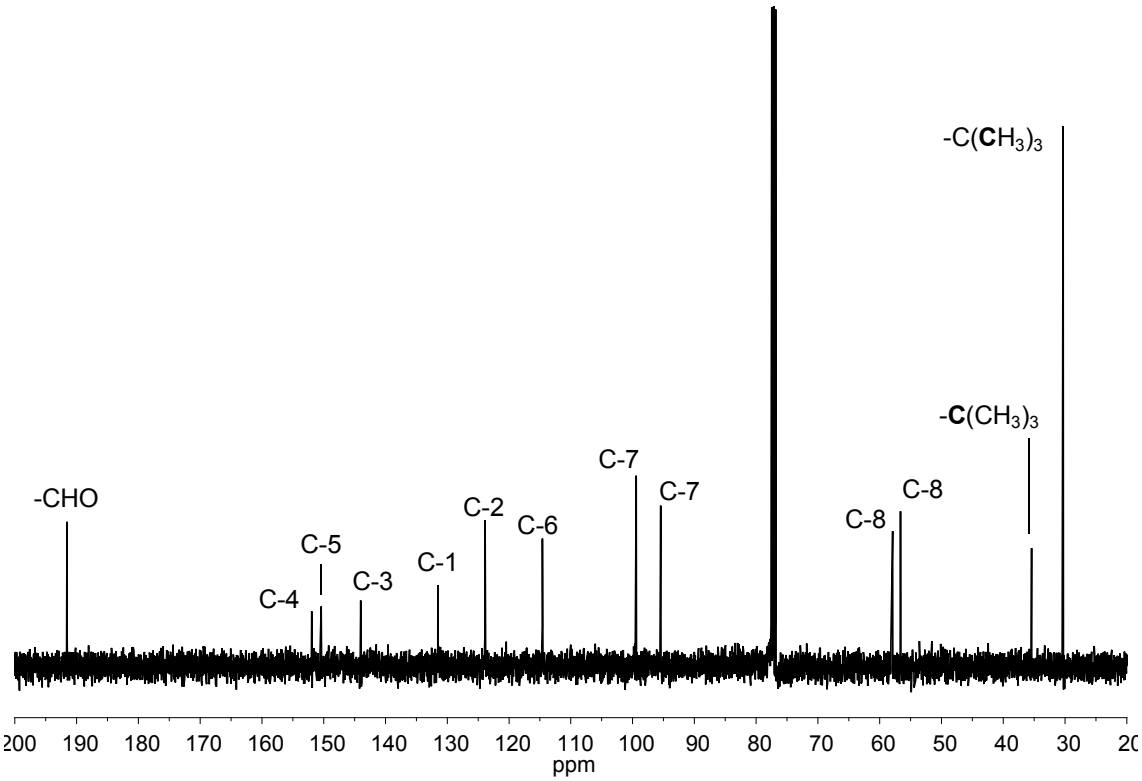
^{1}H NMR ($CDCl_3$, 250 MHz)



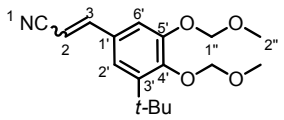
^{1}H NMR ($CDCl_3$, 250 MHz)



^{1}H NMR ($CDCl_3$, 250 MHz)

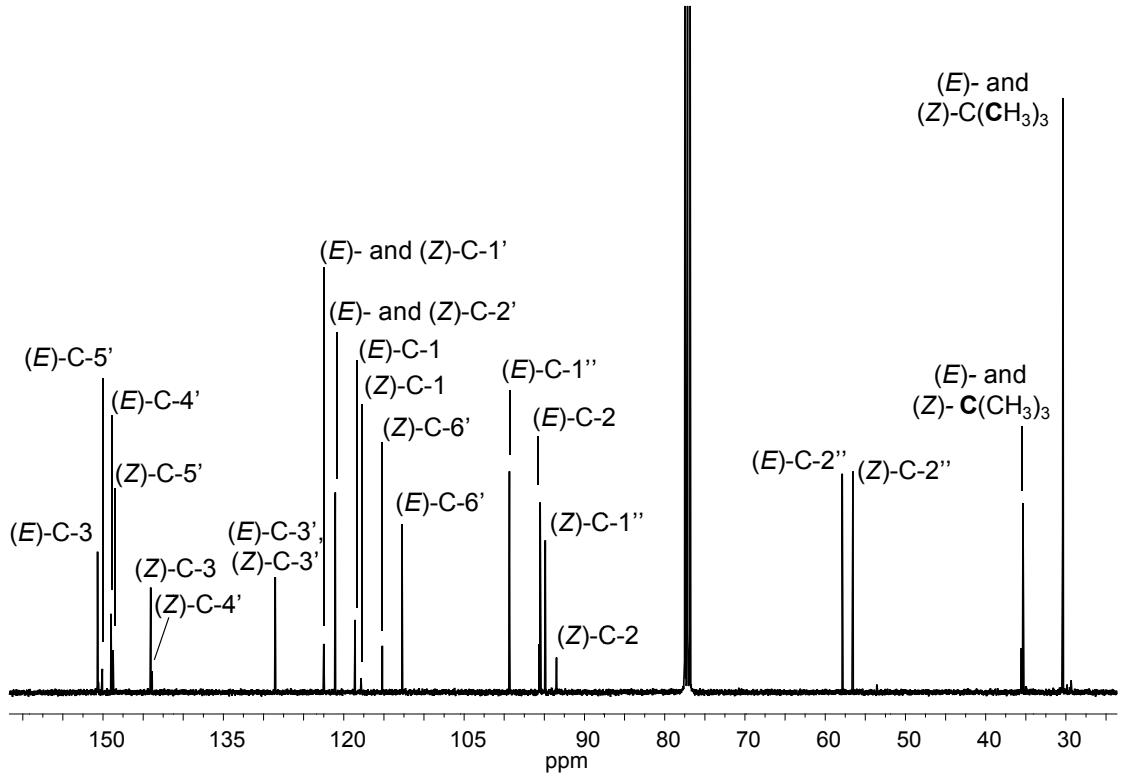


^{13}C NMR ($CDCl_3$, 63 MHz)

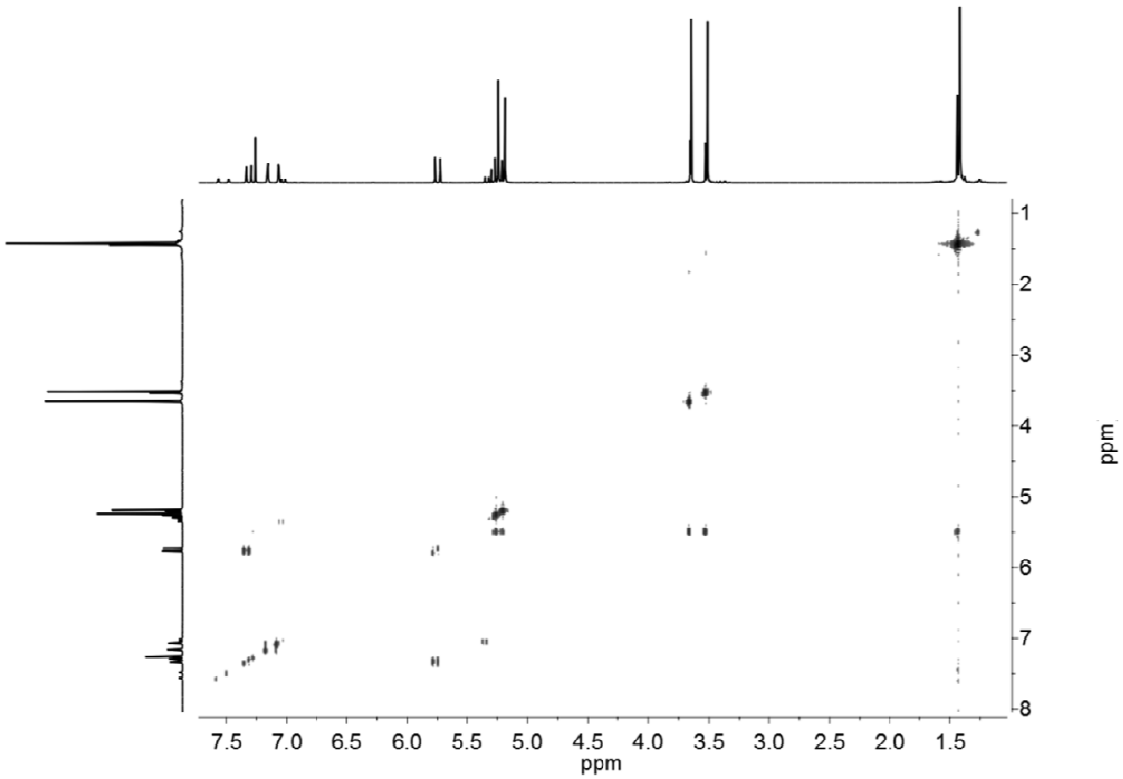


(*E*)- and (*Z*)-**18**

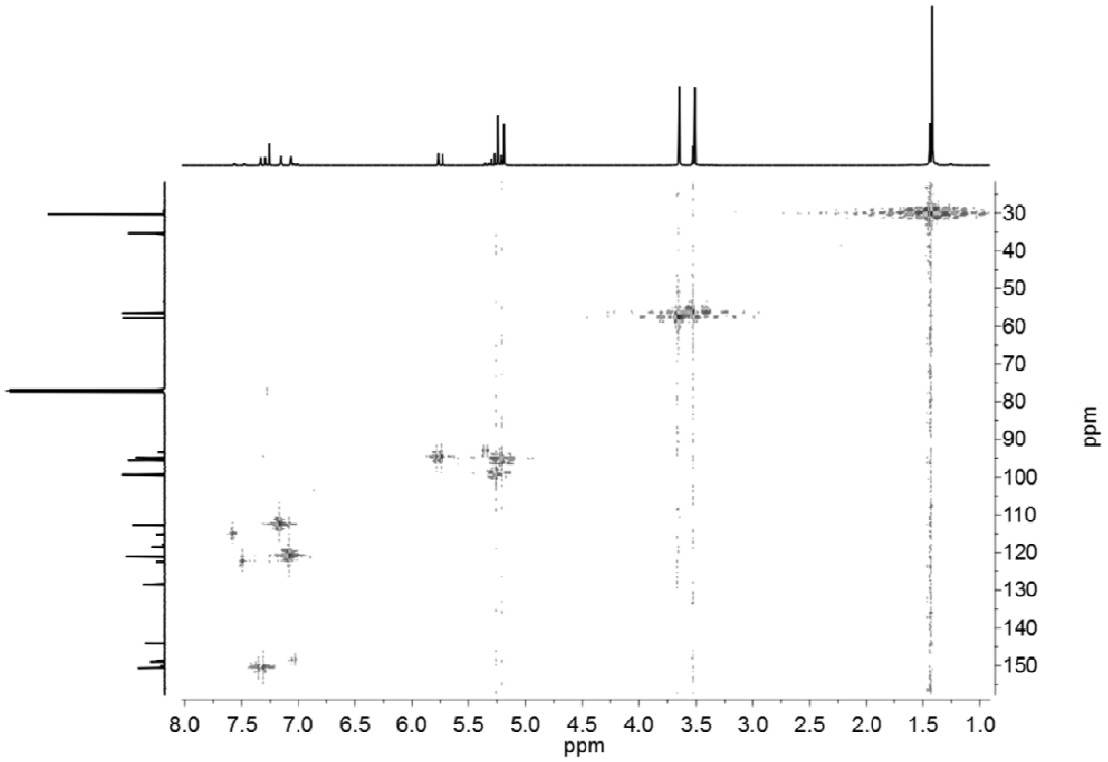
^{1}H NMR ($CDCl_3$, 400 MHz)



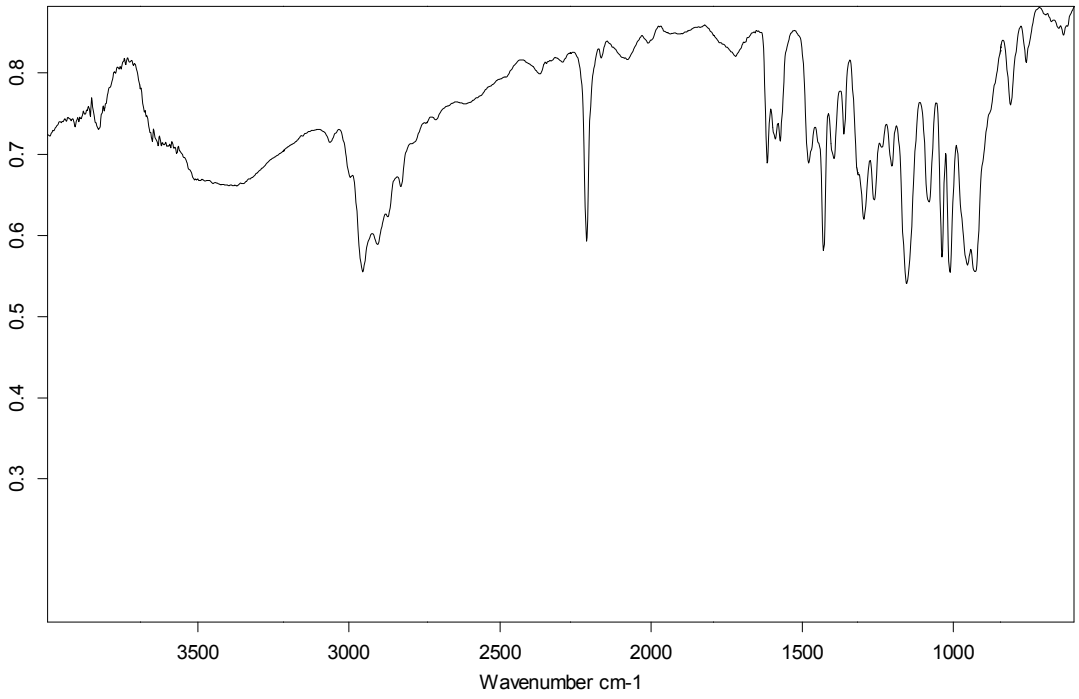
^{13}C NMR ($CDCl_3$, 100 MHz)



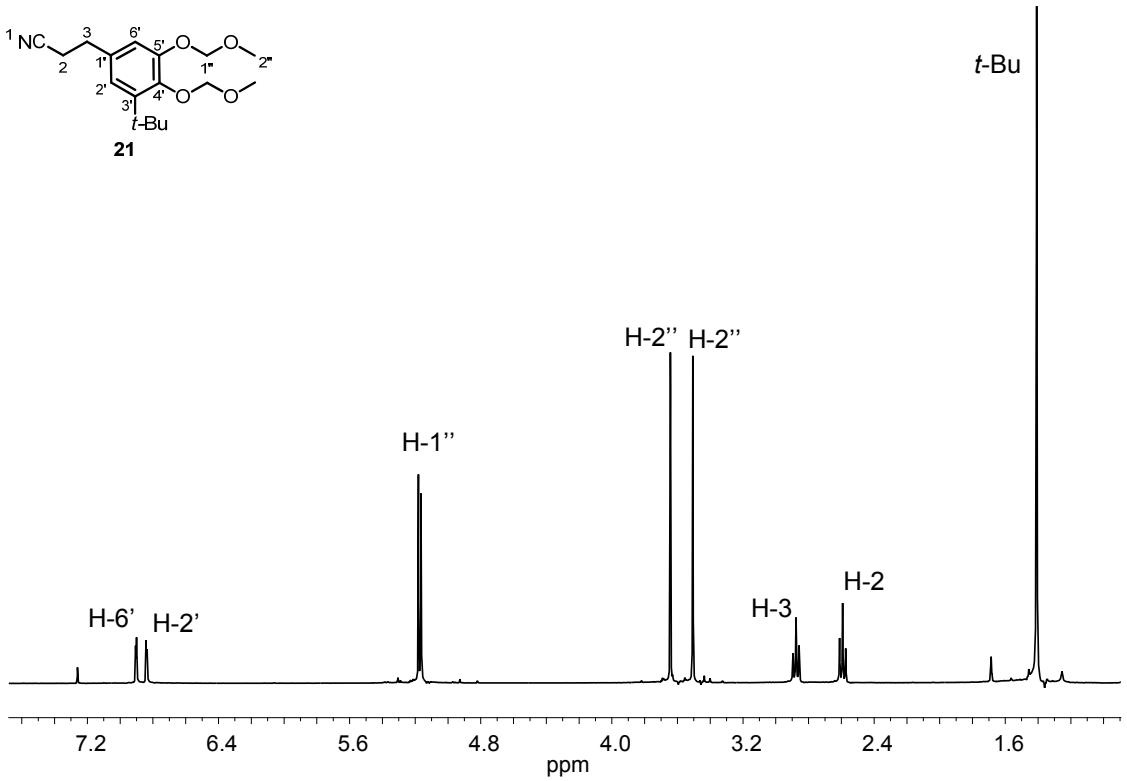
COSY ($CDCl_3$, 400 MHz)



