

## **Supporting Information**

### **A simple competent etiquette for Pd catalyzed ligand free homocoupling of aryl boronic acids in water at ambient conditions**

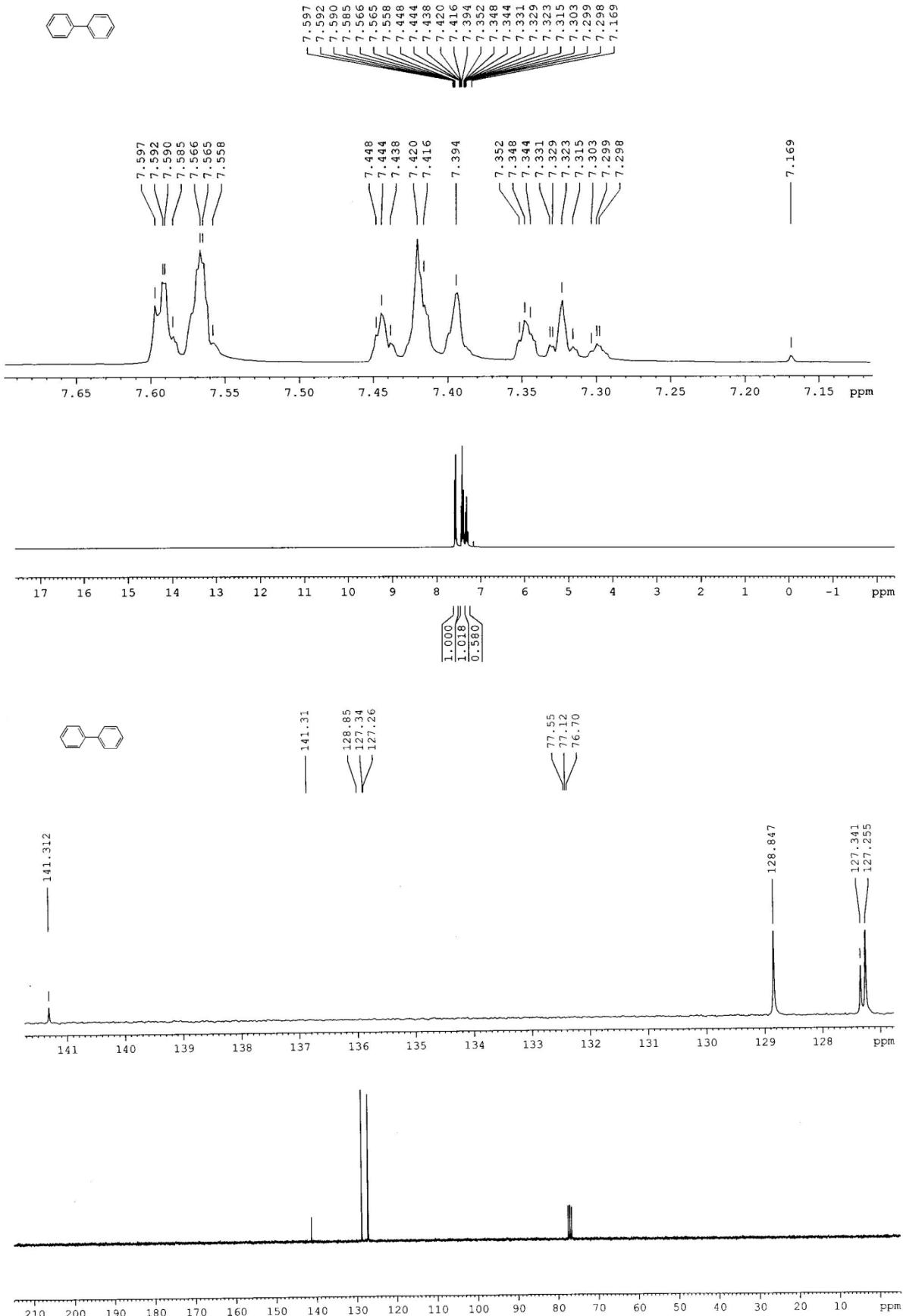
Seema Dwivedi, Soumik Bardhan, Prasanjit Ghosh and Sajal Das\*

