

Selective Syntheses of Novel Polyether Fullerene Multiple Adducts

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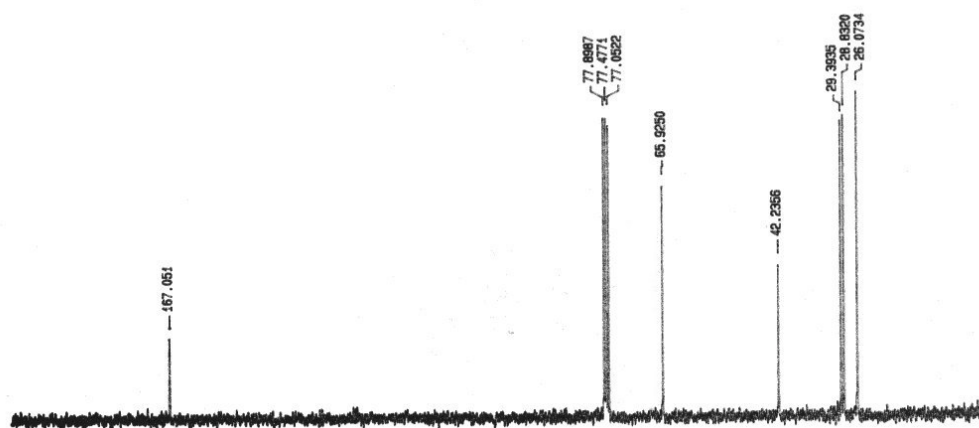
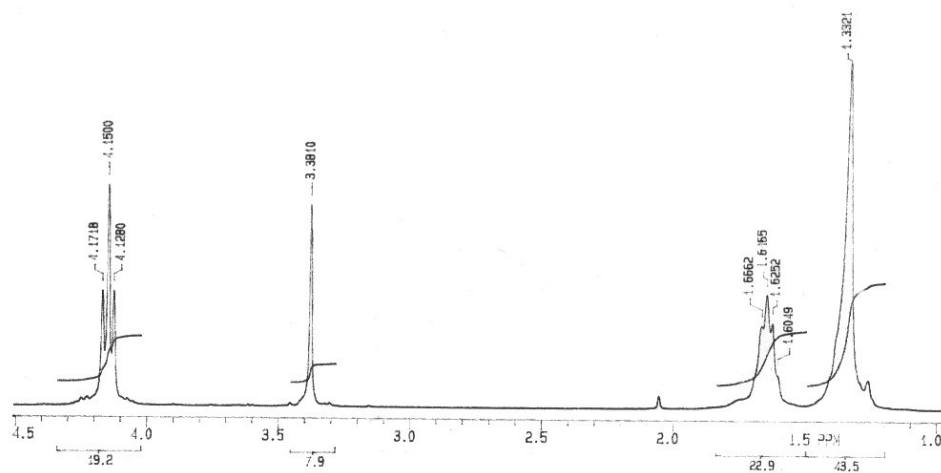
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(Supporting Information)

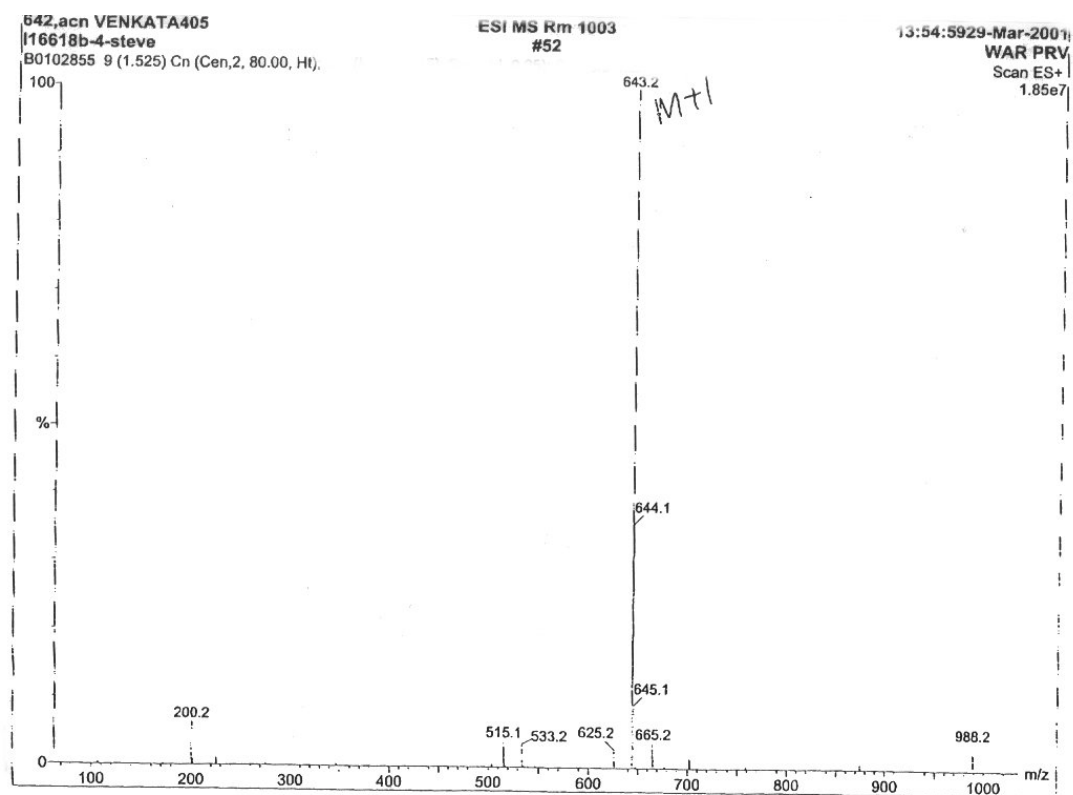
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General Experimental Section: ^1H NMR spectra were taken on a 300MHz NMR spectrometer and ^{13}C NMR spectra were taken on a 500 MHz NMR spectrometer. Mass spectra were taken using either ESI-MS or MALDI-TOF mass spectrometer. All the $^3\text{He}@C_{60}$ multiple adducts were prepared using the same procedure as for their corresponding pristine C_{60} adducts, with $^3\text{He}@C_{60}$ in place of pristine C_{60} . ^3He NMR spectra were recorded at Yale University, using gaseous ^3He as internal standard.