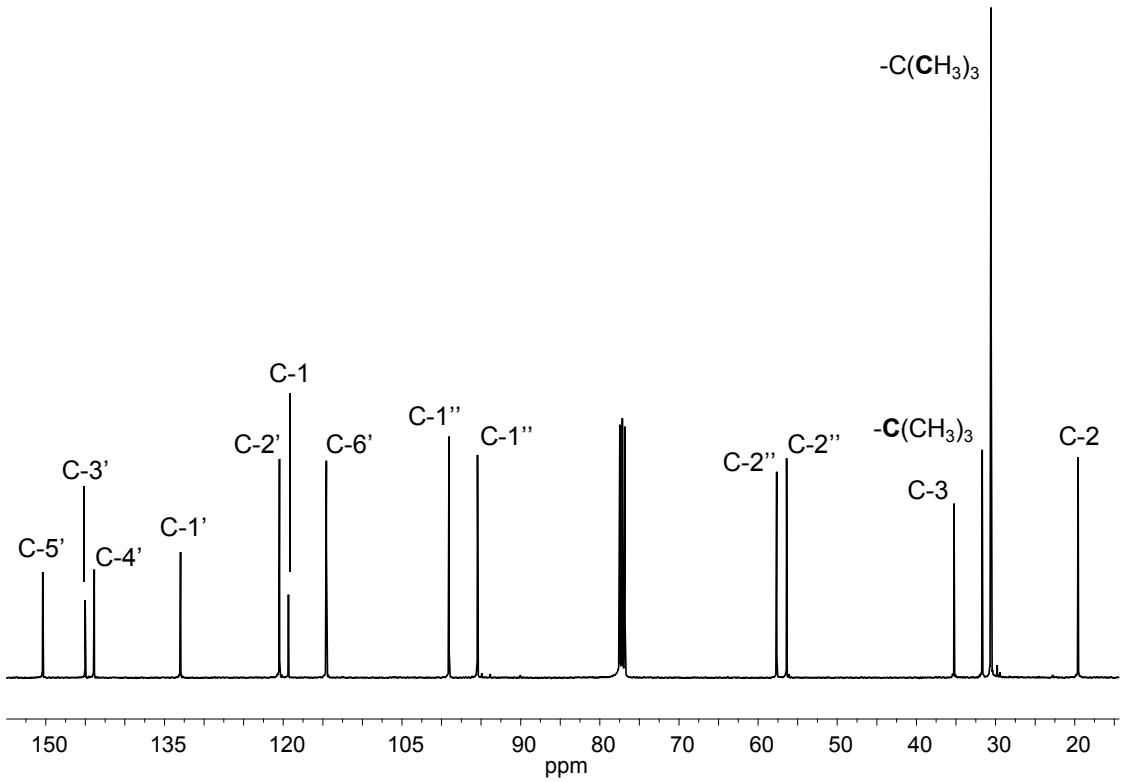
HSQC ($CDCl_3$, 100 MHz)



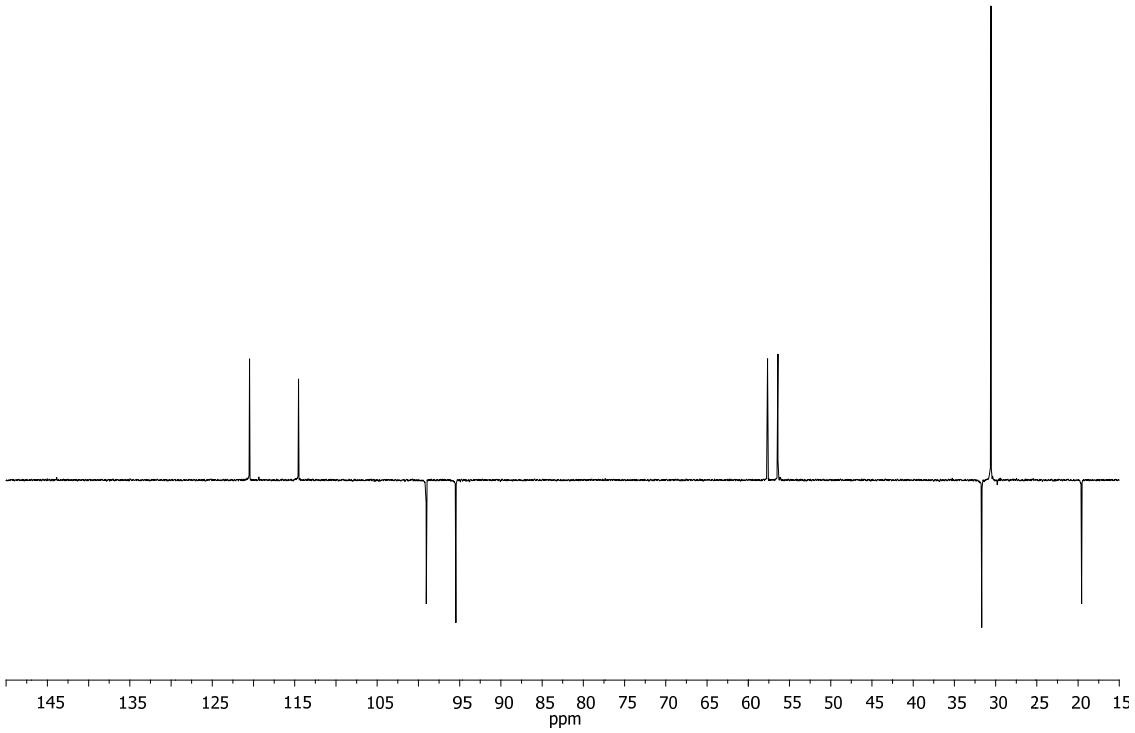
IR (ATR)



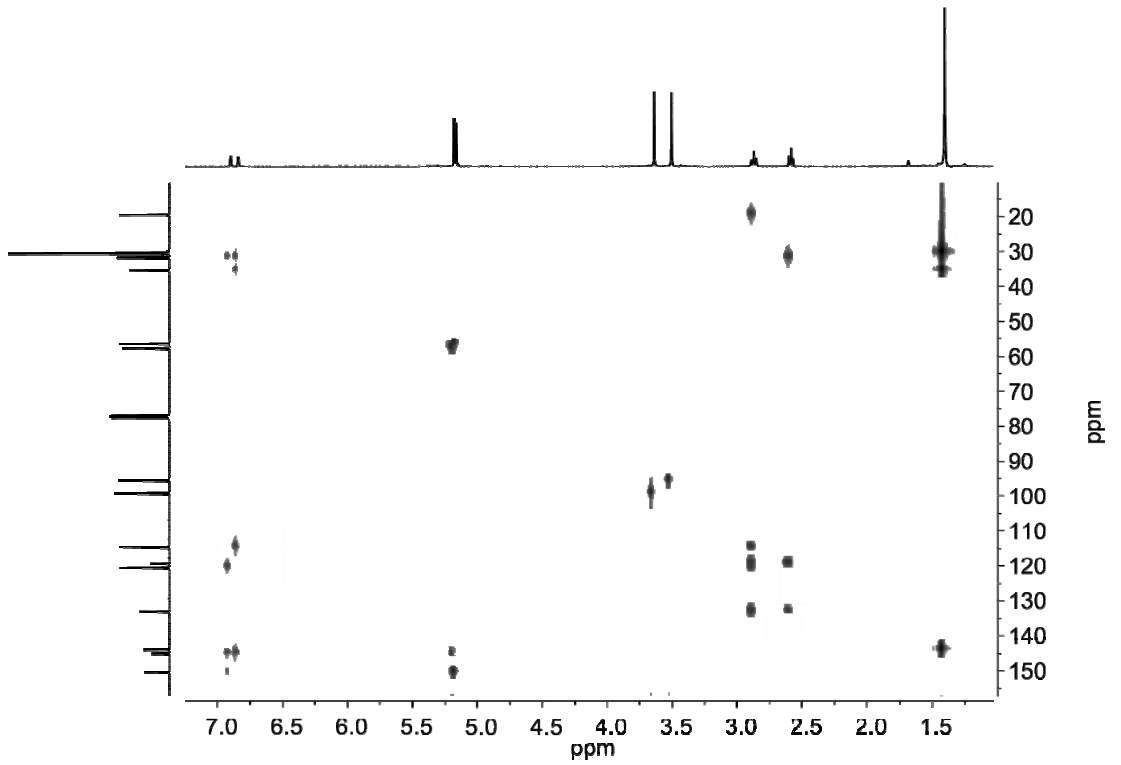
^{1}H NMR ($CDCl_3$, 400 MHz)



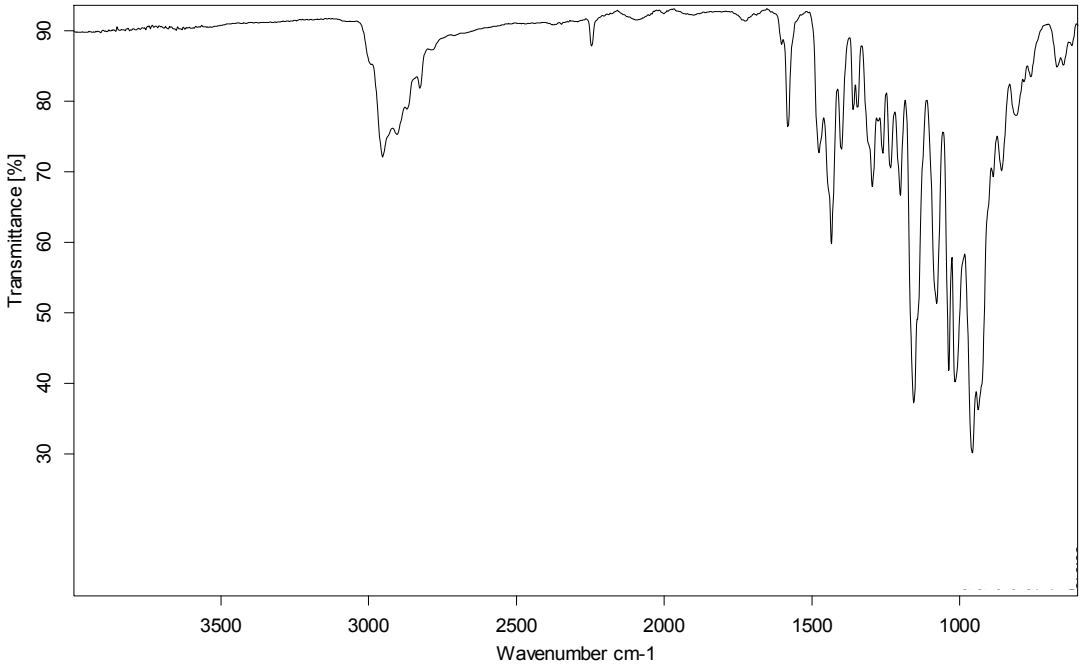
^{13}C NMR ($CDCl_3$, 100 MHz)



DEPT 135 ($CDCl_3$, 400 MHz)



HMBC ($CDCl_3$, 100 MHz)



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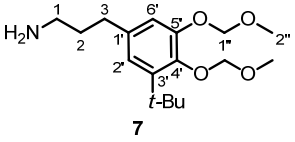
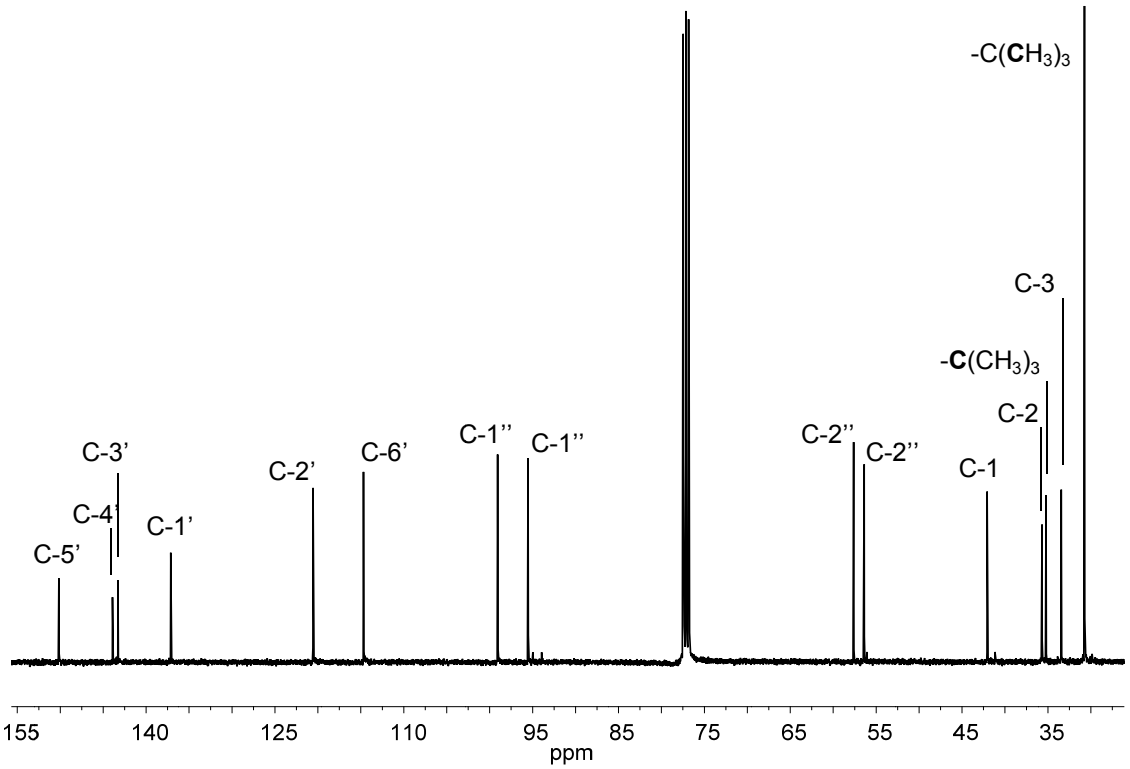
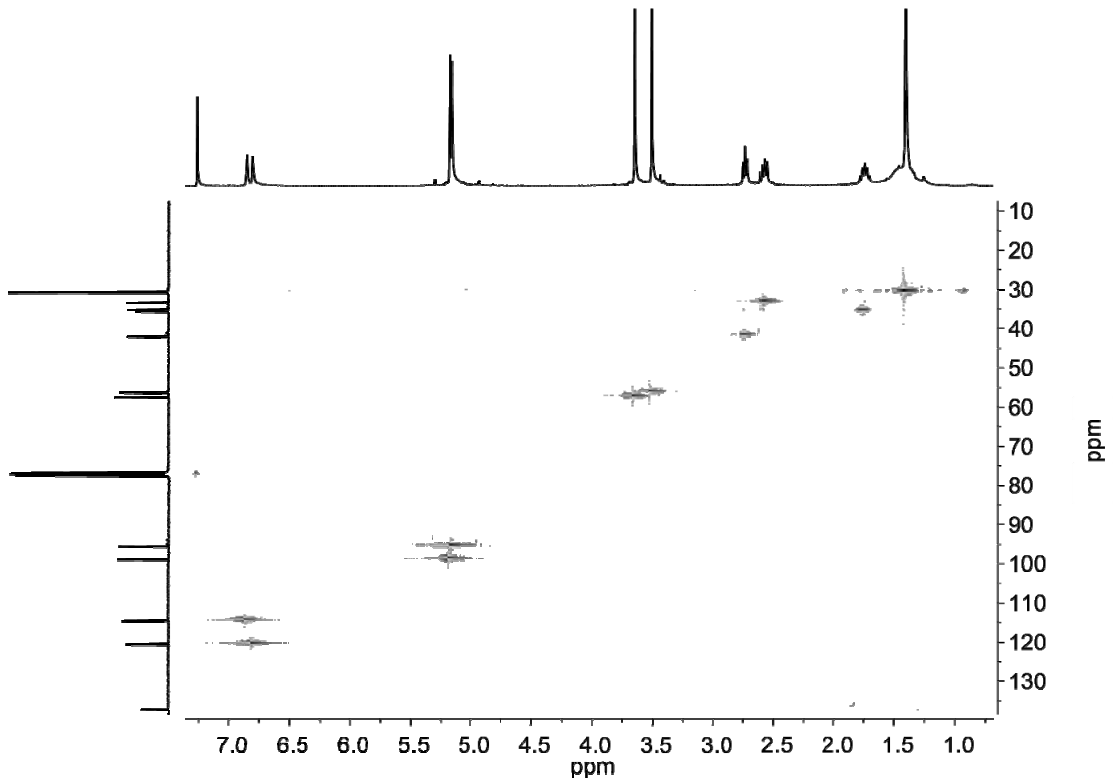


