Supplementary Information

Pyridine-functionalised Ambidextrous Gelators: Towards Catalytic Gels

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Compound 1a

^{1}H NMR (δ, ppm; d_6-DMSO, 300 MHz): 0.90 (m, 12H); 1.55 (m, 2 H); 2.10 (m, 2H); 3.08 (m, 4H); 4.23 (t, 7.5 Hz, 2 H); 7.46 (dd, 7.8 Hz, 4.8 Hz, 2 H); 8.035 (t, 5.4 Hz, 2H); (8.20, m, 2H); 8.50 (d, 8.7 Hz, 2H); 8.68 (d, 4.8 Hz, 2H); 9.00 (s, 2H); ^{13}C NMR (δ, ppm; d_6-DMSO, 75 MHz): 19.5, 20.0, 29.8, 30.7, 37.1, 59.9, 123.9, 130.5, 136.0, 149.4, 152.5, 165.8, 171.4; MS: 483.3 ($M+H^+$). Melting point (ºC): 250-253 (dec.)

Compound 1b

^{1}H NMR (δ, ppm; d_6-DMSO, 300 MHz): 0.90 (m, 12H); 1.55 (m, 2 H); 2.10 (m, 2H); 3.08 (m, 4H); 4.22 (t, 7.5 Hz, 2 H); 7.78 (d, 5.4 Hz, 4 H); 8.06 (t, 5.4 Hz, 2H); 8.58 (d, 8.4 Hz, 2H); 8.68 (d, 5.4 Hz, 4H); ^{13}C NMR (δ, ppm; d_6-DMSO, 75 MHz): 19.6, 20.0, 29.8, 30.6, 37.1, 60.0, 122.3, 141.9, 150.8, 165.7, 171.3; MS: 483.3 ($M+H^+$). Melting point (ºC): 249-257 (dec.).

Electron microscopy.

Preparation of samples for Transmission Electron Microscopy (TEM):

A copper grid coated with carbon (organogels) or formvar (hydrogels) was dipped into the gel sample. After drying in a dessicator, the samples were shadowed with Pt at 45º.

Preparation of samples for cryo-Scanning Electron Microscopy (cryo-SEM):

A drop of the gel was placed in a stub and was quickly cooled down at –220 ºC with under-cooled nitrogen as slush. The sample was then introduced into the microscope cooling pre-chamber and it was allowed to warm up until –95 ºC. At this temperature the upper part of the drop was fractured with a cool knife and etched for 2 min. Then, the pre-chamber was cooled down until –120 ºC and the sample was sputtered in situ with 1.5 nm of Au/Pd. Finally, it was transferred into the microscope chamber where the temperature was kept below –130 ºC to avoid the formation of ice crystals.