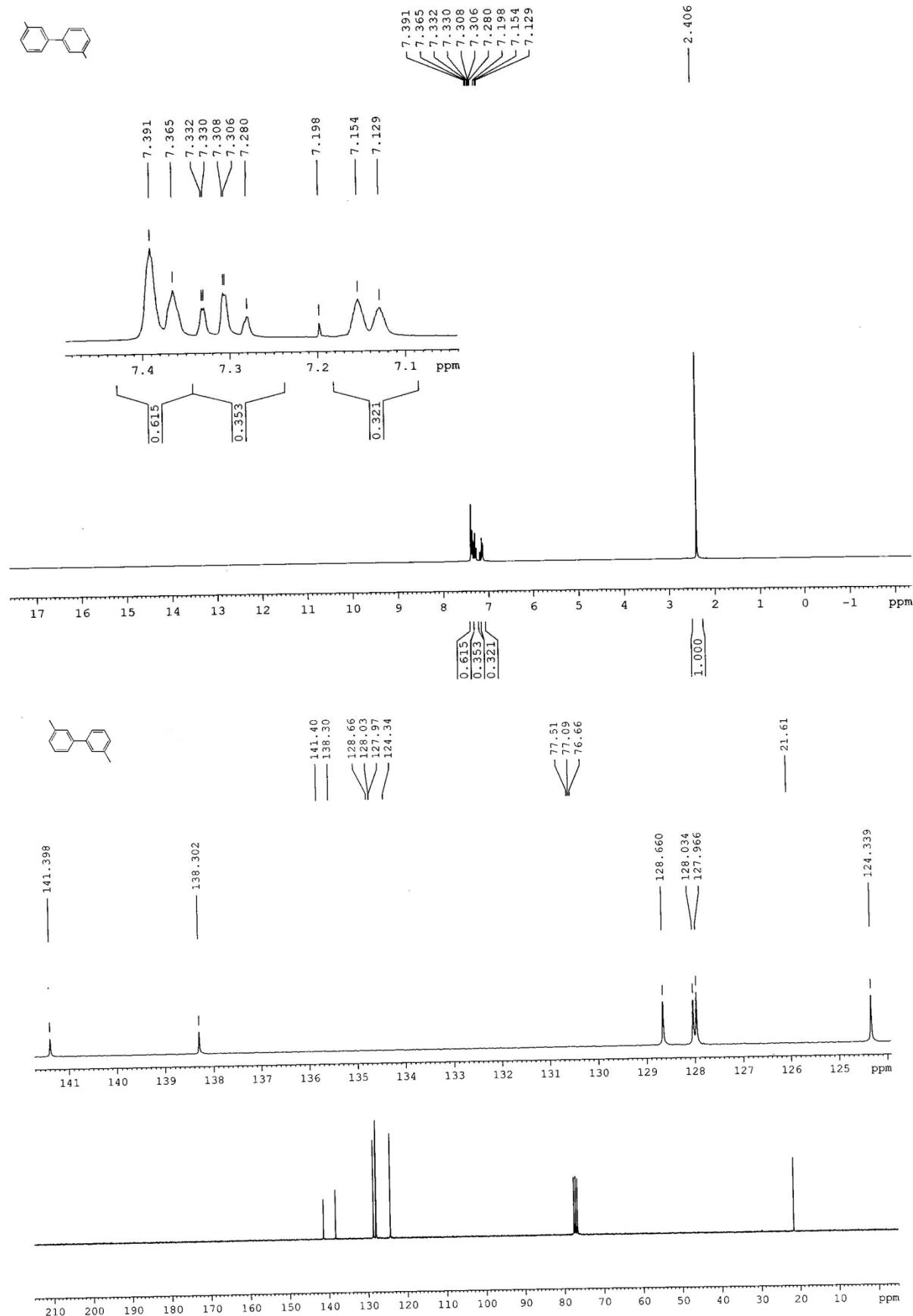
Department of Chemistry, University of North Bengal, Darjeeling 734 013, INDIA

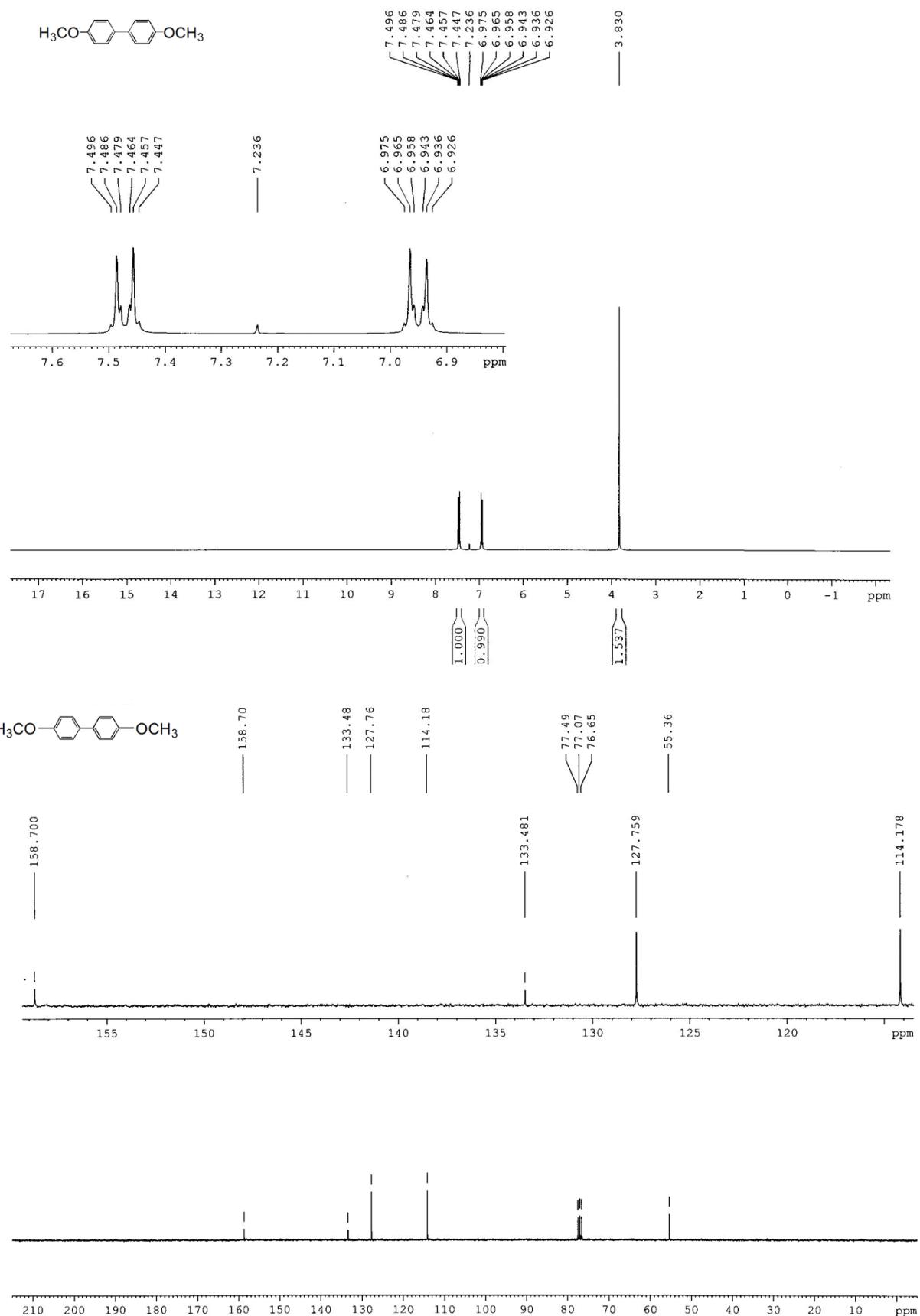
E-mail: [sajal.das@hotmail.com](mailto:sajal.das@hotmail.com)