7

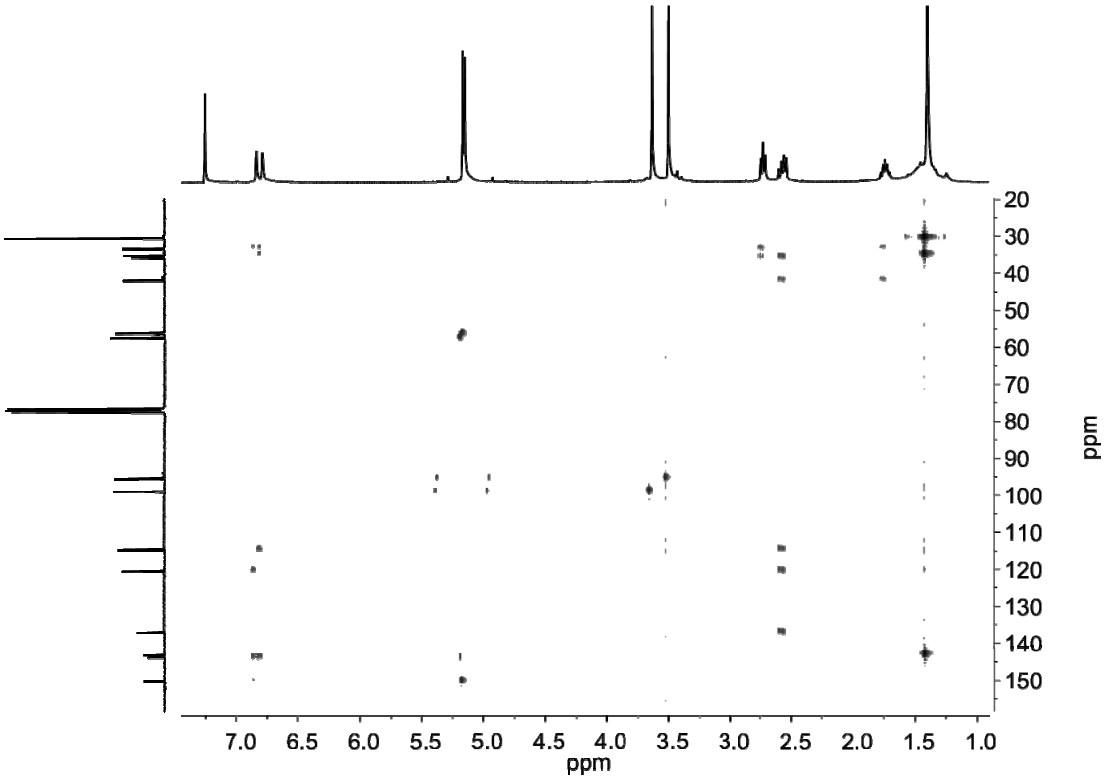
^{1}H NMR ($CDCl_3$, 400 MHz)



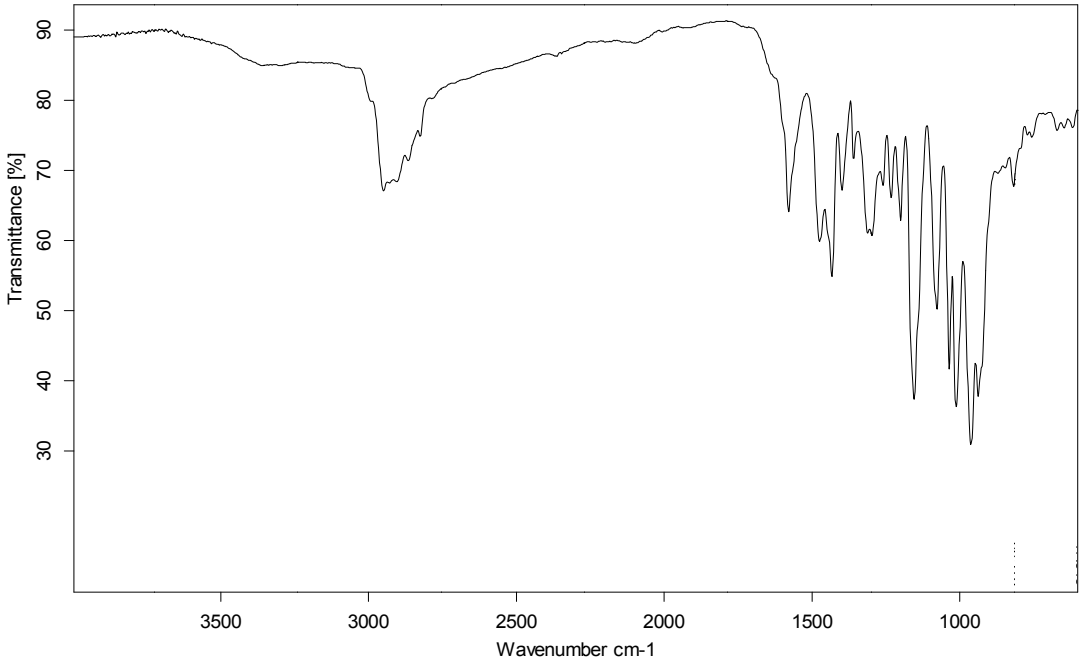
^{13}C NMR ($CDCl_3$, 100 MHz)



HSQC ($CDCl_3$, 100 MHz)



HMBC ($CDCl_3$, 100 MHz)



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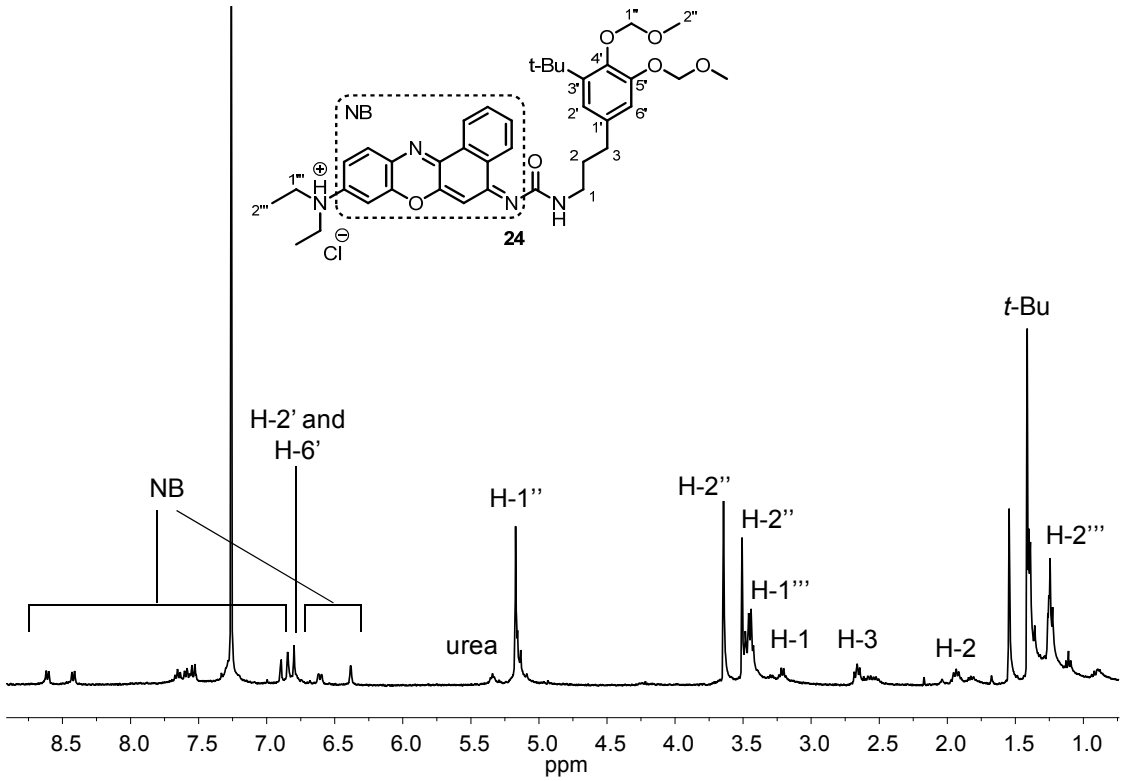
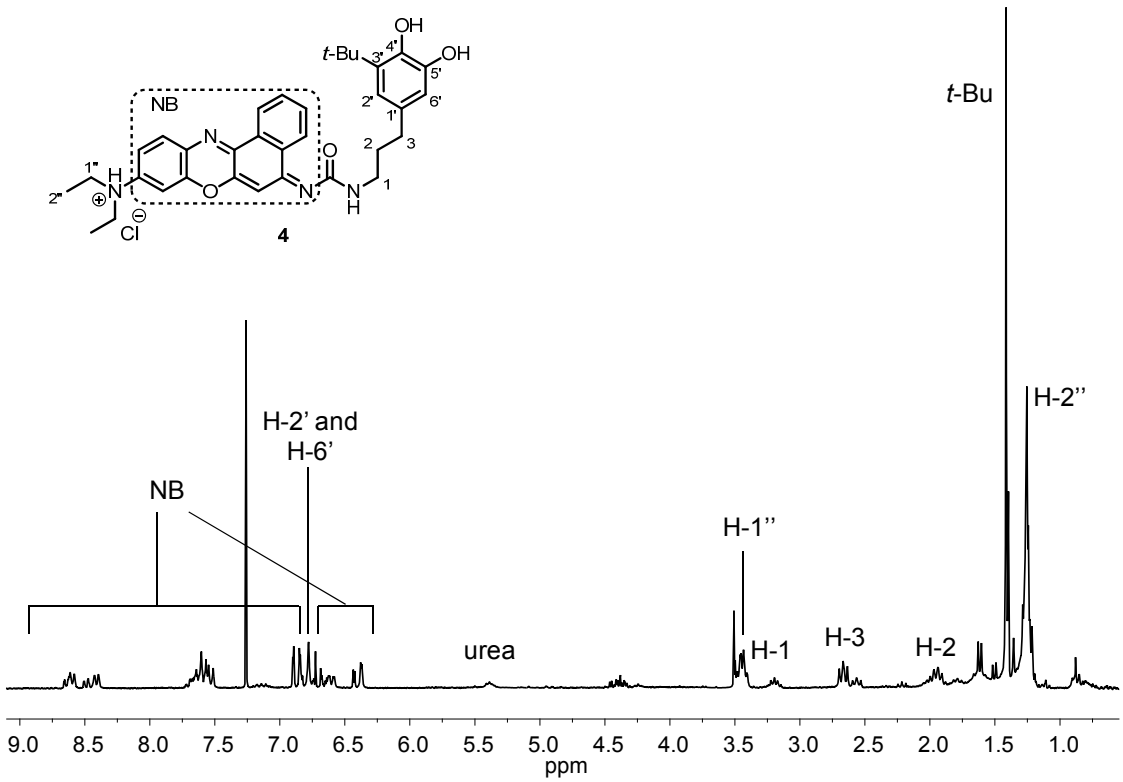
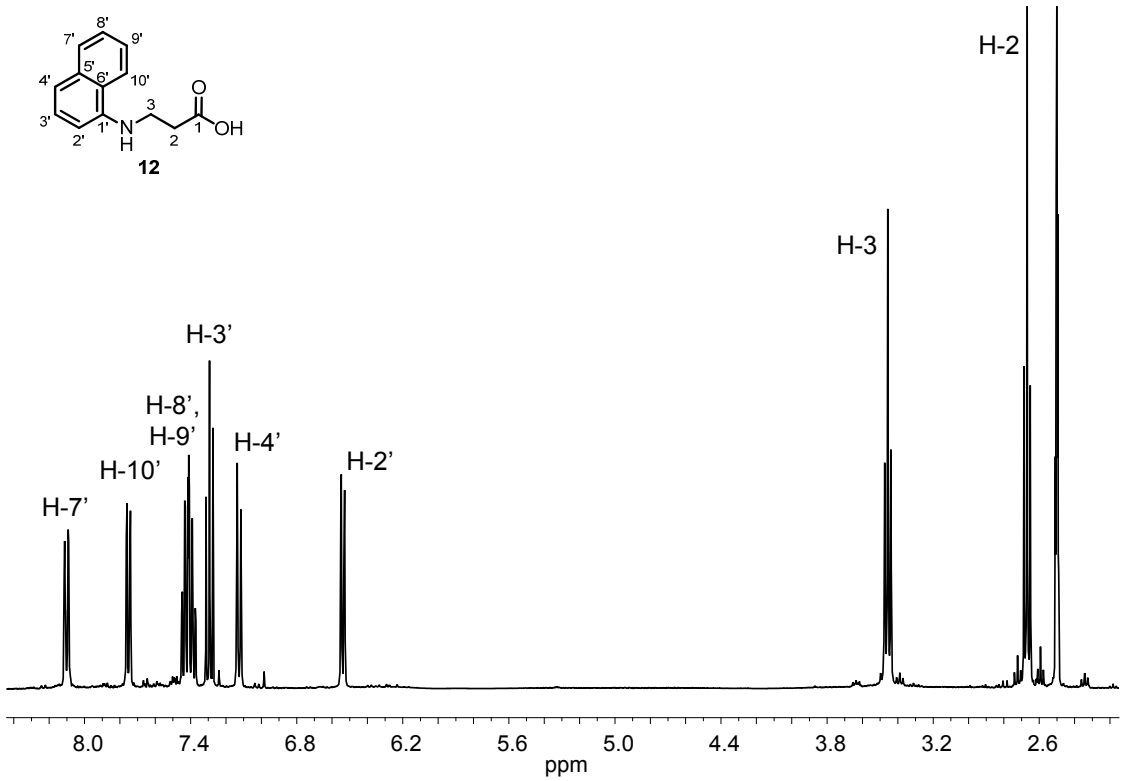


^{1}H NMR ($CDCl_3$, 400 MHz)

