

# Supporting Information

## A novel domino protocol for three-component synthesis of new dibenzo[*e,g*]-indoles: flexible intramolecular charge transfers

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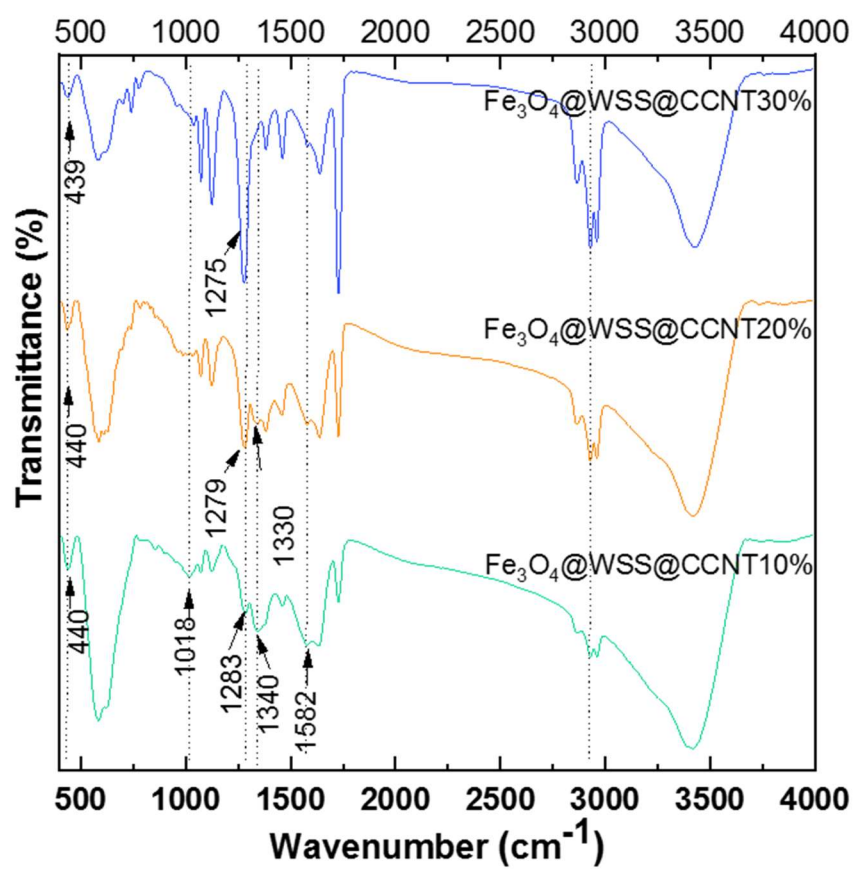
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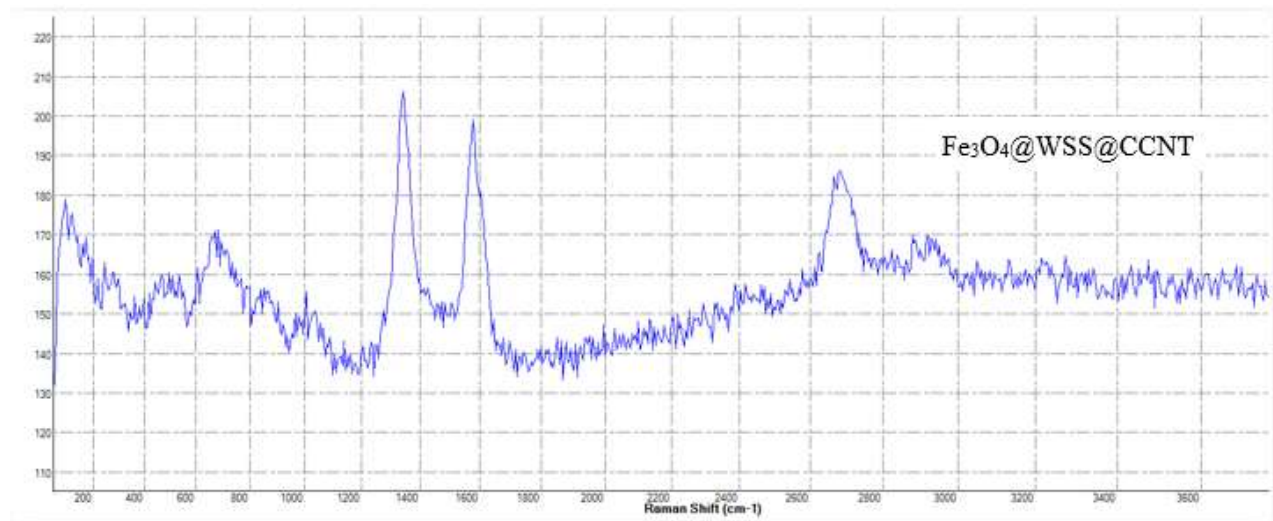
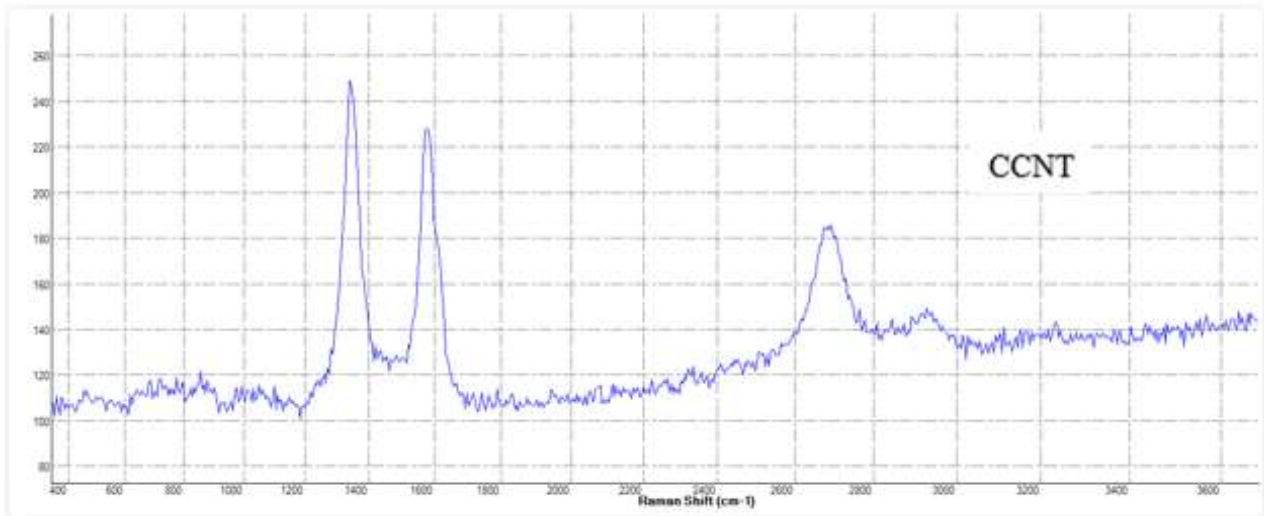
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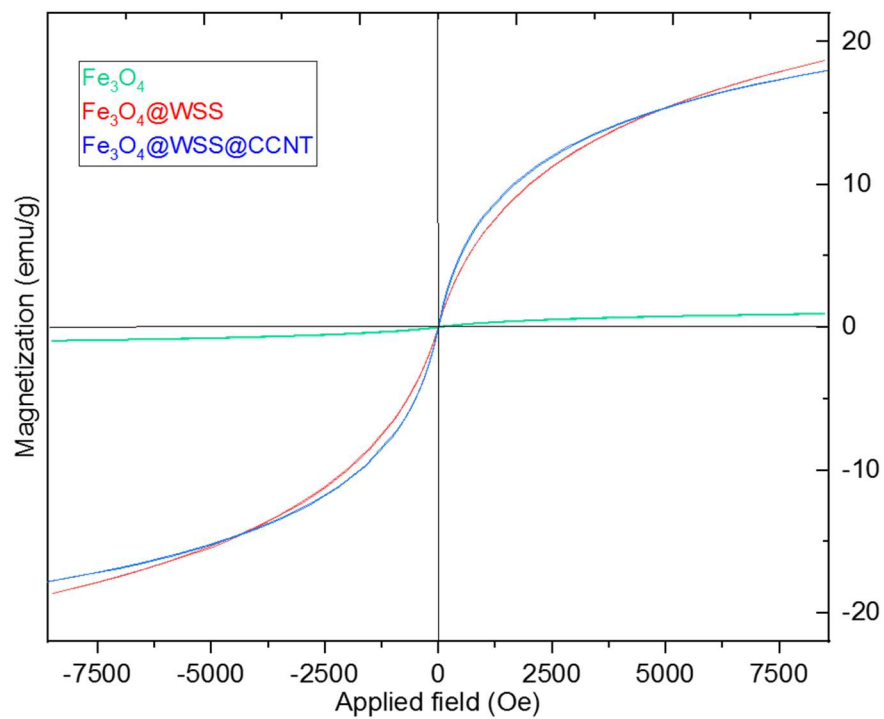
**S1** The FT-IR spectrum of  $\text{Fe}_3\text{O}_4@\text{WSS}@\text{CCNT}$



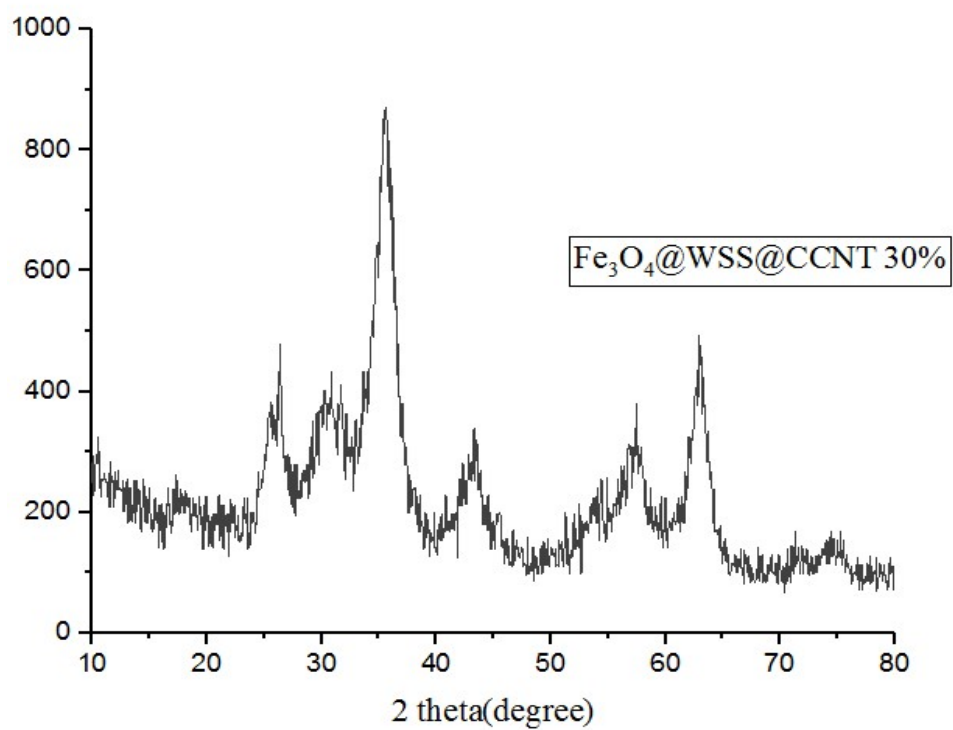
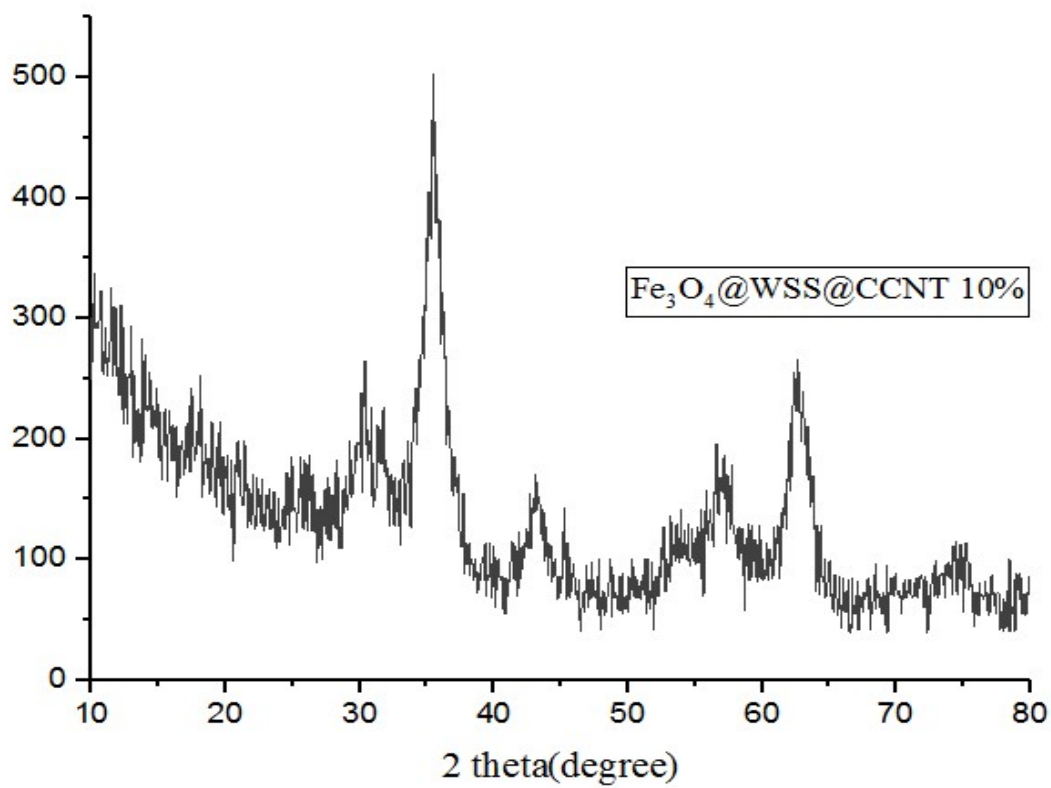
## S2 The Raman spectra of CCNT and Fe<sub>3</sub>O<sub>4</sub>@WSS@CCNT



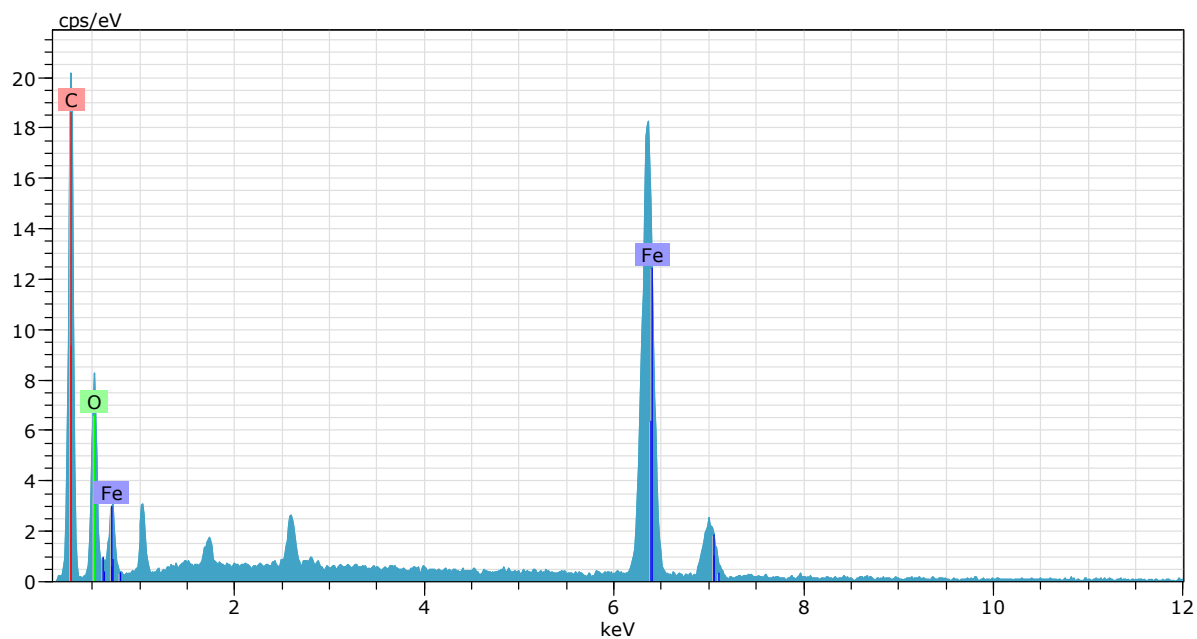
**S3** The VSM analysis of  $\text{Fe}_3\text{O}_4$ ,  $\text{Fe}_3\text{O}_4@\text{WSS}$  and  $\text{Fe}_3\text{O}_4@\text{WSS}@\text{CCNT}$



