

## Exploring the Potential of Anthracene Derivatives as Fluorescence Emitters for Biomedical Applications

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**Keywords:** anthracene derivatives, triphenylamine groups, cyano groups, fluorescence emitters, biological properties

## Supplementary Material

### 1 Supplementary Data

#### Table Captions:

**Table 1** The physical and thermal properties of **7 & 8**

**Table 2** The electrochemical properties of **7 & 8**

#### Figure Captions:

**Scheme 1** The synthesis route used to prepare **7** & **8**

**Figure S1.** <sup>1</sup>H-NMR Spectrum of compound **4**

**Figure S2.** <sup>13</sup>C-NMR Spectrum of compound **4**

**Figure S3.** <sup>1</sup>H-NMR Spectrum of compound **5**

**Figure S4.** <sup>13</sup>C-NMR Spectrum of compound **5**

**Figure S5.** <sup>1</sup>H-NMR Spectrum of compound **7**

**Figure S6.** <sup>13</sup>C-NMR Spectrum of compound **7**

**Figure S7.** <sup>1</sup>H-NMR Spectrum of compound **8**

**Figure S8.** <sup>13</sup>C-NMR Spectrum of compound **8**

**Figure S9.** Thermal Gravimetric Analysis thermogram of compound **7**

**Figure S10.** Thermal Gravimetric Analysis thermogram of compound **8**

**Figure S11.** GC-MS chromatogram of compound **4**

**Figure S12.** GC-MS chromatogram of compound **5**

**Figure S13.** High Resolution Mass spectrum of compound **7**

**Figure S14.** High Resolution Mass spectrum of compound **8**

**Figure S15.** Electrochemical characterization of compound **7**

**Figure S16.** Electrochemical characterization of compound **8**

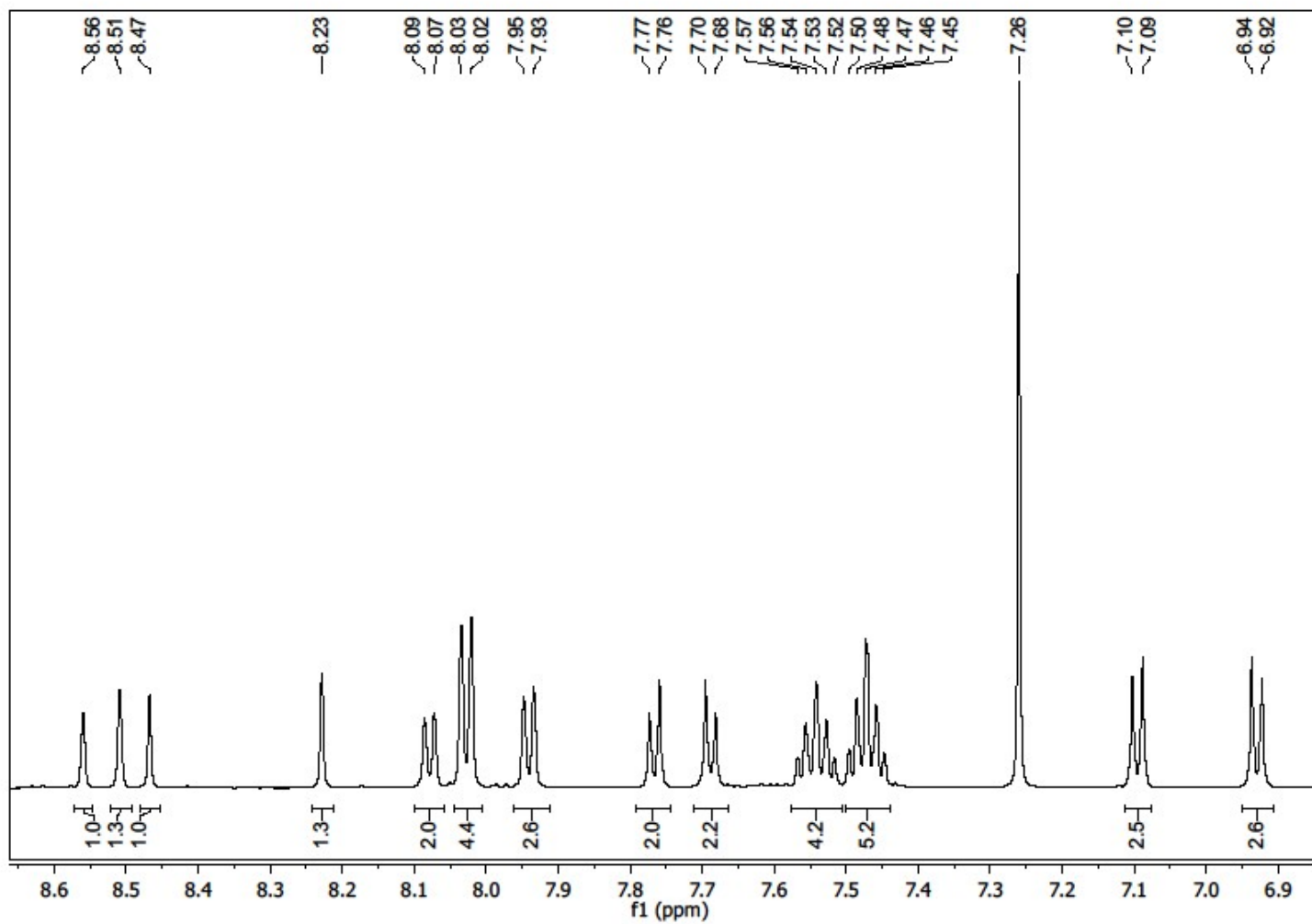


Figure S1. <sup>1</sup>H-NMR Spectrum of compound 4.

