

Supplementary File

Facile Synthesis and Characterization of Bio-Organometallic Compounds and their Biological Activity Contour against Human Pathogens†

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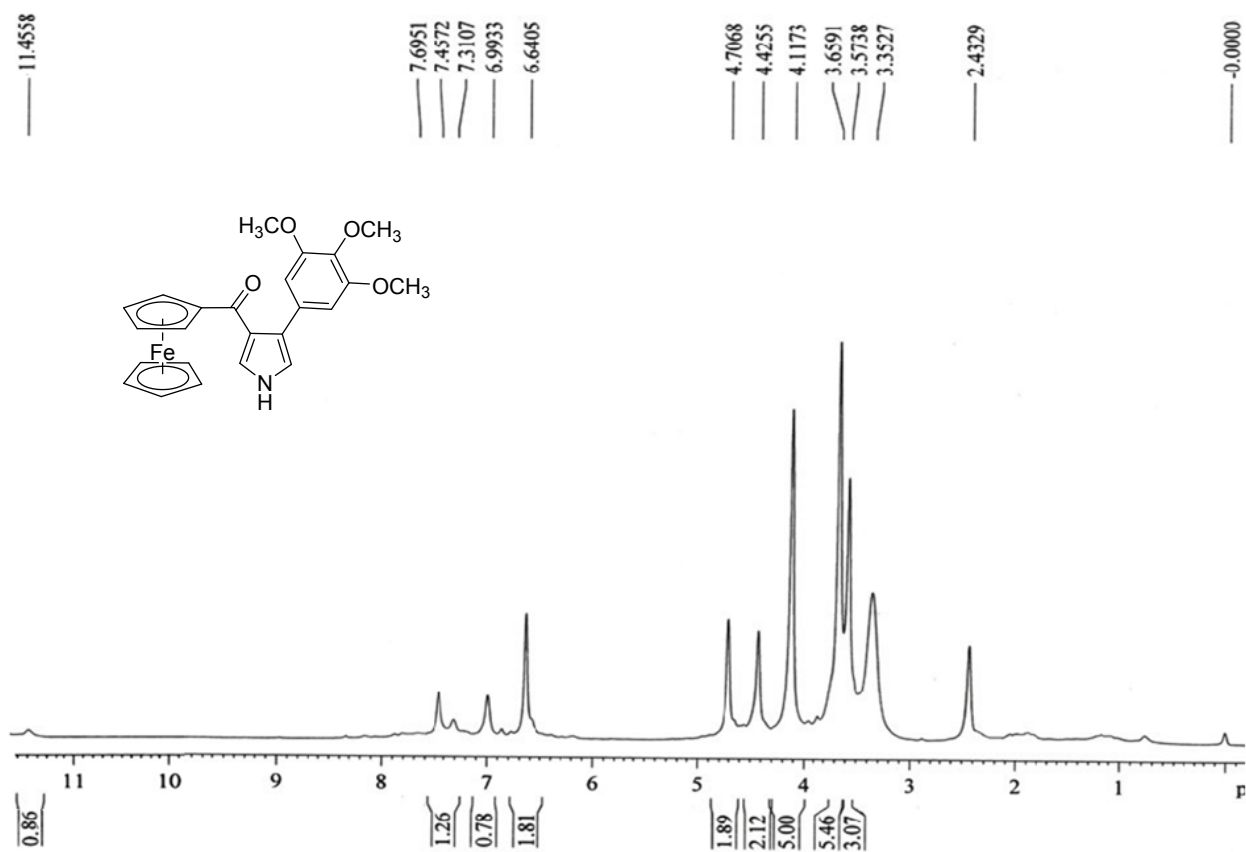
^b Department of Marine and Coastal Studies, School of Energy, Environment and Natural Resources, Madurai Kamaraj University, Madurai – 625 021.

^c Cancer Genetics Laboratory, Department of Genetics, Centre for Excellence in Genomic Sciences, School of Biological Sciences, Madurai Kamaraj University, Madurai – 625 021, India.

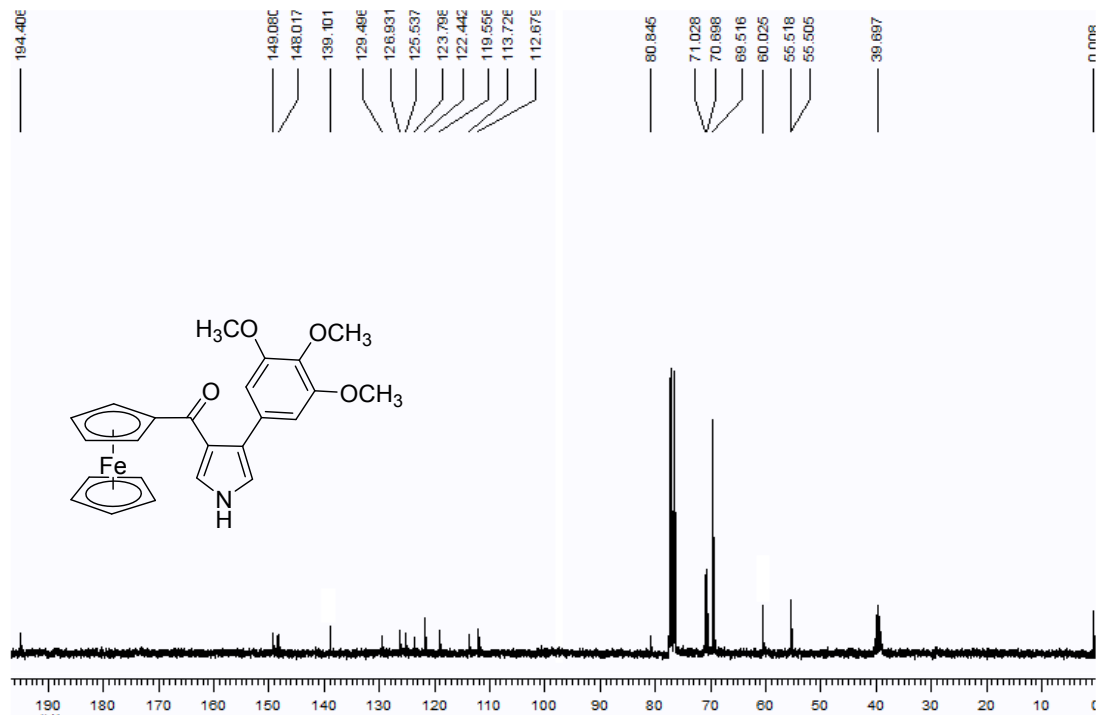
**¹H & ¹³C NMR spectra of
ferrocenyl(4-(aryl)-1*H*-pyrrol-3-yl)methanone - 2a-h**

**¹H & ¹³C NMR spectra of
(1-methyl-4-(aryl)-1*H*-pyrrol-3-yl)(ferrocenyl)methanone - 3a-h
and**

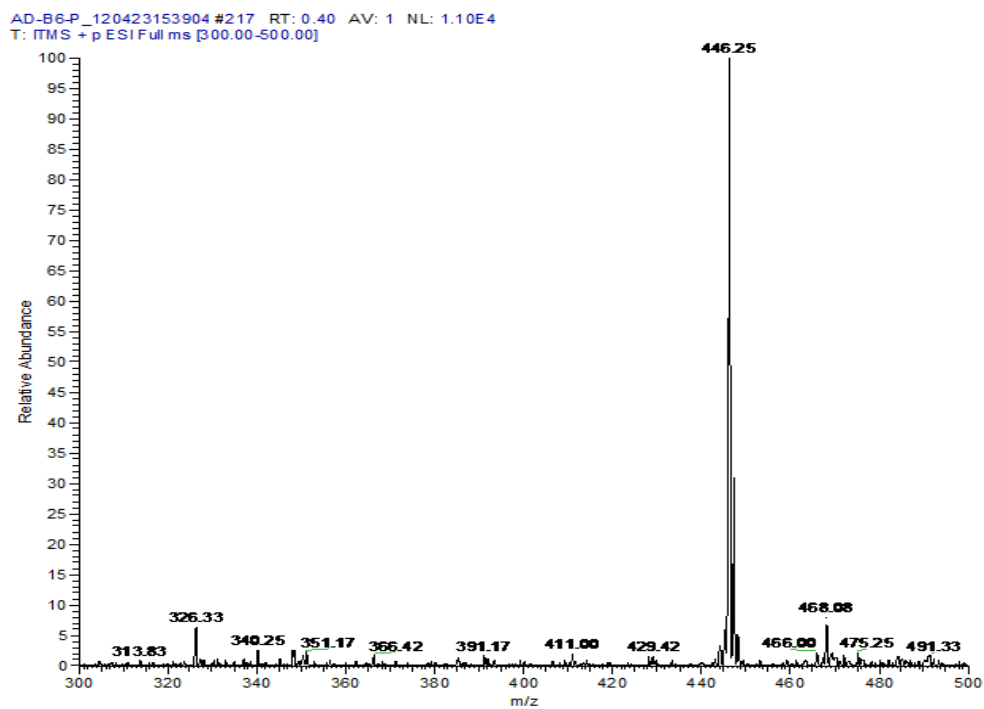
LC-MS SPECTRA of some representative PYRROLES



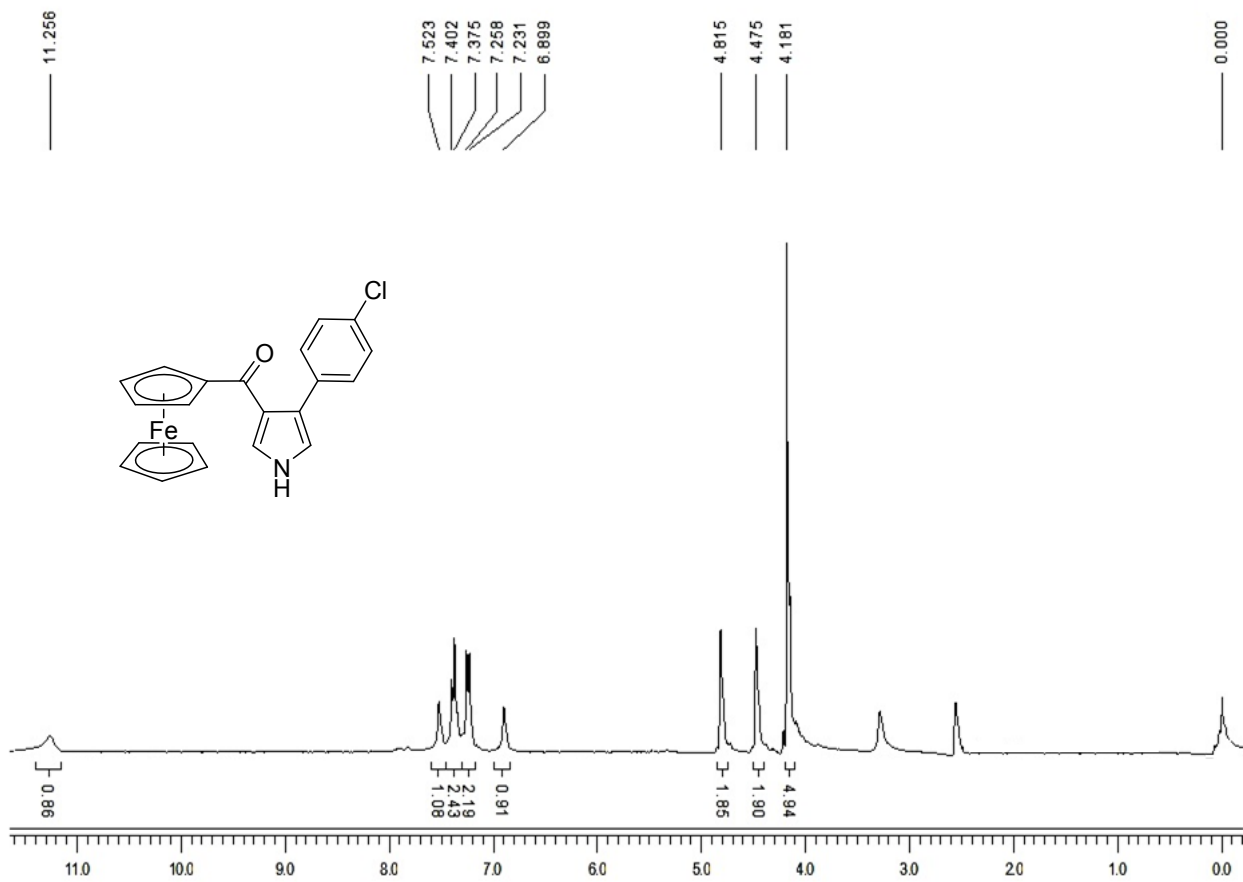
¹H NMR (400 MHz, DMSO-d₆): ferrocenyl(4-(3,4,5-trimethoxyphenyl)-1H-pyrrol-3-yl)methanone **2a**



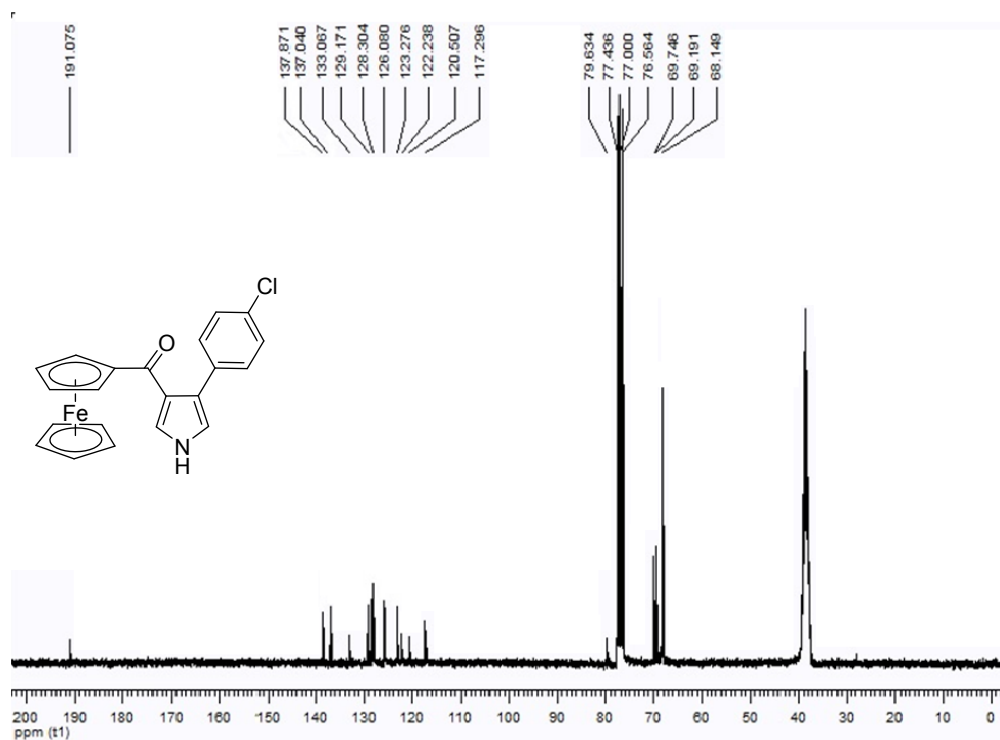
¹³C NMR (75 MHz, DMSO-d₆): ferrocenyl(4-(3,4,5-trimethoxyphenyl)-1H-pyrrol-3-yl)methanone **2a**