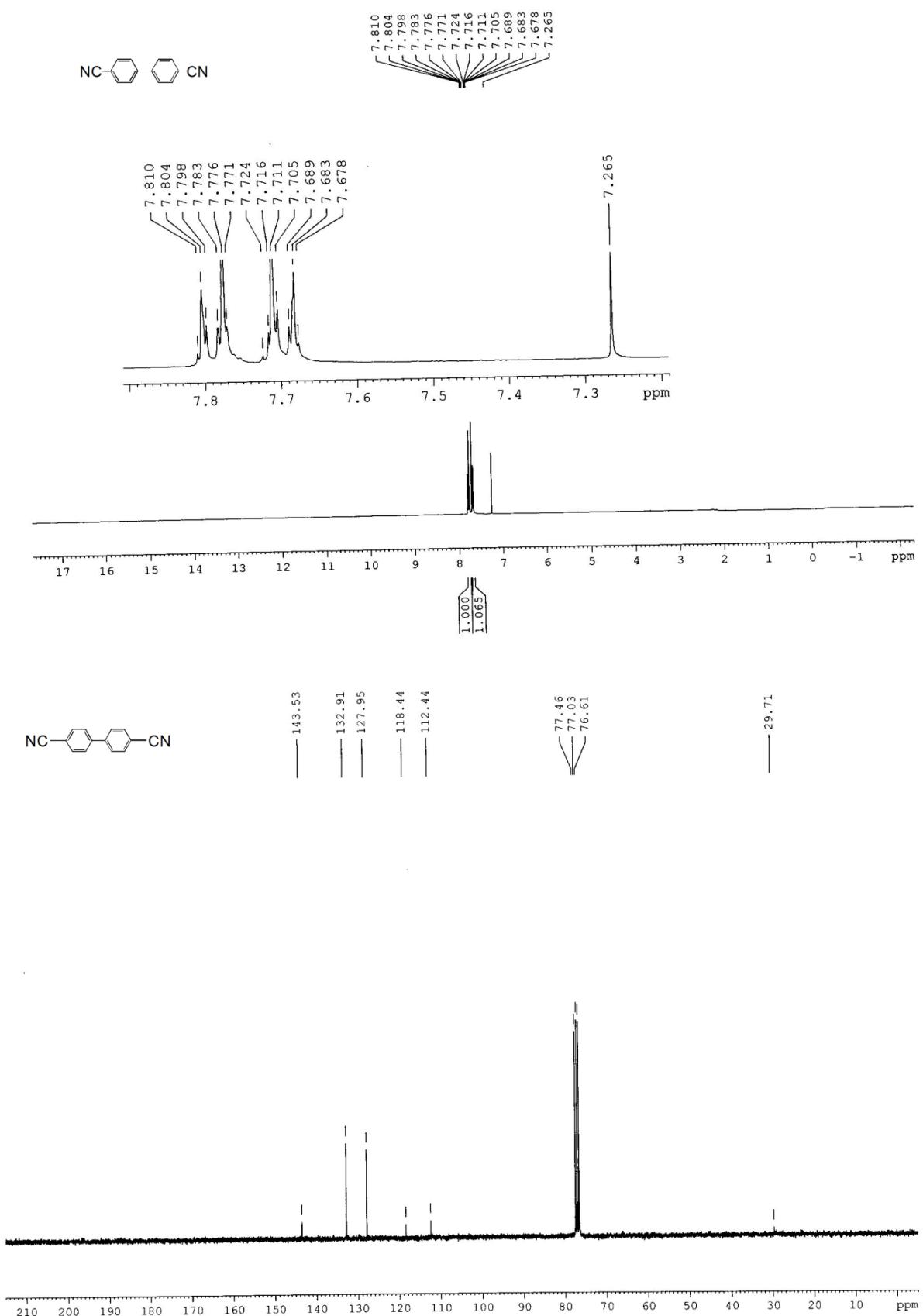
#### **Scan copies of NMR Spectra**

<sup>1</sup> H NMR and <sup>13</sup> C spectra of biphenyl.....	S2
<sup>1</sup> H NMR and <sup>13</sup> C spectra of 3,3'-dimethylbiphenyl.....	S3
<sup>1</sup> H NMR and <sup>13</sup> C spectra of 4,4'-dimethoxybiphenyl .....	S4
<sup>1</sup> H NMR and <sup>13</sup> C spectra of 4,4'-dicyanobiphenyl.....	S5
<sup>1</sup> H NMR and <sup>13</sup> C spectra of 4,4'-difluorobiphenyl.....	S6
<sup>1</sup> H NMR and <sup>13</sup> C spectra of 1,1'-binaphthyl.....	S7
<sup>1</sup> H NMR and <sup>13</sup> C spectra of 2,2'-dichlorobiphenyl.....	S8
<sup>1</sup> H NMR and <sup>13</sup> C spectra of 3,3'- dinitrobiphenyl.....	S9
<sup>1</sup> H NMR and <sup>13</sup> C spectra of 1,1'-biphenyl-4,4'-dicarbaldehyde.....	S10
<sup>1</sup> H NMR and <sup>13</sup> C spectra of 2,2'-dithiophene.....	S11
<sup>1</sup> H NMR and <sup>13</sup> C spectra of 5,5'-dimethyl-2,2'-dithiophene.....	S12
<b>FTIR Analysis data.....</b>	<b>S13</b>