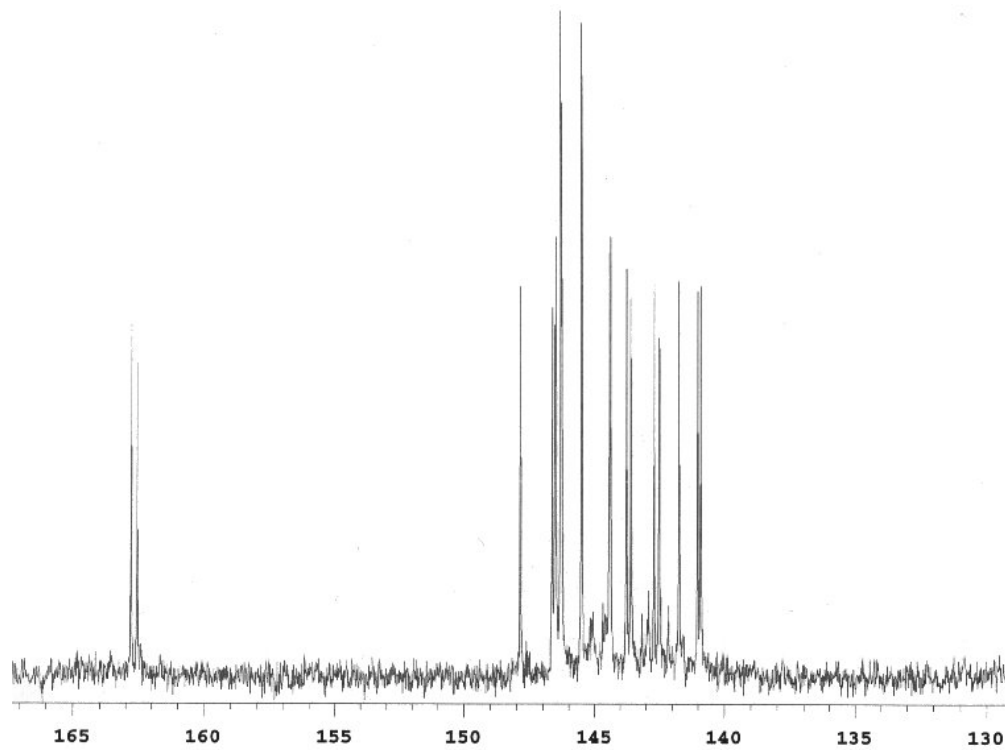
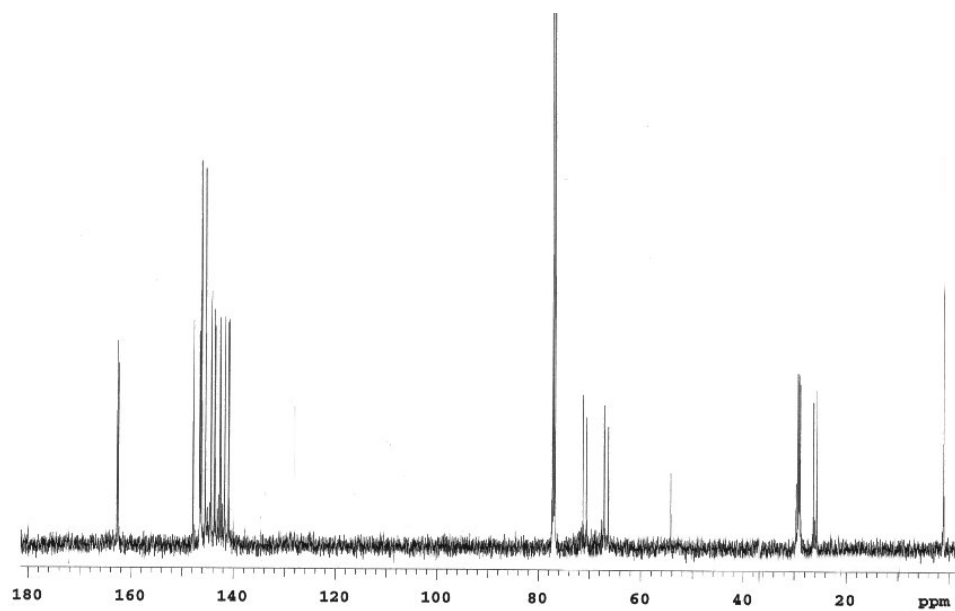
^1H NMR and ^{13}C NMR of Compound 1