S4 The XRD pattern of  $\text{Fe}_3\text{O}_4@\text{WSS}@\text{CCNT}$

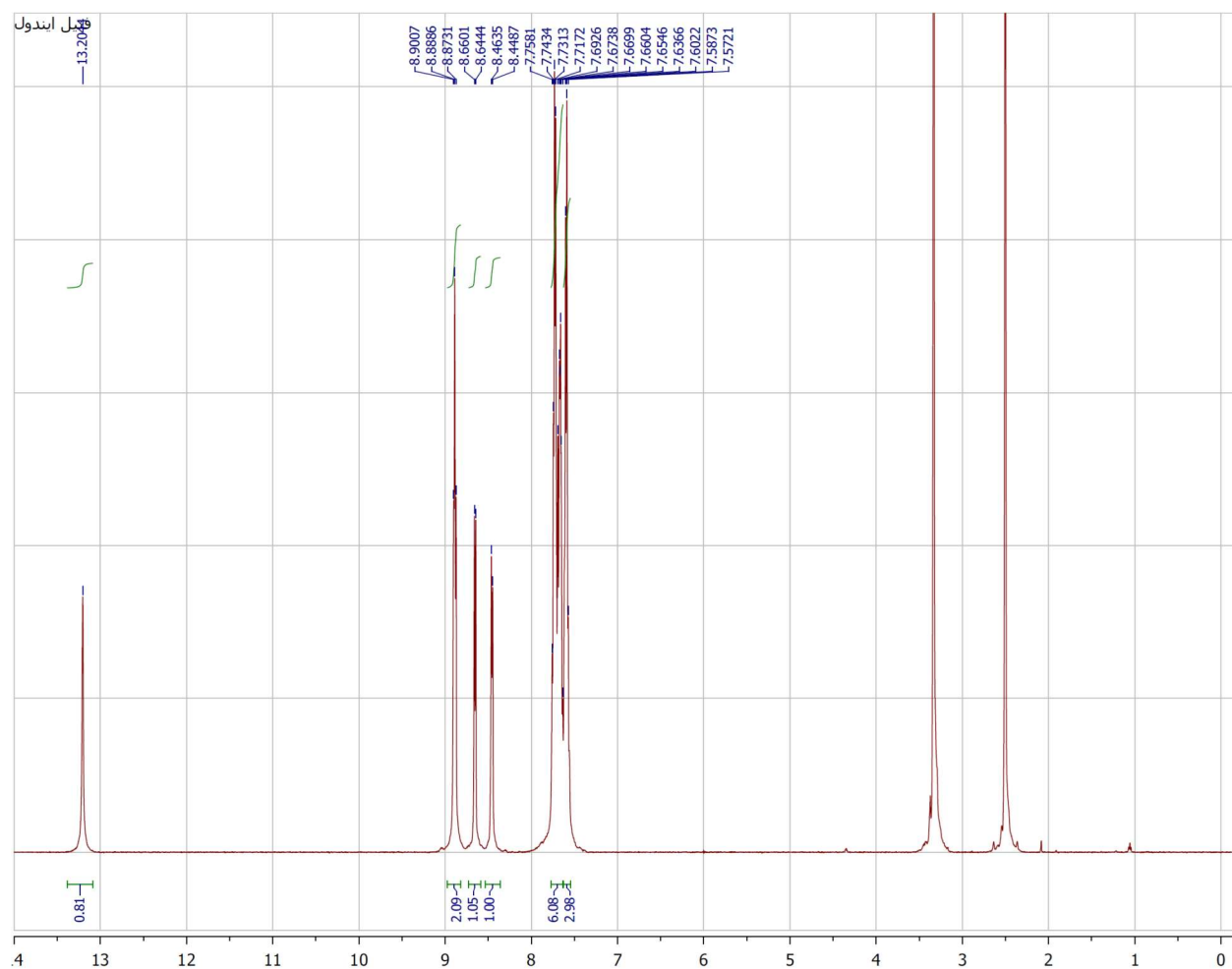


# S5 The EDX spectrum of Fe<sub>3</sub>O<sub>4</sub>@WSS@CCNT

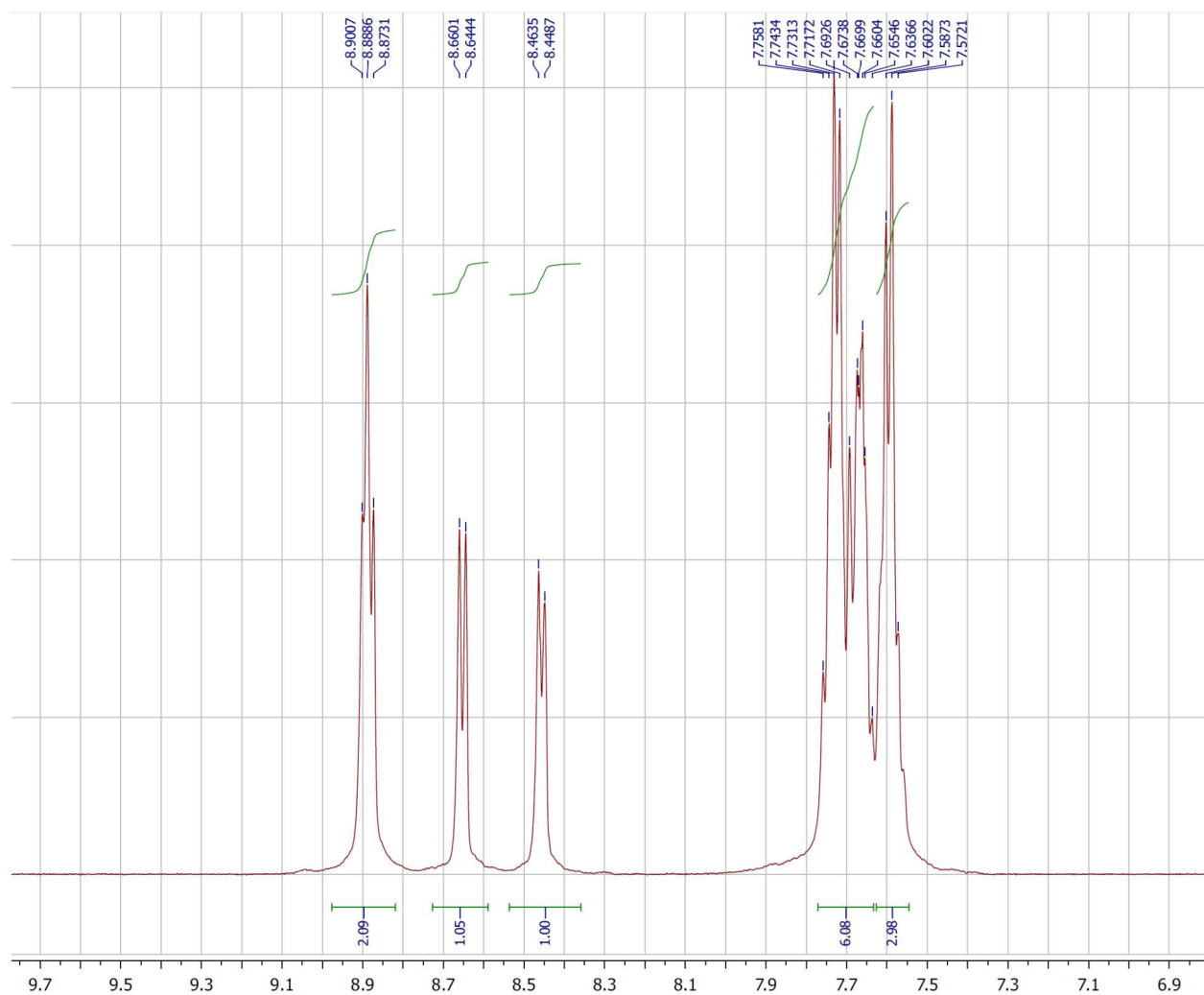


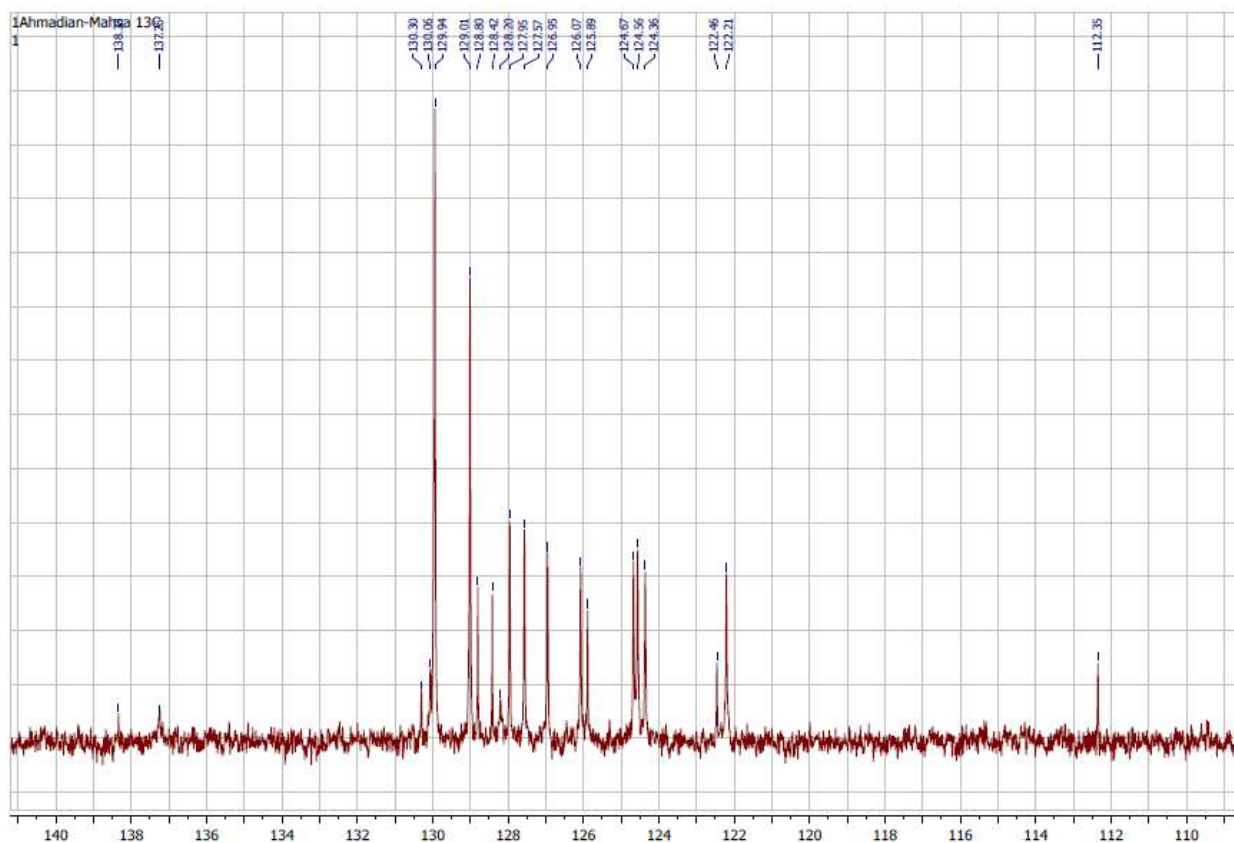
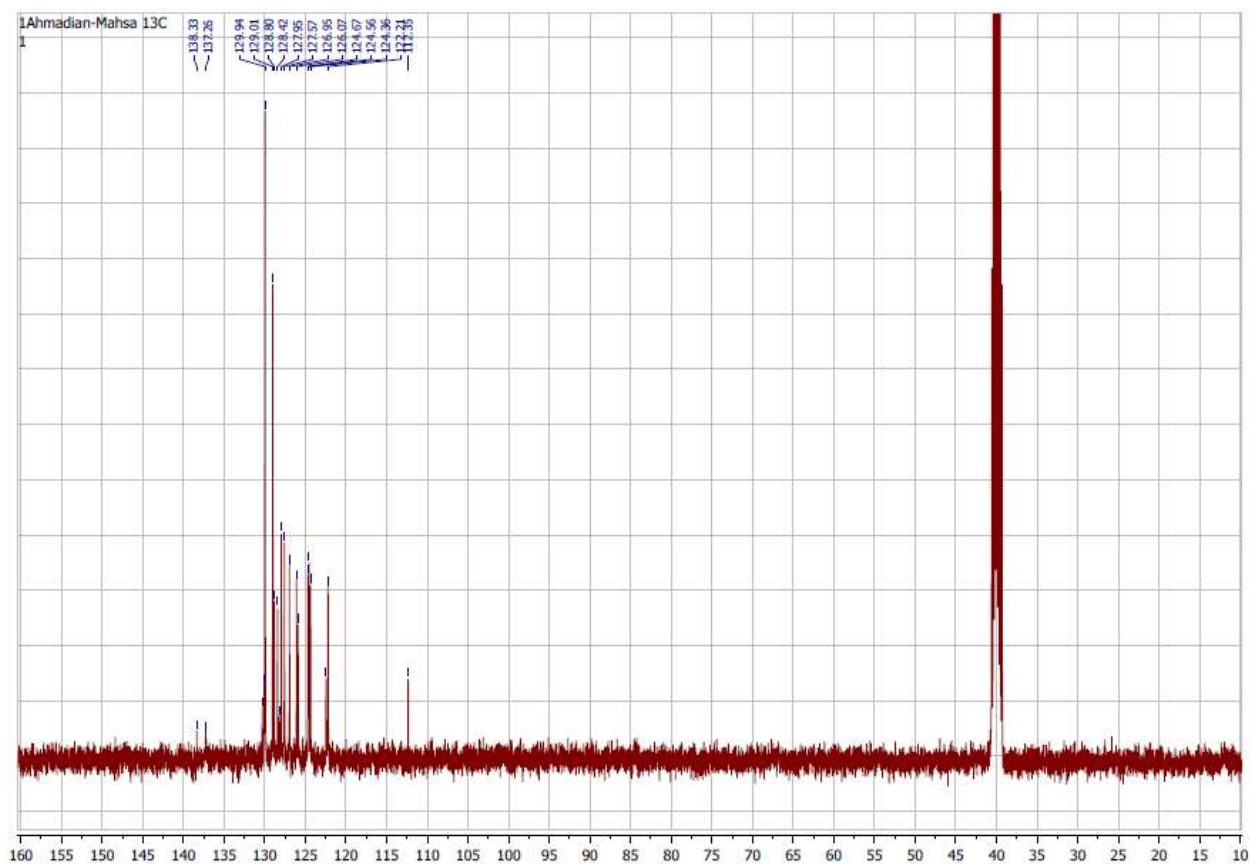
| El     | AN | Series   | unn. C<br>[wt.%] | norm. C<br>[wt.%] | Atom. C<br>[at.%] | Error (1 Sigma)<br>[wt.%] |
|--------|----|----------|------------------|-------------------|-------------------|---------------------------|
| C      | 6  | K-series | 54.27            | 51.03             | 67.62             | 8.10                      |
| O      | 8  | K-series | 27.61            | 25.96             | 25.82             | 4.82                      |
| Fe     | 26 | K-series | 24.48            | 23.01             | 6.56              | 0.69                      |
| Total: |    |          | 106.36           | 100.00            | 100.00            |                           |

S6 The  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR spectra of 2-phenyl-3-nitrodibenzo[e,g]indole in  $\text{DMSO}-d_6$  (**3a**):

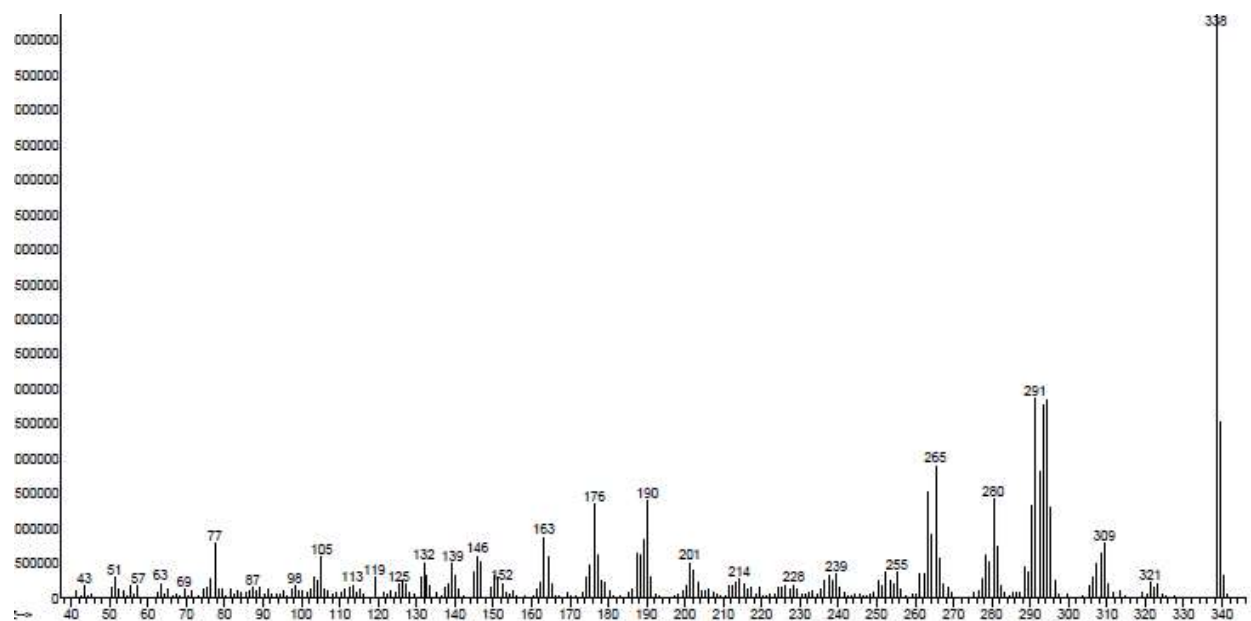




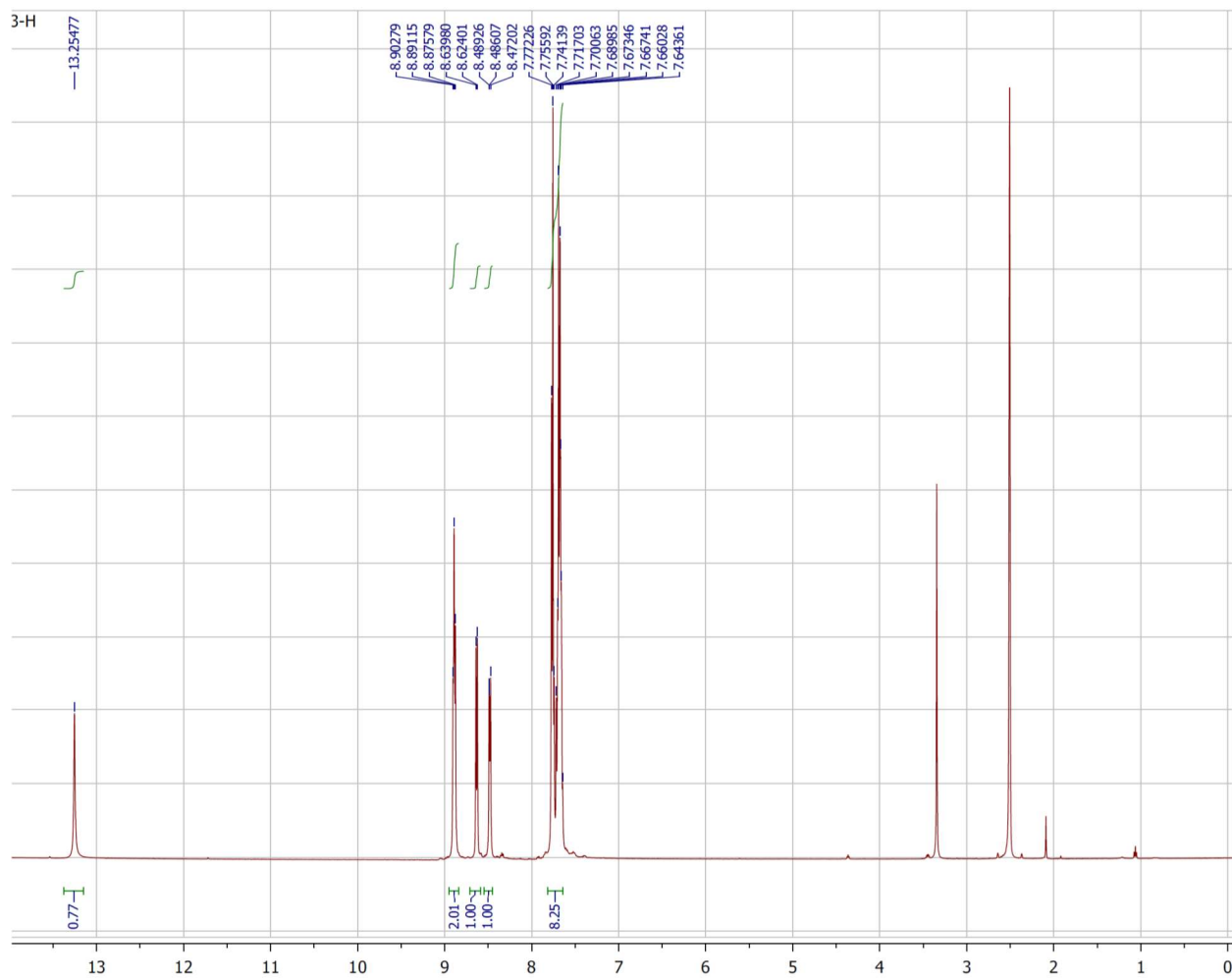


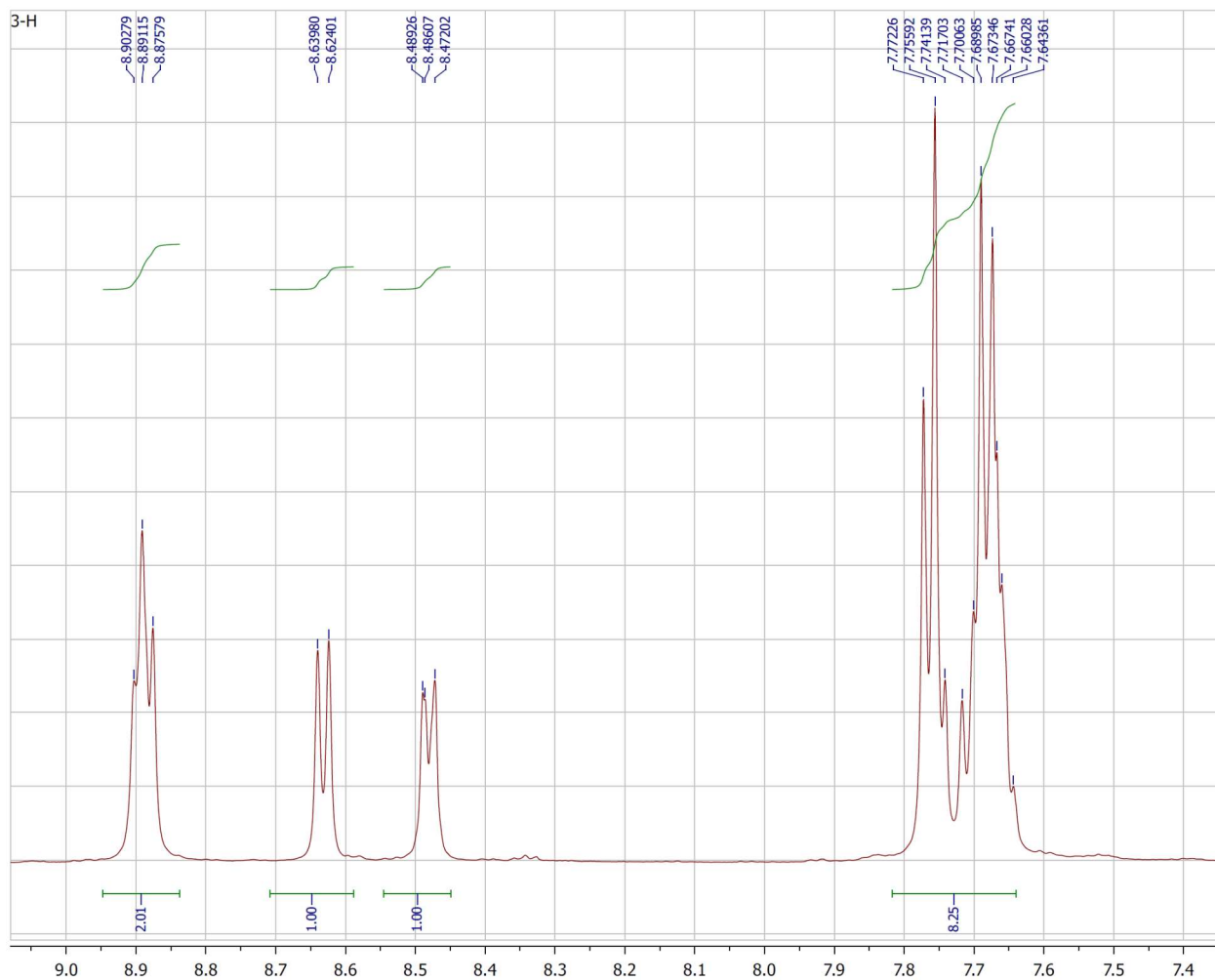


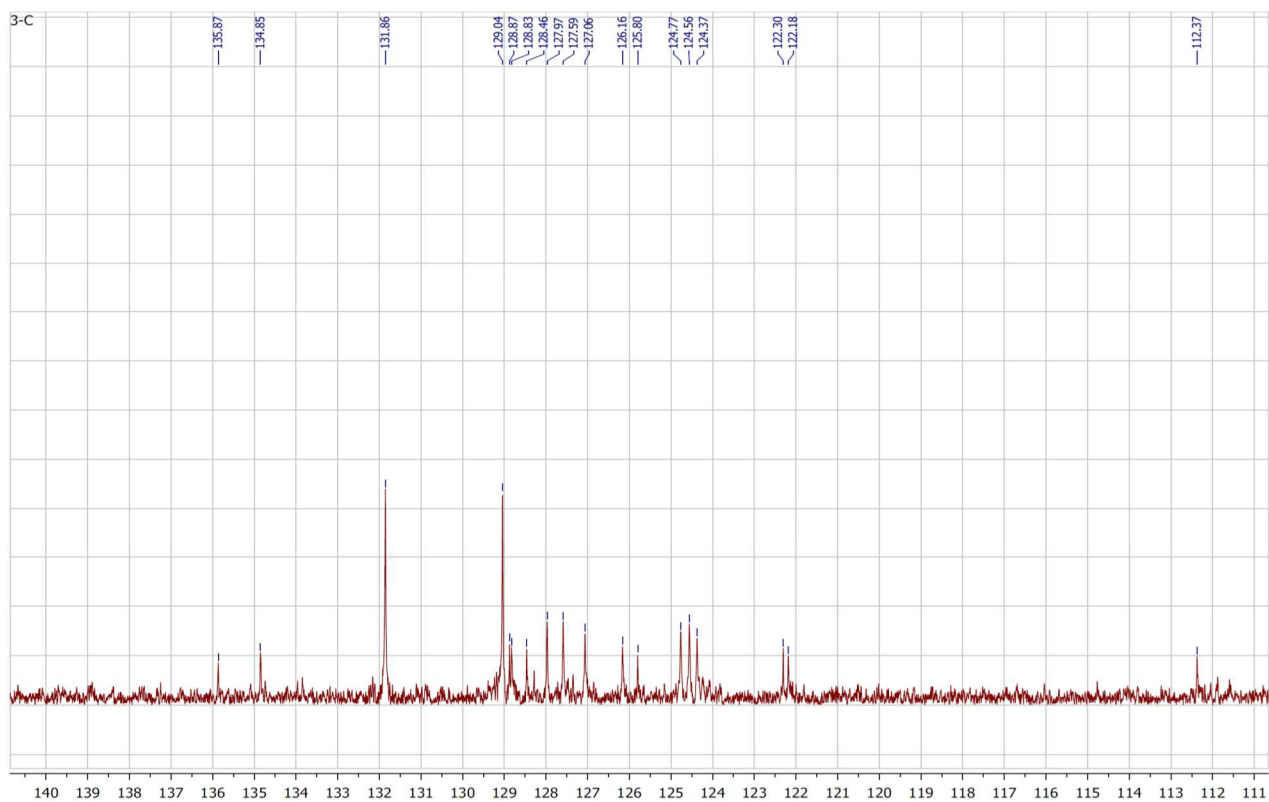
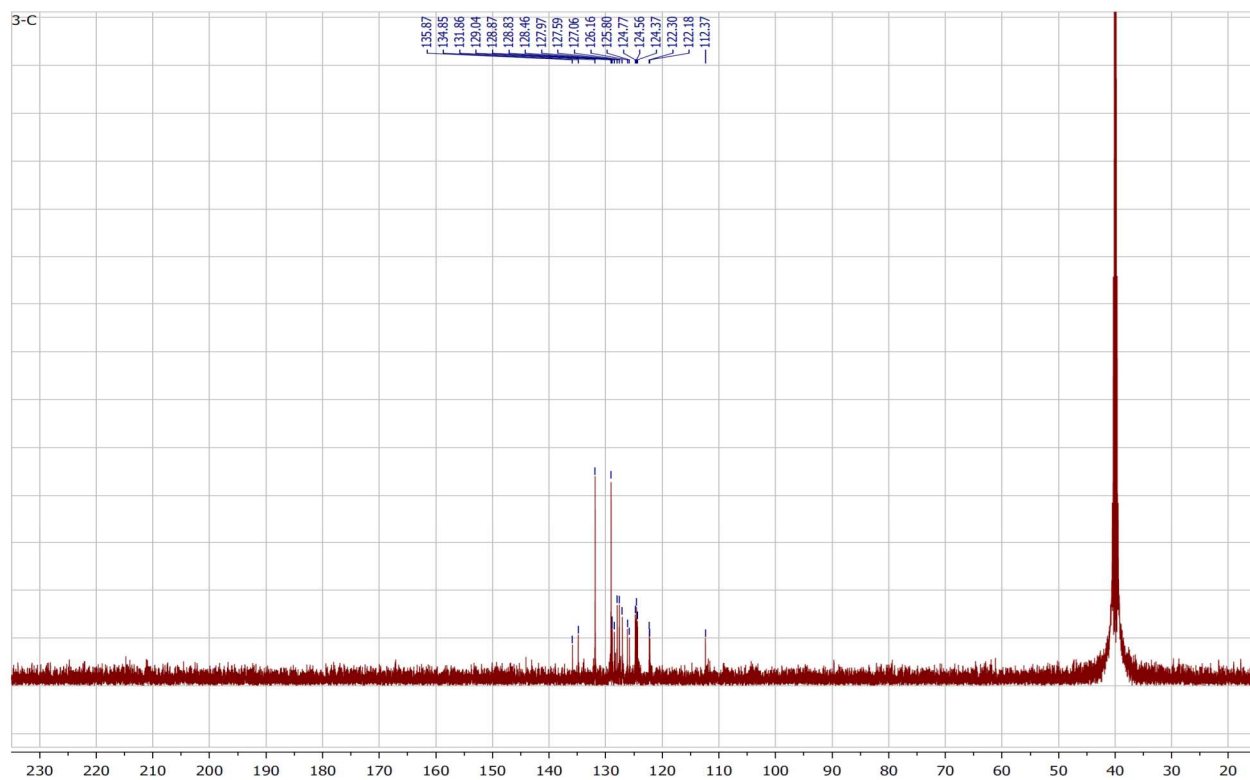
S7 The mass spectrum of 2-phenyl-3-nitrodibenzo[e,g]indole (**3a**):



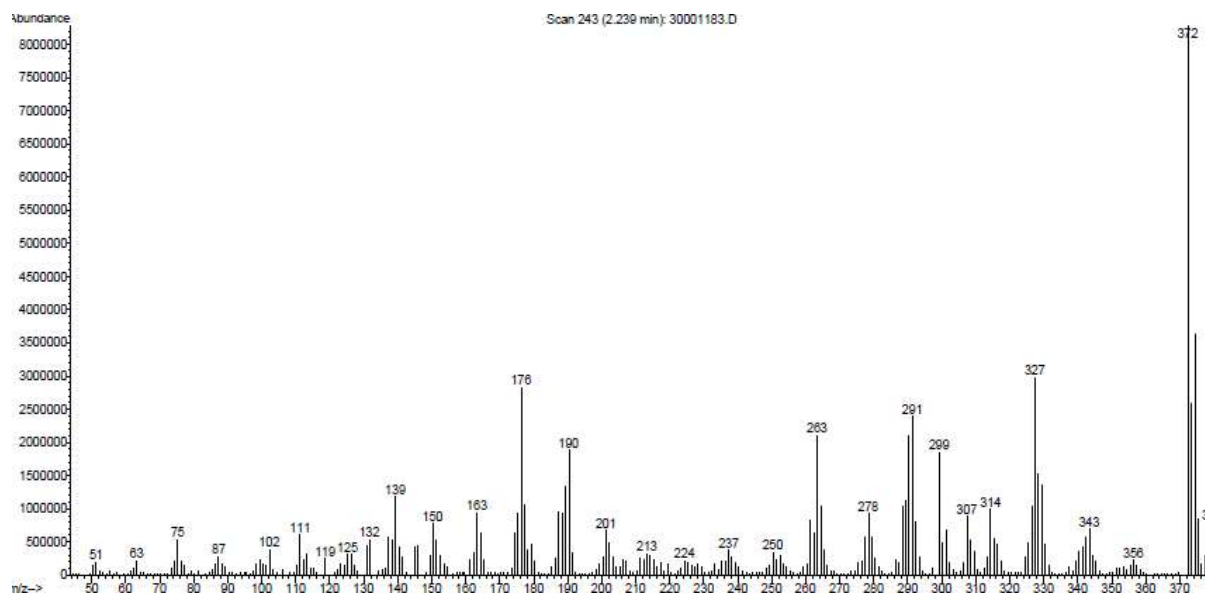
**S8** The  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR spectrum of 2-(4-chlorophenyl)-3-nitrodibenzo[e,g]indole in  $\text{DMSO-}d_6$  (**3b**):



