Suzuki–Miyaura Coupling Using Monolithic Pd Reactors and Scaling-up by Series Connection of the Reactors

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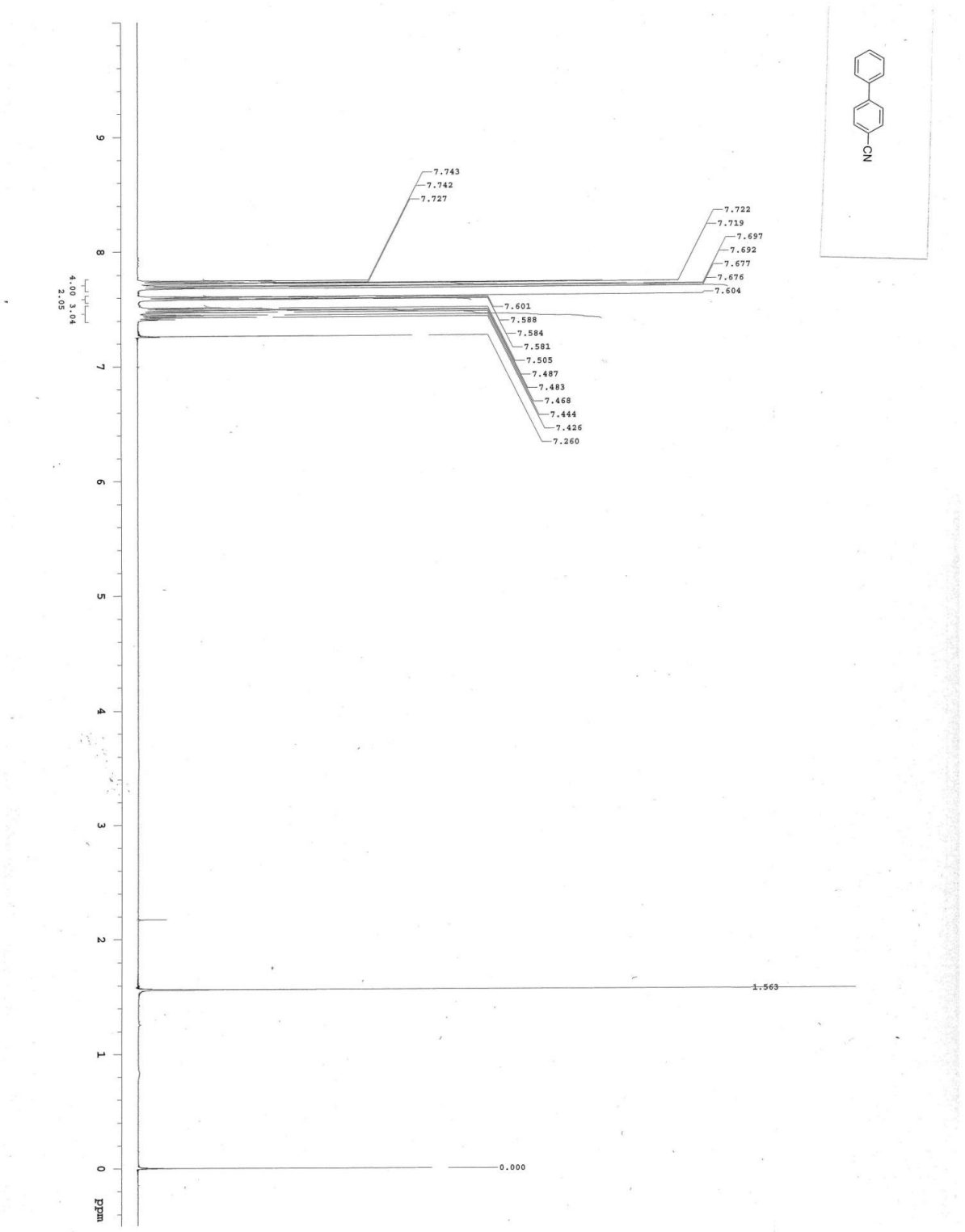