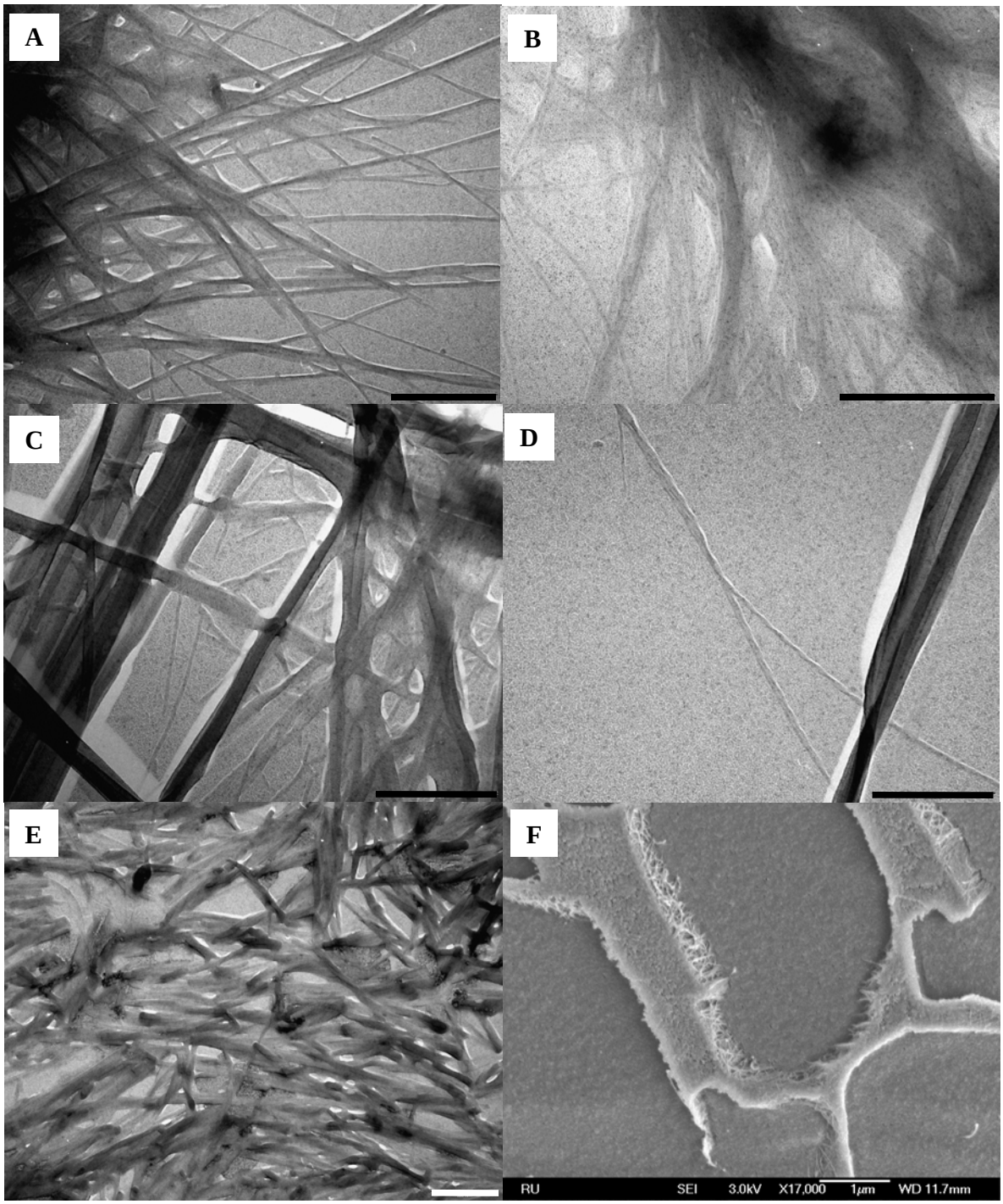


Figure S1. TEM images of xerogels of compound **1a** in acetone (A) and dioxane (B), compound **1b** in CH_2Cl_2 (C, D) and dried hydrogel of compound **1b** (E). Bars represent 500 nm. (F) cryo-SEM image of hydrogel of compound **1a**.