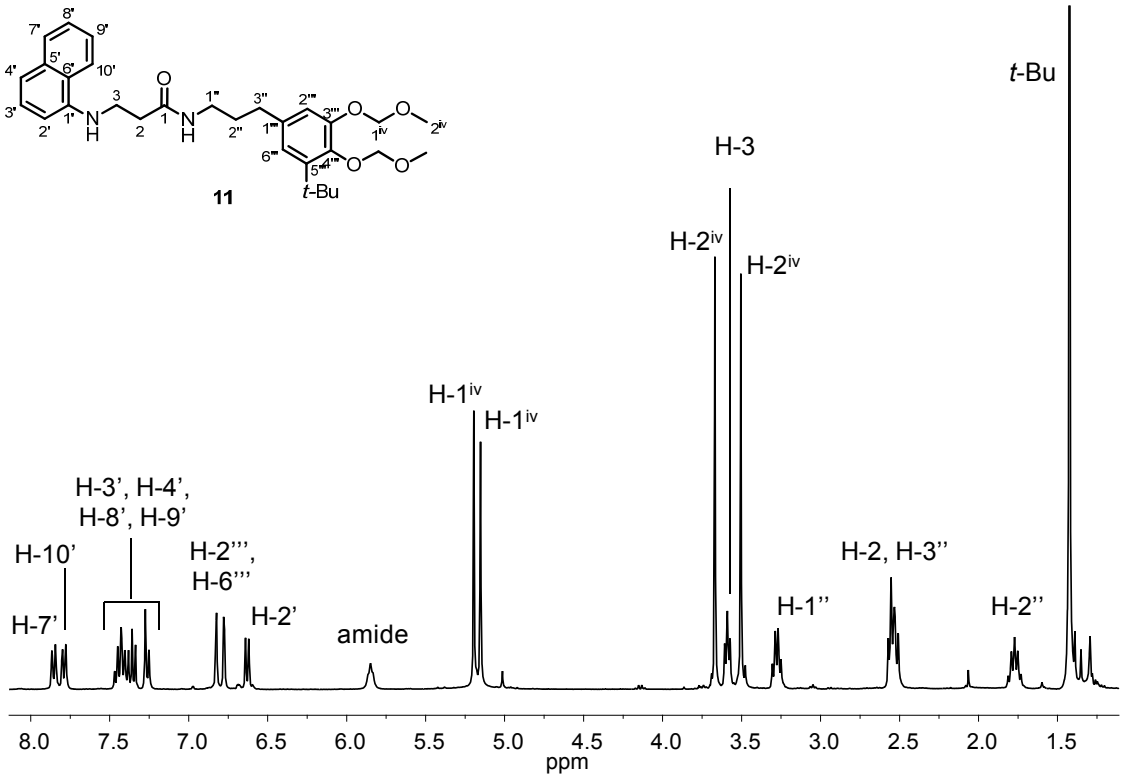


^{1}H NMR ($CDCl_3$, 400 MHz)



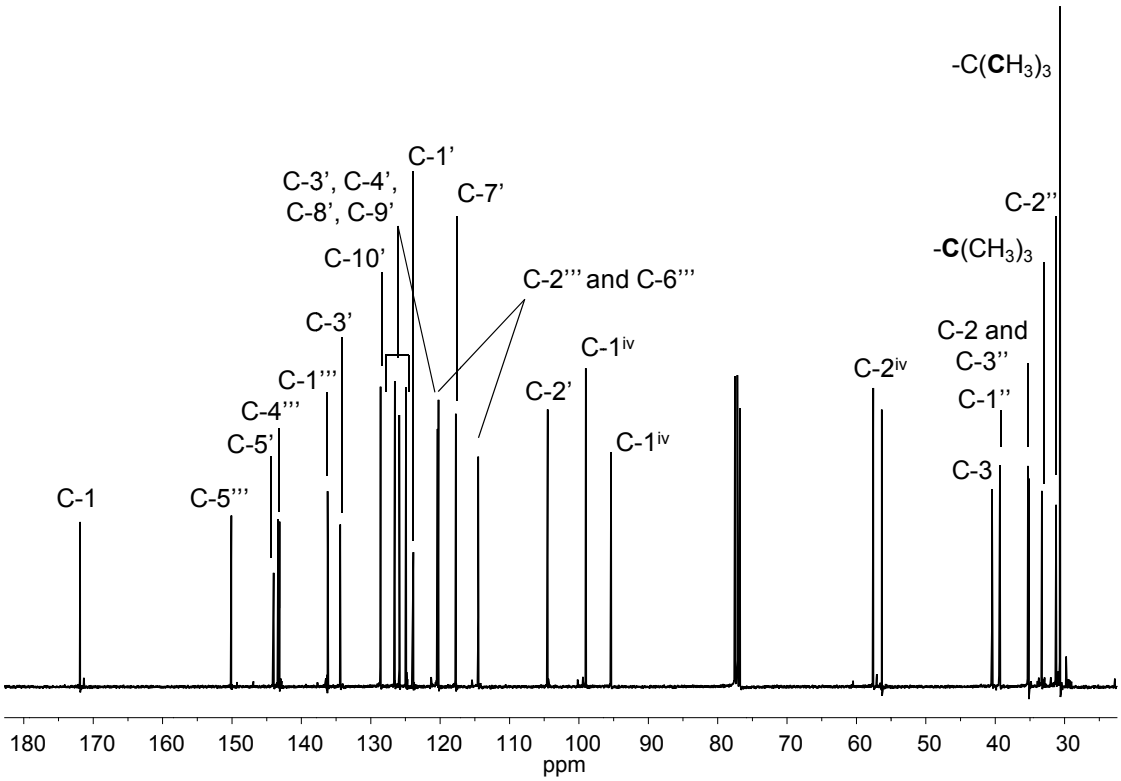
12

^{1}H NMR ($CDCl_3$, 400 MHz)

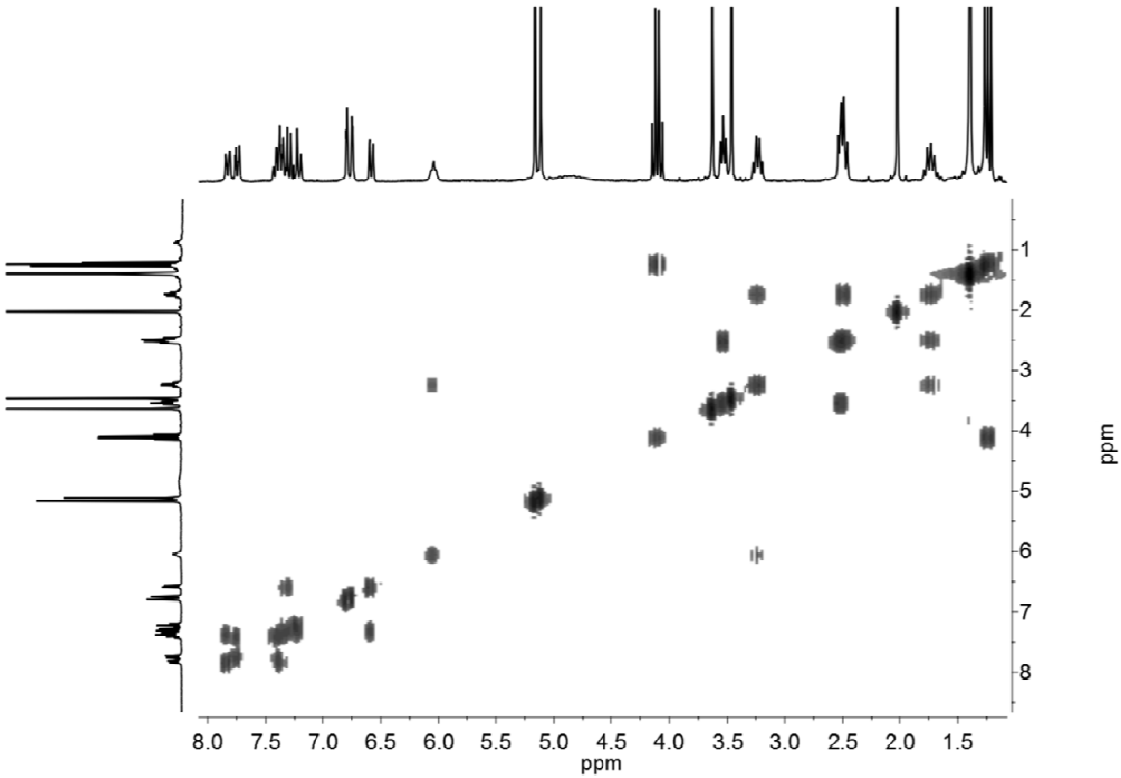


11

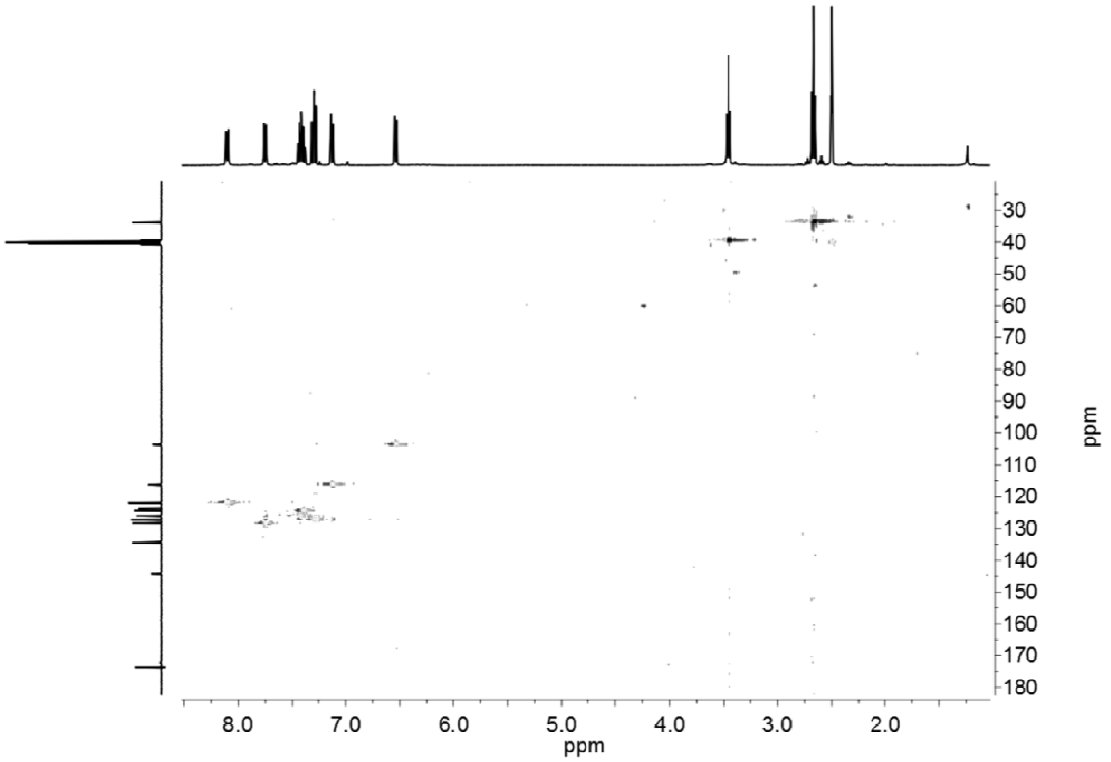
^{1}H NMR ($CDCl_3$, 400 MHz)



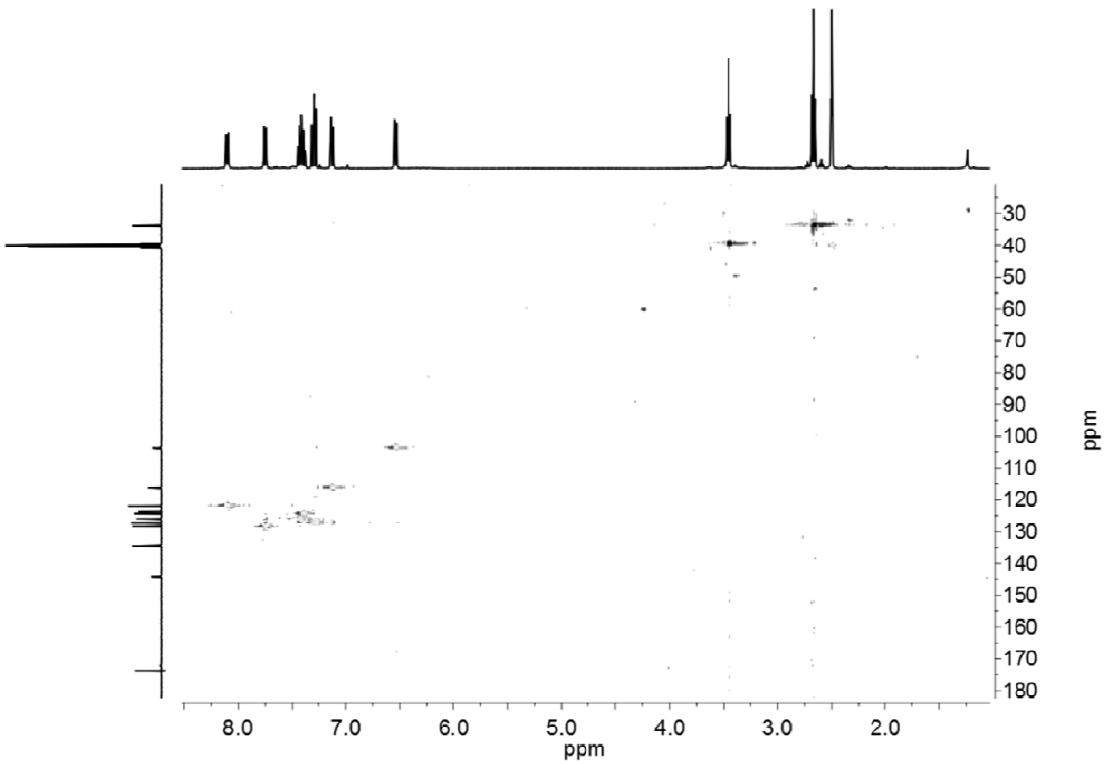
^{13}C NMR ($CDCl_3$, 100 MHz)



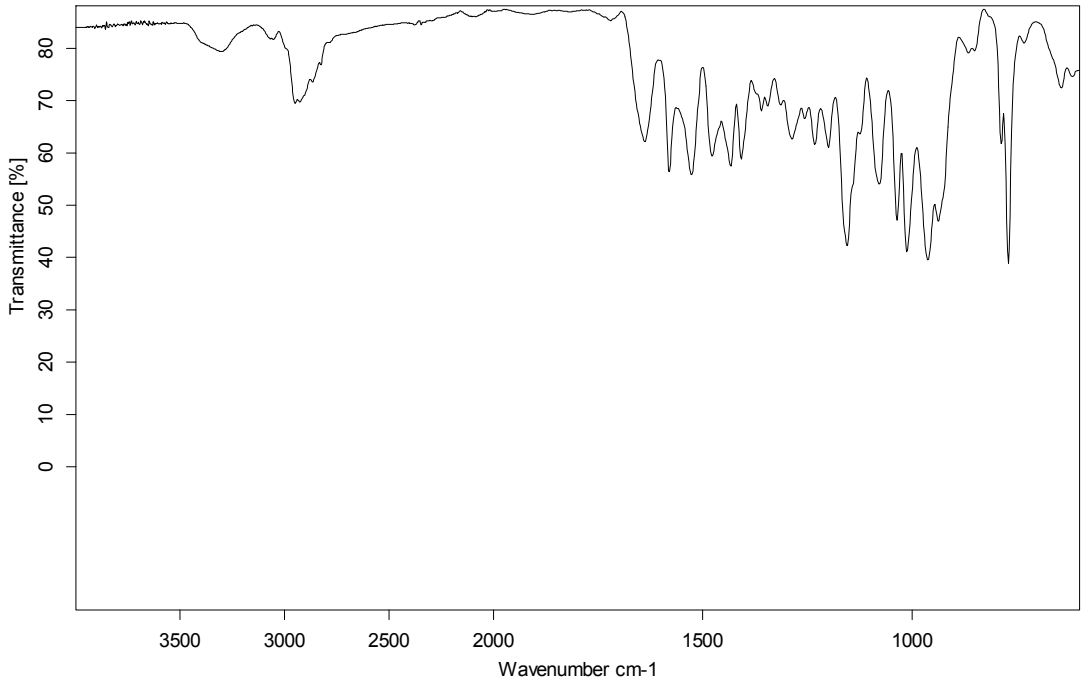
COSY ($CDCl_3$, 400 MHz)



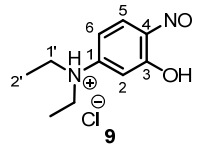
HSQC ($CDCl_3$, 100 MHz)



