Supporting Information for

Multi-Component One-Pot Reaction of Aromatic Carbonyl Compounds, Tosylhydrazide, and Arylboronic Acids

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4-(1-phenylethyl)-1,1'-biphenyl (3a)

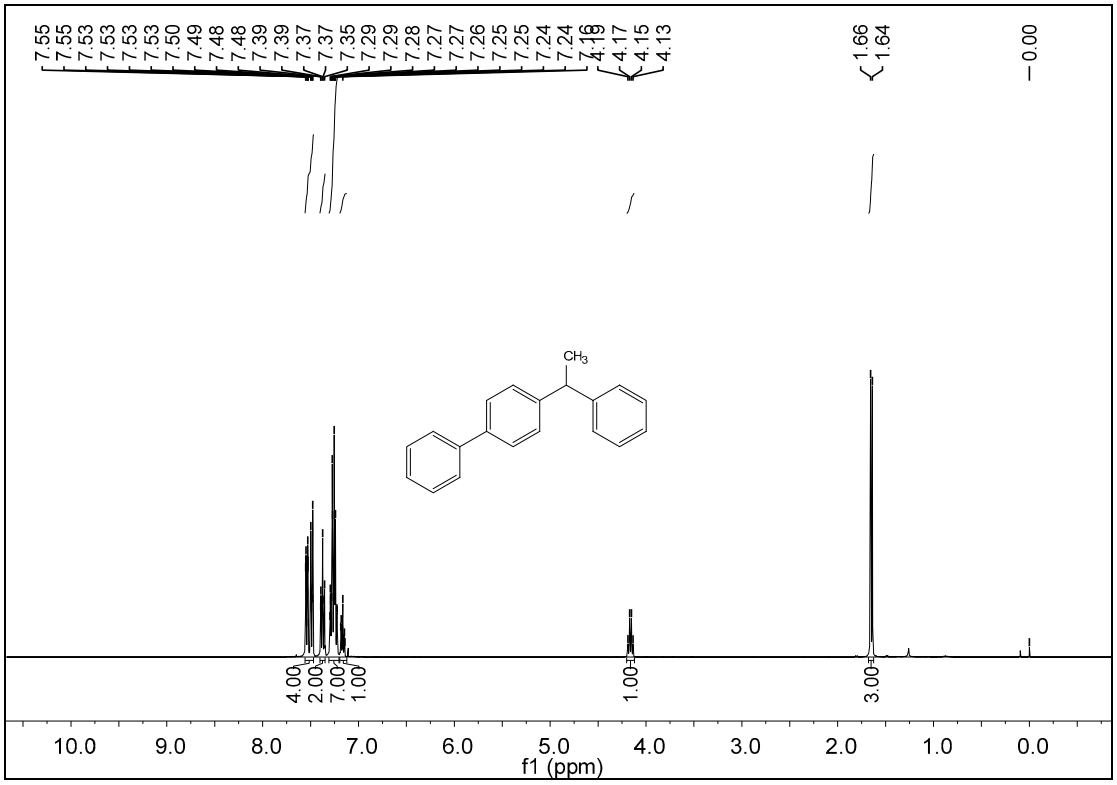


Figure S1

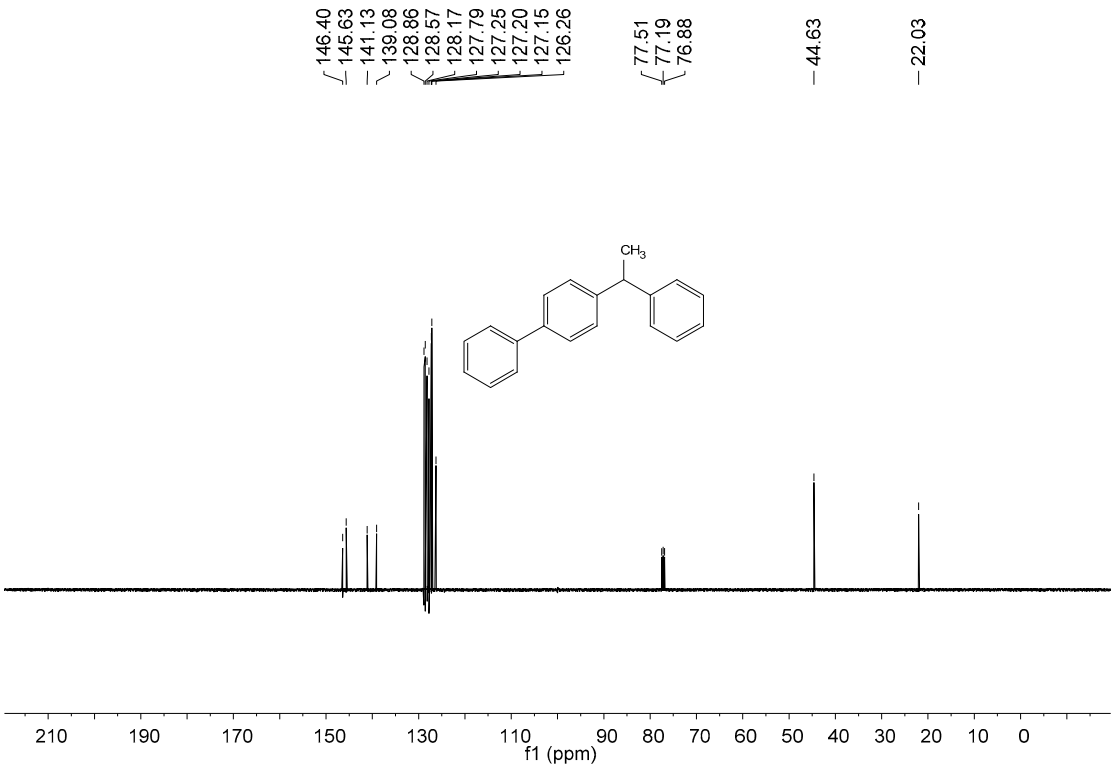


Figure S2

4-methyl-4'-(1-(p-tolyl)ethyl)-1,1'-biphenyl (3b)

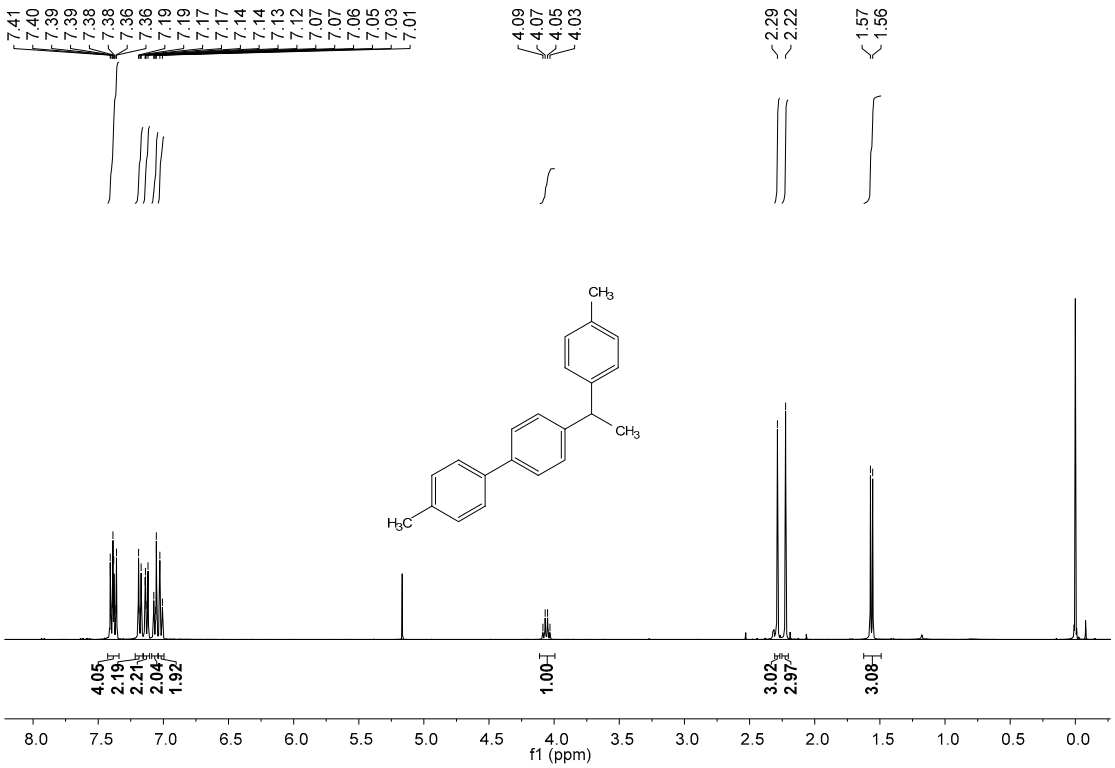


Figure S3

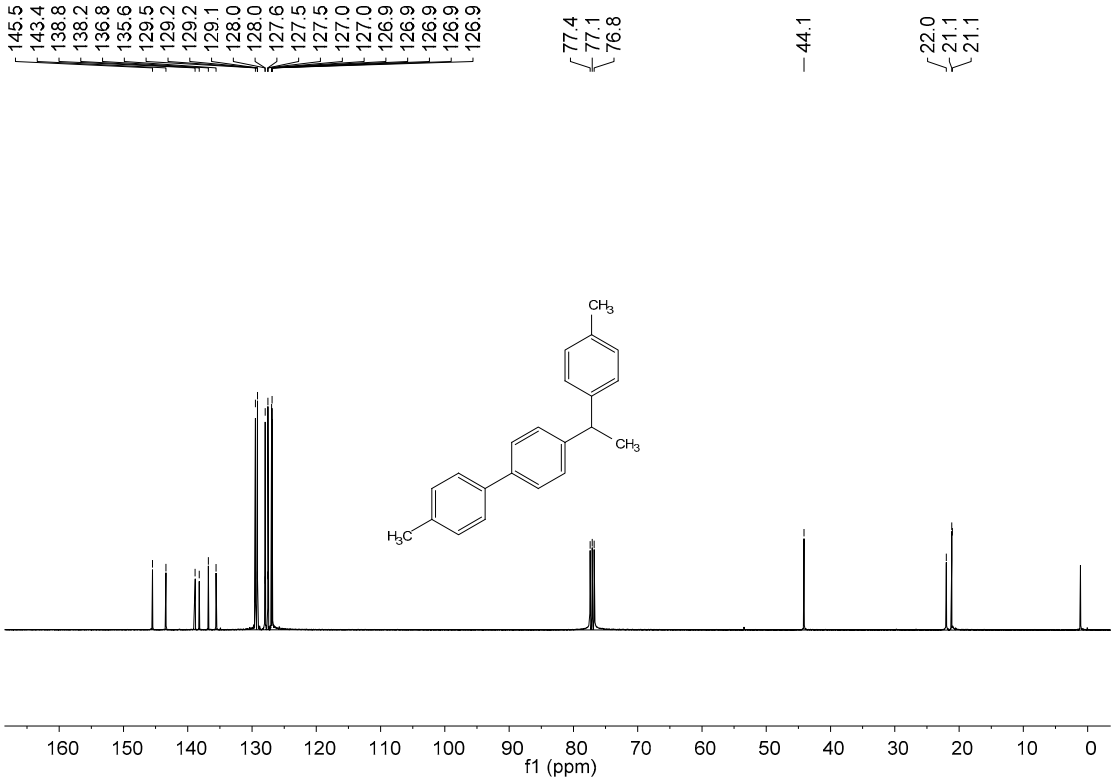


Figure S4

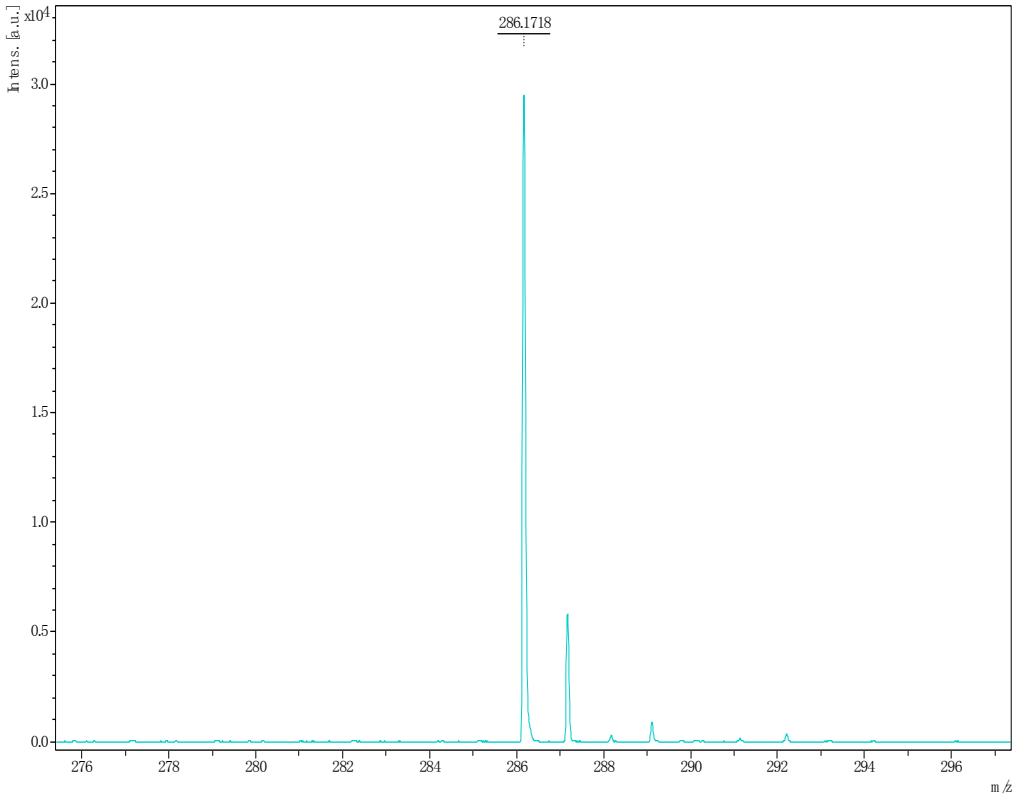


Figure S5

4-methoxy-4'-(1-(4-methoxyphenyl)ethyl)-1,1'-biphenyl (3c)

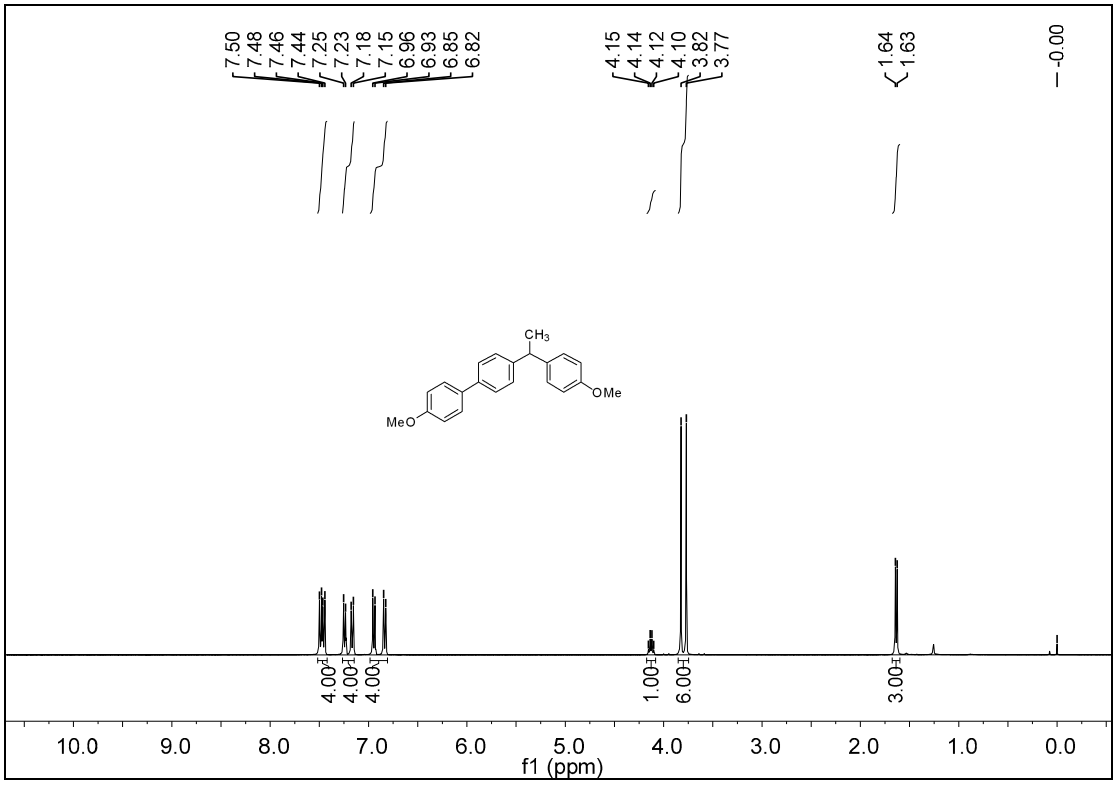


Figure S6

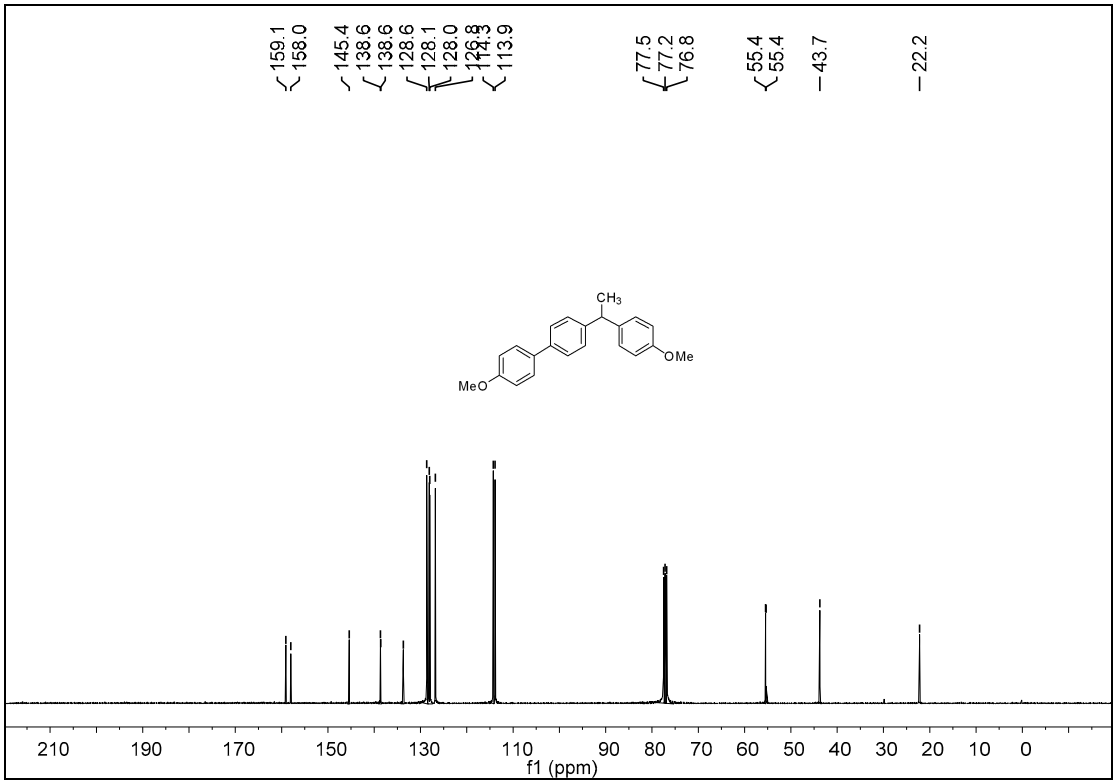


Figure S7

Elemental Composition Report **Page 1**

Tolerance = 1.0 mDa / DBE: min = -1.5, max = 50.0
Element prediction: Off

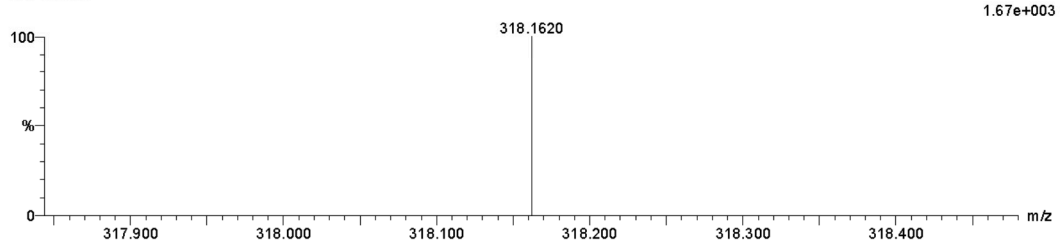
Monoisotopic Mass, Odd and Even Electron Ions
25 formula(e) evaluated with 1 results within limits (up to 70 best isotopic matches for each mass)
Elements Used:
C: 0-50 H: 0-100 O: 0-5

GCT Premier ZJU
TOF MS EI+

26-Jun-2015

gn-h21 874 (4.158)

1.67e+003



Minimum:				-1.5		
Maximum:		1.0	10.0	50.0		
Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	Formula
318.1620	318.1620	0.0	0.0	12.0	5546847.5	C22 H22 O2

Figure S8

4-fluoro-4'-(1-(4-fluorophenyl)ethyl)-1,1'-biphenyl (3d)