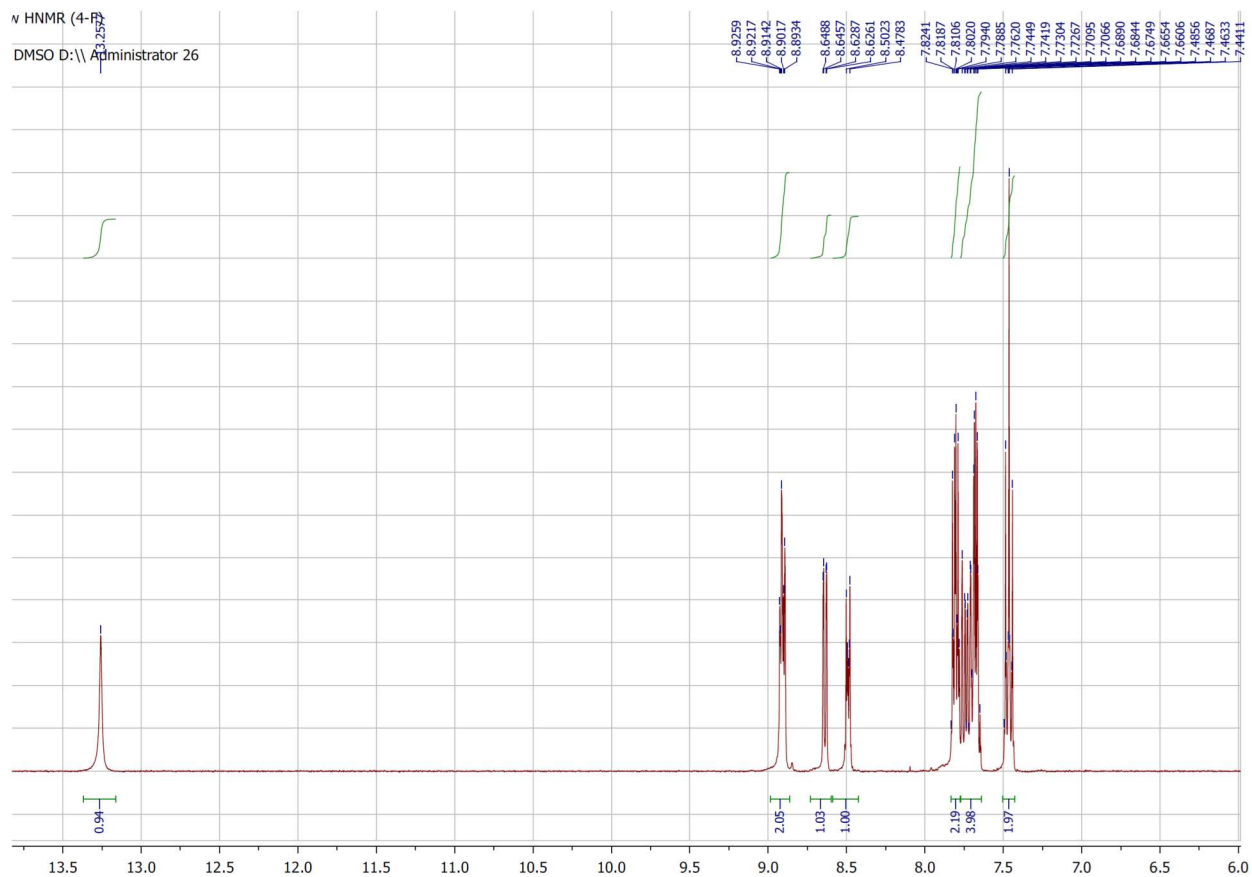




**S9** The mass spectrum of 2-(4-chlorophenyl)-3-nitrodibenzo[e, g]indole (**3b**):

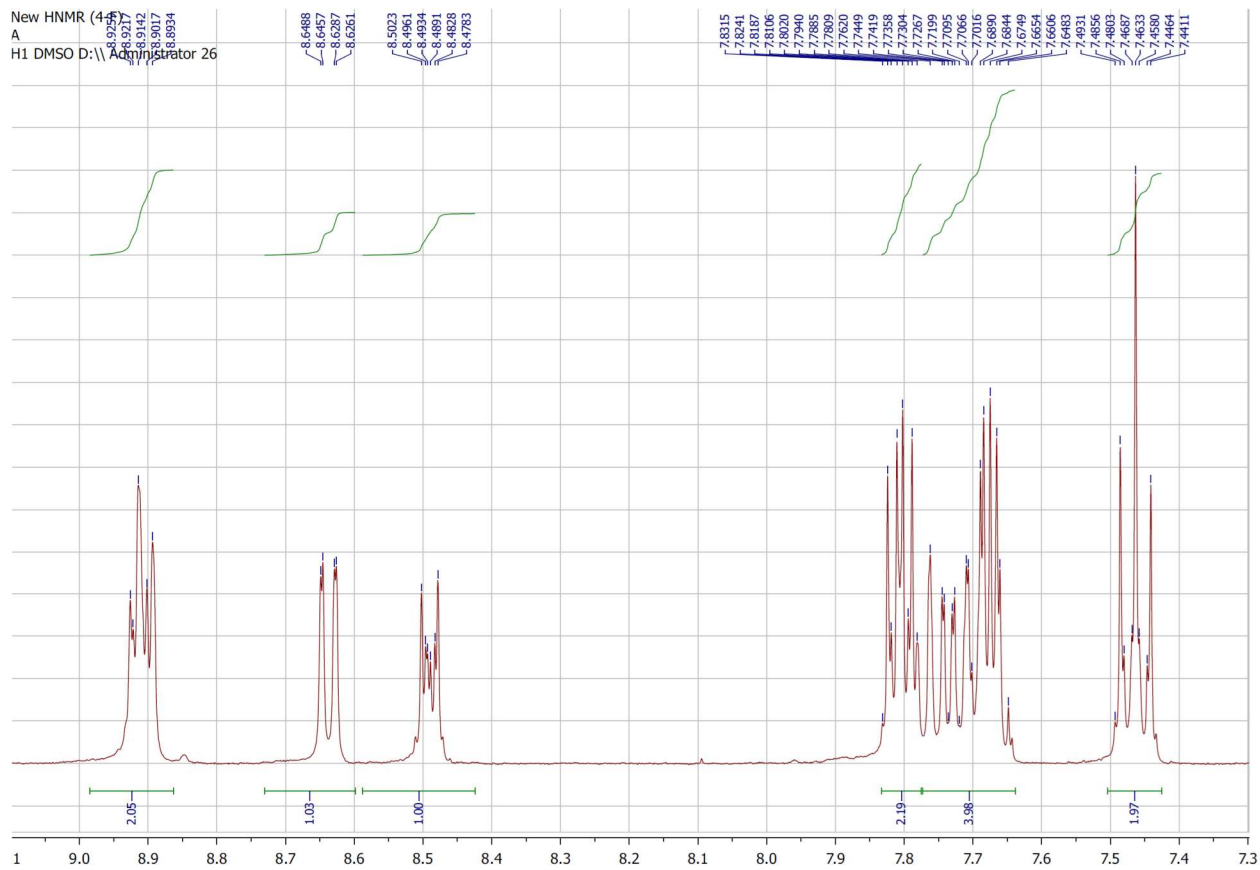


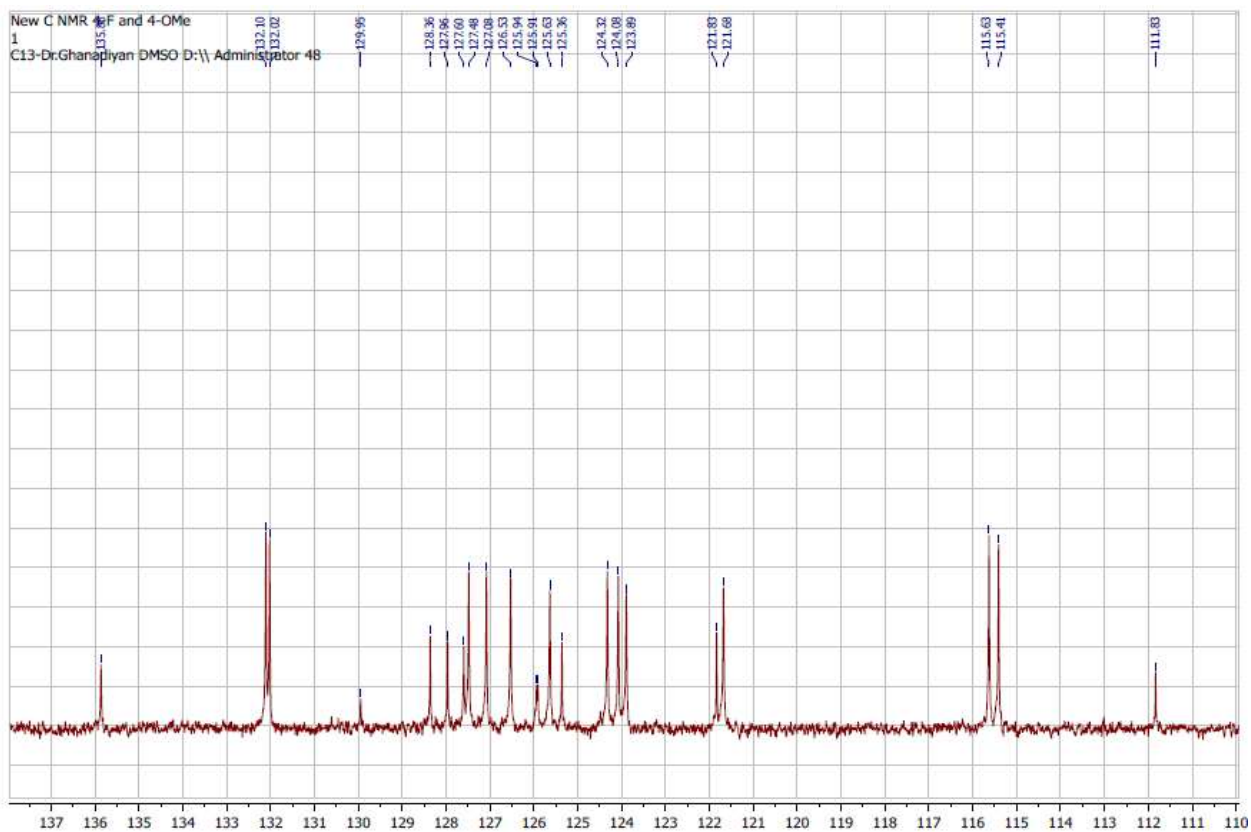
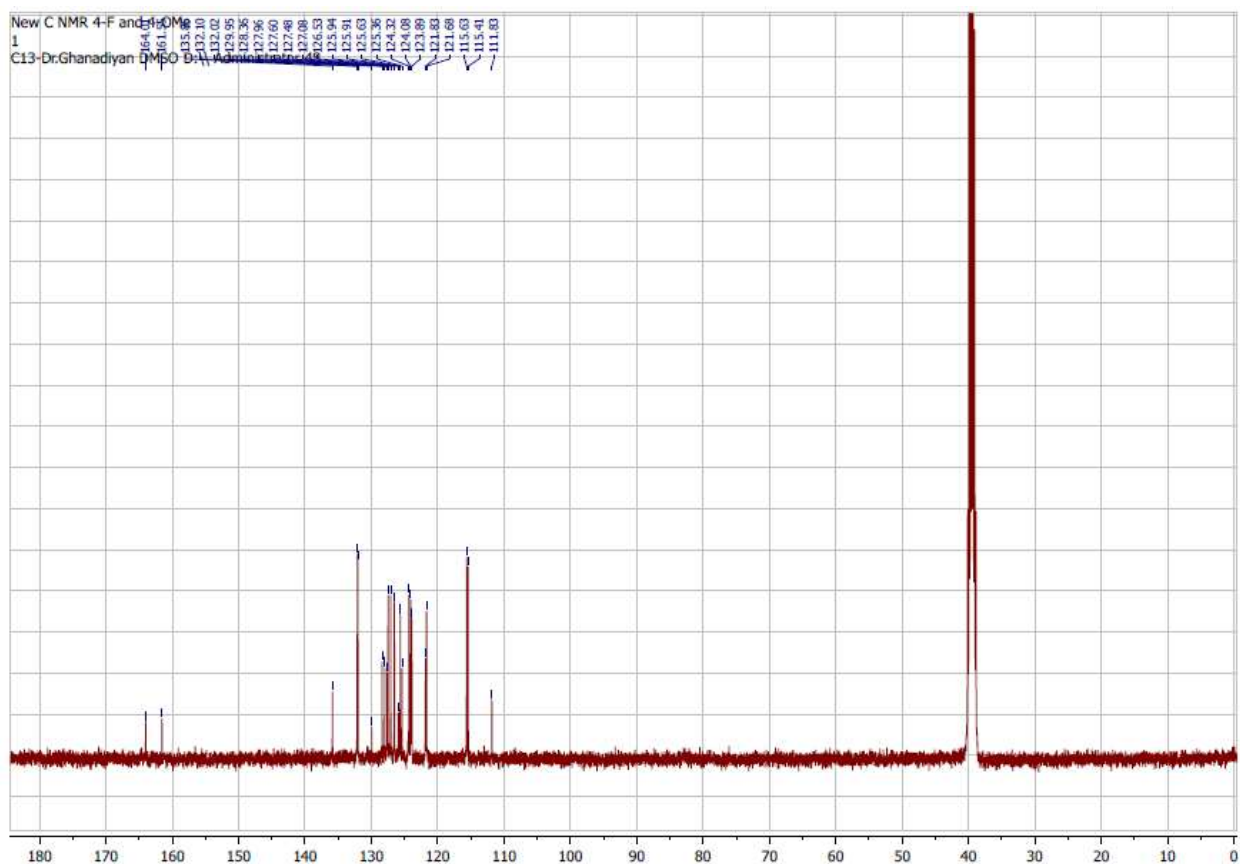
**S10** The  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR spectrum of 2-(4-fluorophenyl)-3-nitrodibenzo[e, g]indole in DMSO- $d_6$  (**3c**):



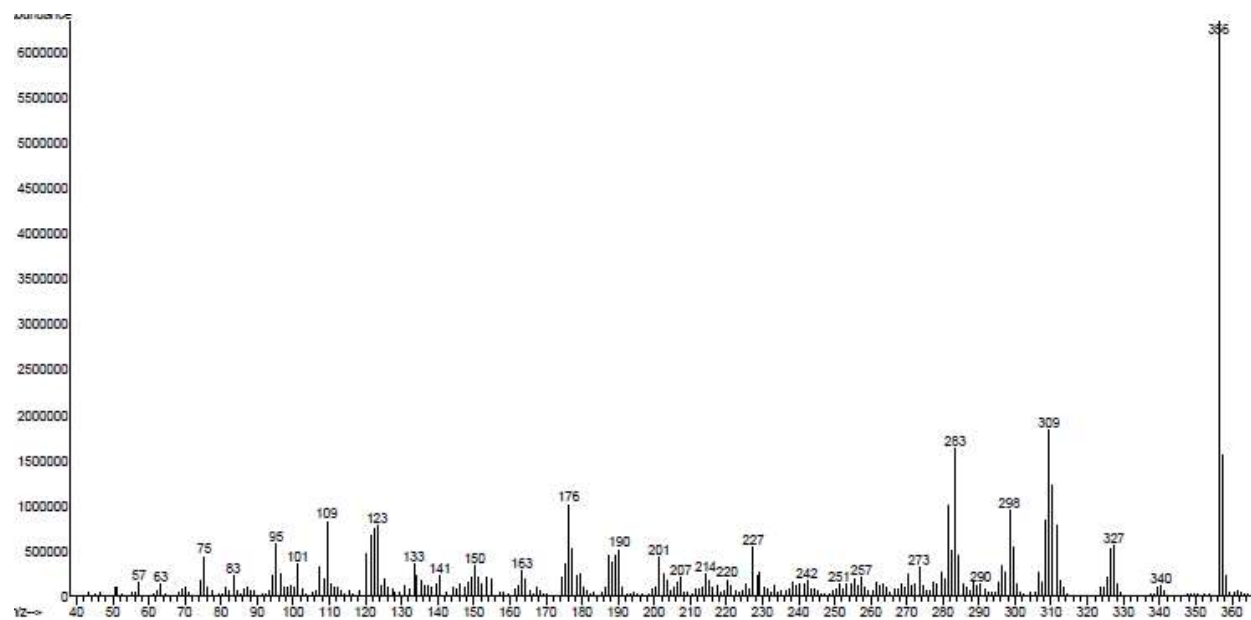


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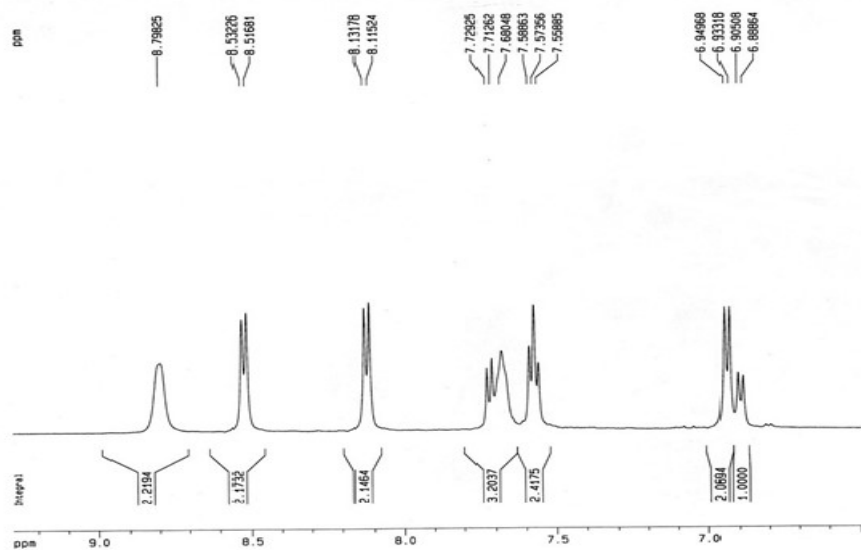
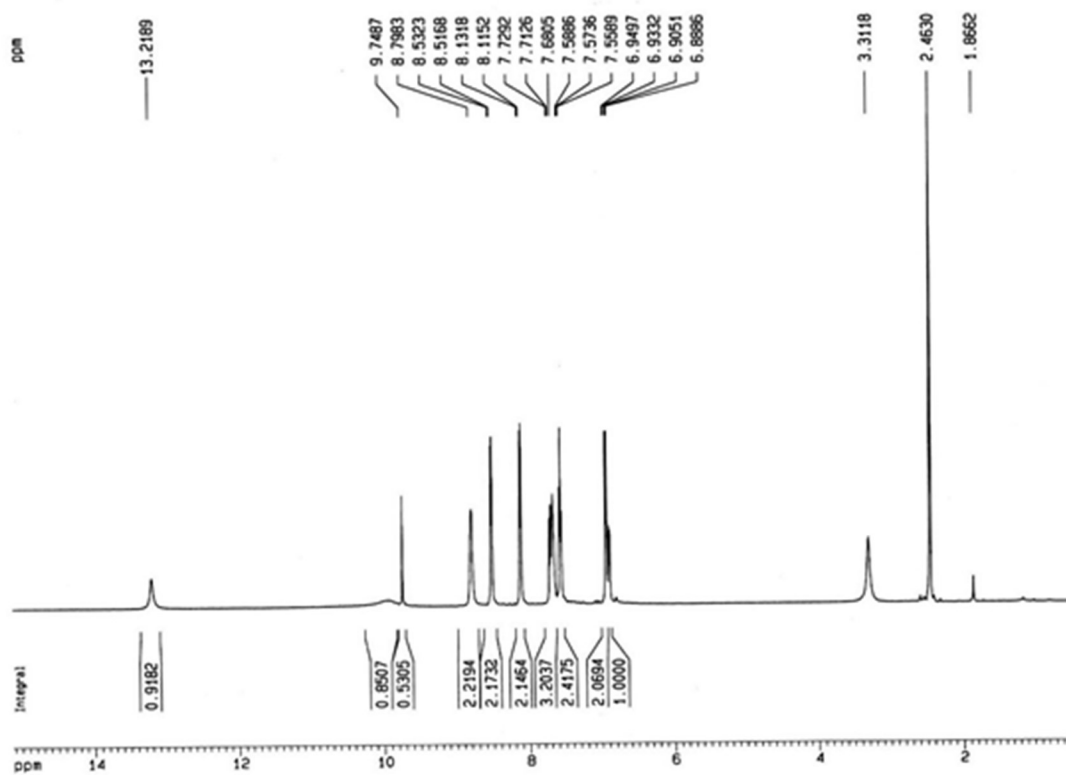




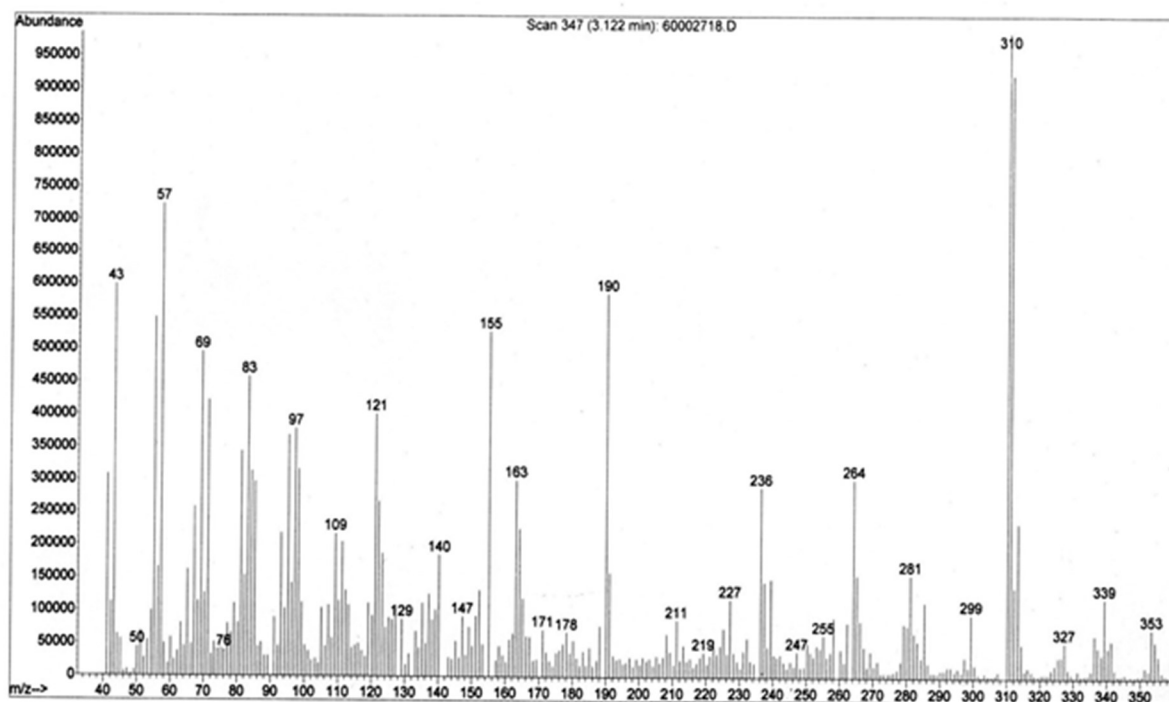
**S11** The mass spectrum of 2-(4-fluorophenyl)-3-nitrodibenzo[*g,e*]indole in DMSO-*d*<sub>6</sub> (**3c**):