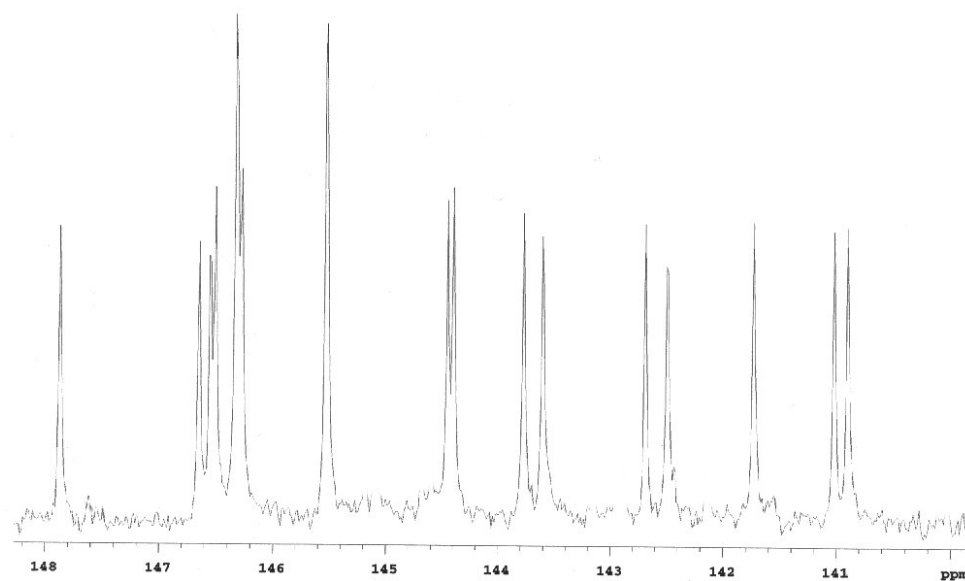
Mass spectrum of compound 1



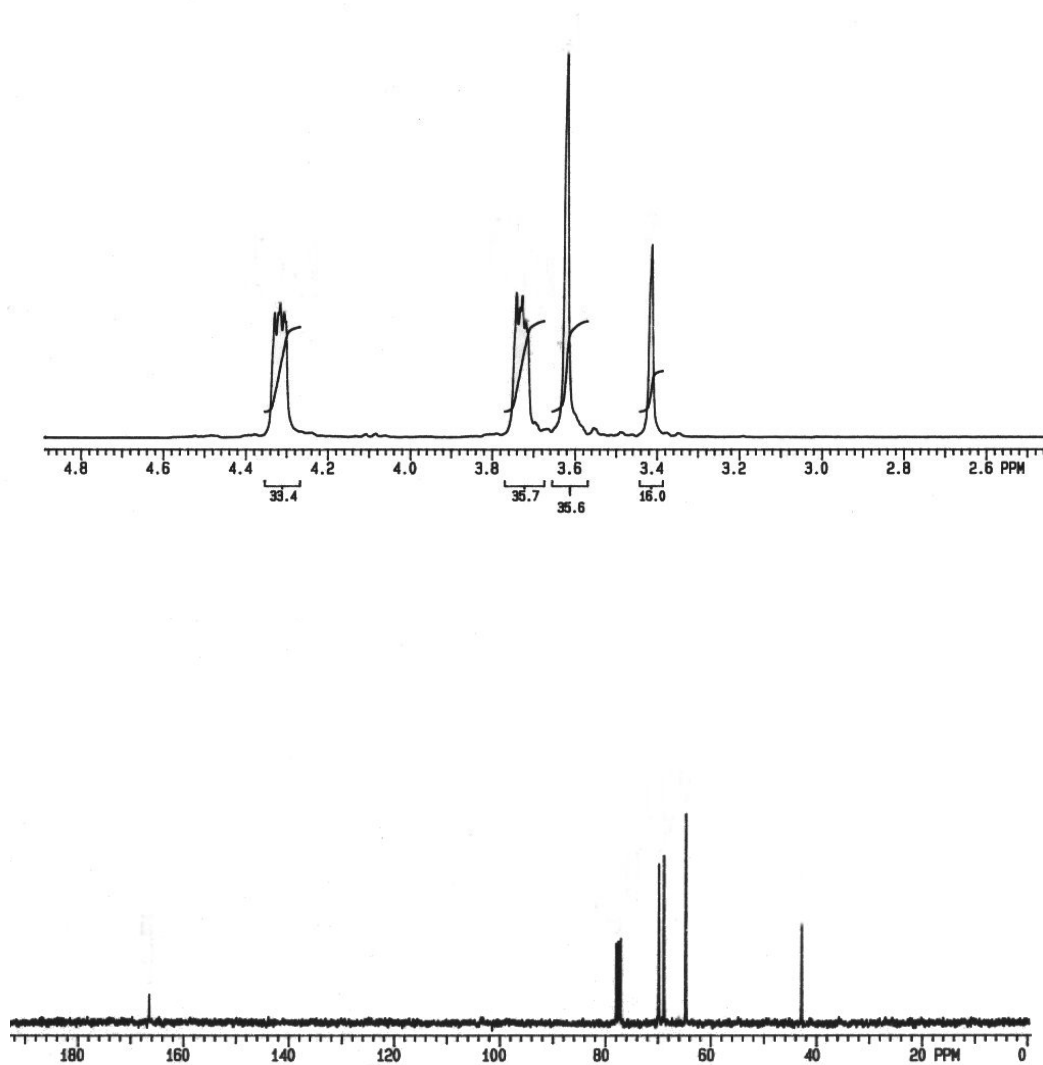
^{13}C NMR of compound **2**



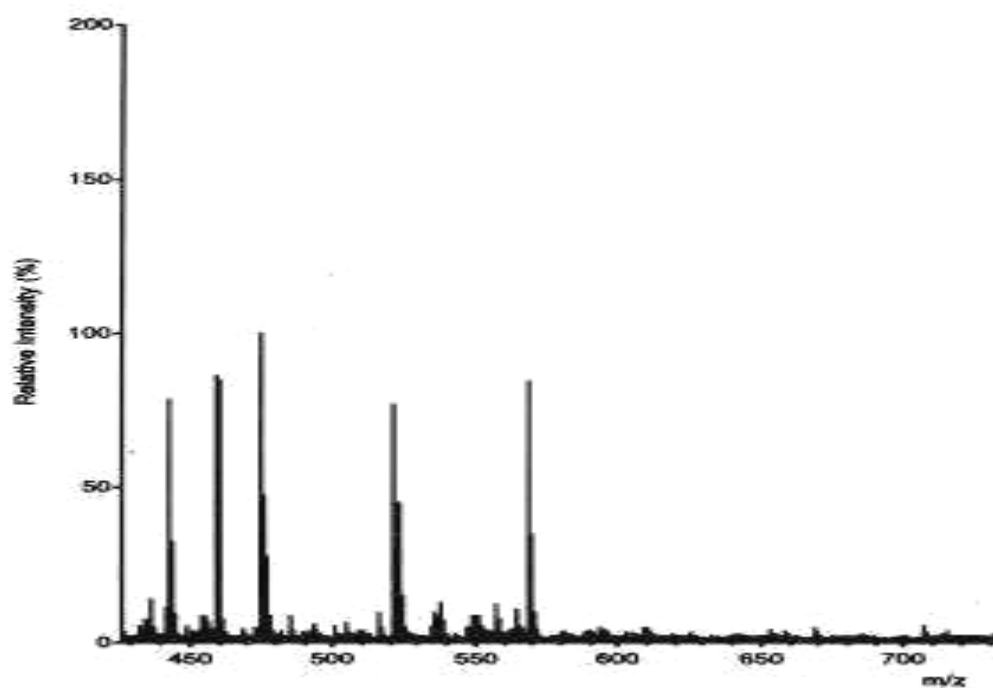
^{13}C NMR of compound **2** (expanded aromatic region)