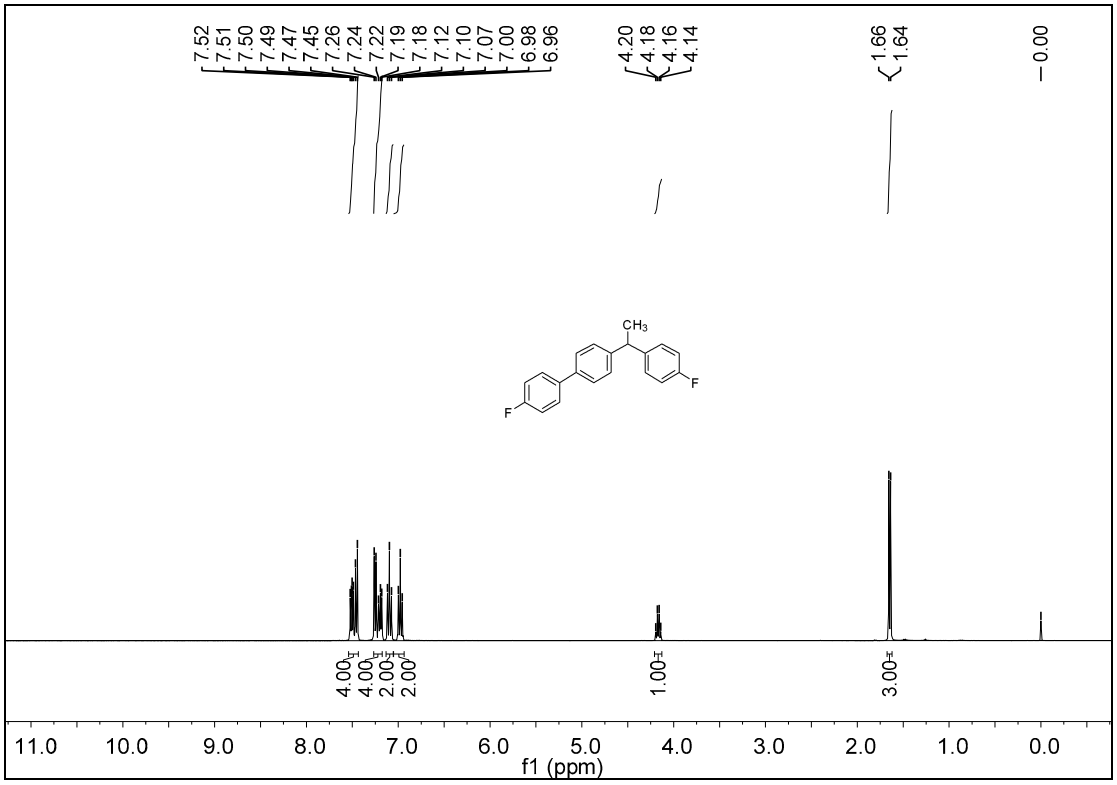


Figure S9

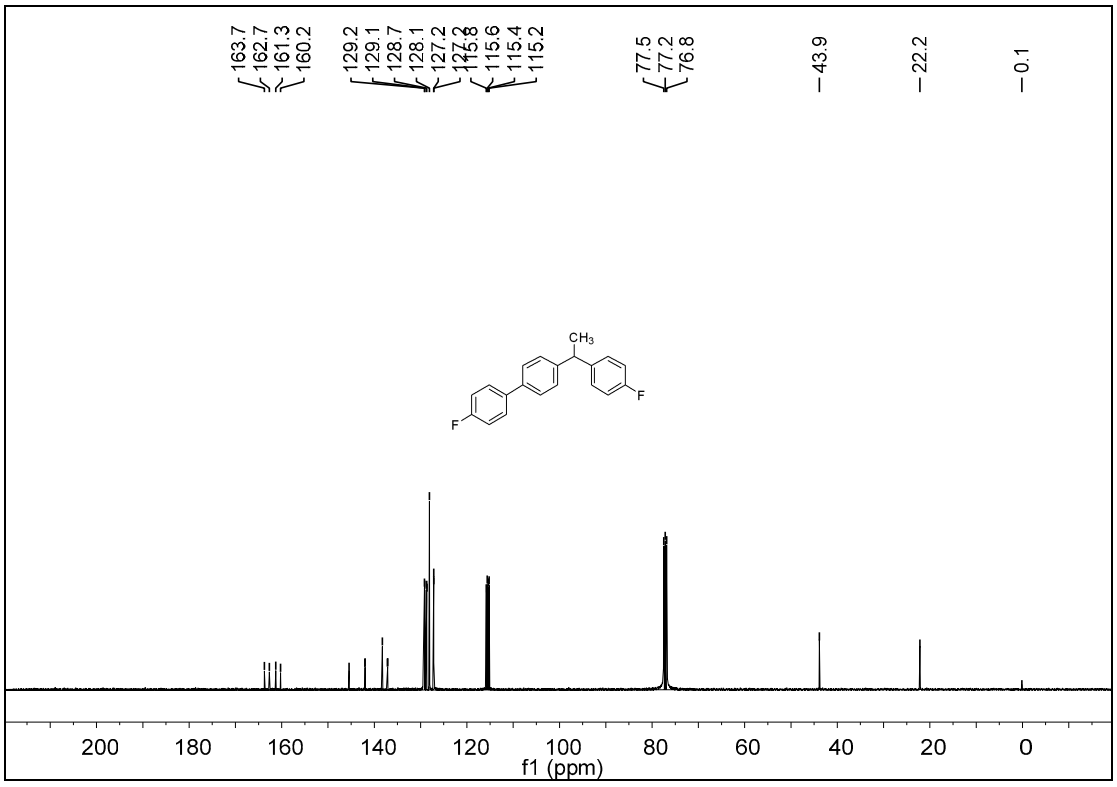


Figure S10

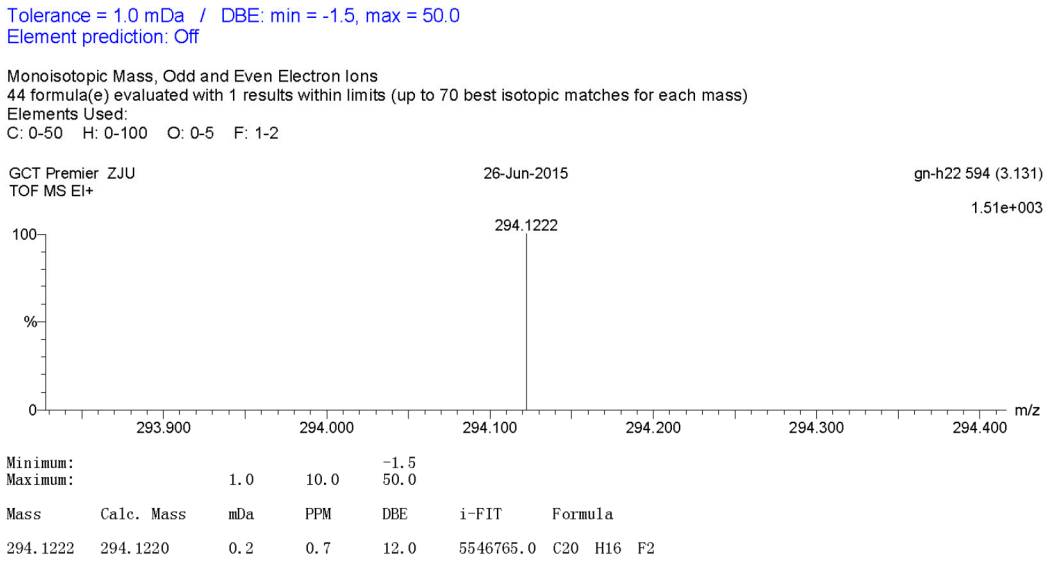


Figure S11

4-(trifluoromethyl)-4'-(1-(trifluoromethyl)phenyl)ethyl)-1,1'-biphenyl (3e)

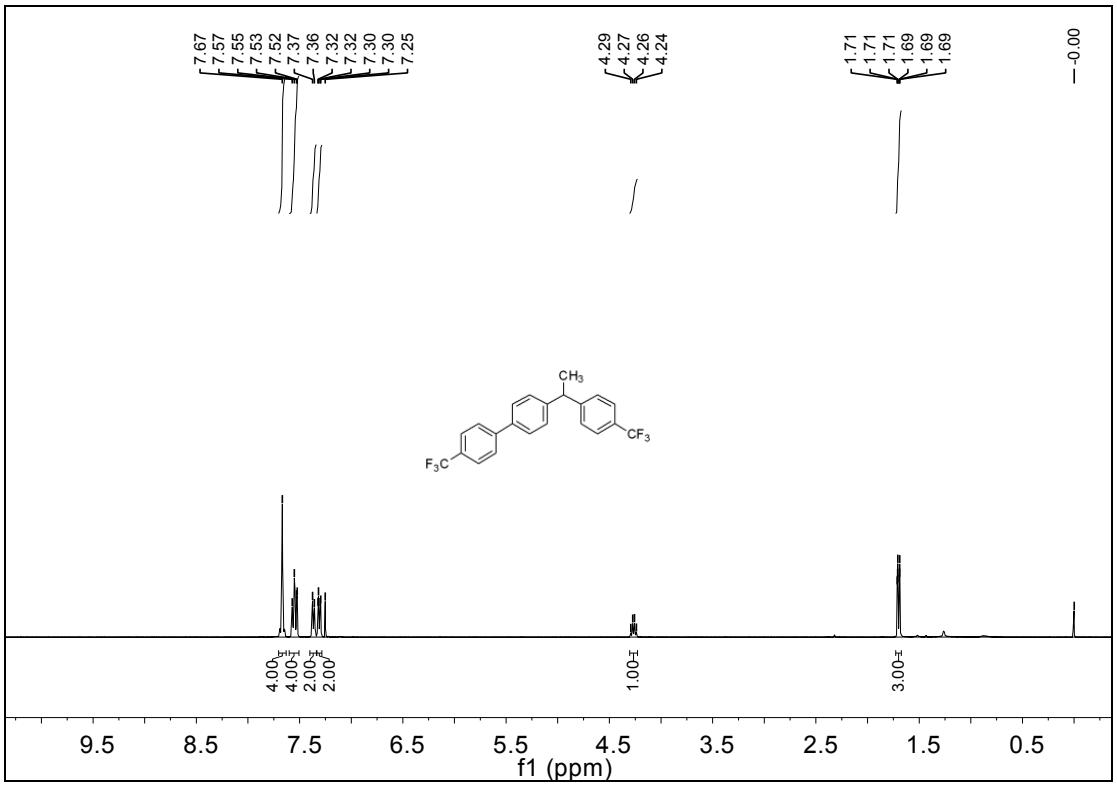


Figure S12

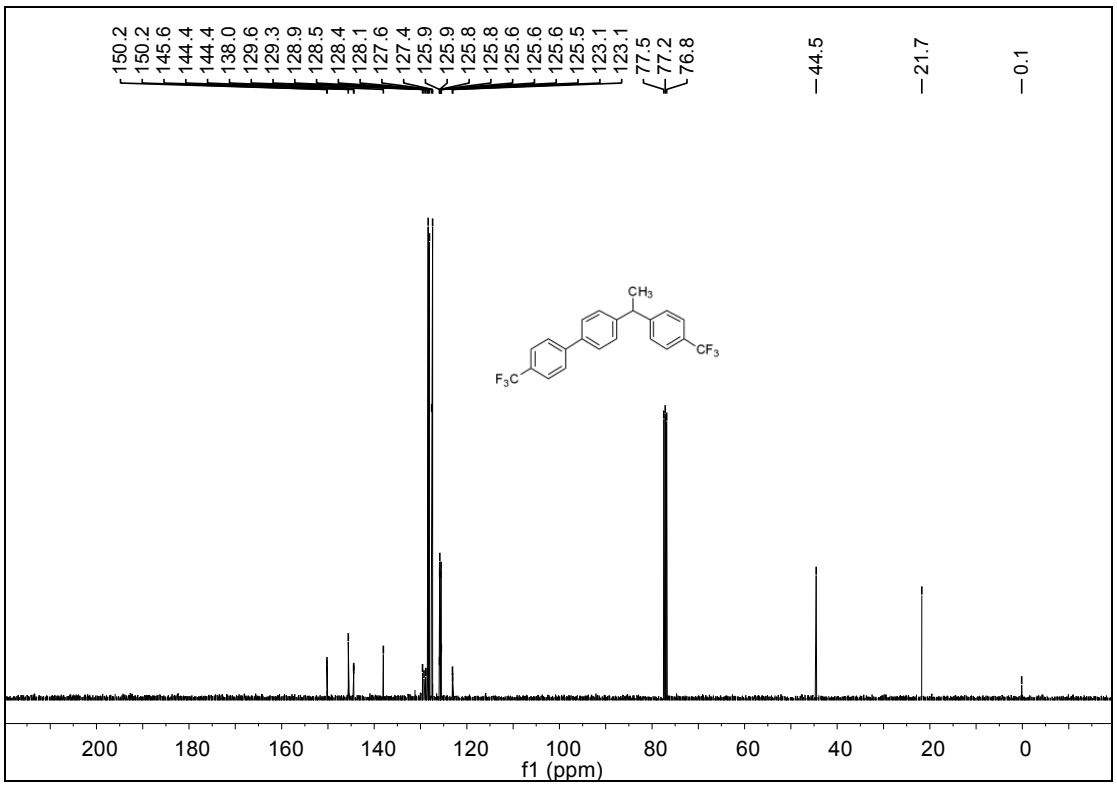


Figure S13

Elemental Composition Report **Page 1**

Tolerance = 1.0 mDa / DBE: min = -1.5, max = 50.0
Element prediction: Off

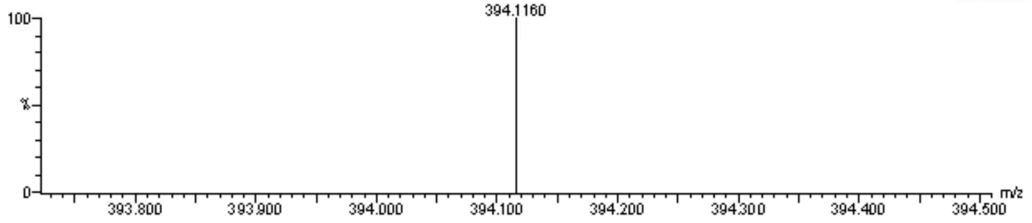
Monoisotopic Mass, Odd and Even Electron Ions
44 formula(e) evaluated with 1 results within limits (up to 70 best isotopic matches for each mass)
Elements Used:
C: 0-50 H: 0-100 O: 0-5 F: 5-6

GCT Premier ZJU
TOF MS EI+

26-Jun-2015

gn-h23 554 (2.984)

8.04e+002



Minimum:				-1.5		
Maximum:		1.0	10.0	50.0		
Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	Formula
394.1160	394.1156	0.4	1.0	12.0	5546415.5	C22 H16 F6

Figure S14

4-propyl-4'-(1-(4-propylphenyl)ethyl)-1,1'-biphenyl (3f)

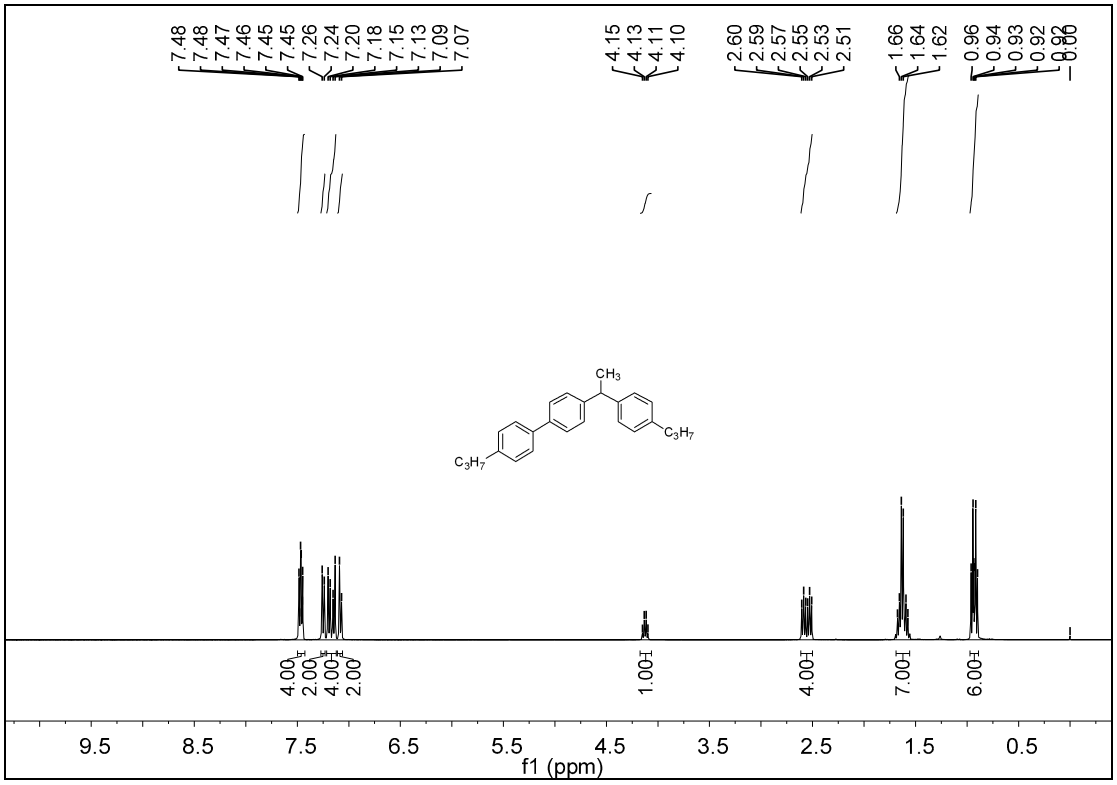


Figure S15

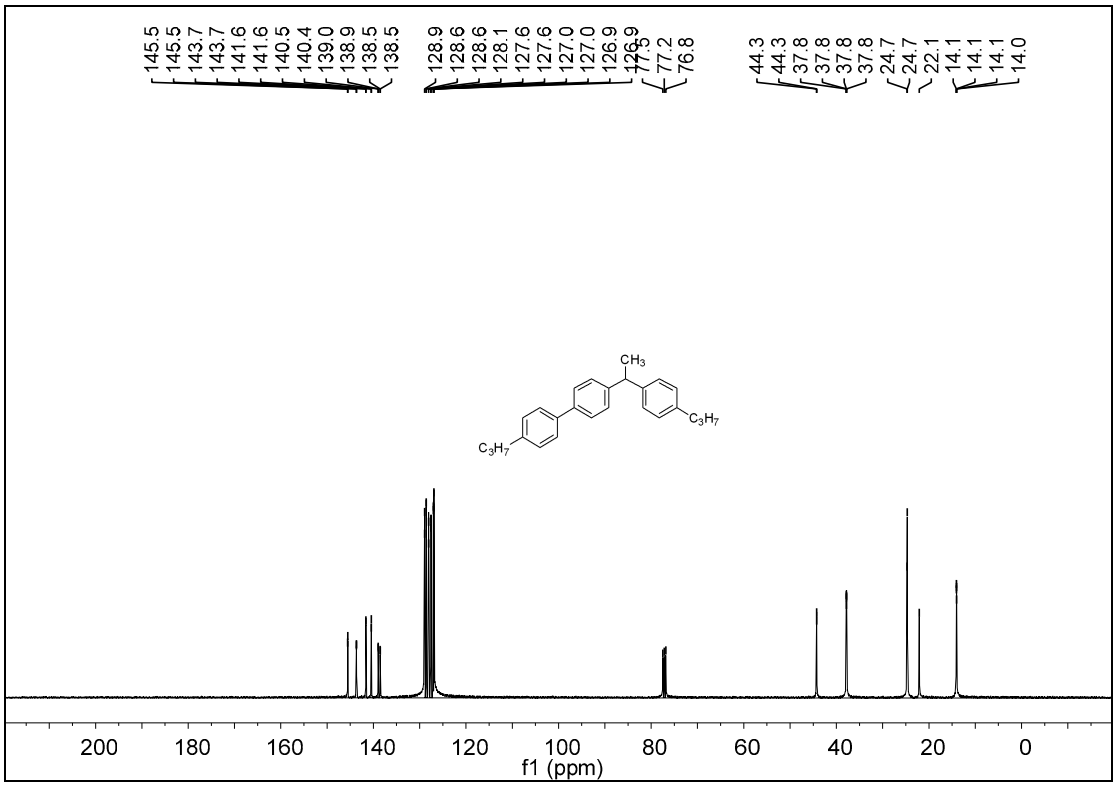


Figure S16

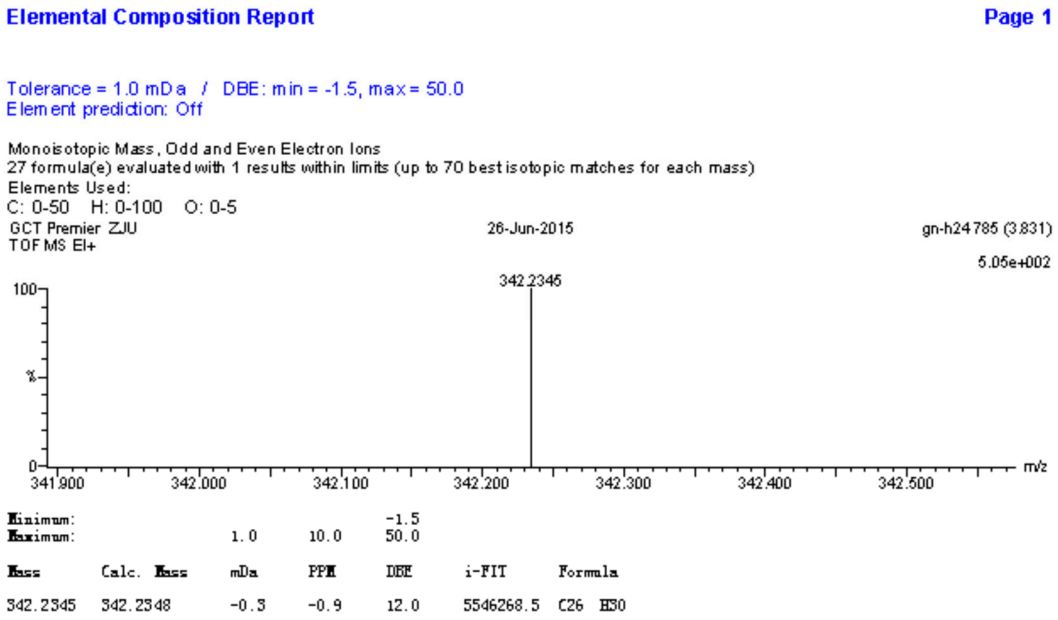


Figure S17

3-methyl-4'-(1-(m-tolyl)ethyl)-1,1'-biphenyl (3g)

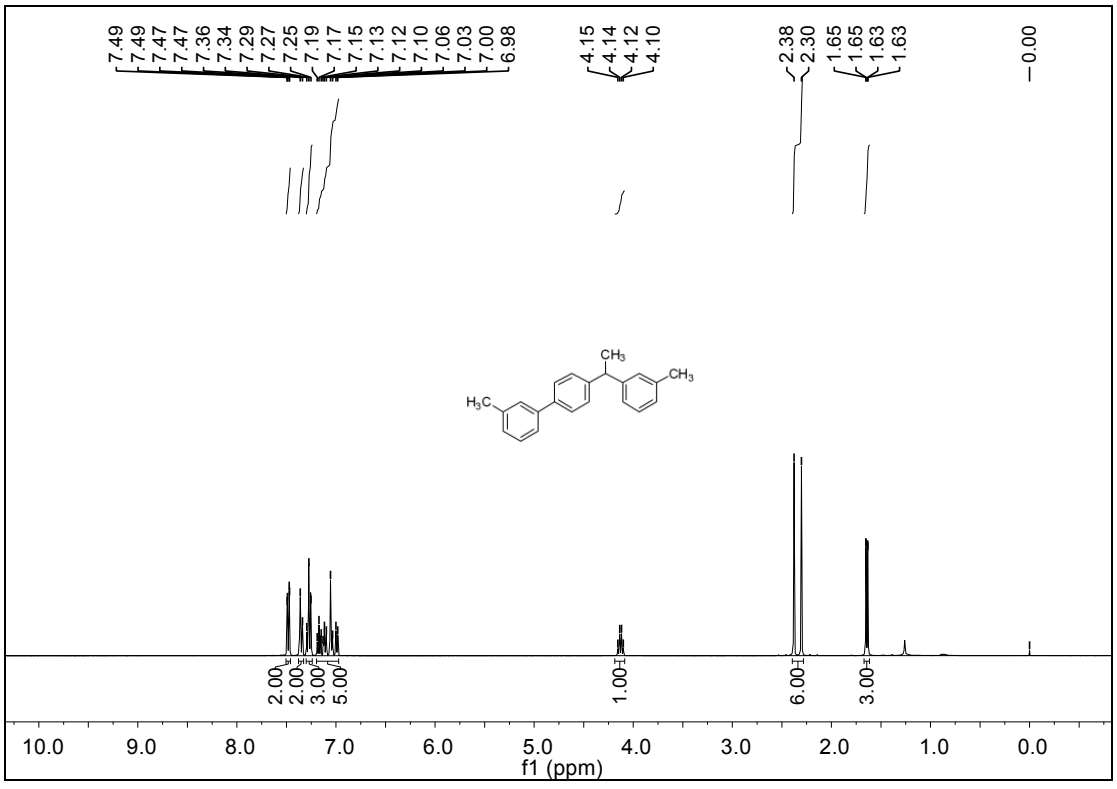


Figure S18

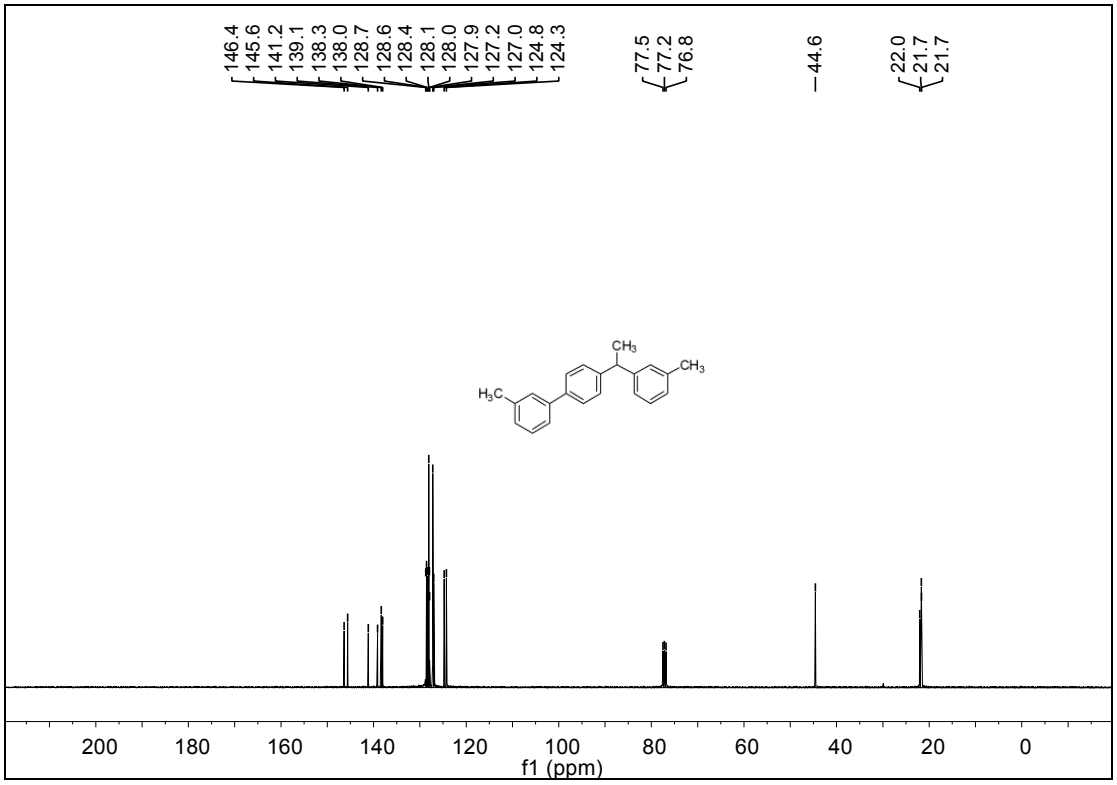


Figure S19

Elemental Composition Report **Page 1**

Tolerance = 1.0 mDa / DBE: min = -1.5, max = 50.0
Element prediction: Off

Monoisotopic Mass, Odd and Even Electron Ions
23 formula(e) evaluated with 1 results within limits (up to 70 best isotopic matches for each mass)
Elements Used:
C: 0-50 H: 0-100 O: 0-5