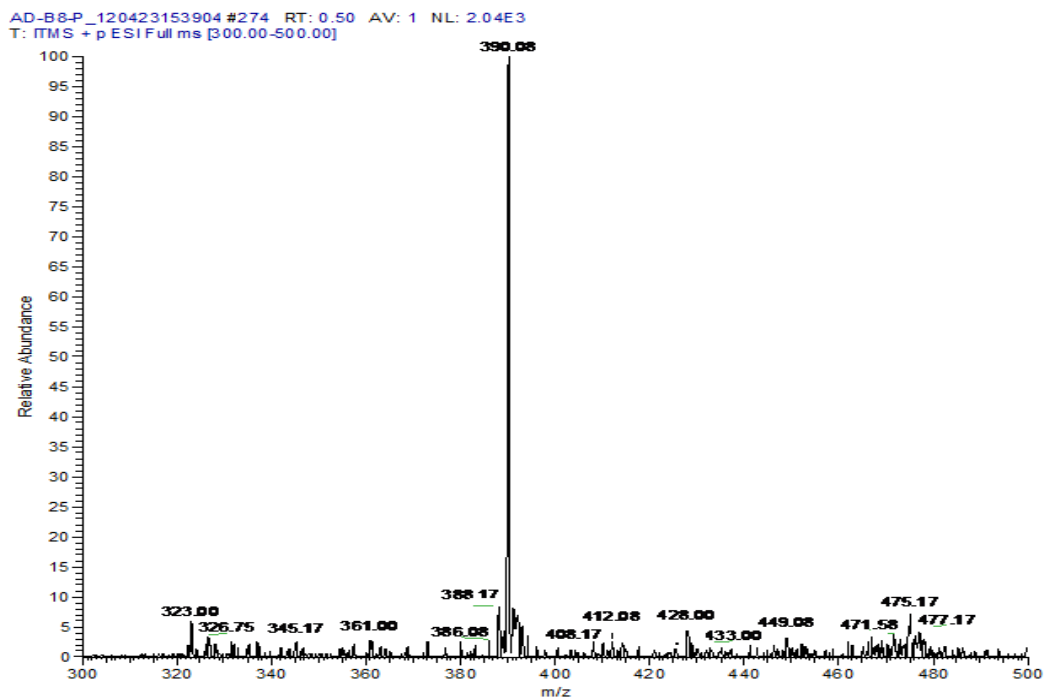
LC-MS: ferrocenyl(4-(3,4,5-trimethoxyphenyl)-1H-pyrrol-3-yl)methanone **2a**



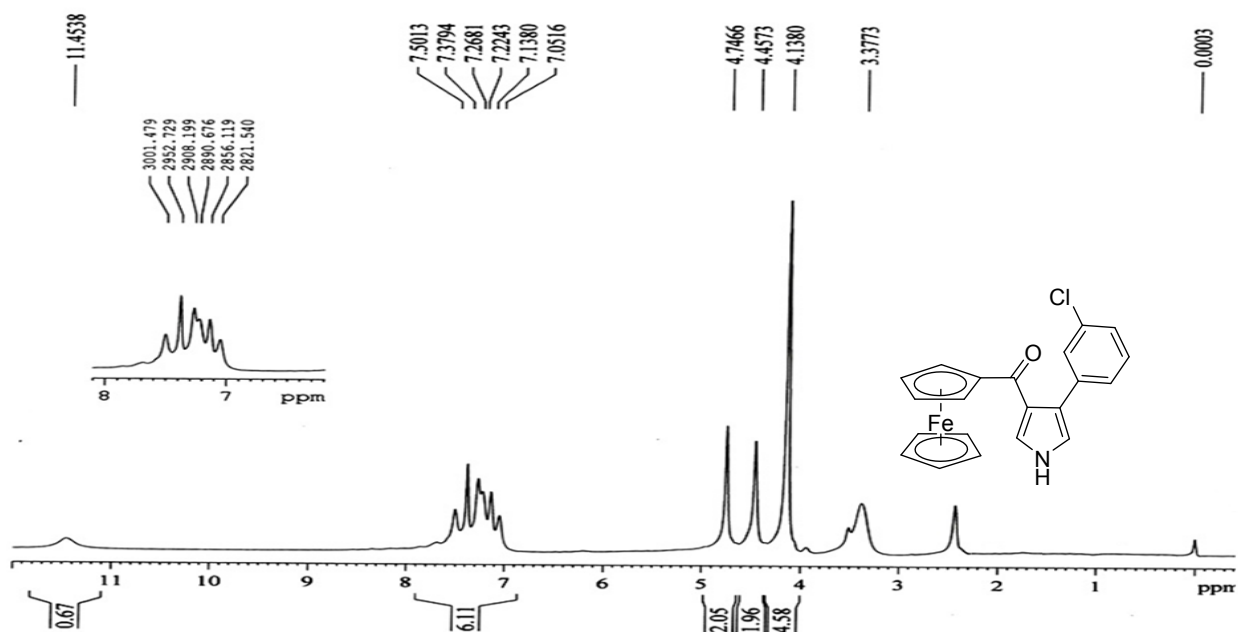
¹H NMR (300 MHz, DMSO-d₆): ferrocenyl(4-(4-chlorophenyl)-1H-pyrrol-3-yl)methanone **2b**



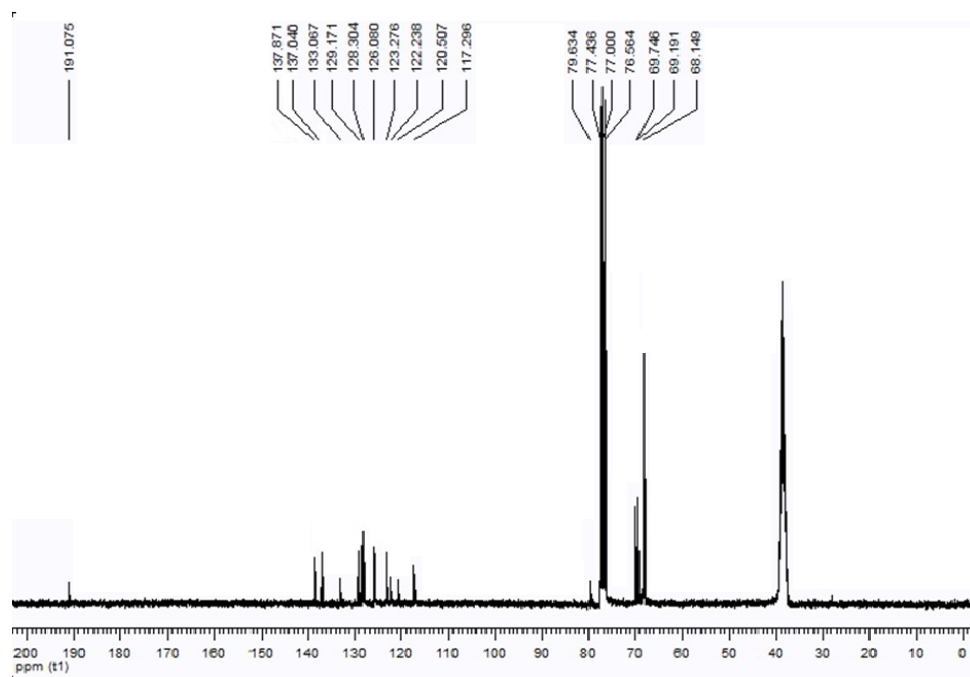
¹³C NMR (75 MHz, DMSO-d₆): ferrocenyl(4-(4-chlorophenyl)-1H-pyrrol-3-yl)methanone **2b**



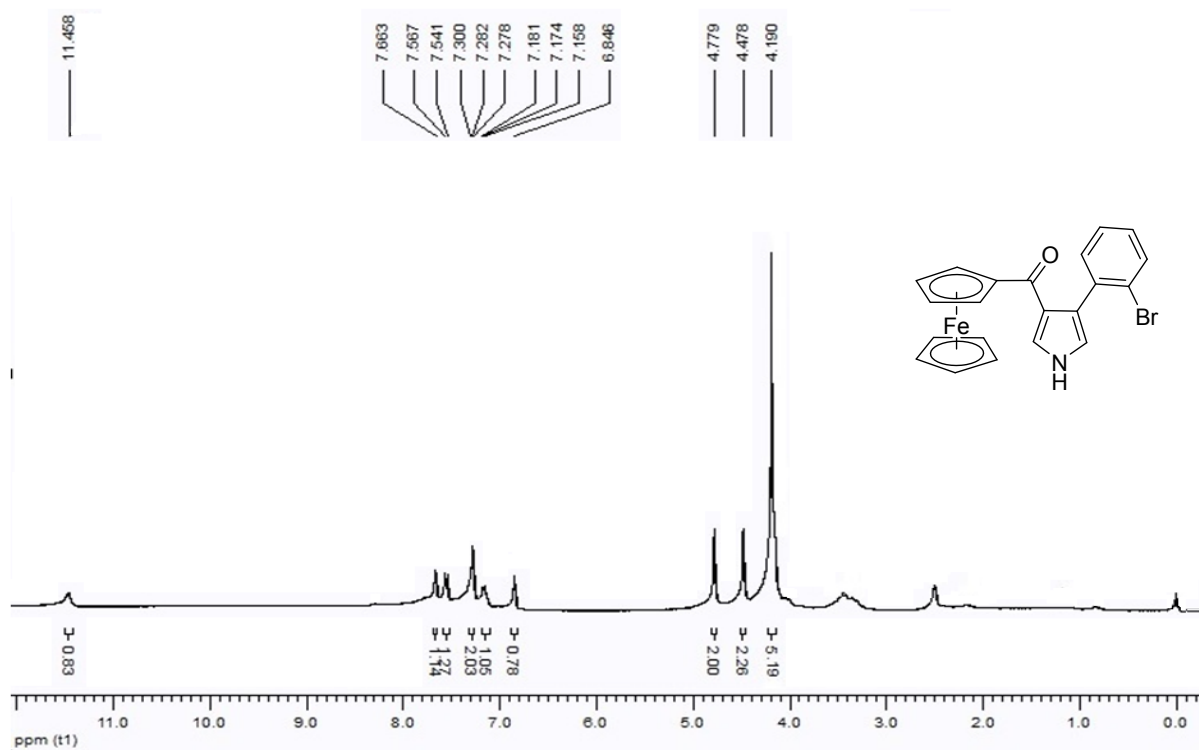
LC-MS: ferrocenyl(4-(4-chlorophenyl)-1H-pyrrol-3-yl)methanone **2b**



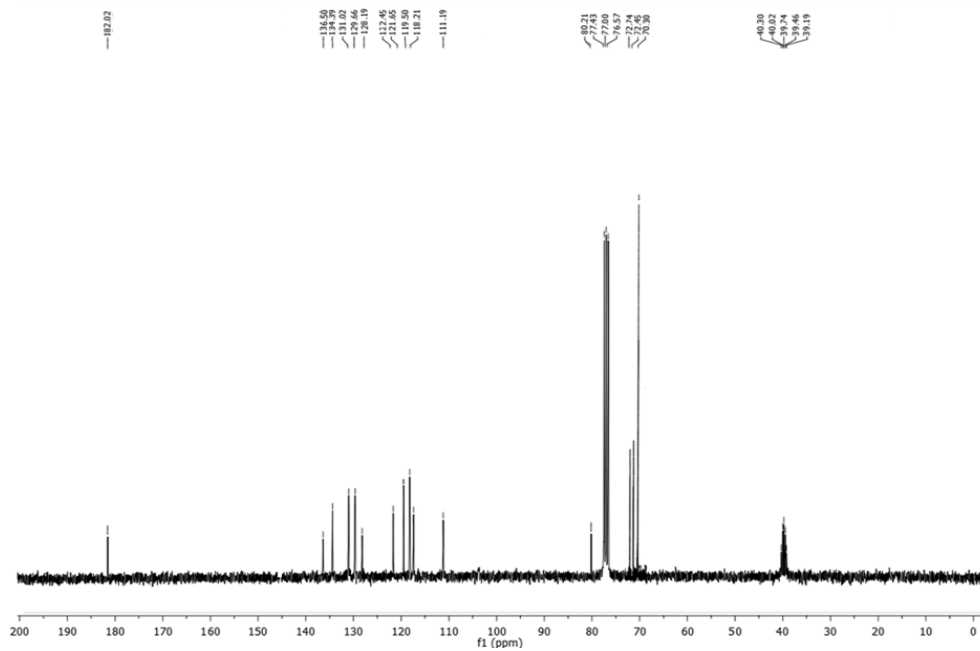
^1H NMR (400 MHz, DMSO- d_6): ferrocenyl(4-(3-chlorophenyl)-1*H*-pyrrol-3-yl)methanone **2c**