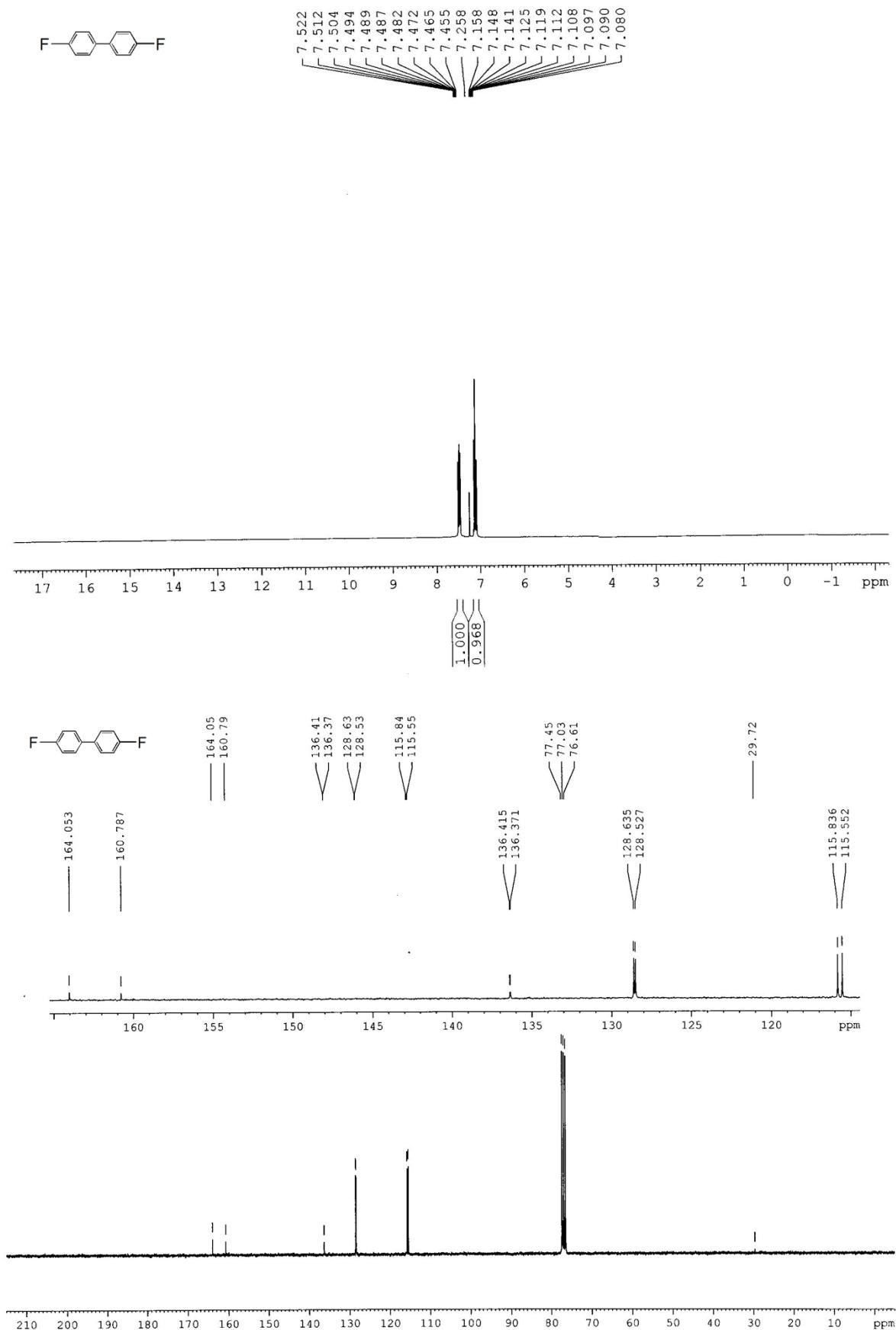


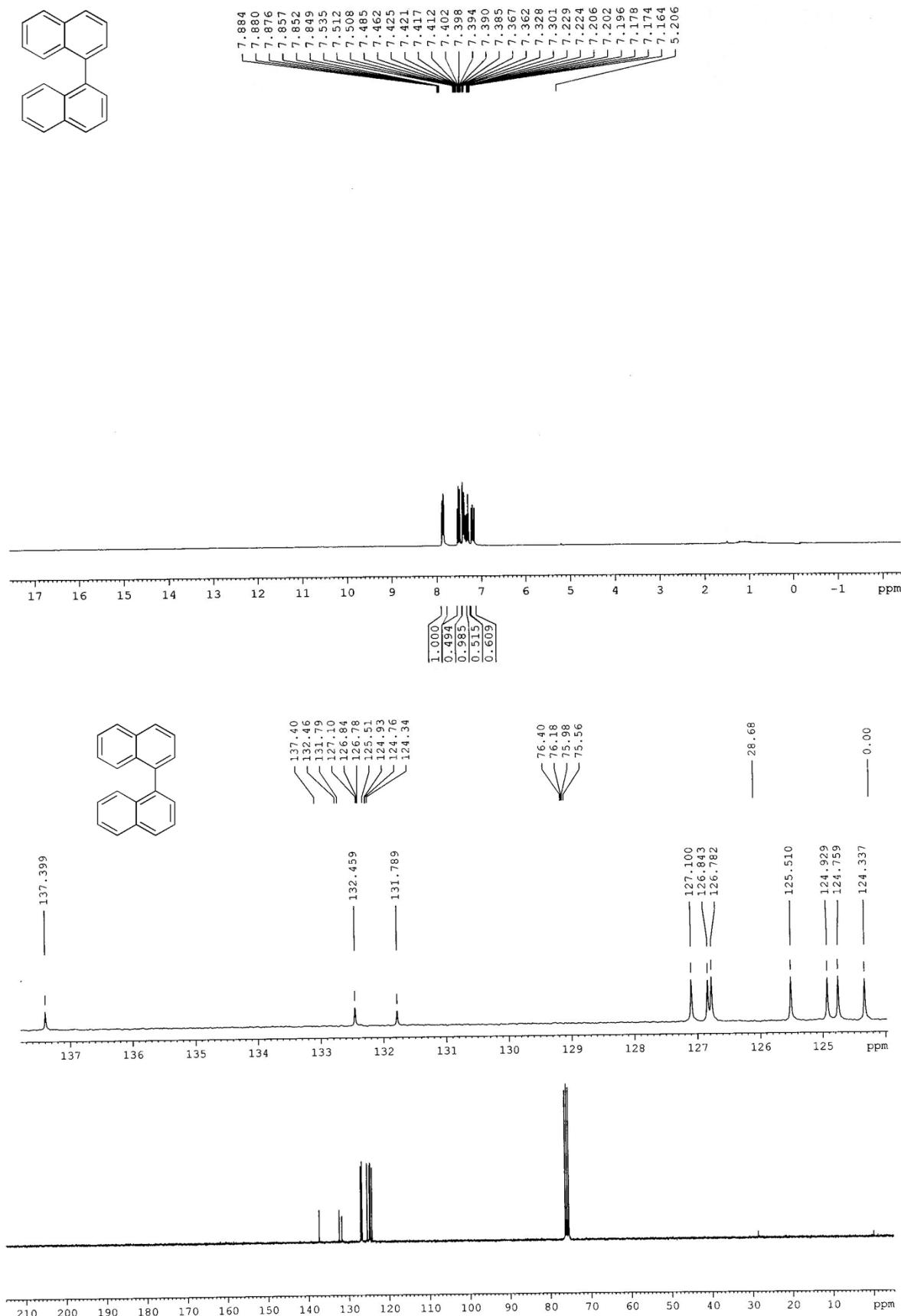
2)  $^1\text{H}$  NMR and  $^{13}\text{C}$  spectra of 3,3'-dimethylbiphenyl