Figure S1. ^{1}H NMR spectrum of biphenyl-4-carbonitrile

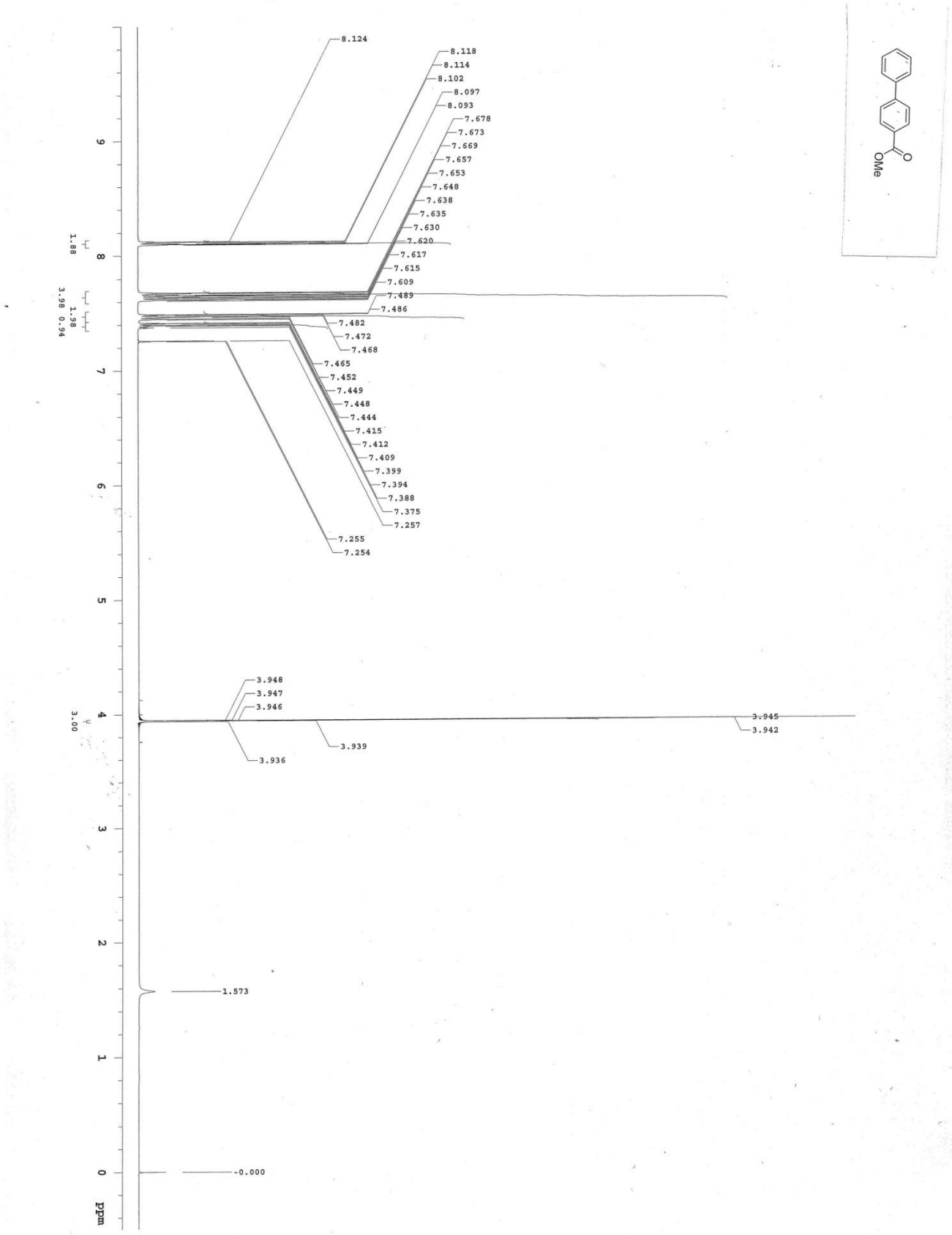

Figure S2. ^{1}H NMR spectrum of methyl 4-phenylbenzoate

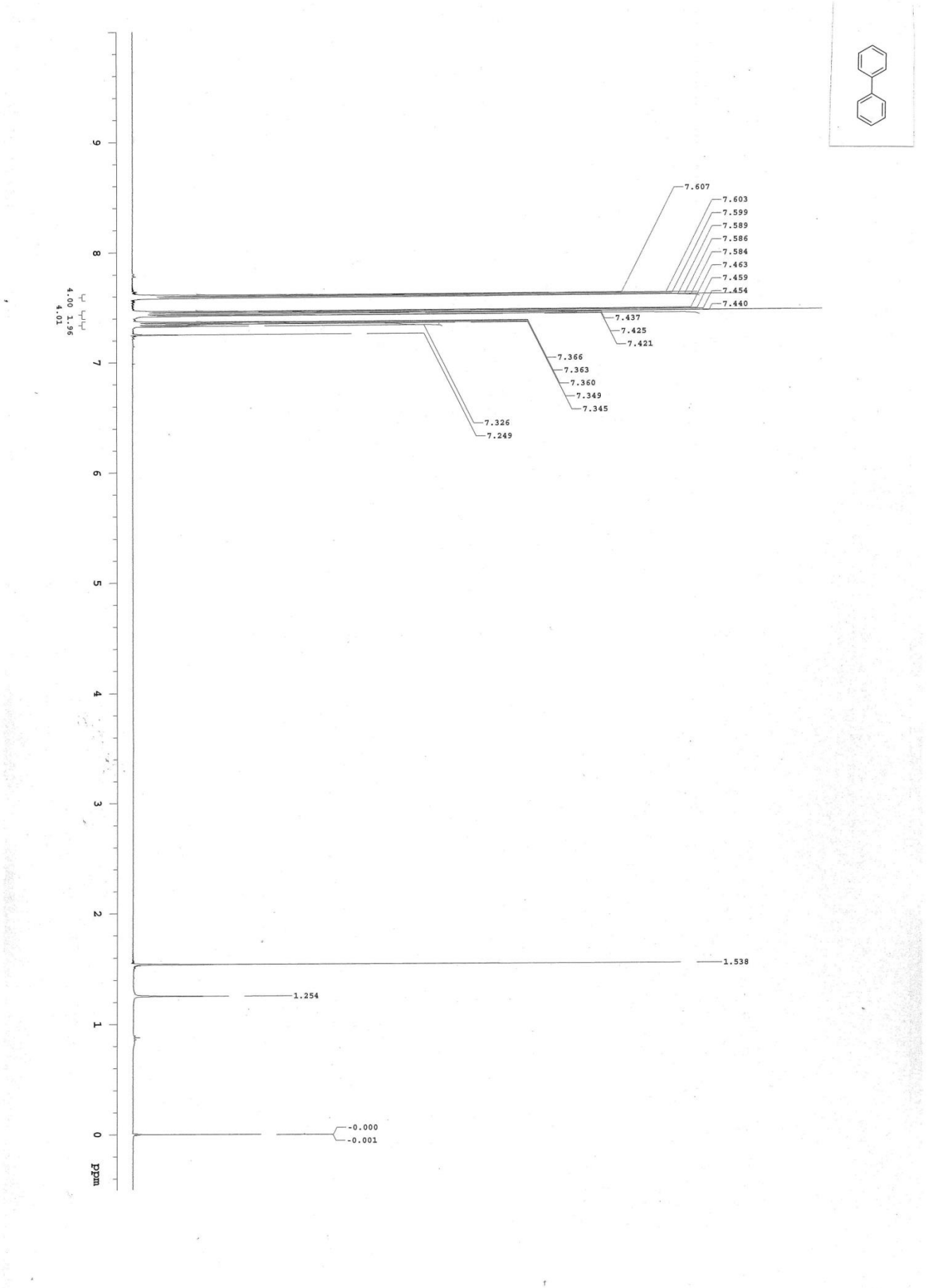

Figure S3. ^{1}H NMR spectrum of biphenyl

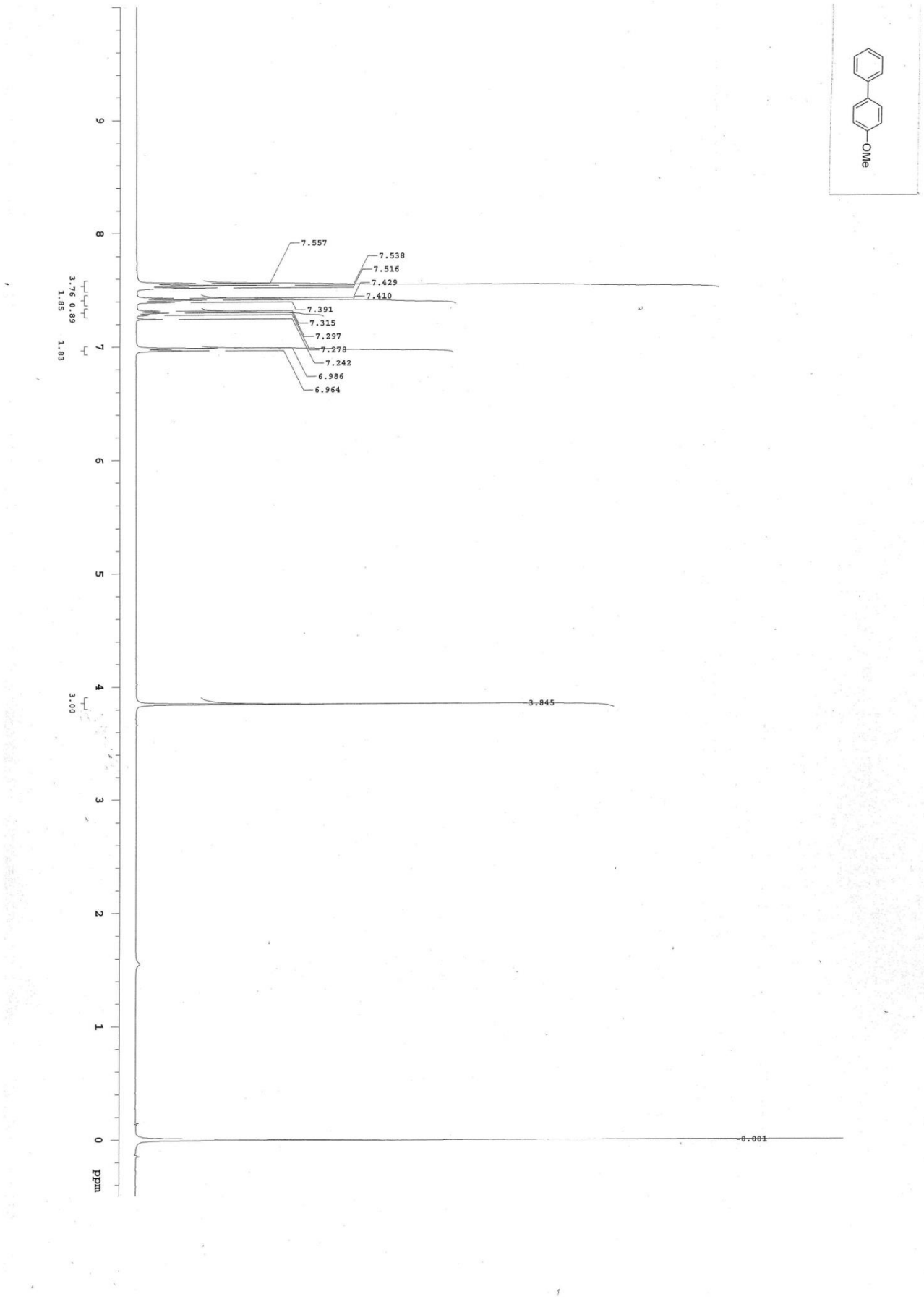