GCT Premier ZJU
TOF MS EI+

26-Jun-2015

gn-h25 625 (3.245)

1.00e+003

Minimum:				-1.5		
Maximum:		1.0	10.0	50.0		
Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	Formula
286.1721	286.1722	-0.1	-0.3	12.0	5546513.5	C22 H22

Figure S20

3-methoxy-4'-(1-(3-methoxyphenyl)-1,1'-biphenyl (3h)

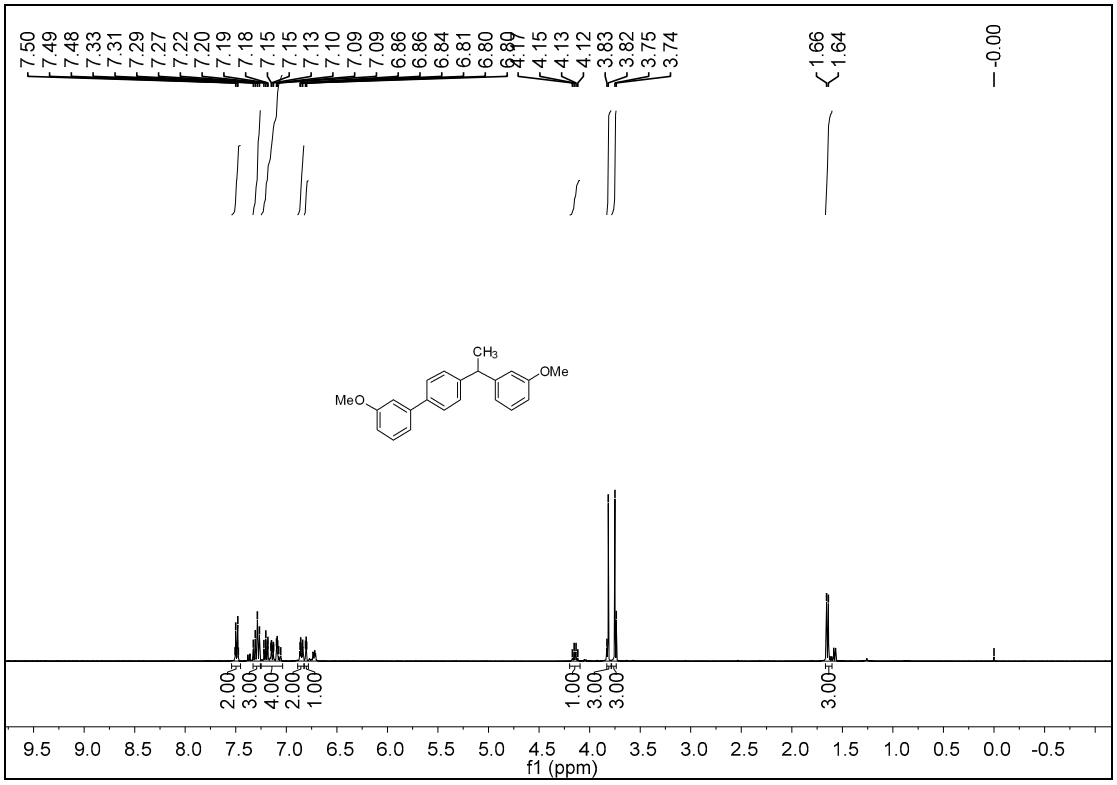


Figure S21

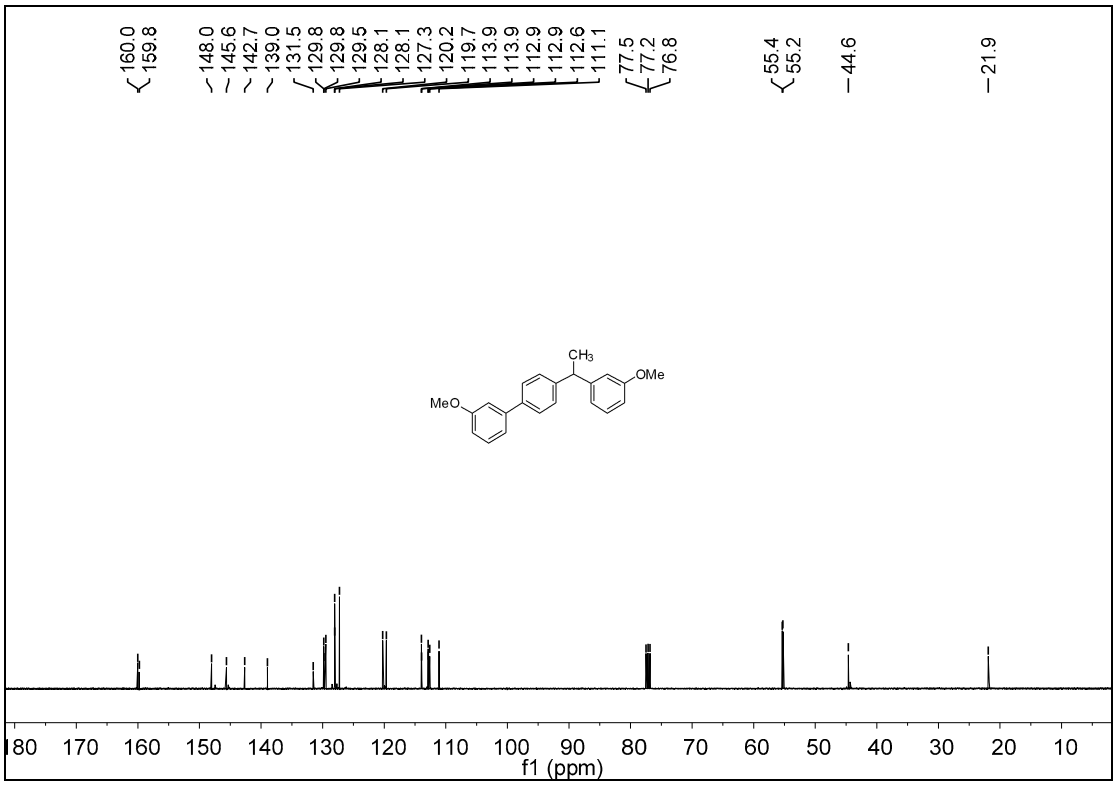


Figure S22

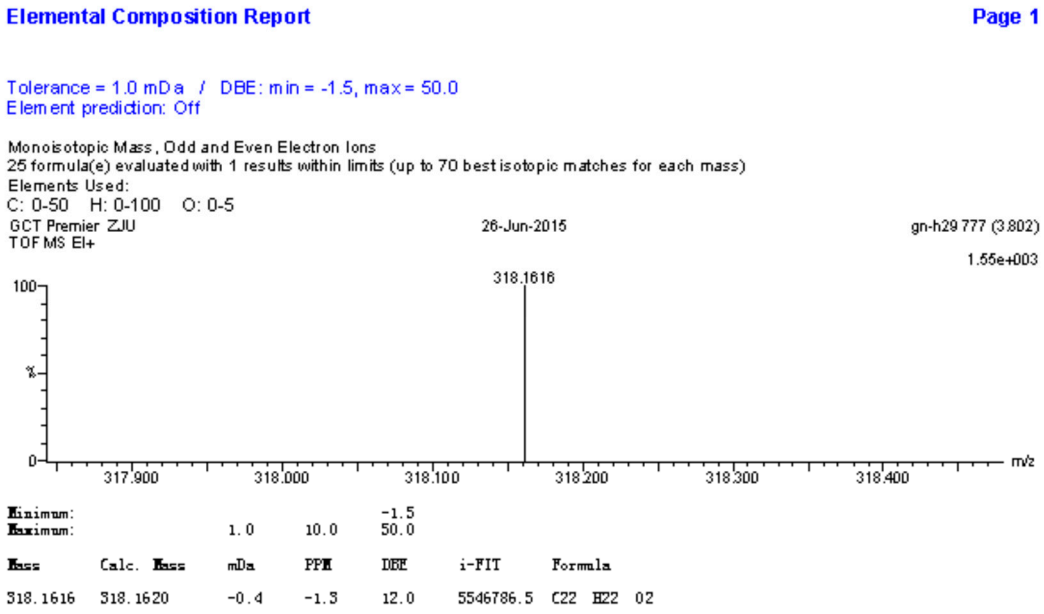


Figure S23

3,4,5-trifluoro-4'-(1-(3,4,5-trifluorophenyl)ethyl)-1,1'biphenyl (3i)

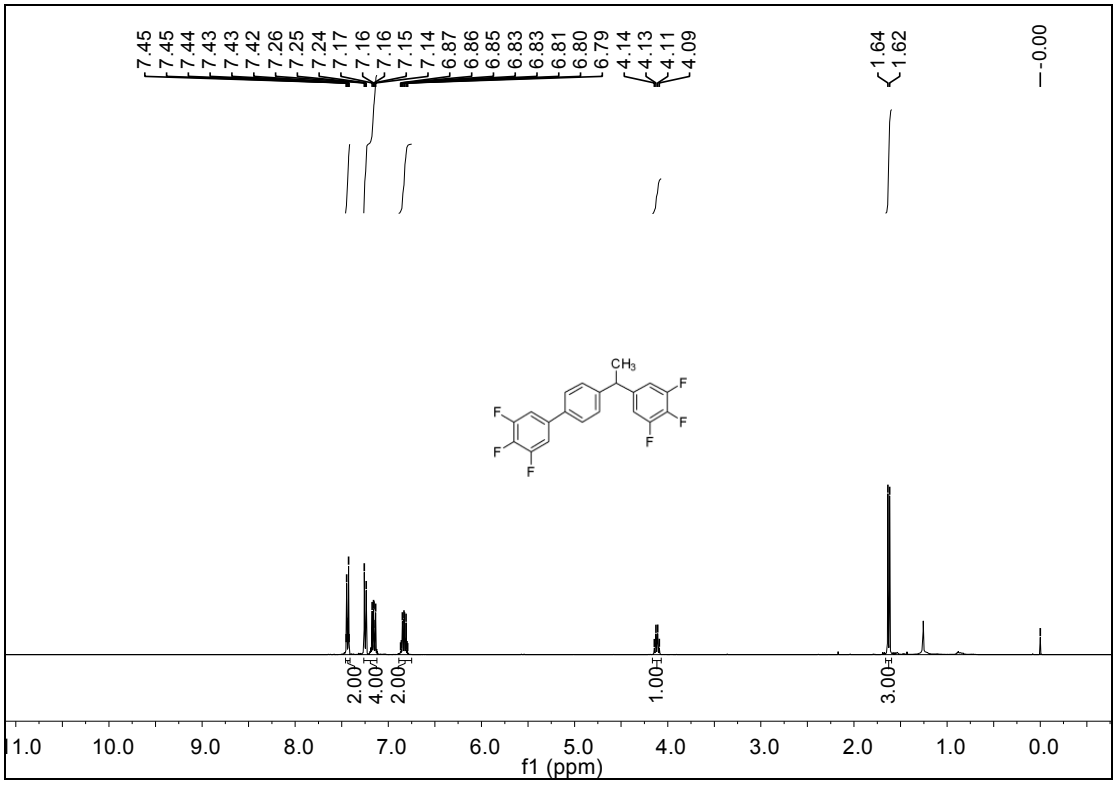


Figure S24

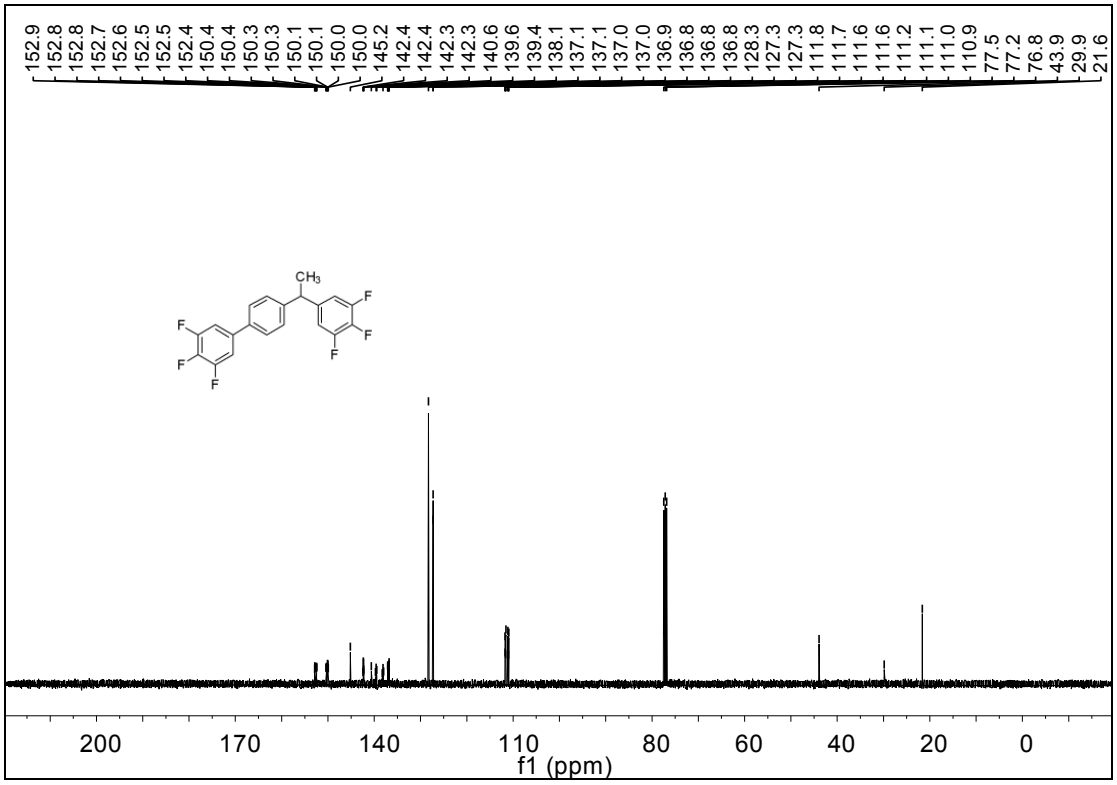


Figure S25

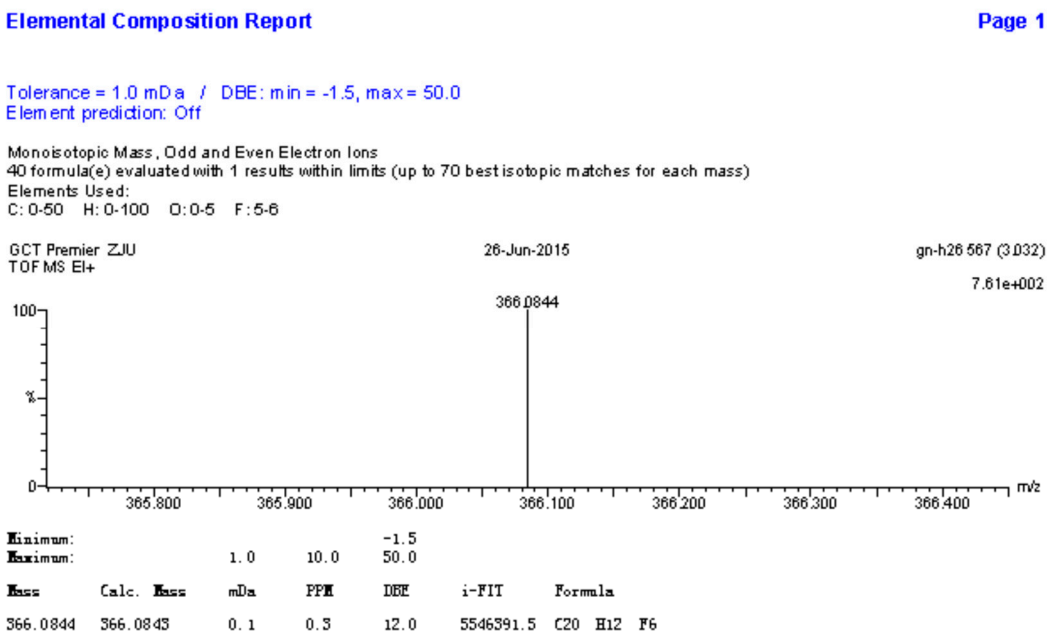


Figure S26

2-methyl-4'-(1-(o-tolyl)ethyl)-1,1'-biphenyl (3j)

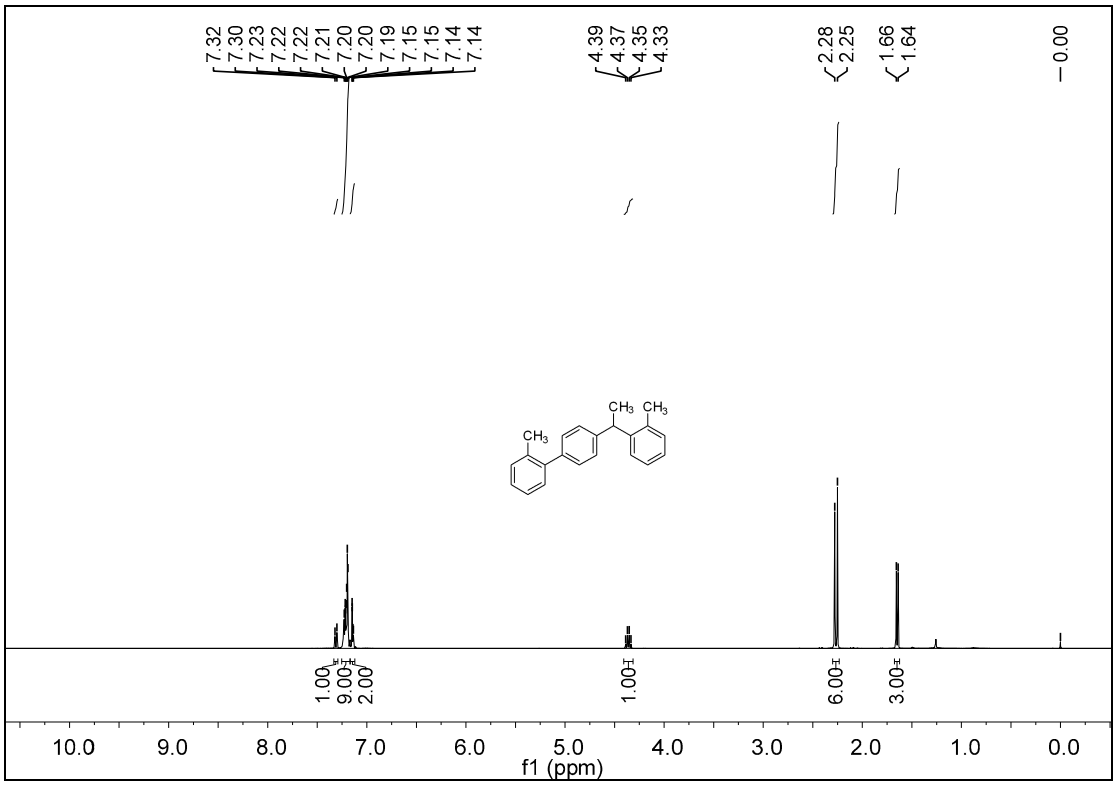


Figure S27

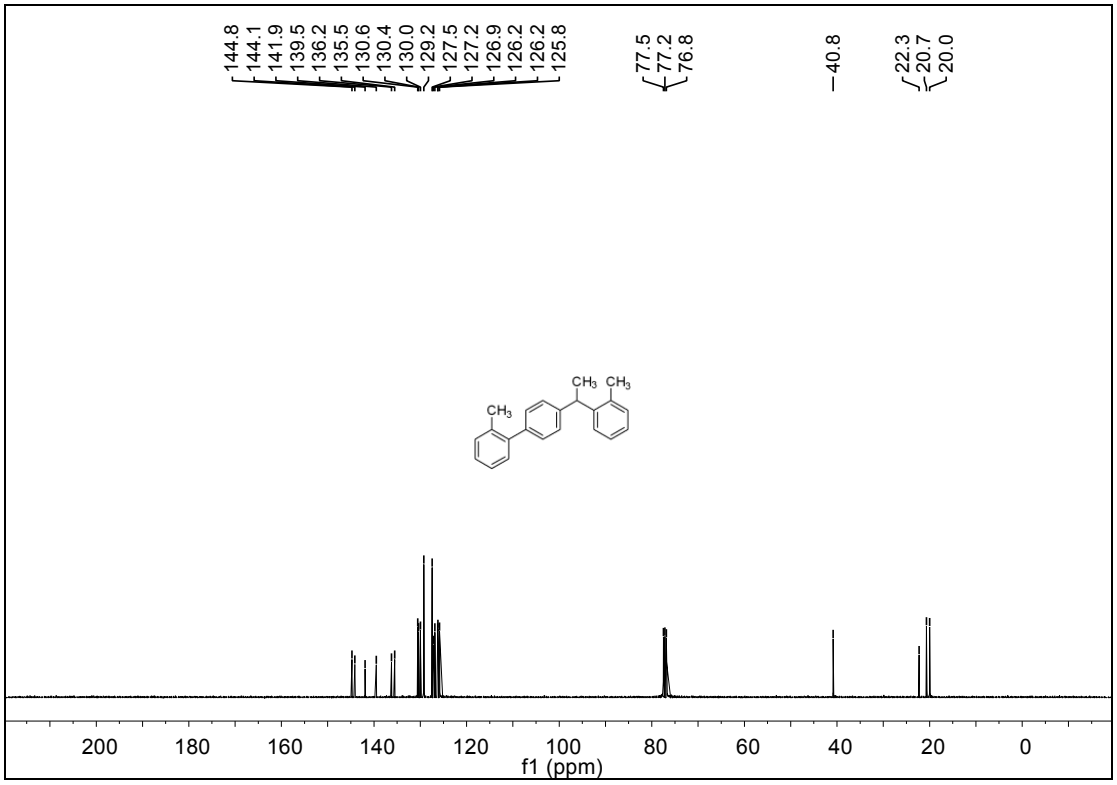


Figure S28

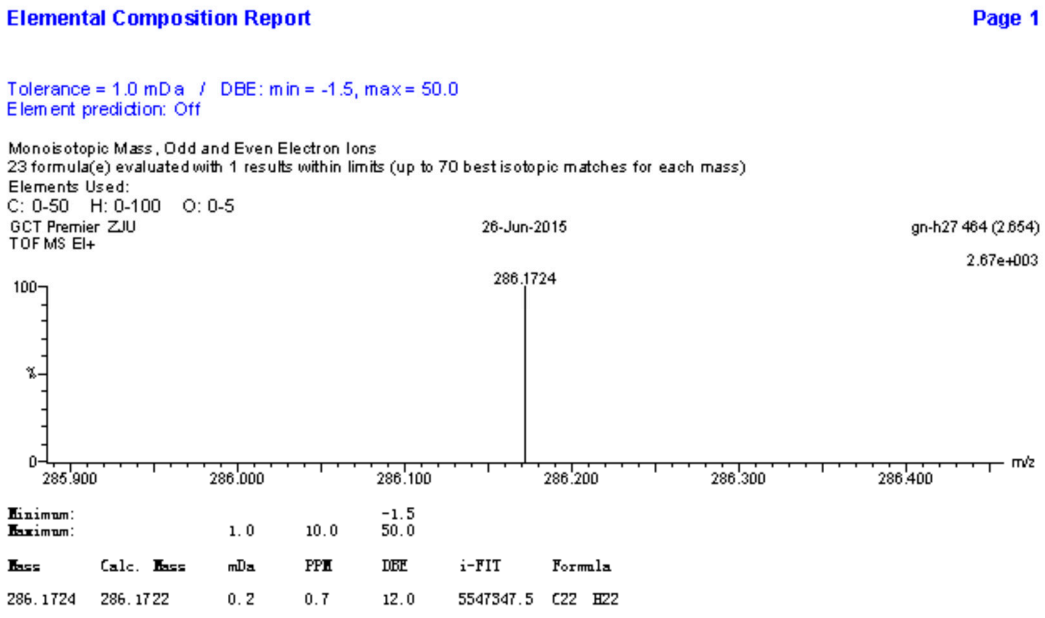


Figure S29

2-(4-(1-(naphthalene-2-yl)ethyl)phenyl)naphthalene (3k)