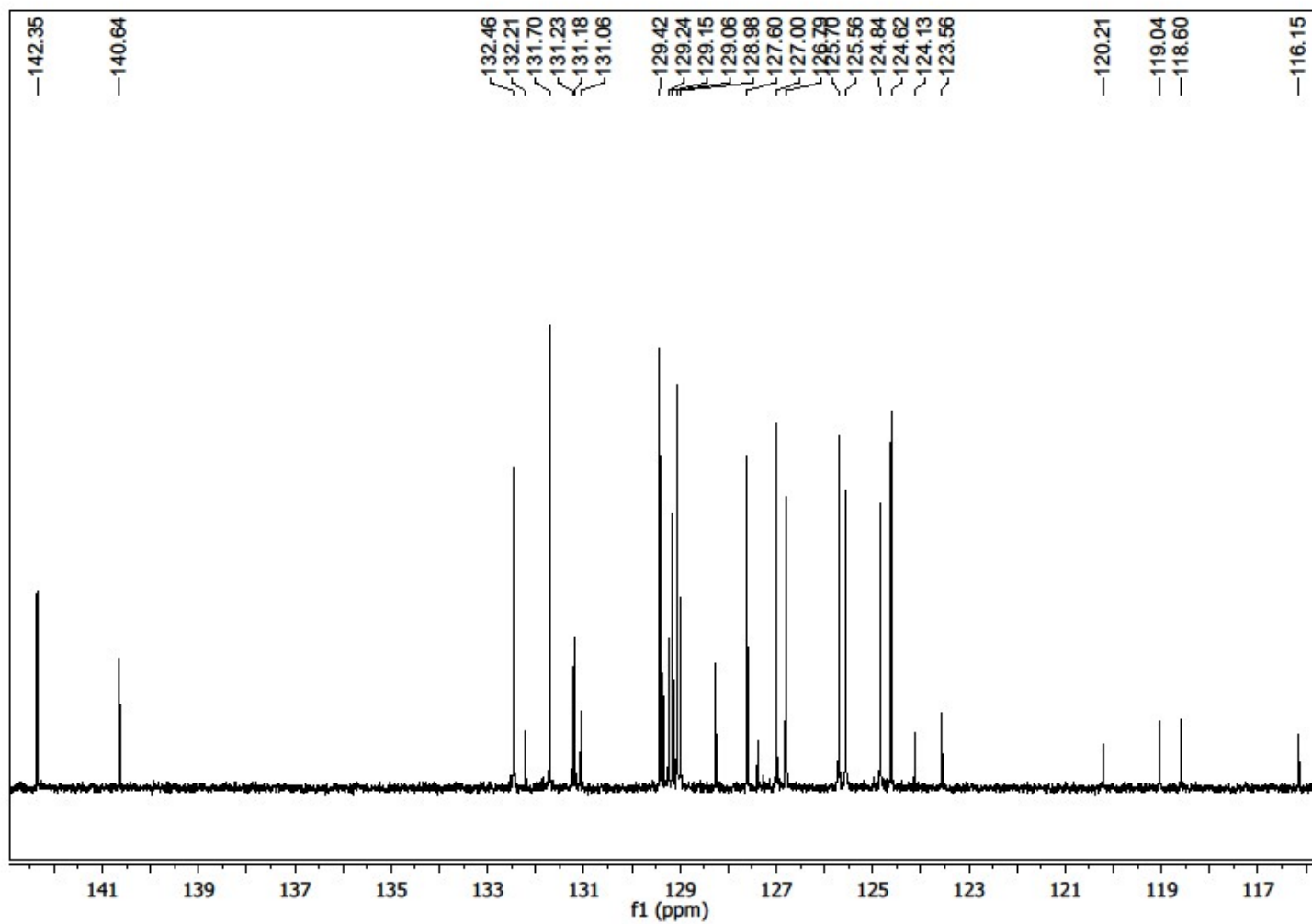


Figure S2. <sup>13</sup>C-NMR Spectrum of compound 4.

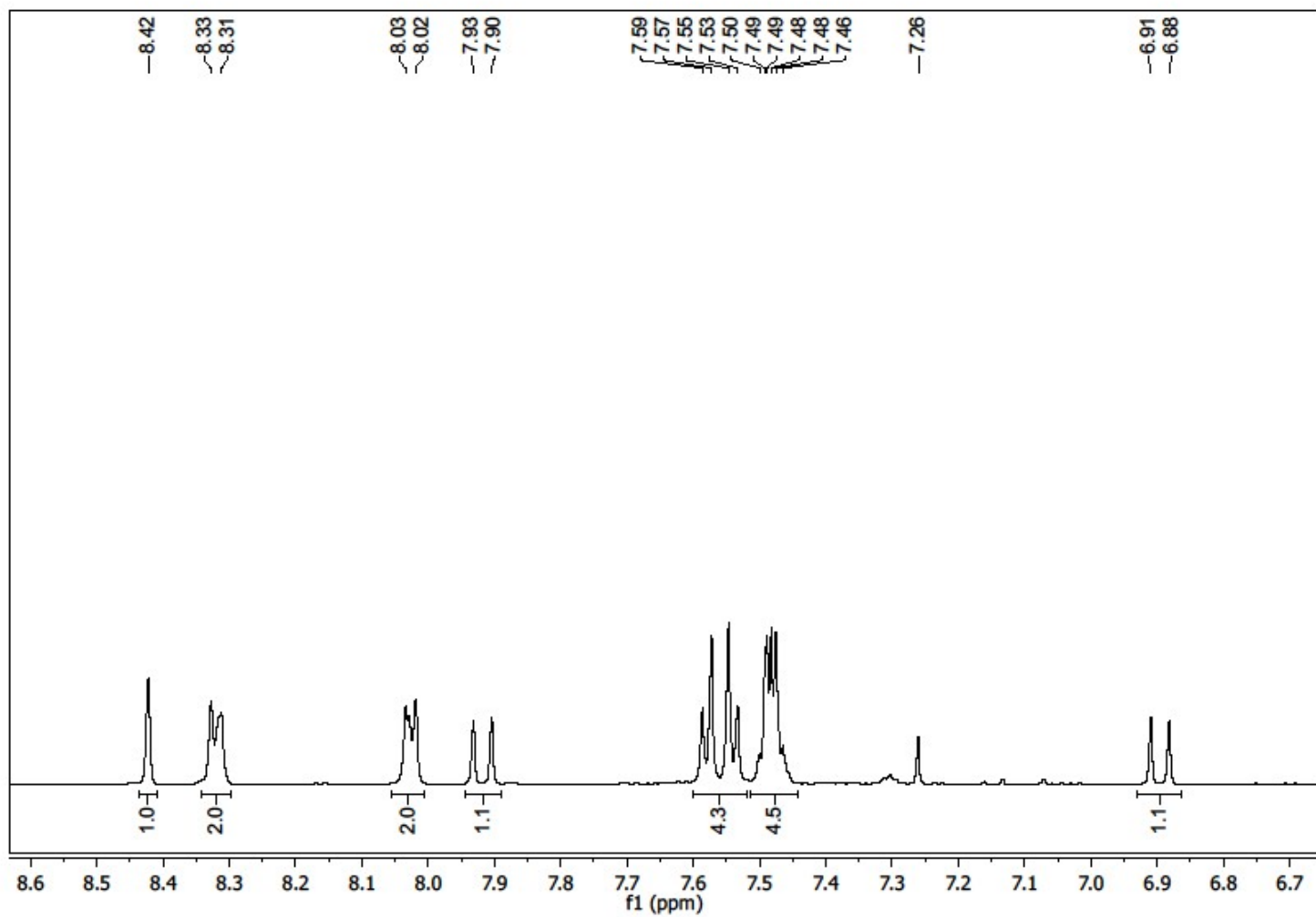


Figure S3. <sup>1</sup>H-NMR Spectrum of compound 5.