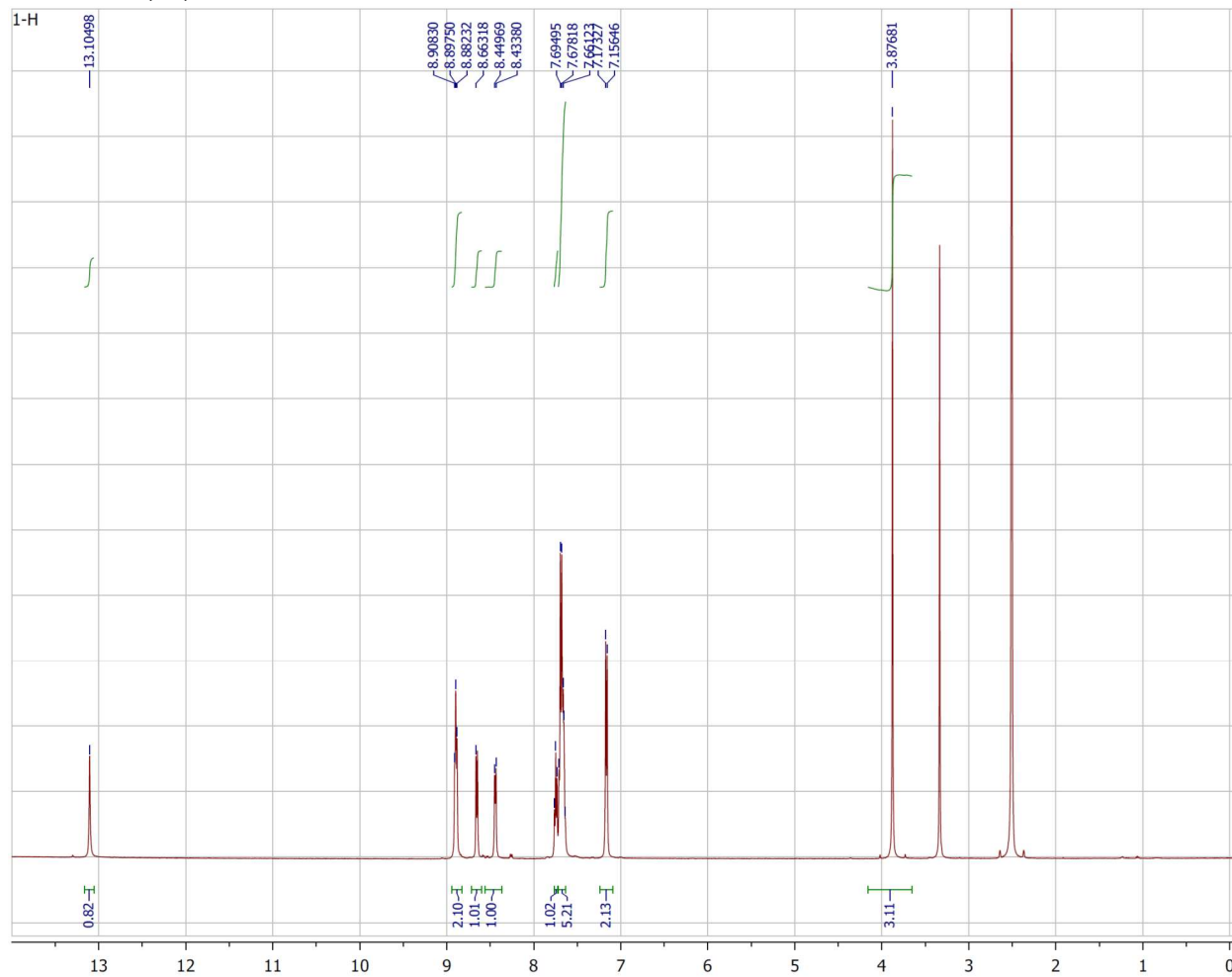
**S12** The  $^1\text{H}$  NMR spectrum of 2-(4-hydroxyphenyl)-3-nitrodibenzo[*e,g*]indole in DMSO- $d_6$  (**3d**):



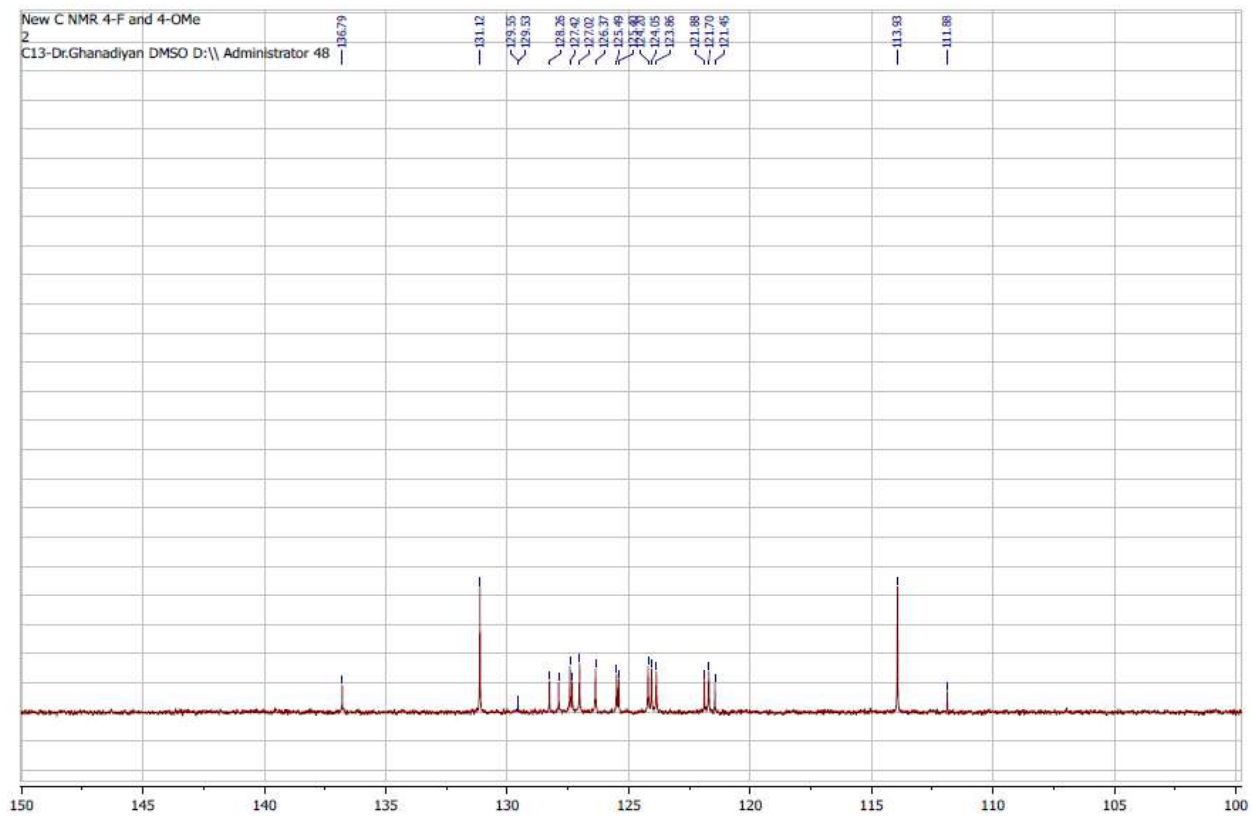
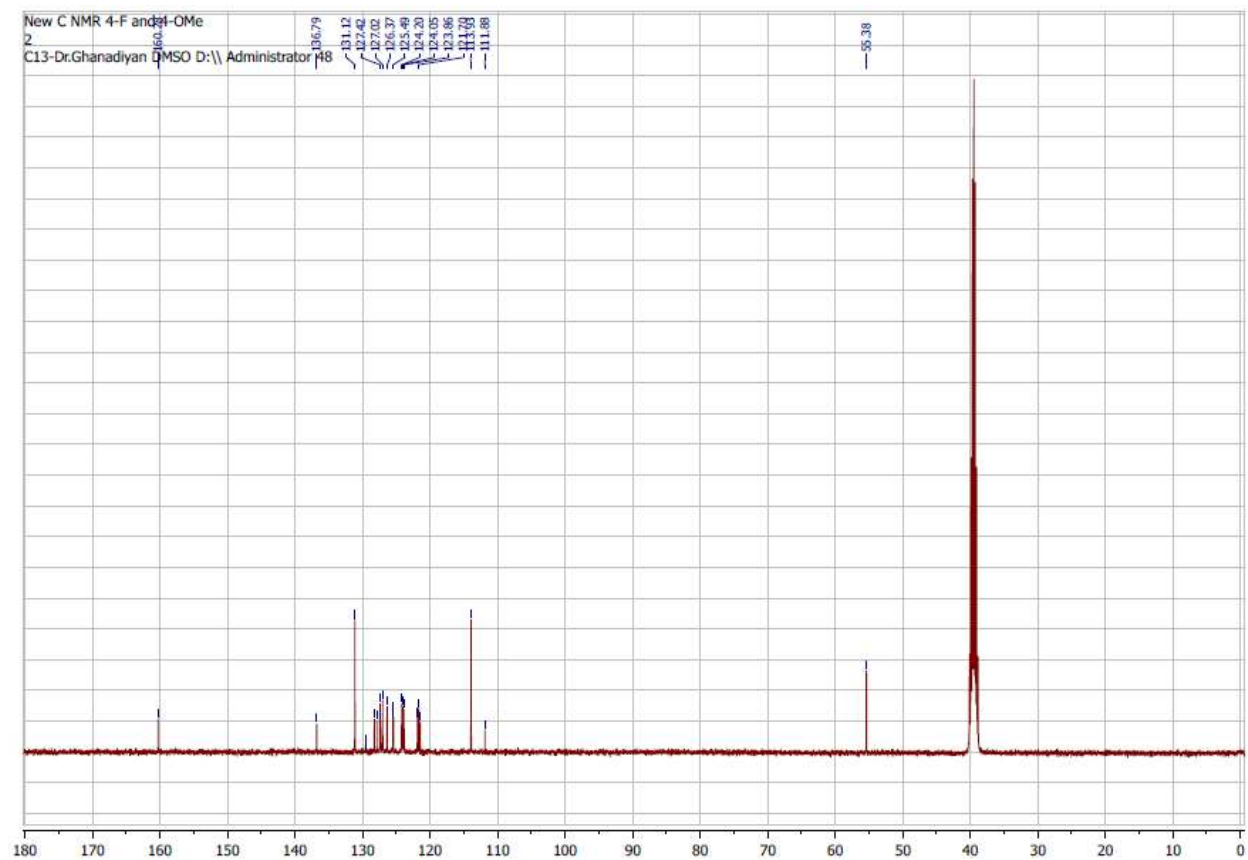
**S13** The Mass spectrum of 2-(4-hydroxyphenyl)-3-nitrodibenzo[e,g]indole (**3d**):



**S14** The  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR spectrum of 2-(4-methoxyphenyl)-3-nitrodibenzo[*e,g*]indole in DMSO- $d_6$  (**3e**):

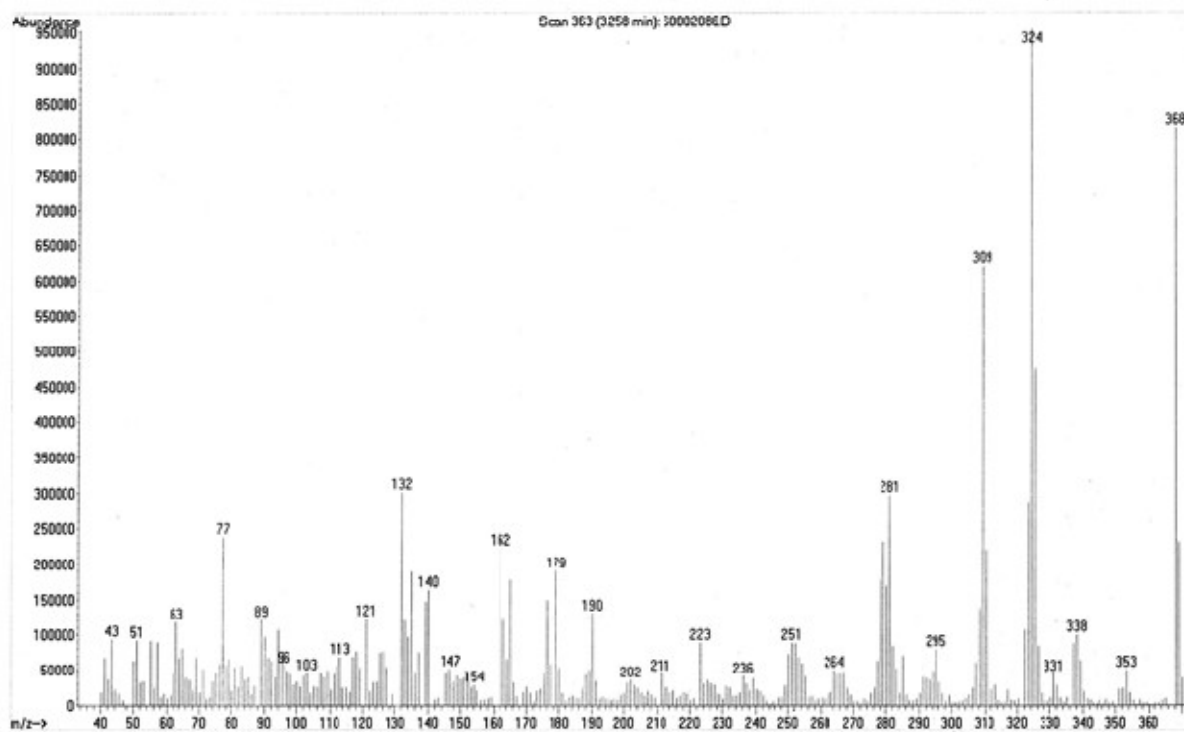




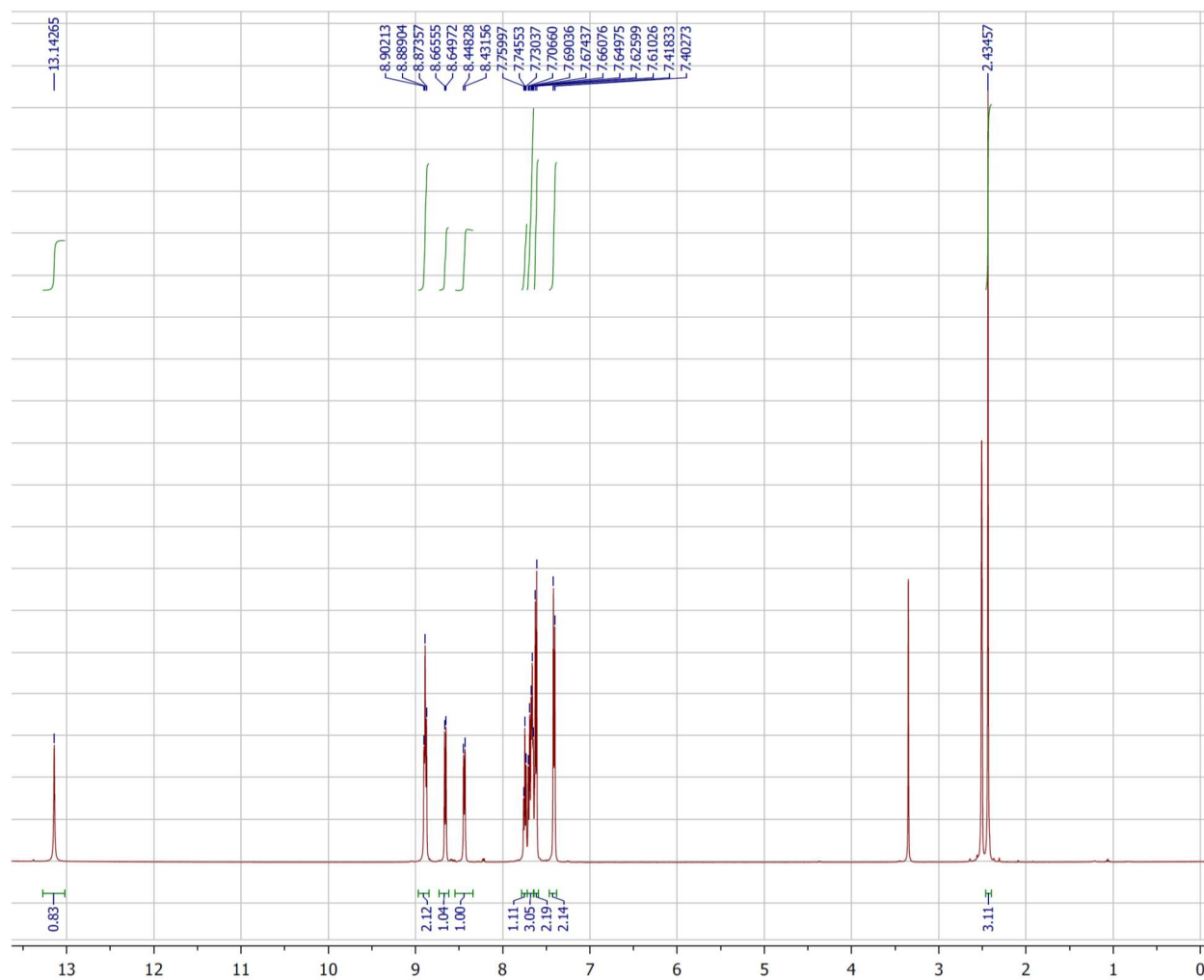


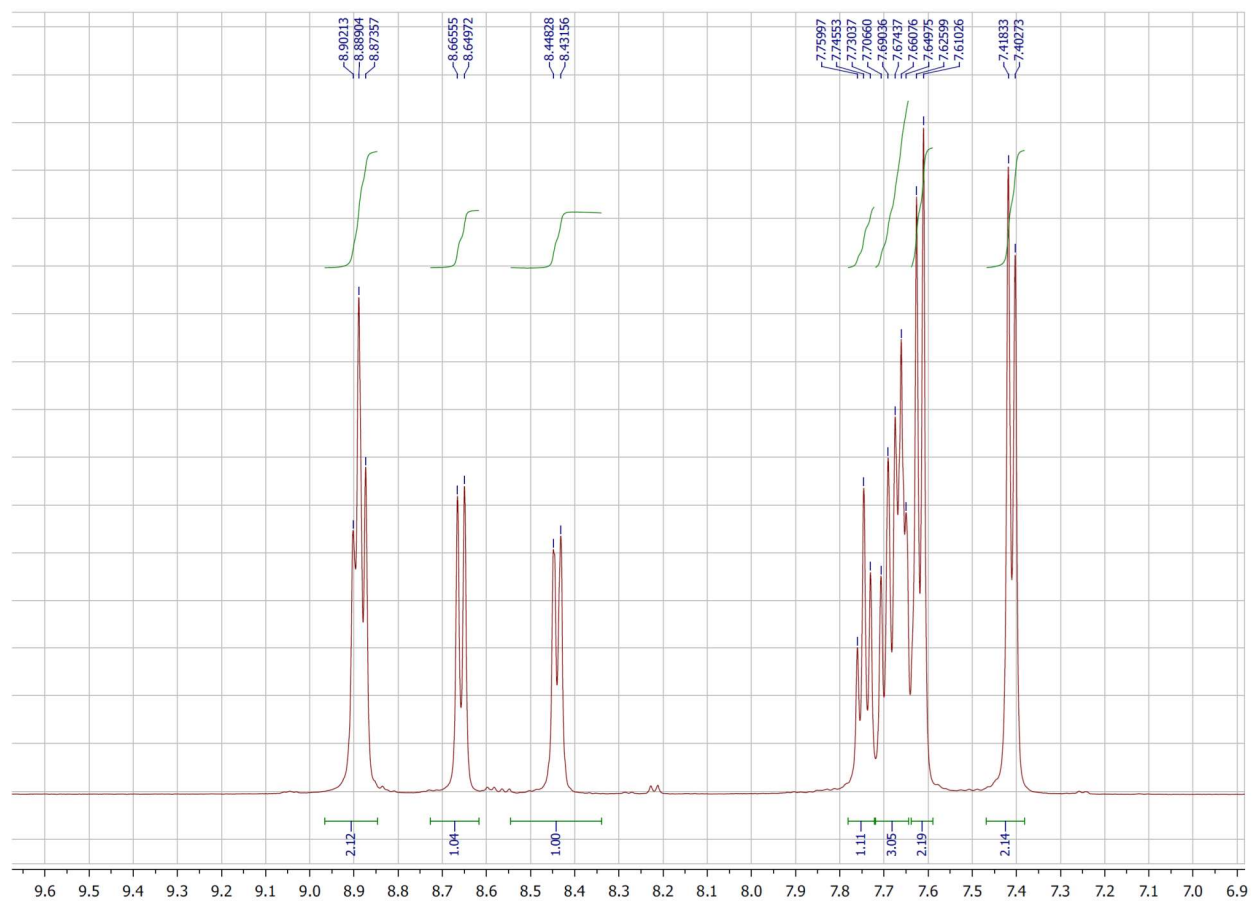


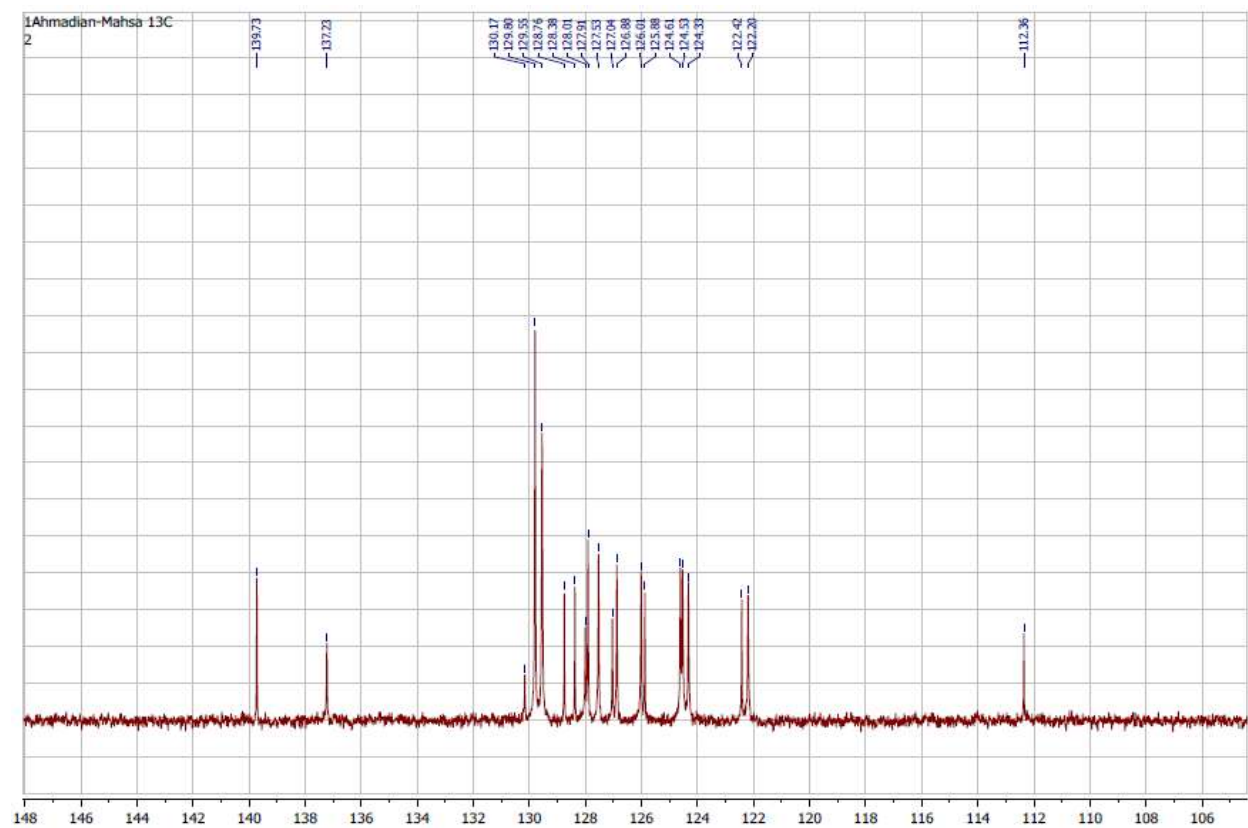
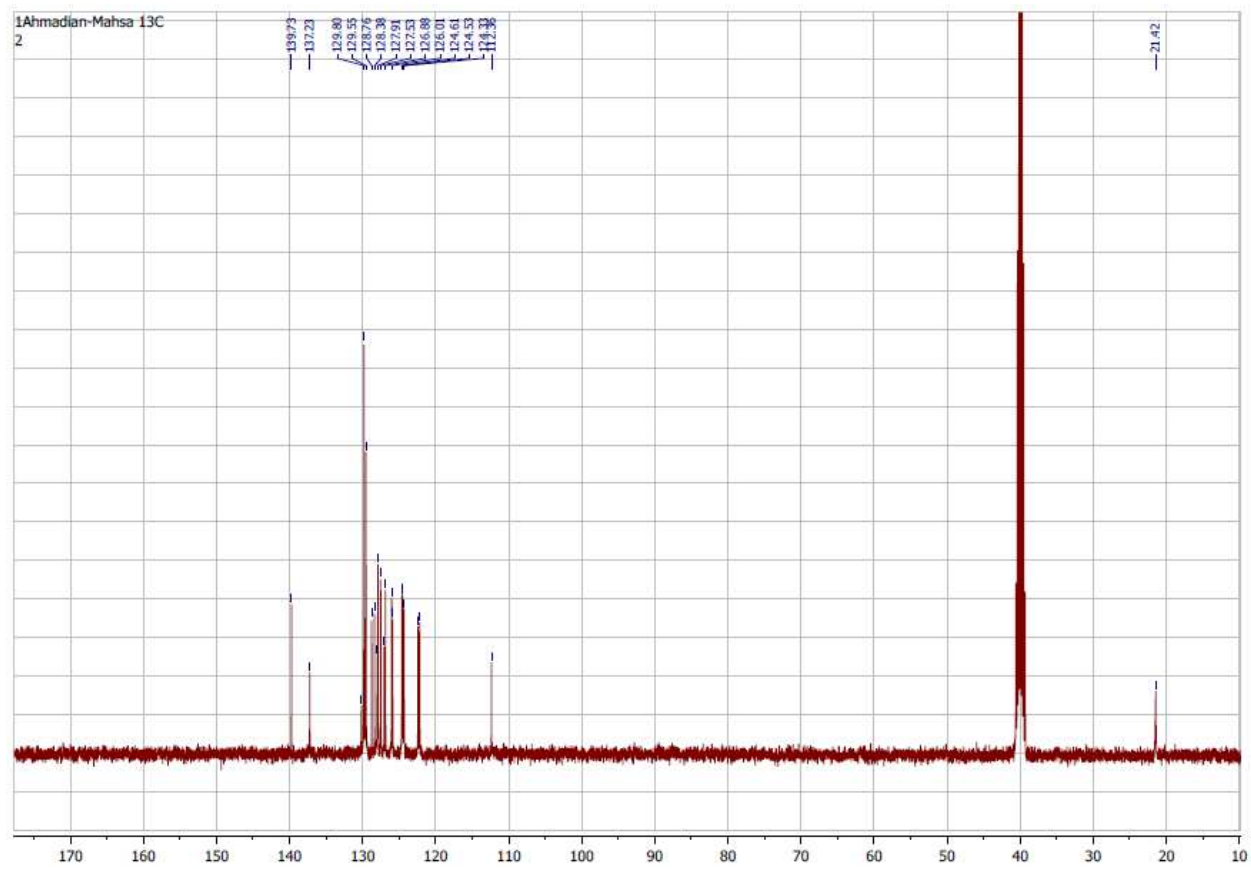
**S15** The Mass spectrum of 2-(4-methoxyphenyl)-3-nitrodibenzo[e,g]indole (**3e**):