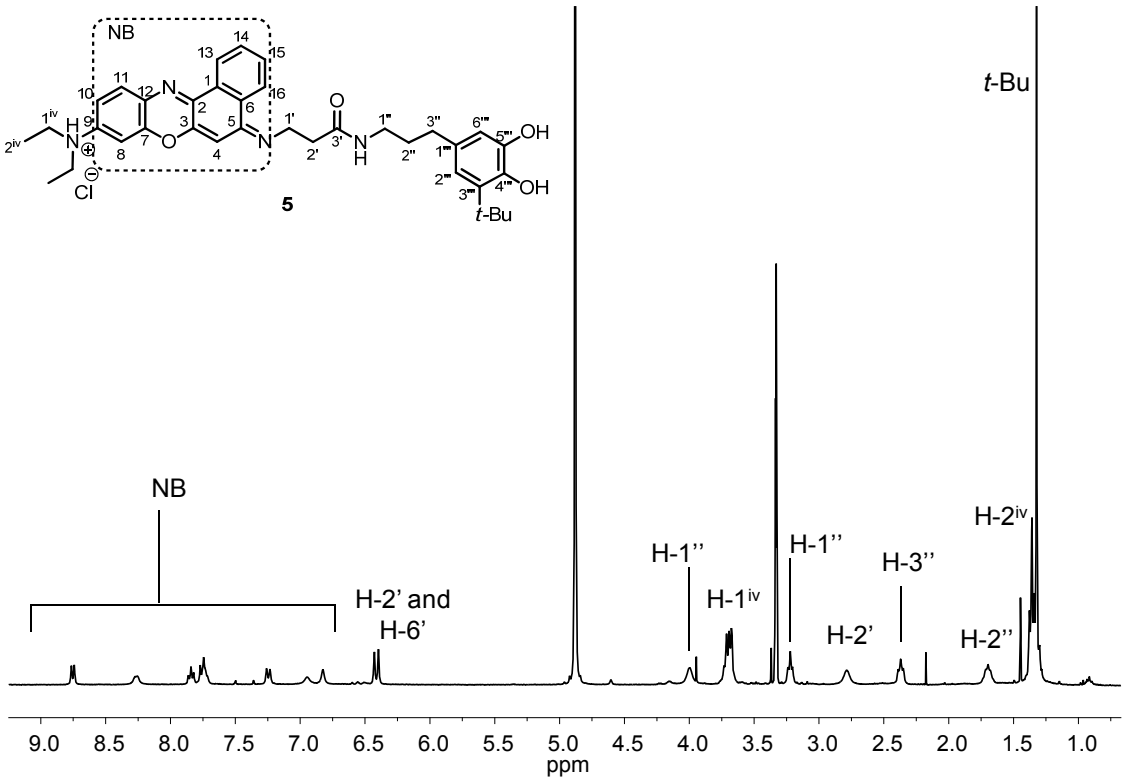
HMBC ($CDCl_3$, 100 MHz)



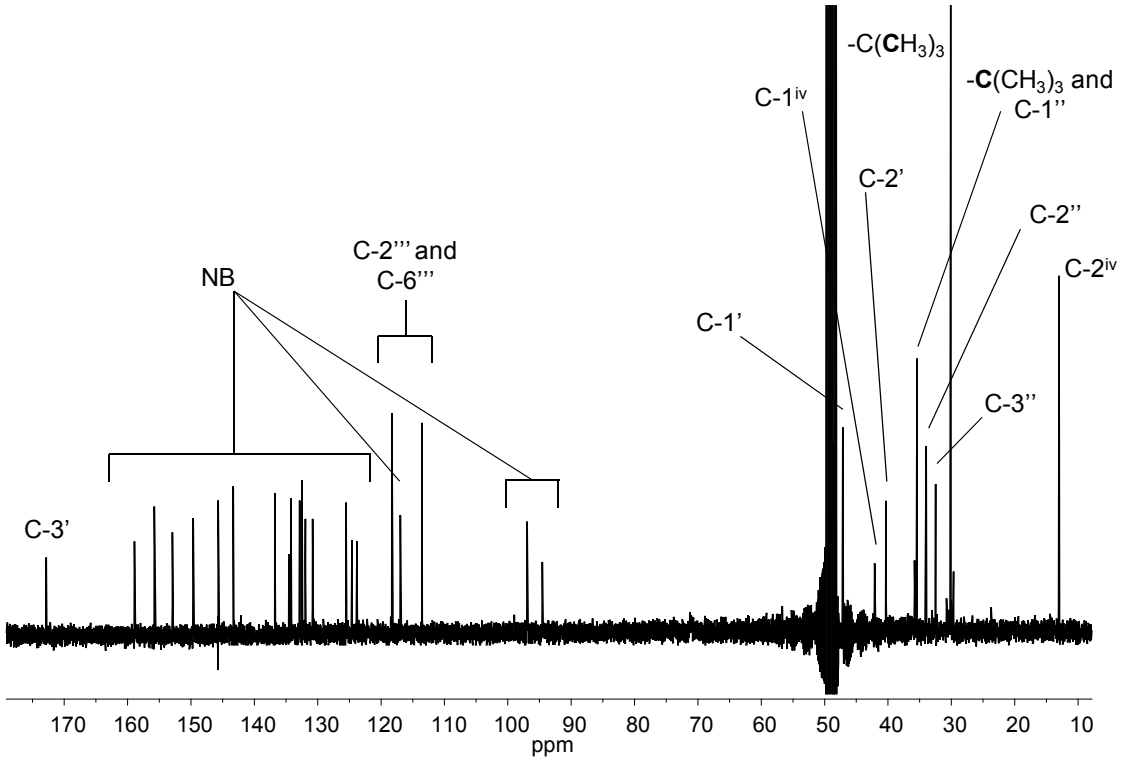
IR (ATR)



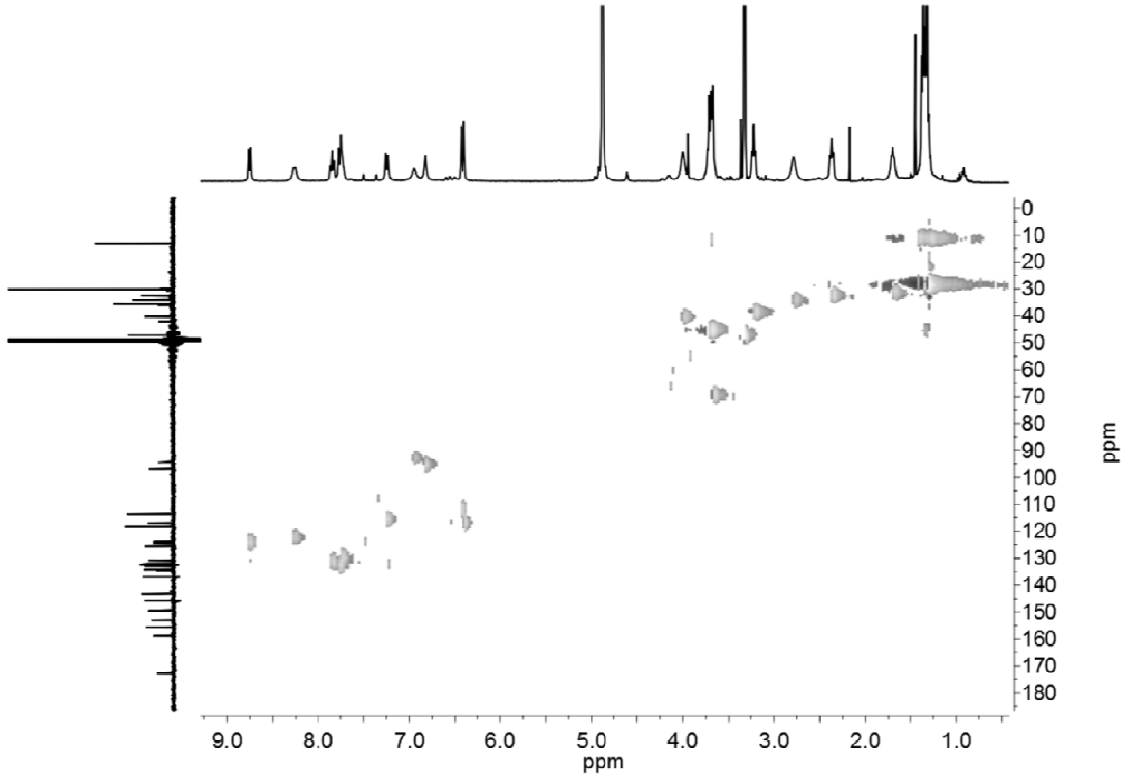
^{1}H NMR (DMSO-d_6, 360 MHz)



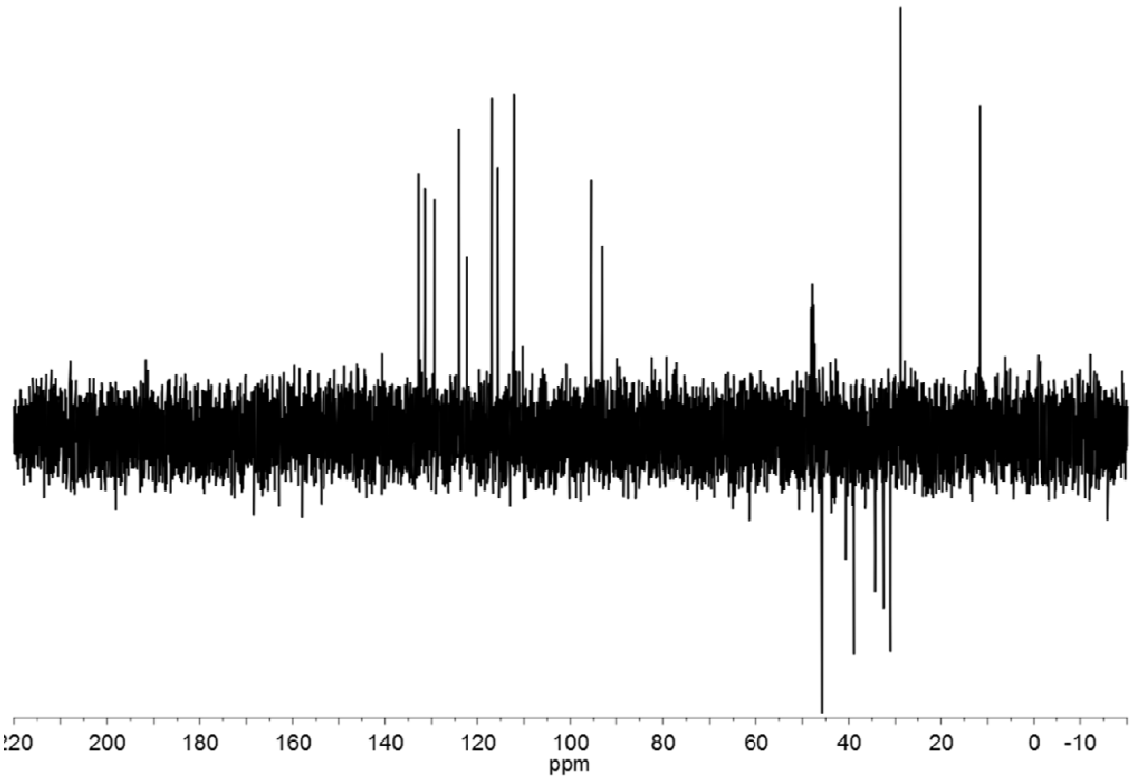
^{1}H NMR (MeOH-d_4, 360 MHz)



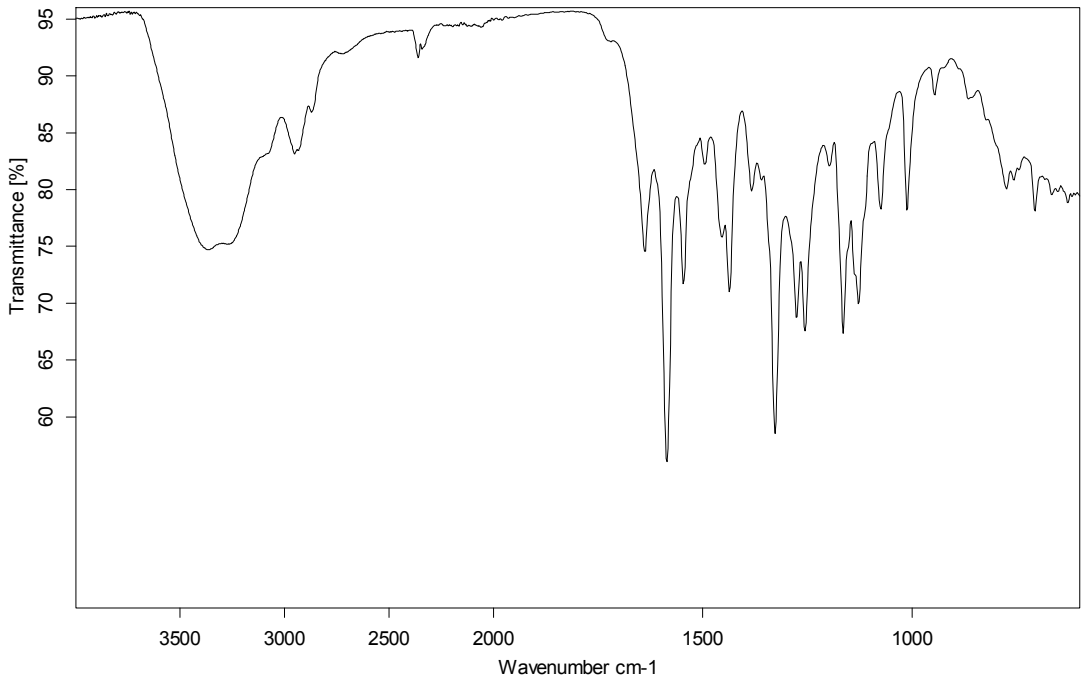
^{13}C NMR (MeOH-d_4, 90 MHz)



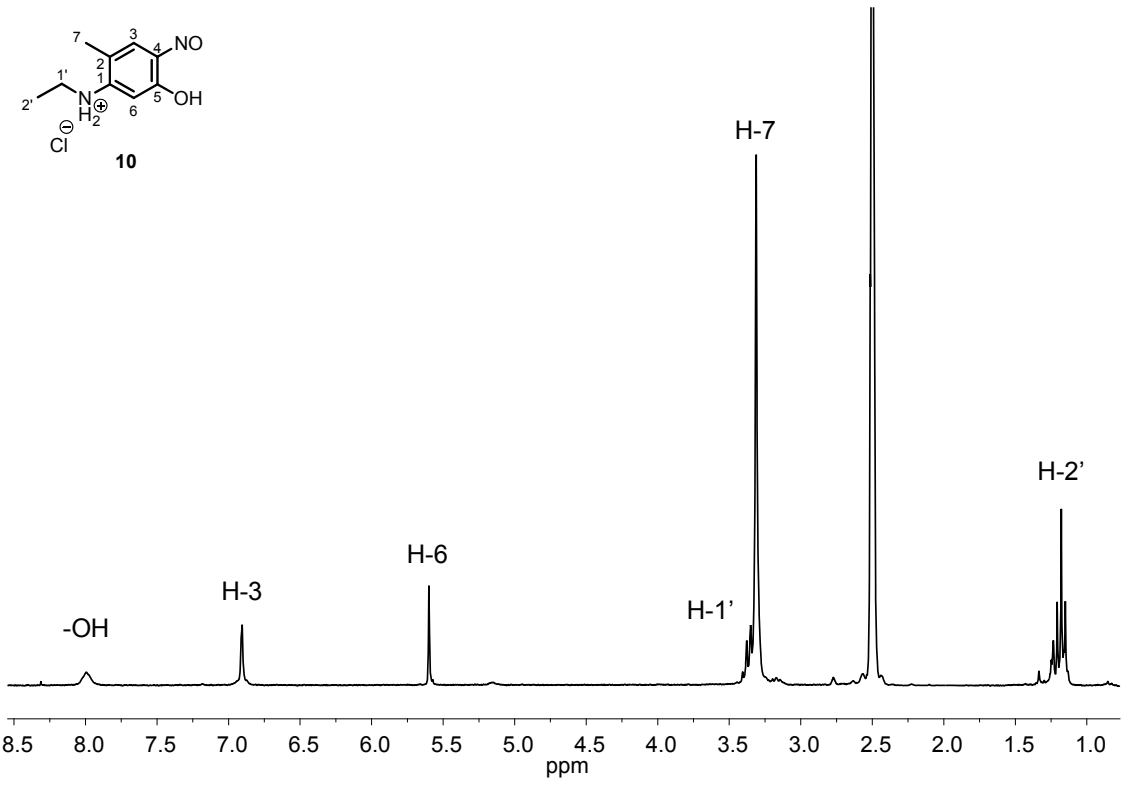
HSQC (MeOH-d_4, 90 MHz)