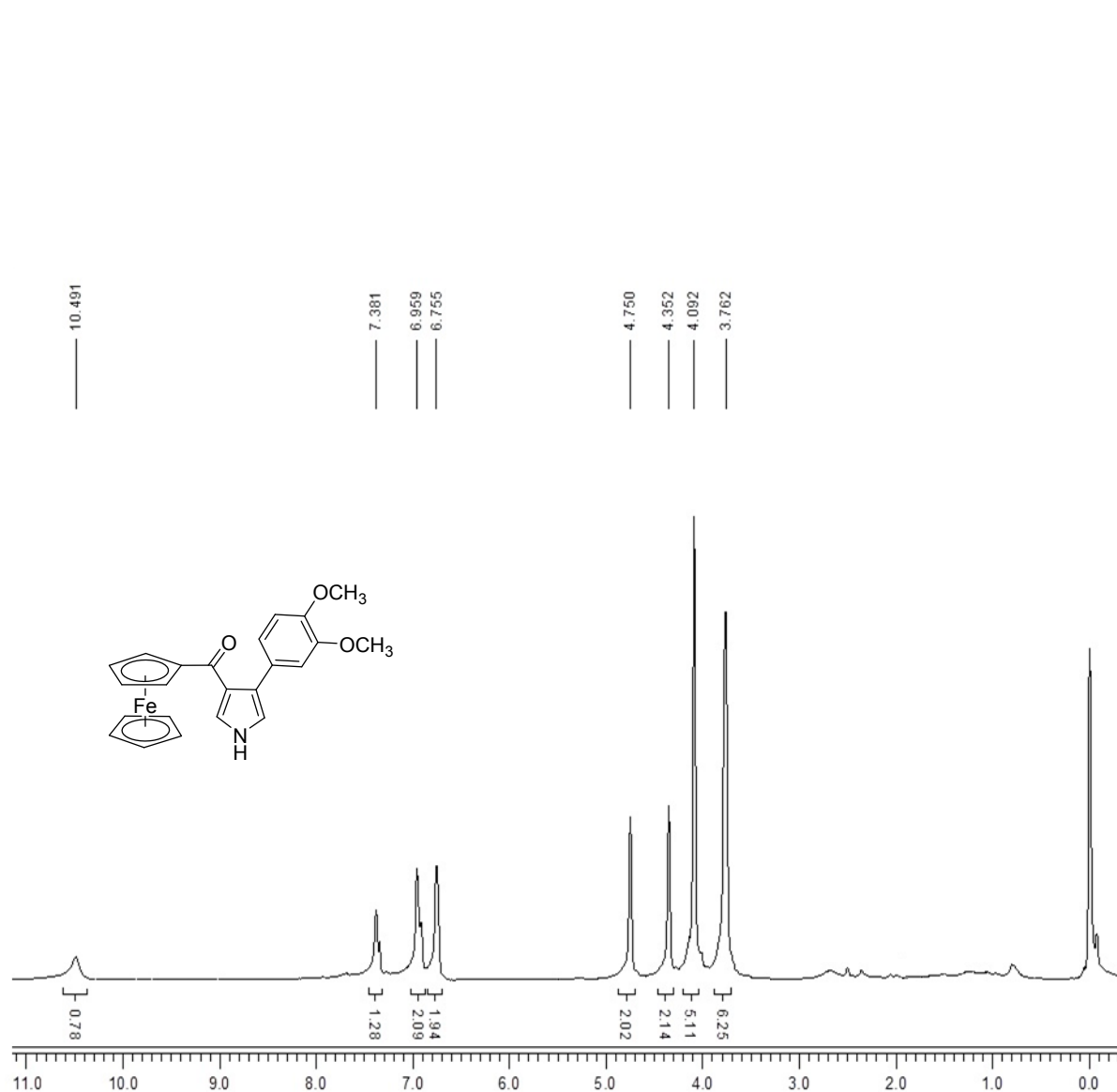
^{13}C NMR (75 MHz, DMSO- d_6): ferrocenyl(4-(3-chlorophenyl)-1*H*-pyrrol-3-yl)methanone **2c**



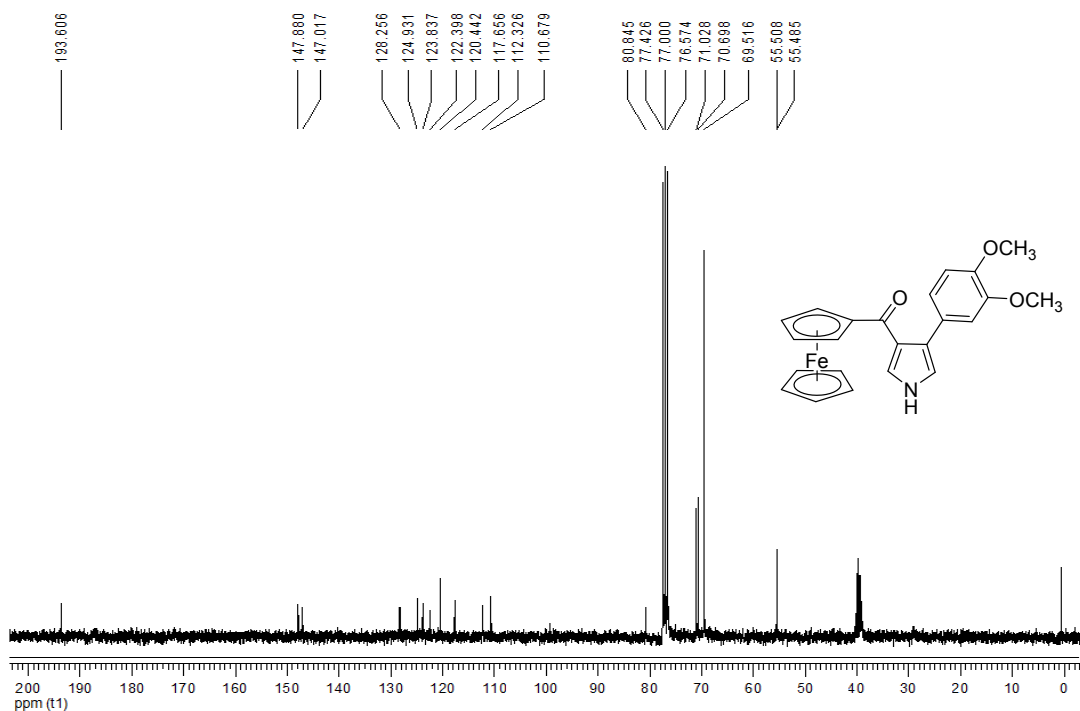
¹H NMR (300 MHz, DMSO-d₆): ferrocenyl(4-(2-bromophenyl)-1H-pyrrol-3-yl)methanone **2d**



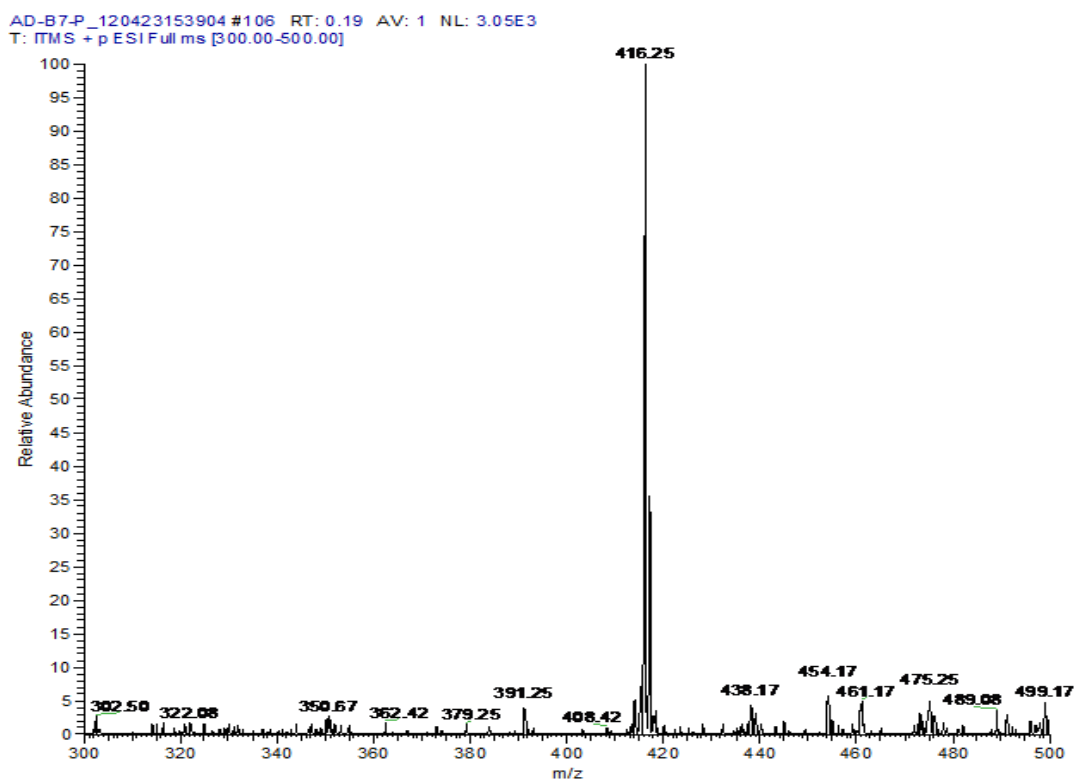
^{13}C NMR (75 MHz, DMSO-d_6): ferrocenyl(4-(2-bromophenyl)-1*H*-pyrrol-3-yl)methanone **2d**



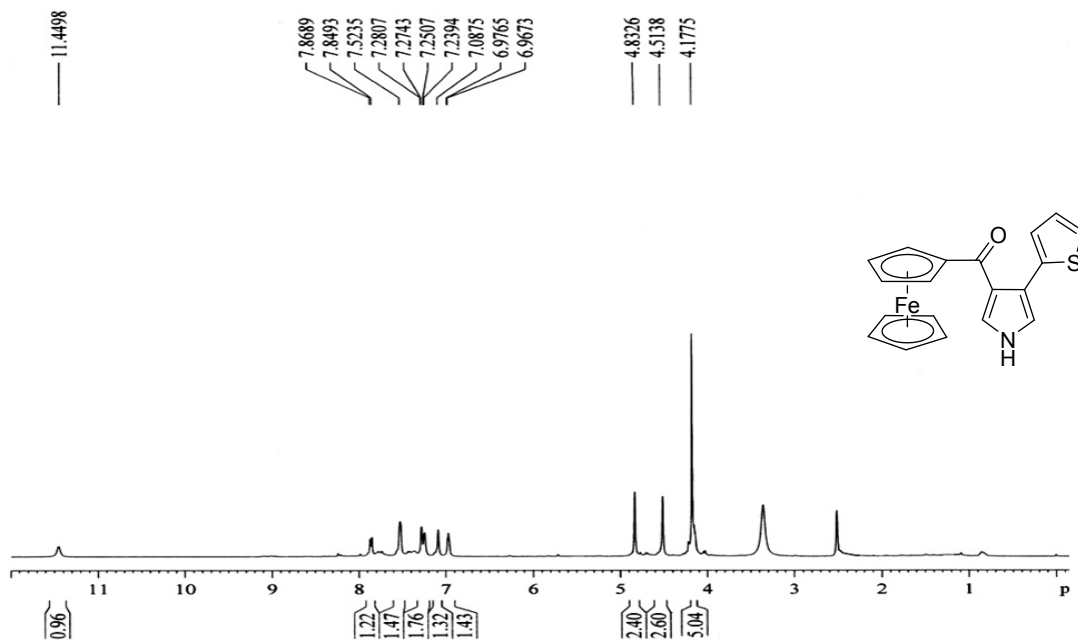
^1H NMR (300 MHz, DMSO-d_6): ferrocenyl(4-(3,4-dimethoxyphenyl)-1*H*-pyrrol-3-yl)methanone **2e**



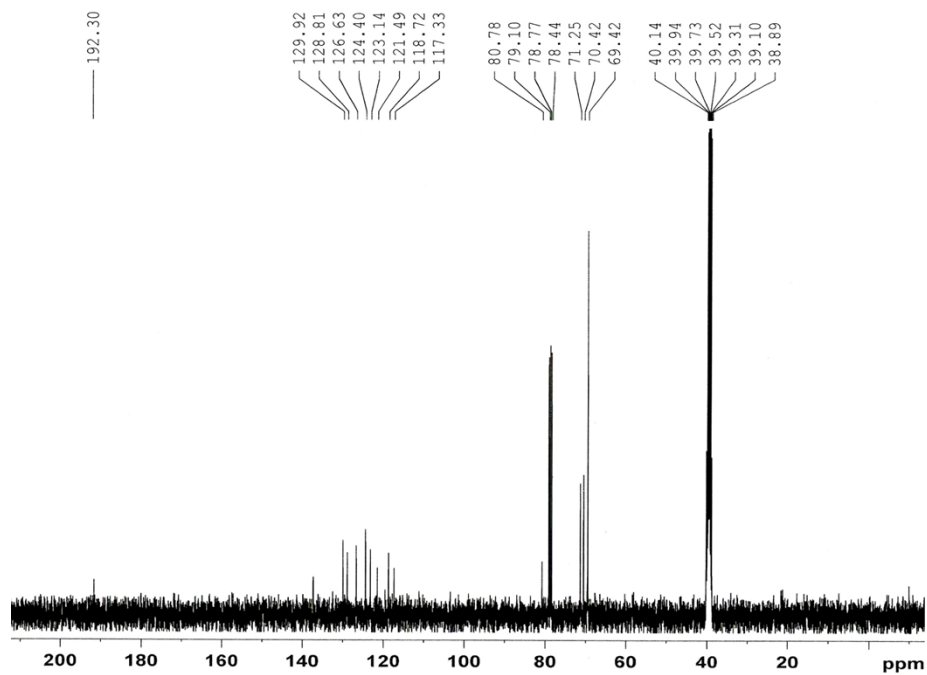
^{13}C NMR (75 MHz, DMSO- d_6): ferrocenyl(4-(3,4-dimethoxyphenyl)-1H-pyrrol-3-yl)methanone **2e**