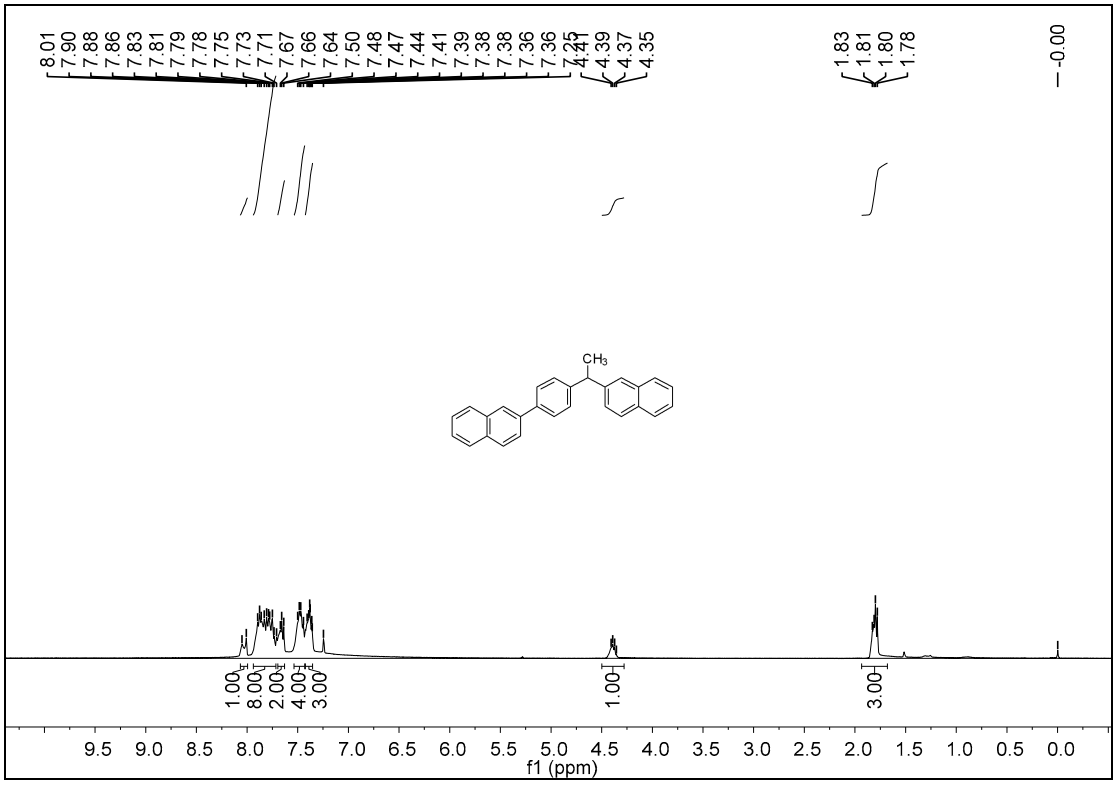


Figure S30

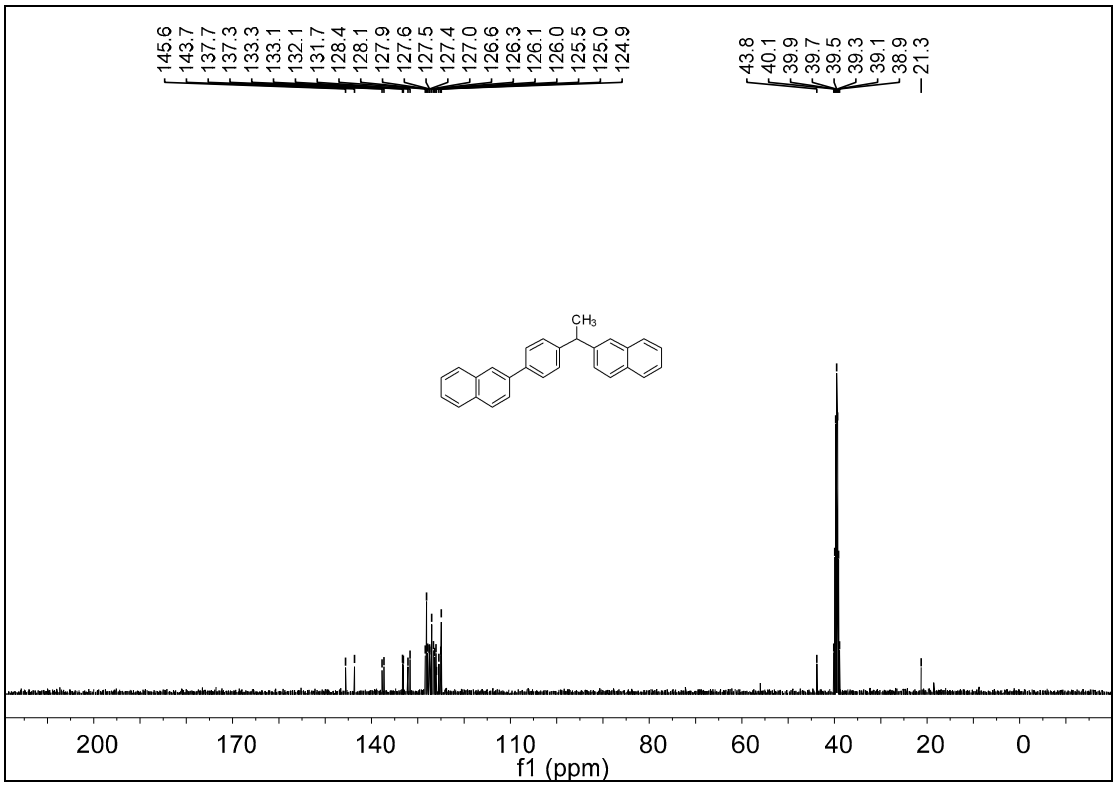


Figure S31

Elemental Composition Report **Page 1**

Tolerance = 1.0 mDa / DBE: min = -1.5, max = 50.0
Element prediction: Off

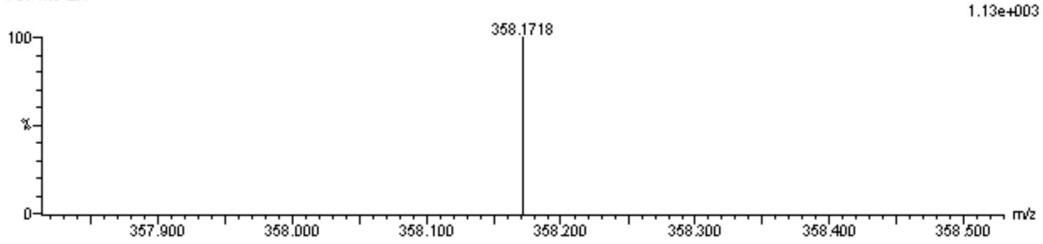
Monoisotopic Mass, Odd and Even Electron Ions
28 formula(e) evaluated with 1 results within limits (up to 70 best isotopic matches for each mass)
Elements Used:
C: 0-50 H: 0-100 O: 0-5

GCT Premier ZJU
TOF MS EI+

26-Jun-2015

gn-h30 1027 (4.719)

1.13e+003



Minimum:				-1.5		
Maximum:		1.0	10.0	50.0		
Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	Formula
358.1718	358.1722	-0.4	-1.1	18.0	5546580.0	C28 H22

Figure S32

3-methyl-3-(1-(m-tolyl)ethyl-1,1-biphenyl (3l)

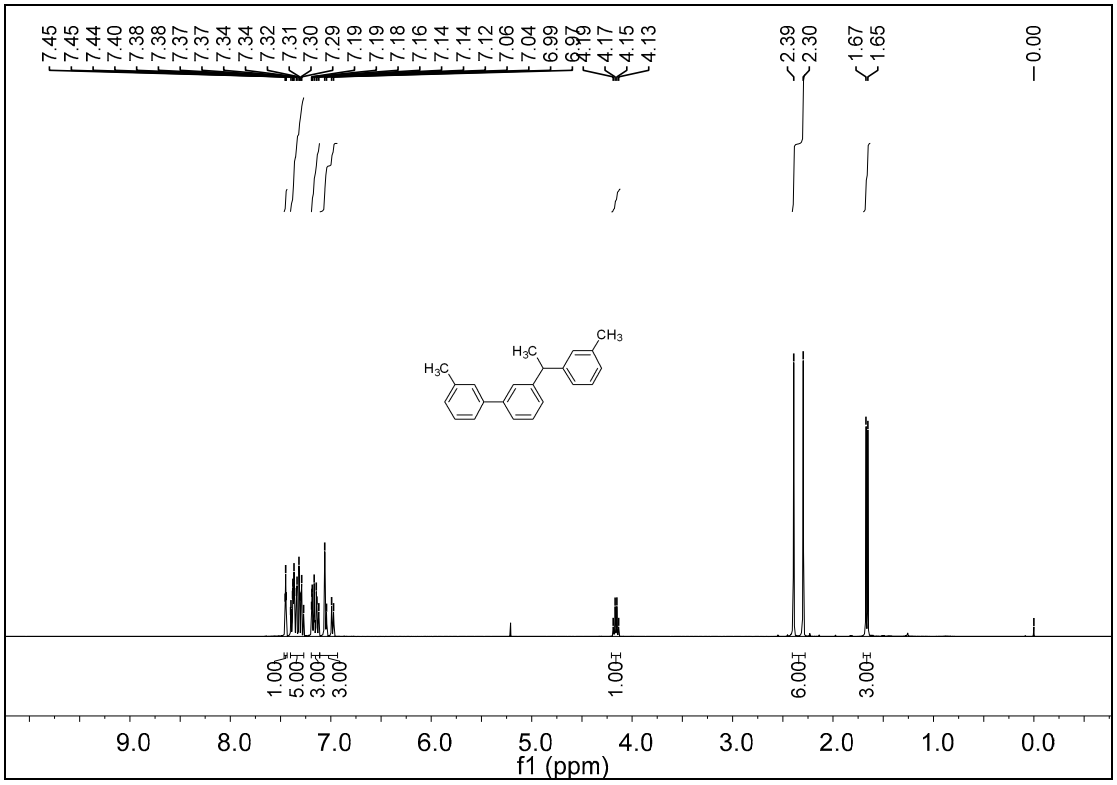


Figure S33

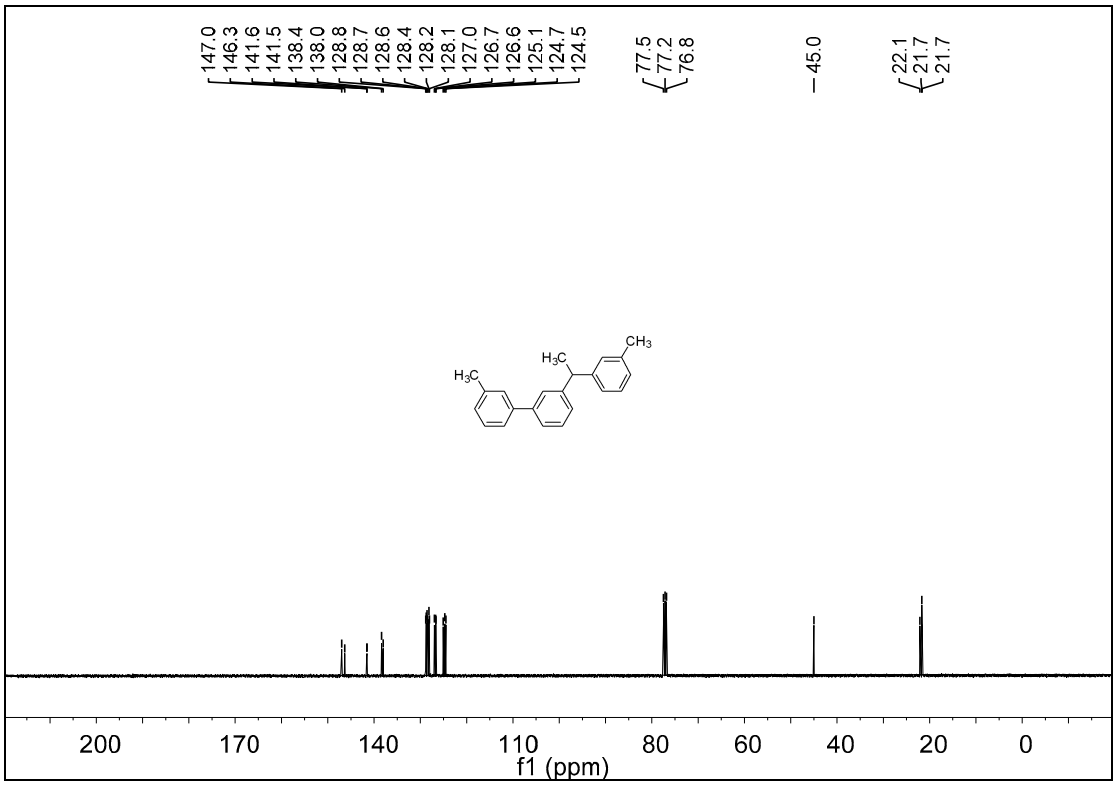


Figure S34

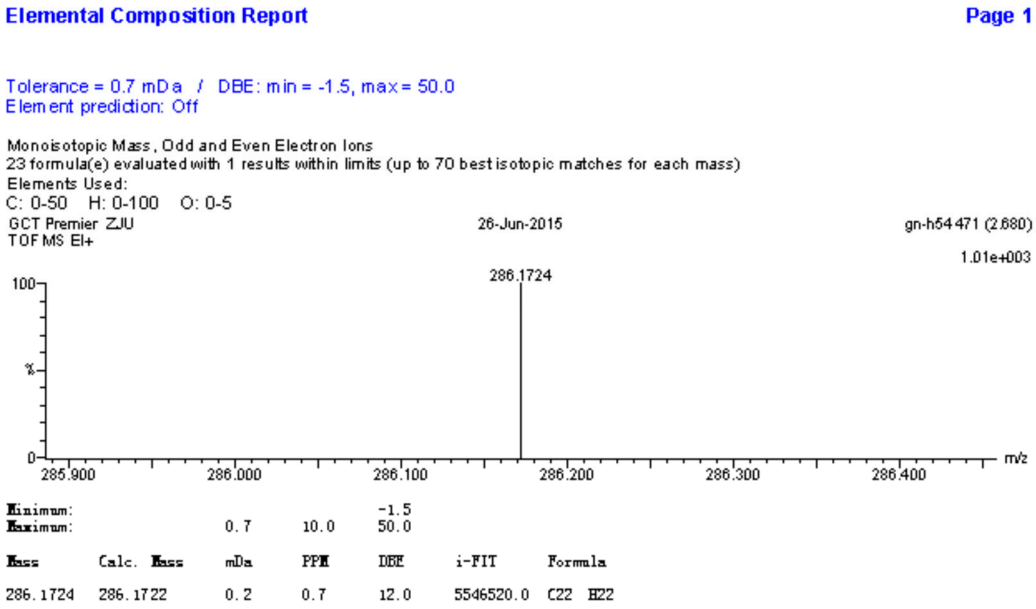


Figure S35

3-methyl-4′-(3-methylbenzyl)-1,1′-biphenyl (3m)

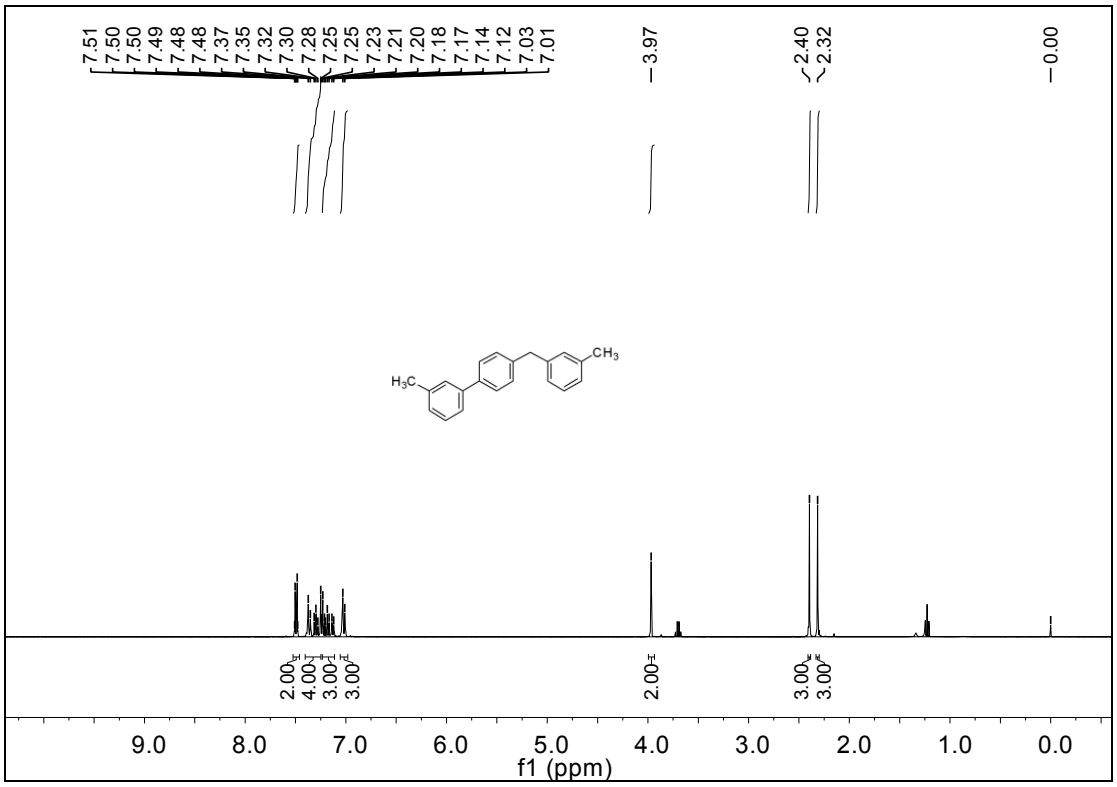


Figure S36

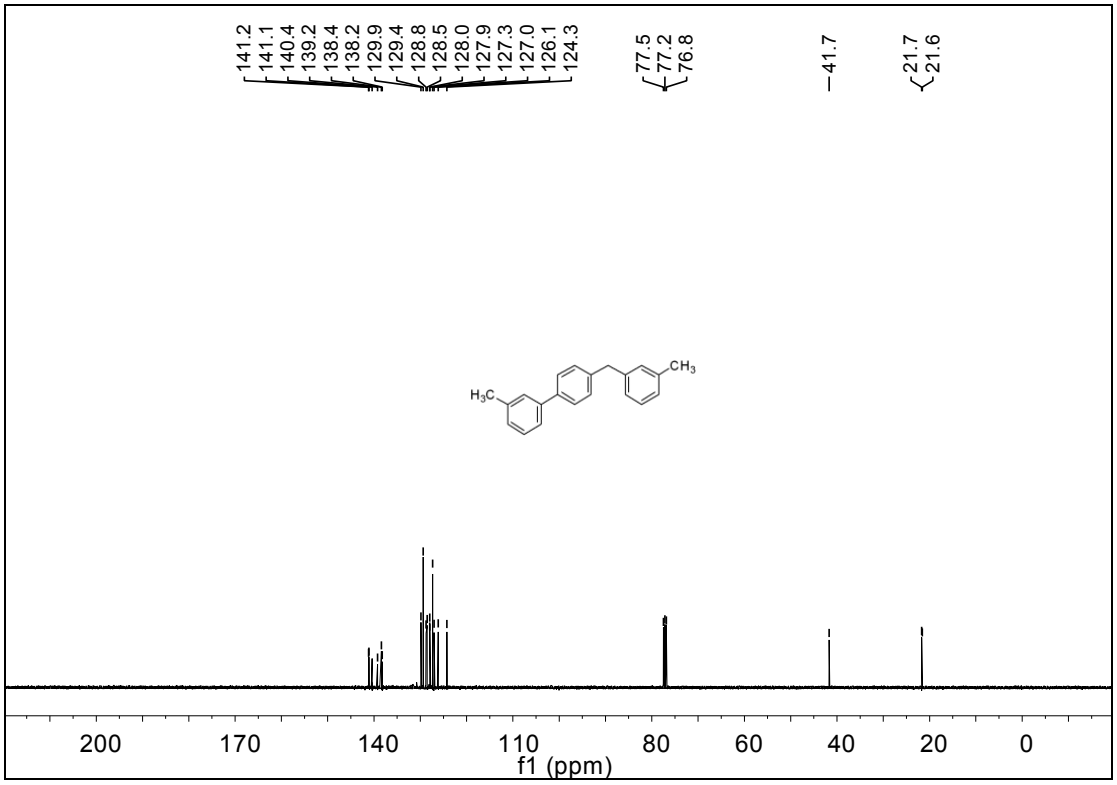


Figure S37

Elemental Composition Report **Page 1**

Tolerance = 1.0 mDa / DBE: min = -1.5, max = 50.0
Element prediction: Off

Monoisotopic Mass, Odd and Even Electron Ions
23 formula(e) evaluated with 1 results within limits (up to 70 best isotopic matches for each mass)
Elements Used:
C: 0-50 H: 0-100 O: 0-5

GCT Premier ZJU
TOF MS EI+

26-Jun-2015

gn-h44620 (3.220)

9.87e+002

Minimum:				-1.5		
Maximum:		1.0	10.0	50.0		
Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	Formula
272.1560	272.1565	-0.5	-1.8	12.0	5546506.0	C21 H20

Figure S38

3'-methyl-2-(2-methylbenzyl)-1,1'-biphenyl (3n)