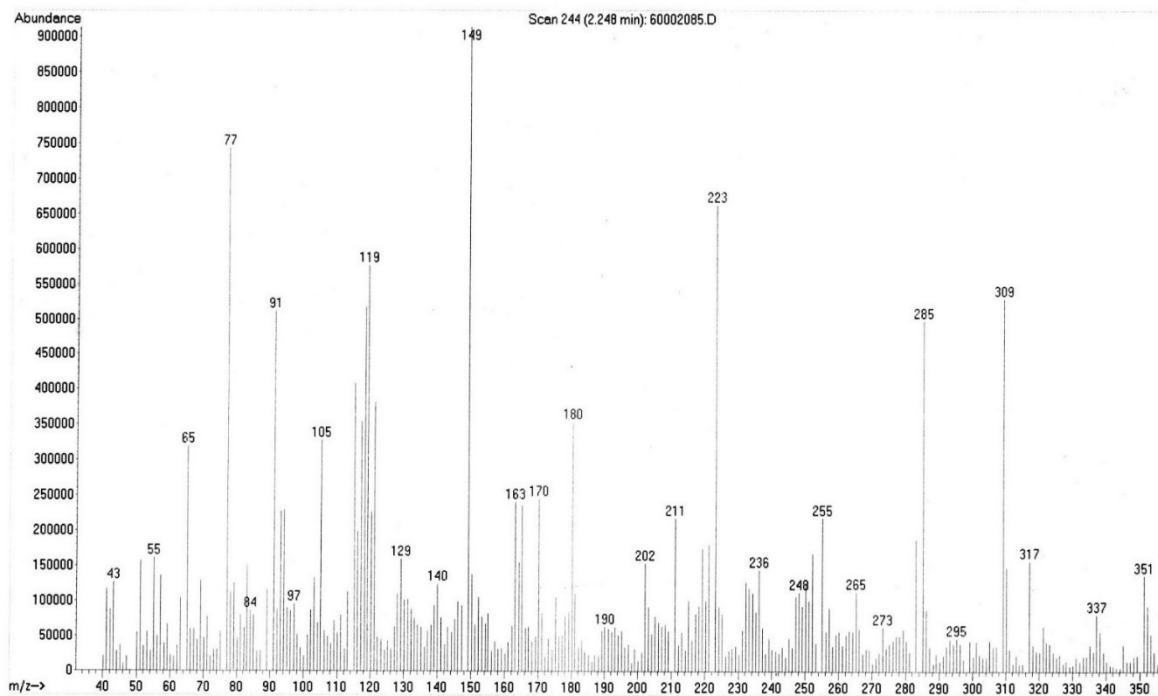
**S16** The  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR spectrum of 2-(4-methylphenyl)-3-nitrodibenzo[*e,g*]indole in DMSO- $d_6$  (**3f**):



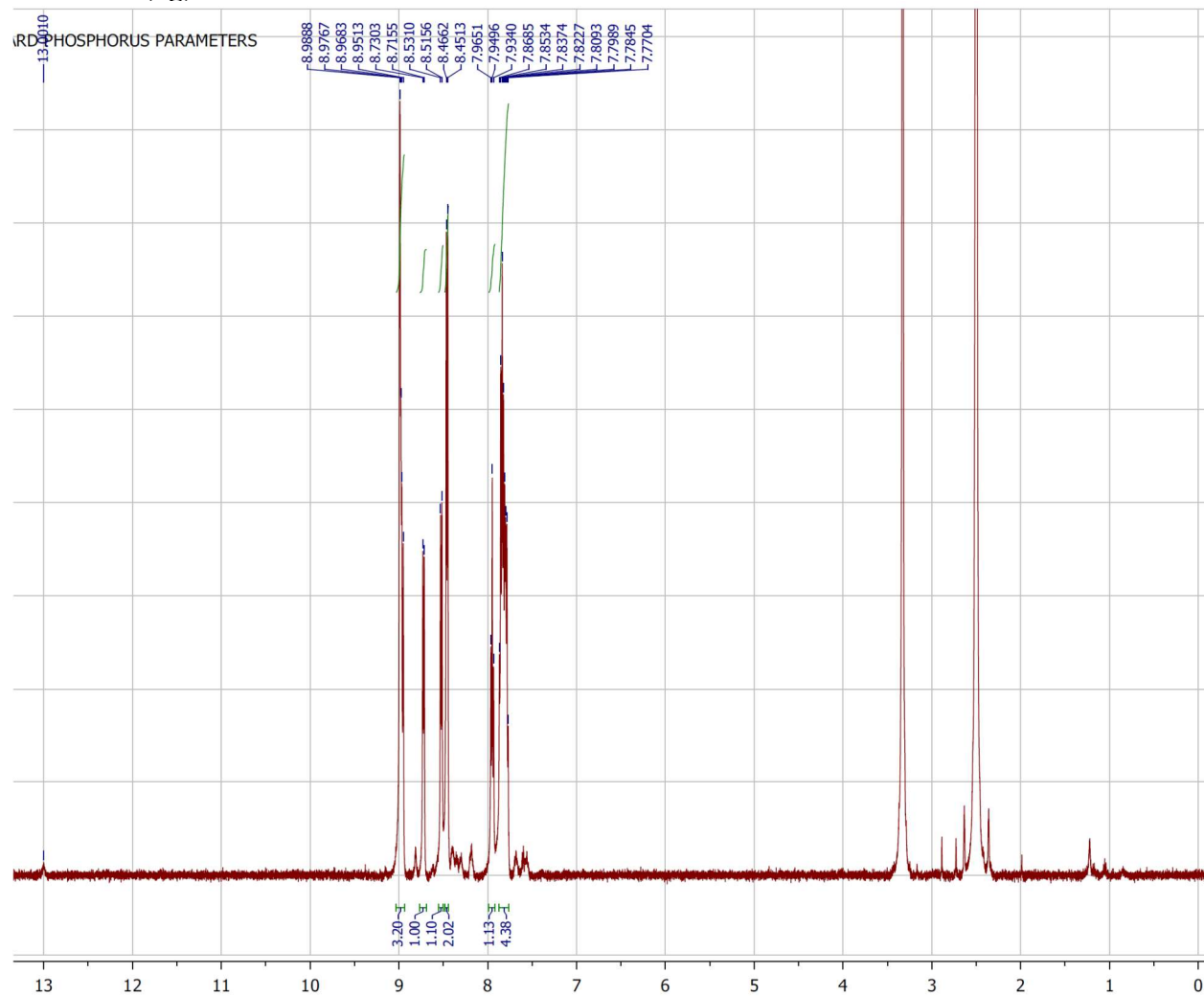


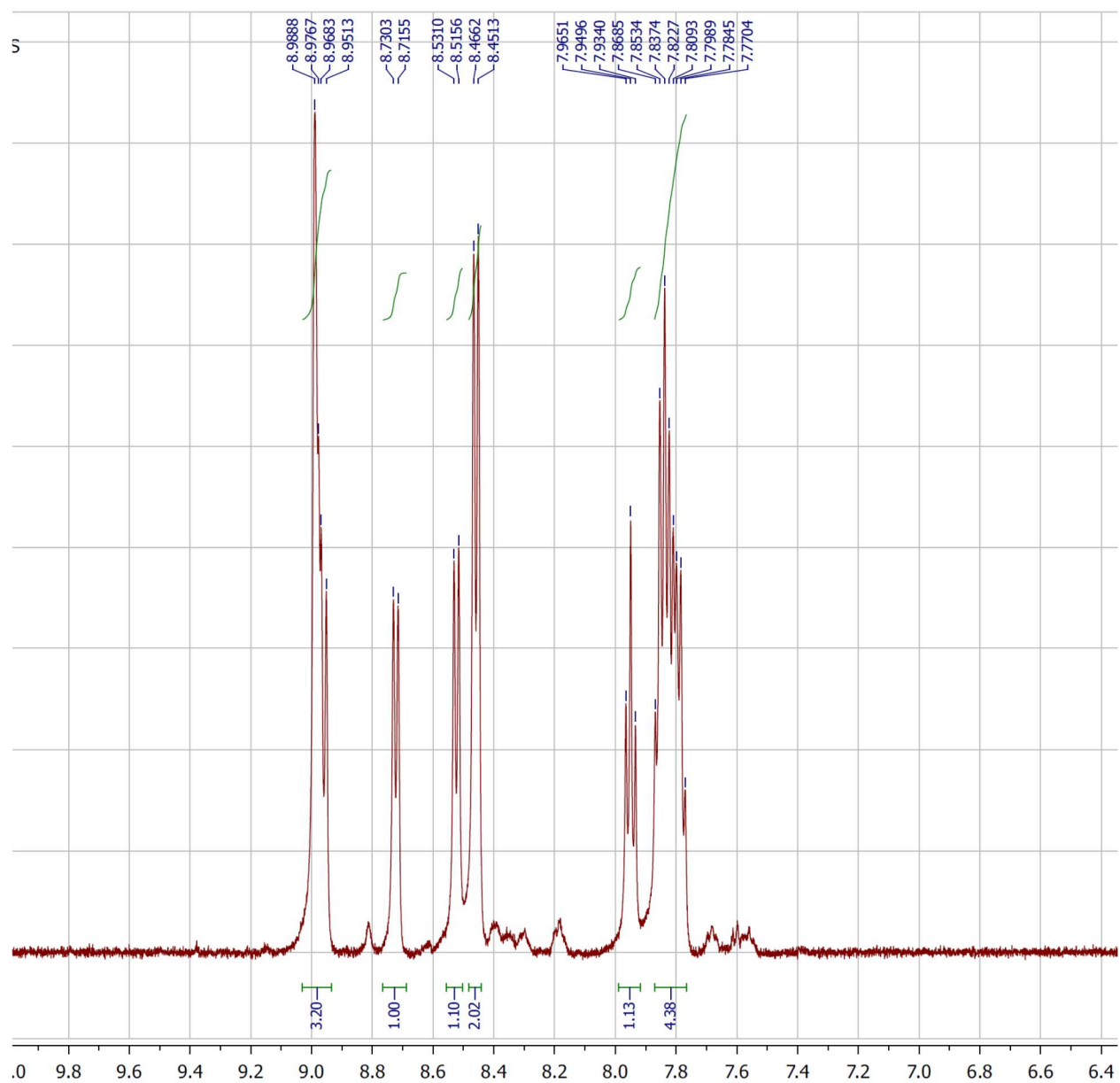


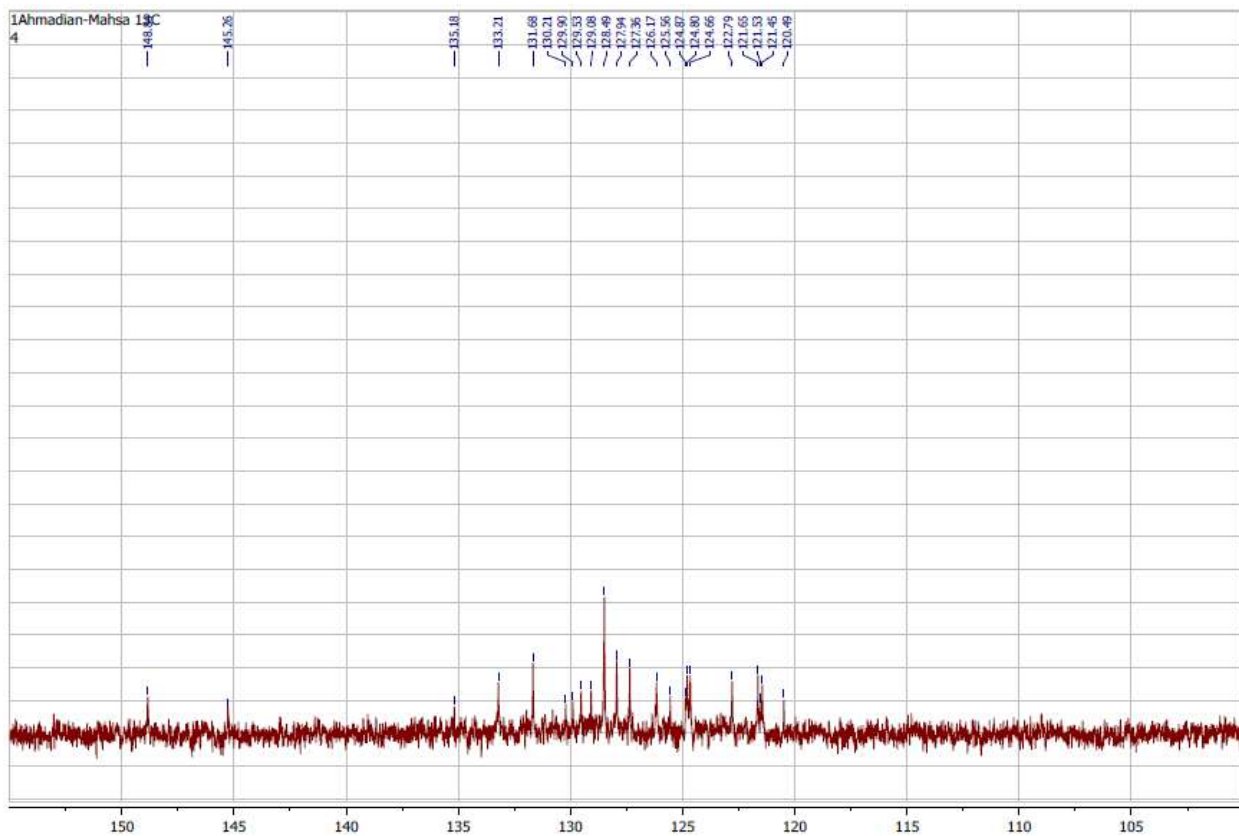
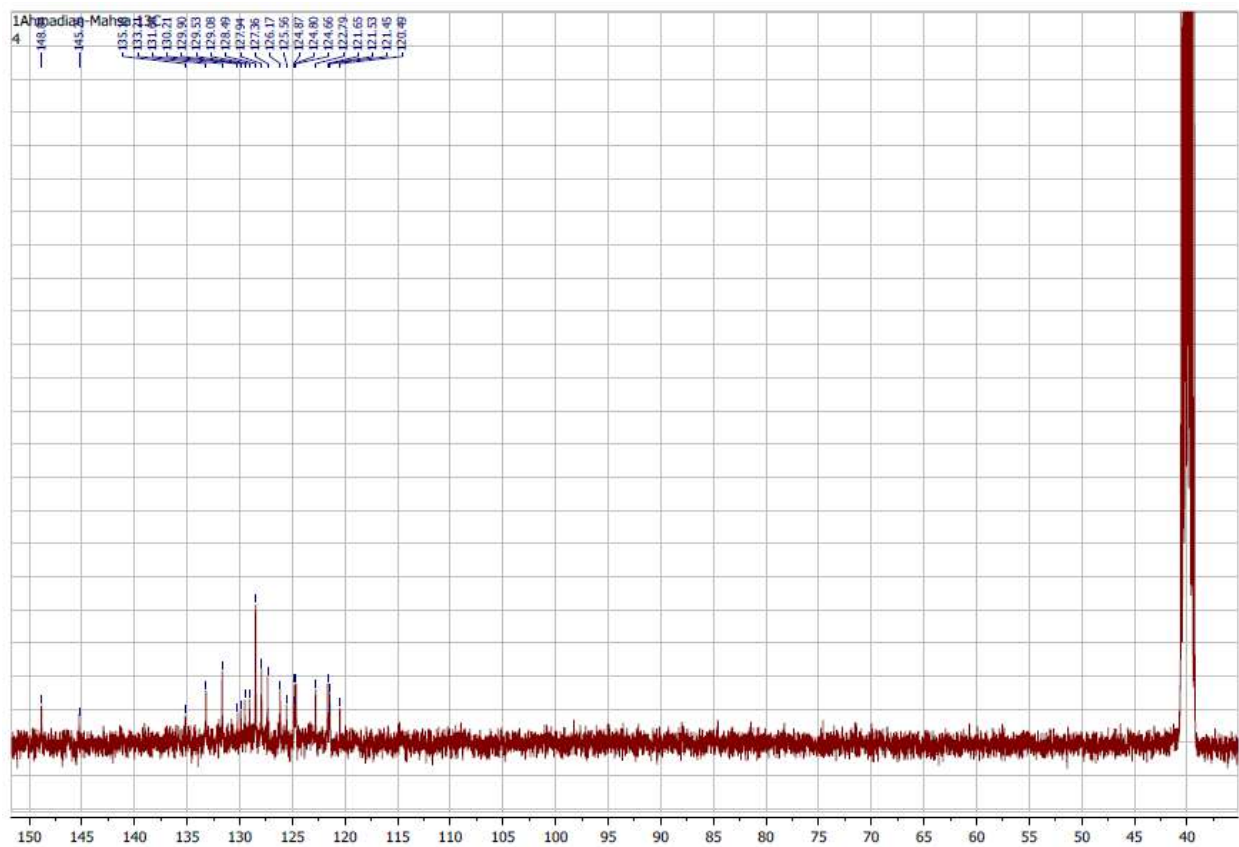
**S17** The Mass spectrum of 2-(4-methylphenyl)-3-nitrodibenzo[e,g]indole (**3f**):



**S18** The  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR spectrum of 2-(3-nitrophenyl)-3-nitrodibenzo[e,g]indole in  $\text{DMSO}-d_6$  (**3g**):