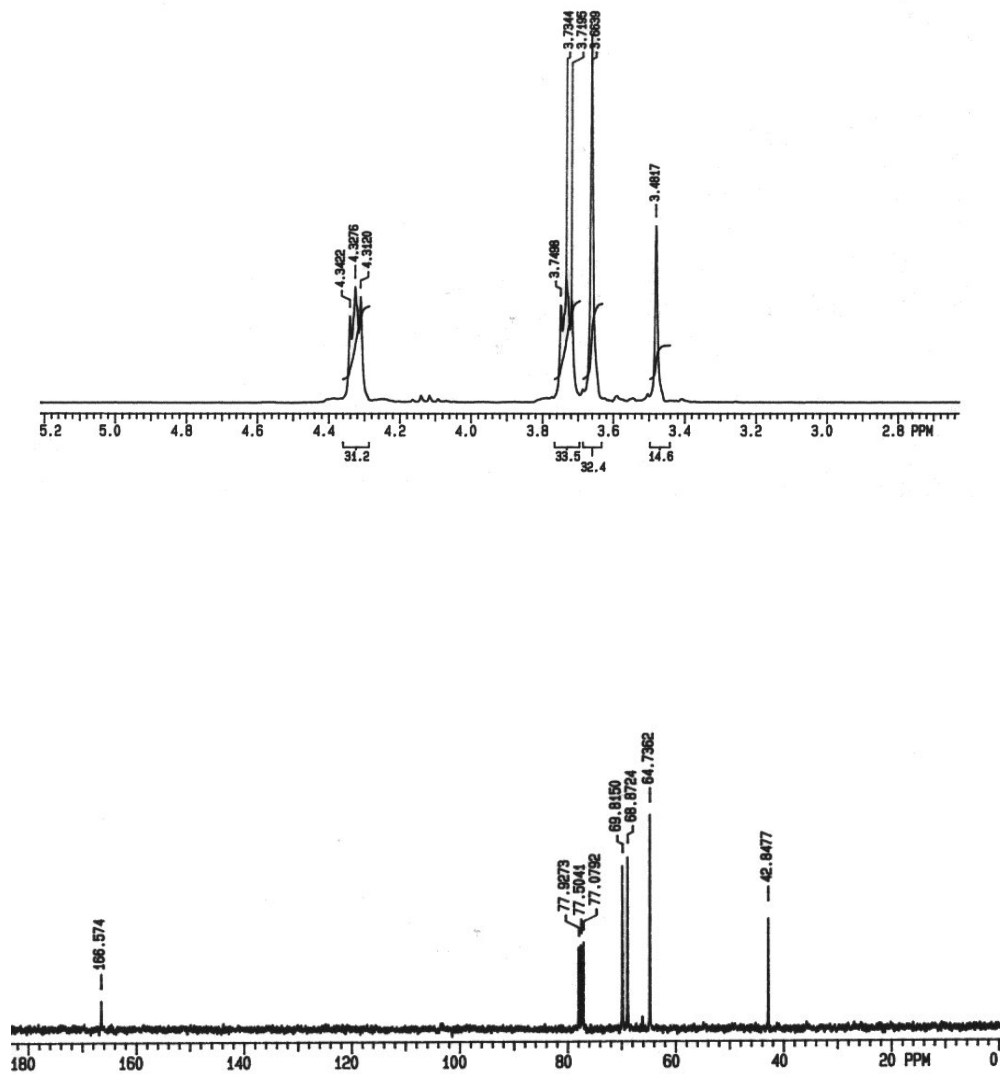
^1H NMR and ^{13}C NMR of Compound **5**