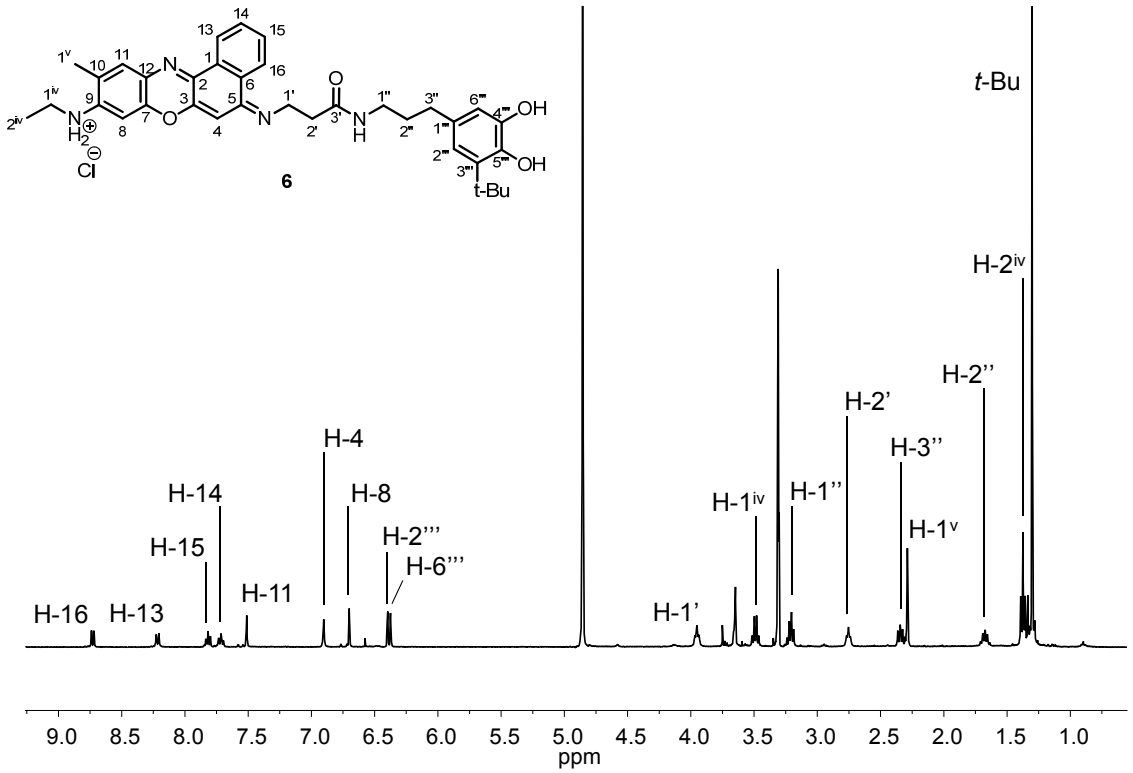
DEPT 135 (MeOH-d_4, 360 MHz)



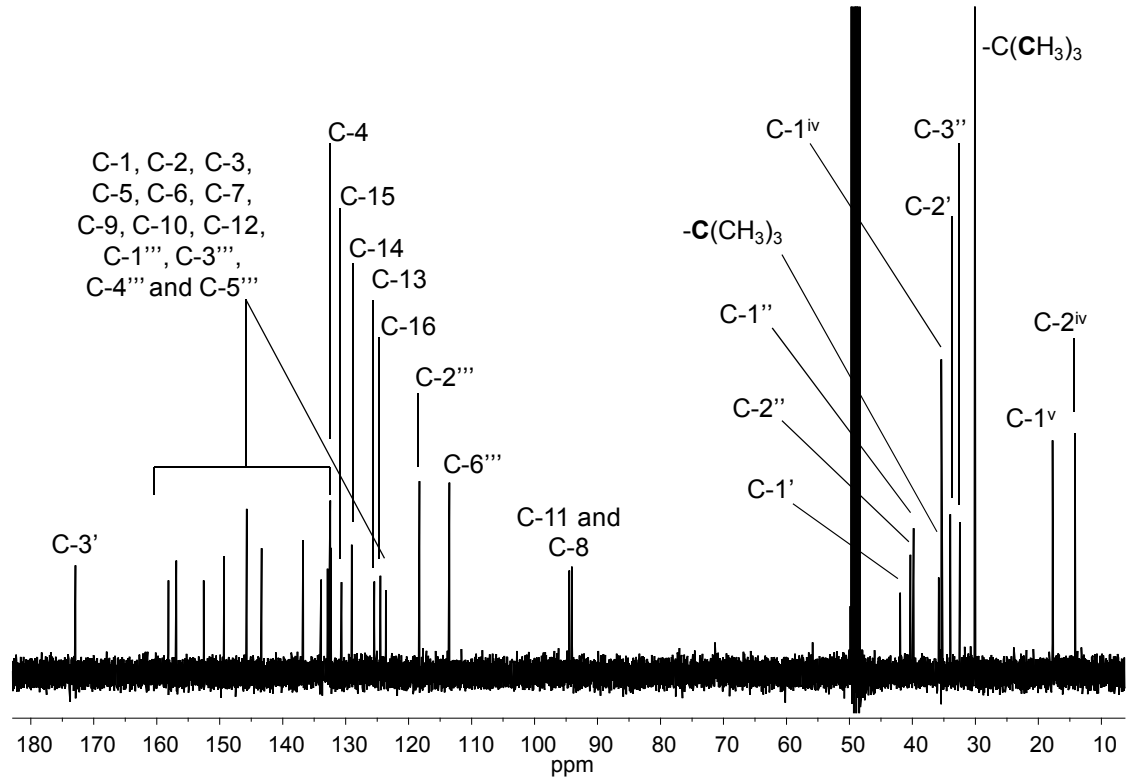
IR (ATR)



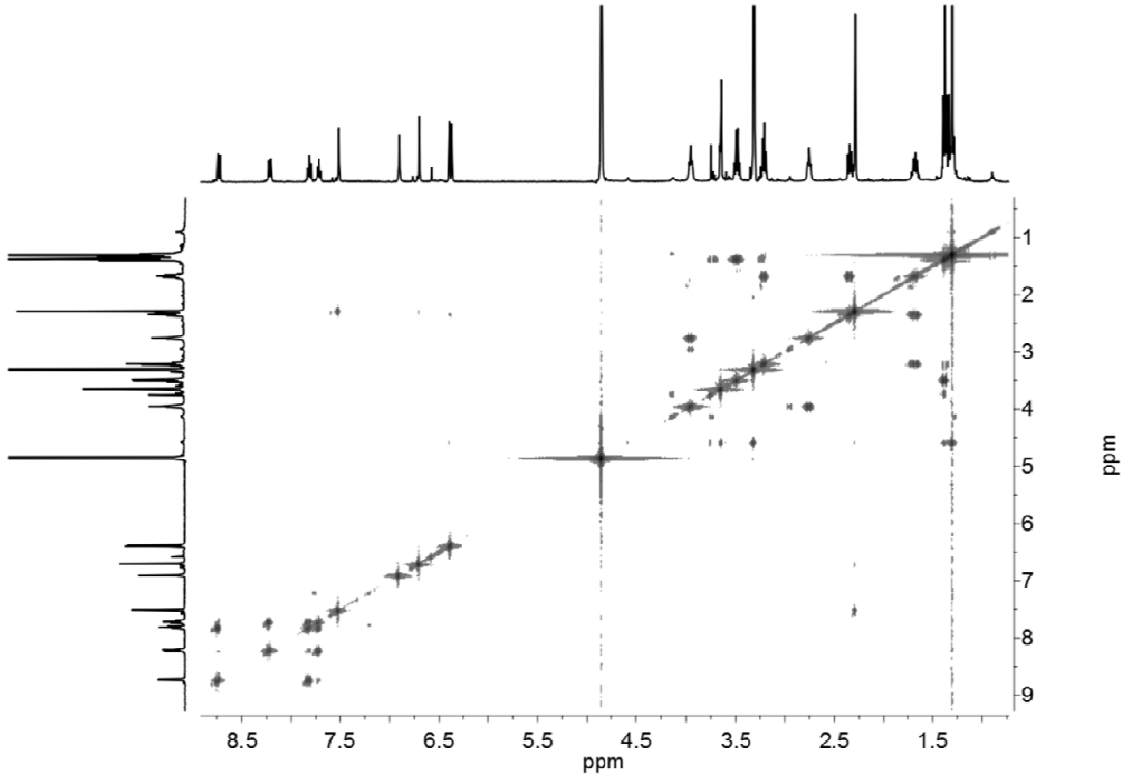
^{1}H NMR (DMSO-d_6, 250 MHz)



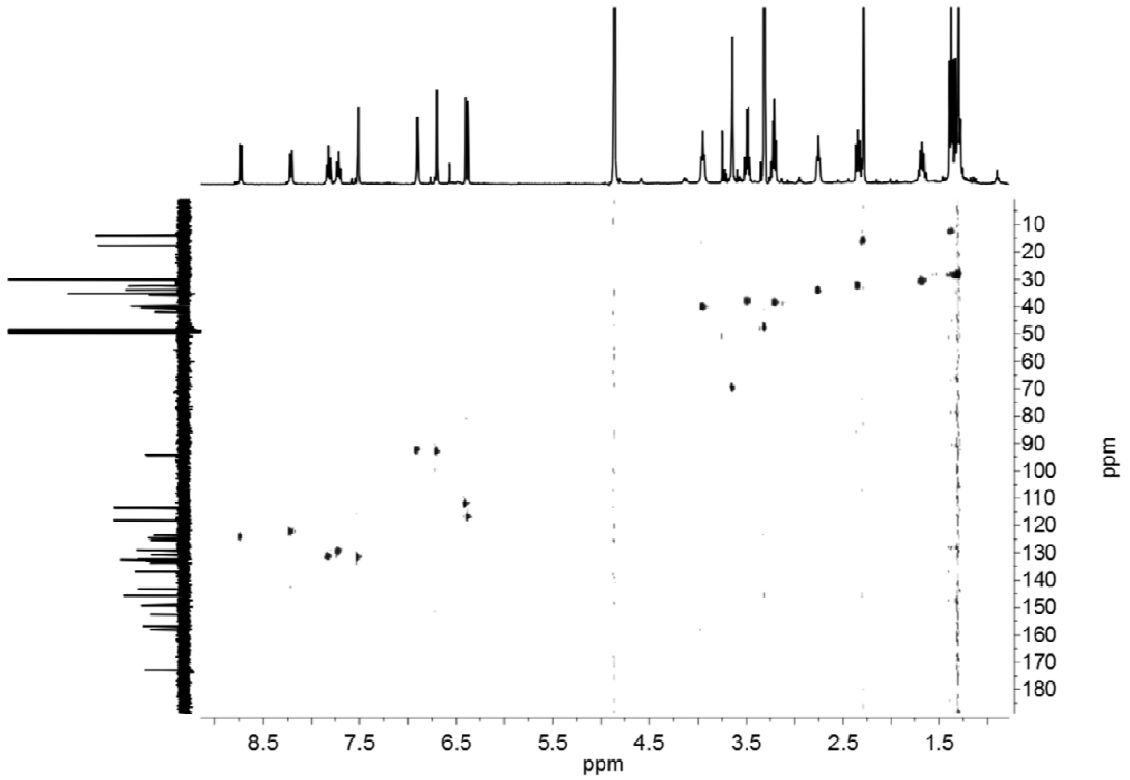
^{1}H NMR (MeOH-d_4, 400 MHz)



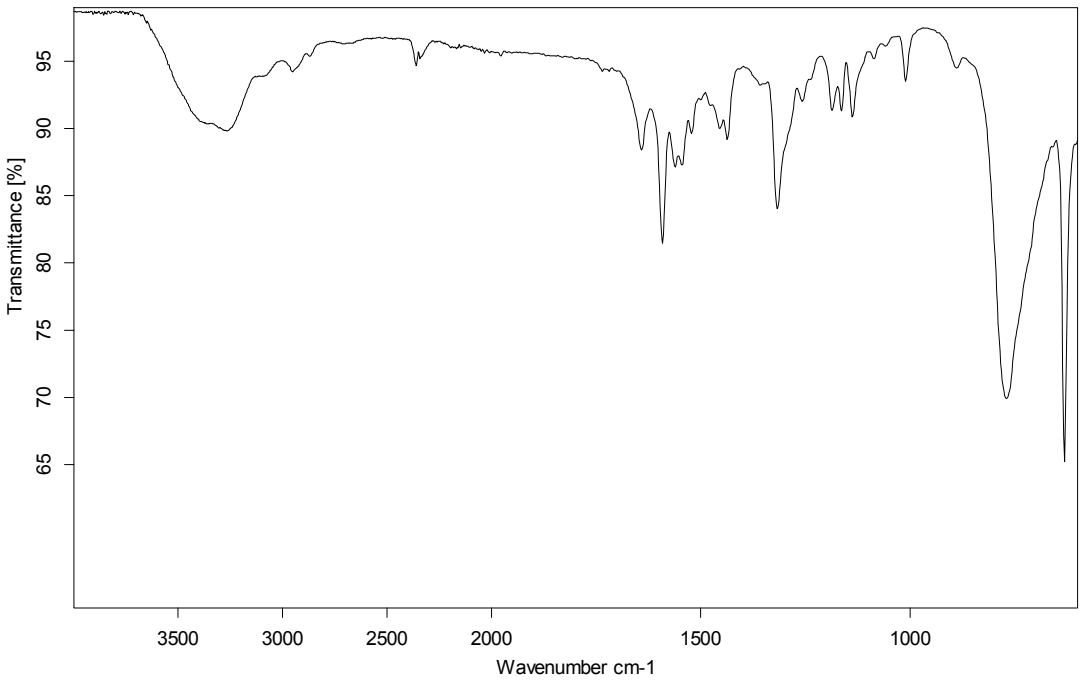
^{13}C NMR (MeOH-d_4, 100 MHz)



COSY (MeOH-d_4, 400 MHz)



HSQC (MeOH-d_4, 100 MHz)