3)  $^1\text{H}$  NMR and  $^{13}\text{C}$  spectra of 4,4'-dimethoxybiphenyl

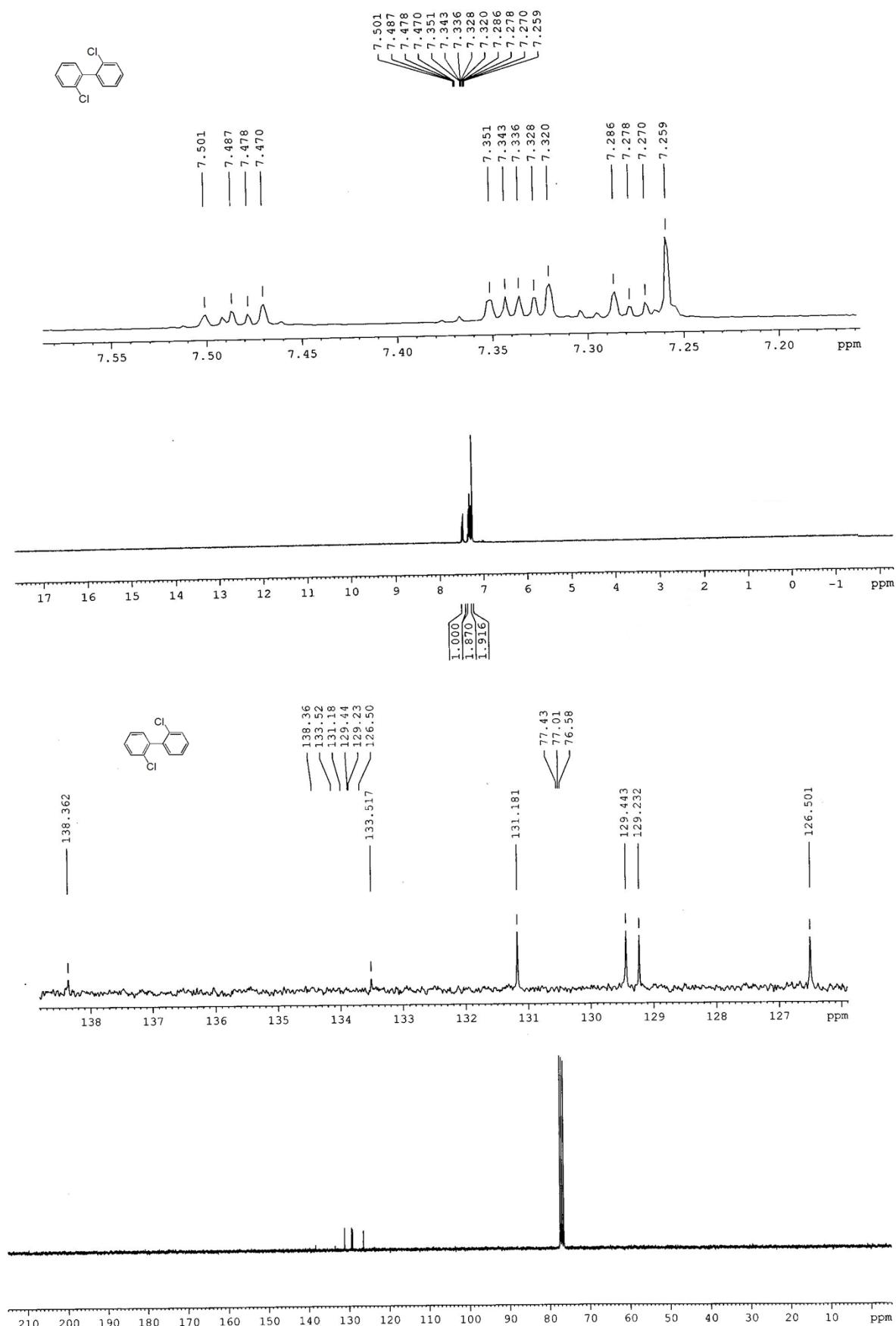
4)  $^1\text{H}$  NMR and  $^{13}\text{C}$  spectra of 4,4'-dicyanobiphenyl