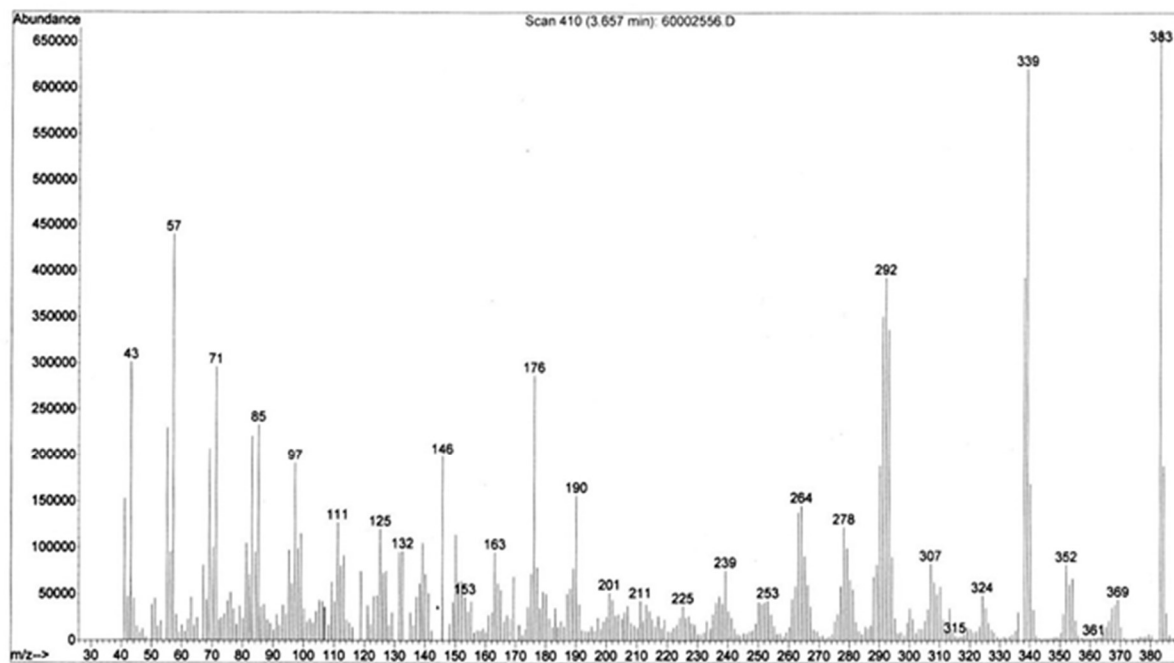




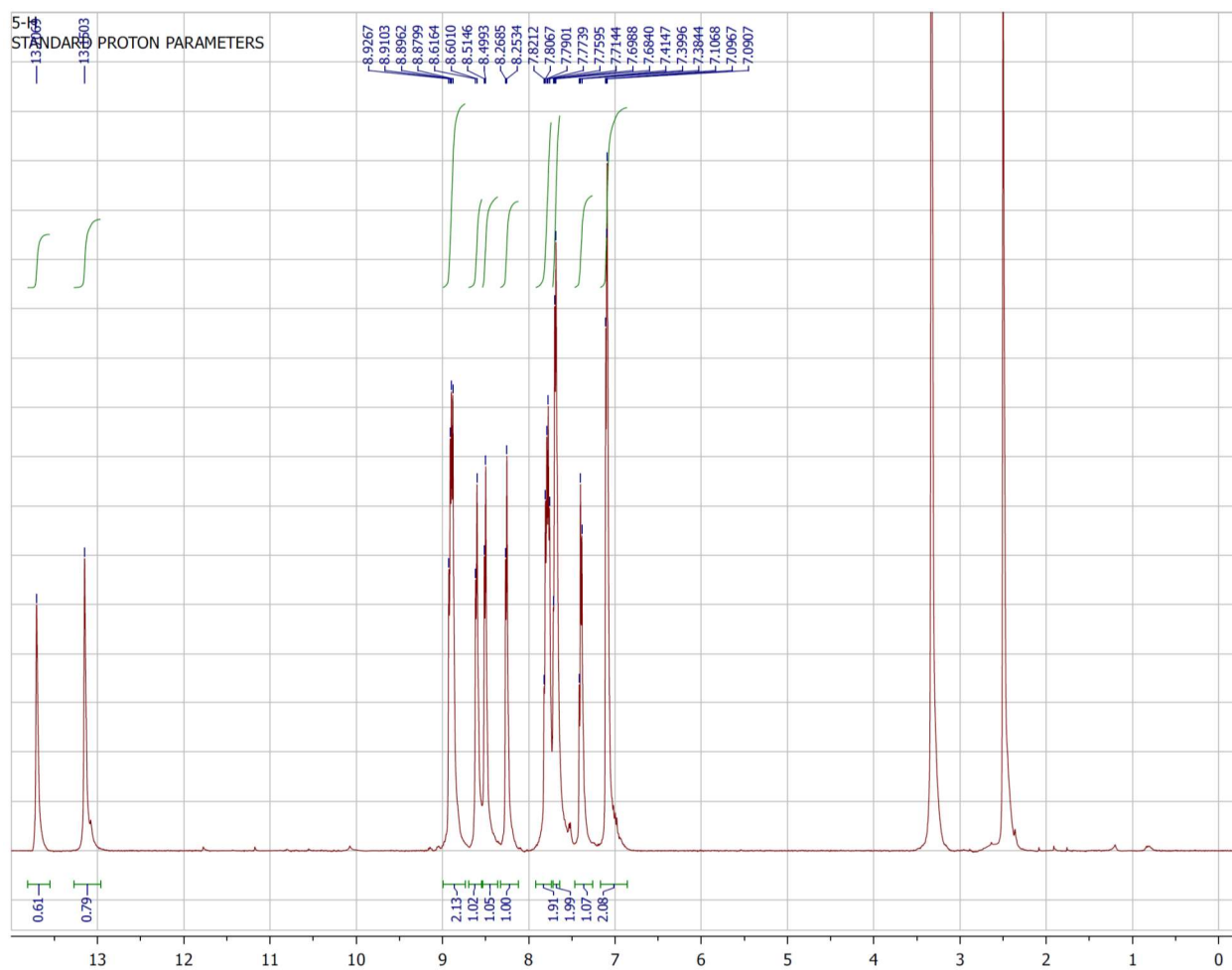


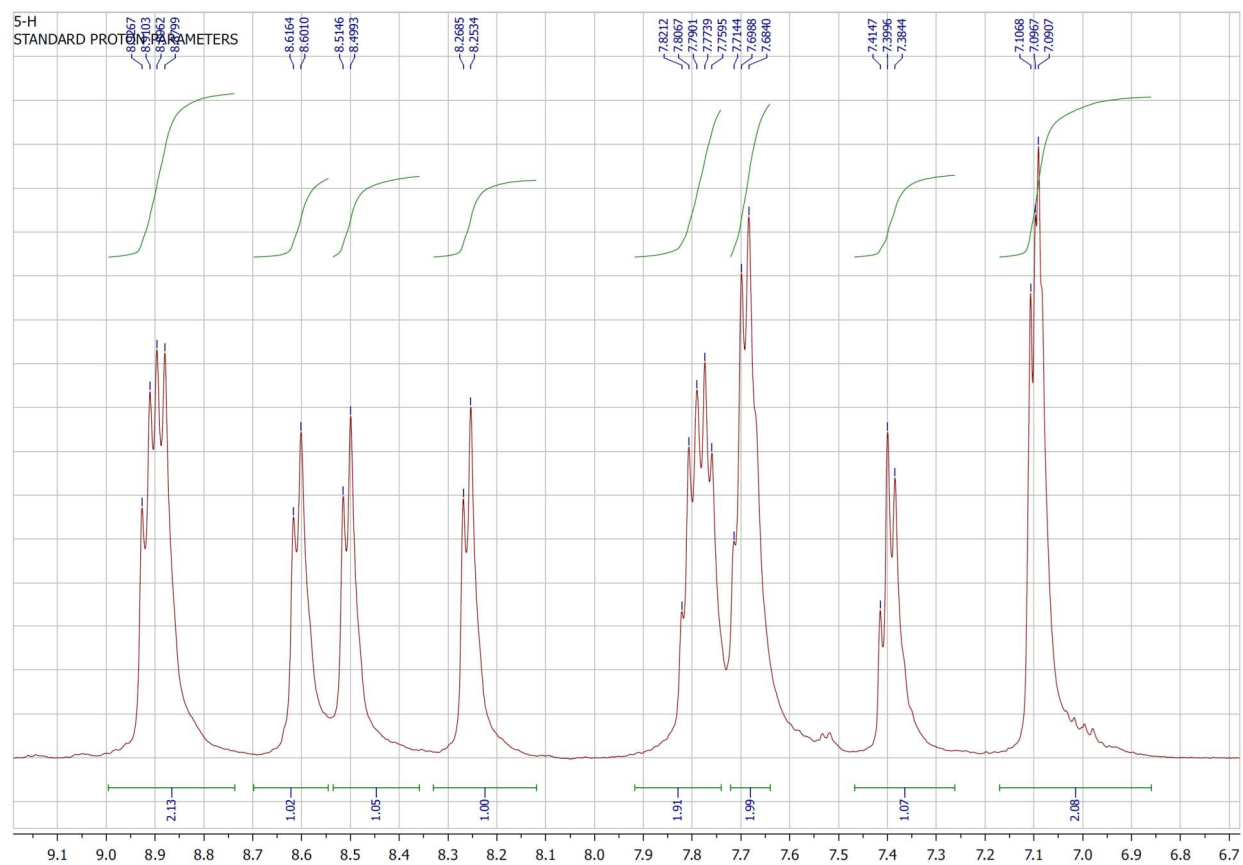


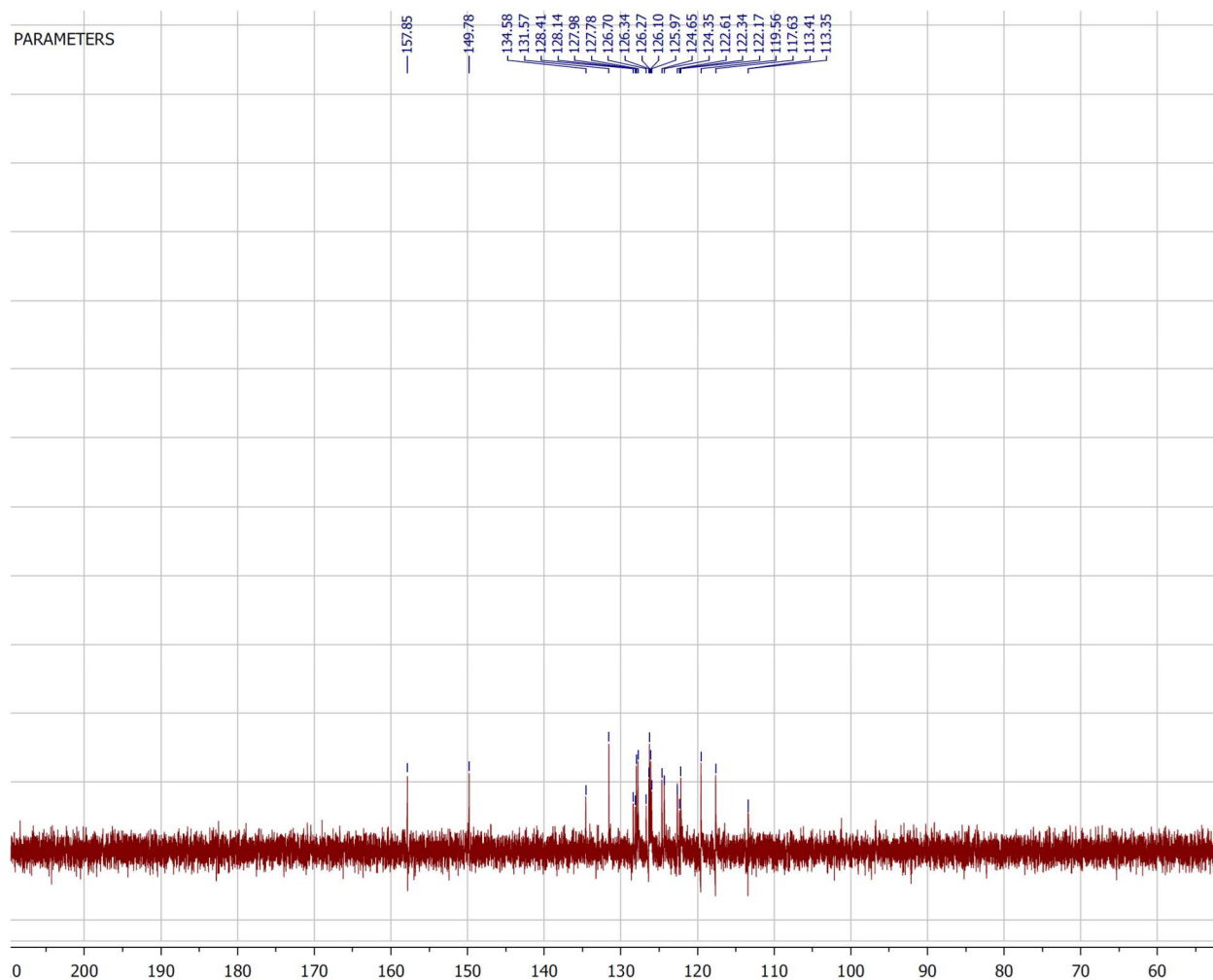
**S19** The Mass spectrum of 2-(3-nitrophenyl)-3-nitrodibenzo[e,g]indole (**3g**):

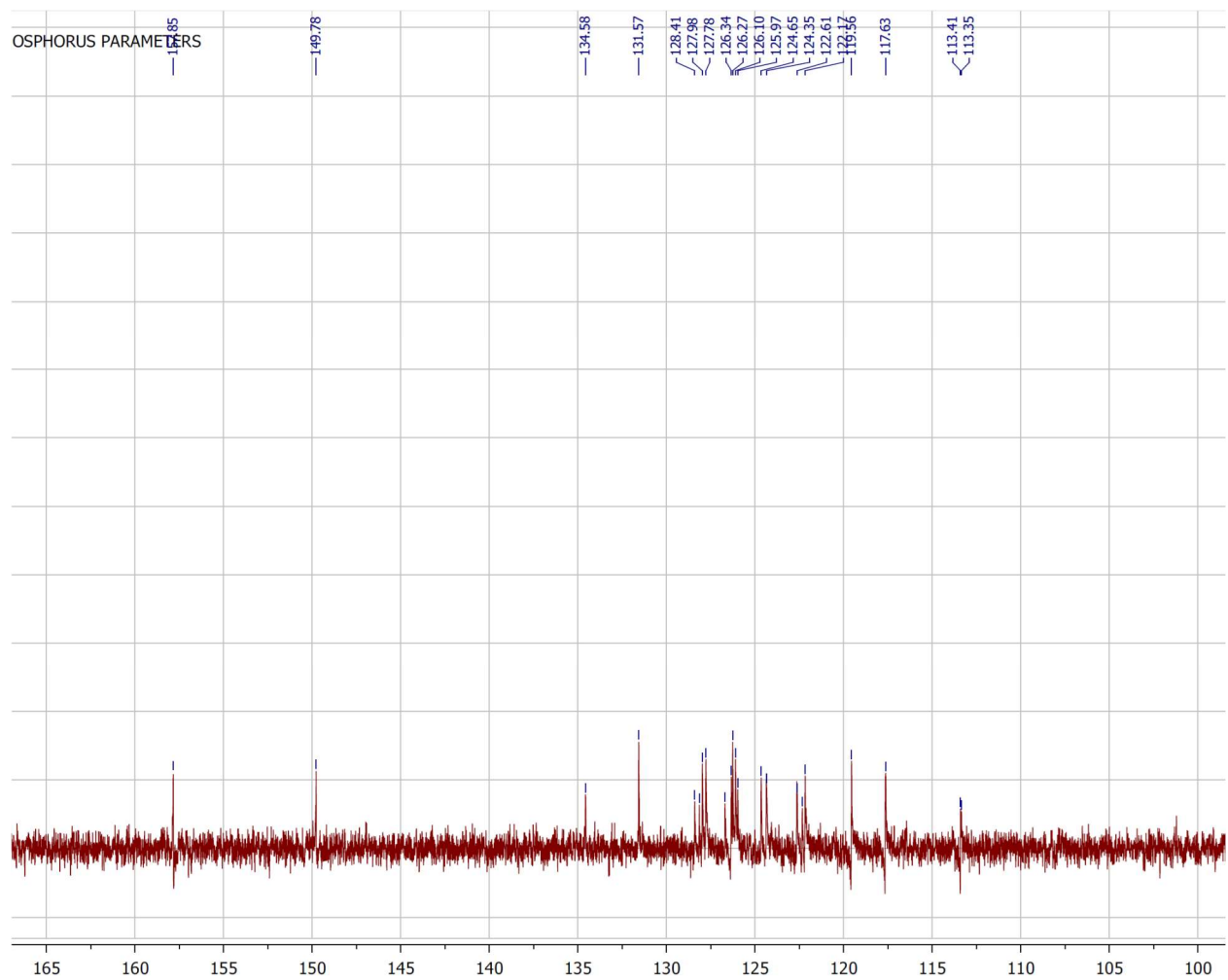


**S20** The  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR spectra of 2-(2-hydroxyphenyl)-3-nitrodibenzo[e,g]indole in DMSO- $d_6$  (**3h**):

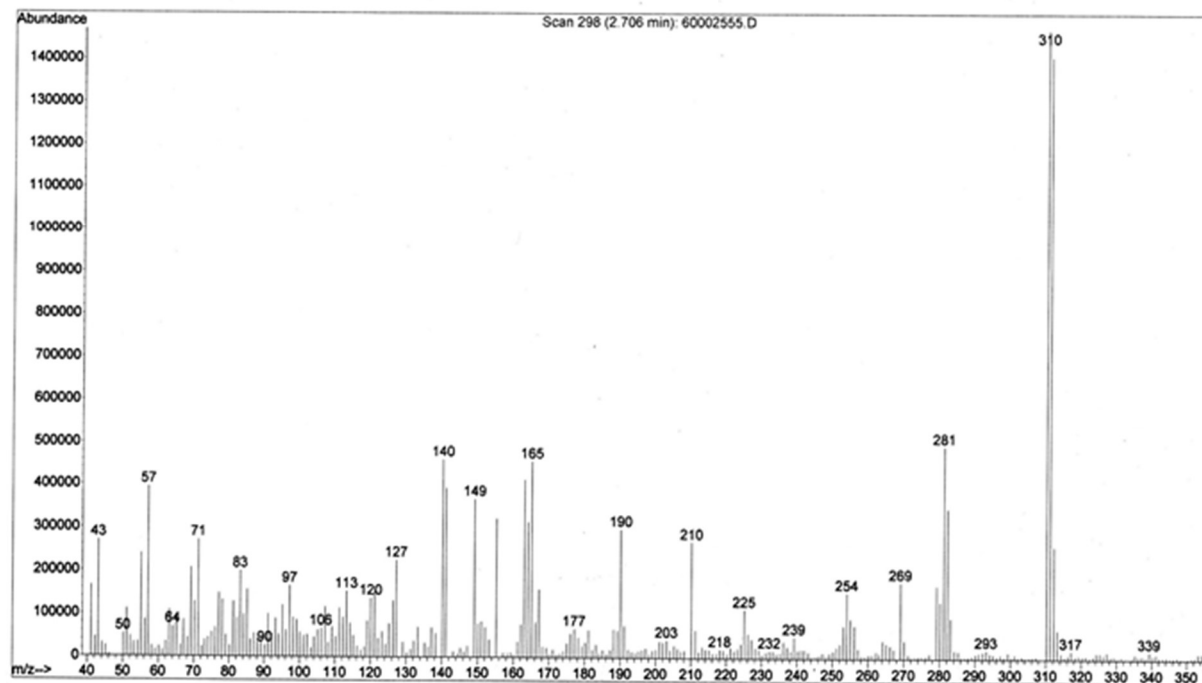




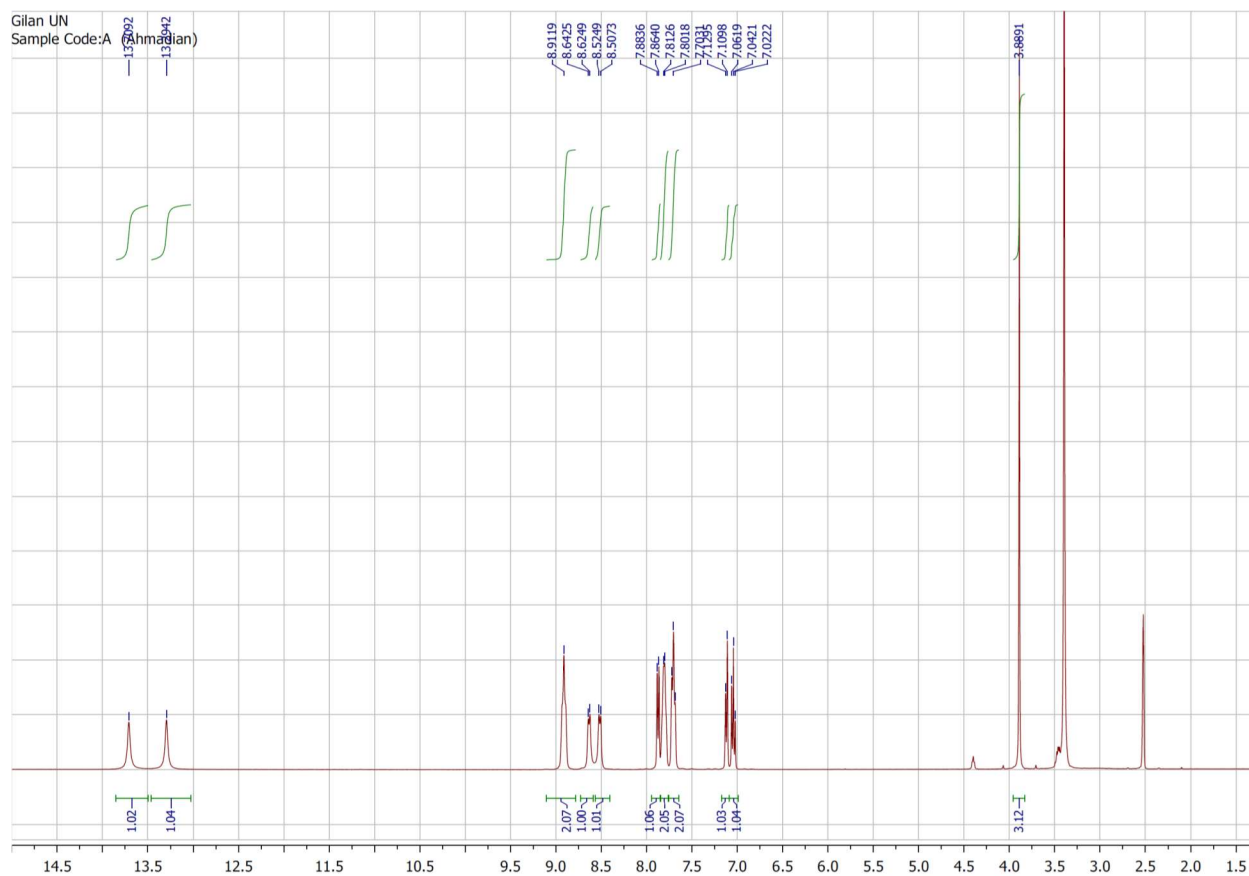




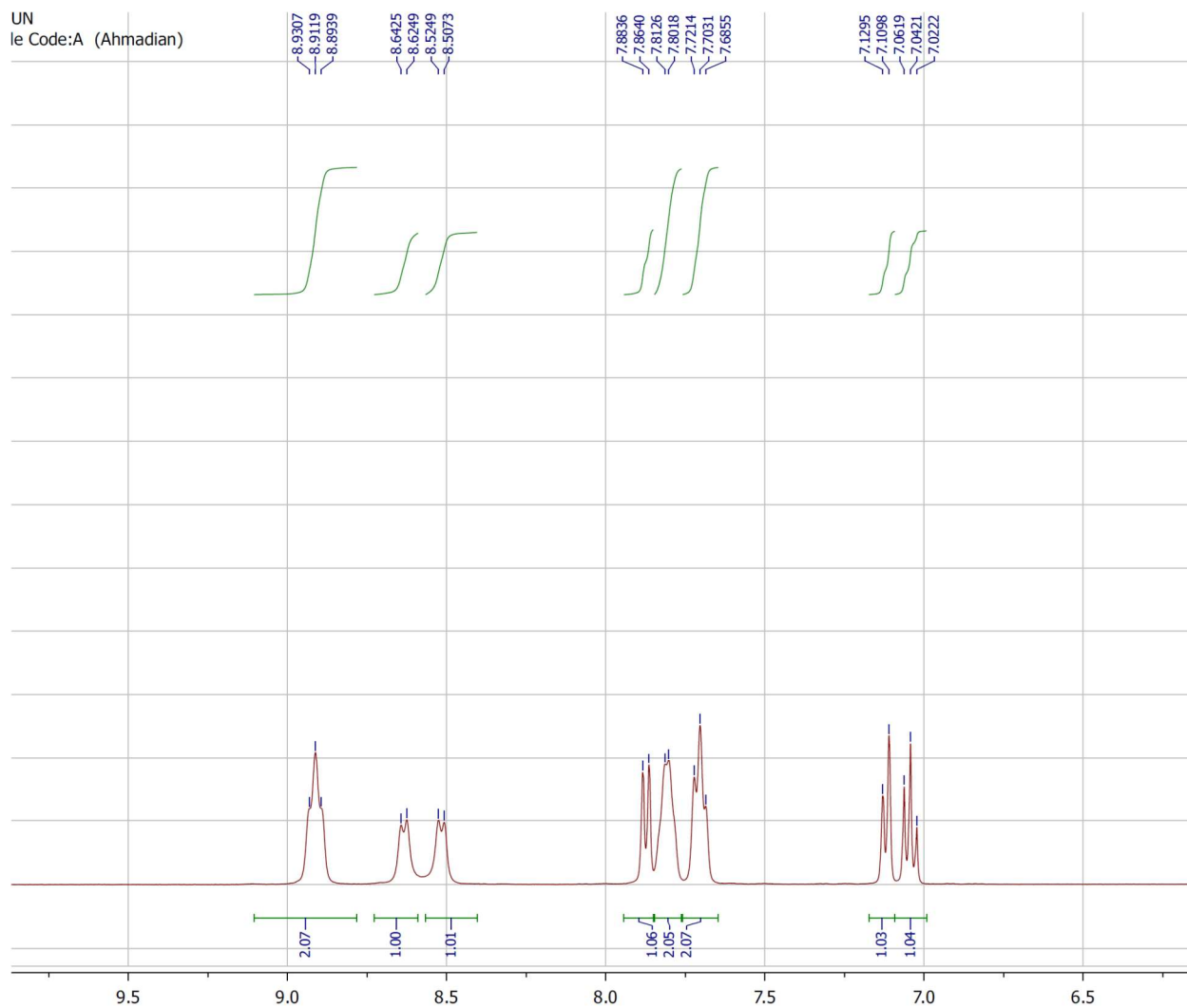
**S21** The Mass spectrum of 2-(2-hydroxyphenyl)-3-nitrodibenzo[e,g]indole (**3h**):



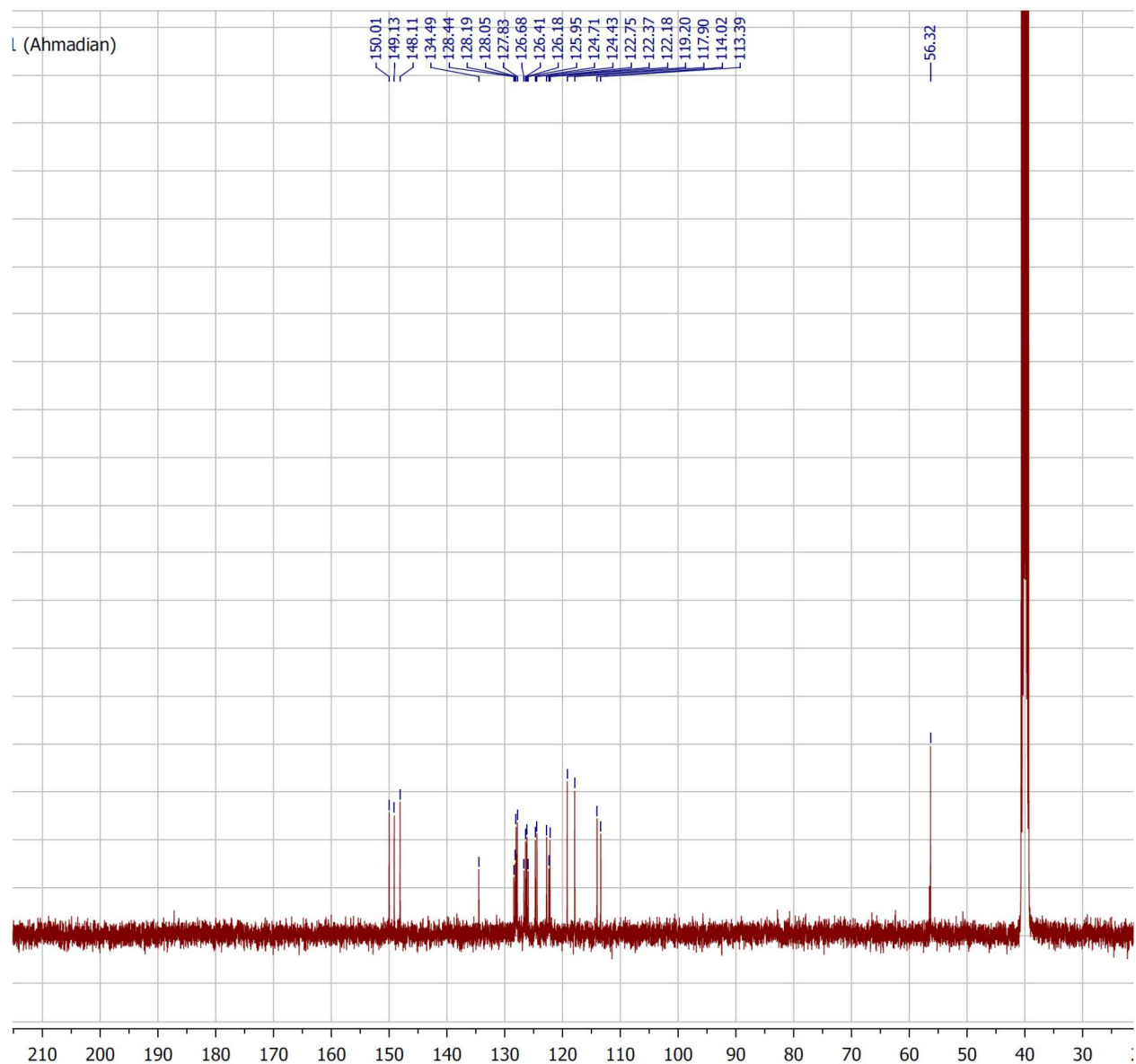
**S22** The  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR spectra of 2-(2-hydroxy,3-methoxyphenyl)-3-nitrodibenzo[e,g]indole in DMSO- $d_6$  (**3i**):