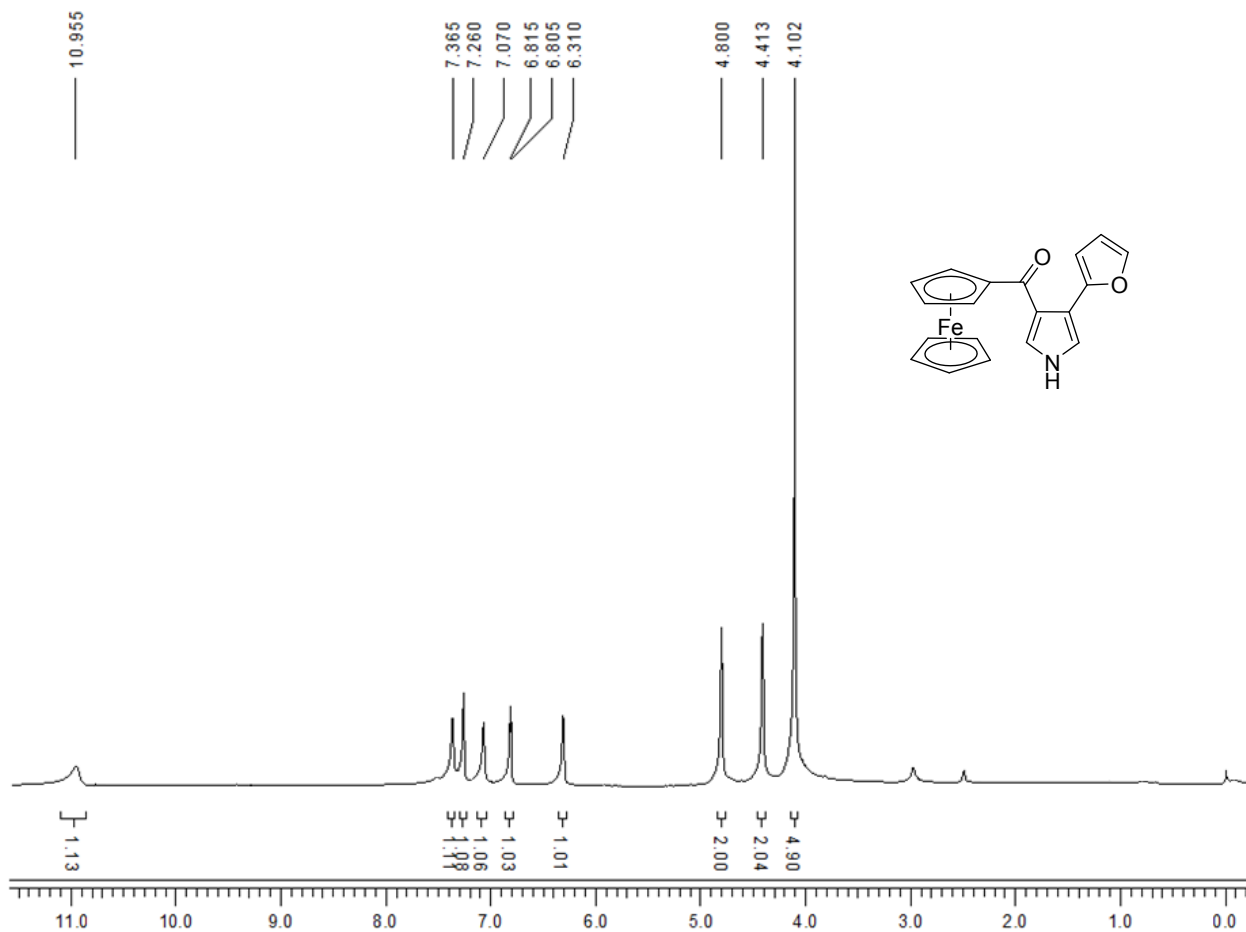
LC-MS: ferrocenyl(4-(3,4-dimethoxyphenyl)-1H-pyrrol-3-yl)methanone **2e**



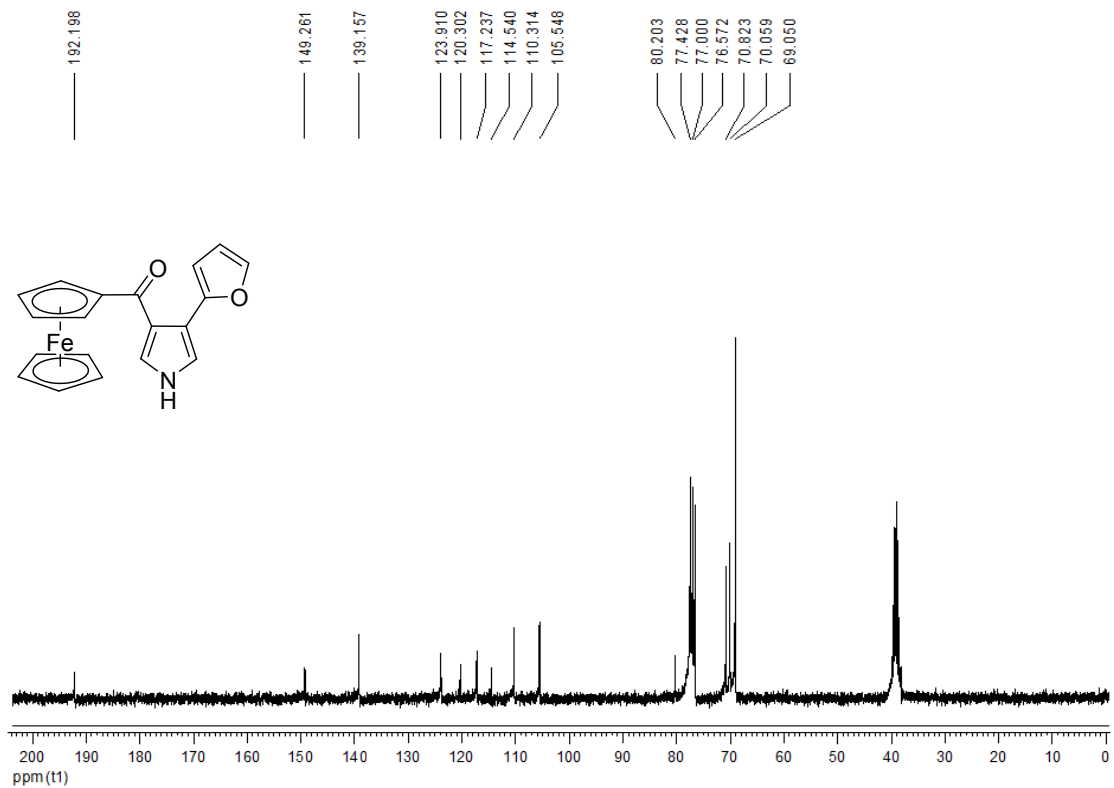
¹H NMR (400 MHz, DMSO-d₆): ferrocenyl(4-(thiophen-2-yl)-1H-pyrrol-3-yl)methanone **2f**



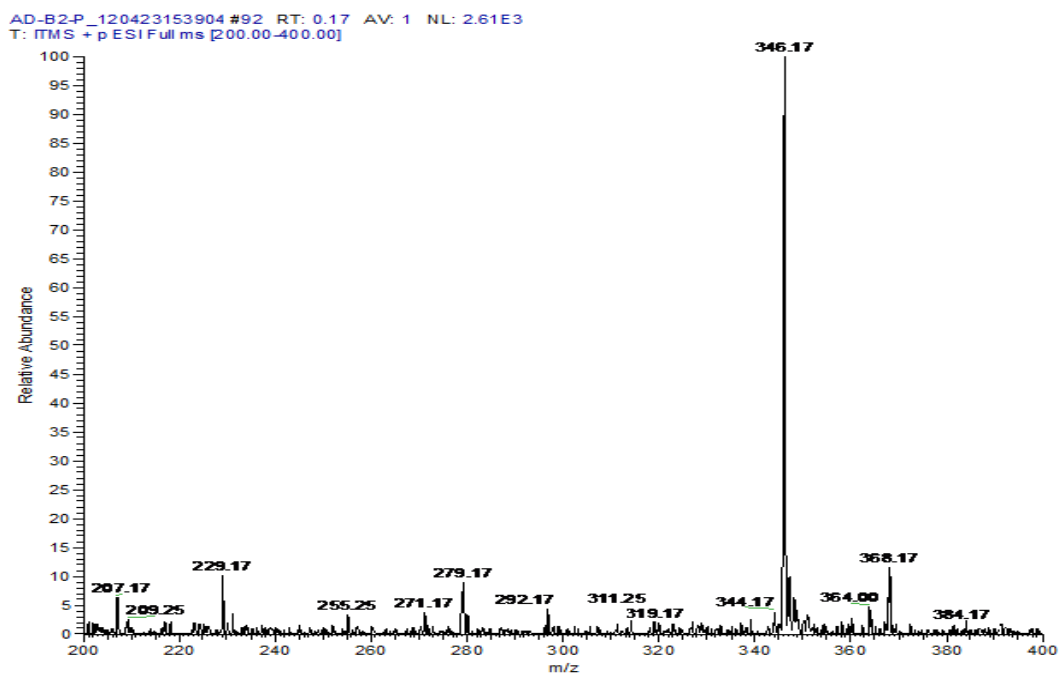
¹³C NMR (75 MHz, DMSO-d₆): ferrocenyl(4-(thiophen-2-yl)-1H-pyrrol-3-yl)methanone **2f**



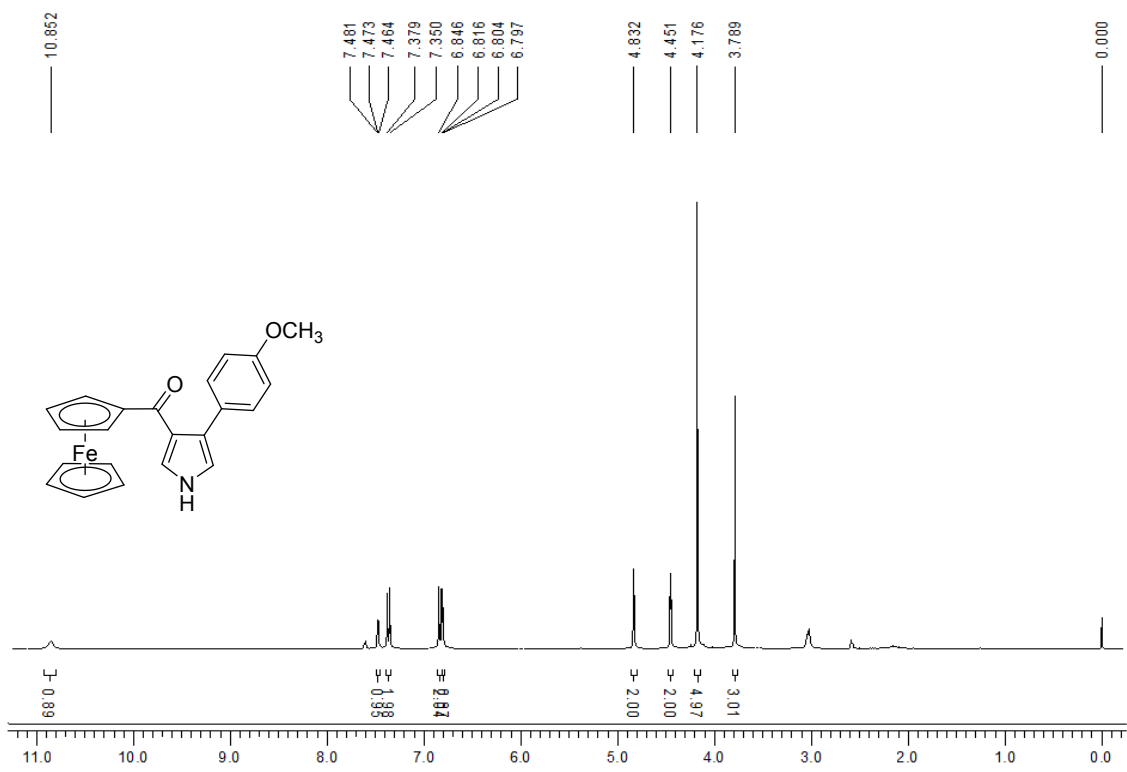
¹H NMR (300 MHz, DMSO-d₆): ferrocenyl(4-(furane-2-yl)-1H-pyrrol-3-yl)methanone **2g**



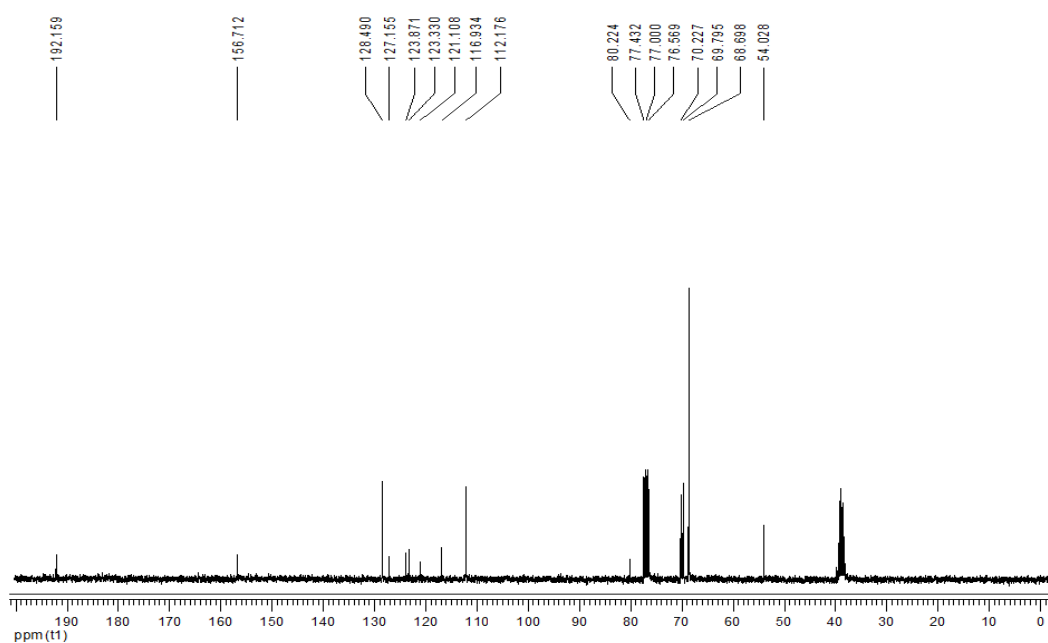
^{13}C NMR (75 MHz, DMSO-d_6): ferrocenyl(4-(furane-2-yl)-1*H*-pyrrol-3-yl)methanone **2g**