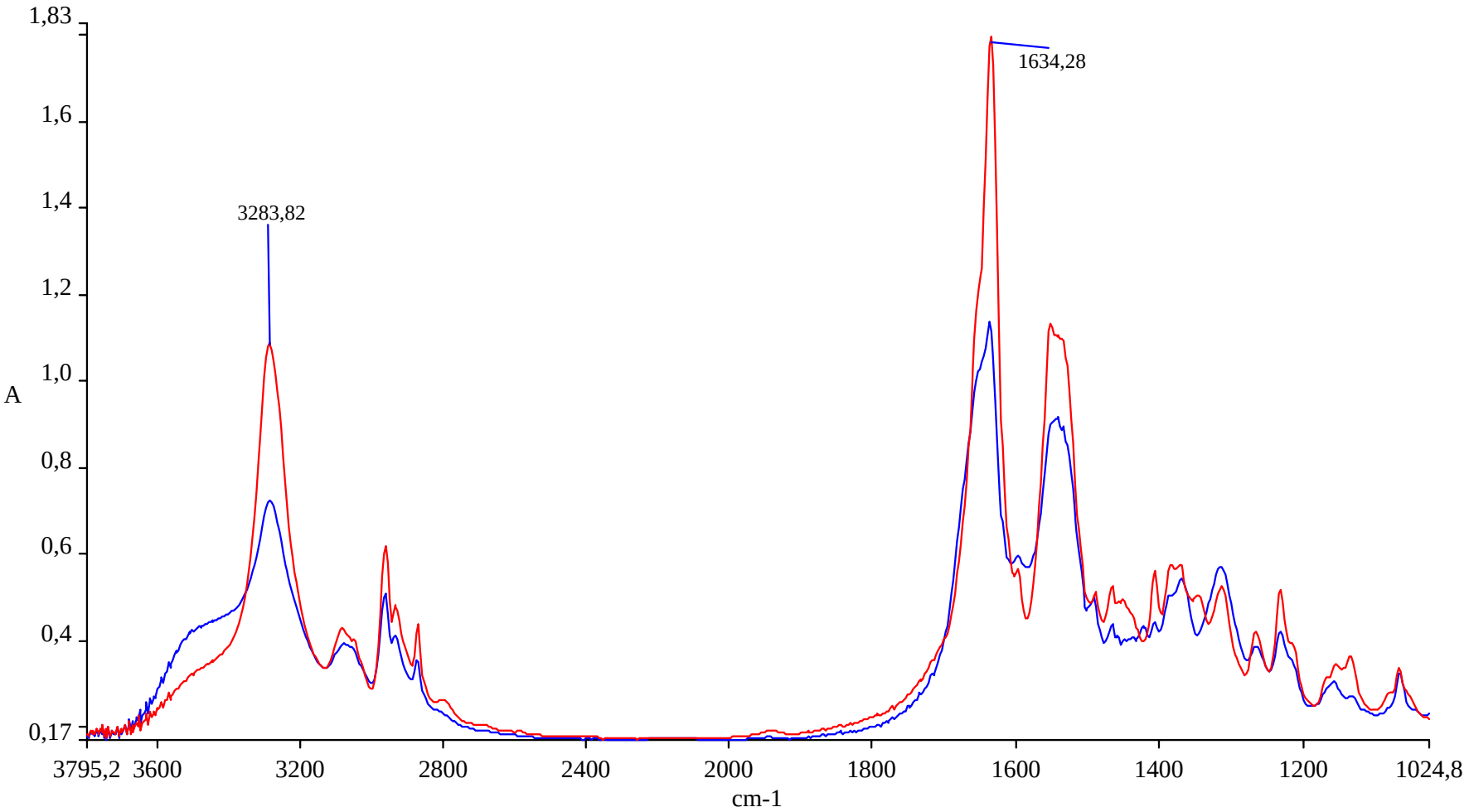


Figure S2. FT-IR spectra (KBr) of toluene xerogels of compound **1b** with (blue) and without (red) Pd(II).