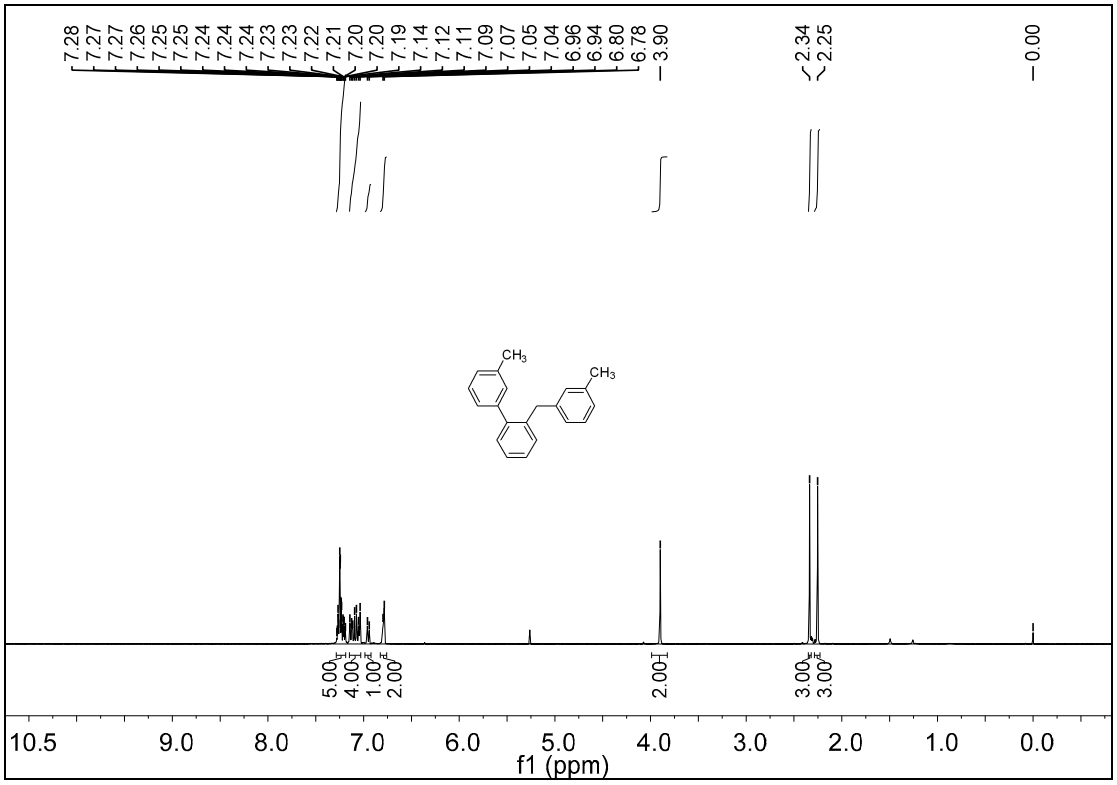


Figure S39

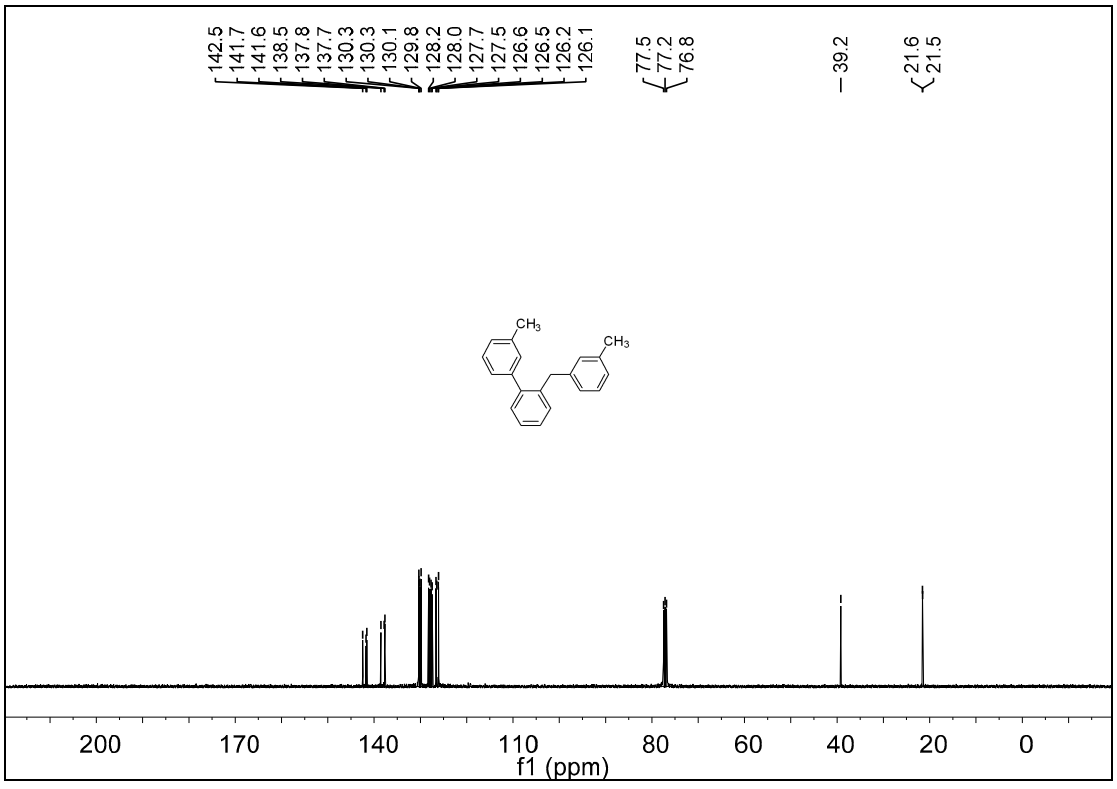


Figure S40

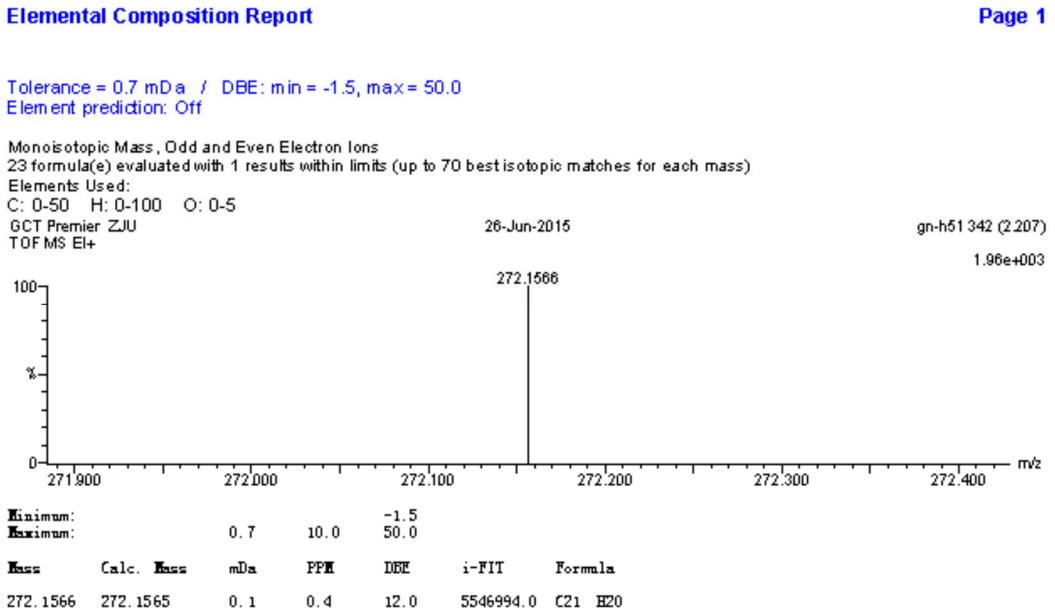


Figure S41

4-methoxy-4'-(1-(p-tolyl)ethyl)-1,1'-biphenyl (3o)

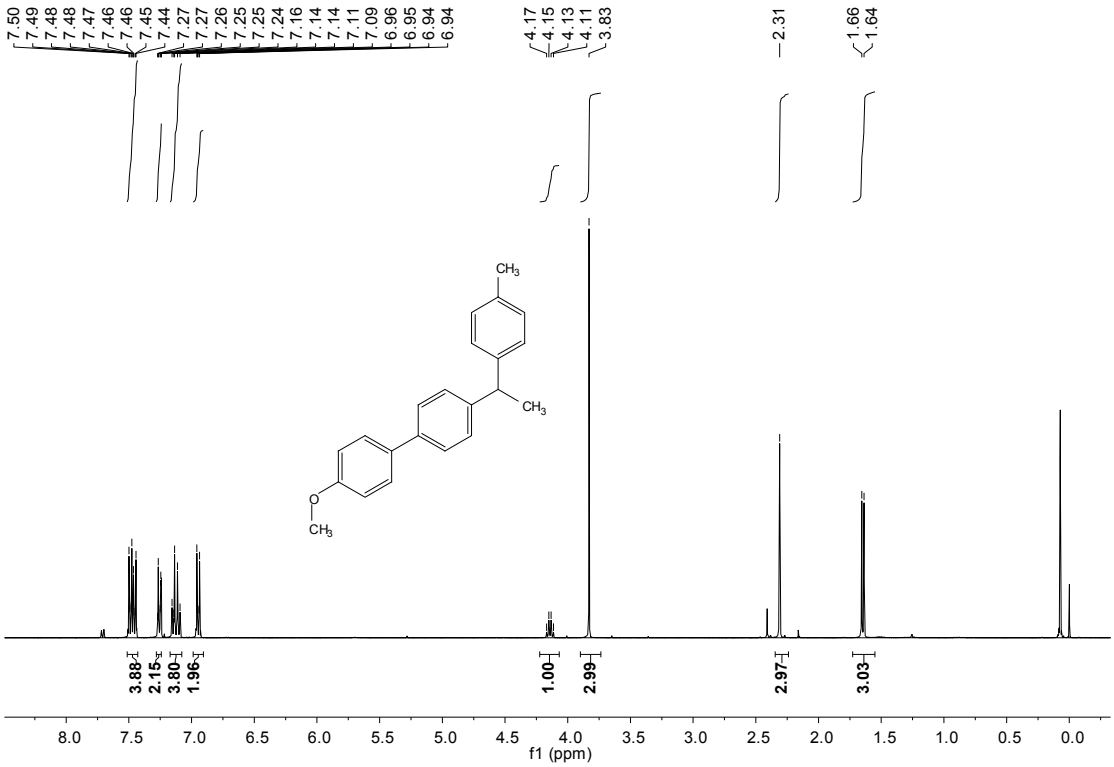


Figure S42

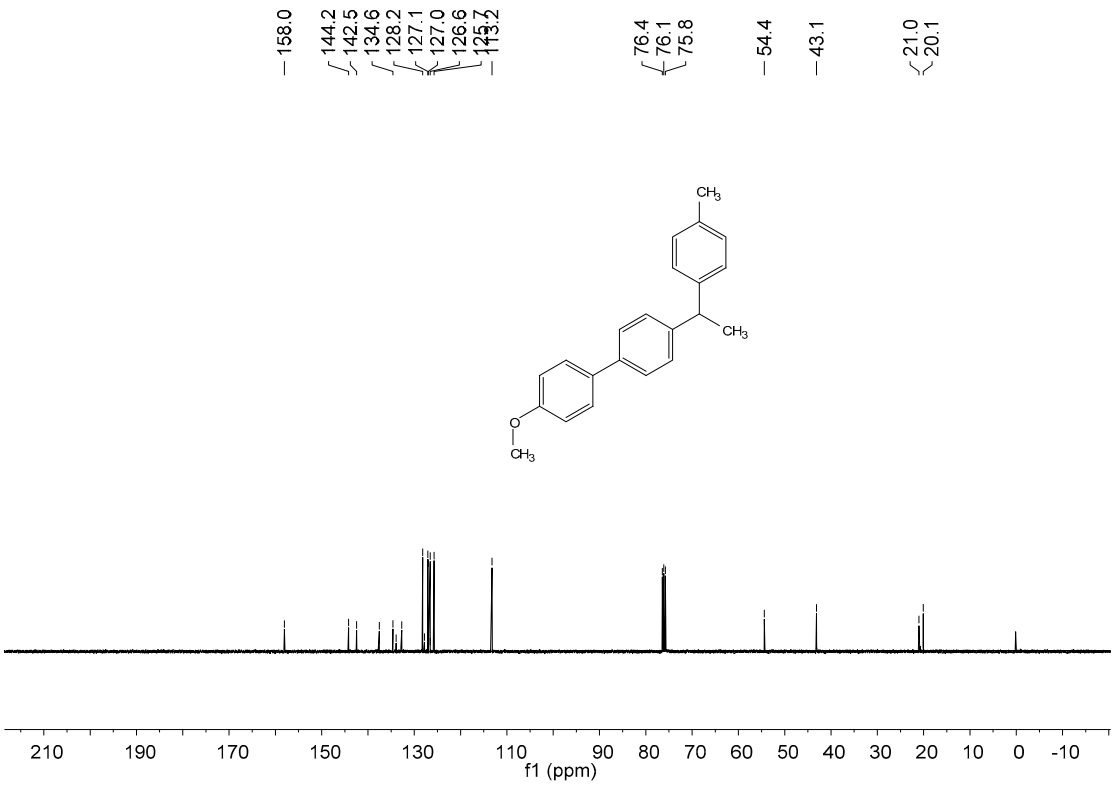


Figure S43

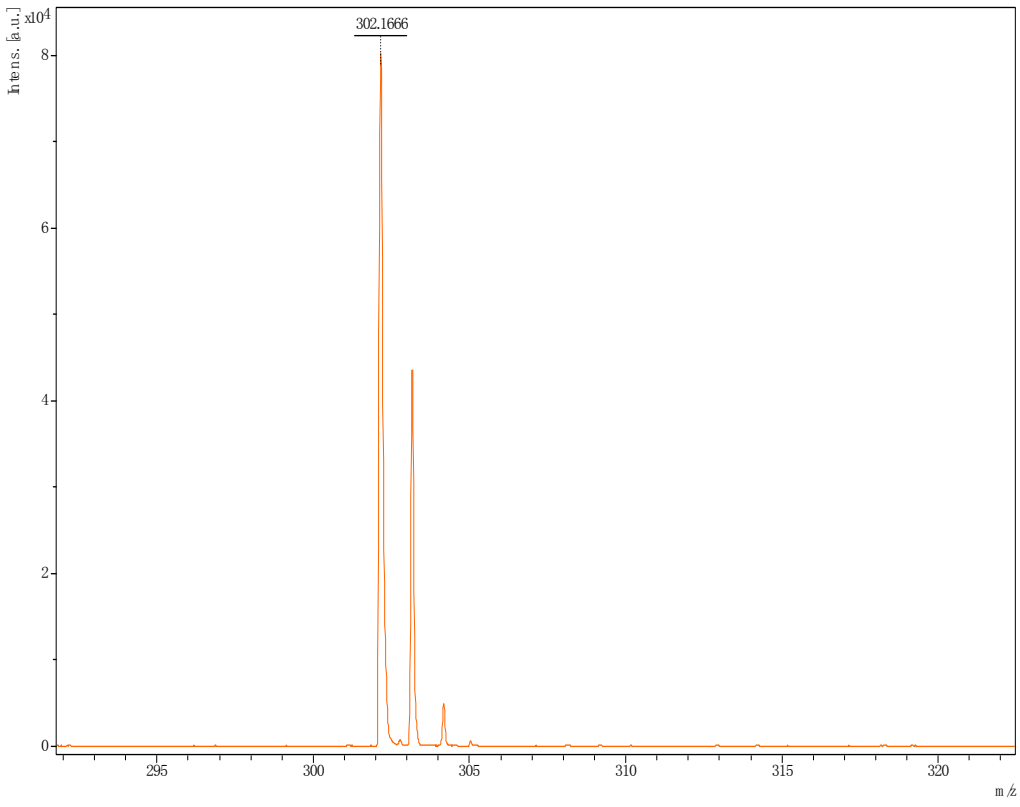


Figure S44

4-propyl-4'-(1-(p-tolyl)ethyl)-1,1'-biphenyl (3p)

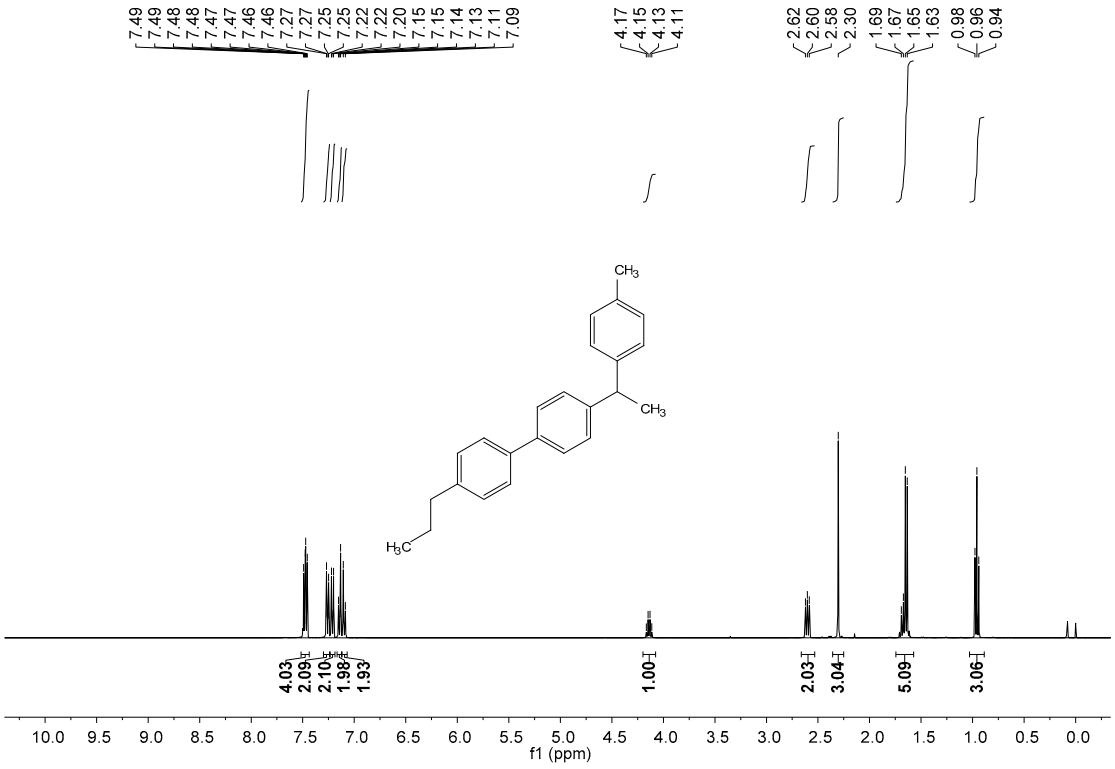


Figure S45

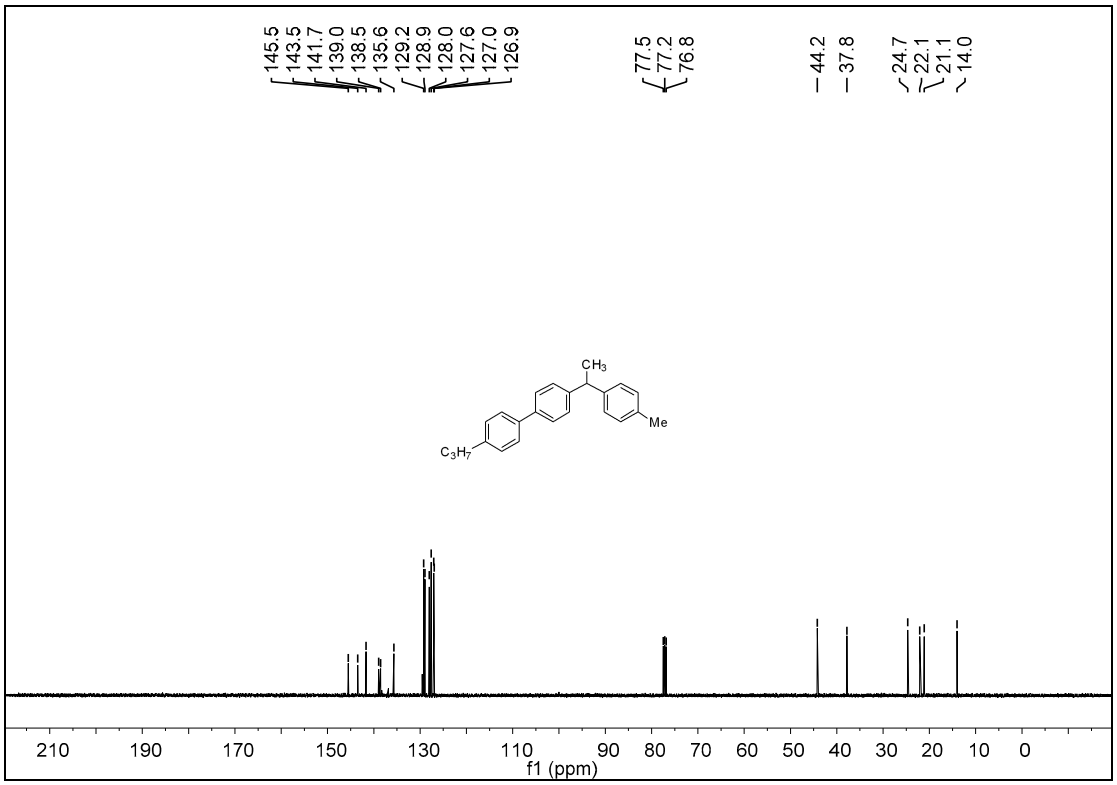


Figure S46

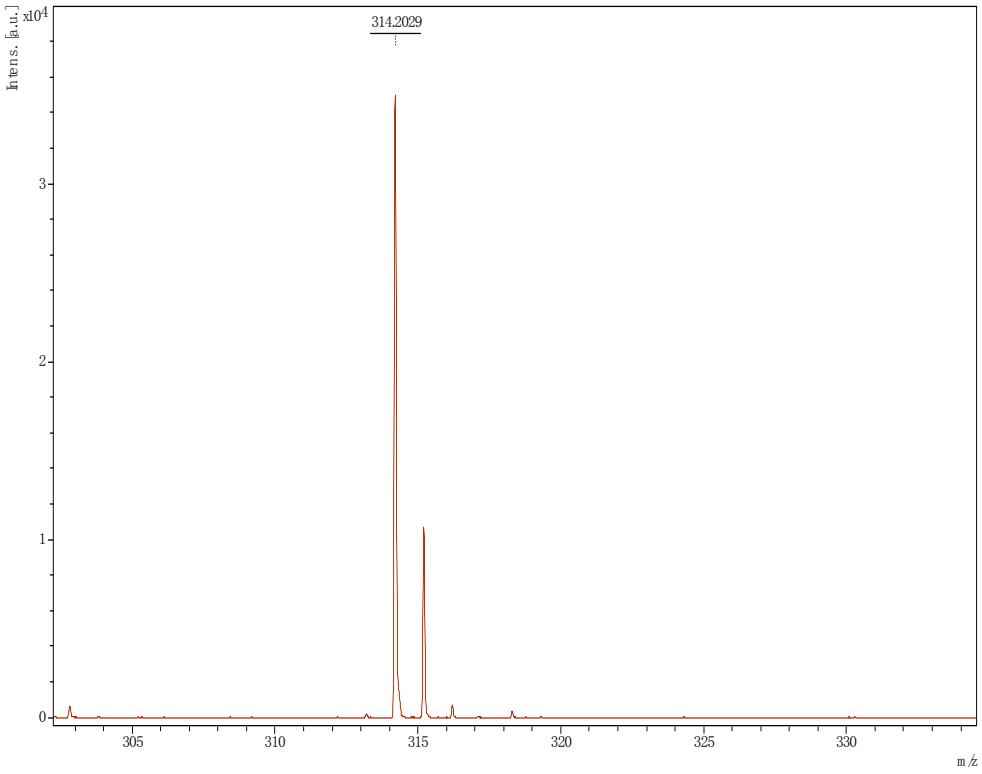


Figure S47

4-flouro-4'-(1-(p-toly)etyl)-1,1'-biphenyl (3q)