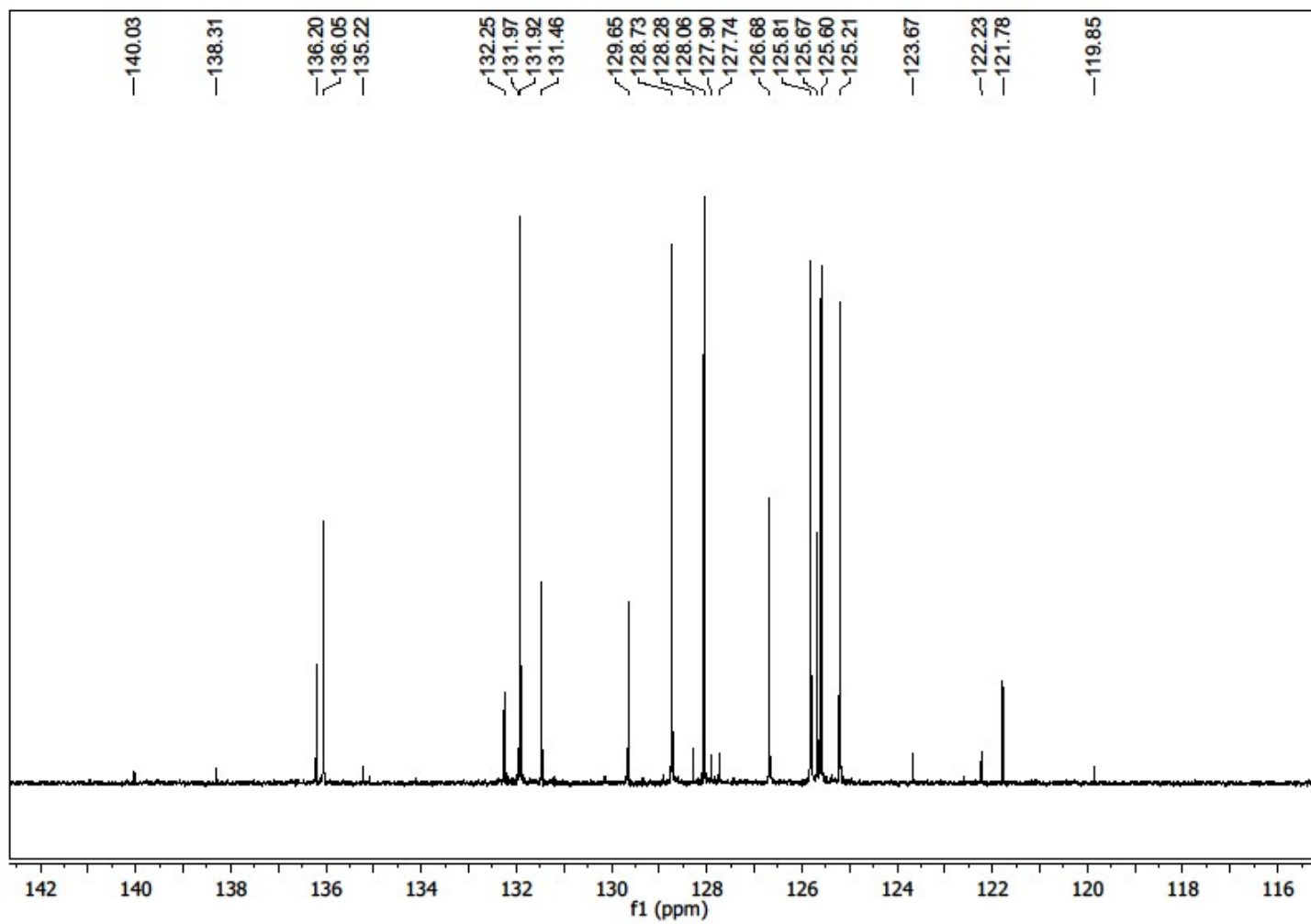


Figure S4. <sup>13</sup>C-NMR Spectrum of compound 5.