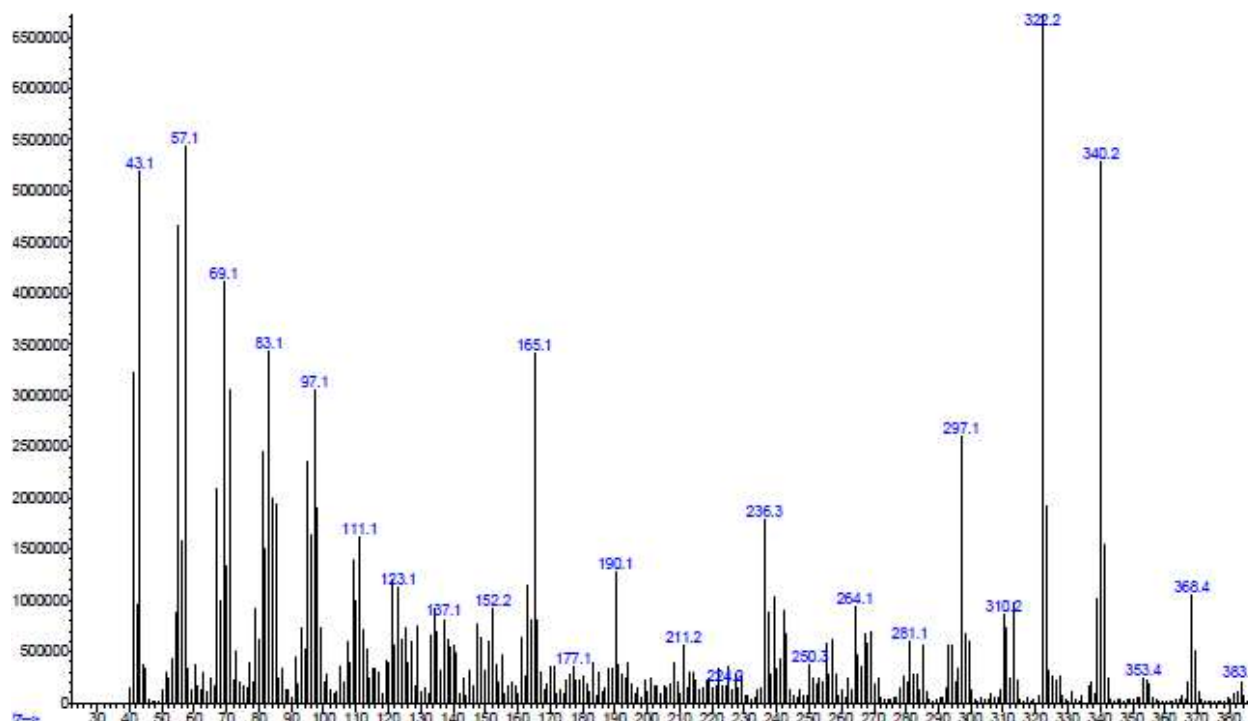
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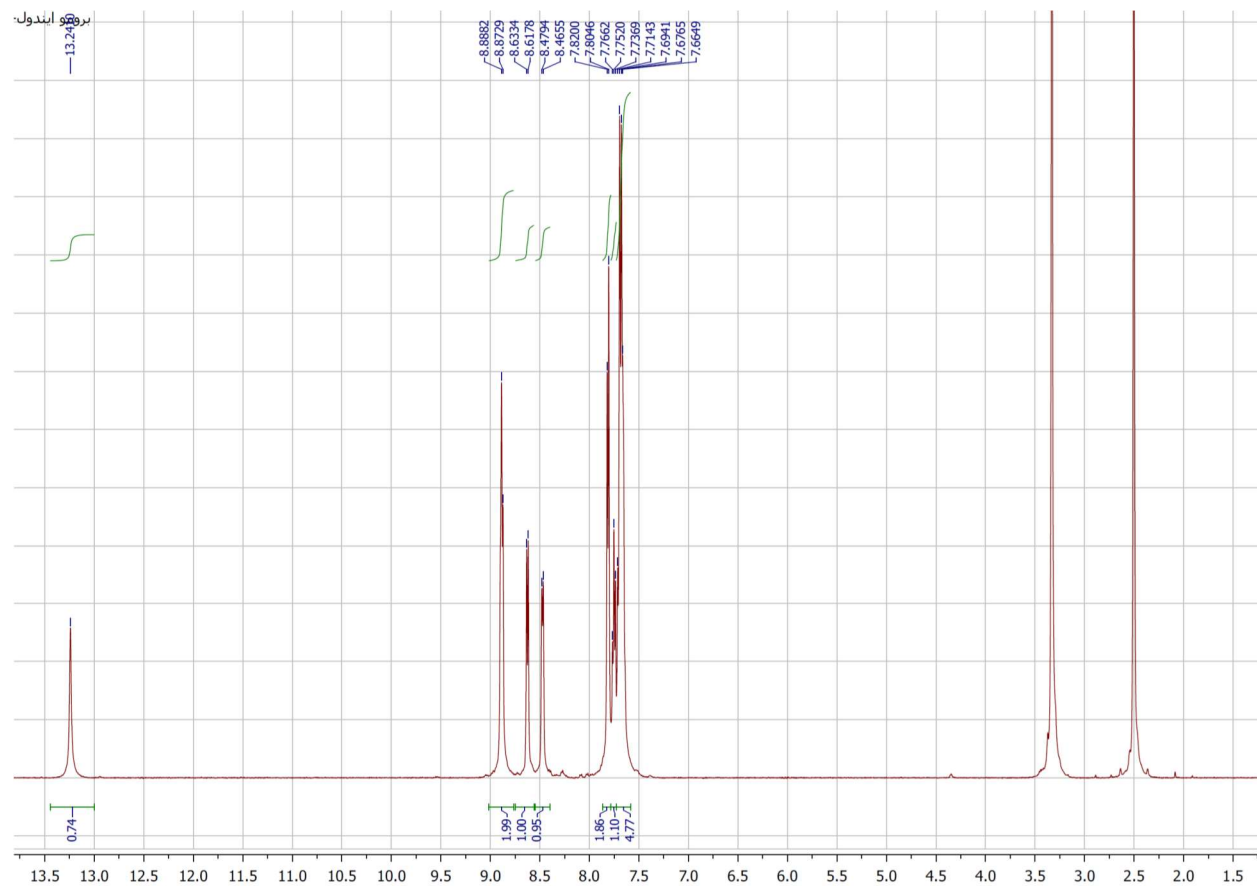


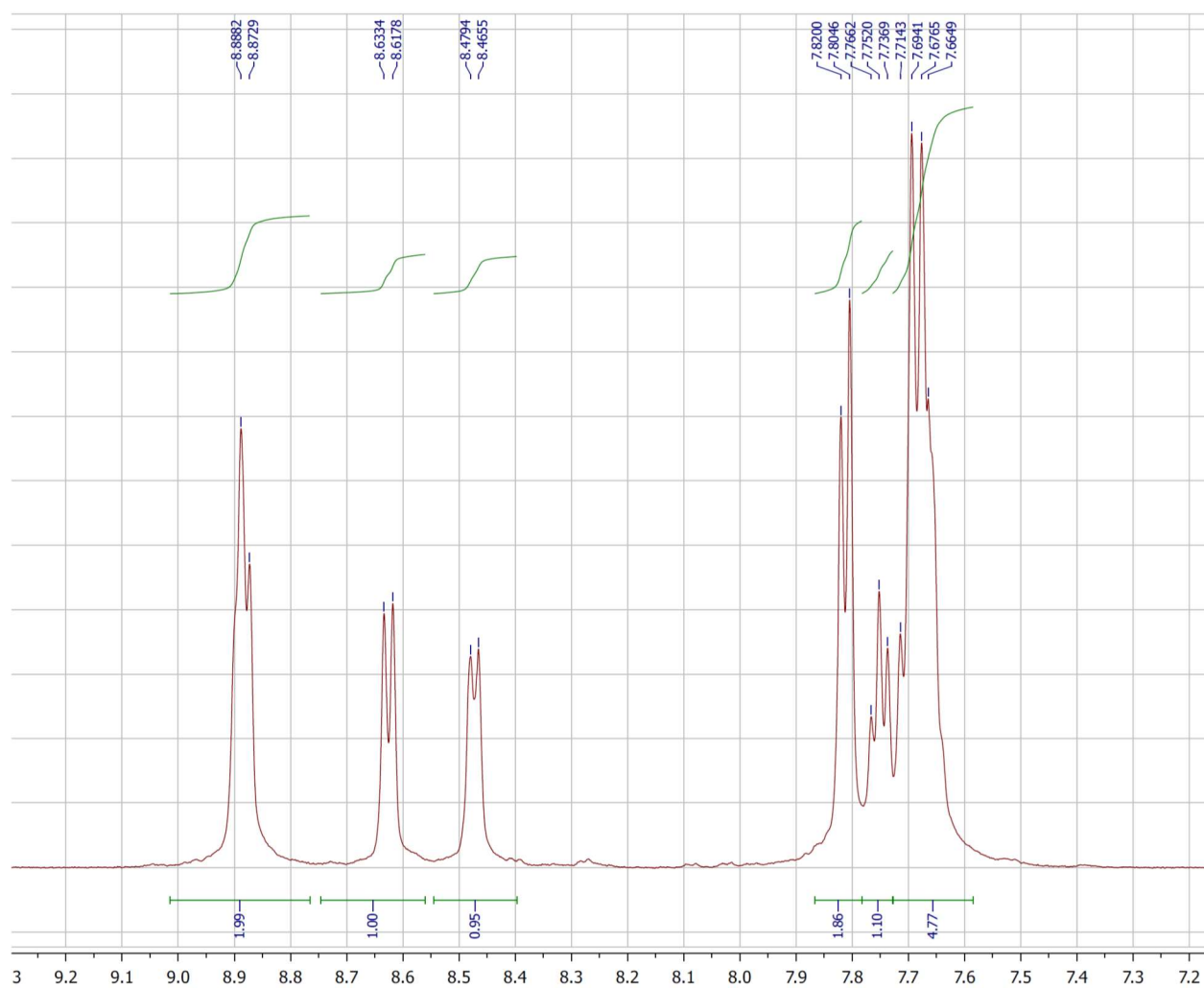


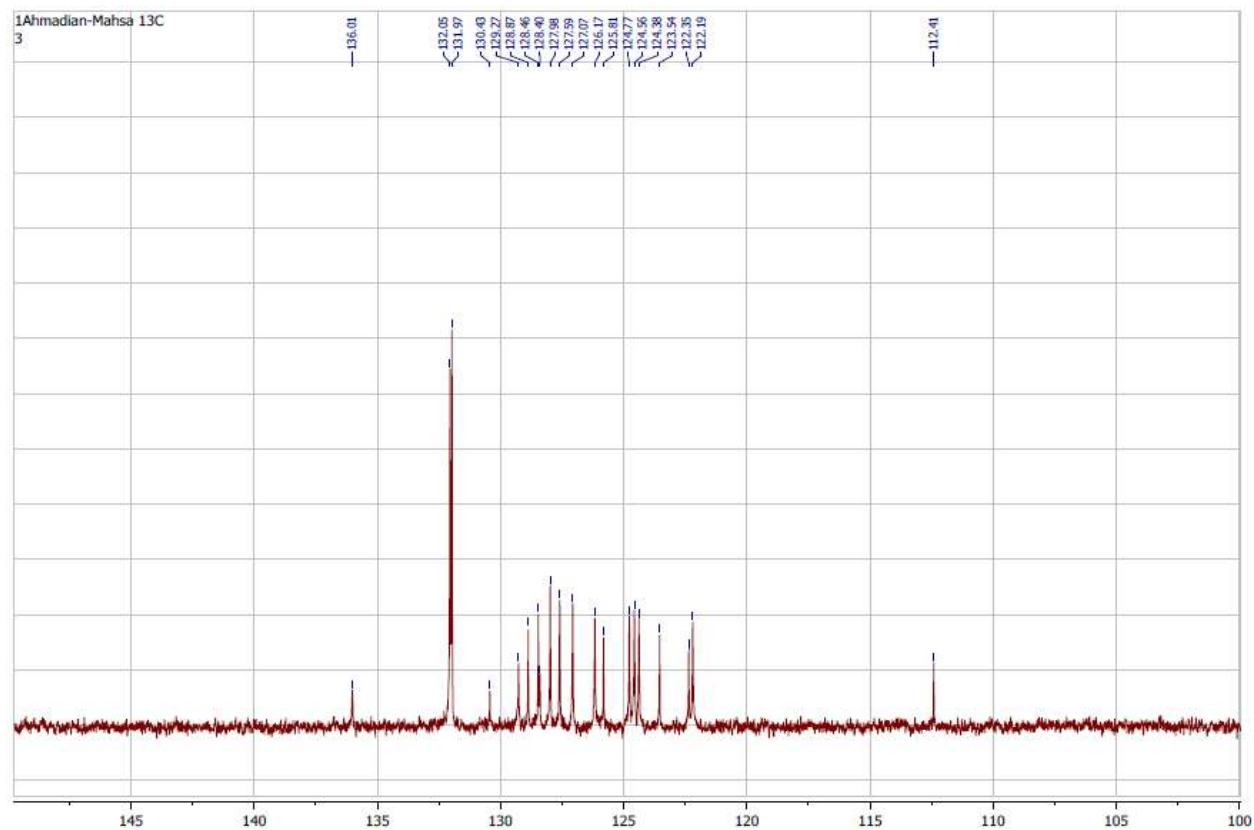
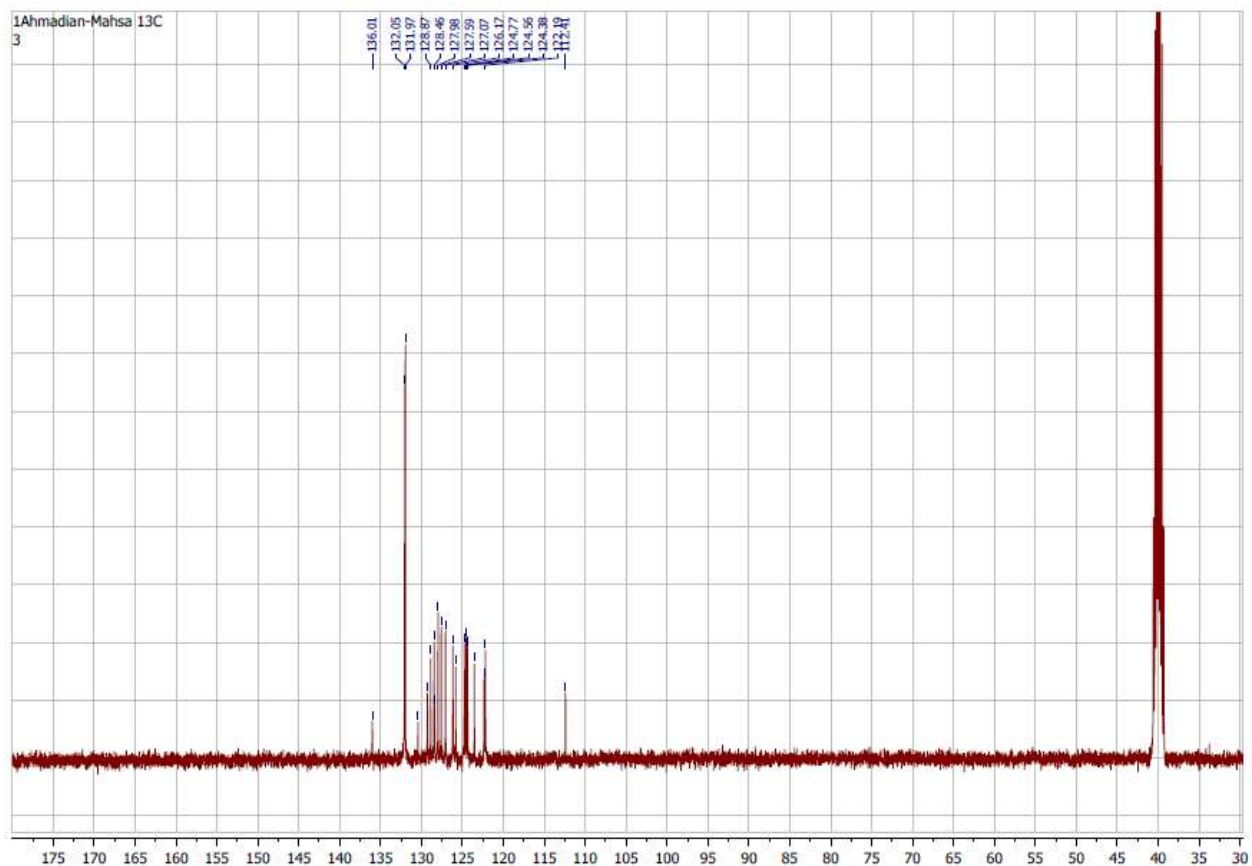
**S23** The mass spectrum of 2-(2-hydroxy,3-methoxyphenyl)-3-nitrodibenzo[e,g]indole (**3i**):



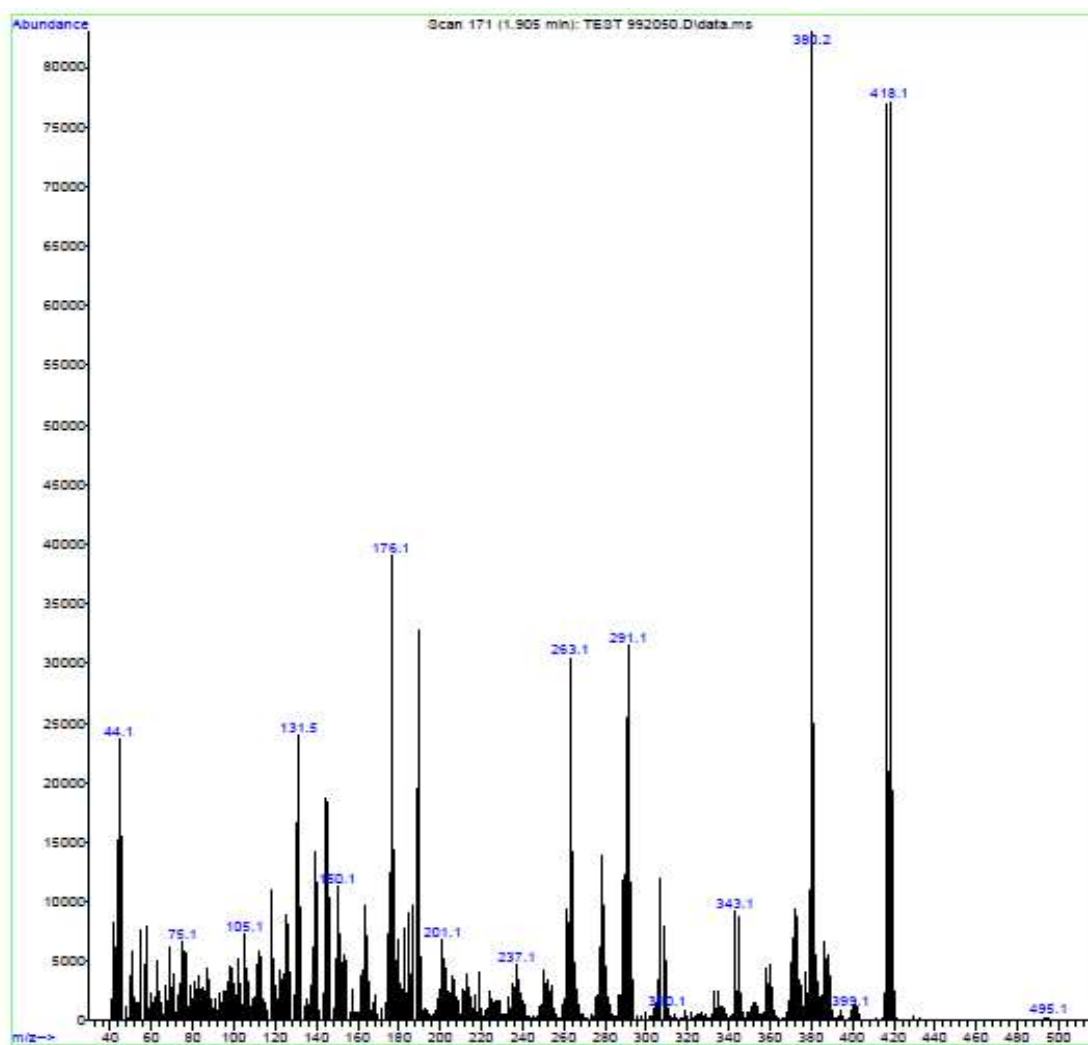
**S24** The  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR spectrum of 2-(4-bromophenyl)-3-nitrodibenzo[e,g]indole in  $\text{DMSO}-d_6$  (**3j**):



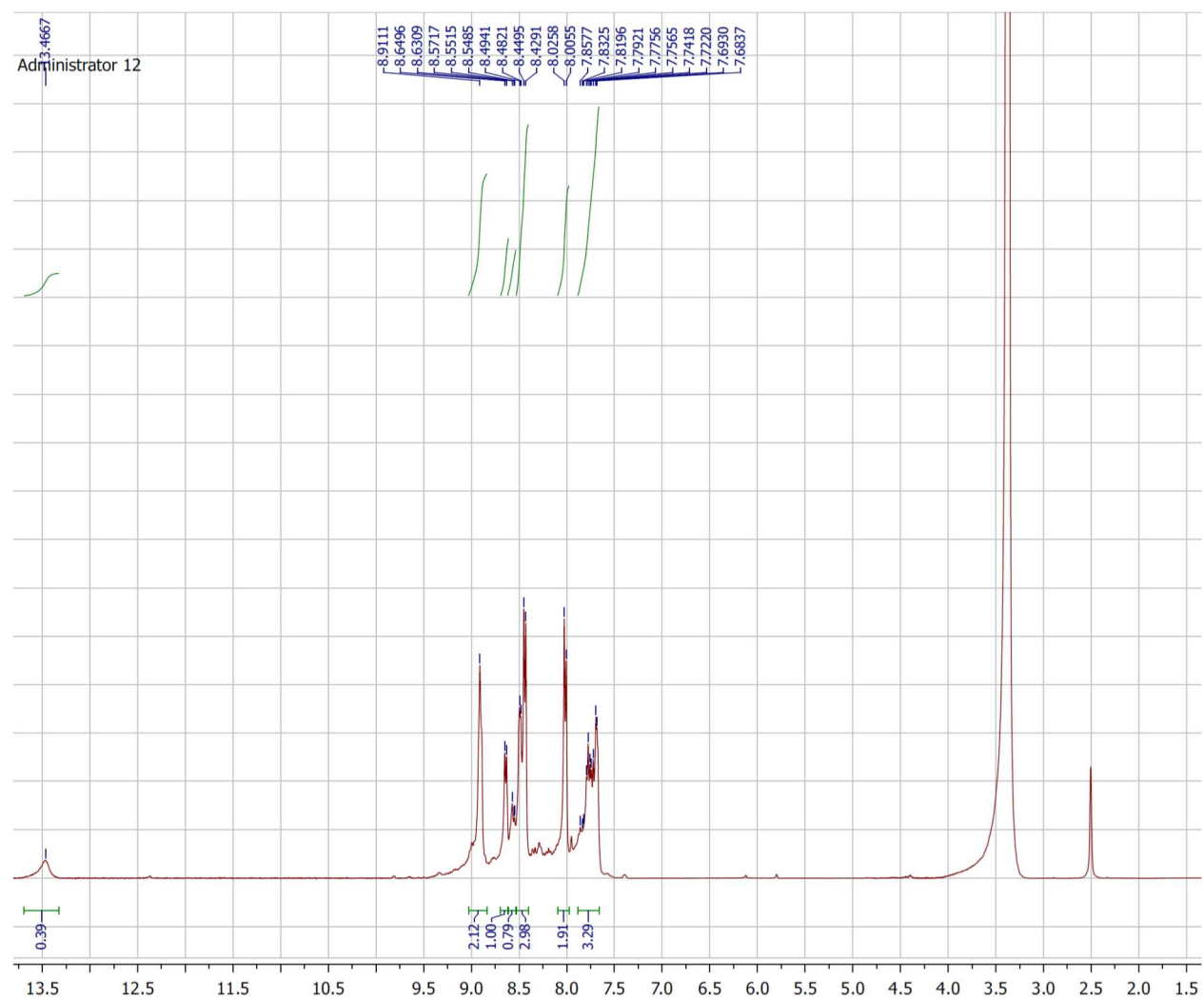




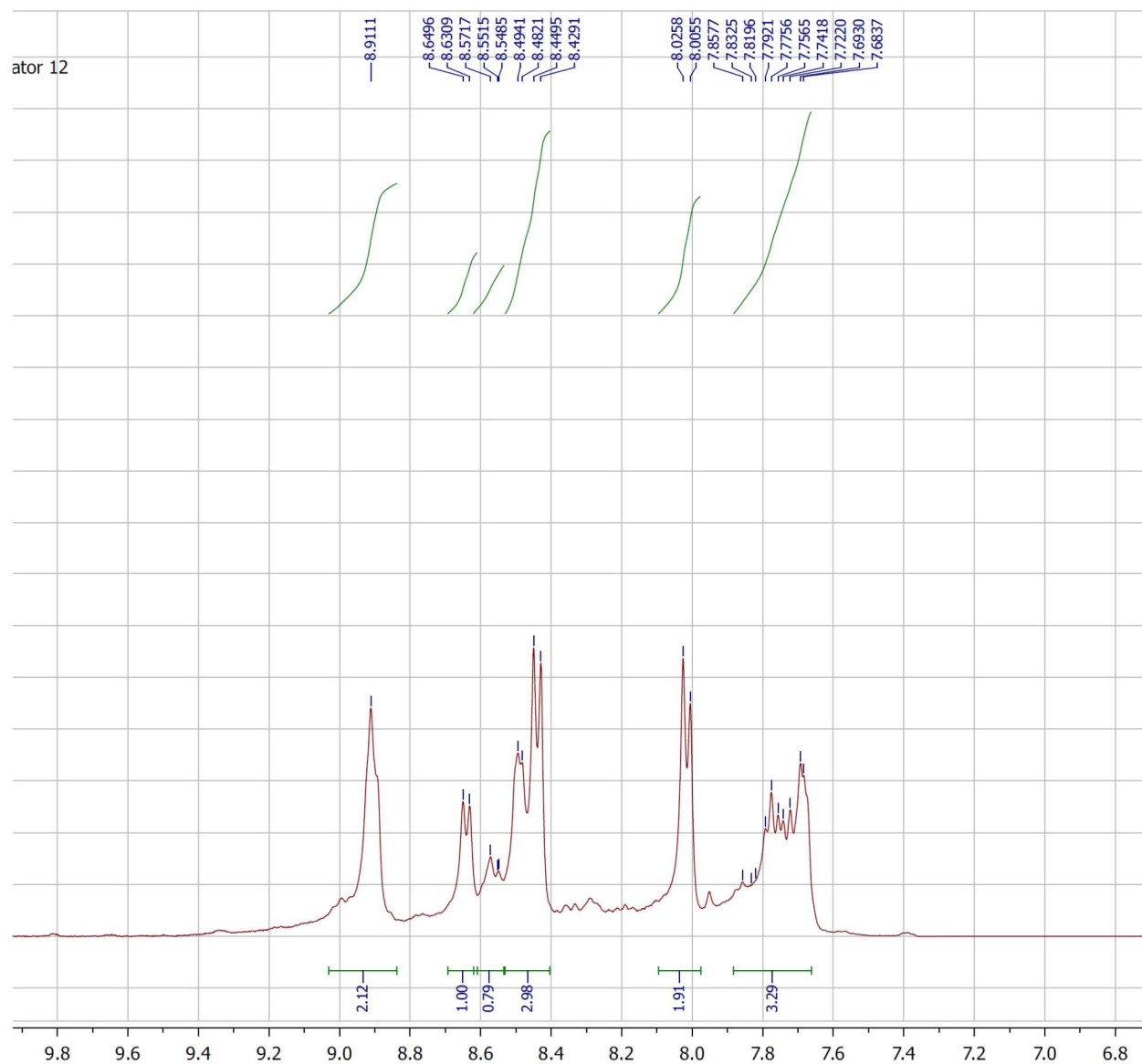
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**S26** The  $^1\text{H}$  NMR spectrum of 2-(4-nitrophenyl)-3-nitrodibenzo[*e,g*]indole in  $\text{DMSO}-d_6$  (**3k**):