Figure S4. ^{1}H NMR spectrum of 4-methoxybiphenyl

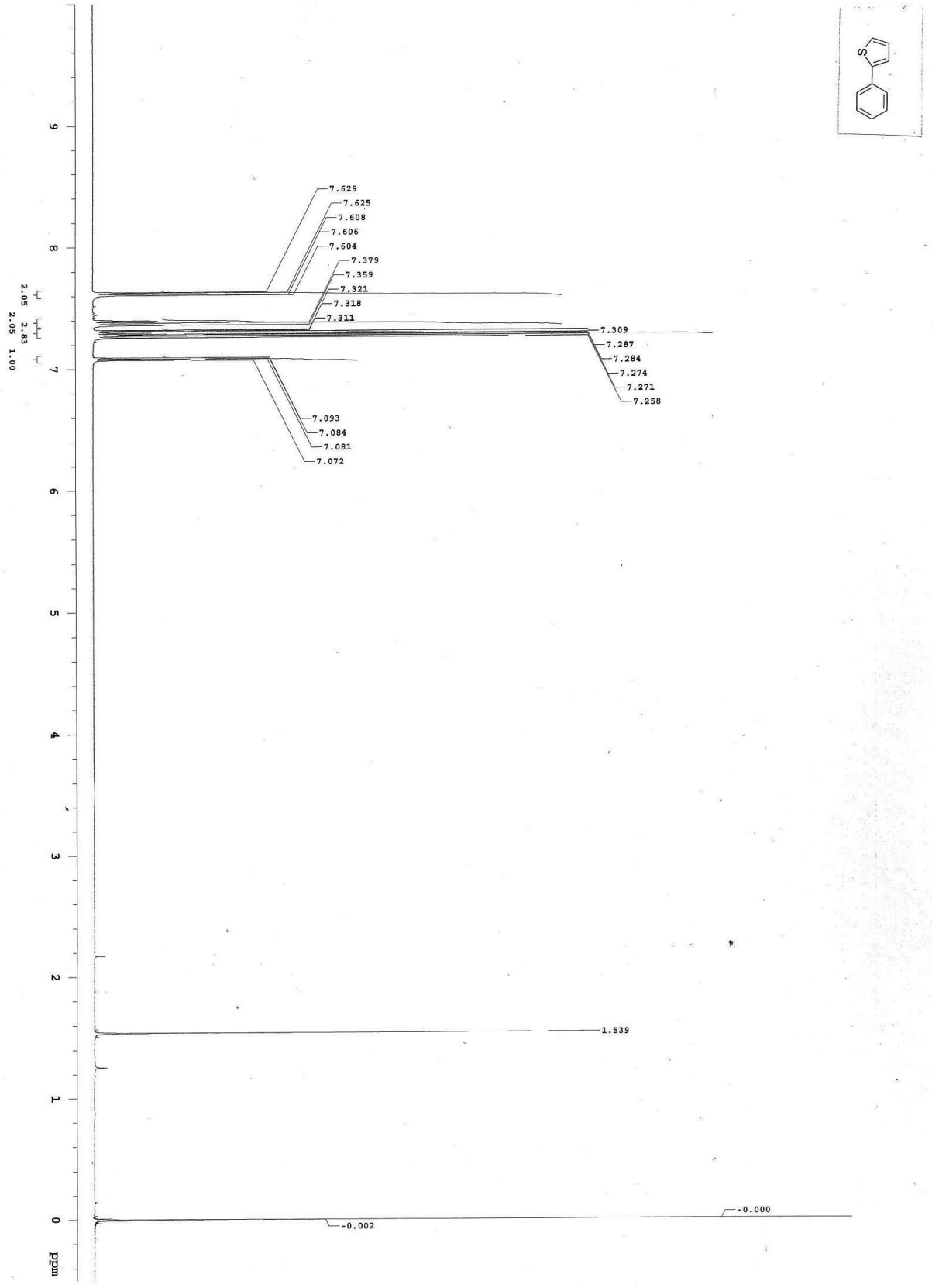

Figure S5. ^{1}H NMR spectrum of 2-phenylthiophene

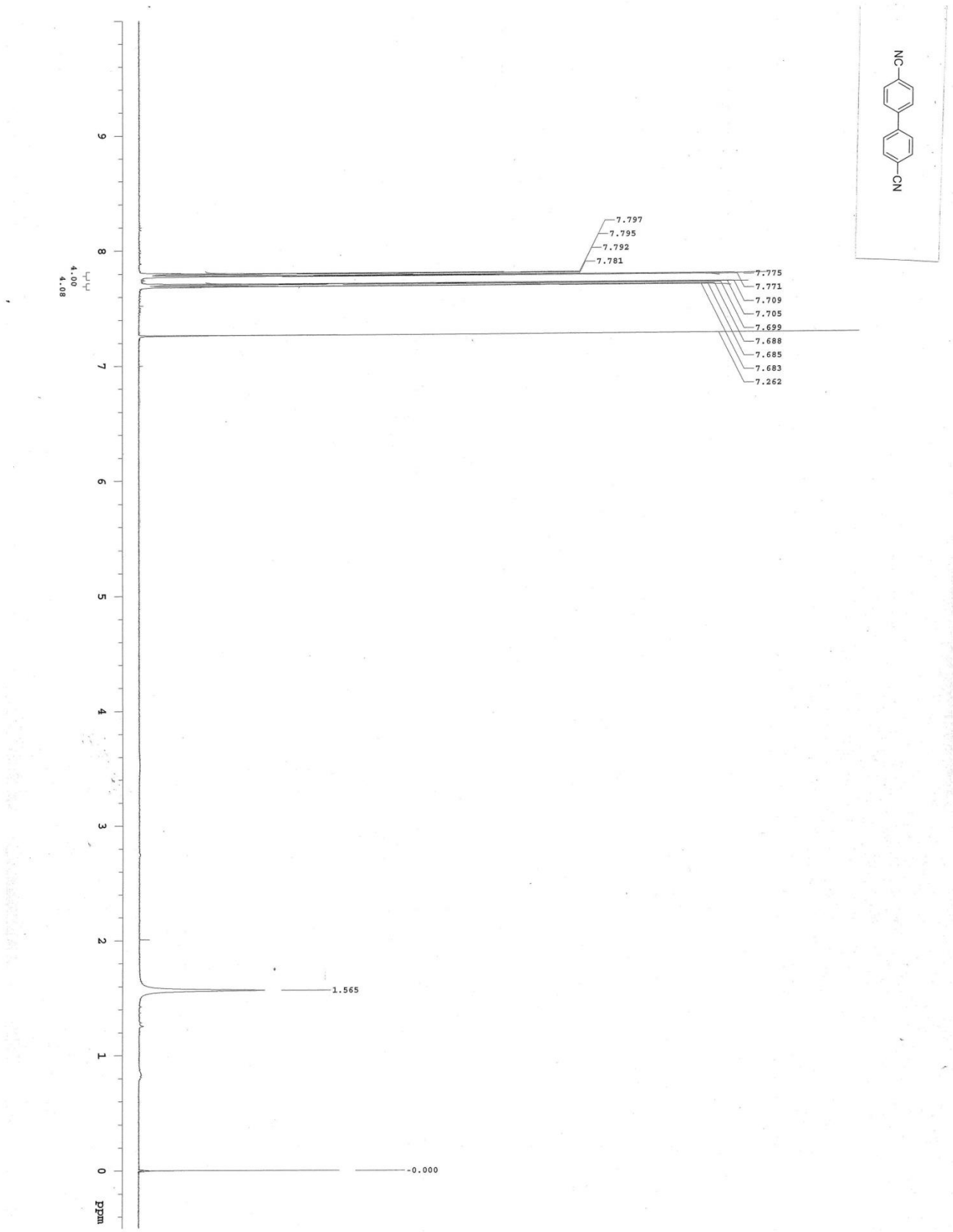

Figure S6. ^{1}H NMR spectrum of 4,4'-dicyanobiphenyl

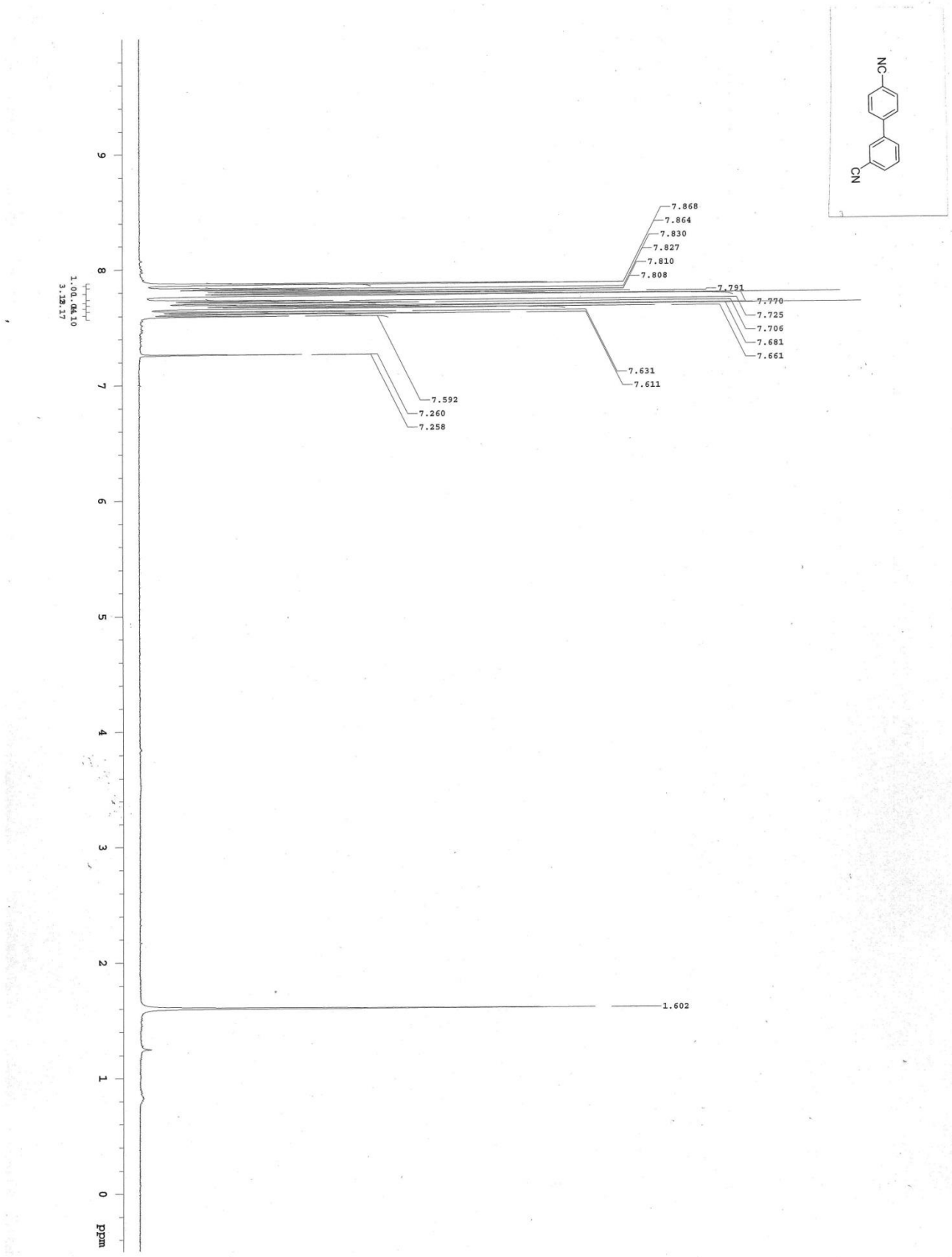

Figure S7. ^{1}H NMR spectrum of 3,4'-dicyanobiphenyl