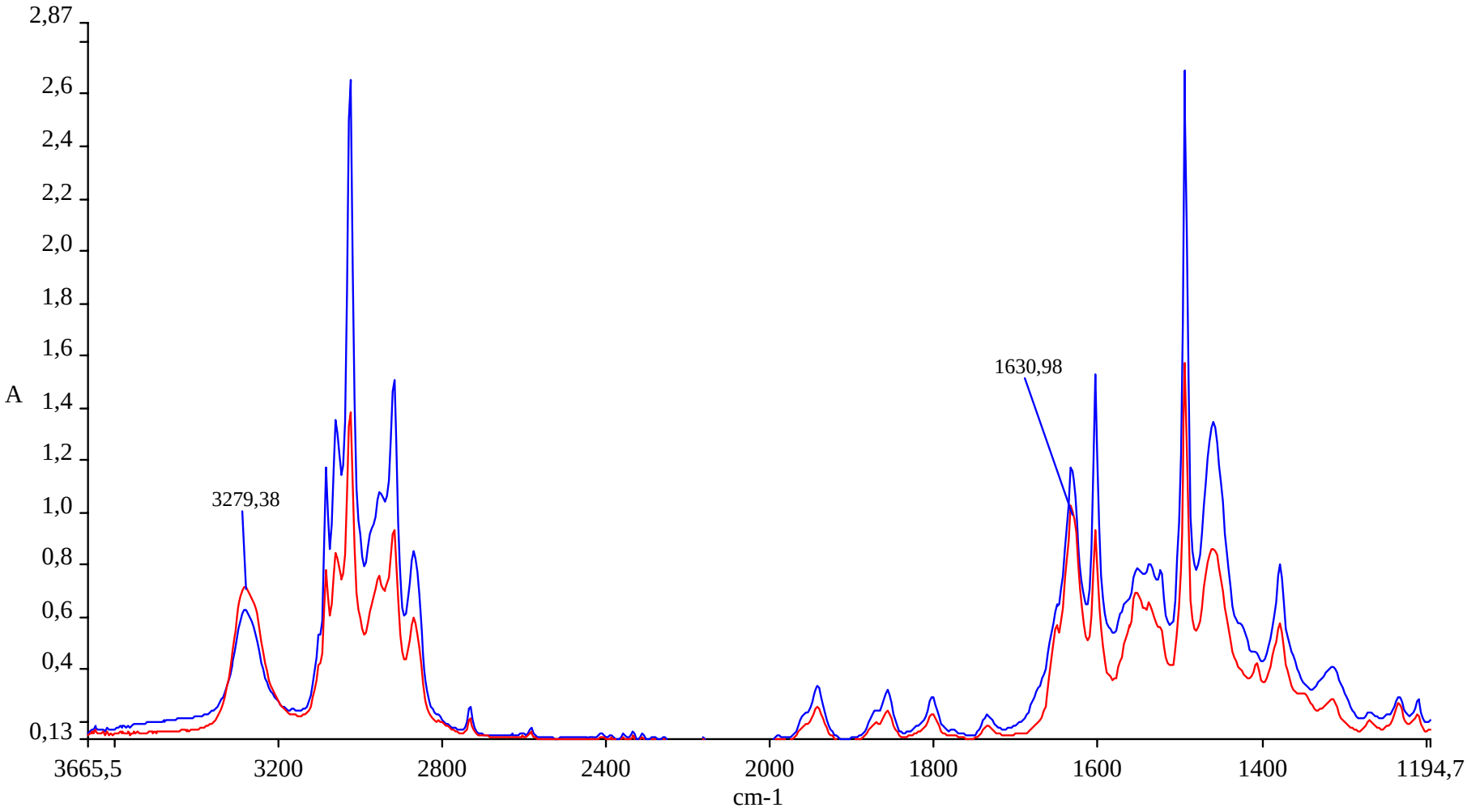