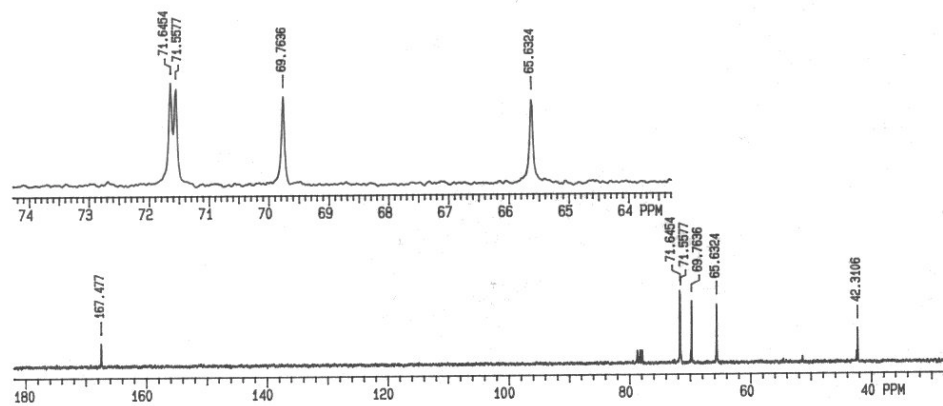
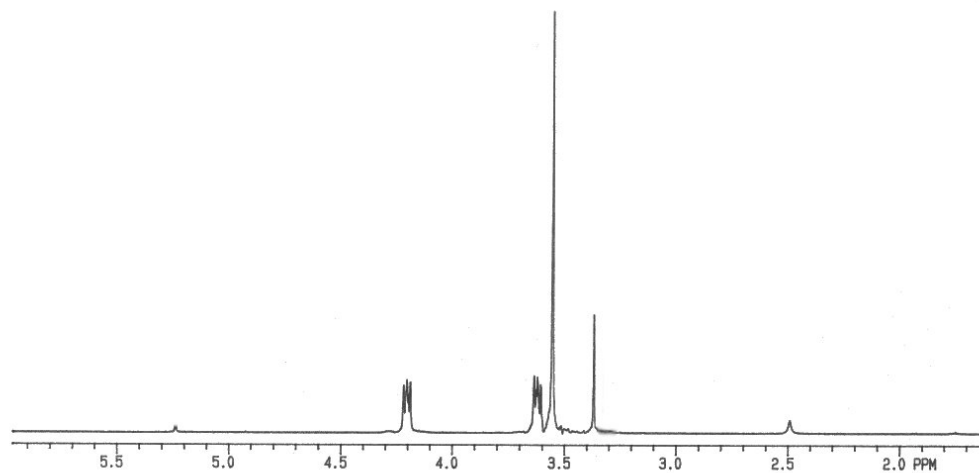
Mass spectrum of compound **5**
(Complex peaks of **5** with the set of alkali metal ions:
 Li^+ , Na^+ , K^+ , Rb^+ and Cs^+)



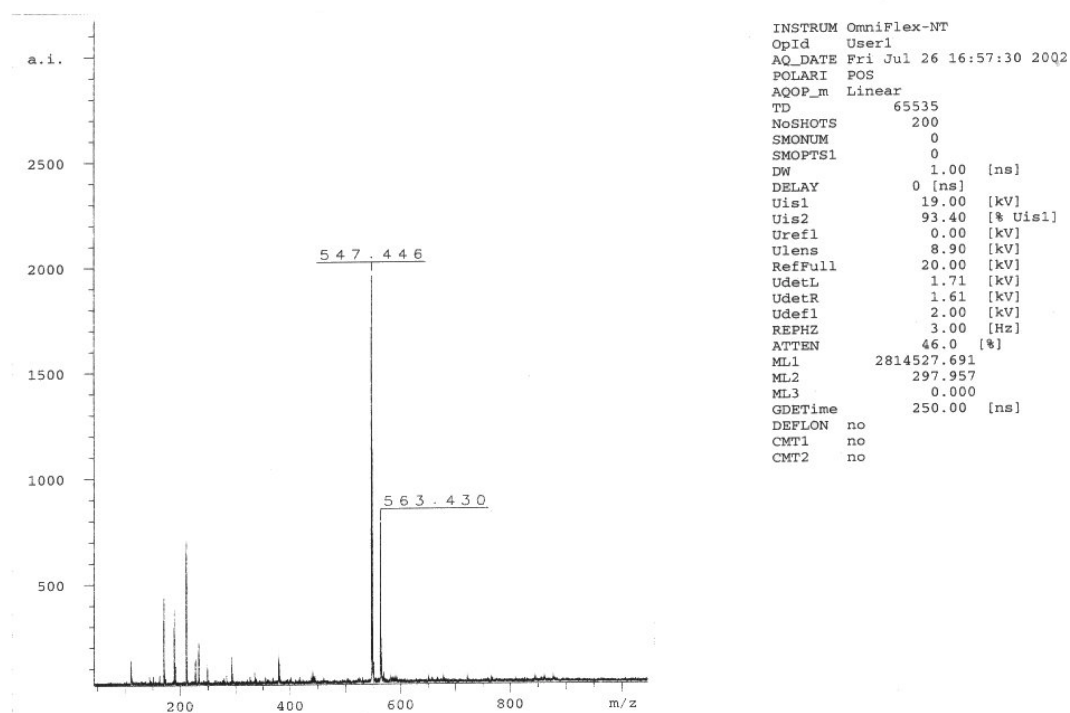
^1H NMR and ^{13}C NMR of Compound **6**



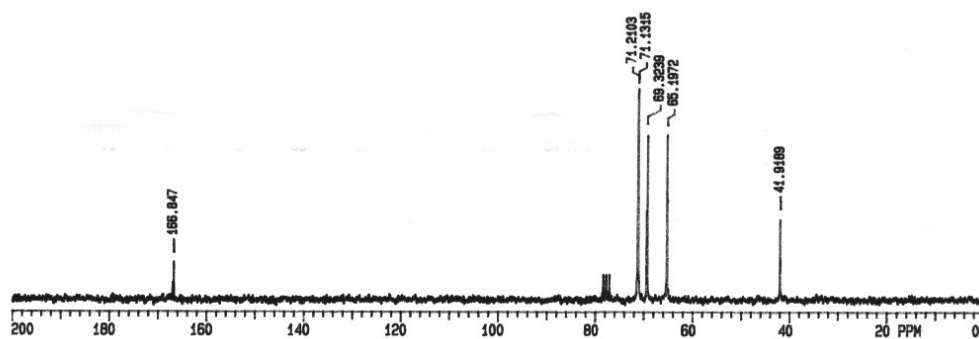
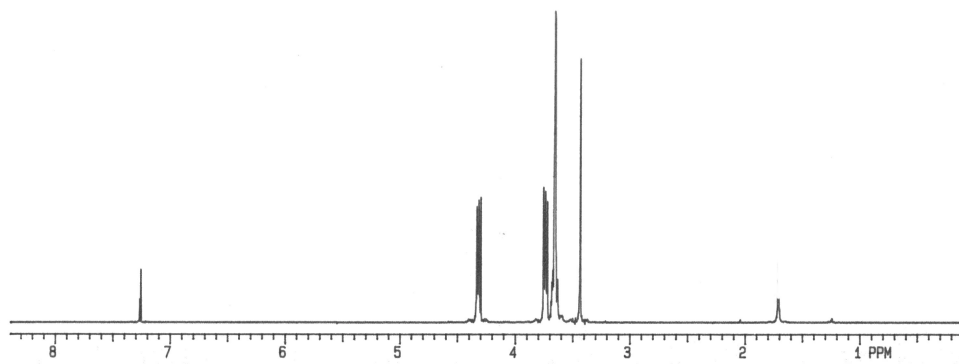
^1H NMR and ^{13}C NMR of Compound **8**