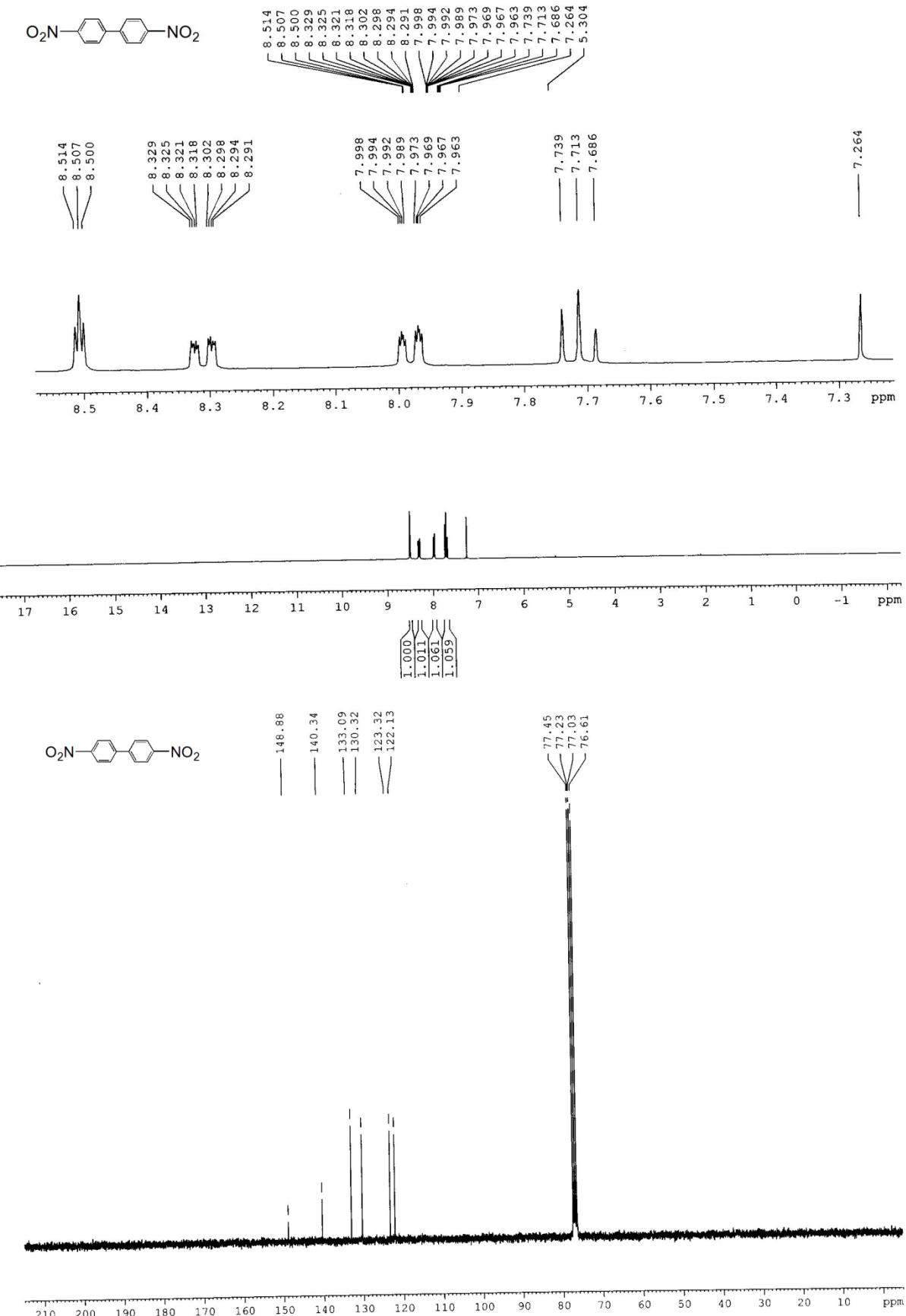
5)  $^1\text{H}$  NMR and  $^{13}\text{C}$  spectra of 4,4'-difluorobiphenyl