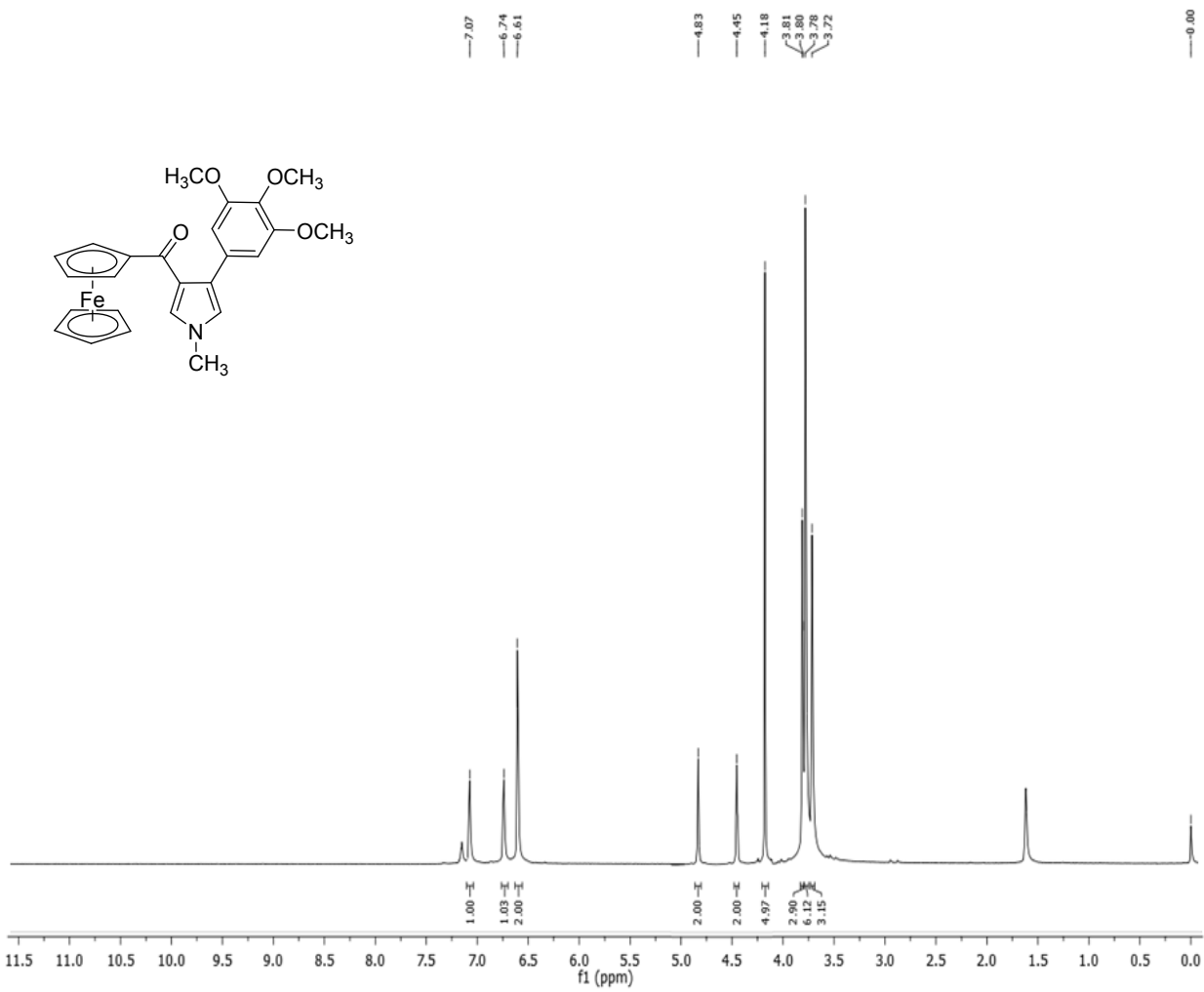
LC-MS: ferrocenyl(4-(furane-2-yl)-1*H*-pyrrol-3-yl)methanone **2g**



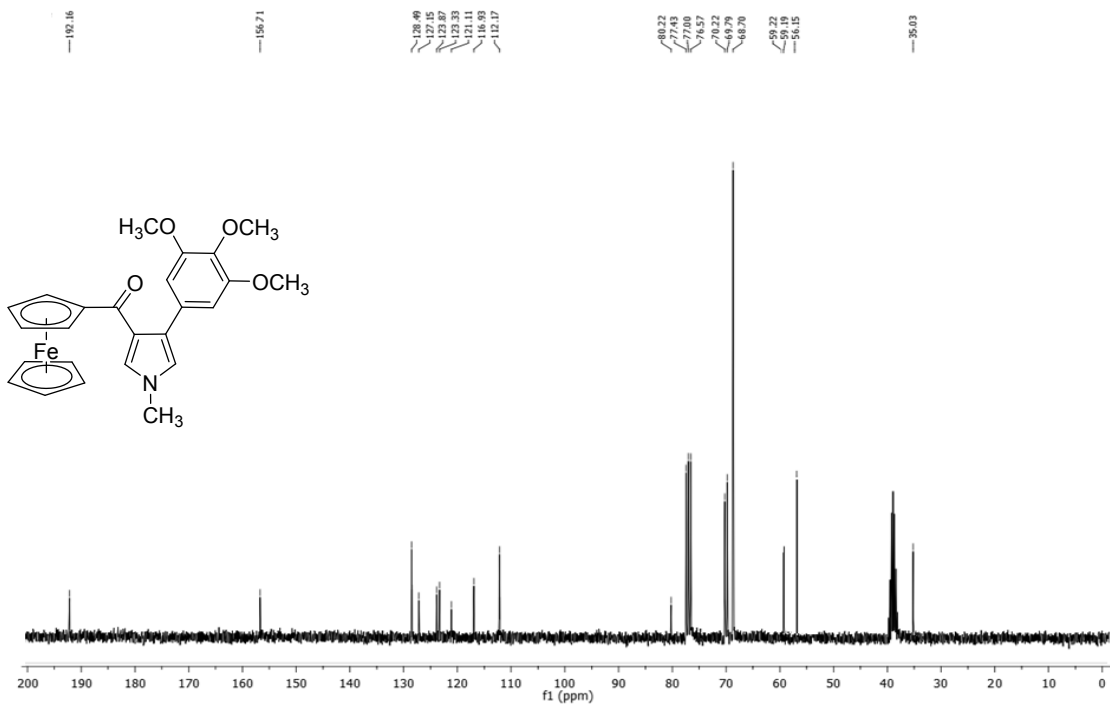
¹H NMR (300 MHz, DMSO-d₆): ferrocenyl(4-(4-methoxyphenyl)-1H-pyrrol-3-yl)methanone **2h**



¹³C NMR (75 MHz, DMSO-d₆): ferrocenyl(4-(4-methoxyphenyl)-1H-pyrrol-3-yl)methanone **2h**

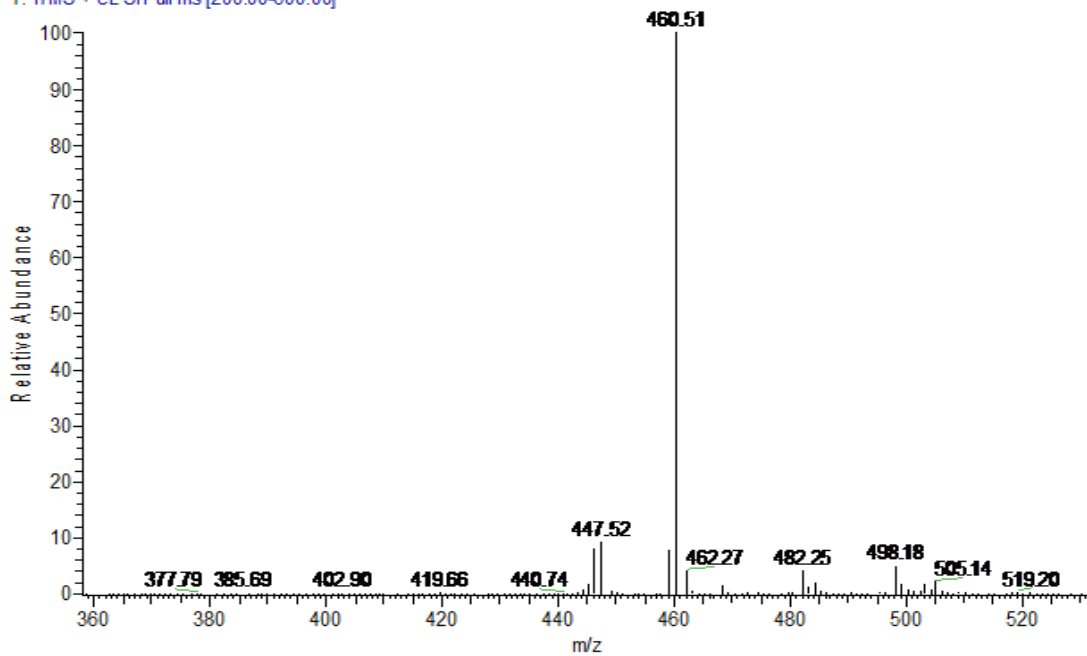


¹H NMR (300 MHz, CDCl₃): (1-methyl-4-(3,4,5-trimethoxyphenyl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3a**

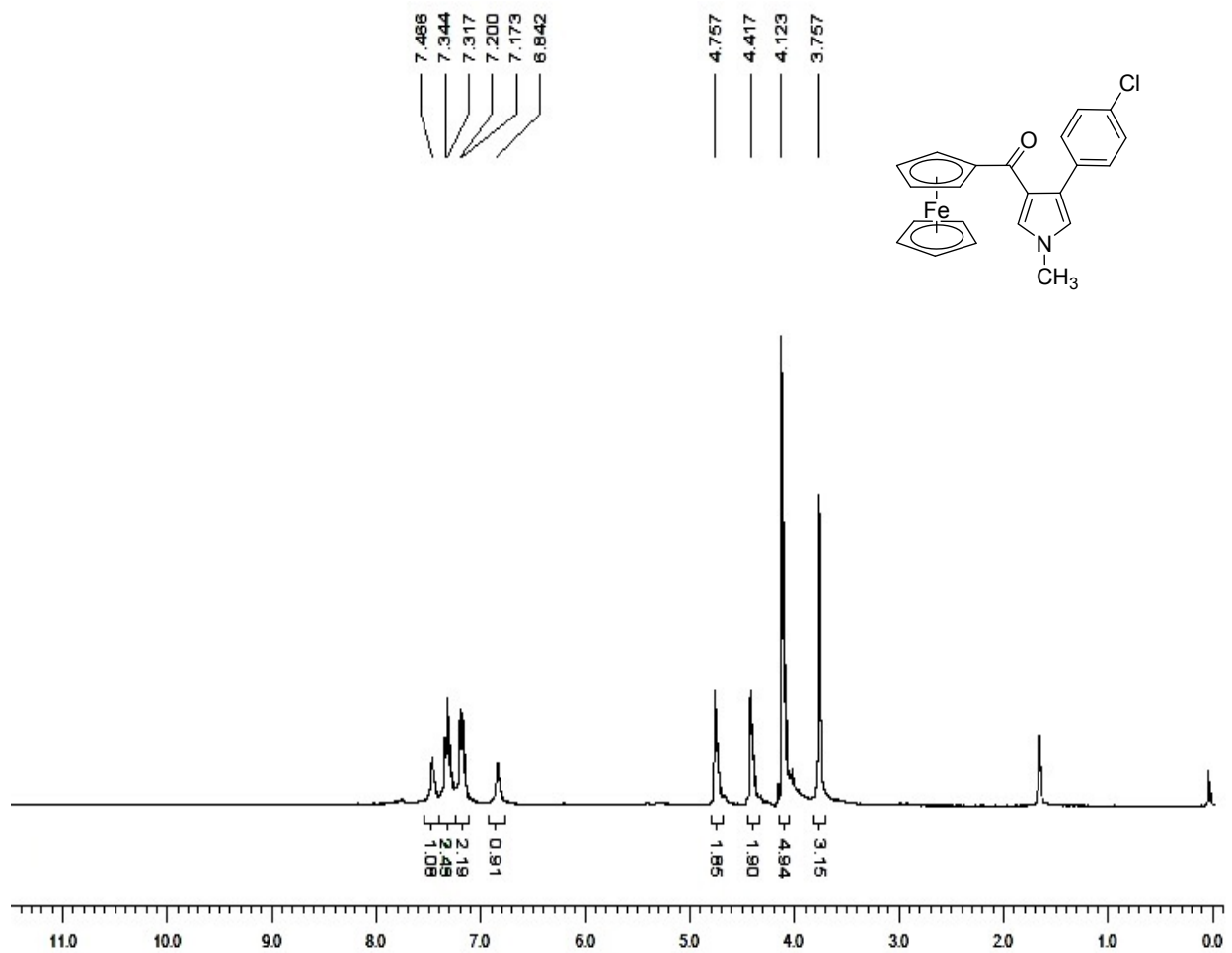


^{13}C NMR (75 MHz, DMSO-d_6): (1-methyl-4-(3,4,5-trimethoxyphenyl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3a**