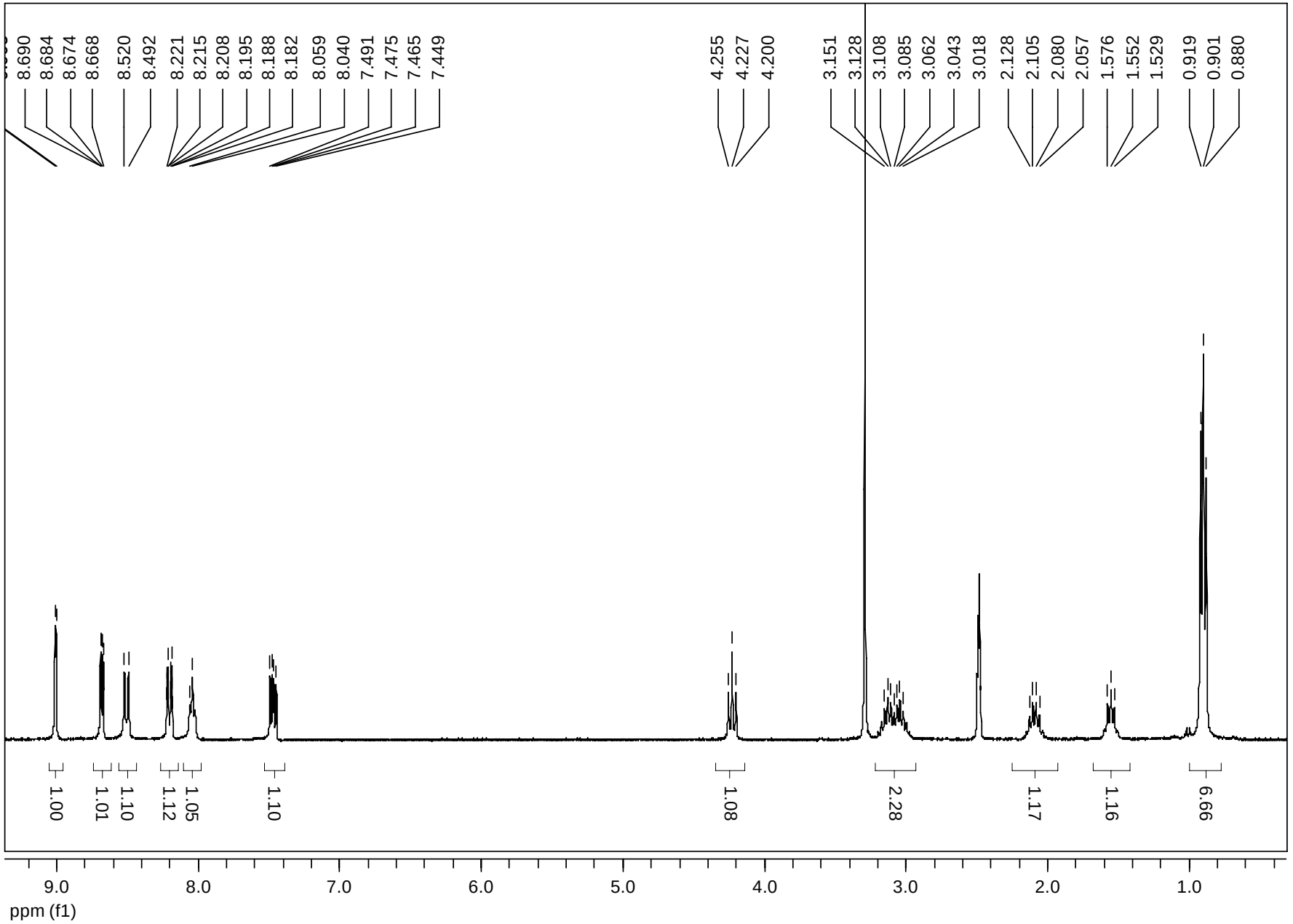