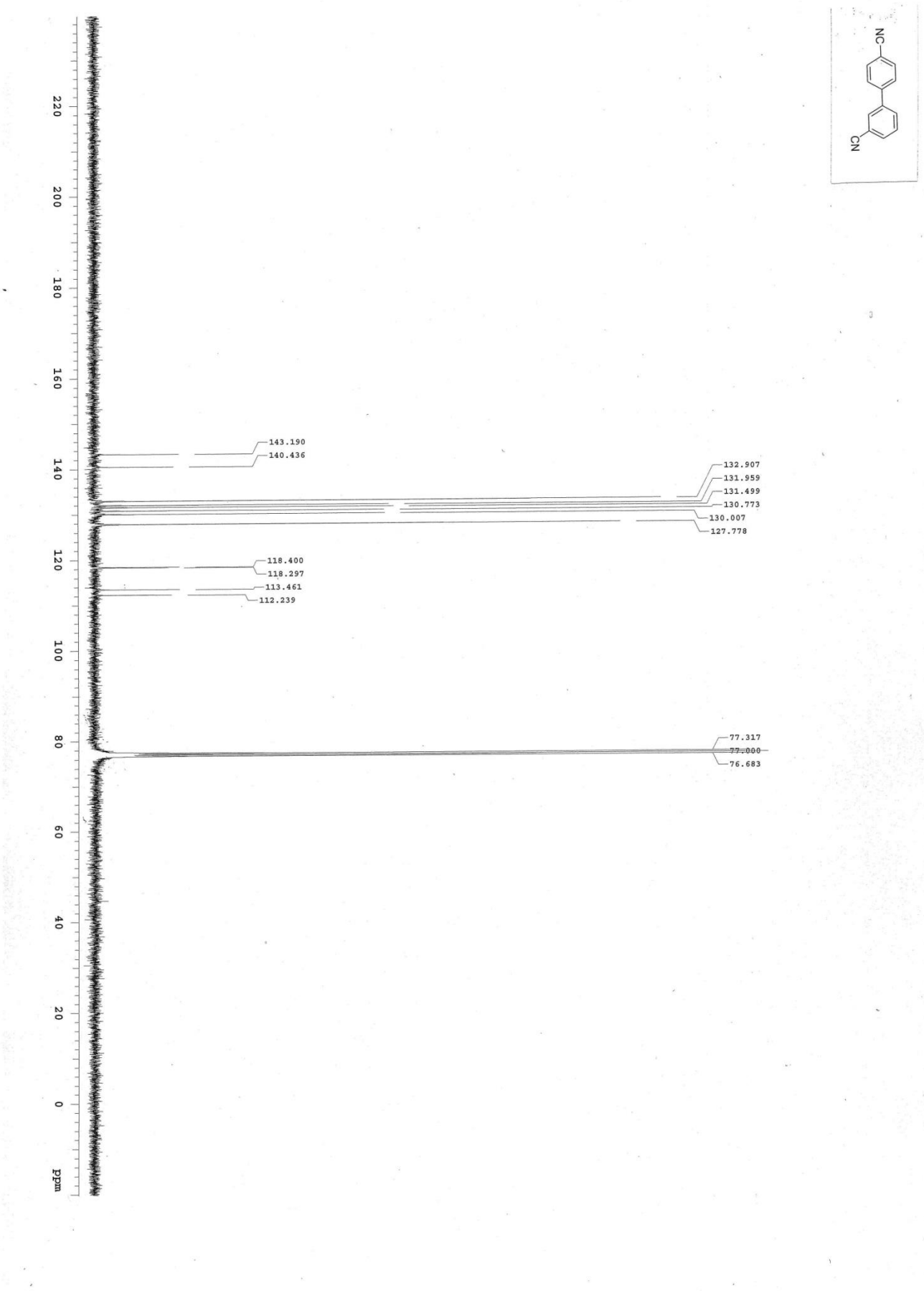

Figure S8. ^{13}C NMR spectrum of 3,4'-dicyanobiphenyl

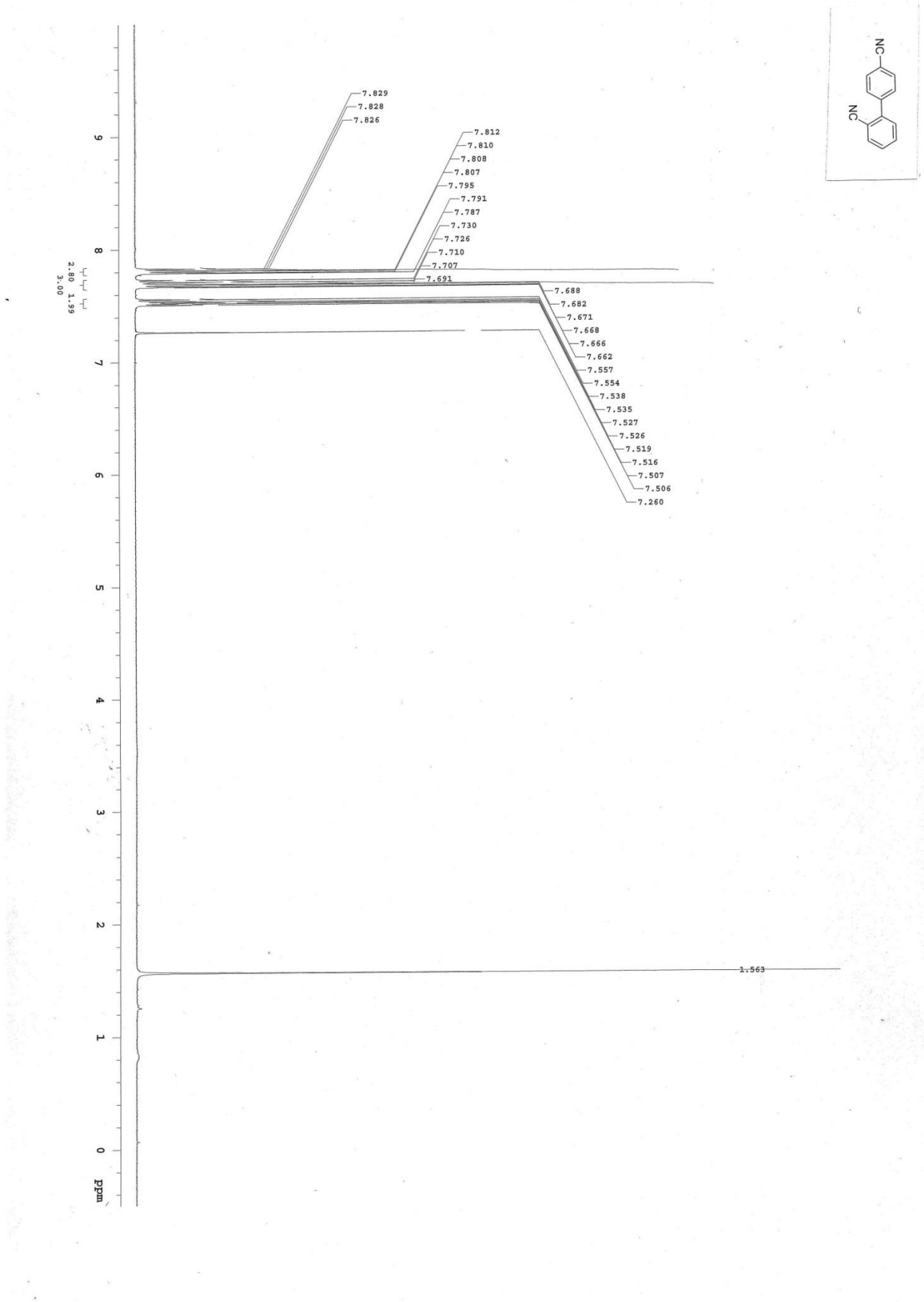

Figure S9. ^{1}H NMR spectrum of 2,4'-dicyanobiphenyl

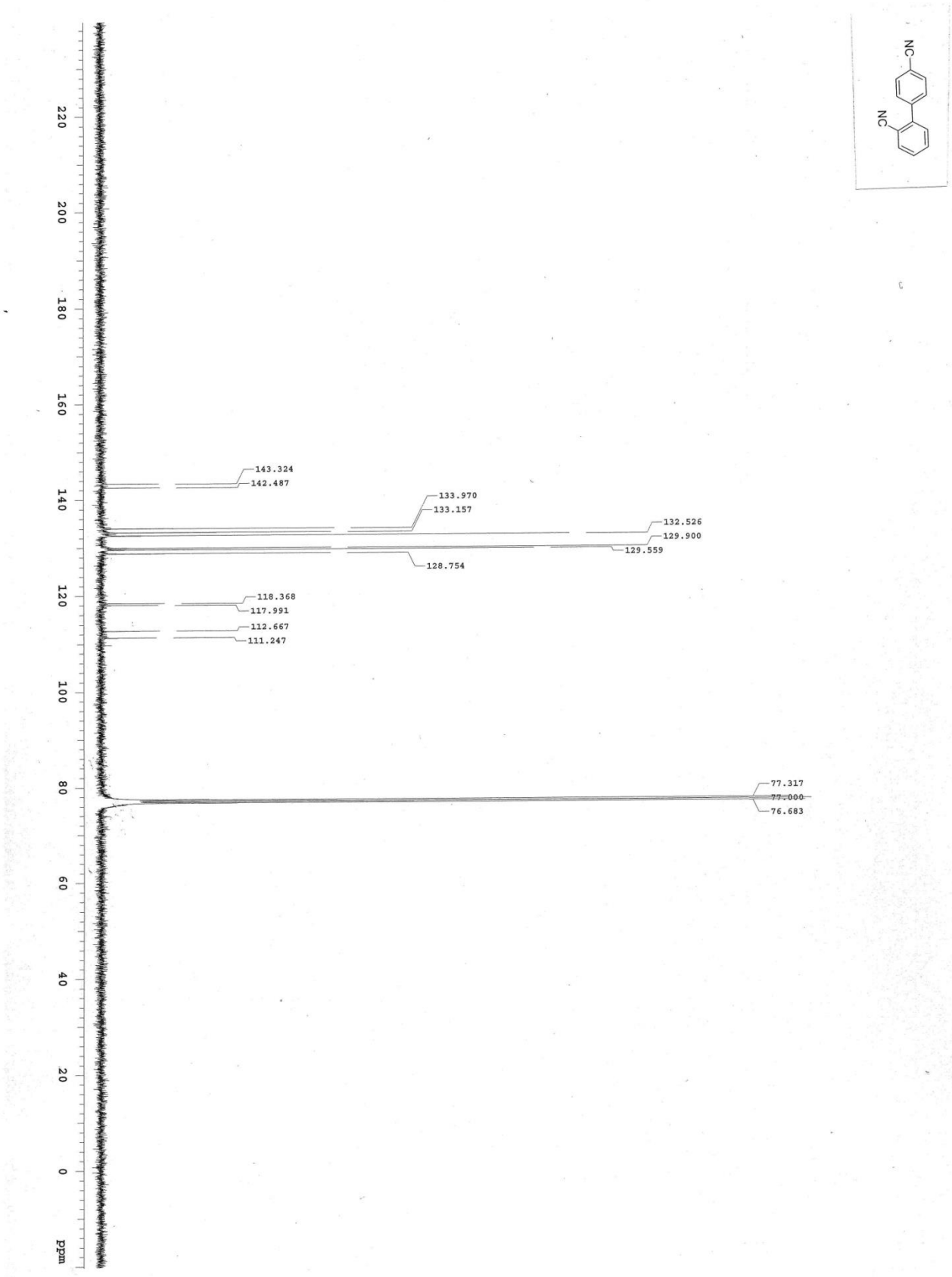

Figure S10. ^{13}C NMR spectrum of 2,4'-dicyanobiphenyl