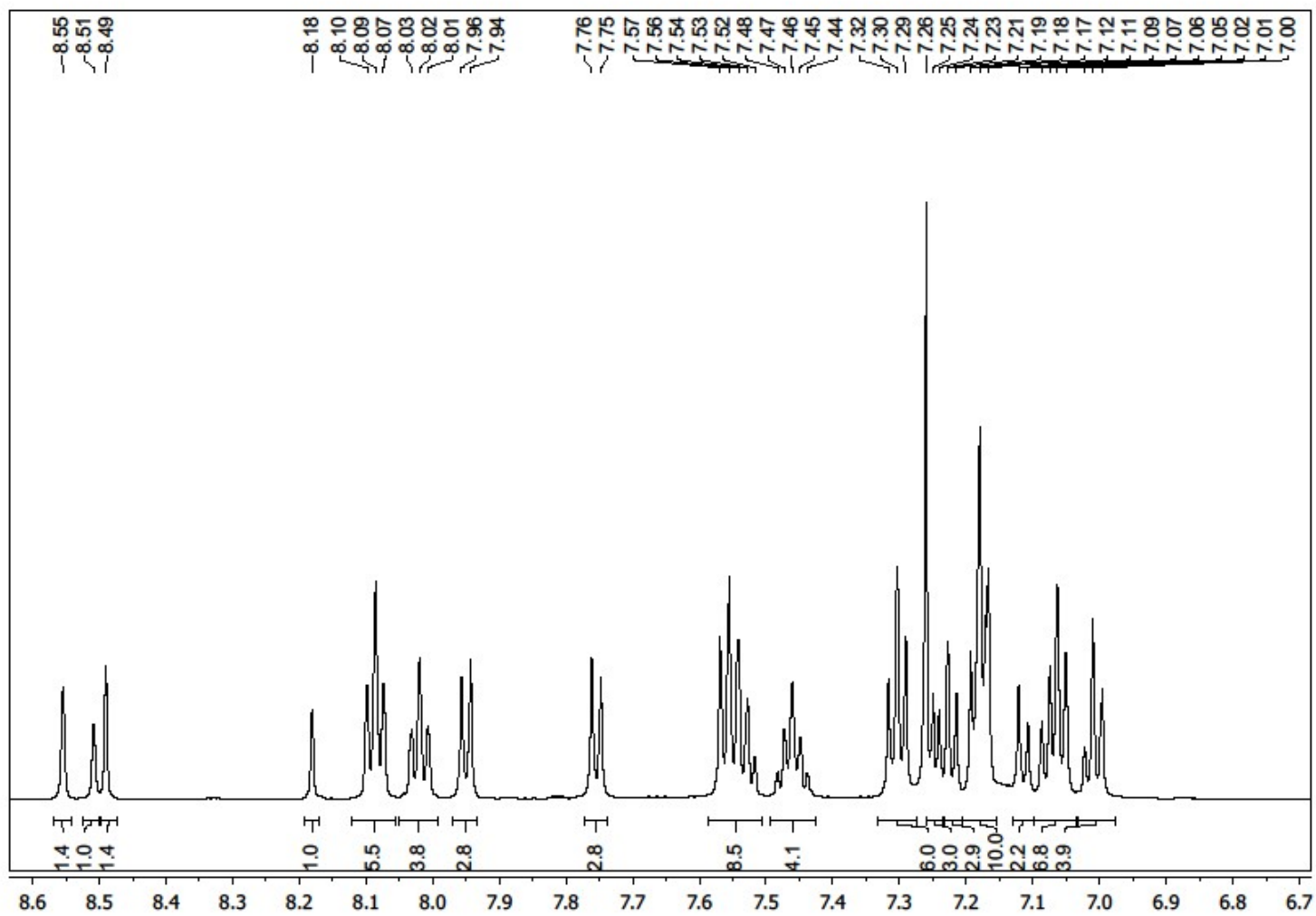


Figure S5. <sup>1</sup>H-NMR Spectrum of compound 7.

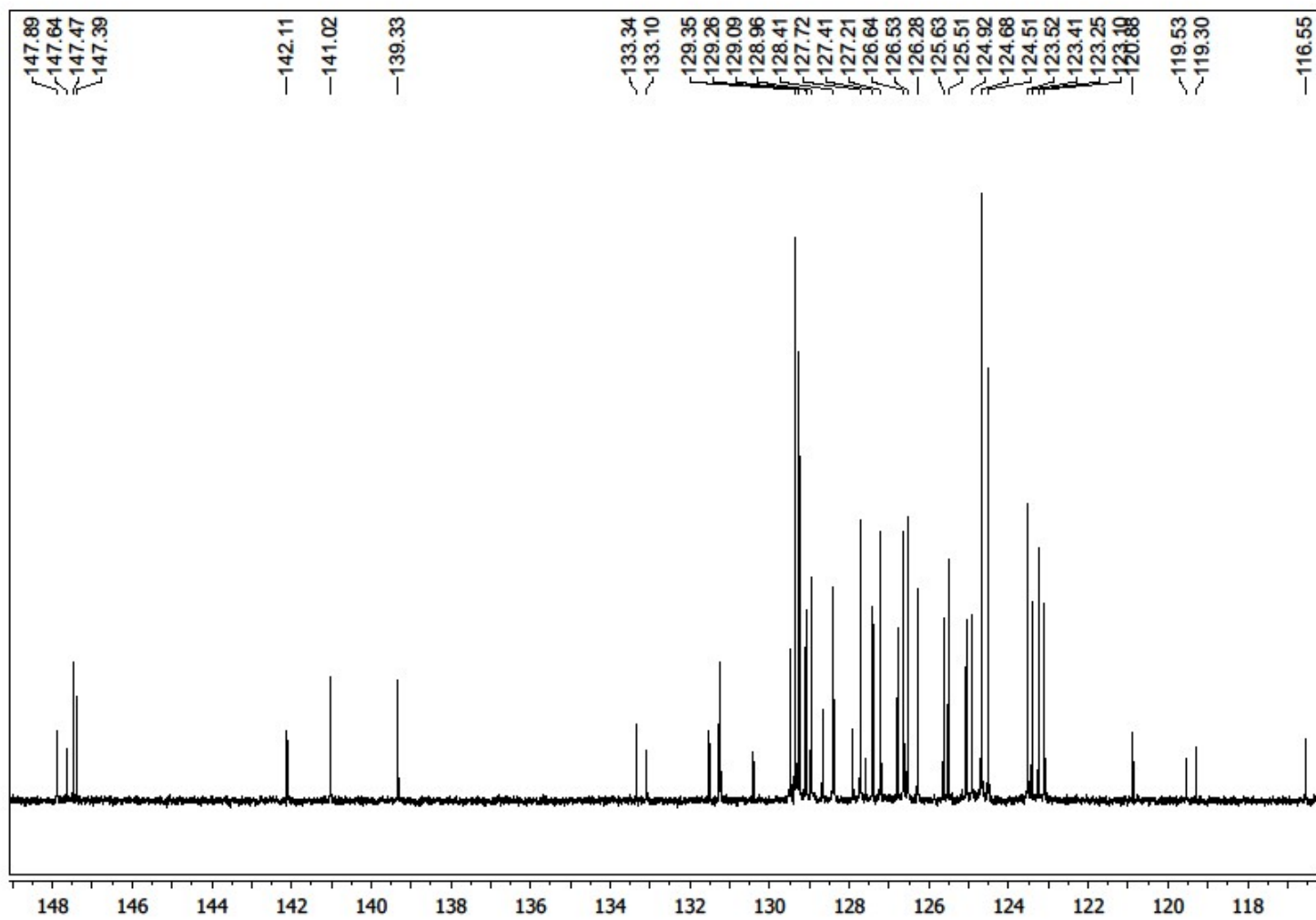


Figure S6.  $^{13}\text{C}$ -NMR Spectrum of compound 7.