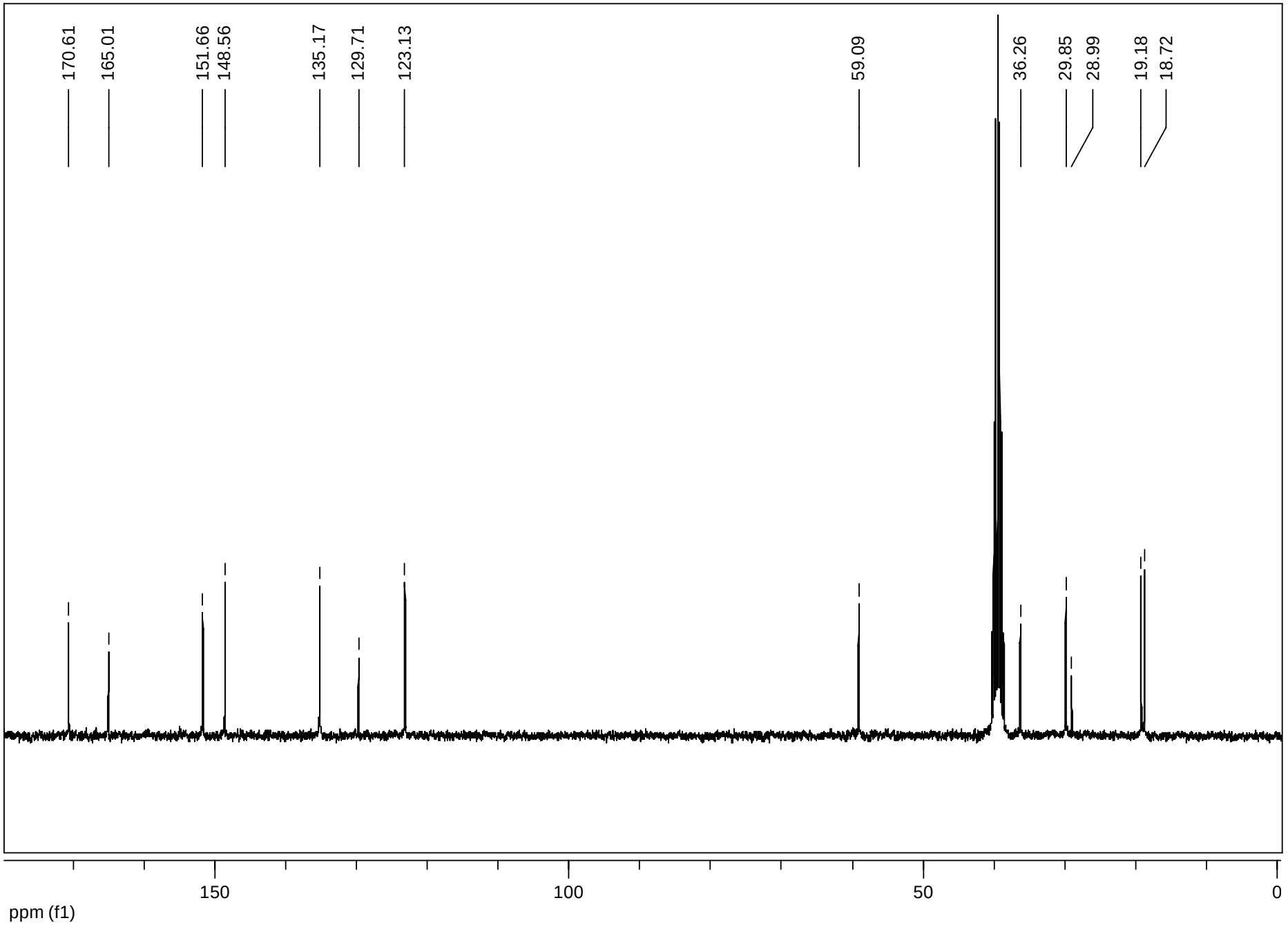