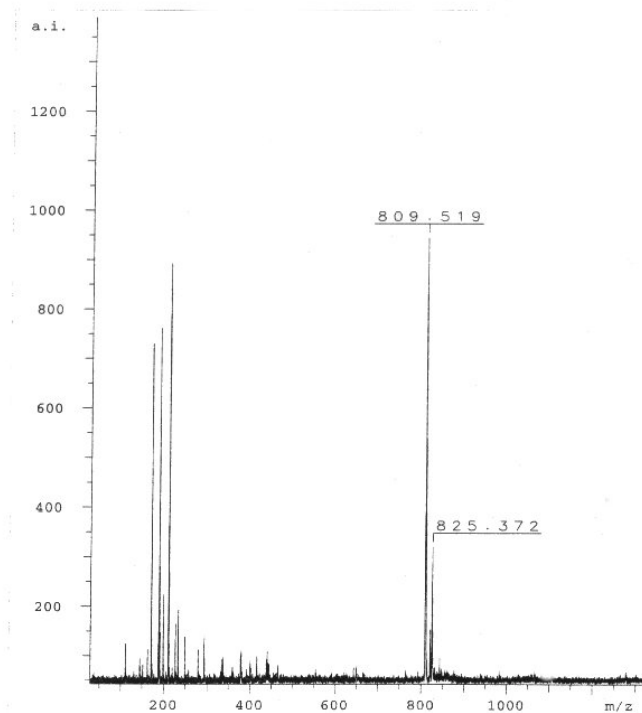
Mass spectrum of compound 8



^1H NMR and ^{13}C NMR of Compound **9**

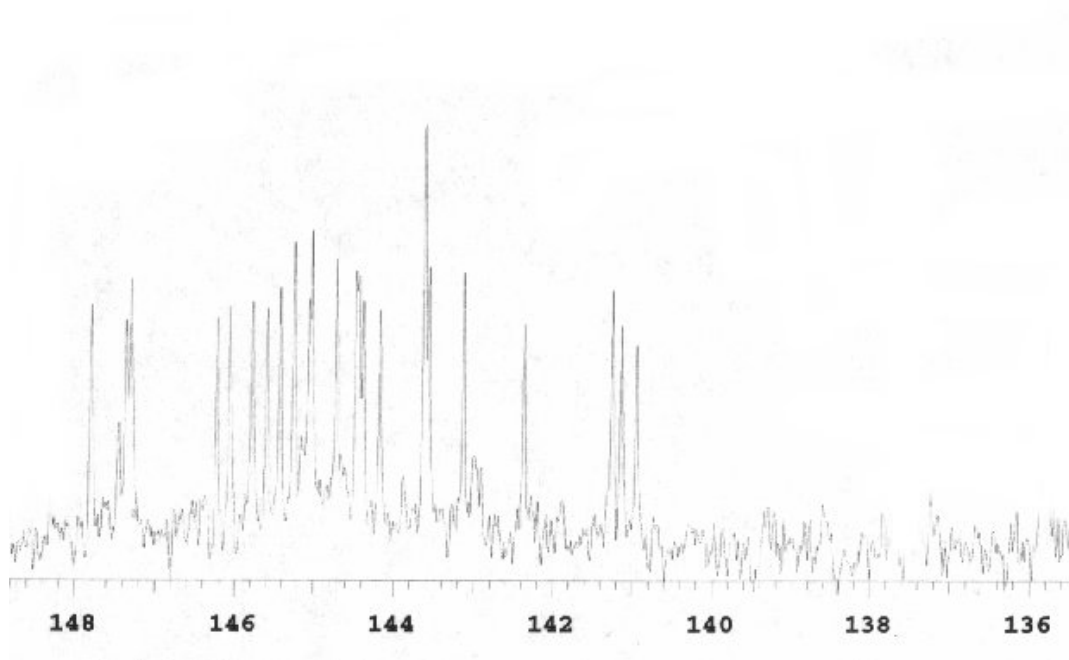
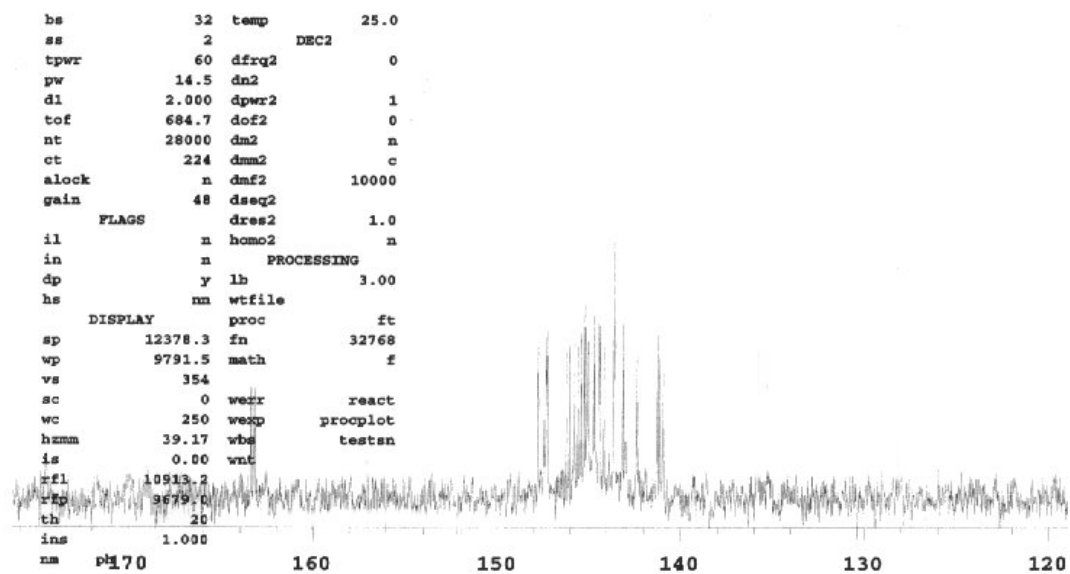