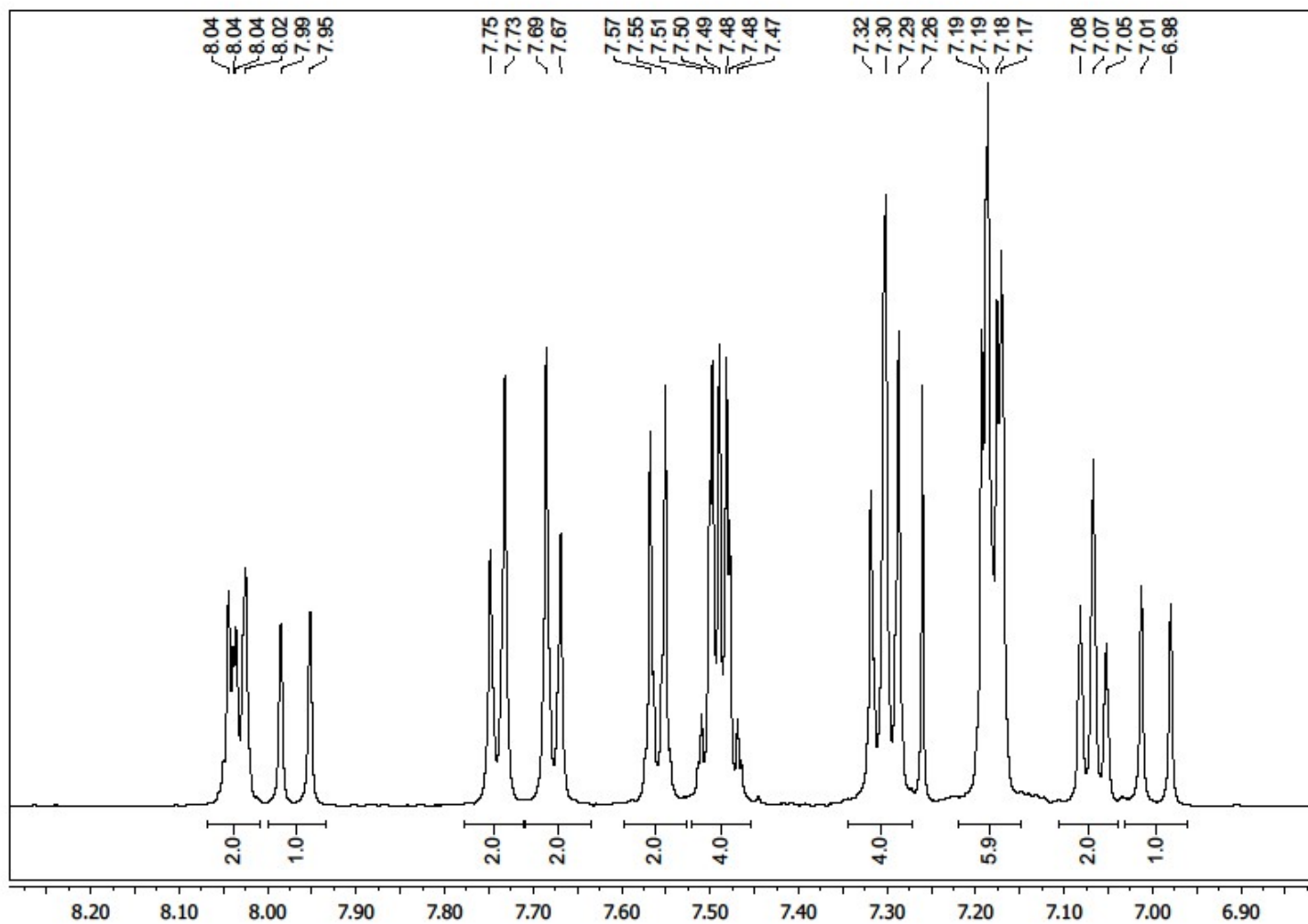


Figure S7. <sup>1</sup>H-NMR Spectrum of compound 8.