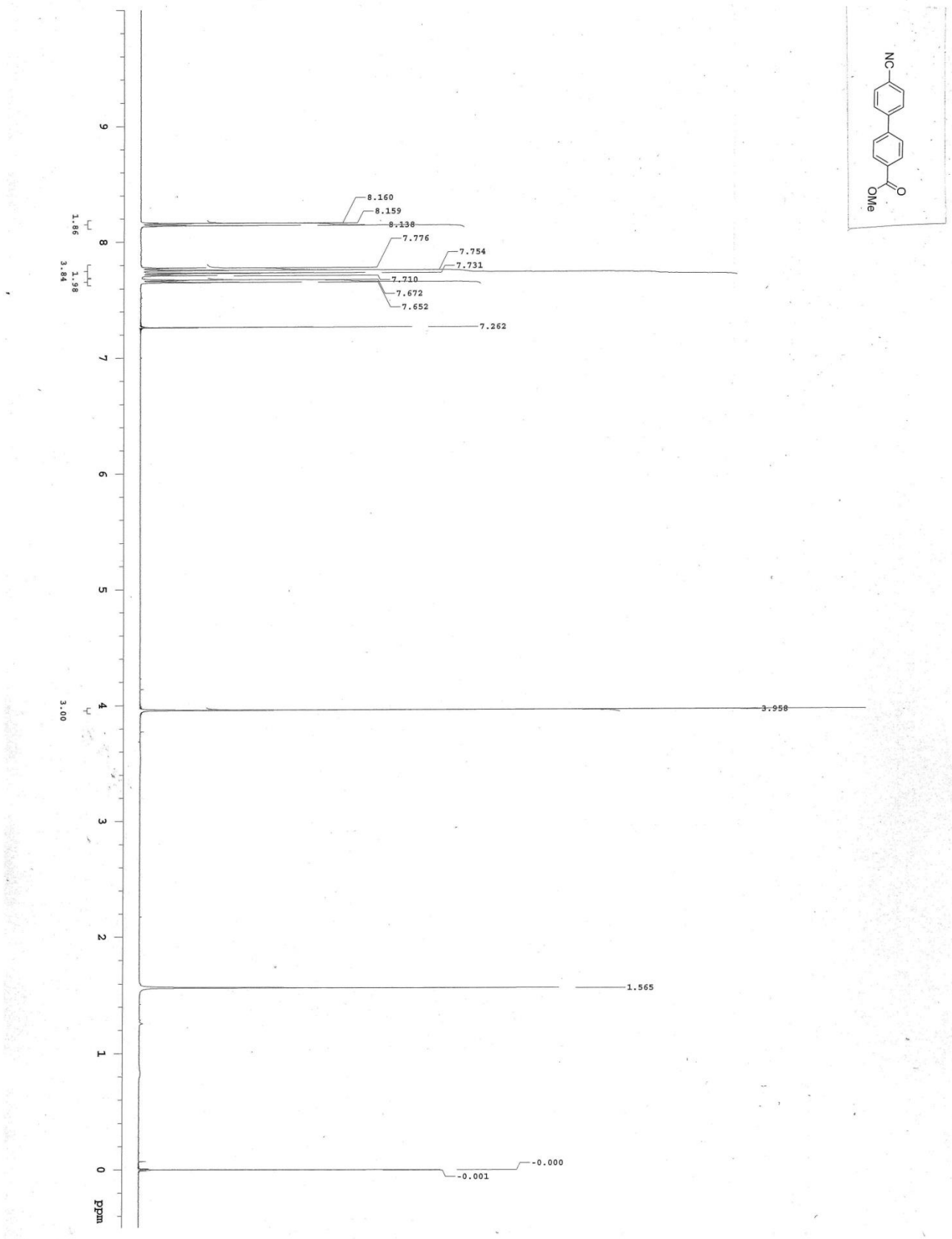

Figure S11. ^{1}H NMR spectrum of methyl 4-(4-cyanophenyl)benzoate

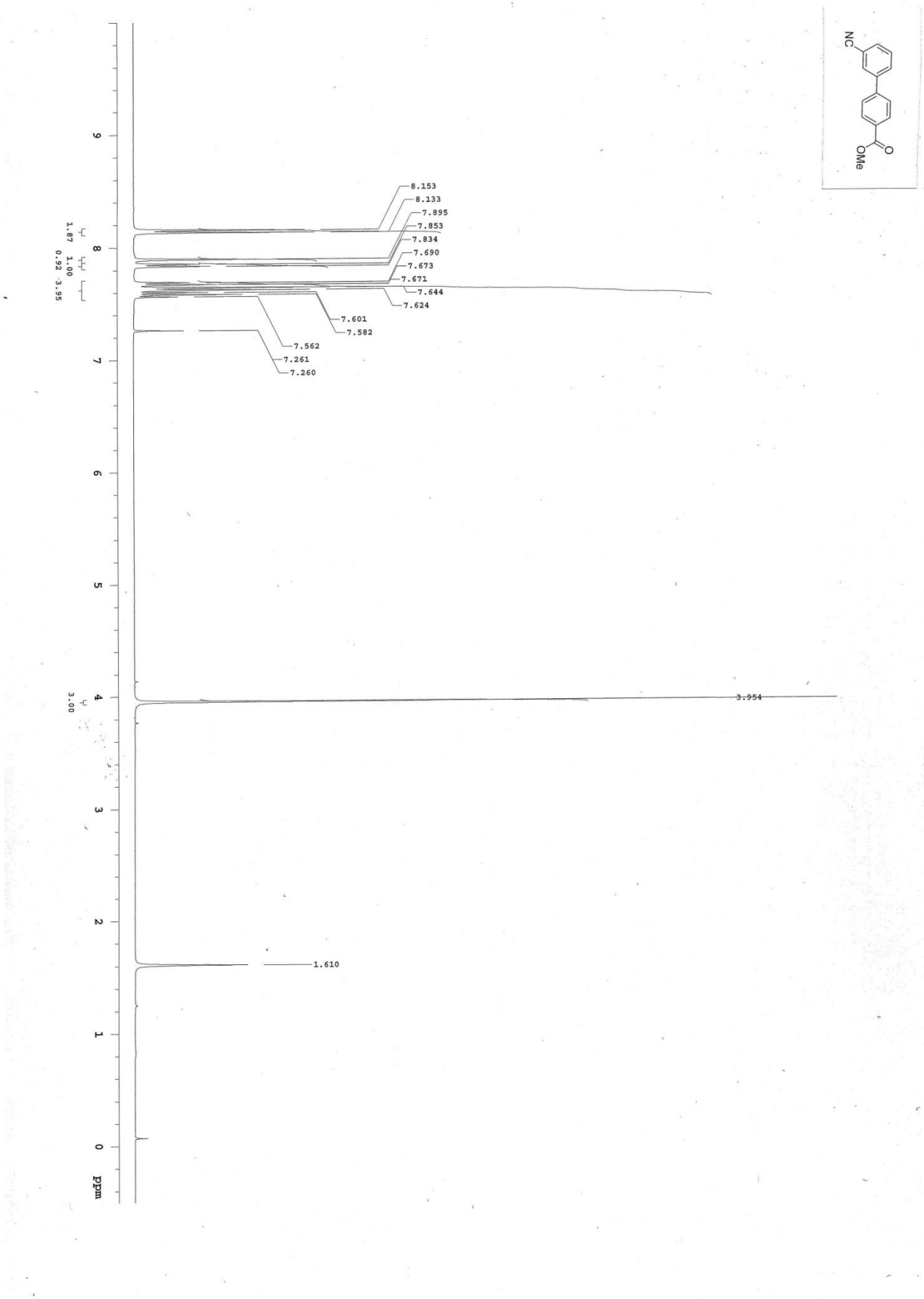

Figure S12. ^{1}H NMR spectrum of methyl 4-(3-cyanophenyl)benzoate

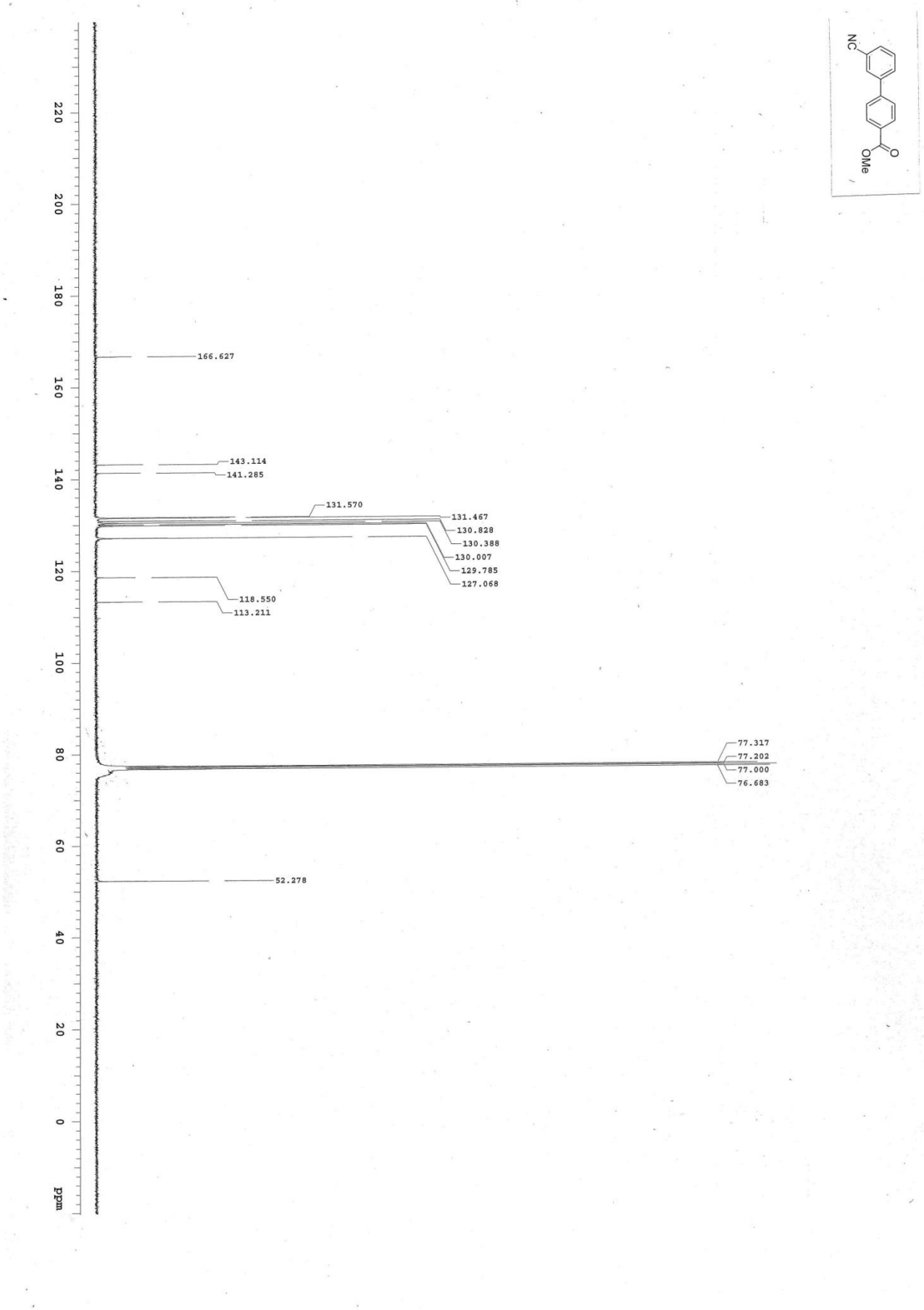