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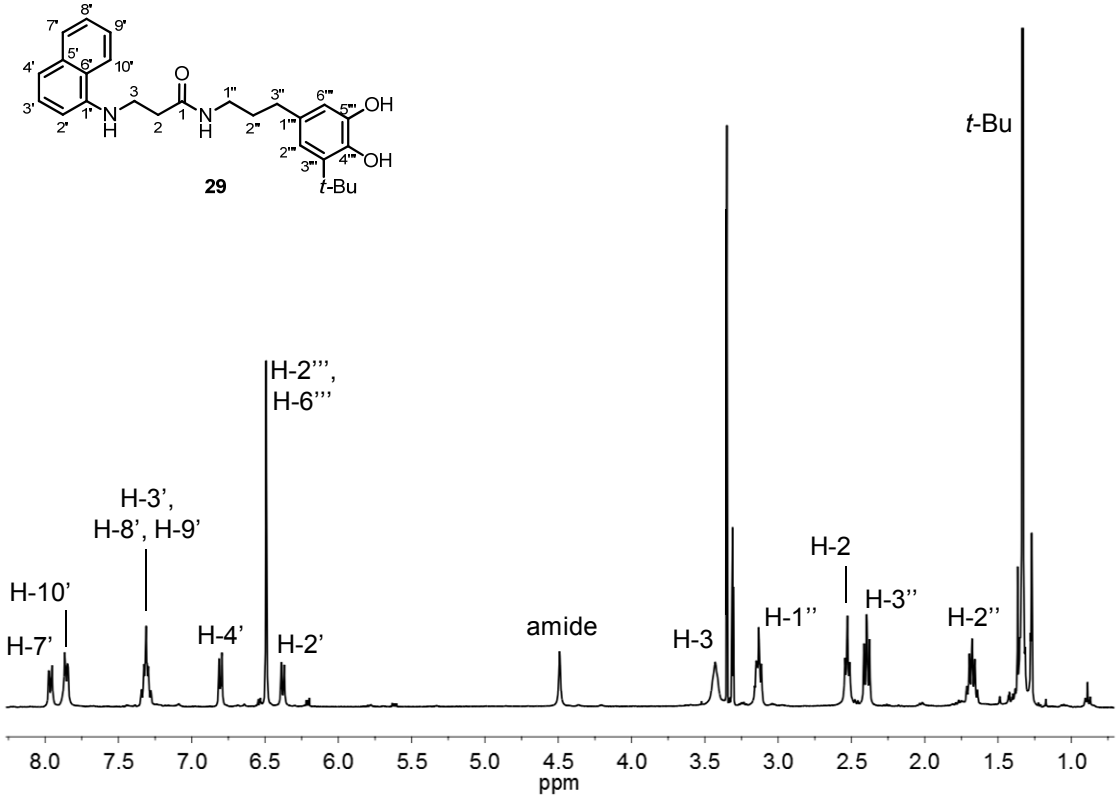
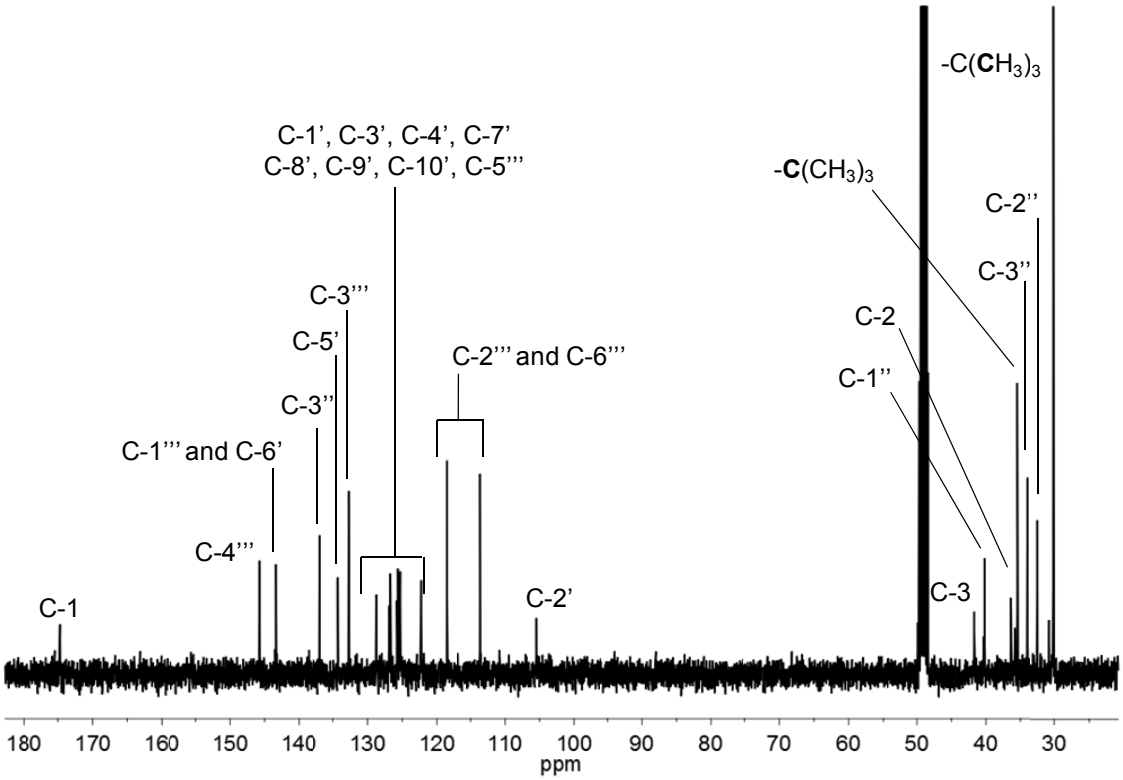
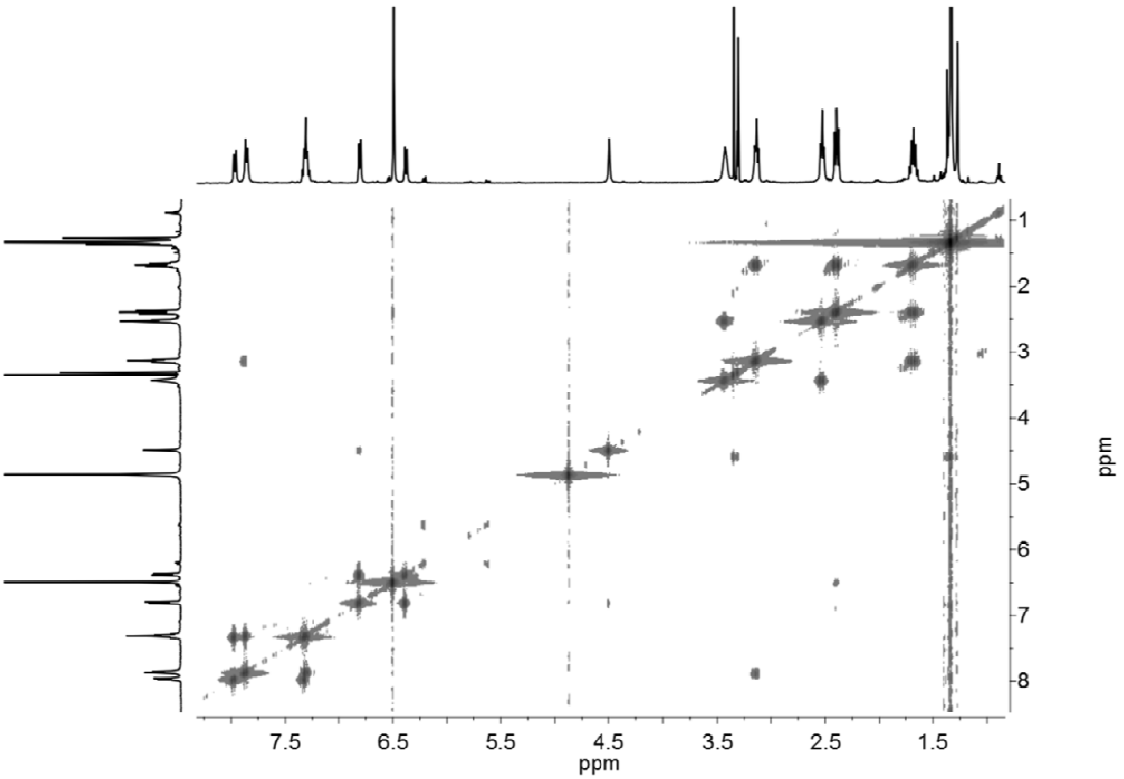


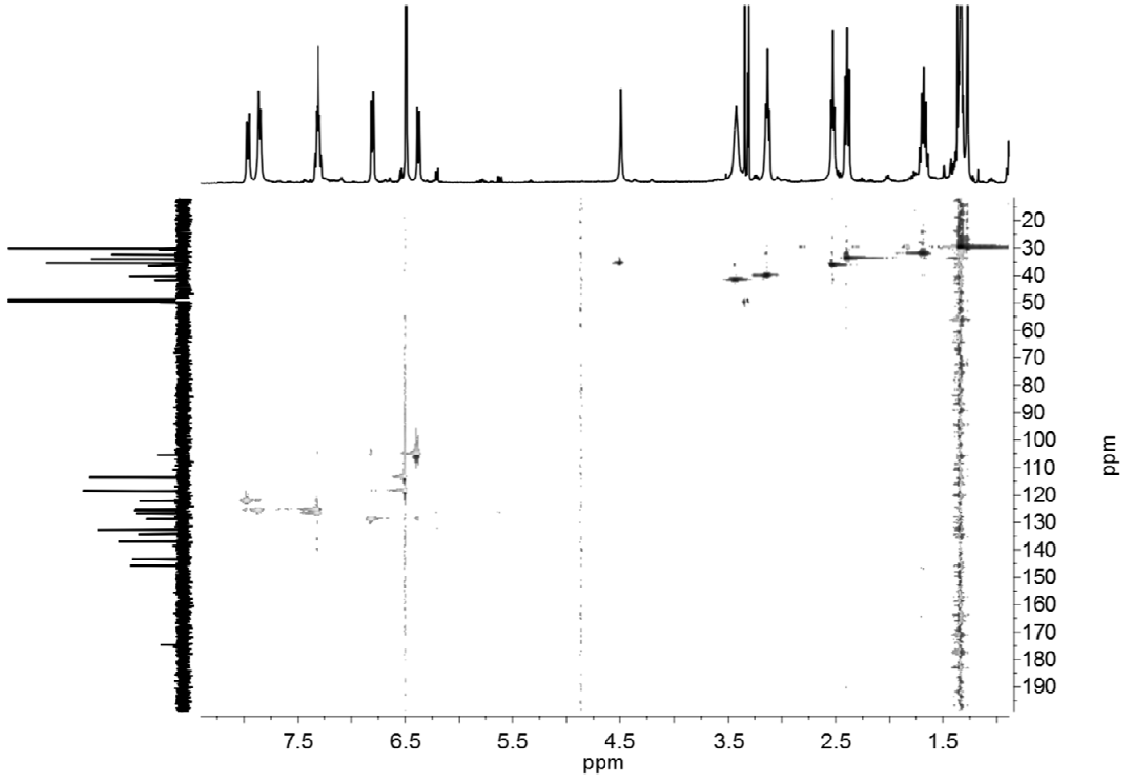
^{1}H NMR (MeOH-d_4, 360 MHz)



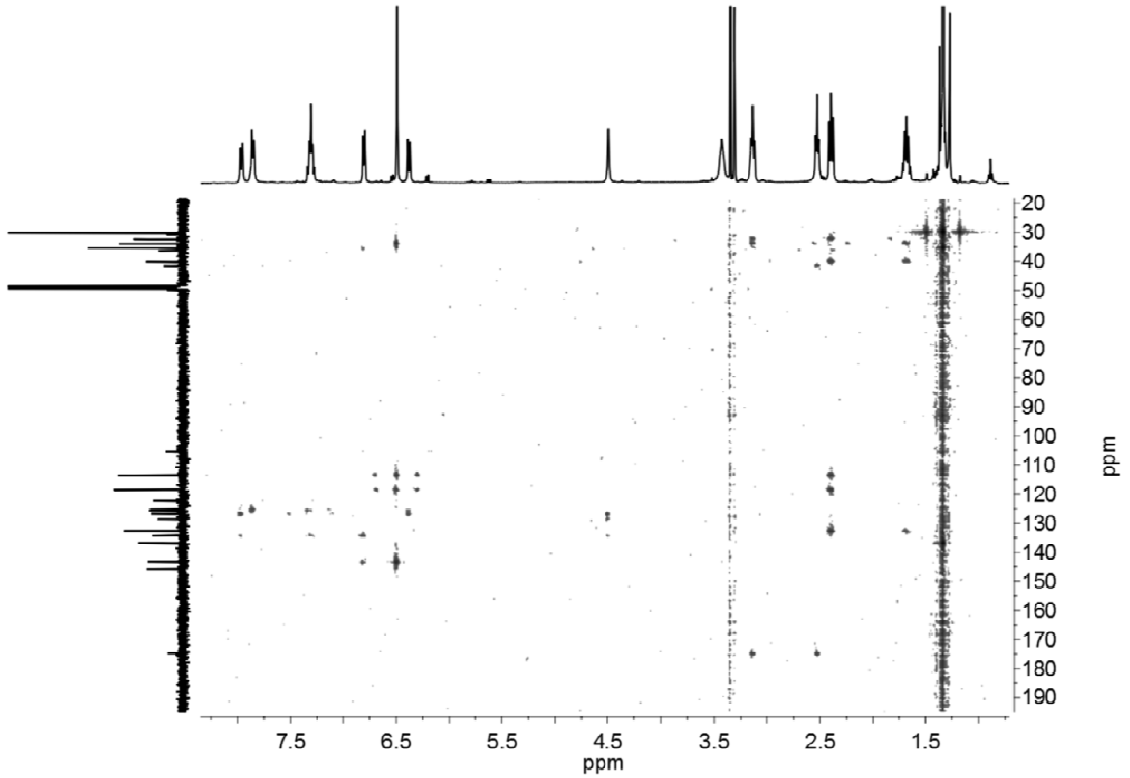
^{13}C NMR (MeOH-d_4, 90 MHz)



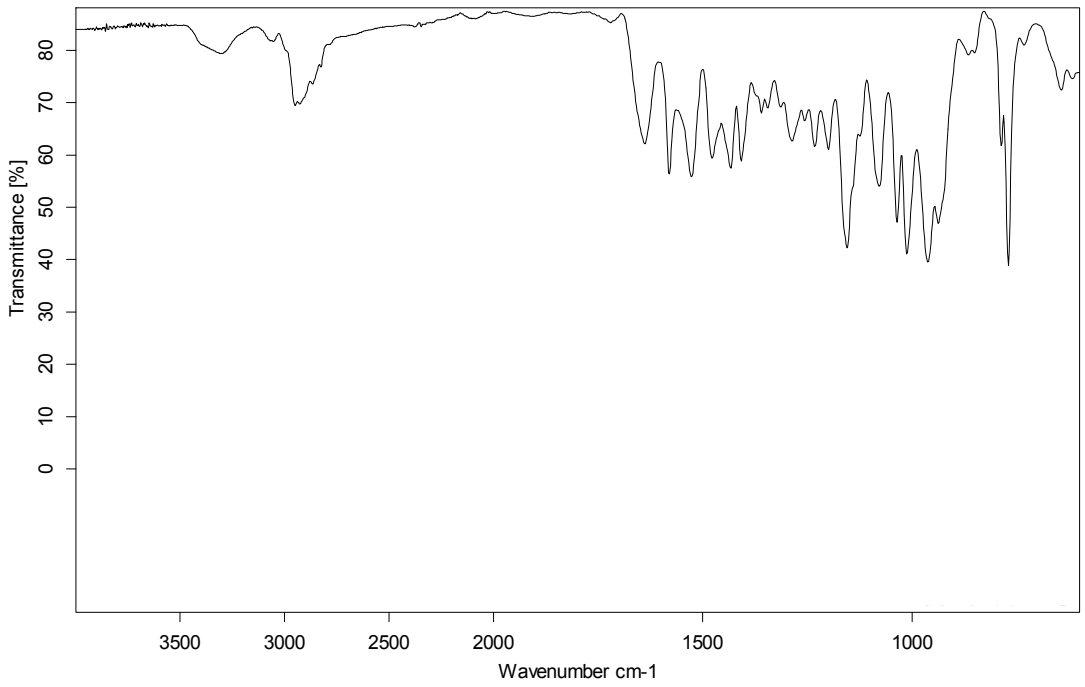
COSY (MeOH-d_4, 360 MHz)



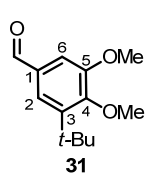
HSQC (MeOH-d_4, 90 MHz)



HMBC (MeOH-d_4, 90 MHz)



IR (ATR)