Figure S3. FT-IR spectra of toluene gels of compound **1b** before (red) and after (blue) addition of Pd(II).

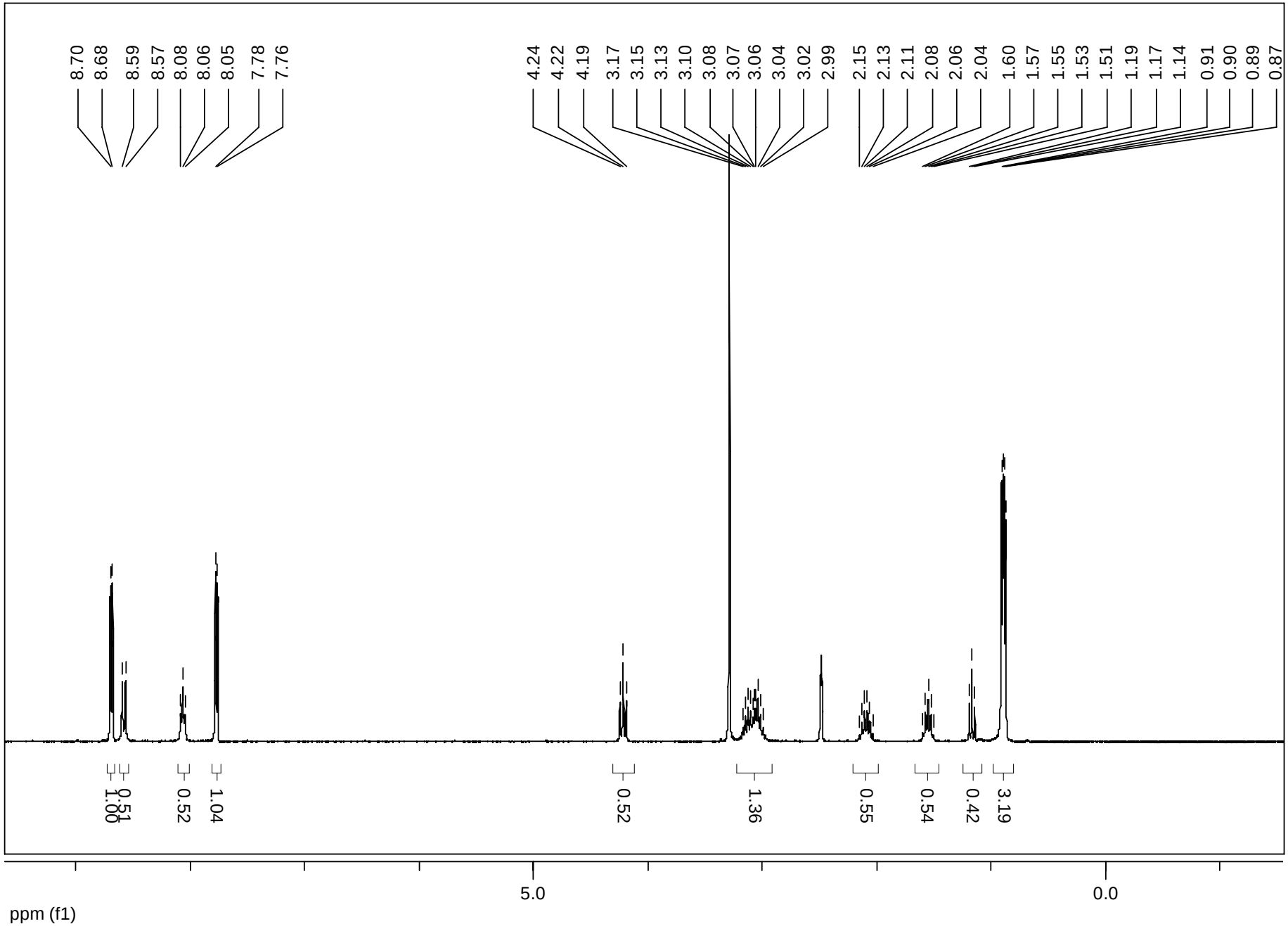
NMR spectroscopy

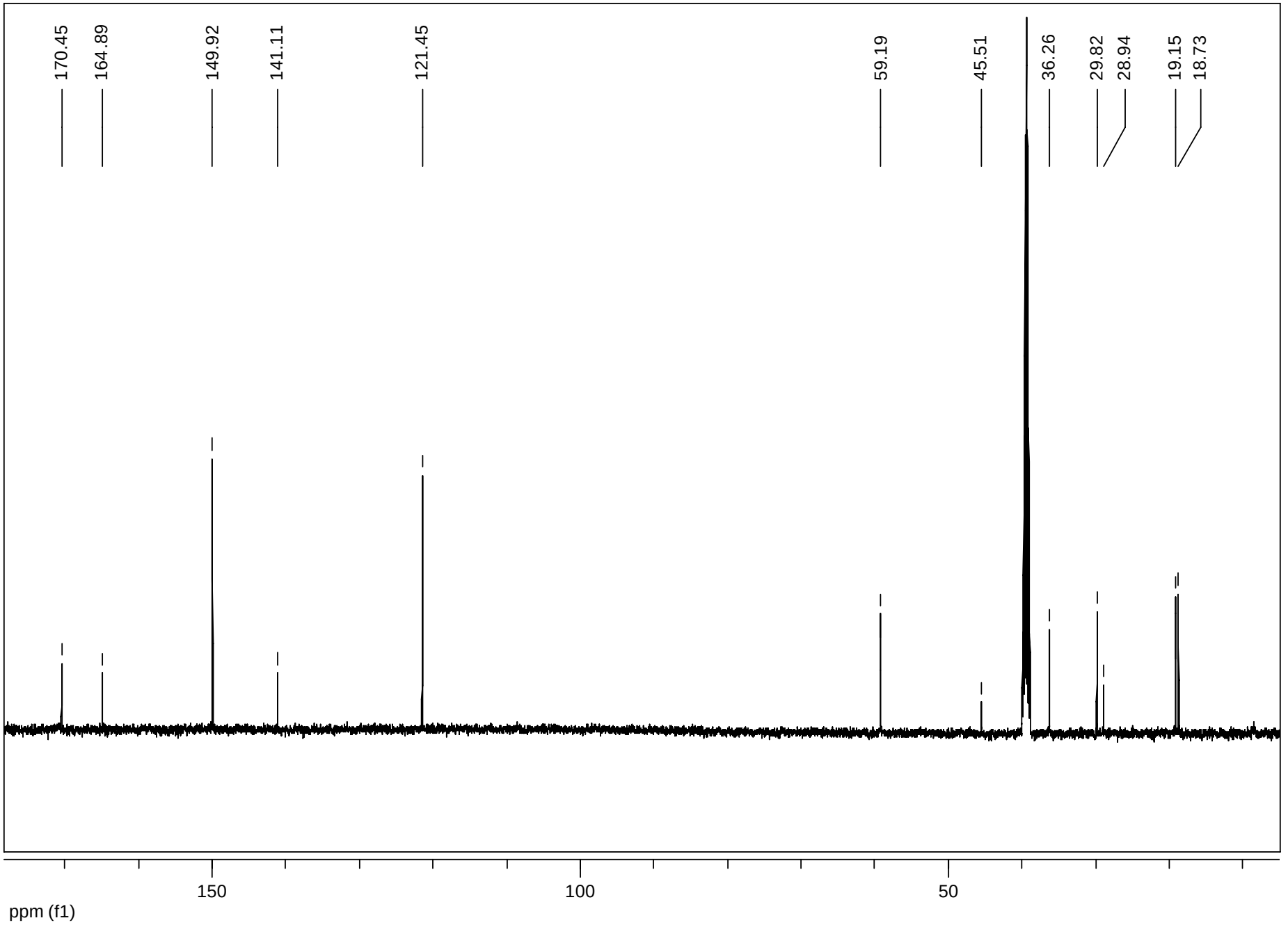
Compound 1a




170.61
165.01
151.66
148.56
135.17
129.71
123.13
59.09
36.26
29.85
28.99
19.18
18.72
150
100
50
0
ppm (f1)

Compound 1b


8.70
8.68
8.59
8.57
8.08
8.06
8.05
7.78
7.76
4.24
4.22
4.19
3.17
3.15
3.13
3.10
3.08
3.07
3.06
3.04
3.02
2.99
2.15
2.13
2.11
2.08
2.06
2.04
1.60
1.57
1.55
1.53
1.51
1.19
1.17
1.14
0.91
0.90
0.89
0.87
1.00
0.51
0.52
1.04
0.52
1.36
0.55
0.54
0.42
3.19
5.0
0.0
ppm (f1)


170.45
164.89
149.92
141.11
121.45
59.19
45.51
36.26
29.82
28.94
19.15
18.73
150
100
50
ppm (f1)