Mass spectrum of compound 9

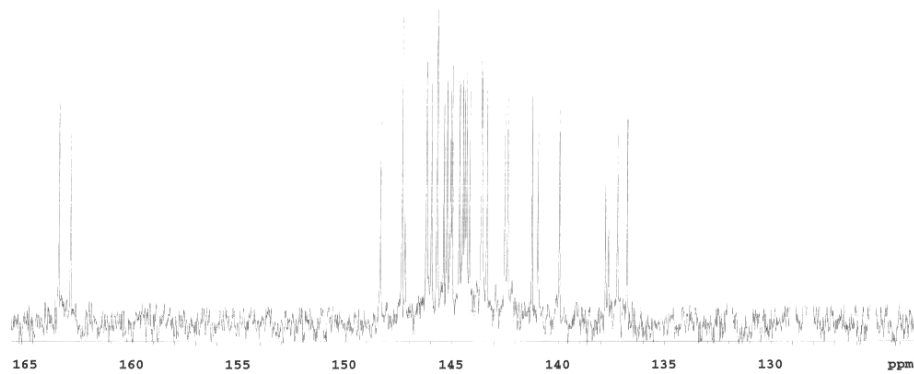
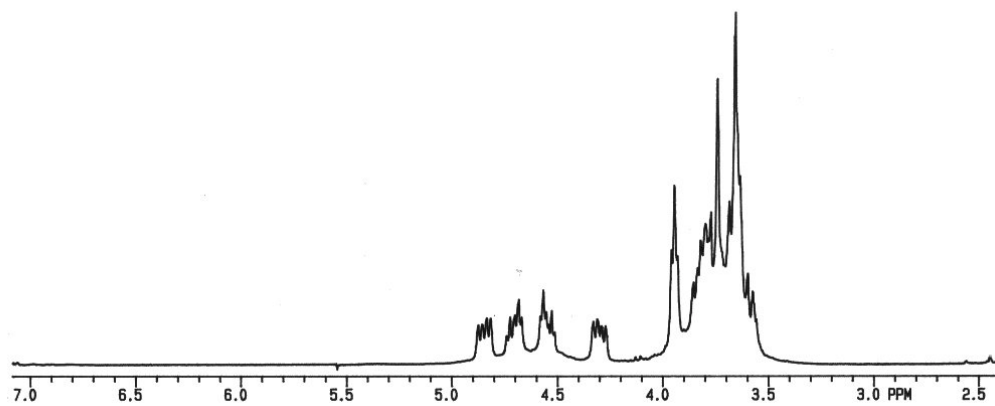


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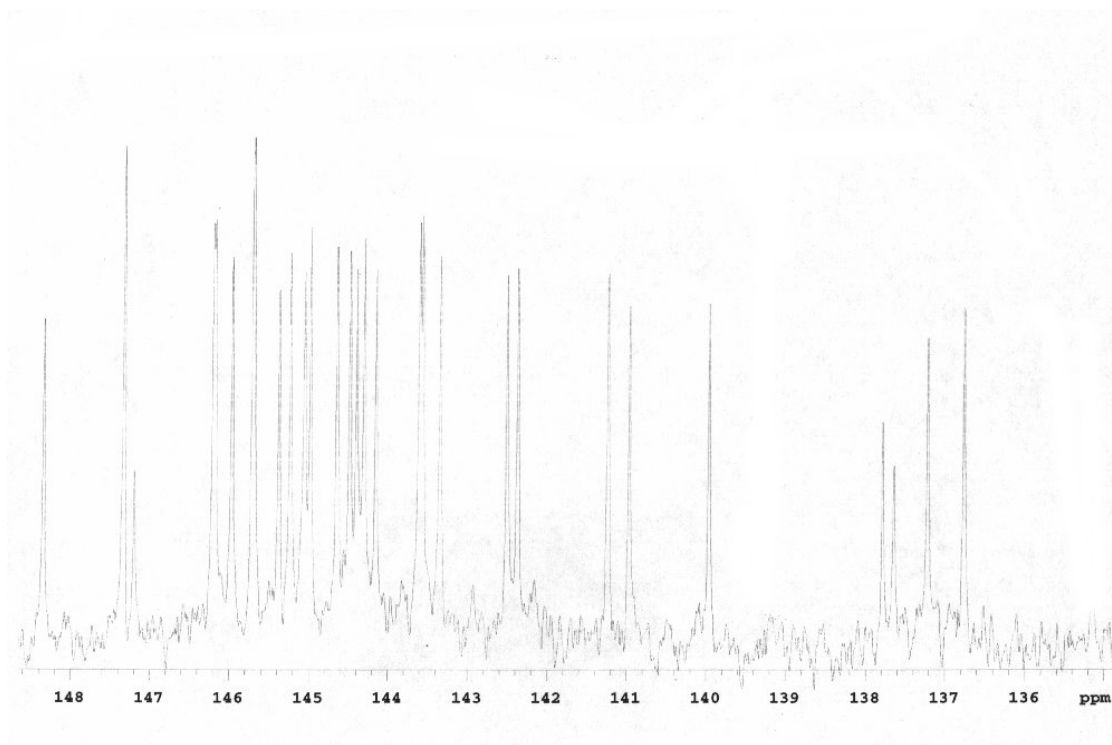
^{13}C NMR (fullerene sp^2 region) of Compound **10**