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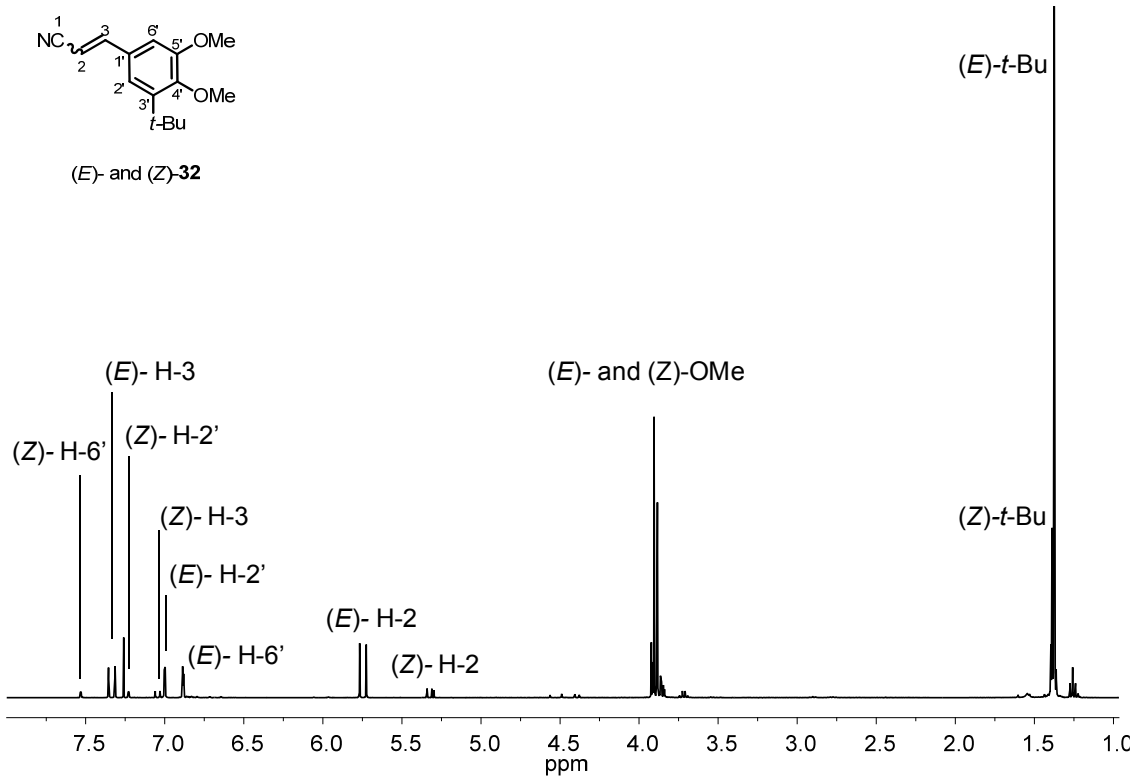
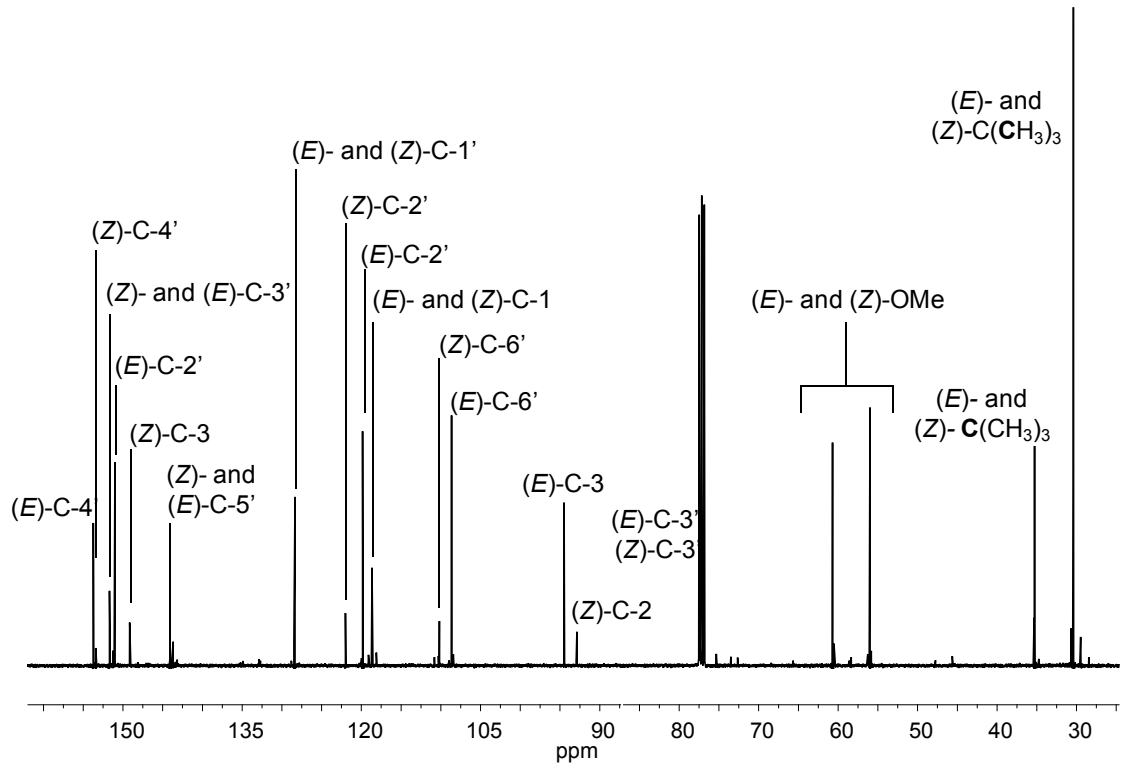
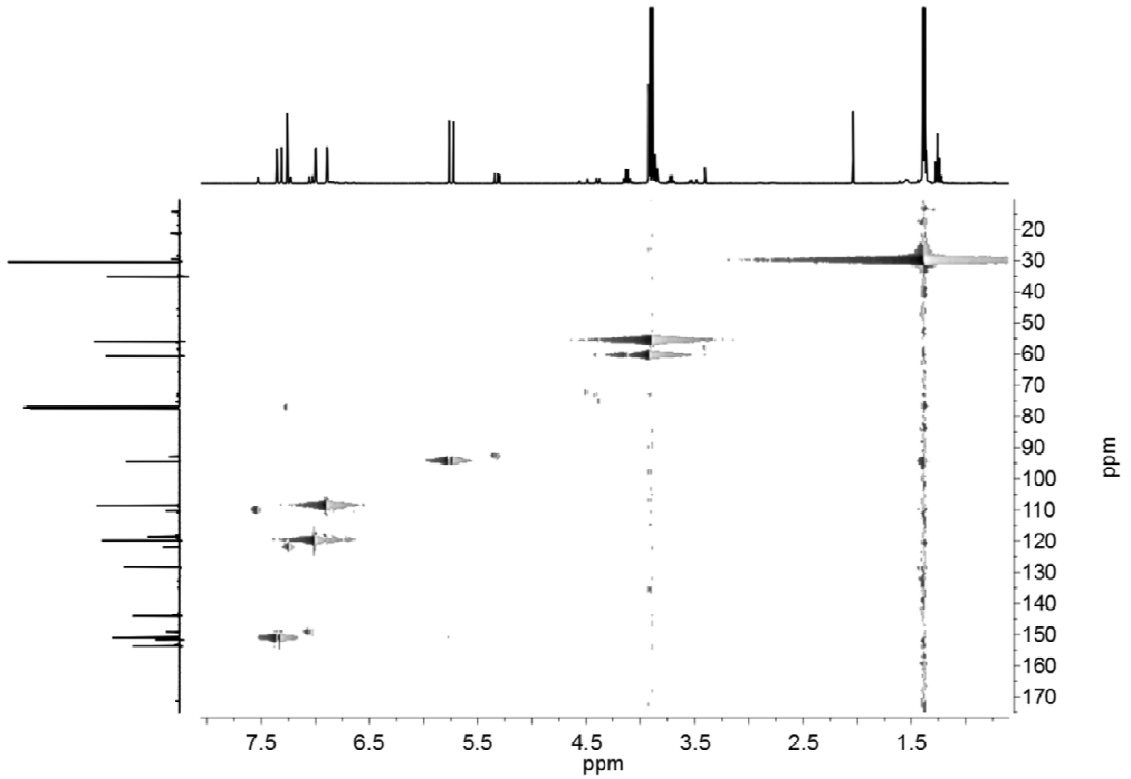
^{1}H NMR ($CDCl_3$, 250 MHz)



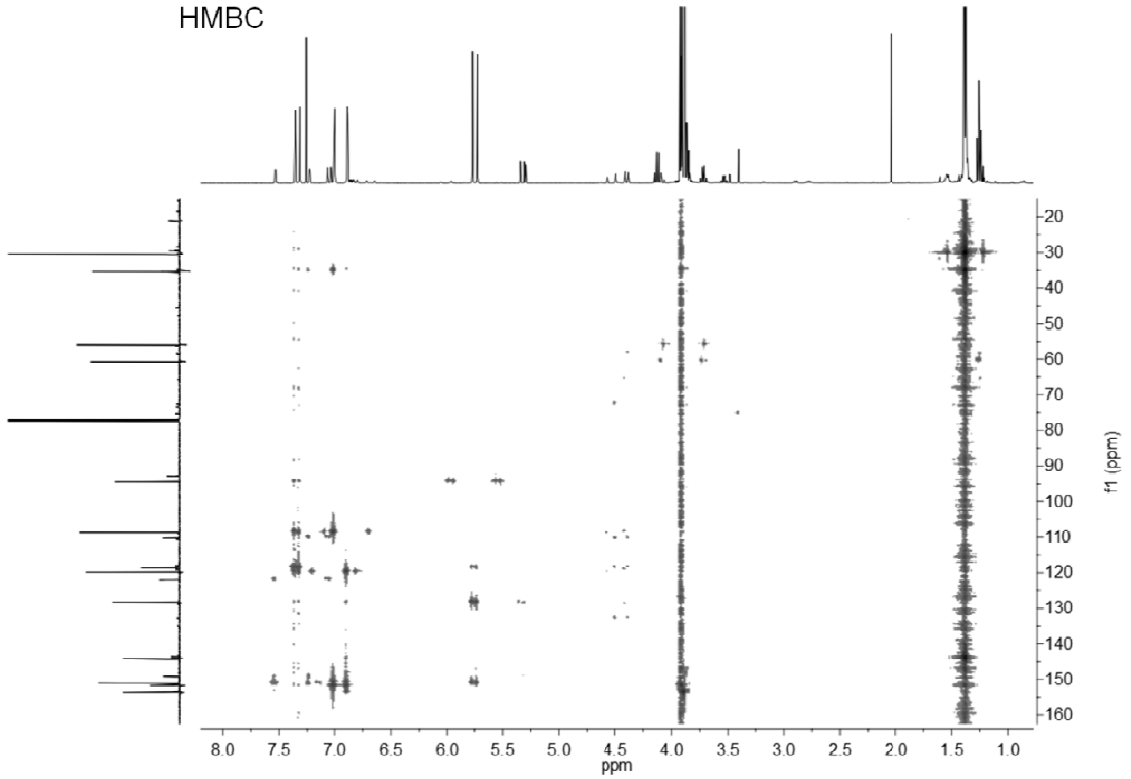
^{1}H NMR ($CDCl_3$, 400 MHz)



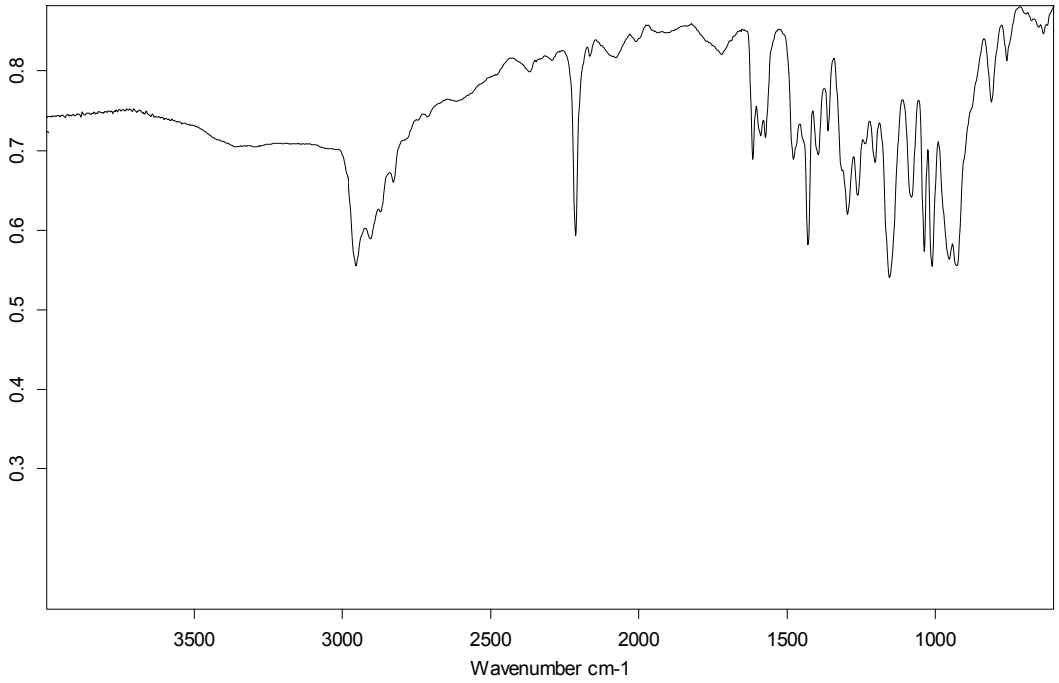
^{13}C NMR ($CDCl_3$, 100 MHz)



HSQC ($CDCl_3$, 100 MHz)



HMBC ($CDCl_3$, 100 MHz)



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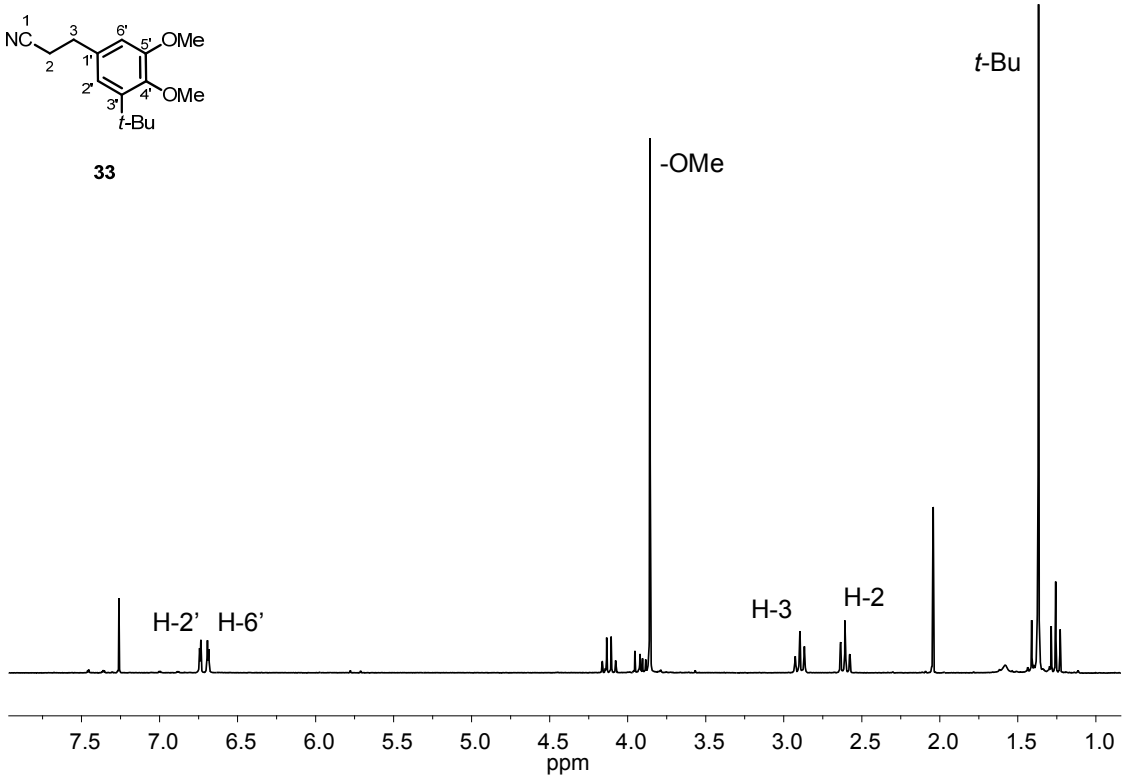

^{1}H NMR ($CDCl_3$, 250 MHz)