Figure S13. ^{13}C NMR spectrum of methyl 4-(3-cyanophenyl)benzoate

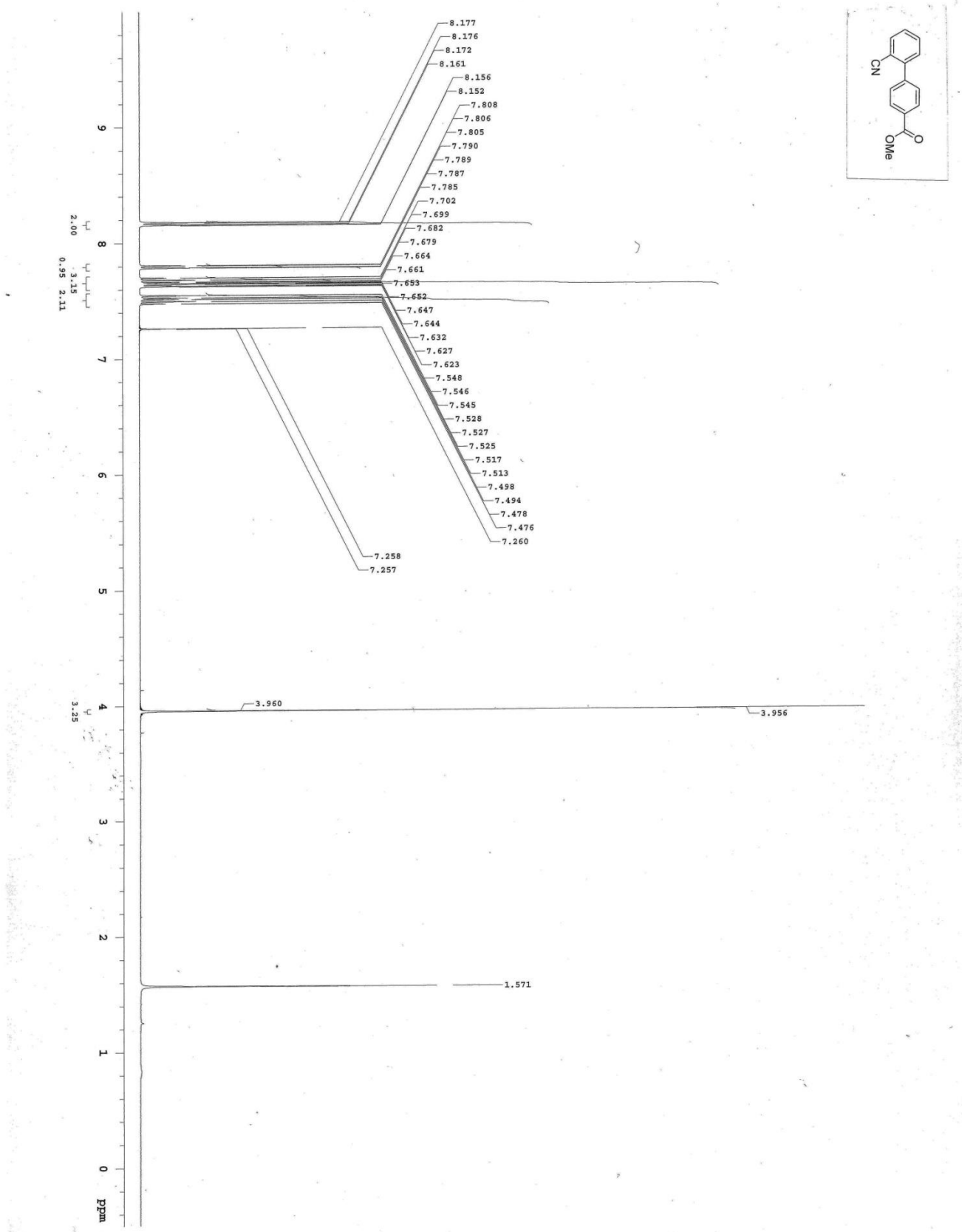

Figure S14. ^{1}H NMR spectrum of methyl 4-(2-cyanophenyl)benzoate

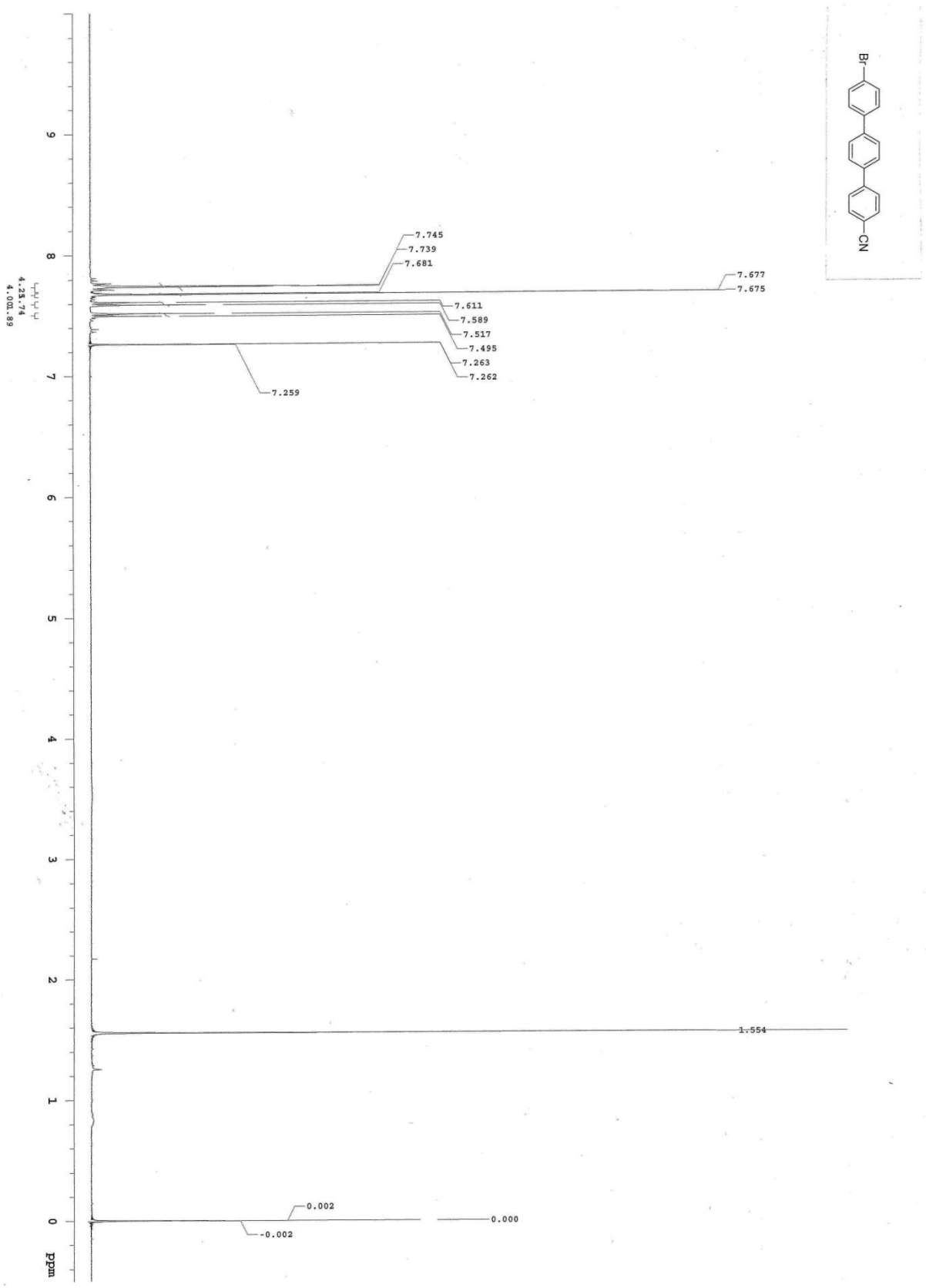

Figure S15. ^{1}H NMR spectrum of 1-cyano-4''-bromo-4,1':4',1''-terphenylene

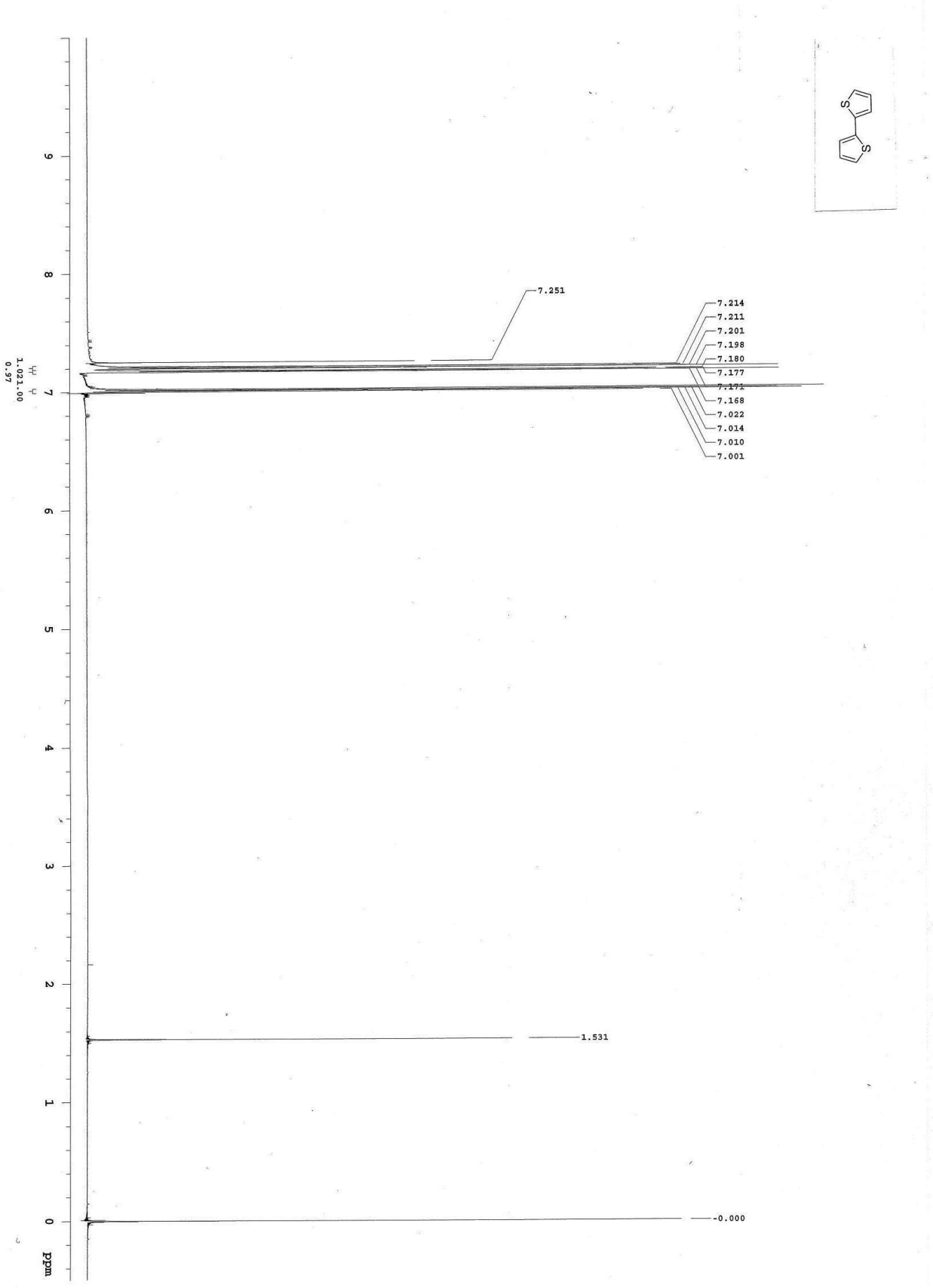