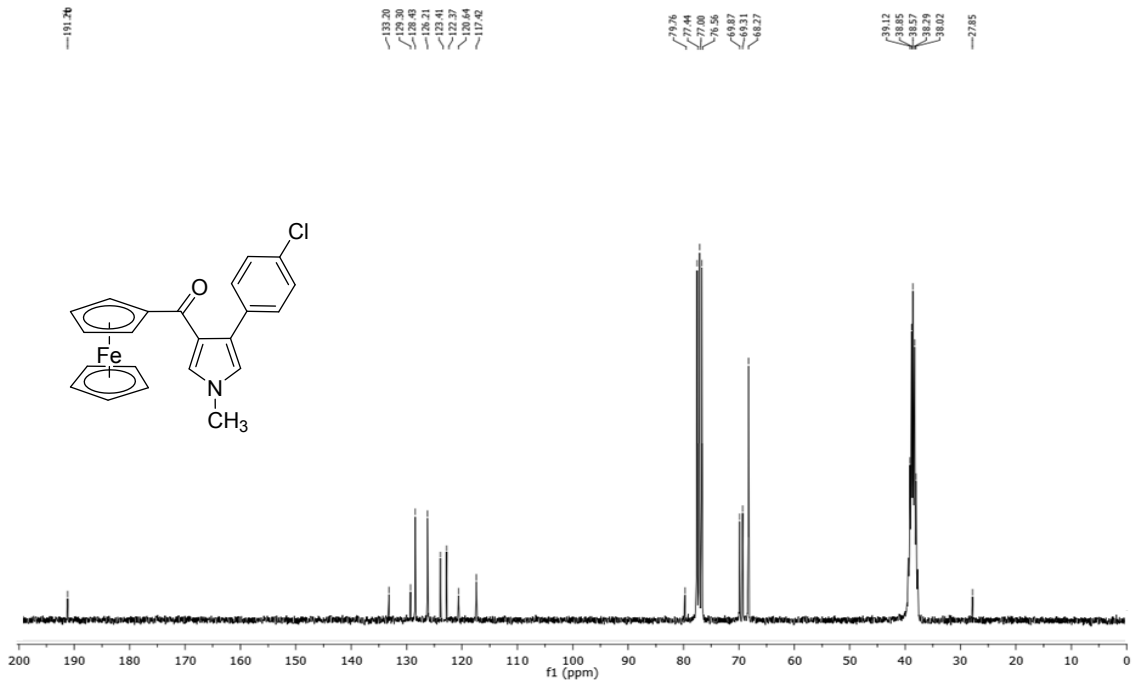
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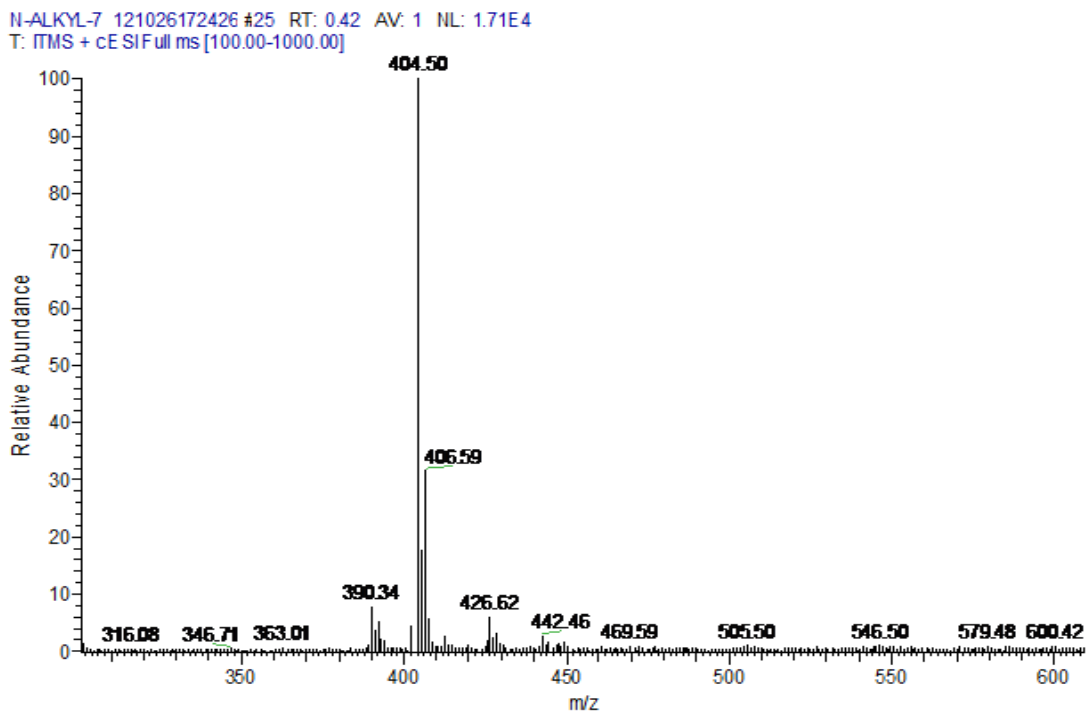
LC-MS: (1-methyl-4-(3,4,5-trimethoxyphenyl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3a**



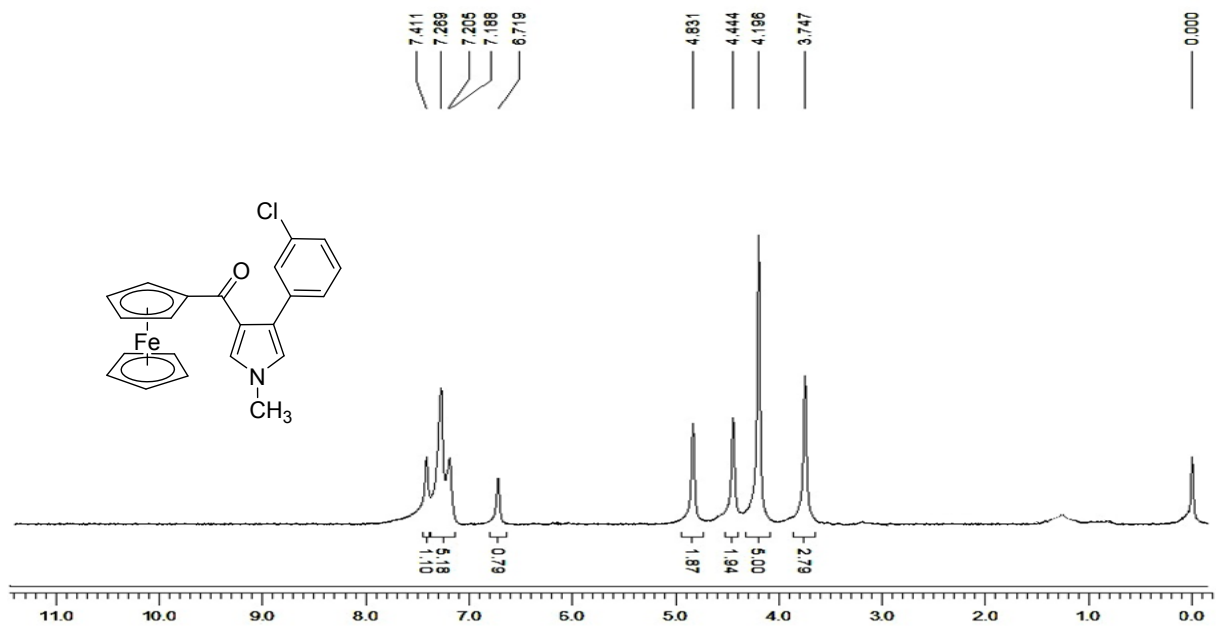
¹H NMR (300 MHz, CDCl₃): (1-methyl-4-(4-chlorophenyl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3b**



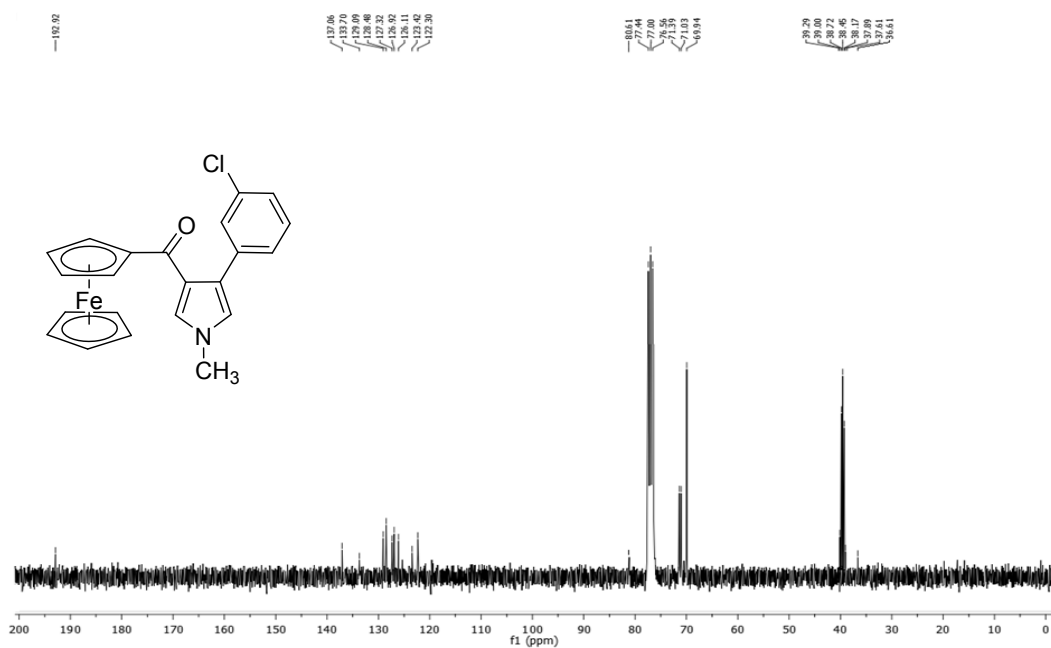
¹³C NMR (75 MHz, DMSO-d₆): (1-methyl-4-(4-chlorophenyl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3b**



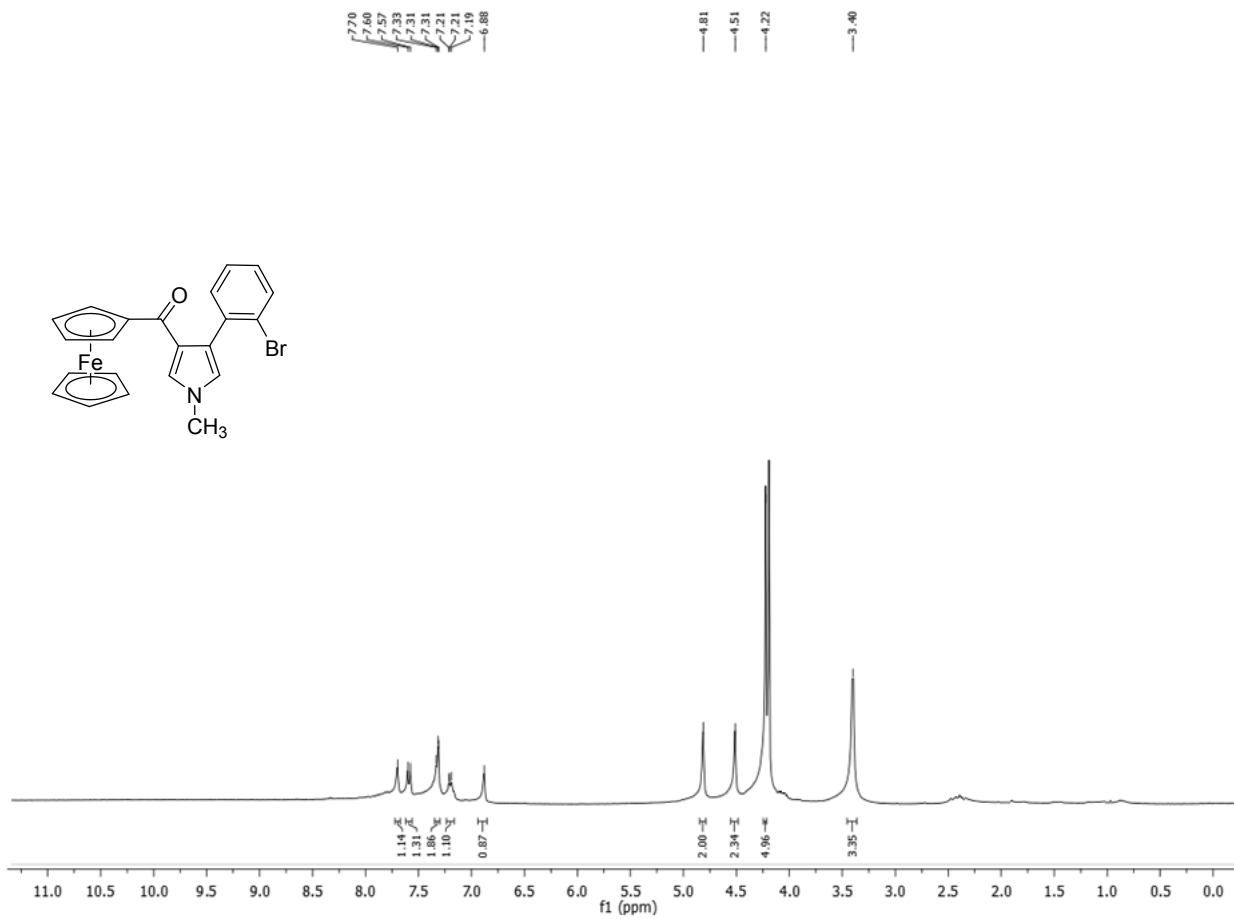
LC-MS: (1-methyl-4-(4-chlorophenyl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3b**