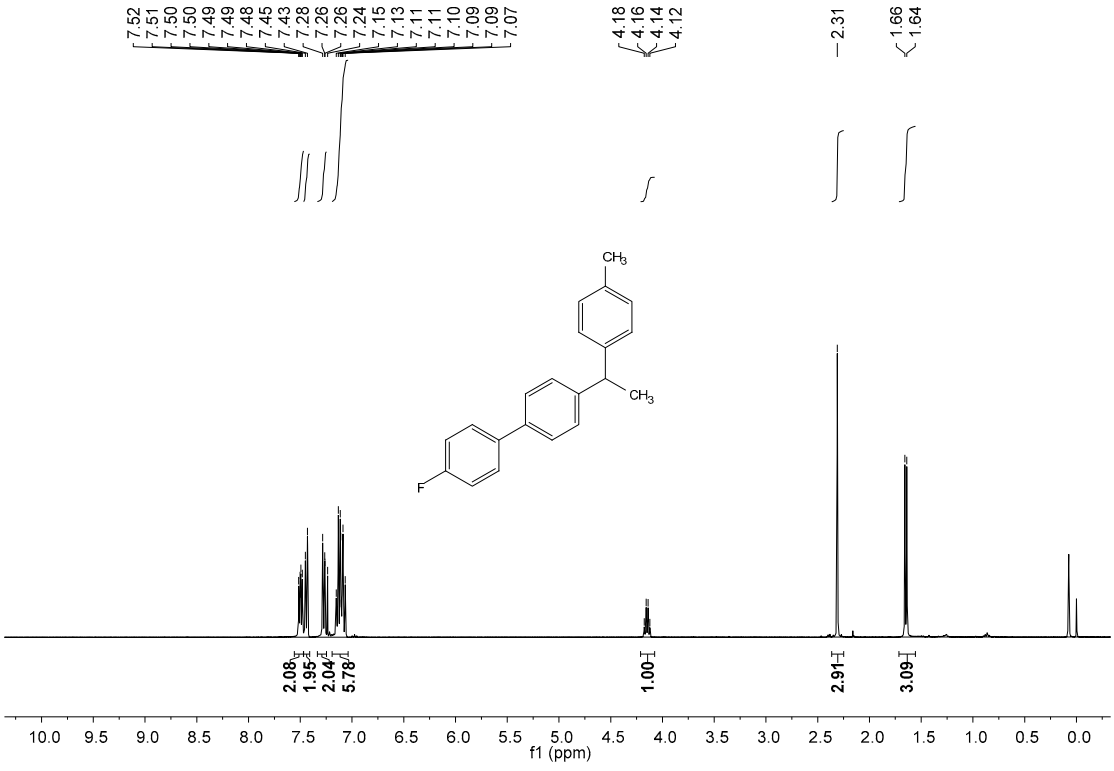


Figure S48

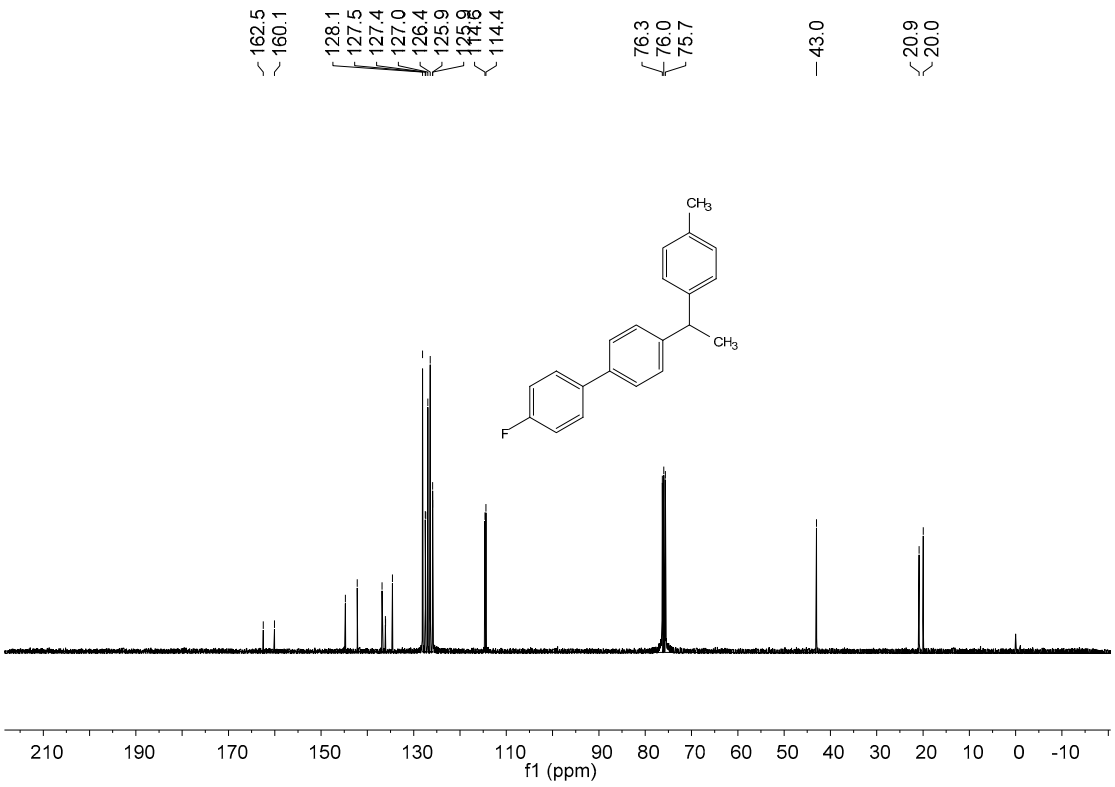


Figure S49

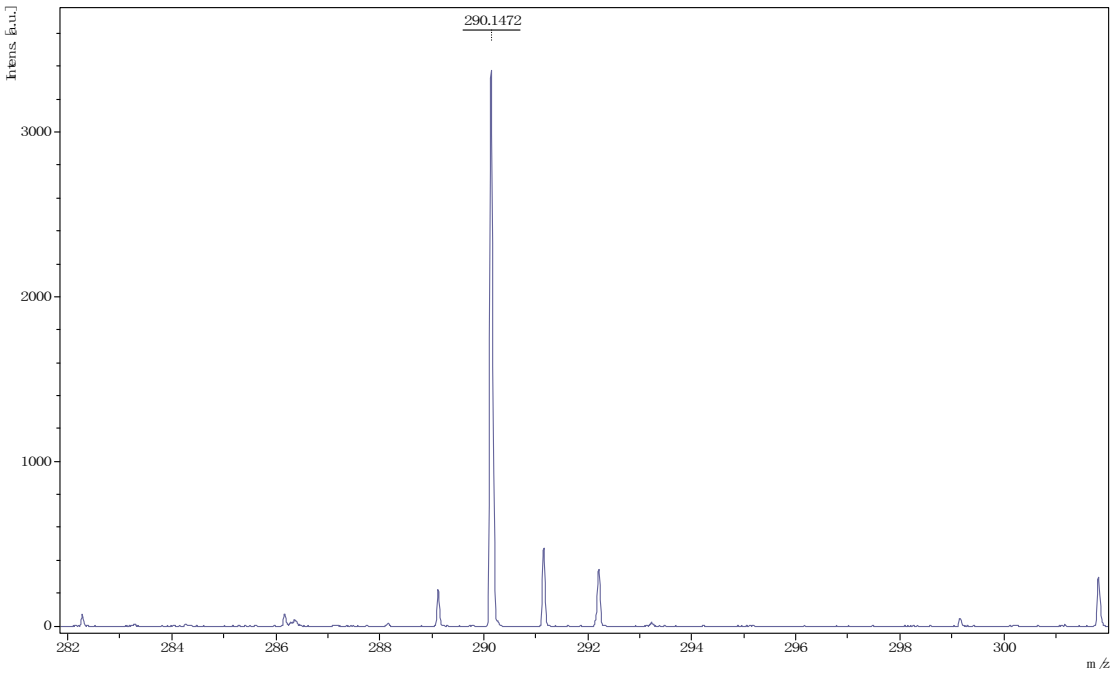


Figure S50

4-(1-(p-tolyl)ethyl)-4'-(trifluoromethyl)-1,1'-biphenyl (3r)

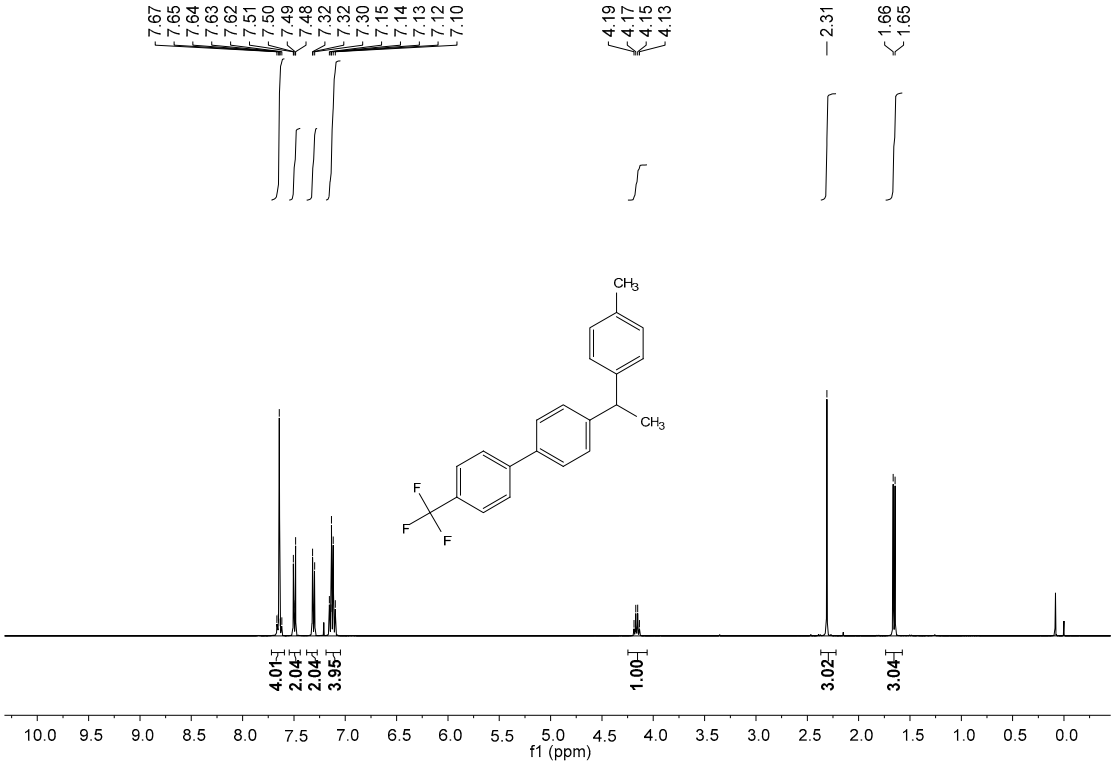


Figure S51

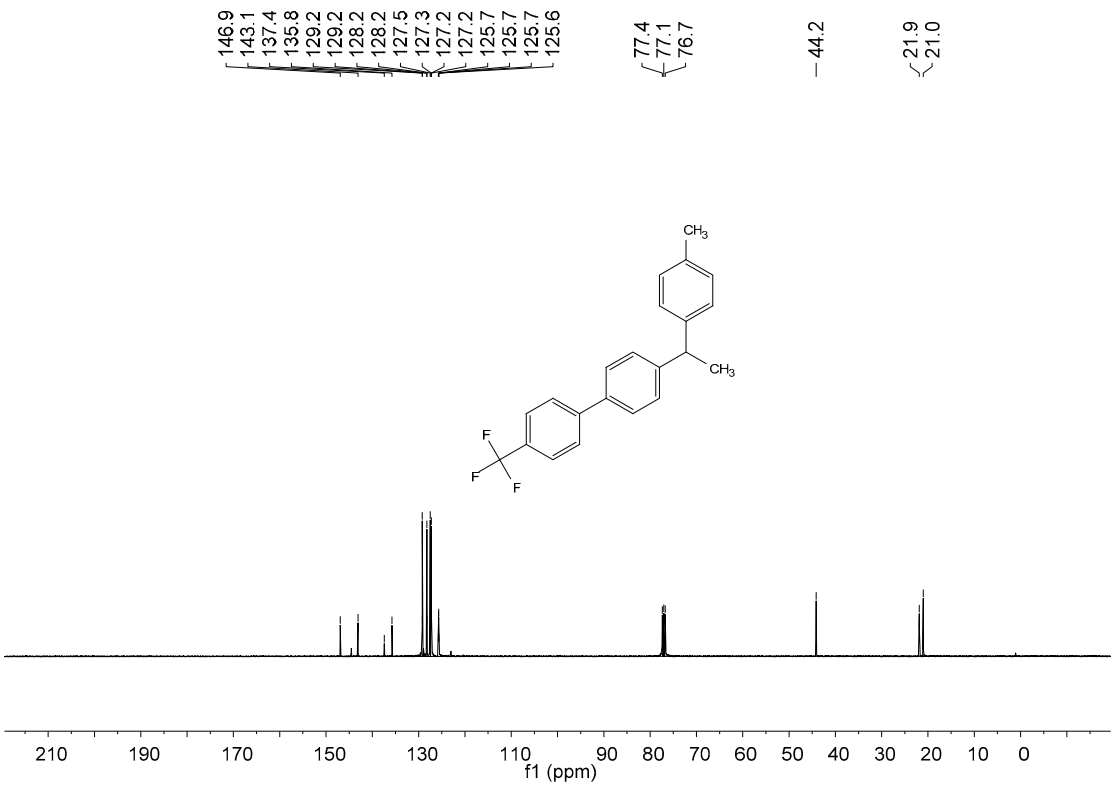


Figure S52

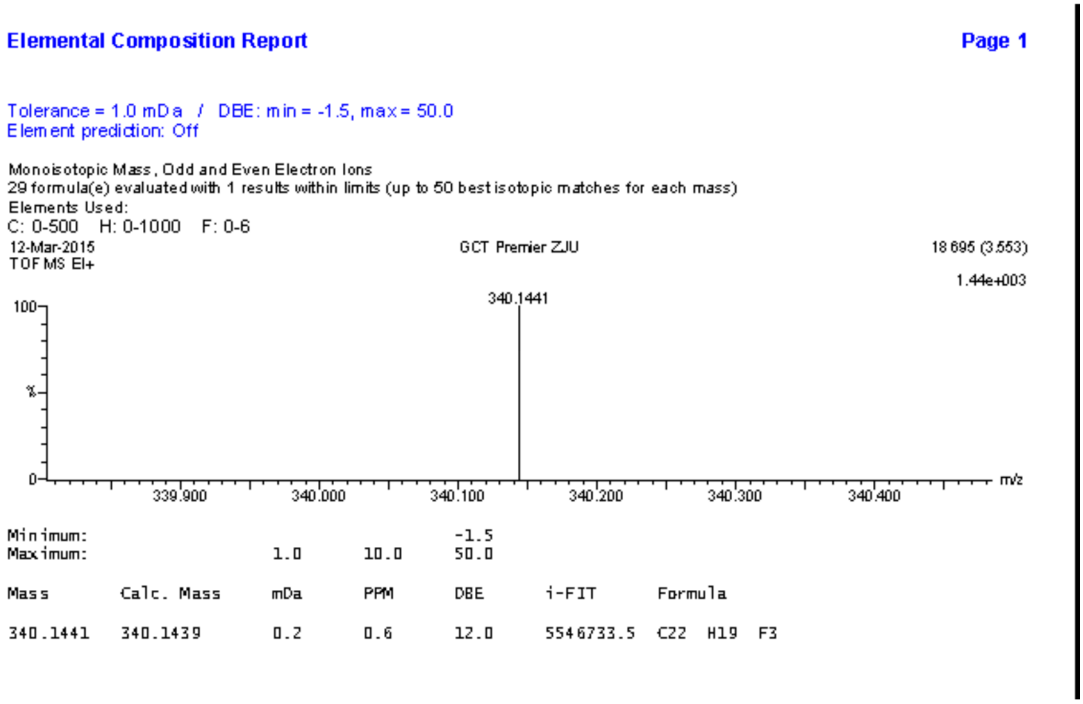


Figure S53

2,4-difluoro-4'-(1-(p-tolyl)ethyl)-1,1'-biphenyl (3s)

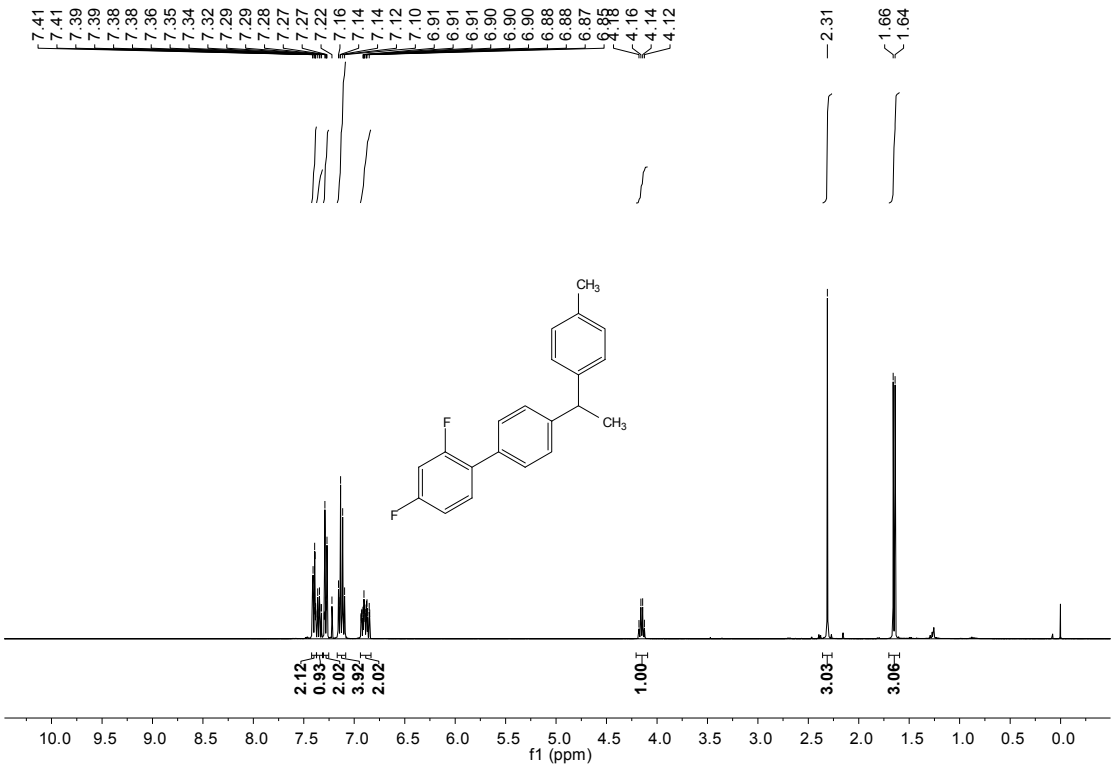


Figure S54

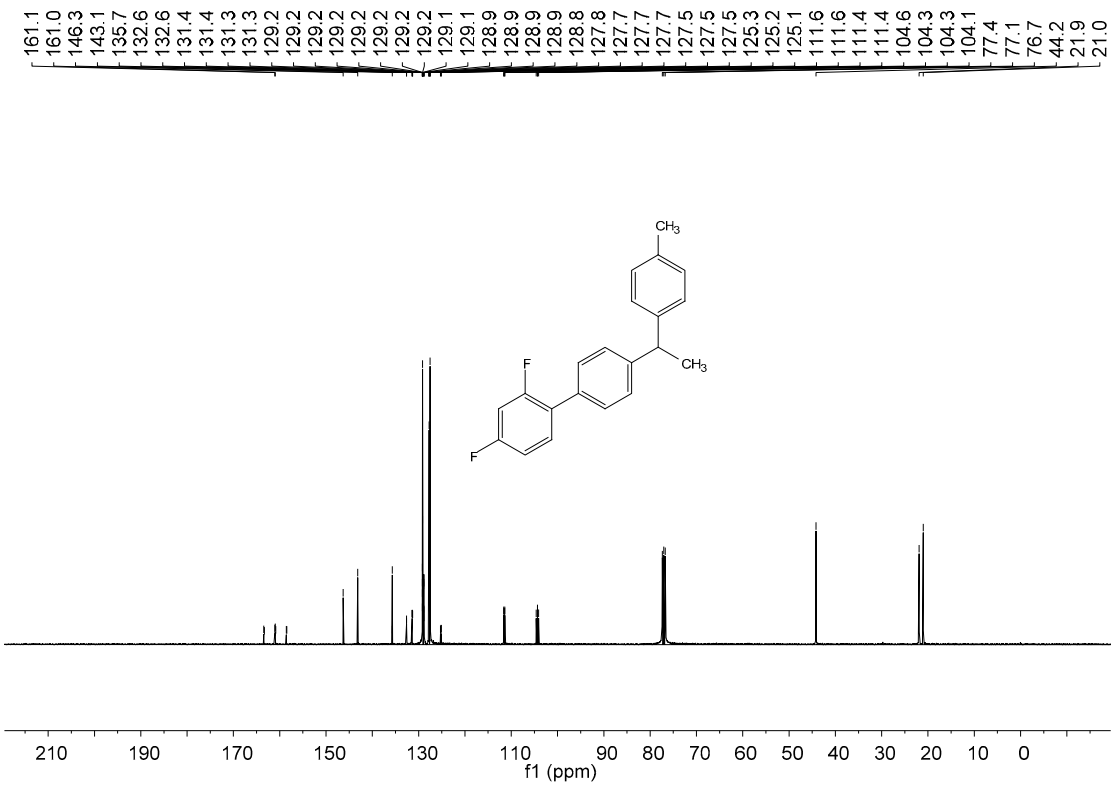

161.1
161.0
146.3
143.1
135.7
132.6
132.6
131.4
131.4
131.3
131.3
129.2
129.2
129.2
129.2
129.2
129.2
129.2
129.1
129.1
128.9
128.9
128.9
128.9
128.8
127.8
127.7
127.7
127.7
127.5
127.5
127.5
125.3
125.2
125.1
111.6
111.6
111.4
111.4
104.6
104.3
104.3
104.1
77.4
77.1
76.7
44.2
21.9
21.0
CH3
CH3
F
F
210
190
170
150
130
110
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

Figure S55

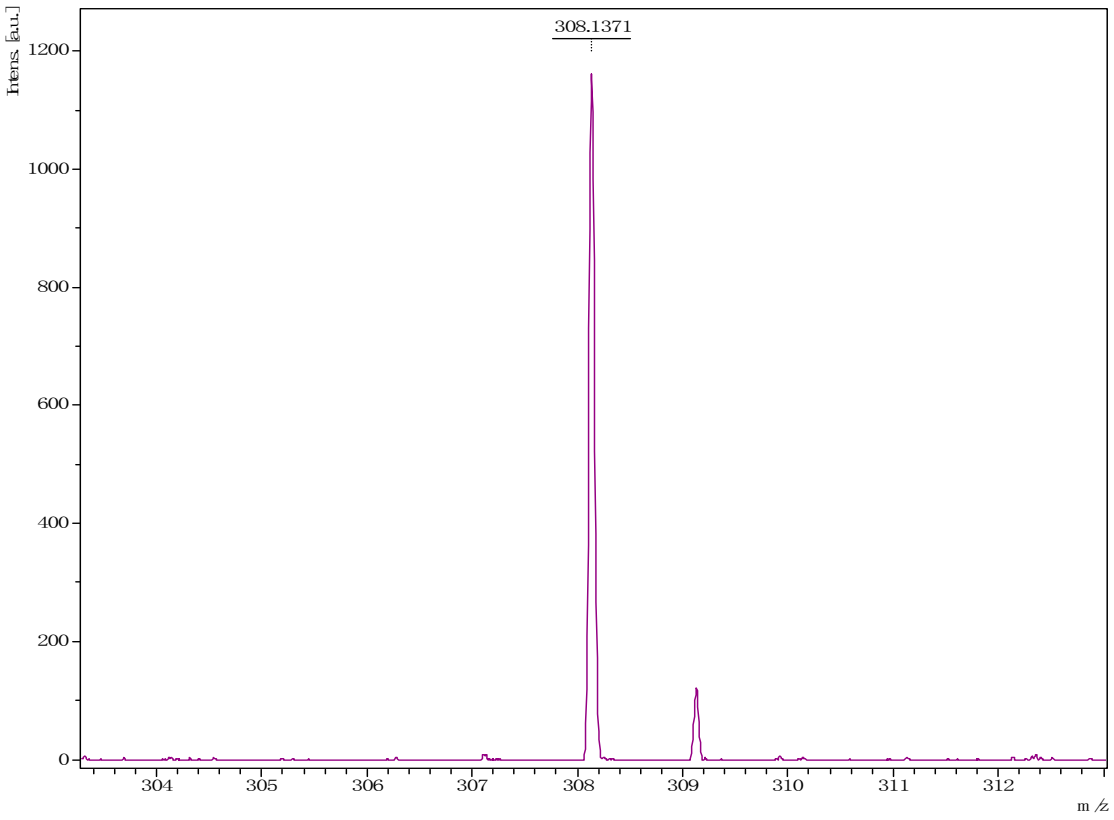

308.1371
Intens. [a.u.]
1200
1000
800
600
400
200
0
304
305
306
307
308
309
310
311
312
m/z

Figure S56

9-(4-(1-([1,1'-biphenyl]-4-yl)ethyl)phenyl)-9H-carbazole (3t)