Figure S16. ^{1}H NMR spectrum of 2,2'-bithiophene

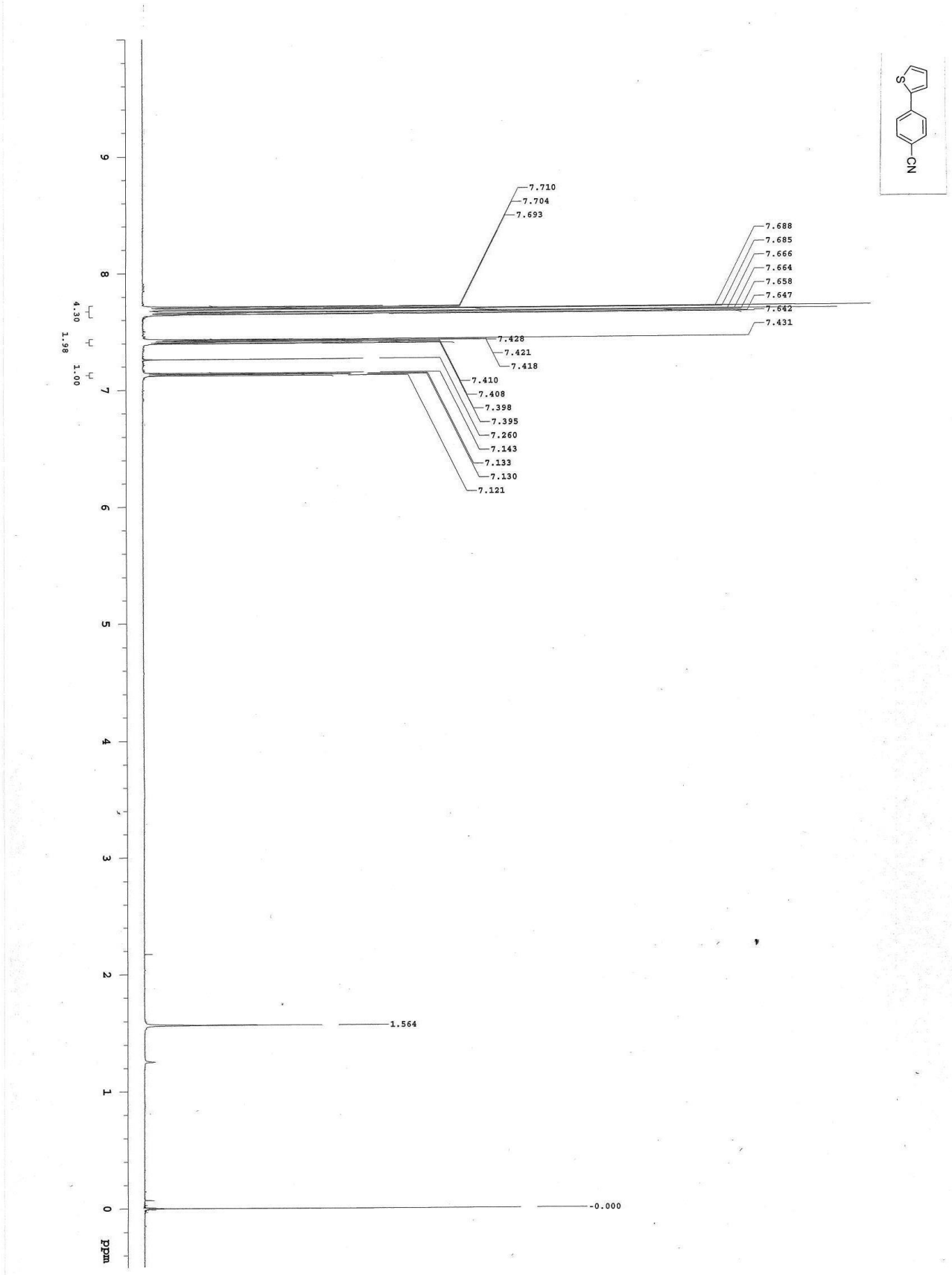

Figure S17. ^{1}H NMR spectrum of 4-(thiophen-2-yl)benzonitrile

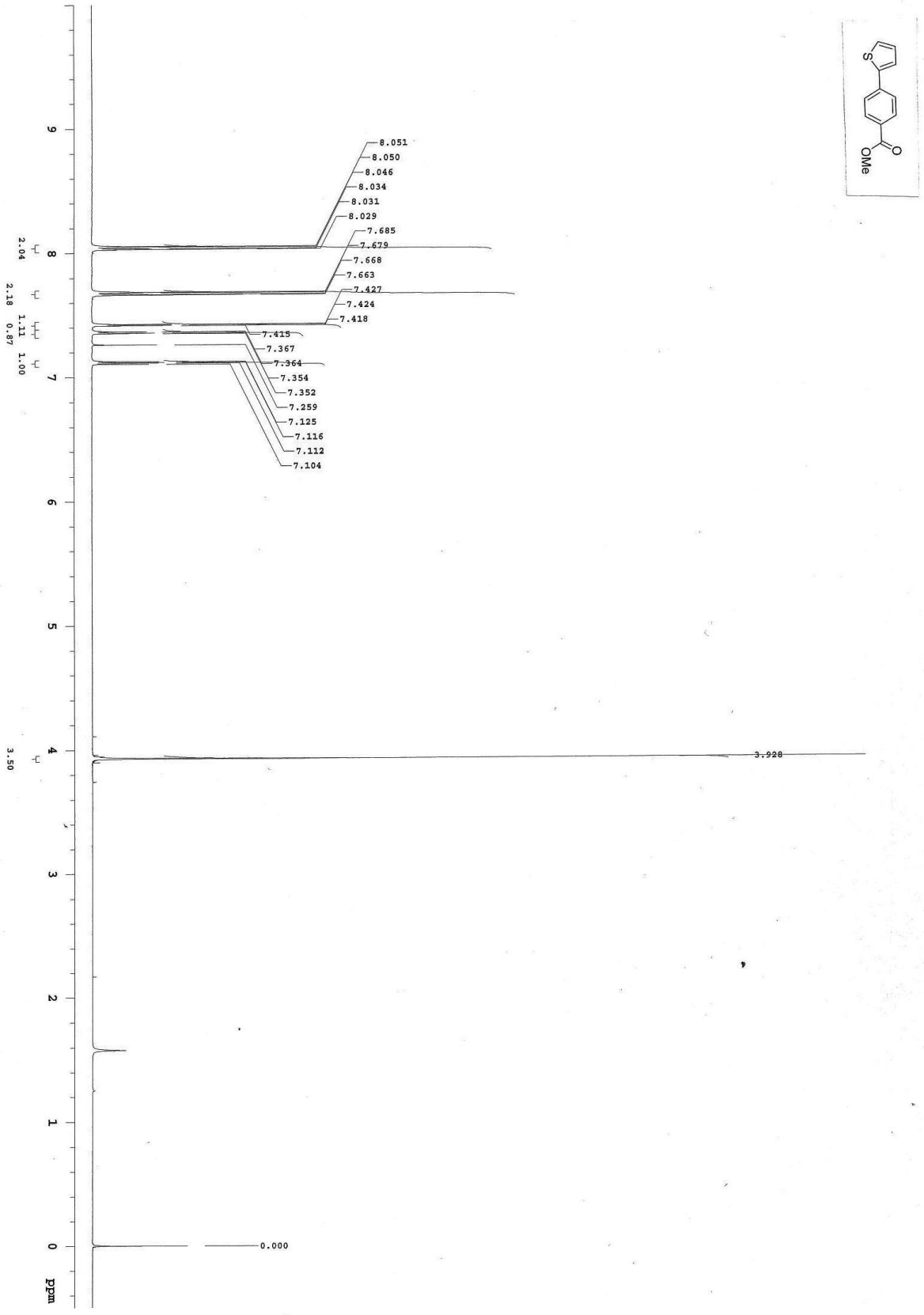

Figure S18. ^{1}H NMR spectrum of methyl 4-(thiophen-2-yl)benzoate