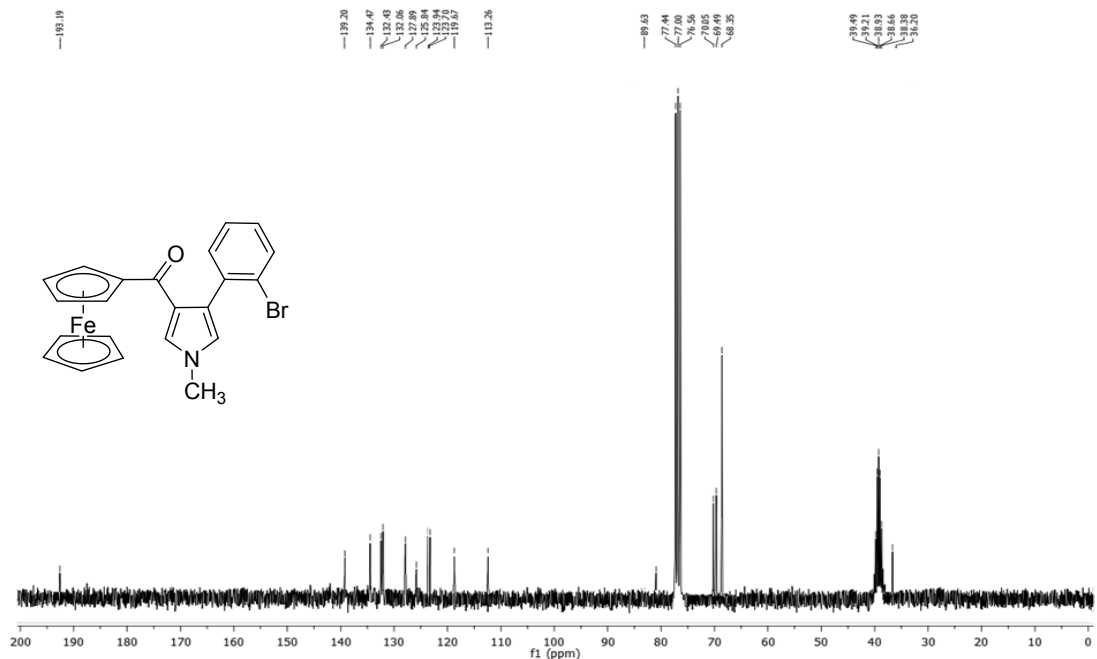
¹H NMR (300 MHz, CDCl₃): (1-methyl-4-(3-chlorophenyl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3c**



¹³C NMR (75 MHz, DMSO-d₆): (1-methyl-4-(3-chlorophenyl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3c**

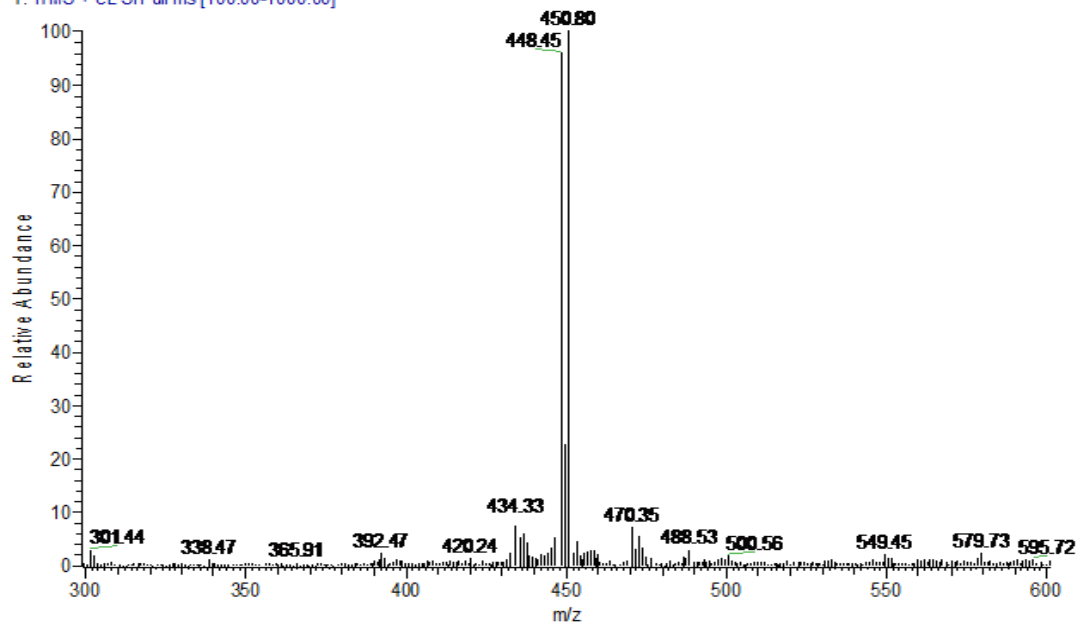


¹H NMR (300 MHz, DMSO-d₆): (1-methyl-4-(2-bromophenyl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3d**

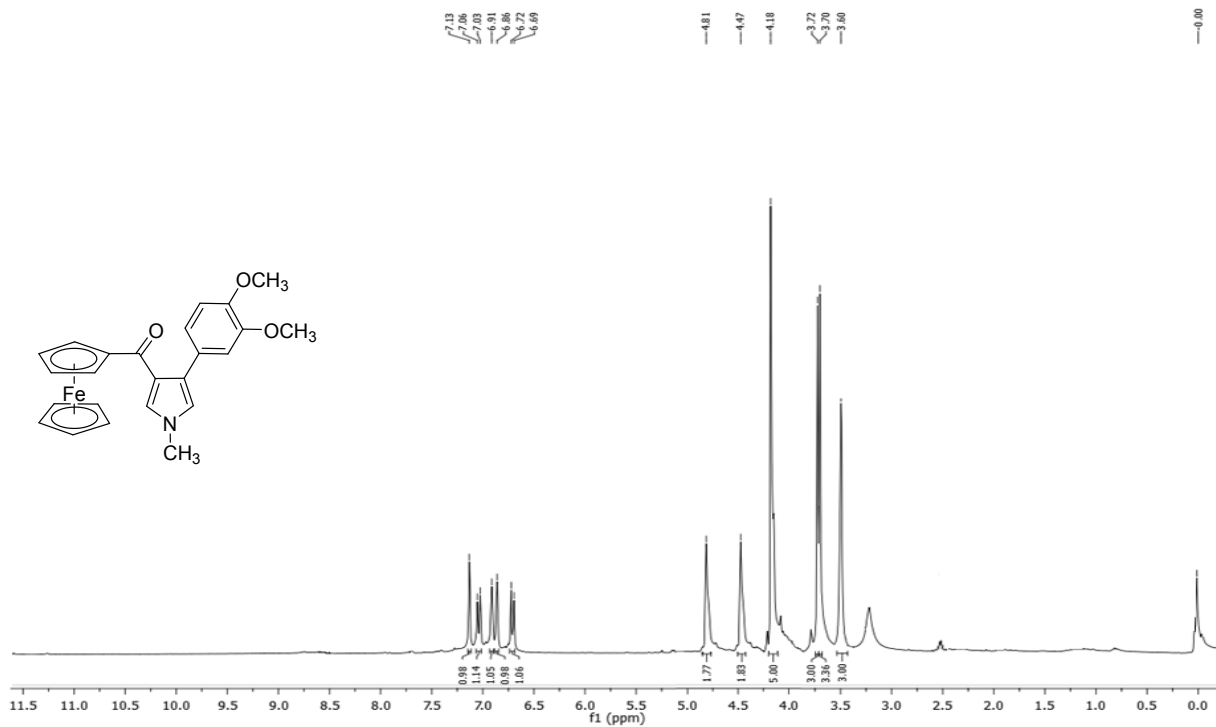


^{13}C NMR (75 MHz, DMSO-d_6): (1-methyl-4-(2-bromophenyl)-1*H*-pyrrol-3-yl)(ferrocenyl)methanone **3d**

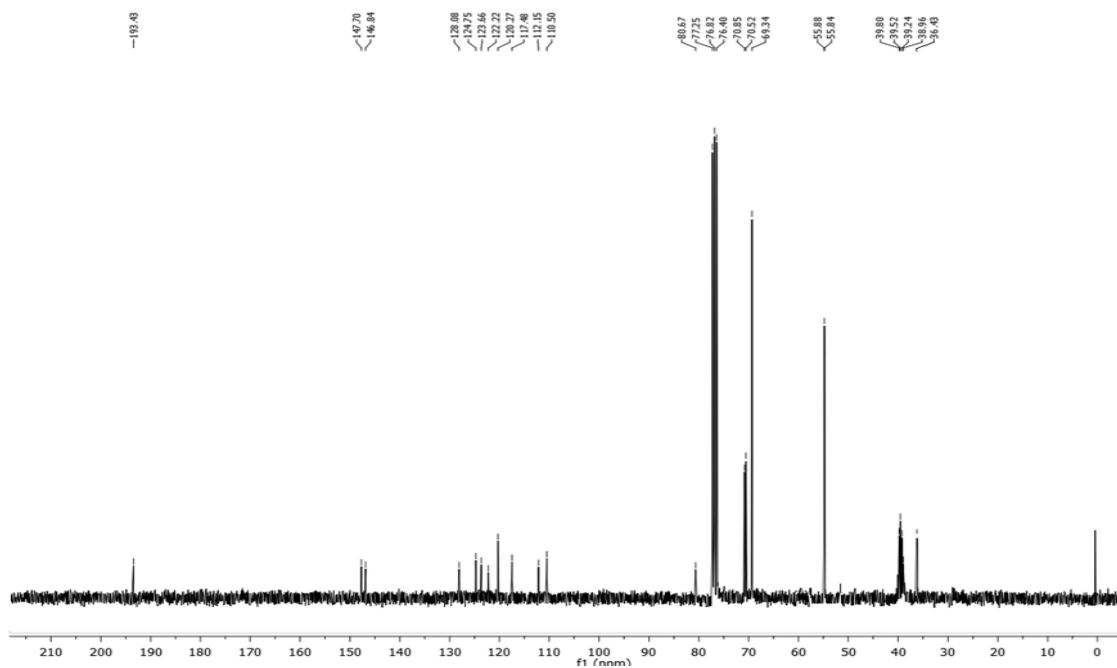
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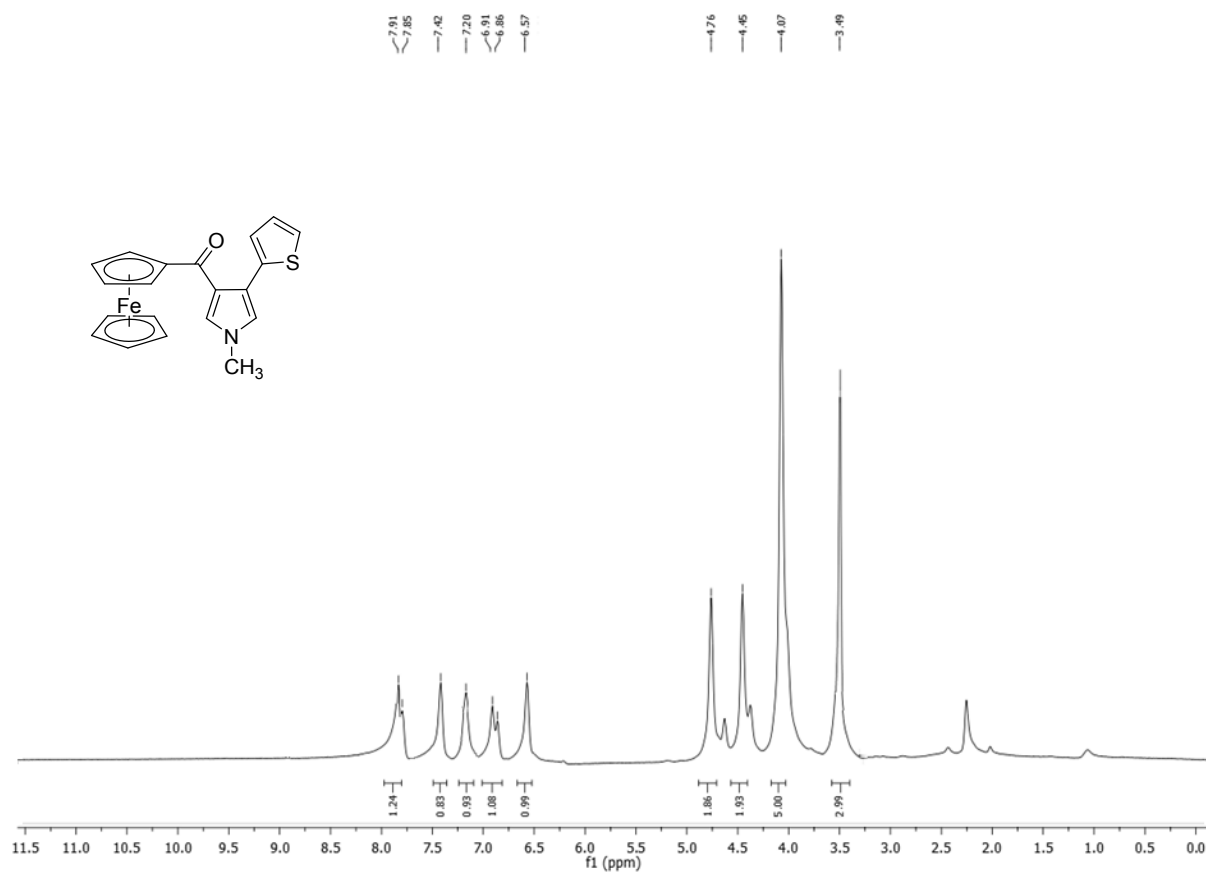
LC-MS: (1-methyl-4-(2-bromophenyl)-1*H*-pyrrol-3-yl)(ferrocenyl)methanone **3d**