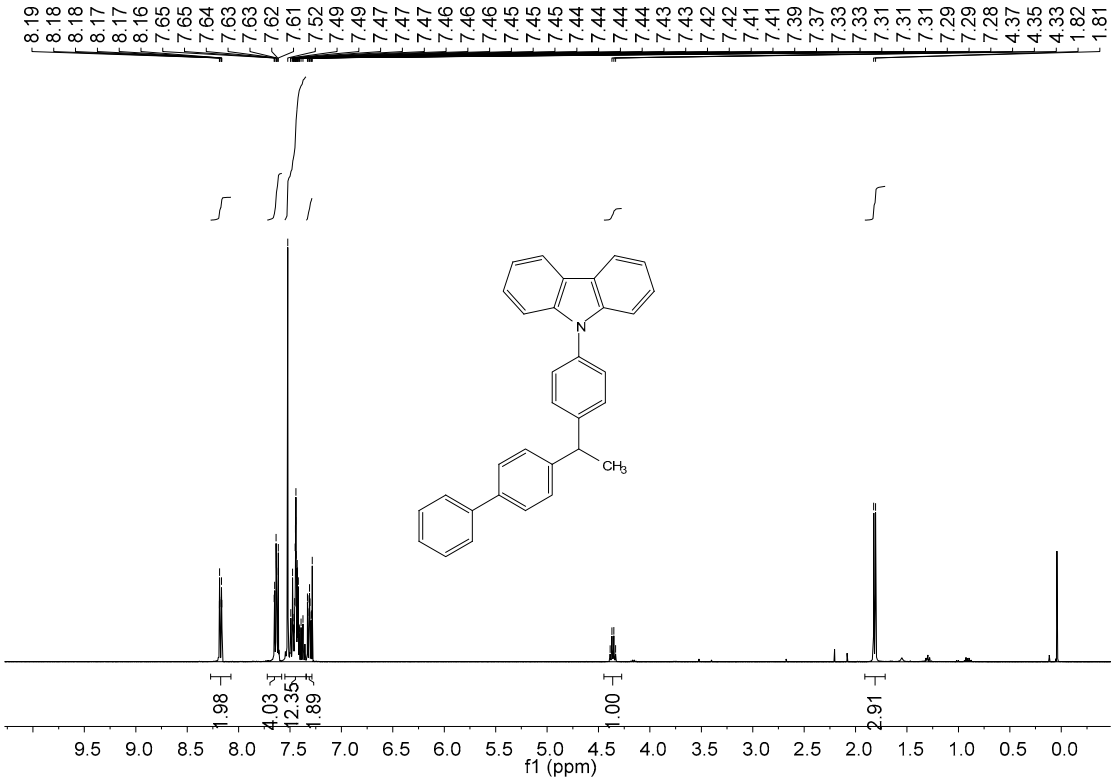


Figure S57

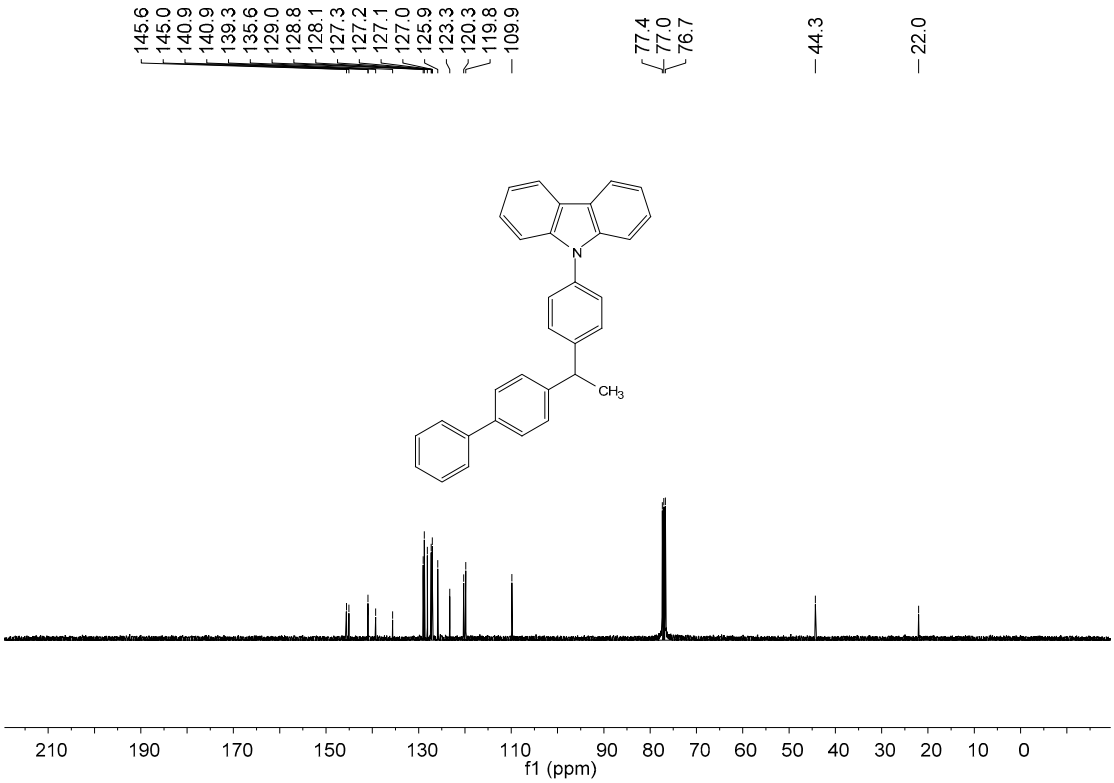


Figure S58

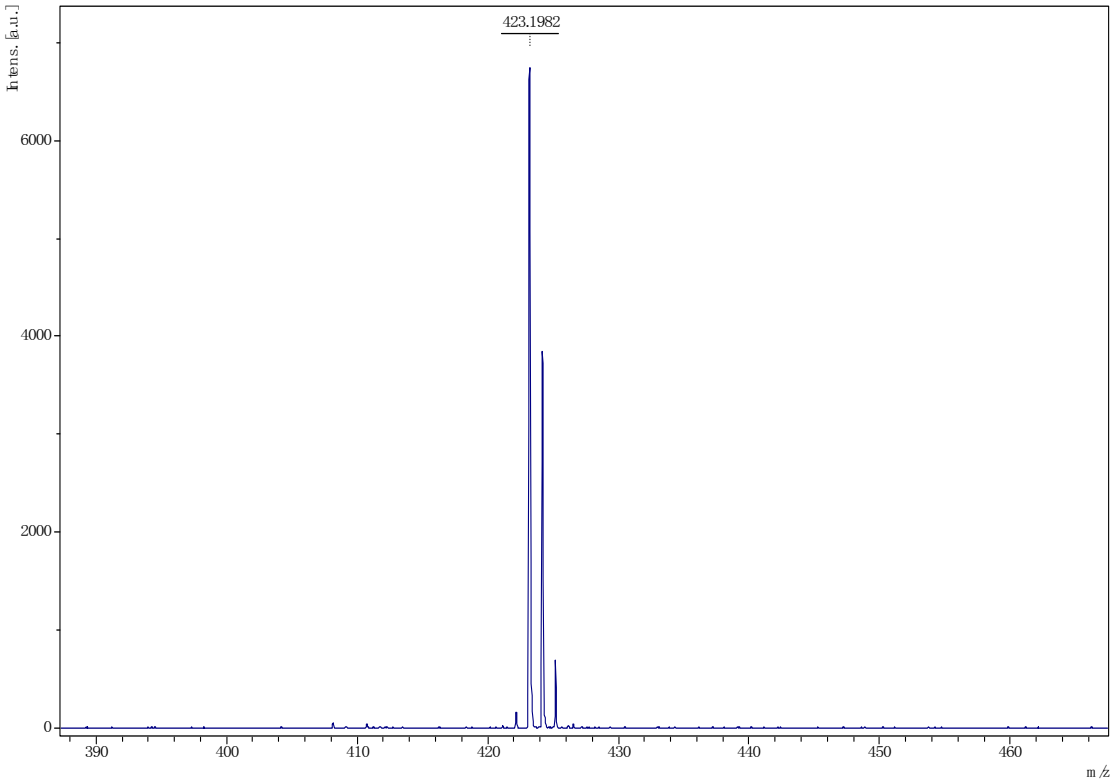


Figure S59

4'-methoxy-3-(1-(p-tolyl)ethyl)-1,1'-biphenyl (3u)

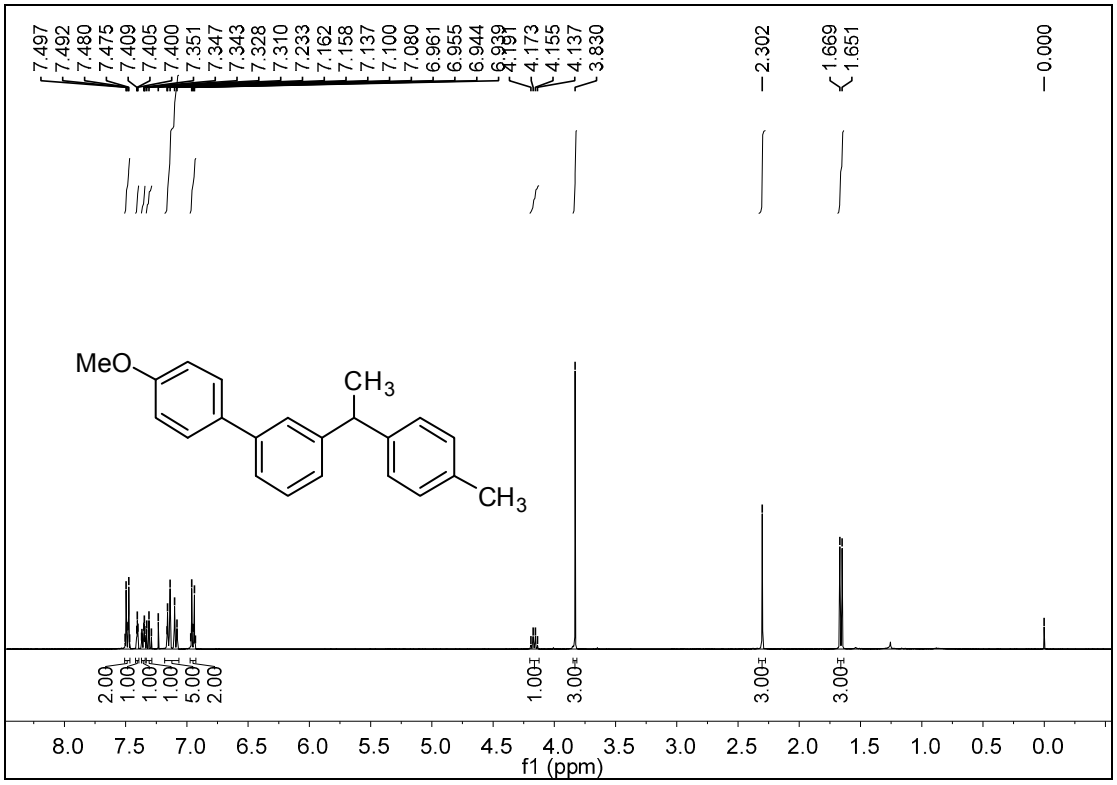


Figure S60

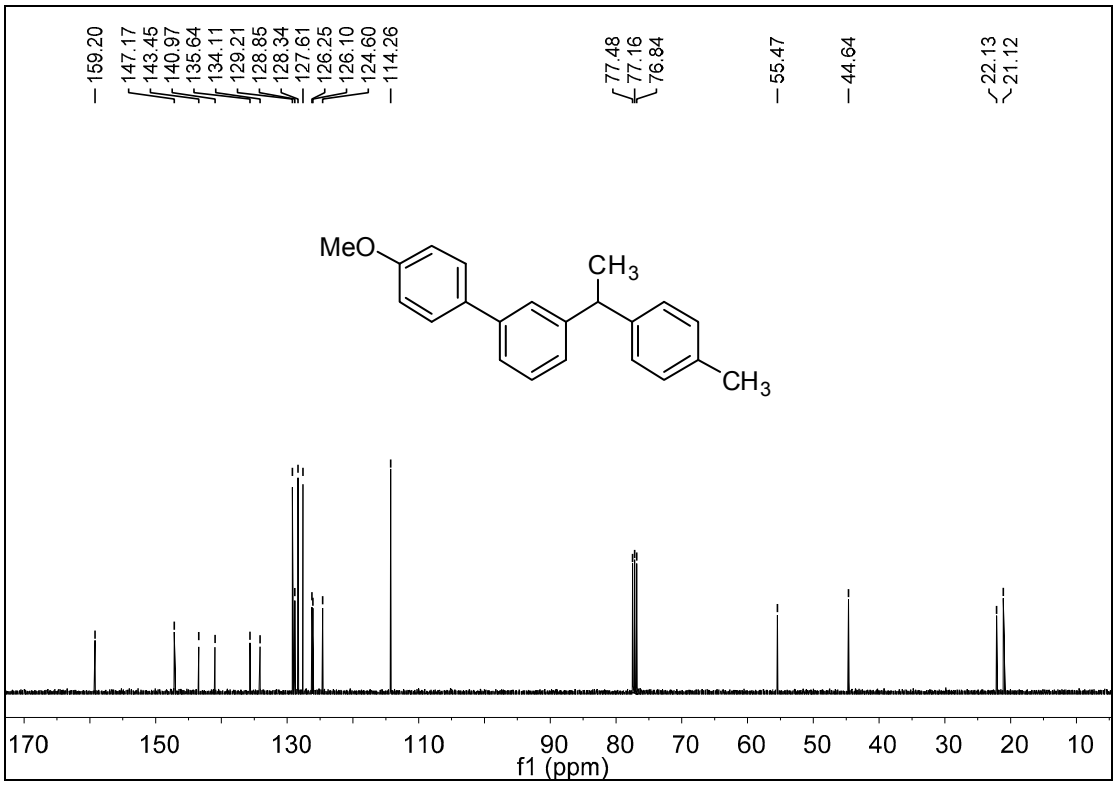


Figure S61

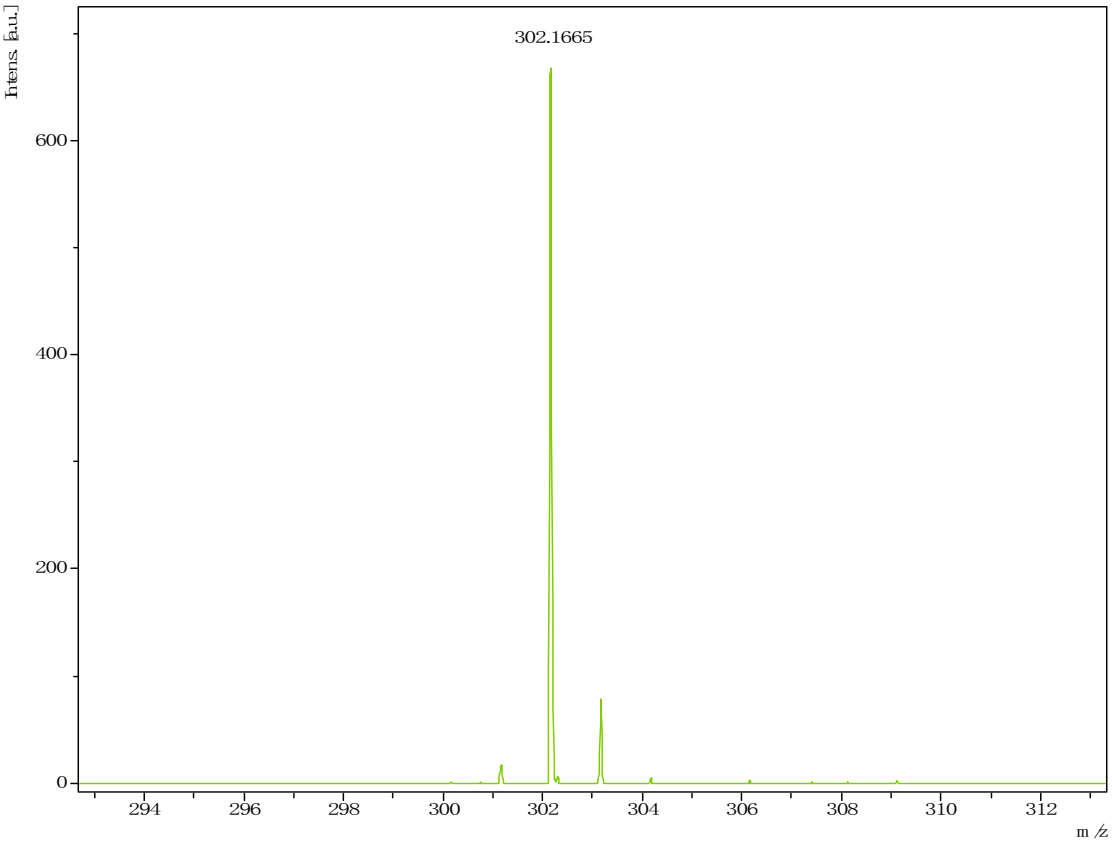


Figure S62

4-methoxy-4'-(4-methylbenzyl)-1,1'-biphenyl (3v)

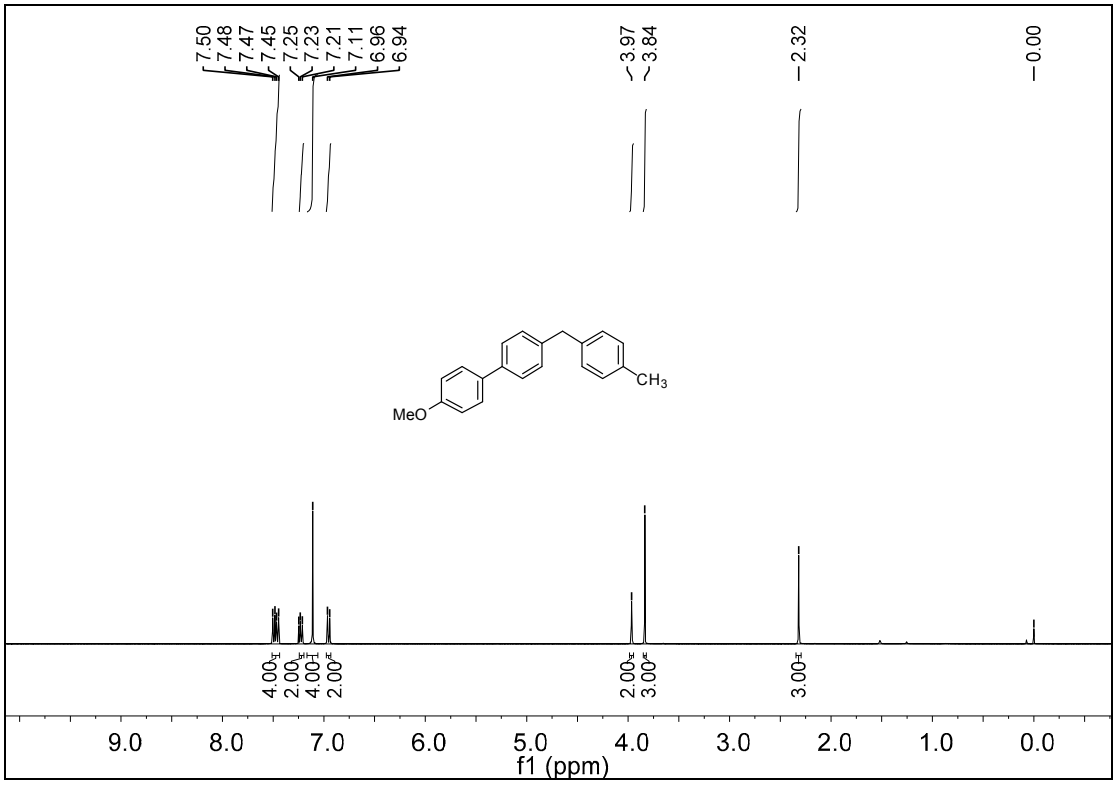


Figure S63

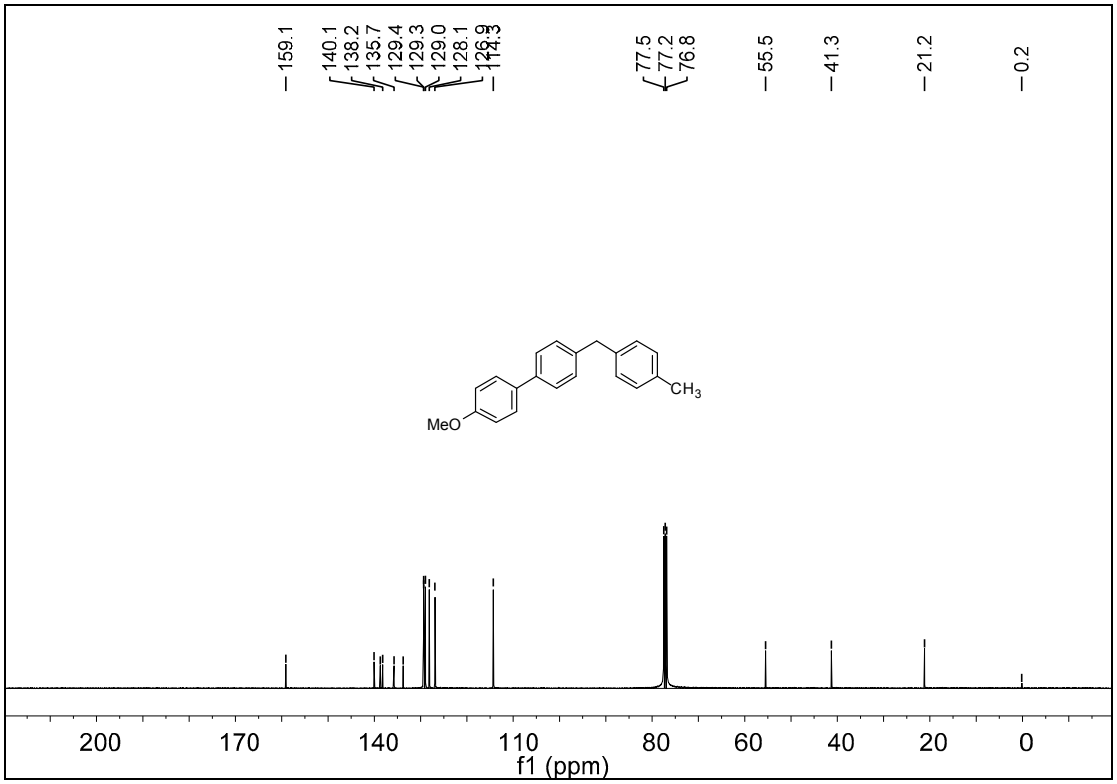


Figure S64

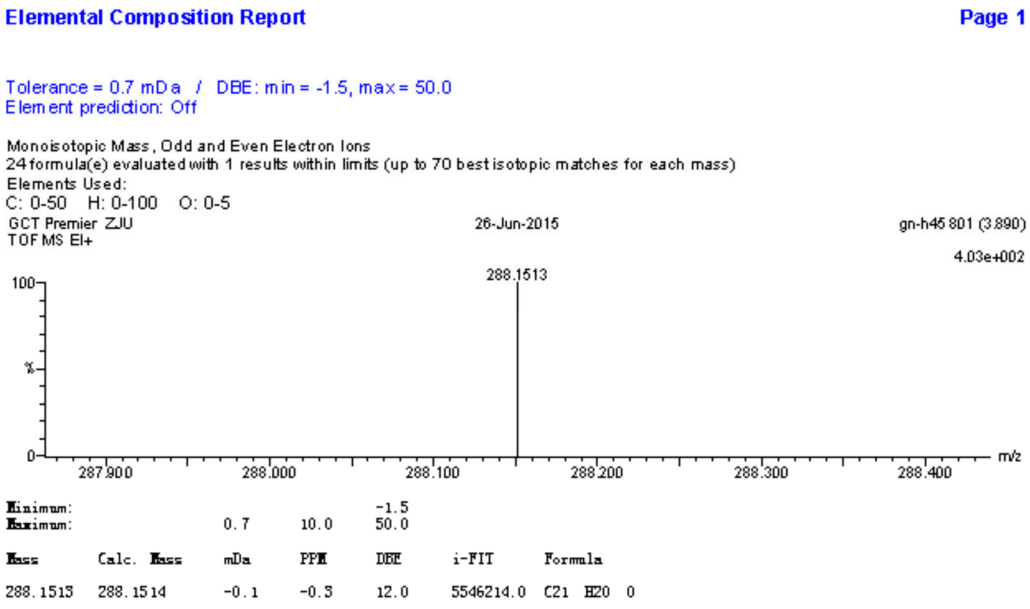


Figure S65

4′-methoxy-2-(4-methylbenzyl)-1,1'-biphenyl (3w)