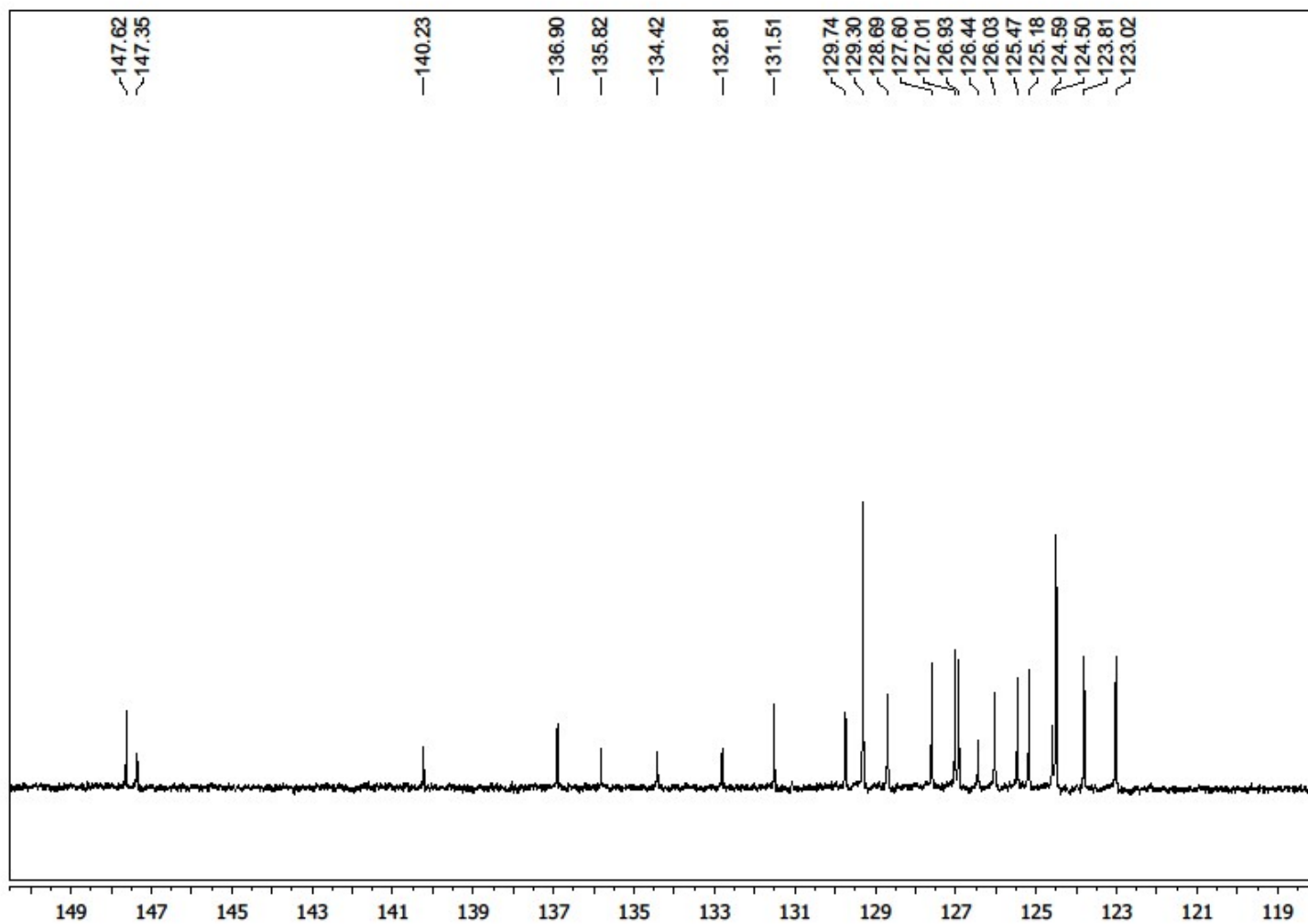
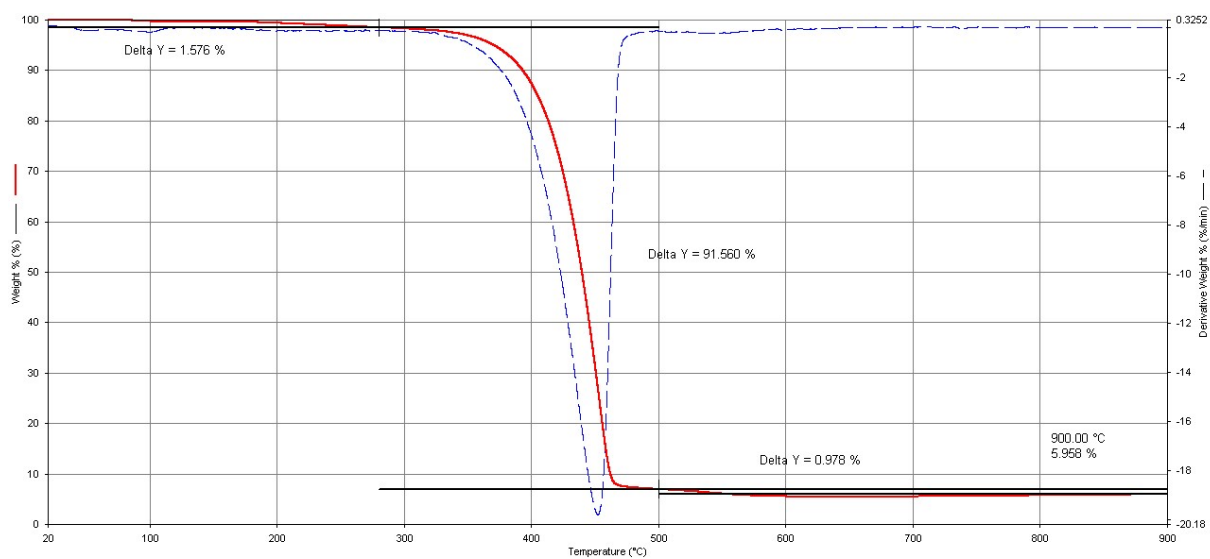
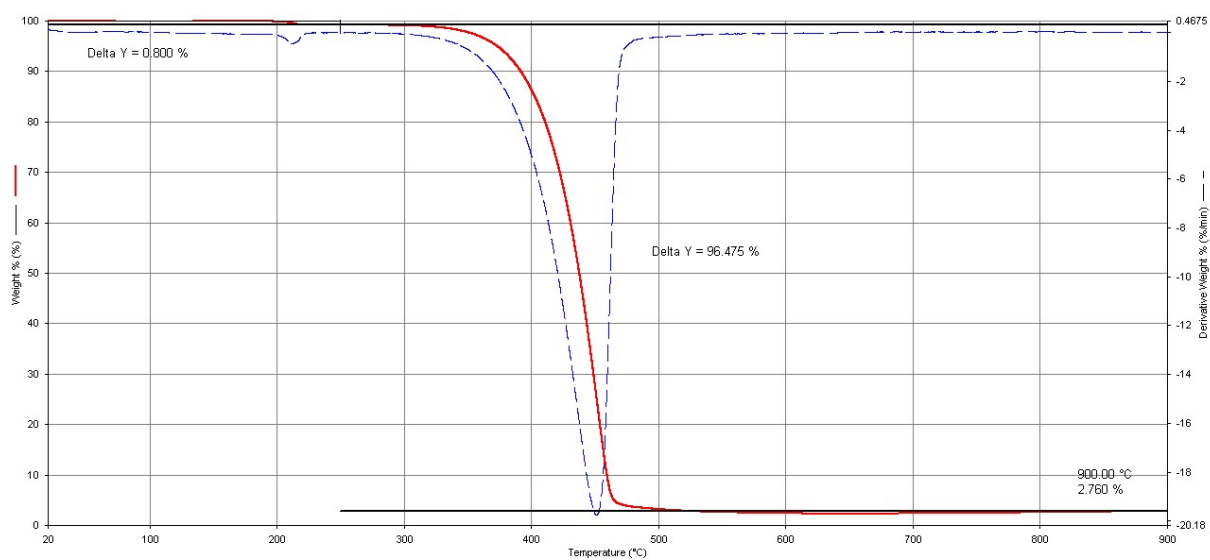


Figure S8. <sup>13</sup>C-NMR Spectrum of compound 8.



**Figure S9.** TGA thermogram of compound **7**.



**Figure S10.** TGA thermogram of compound **8**.

File :C:\MSDCHEM\1\DATA\FIGEN\GH141-1.D  
Operator : NEVIN  
Acquired : 23 May 2019 15:59 using AcqMethod SOLVENT.M  
Instrument : Instrument #1  
Sample Name: GH141+ chcl3  
Misc Info : Direkt  
Vial Number: 1