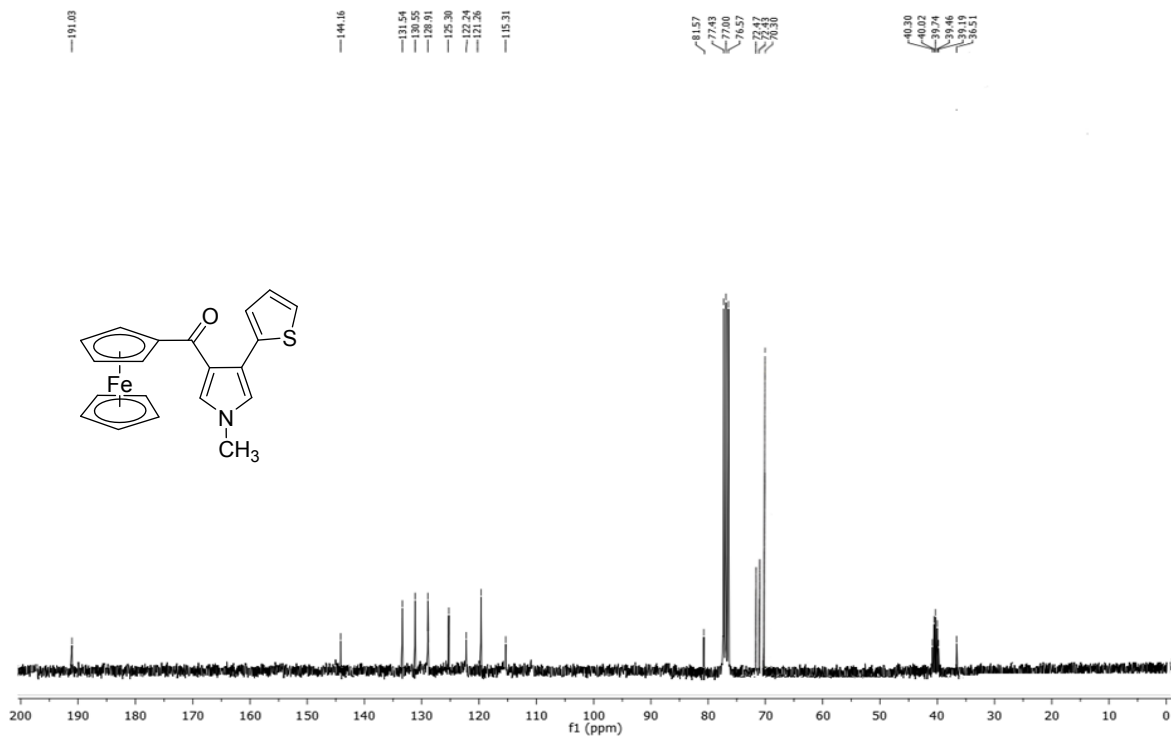
^1H NMR (300 MHz, DMSO-d_6): (1-methyl-4-(3,4-dimethoxyphenyl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3e**



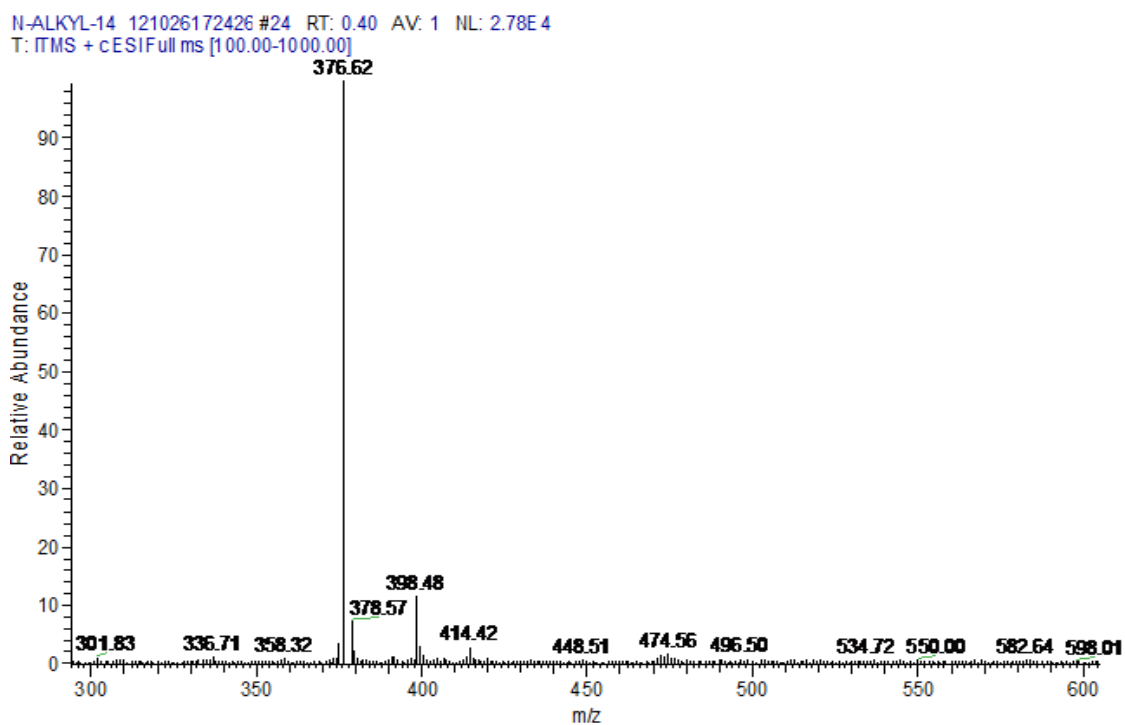
^{13}C NMR (75 MHz, DMSO-d_6): (1-methyl-4-(3,4-dimethoxyphenyl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3e**



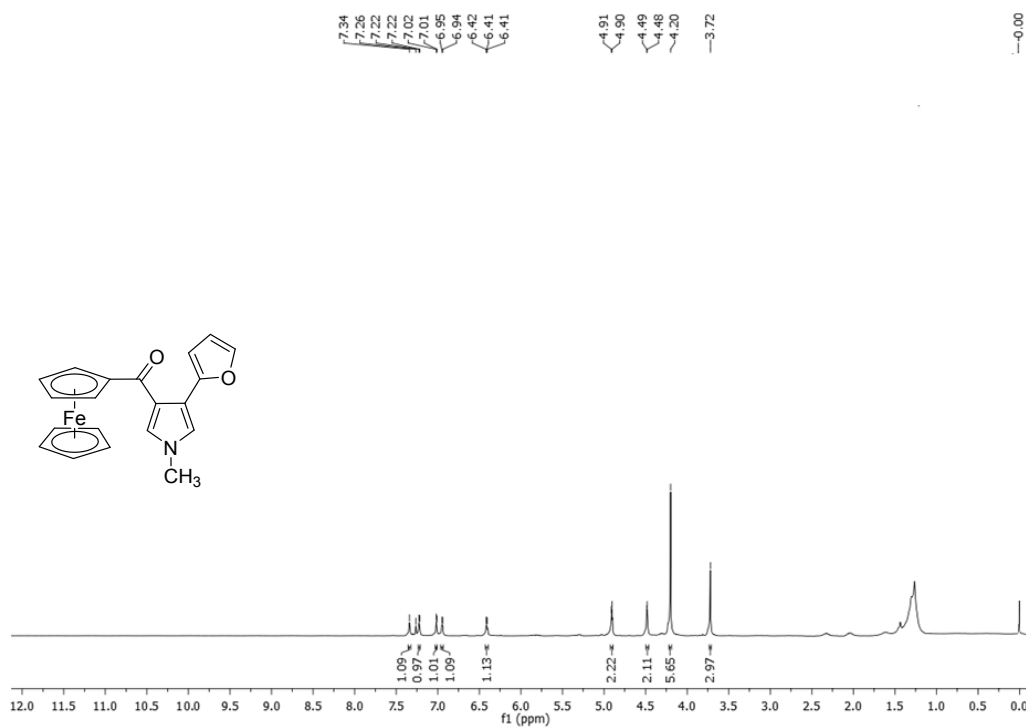
¹H NMR (300 MHz, DMSO-d₆): (1-methyl-4-(thiophen-2-yl)-1*H*-pyrrol-3-yl)(ferrocenyl)methanone **3f**



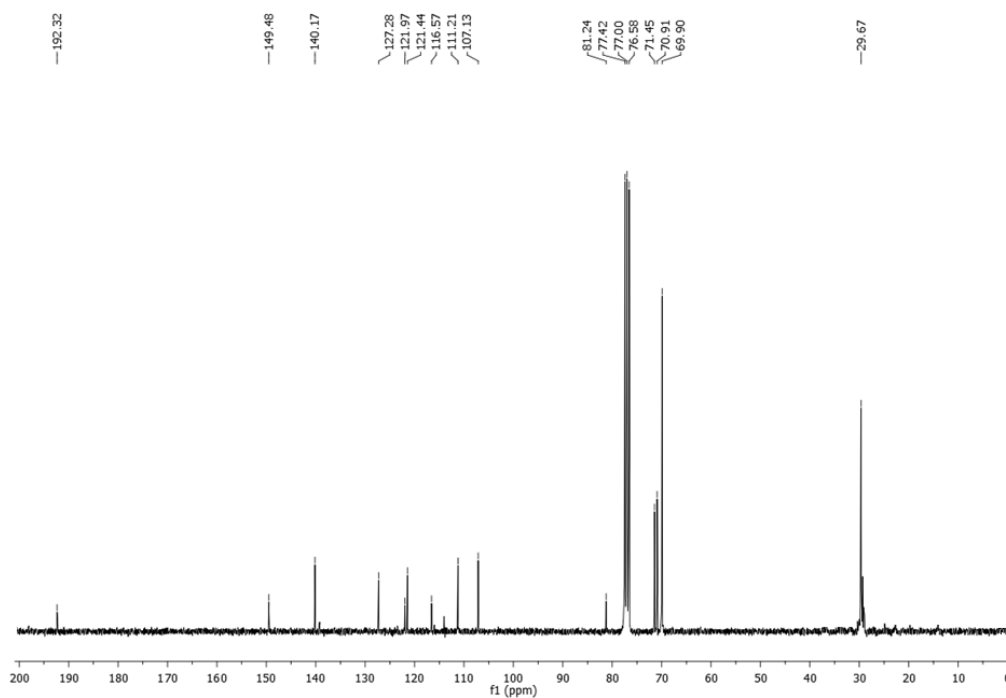
¹³C NMR (75 MHz, DMSO-d₆): (1-methyl-4-(thiophen-2-yl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3f**



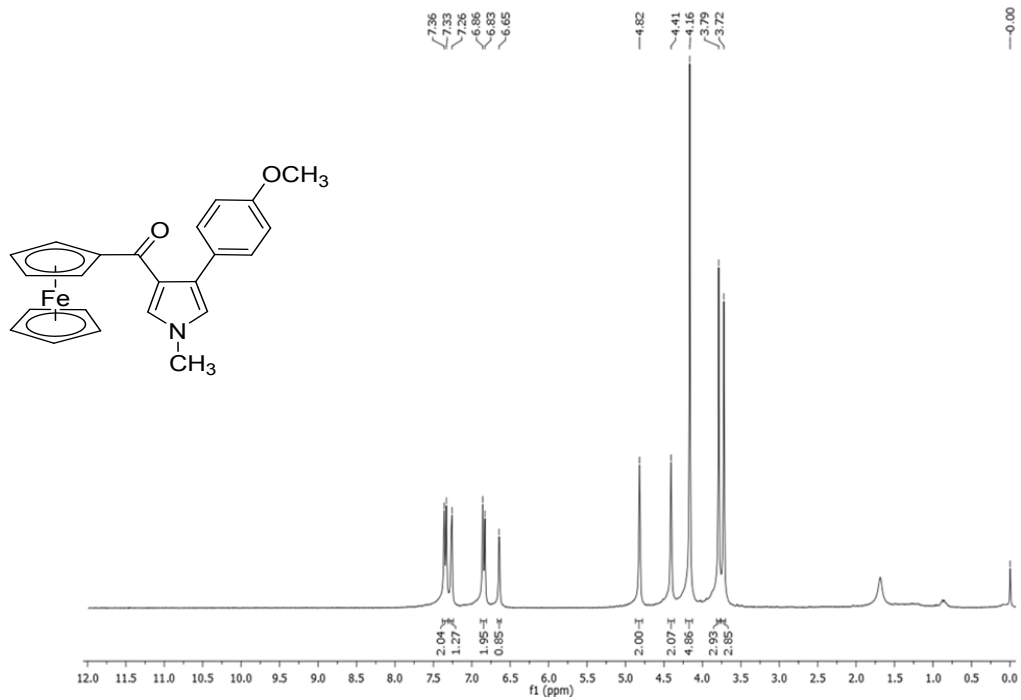
LC-MS: (1-methyl-4-(thiophen-2-yl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3f**



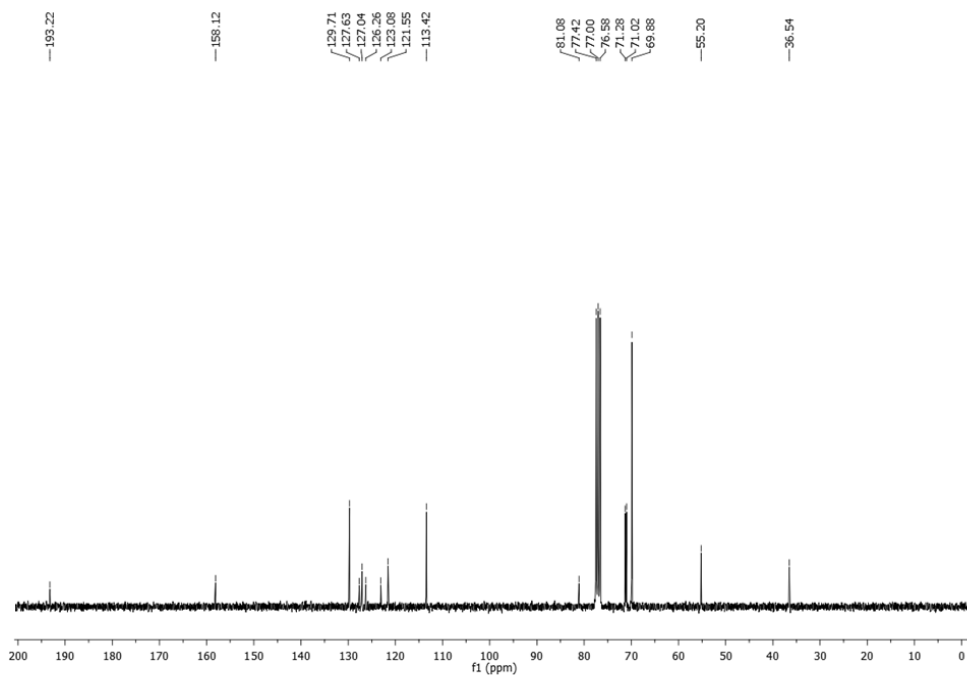
¹H NMR (300 MHz, CDCl₃): (1-methyl-4-(furan-2-yl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3g**



¹³C NMR (75 MHz, CDCl₃): (1-methyl-4-(furan-2-yl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3g**



¹H NMR (300 MHz, CDCl₃): (1-methyl-4-(4-methoxyphenyl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3h**



¹³C NMR (75 MHz, CDCl₃): (1-methyl-4-(4-methoxyphenyl)-1H-pyrrol-3-yl)(ferrocenyl)methanone **3h**