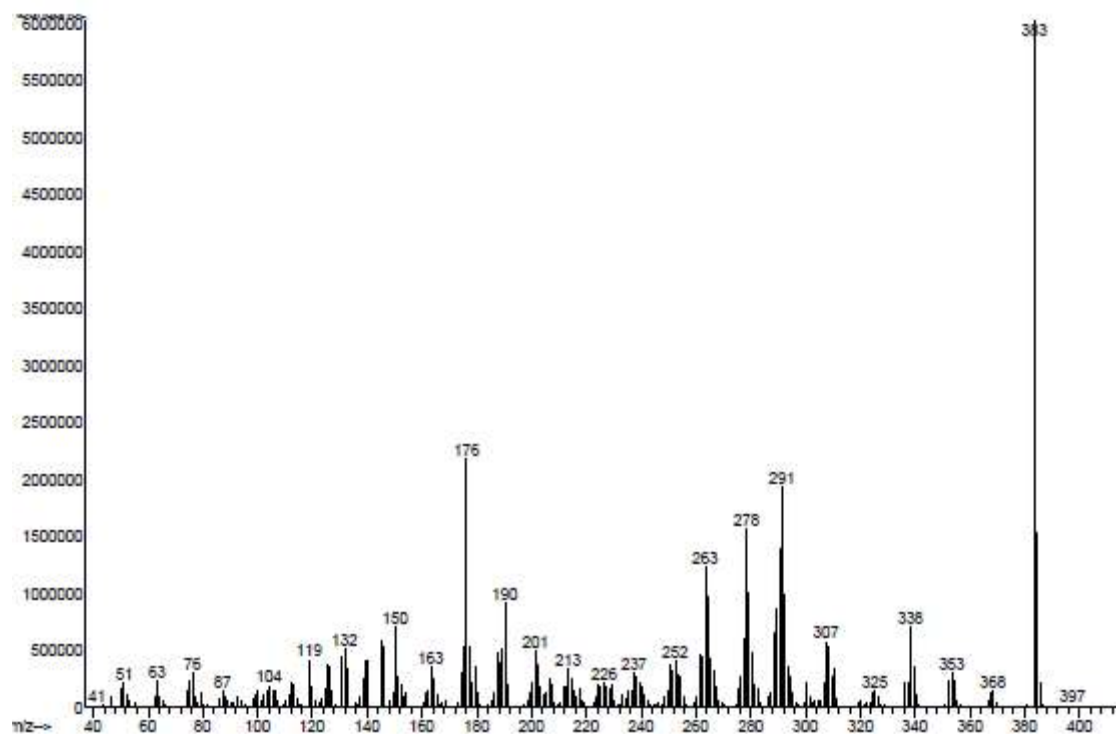


ator 12

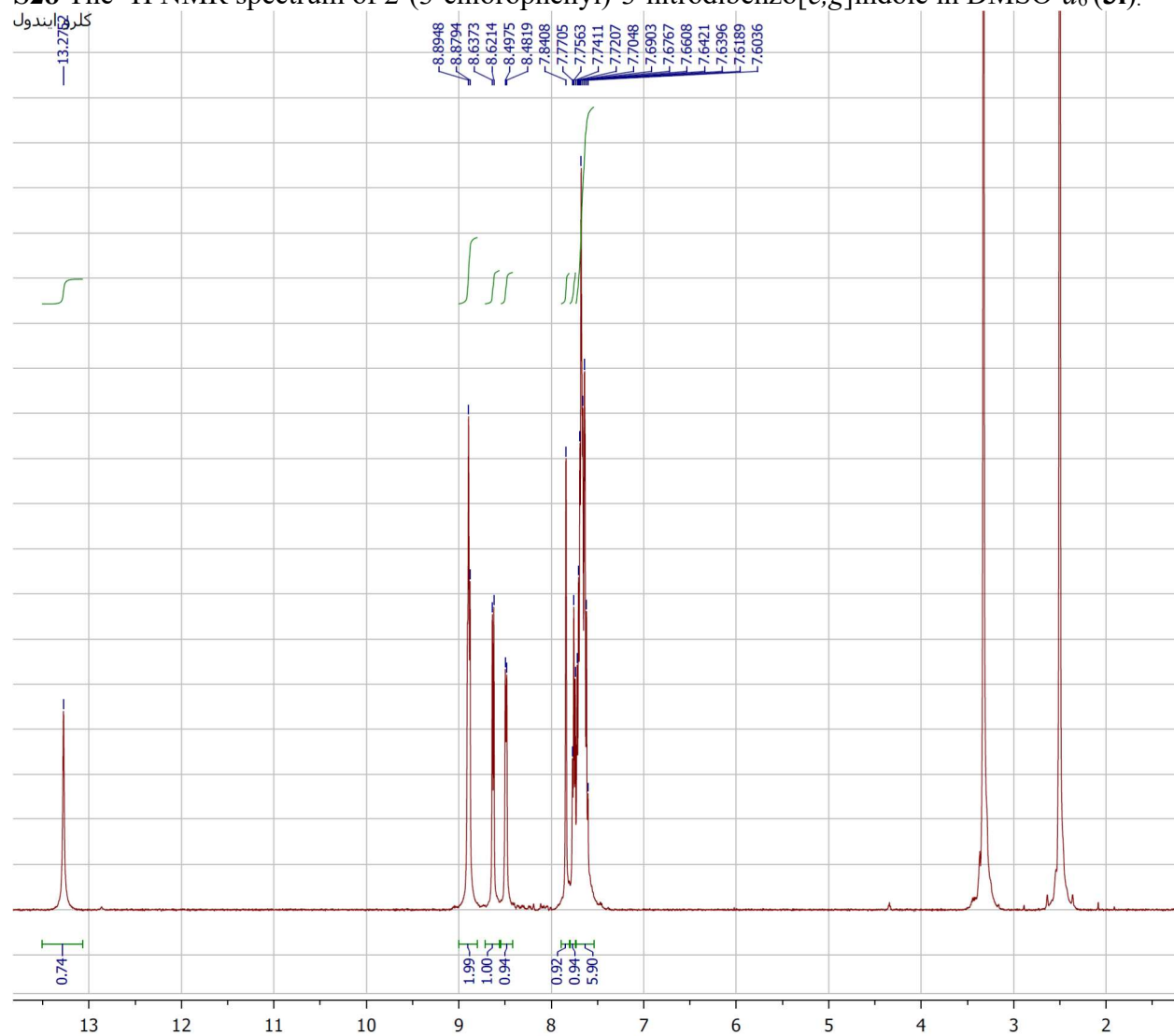


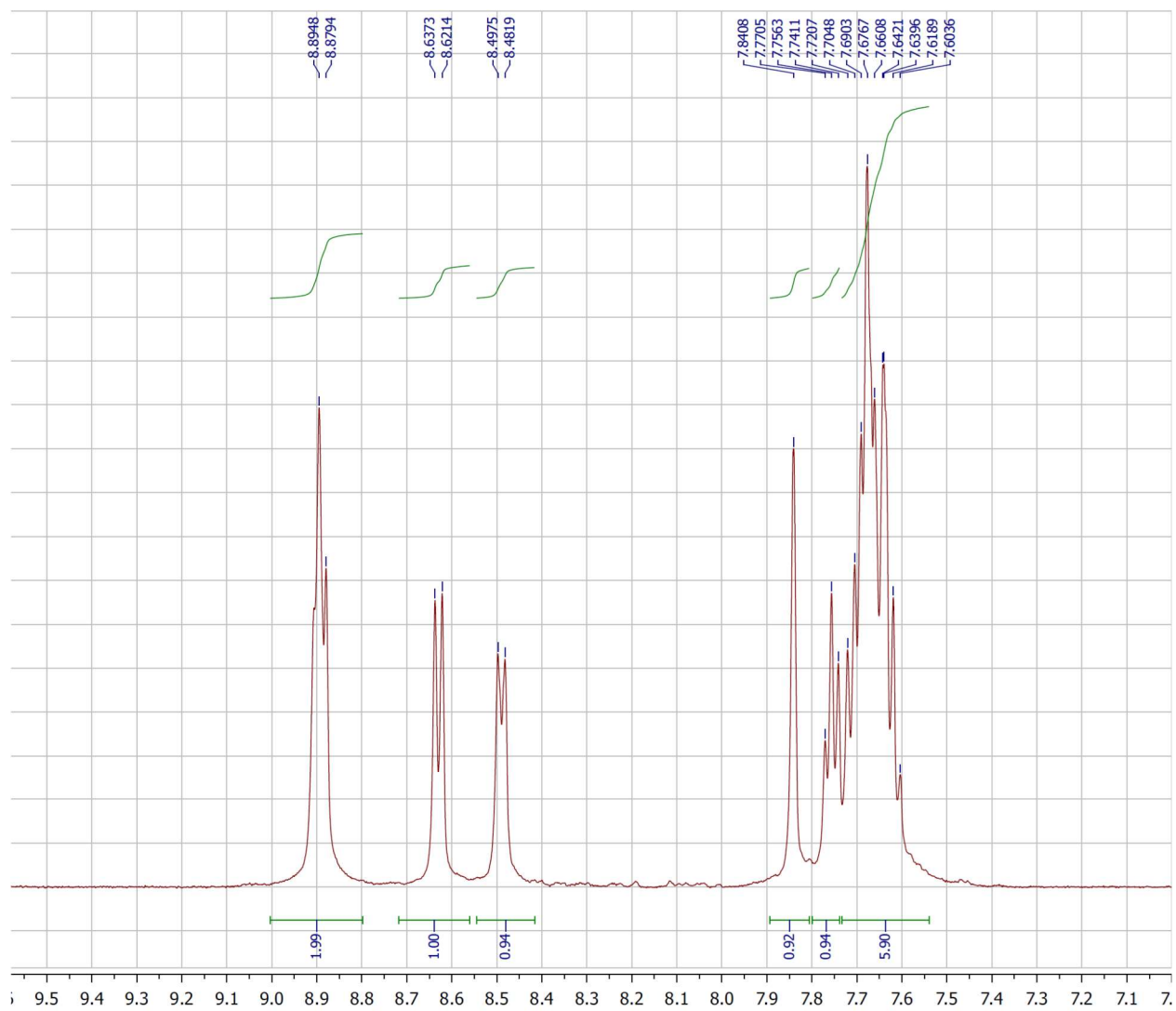


**S27** The mass spectrum of 2-(4-nitrophenyl)-3-nitrodibenzo[*e,g*]indole (**3k**):

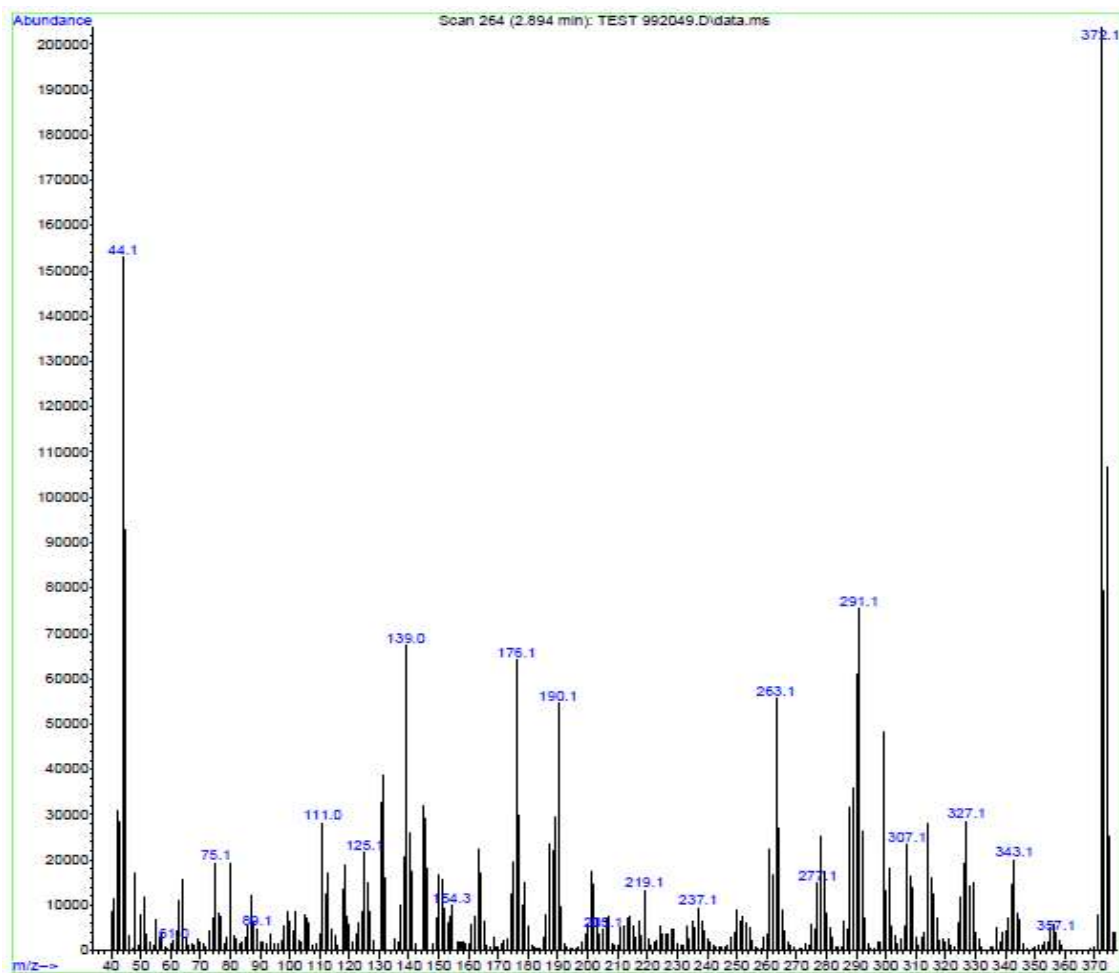


**S28** The  $^1\text{H}$  NMR spectrum of 2-(3-chlorophenyl)-3-nitrodibenzo[*e,g*]indole in  $\text{DMSO}-d_6$  (**31**):

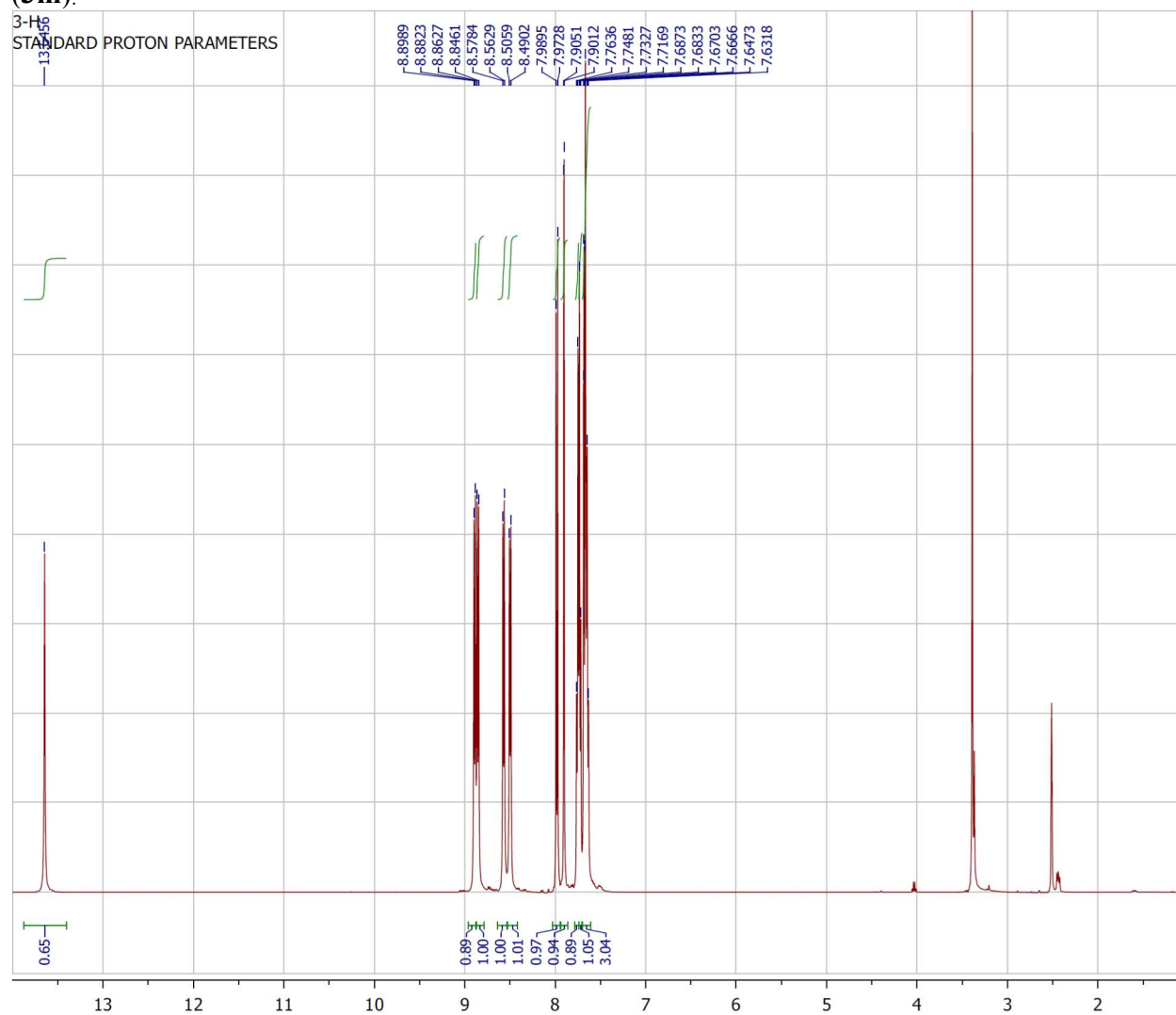


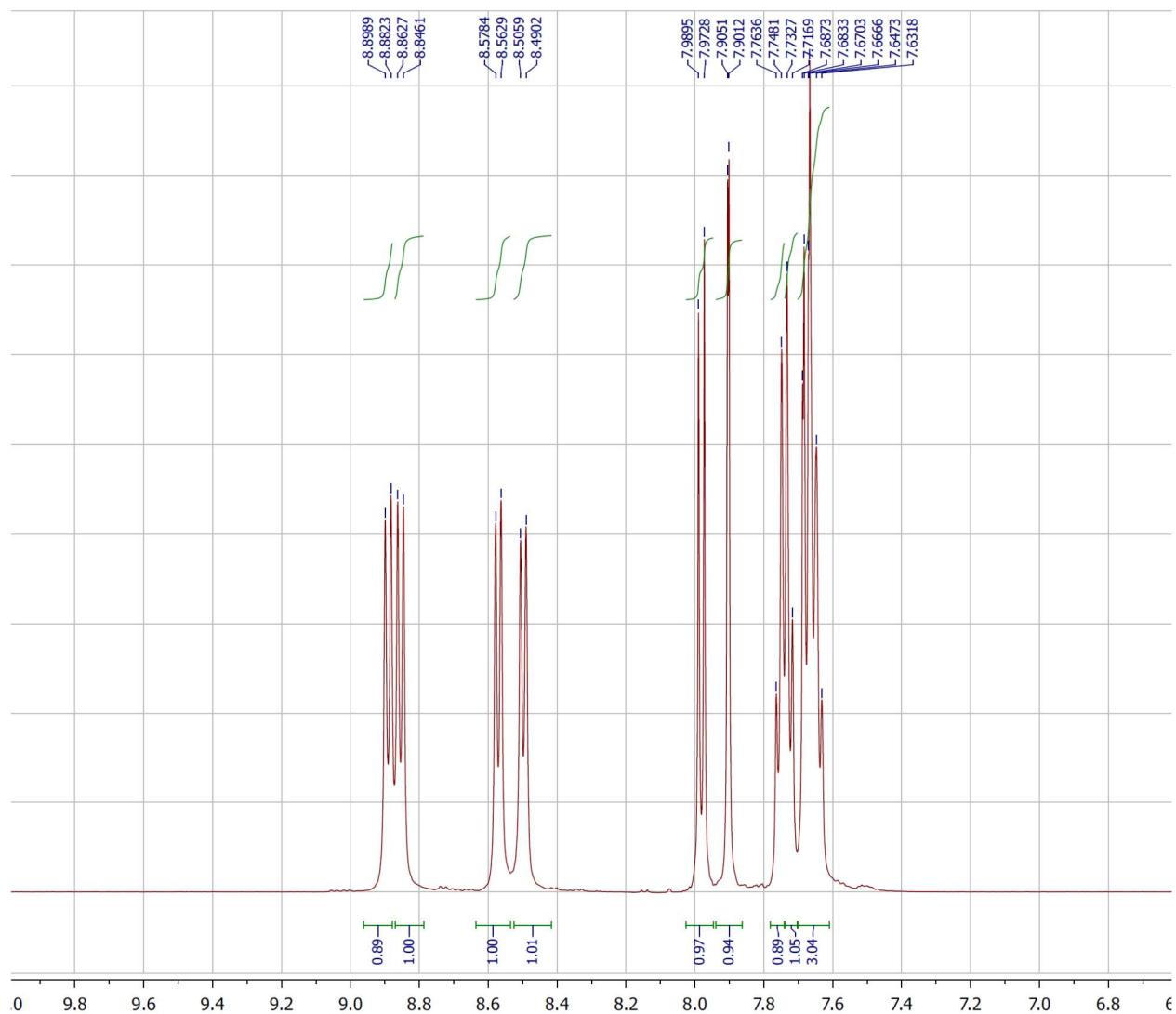


**S29** The Mass spectrum of 2-(3-chlorophenyl)-3-nitrodibenzo[e,g]indole (**31**):



**S30** The  $^1\text{H}$  NMR spectrum of 2-(2,4-dichlorophenyl)-3-nitrodibenzo[*e,g*]indole in  $\text{DMSO}-d_6$  (**3m**):





**S31** The Mass spectrum of 2-(2,4-dichlorophenyl)-3-nitrodibenzo[e,g]indole (**3m**):