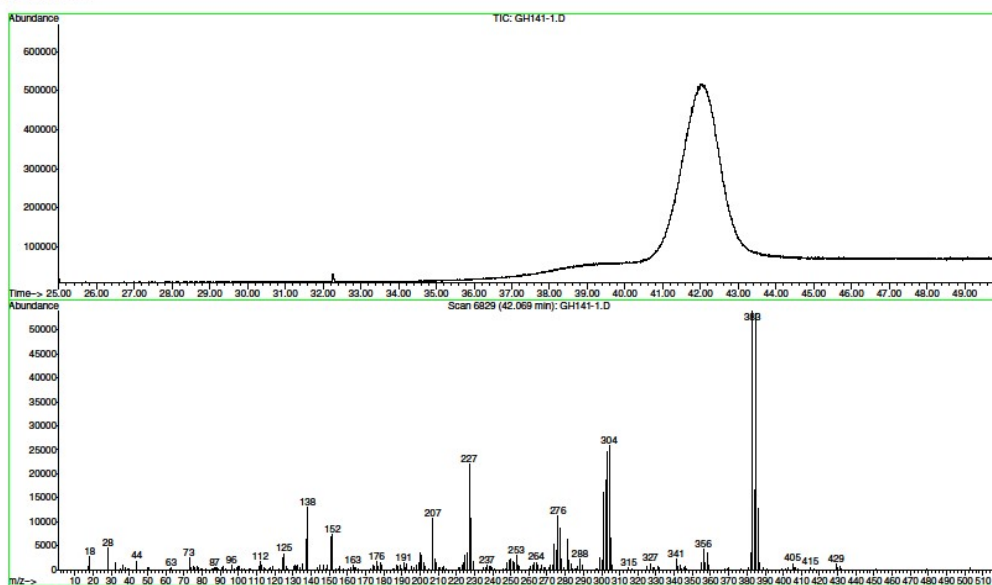


Figure S11. GC-MS chromatogram of compound 4.

File :C:\MSDCHEM\1\DATA\FIGEN\GH228-TEMIZ-1.D  
Operator : NEVIN  
Acquired : 21 May 2019 14:41 using AcqMethod SOLVENT.M  
Instrument : Instrument #1  
Sample Name: GH228-TEMIZ+ chcl3  
Misc Info : Direkt  
Vial Number: 1

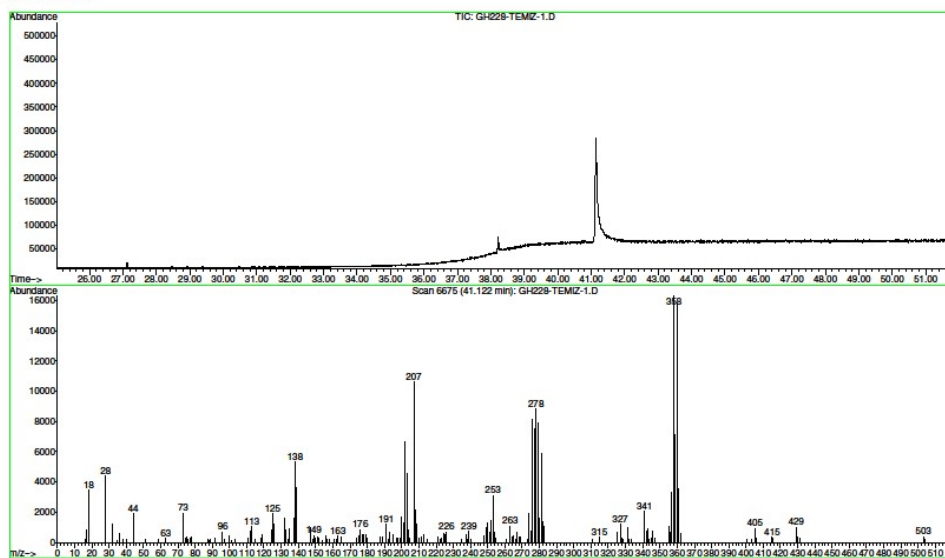


Figure S12. GC-MS chromatogram of compound 5.

### Compound Spectrum Report

<b>Analysis Info</b>		Acquisition Date	6/10/2020 9:12:48 AM
Analysis Name	D:\Data\Gulcin Haykir\GH 155_1.d	Operator	BDAL@DE
Method	tune_low-deneme.m	Instrument / Ser#	microTOF 10308
Sample Name	GH 155_1		
Comment	solvent DCM ADD FA		

<b>Acquisition Parameter</b>					
Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.3 Bar
Focus	Not active			Set Dry Heater	180 °C
Scan Begin	50 m/z	Set Capillary	4500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set End Plate Offset	-500 V	Set Divert Valve	Waste

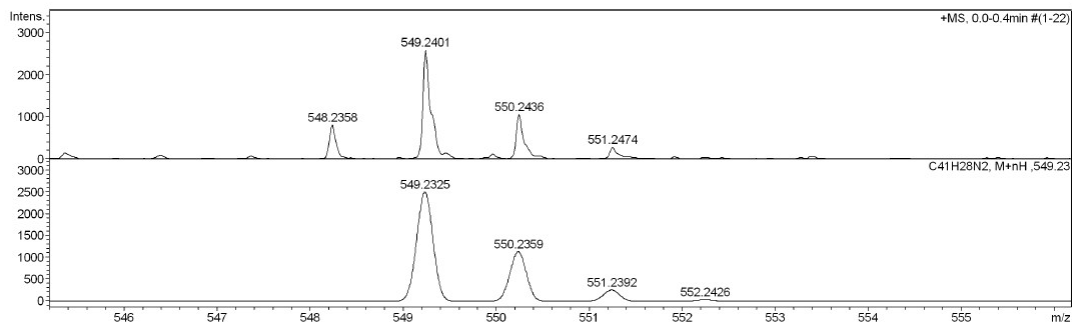


Figure S13. High Resolution Mass spectrum of compound 7.

### Compound Spectrum Report

<b>Analysis Info</b>		Acquisition Date	11/7/2017 3:12:48 PM
Analysis Name	D:\Data\Gulcin Haykir\GH190_HRMS.d	Operator	BDAL@DE
Method	tune_low.m	Instrument / Ser#	microTOF 10308
Sample Name	GH190_HRMS		
Comment			

<b>Acquisition Parameter</b>					
Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.3 Bar
Focus	Not active			Set Dry Heater	180 °C
Scan Begin	50 m/z	Set Capillary	4500 V	Set Dry Gas	2.5 l/min
Scan End	3000 m/z	Set End Plate Offset	-500 V	Set Divert Valve	Waste