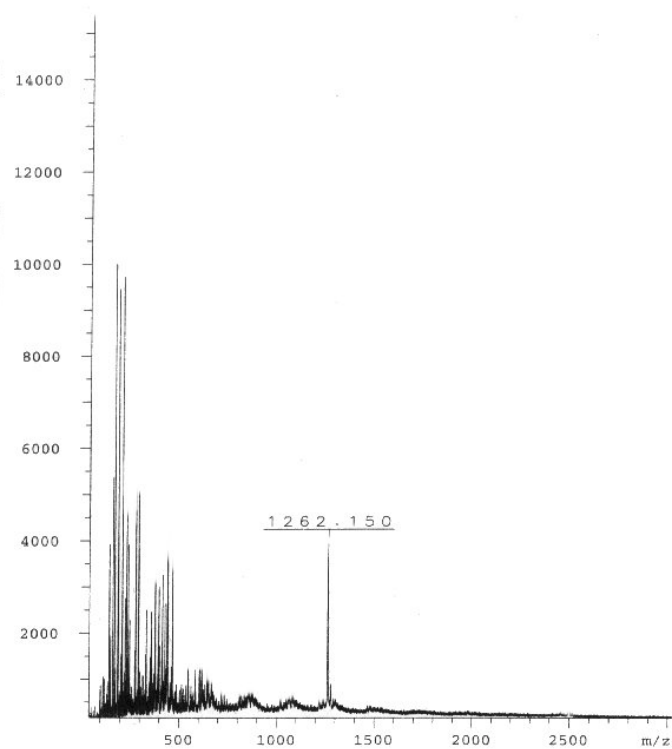
^1H NMR and ^{13}C NMR (sp^2 region) of Compound **11**



^{13}C NMR (expanded fullerene sp^2 region) of Compound **11**

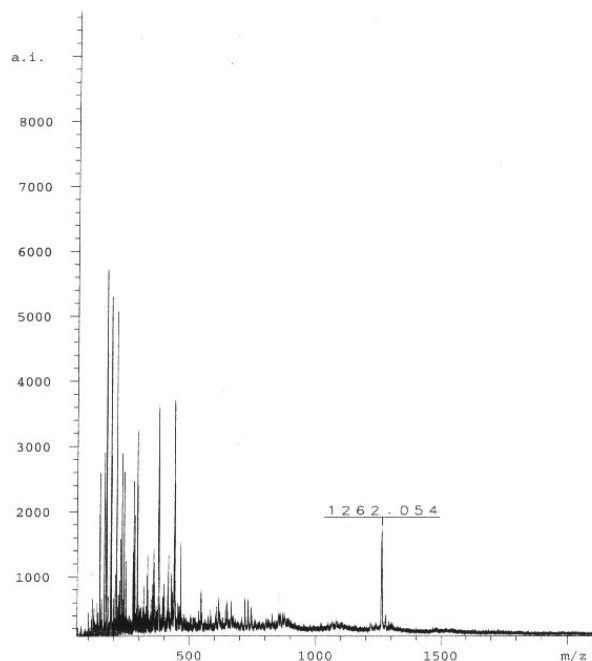


Mass spectrum of compound **11**



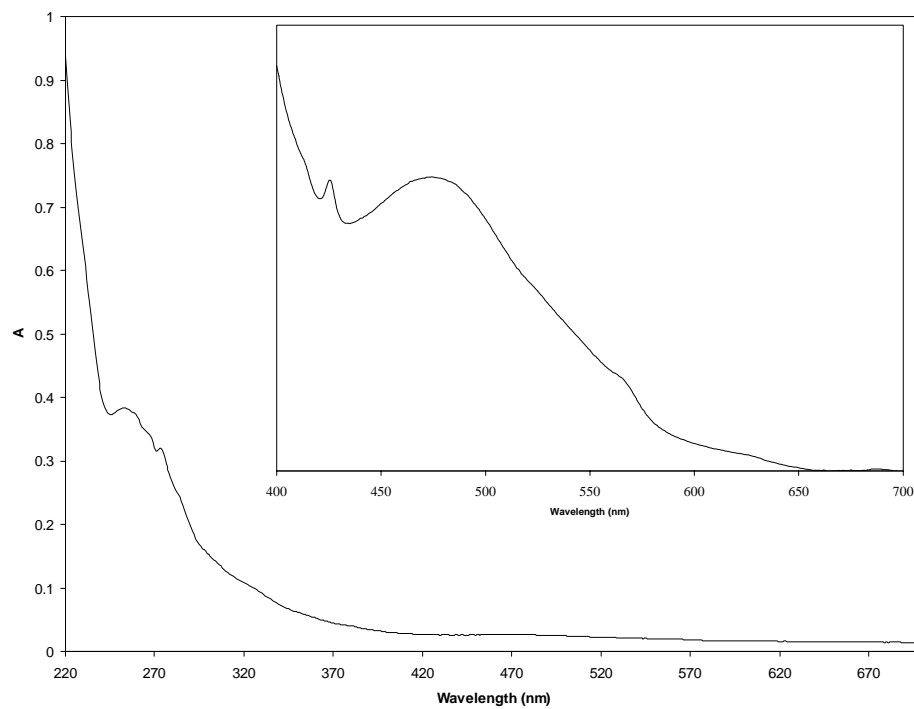
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Mass spectrum of compound 12



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UV-vis spectrum of C₆₀ *tris*-adduct **13**



^{13}C NMR (fullerene sp^2 region) of Compound **13**