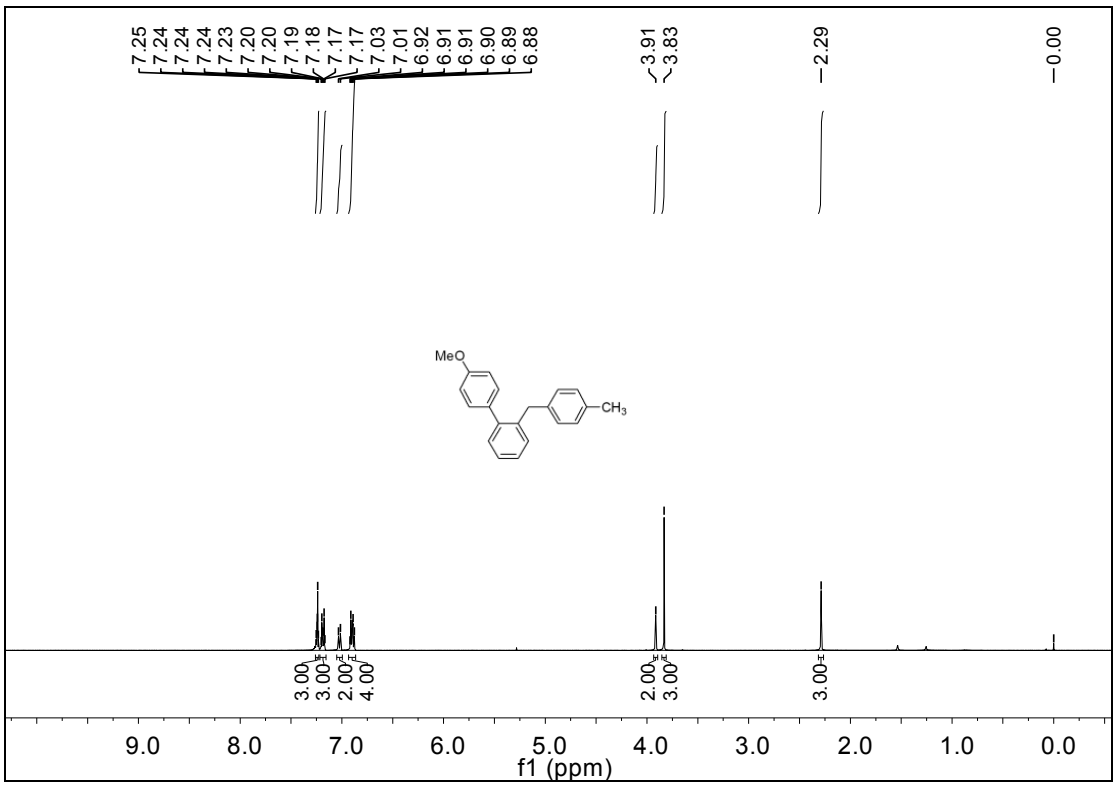


Figure S66

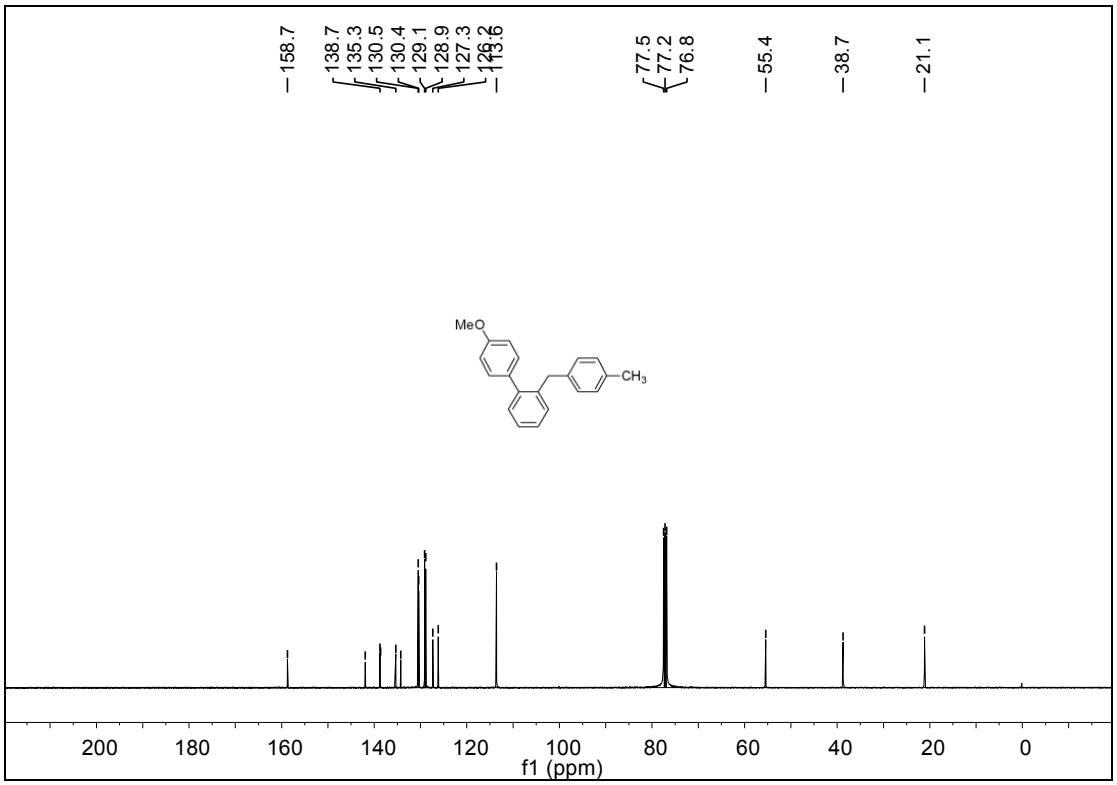


Figure S67

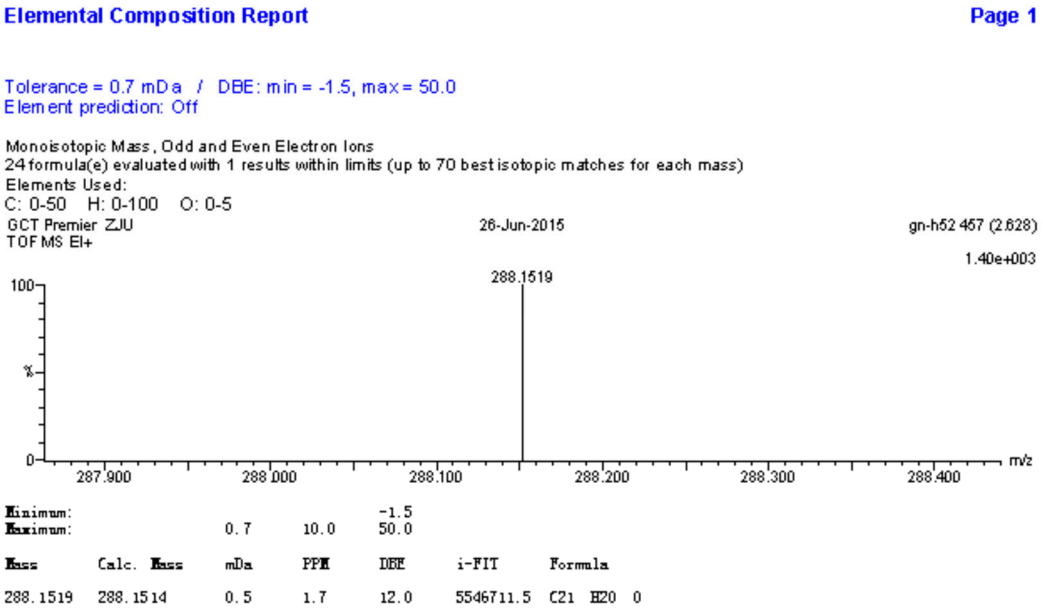


Figure S68

4-(1-([1,1'-biphenyl]-4-yl)ethyl)pryidine (3x)

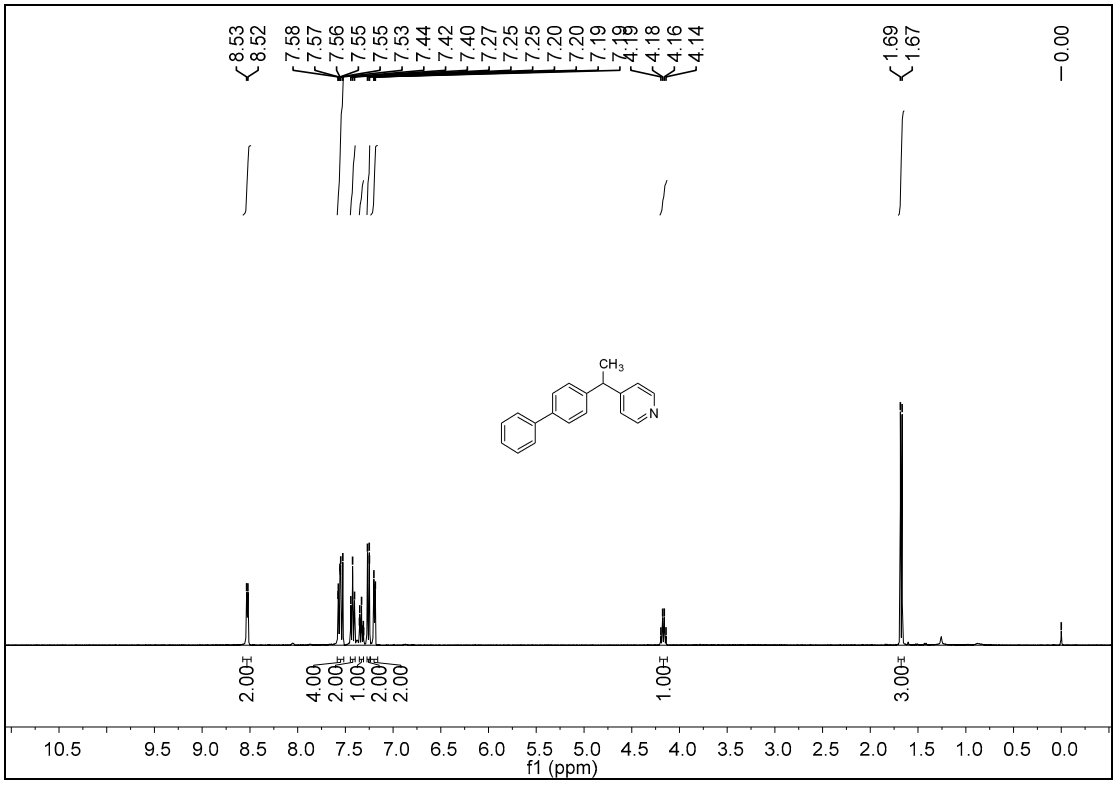


Figure S69

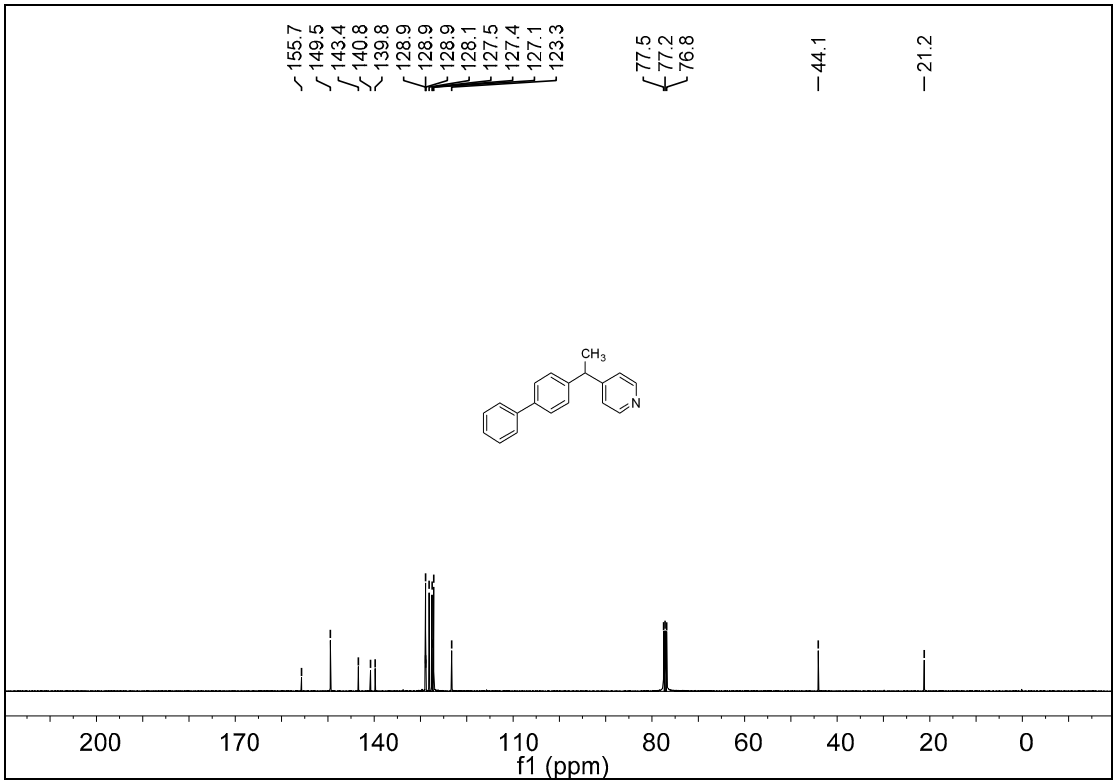


Figure S70

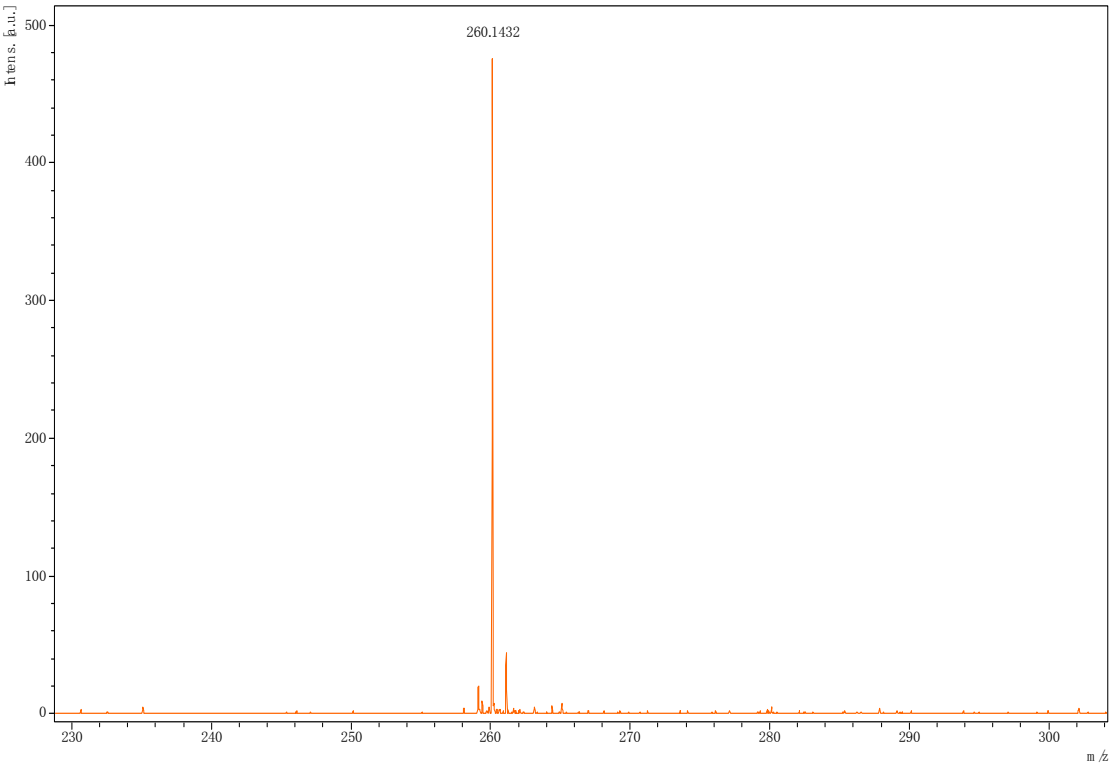


Figure S71

4-(1-(4'-methoxy-[1,1'-biphenyl]-4-yl)ethyl)pyridine (3y)

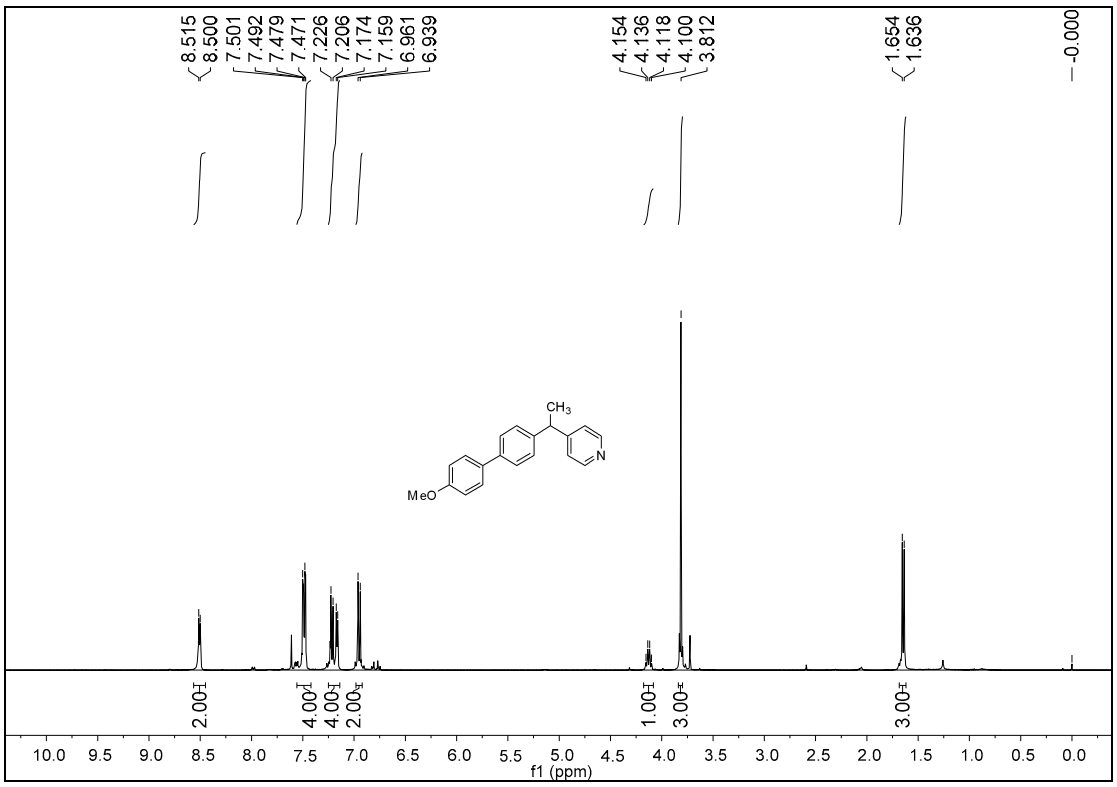


Figure S72

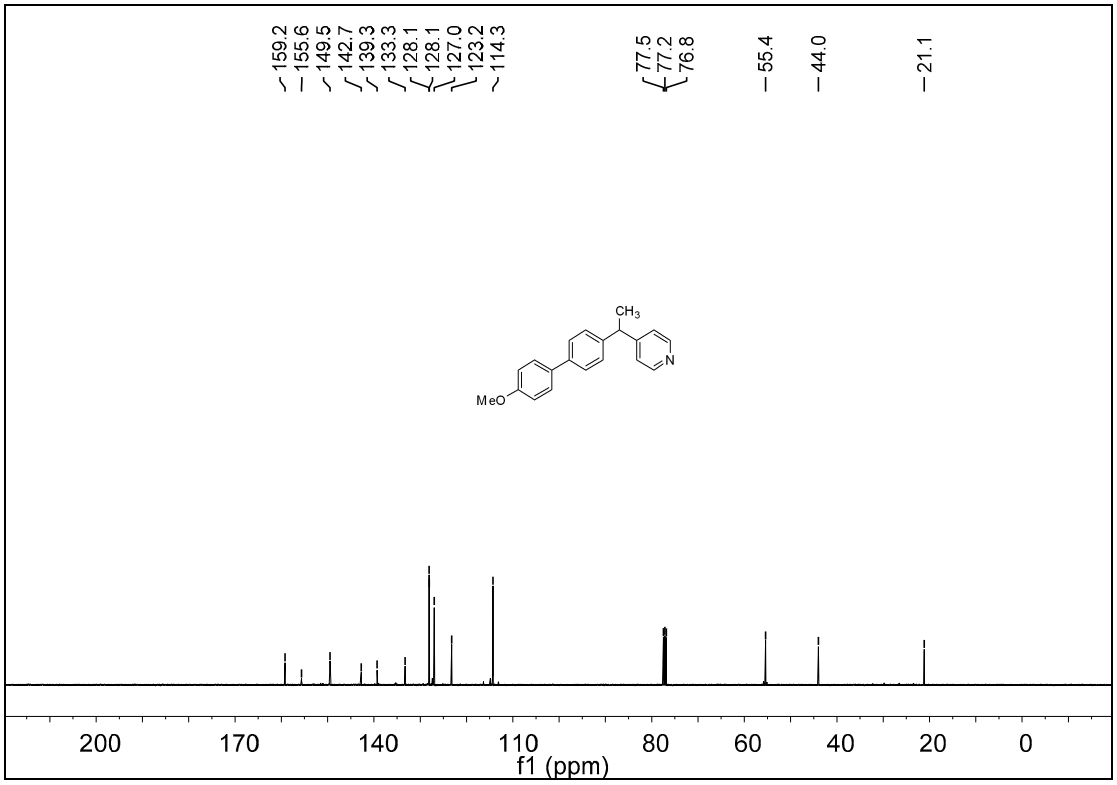


Figure S73

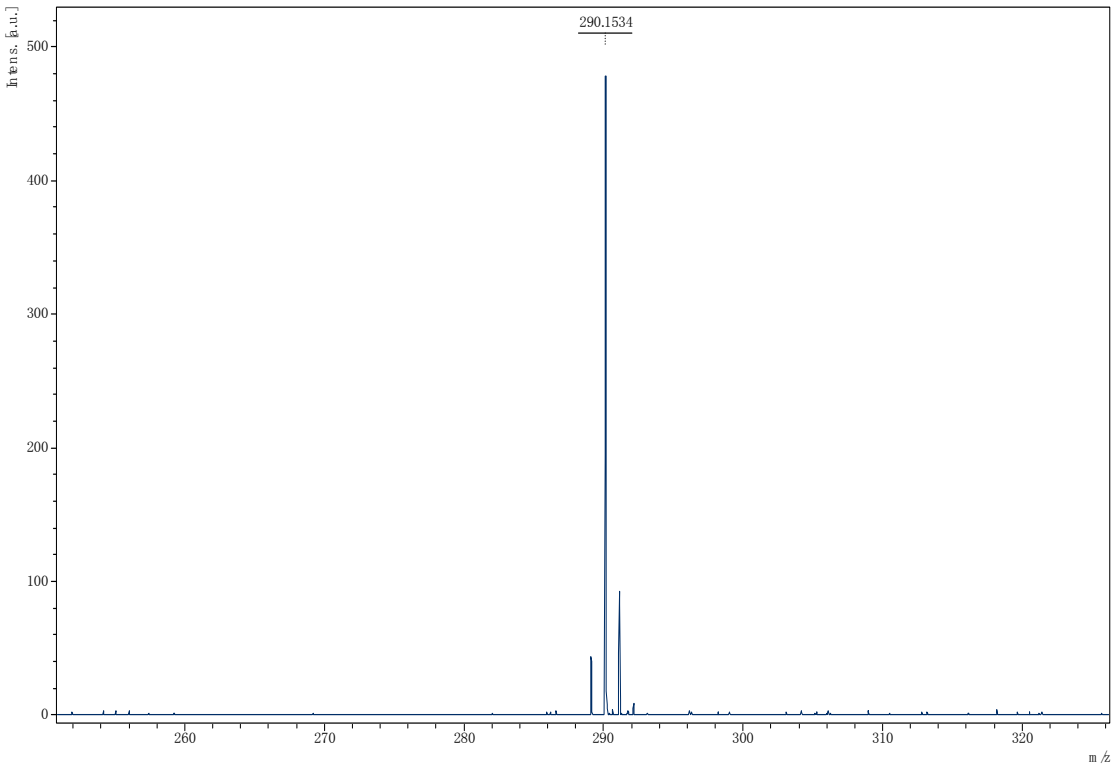


Figure S74