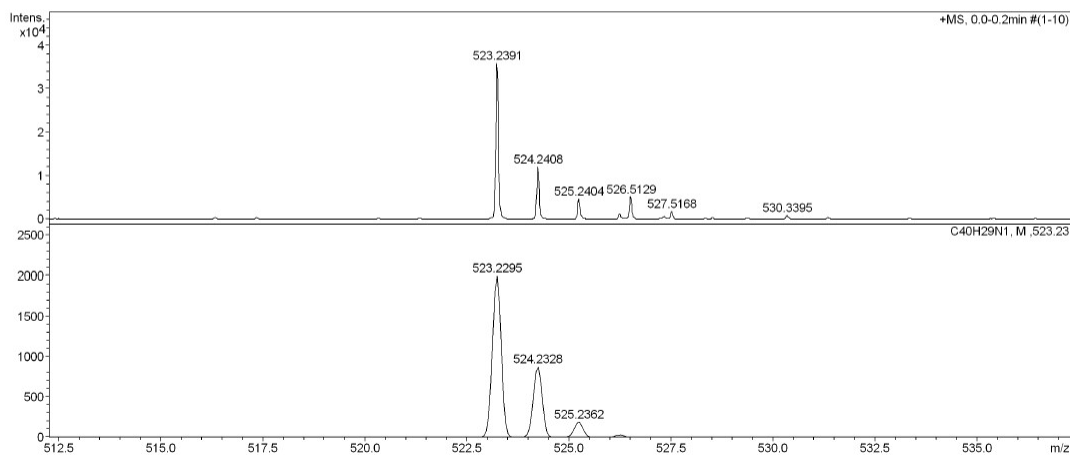


Figure S14. High Resolution Mass spectrum of compound 8.

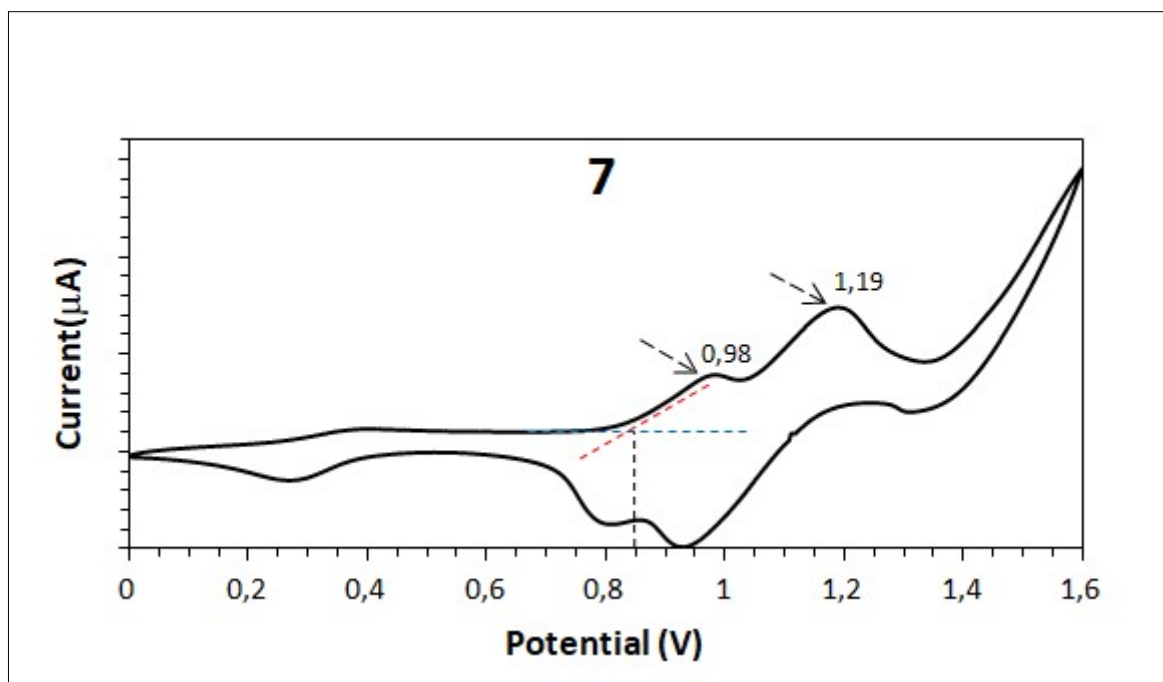


Figure S15. Electrochemical characterization of compound 7.

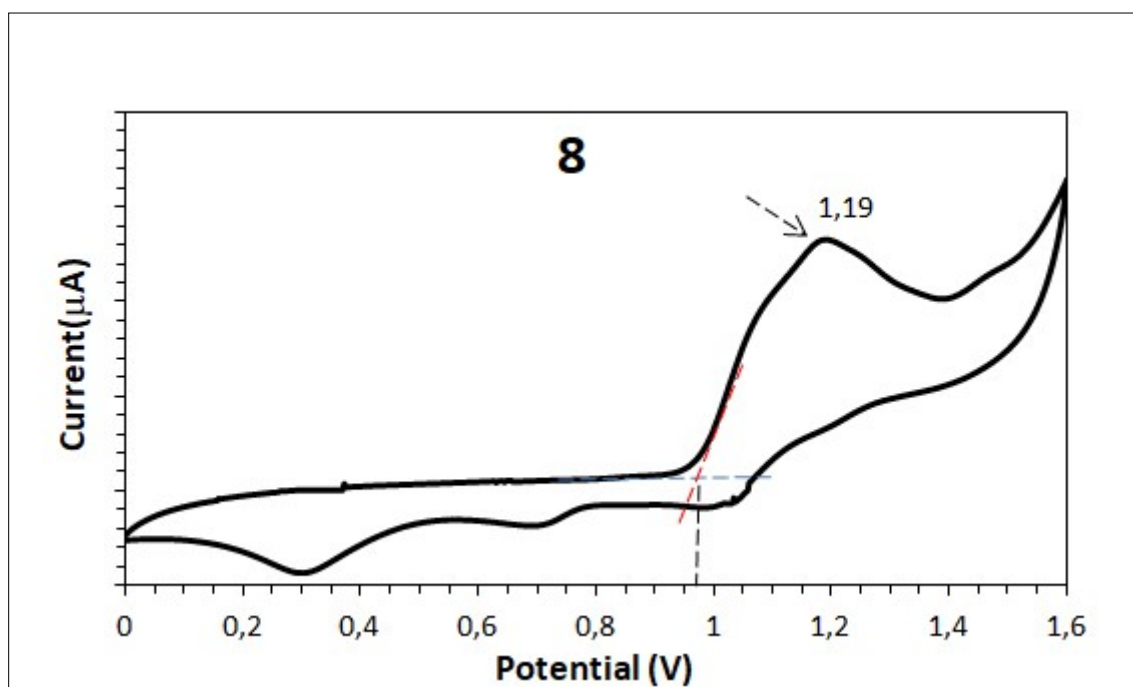


Figure S16. Electrochemical characterization of compound 8.