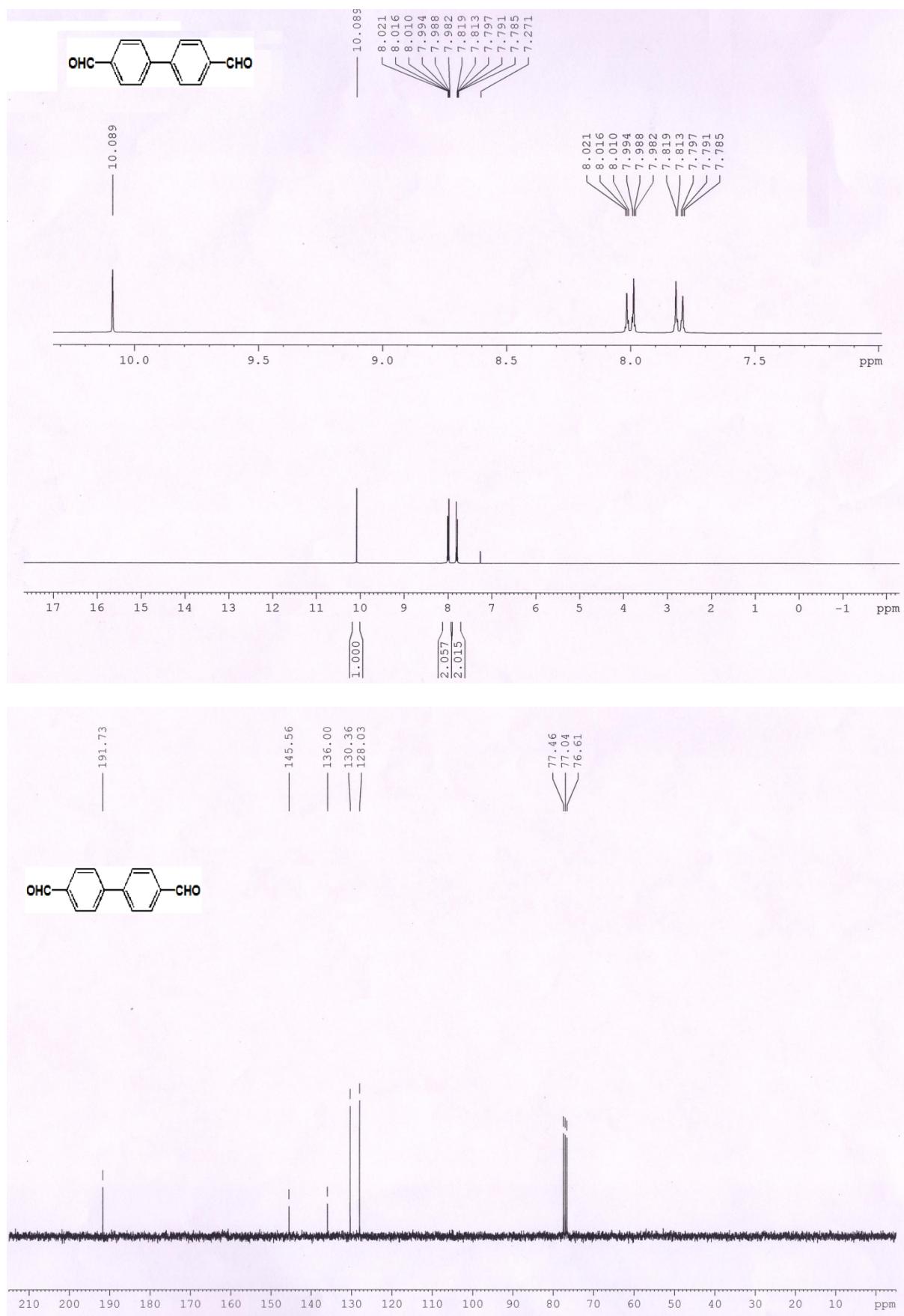


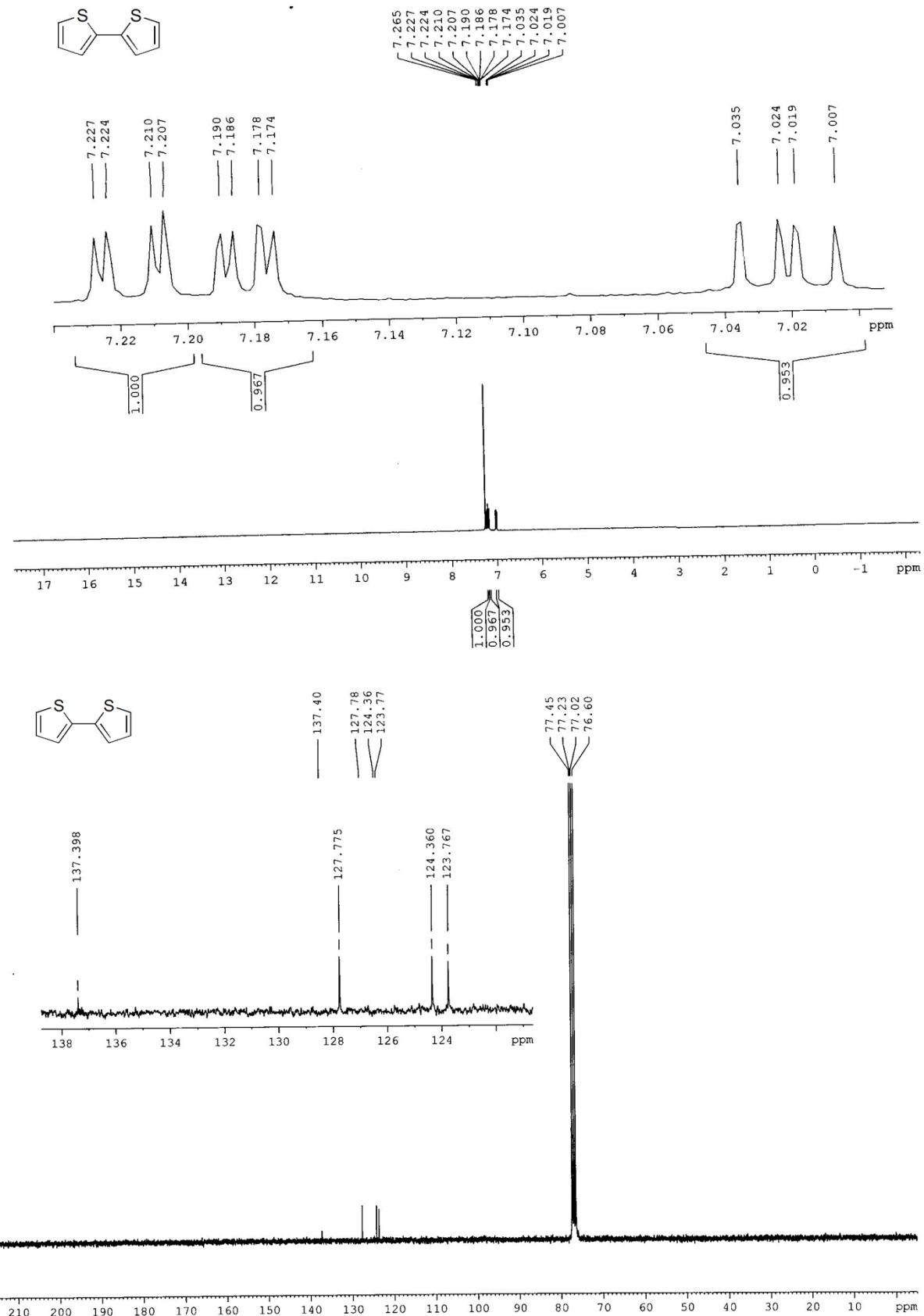
6)  $^1\text{H}$  NMR and  $^{13}\text{C}$  spectra of 1,1'-binaphthyl

7)  $^1\text{H}$  NMR and  $^{13}\text{C}$  spectra of 2,2'-dichlorobiphenyl



8)  $^1\text{H}$  NMR and  $^{13}\text{C}$  spectra of 3,3'-dinitrobiphenyl

9)  $^1\text{H}$  NMR and  $^{13}\text{C}$  spectra of 1,1'-biphenyl-4,4'-dicarbaldehyde

10)  $^1\text{H}$  NMR and  $^{13}\text{C}$  spectra of 2,2'-bithiophene

11)  $^1\text{H}$  NMR and  $^{13}\text{C}$  spectra of 5,5'-dimethyl-2,2'-bithiophene

### FTIR analysis Data

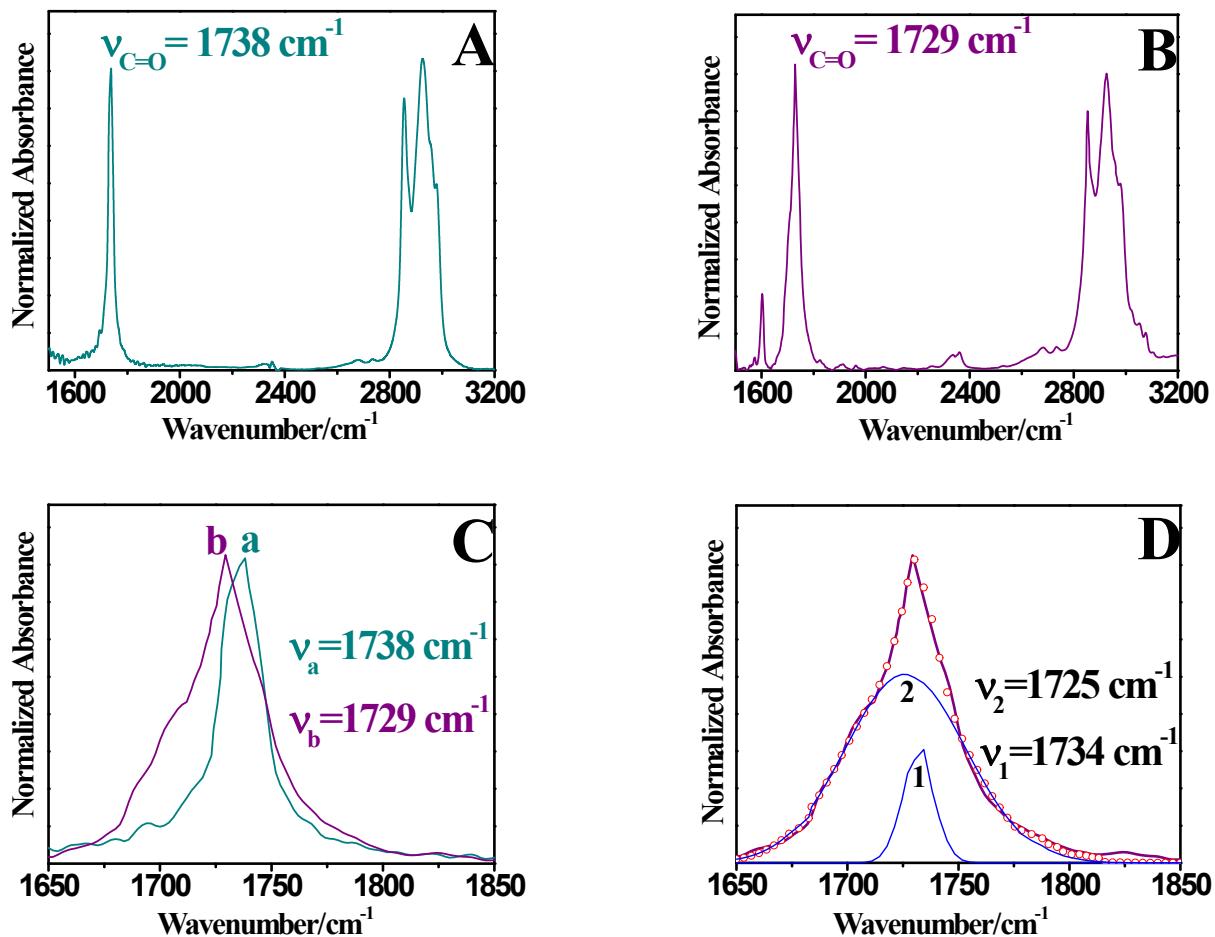


Figure: (A) FTIR spectra of IPM, (B) FTIR spectra of IPM in presence of PhB(OH)<sub>2</sub> (1:1), (C) Shifting of C=O stretching band of ester group in IPM (Specification: a; neat IPM, b; IPM in presence of PhB(OH)<sub>2</sub> (1:1)), (D) Gaussian deconvolution of C=O stretching band of IPM in presence PhB(OH)<sub>2</sub> (1:1) (Specification: Experimental spectra, overall fitted point (open circle) and deconvoluted curves, 1: free C=O stretching band ; 2: bound C=O stretching band)