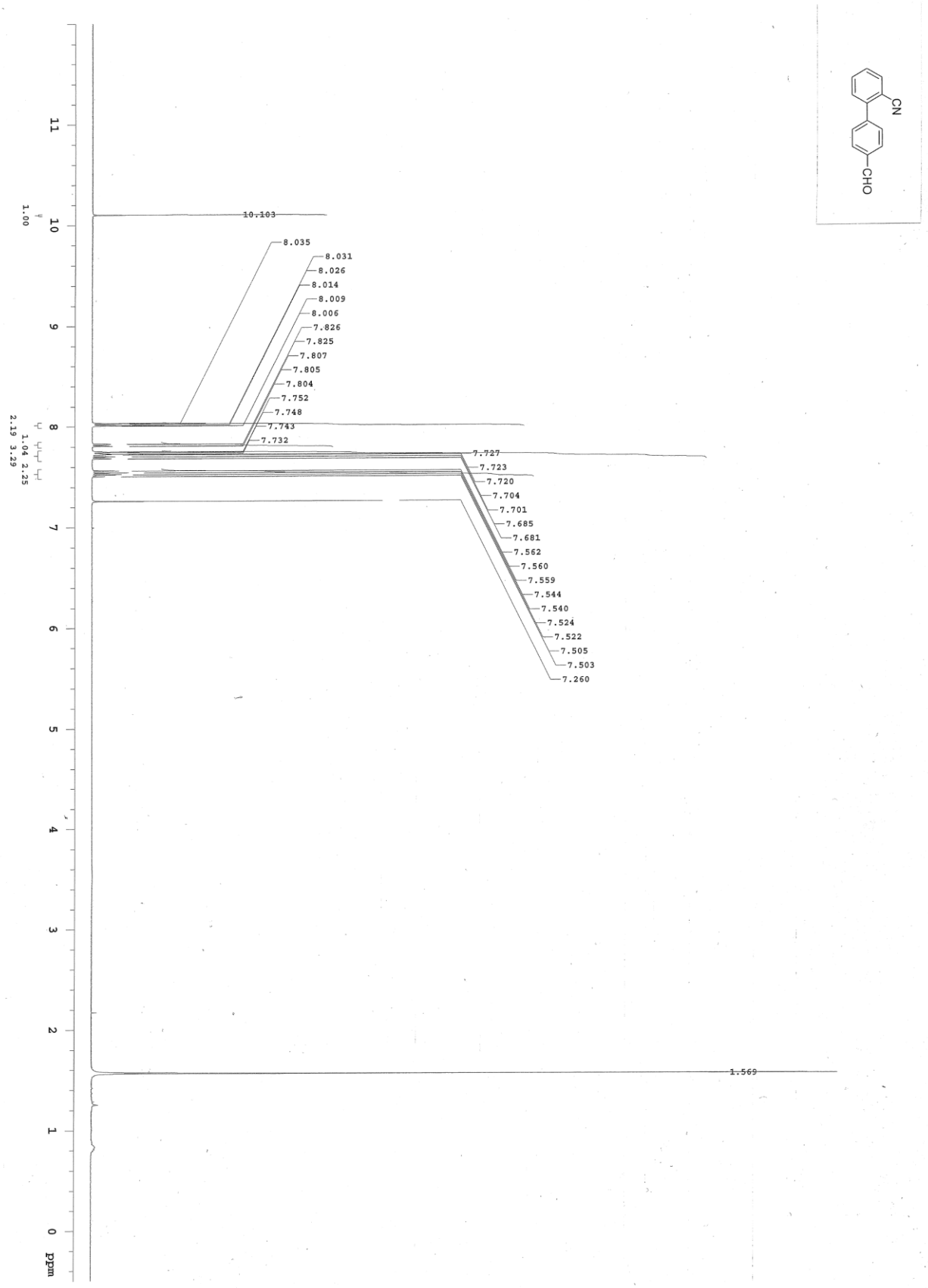

Figure S19. ^{1}H NMR spectrum of 2-Cyano-4'-formylbiphenyl

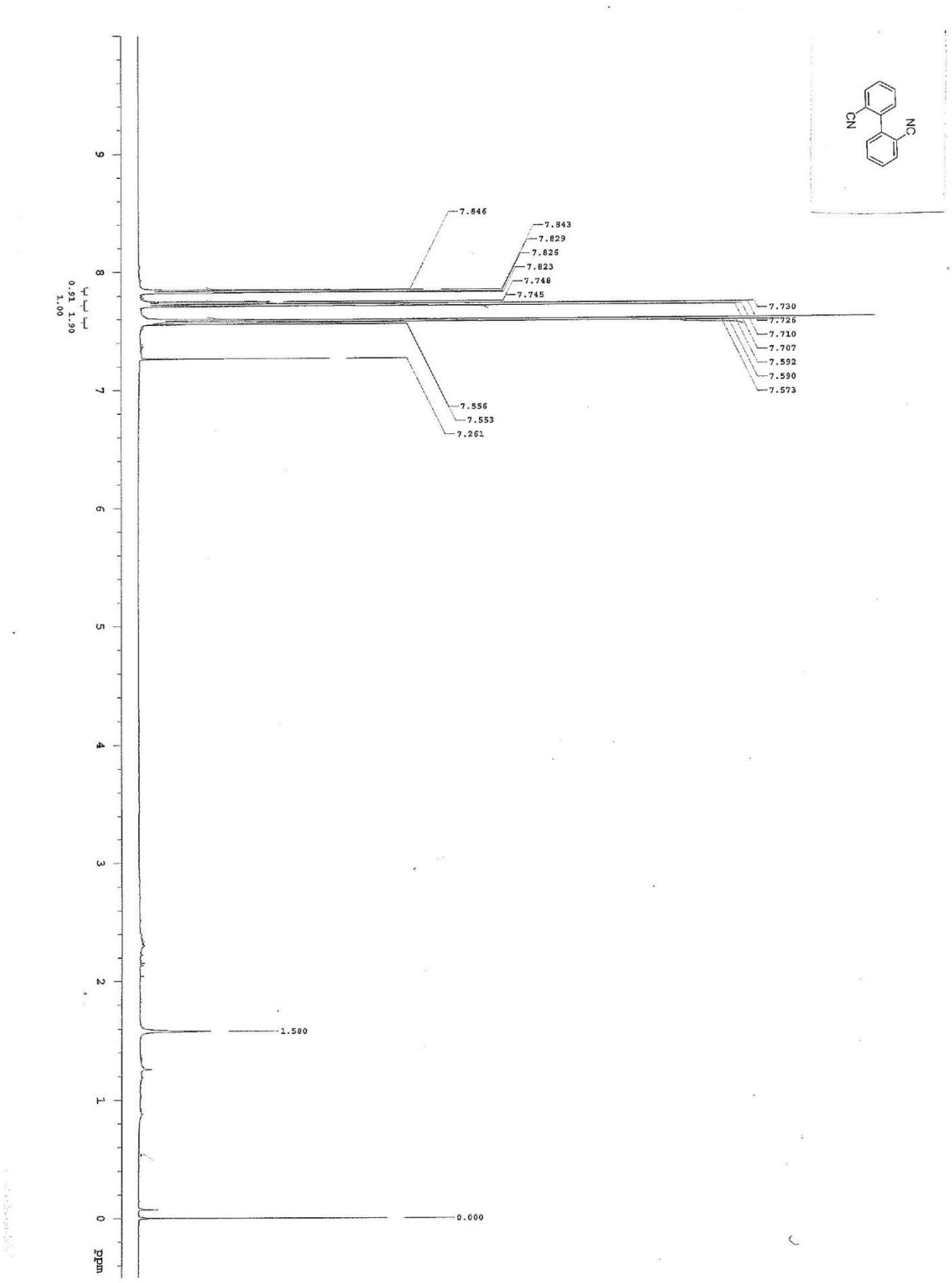

Figure S20. ^{1}H NMR spectrum of 2,2'-Dicyanobiphenyl

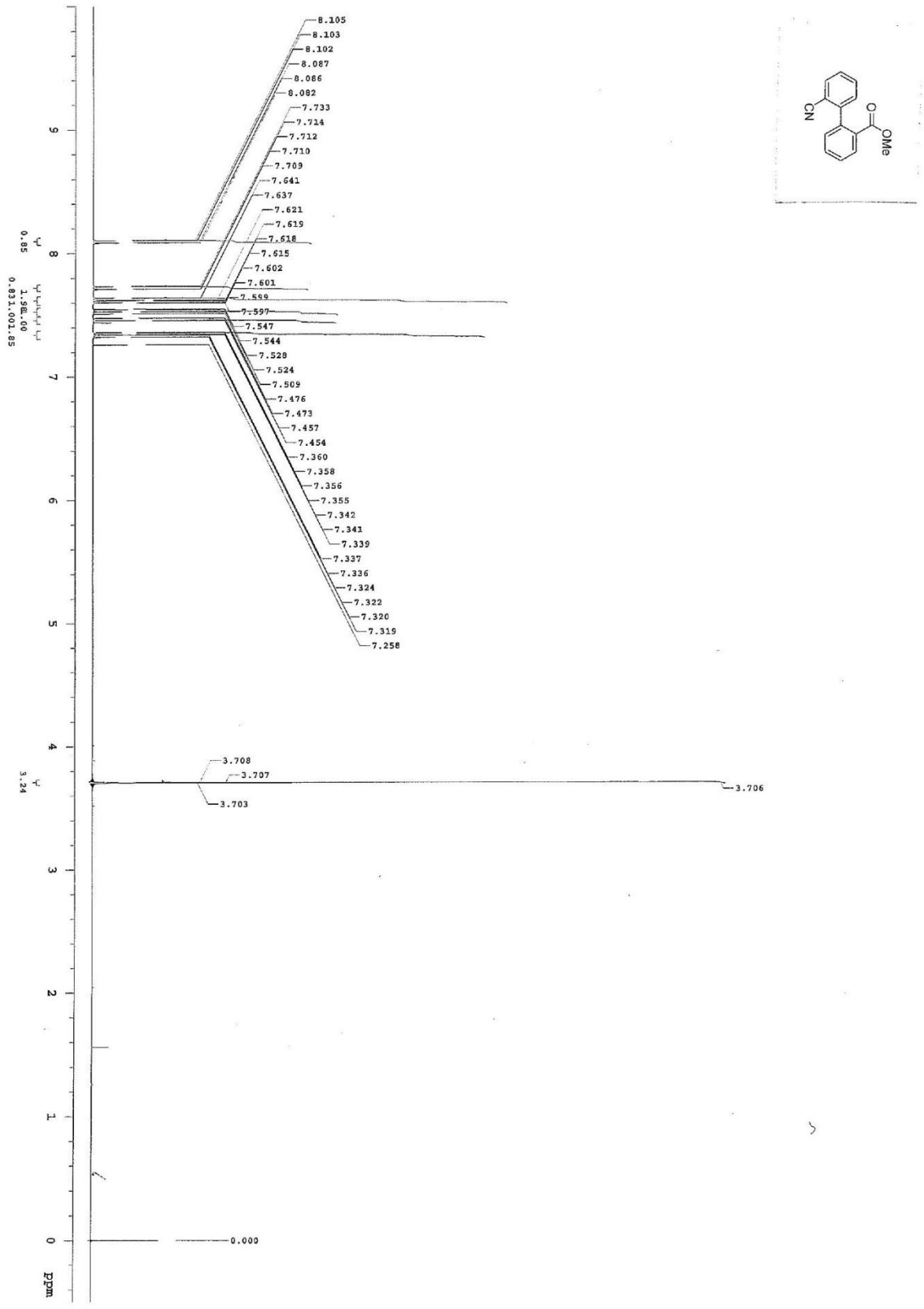

Figure S21. ^{1}H NMR spectrum of Methyl 2-(2-Cyanophenyl)benzoate

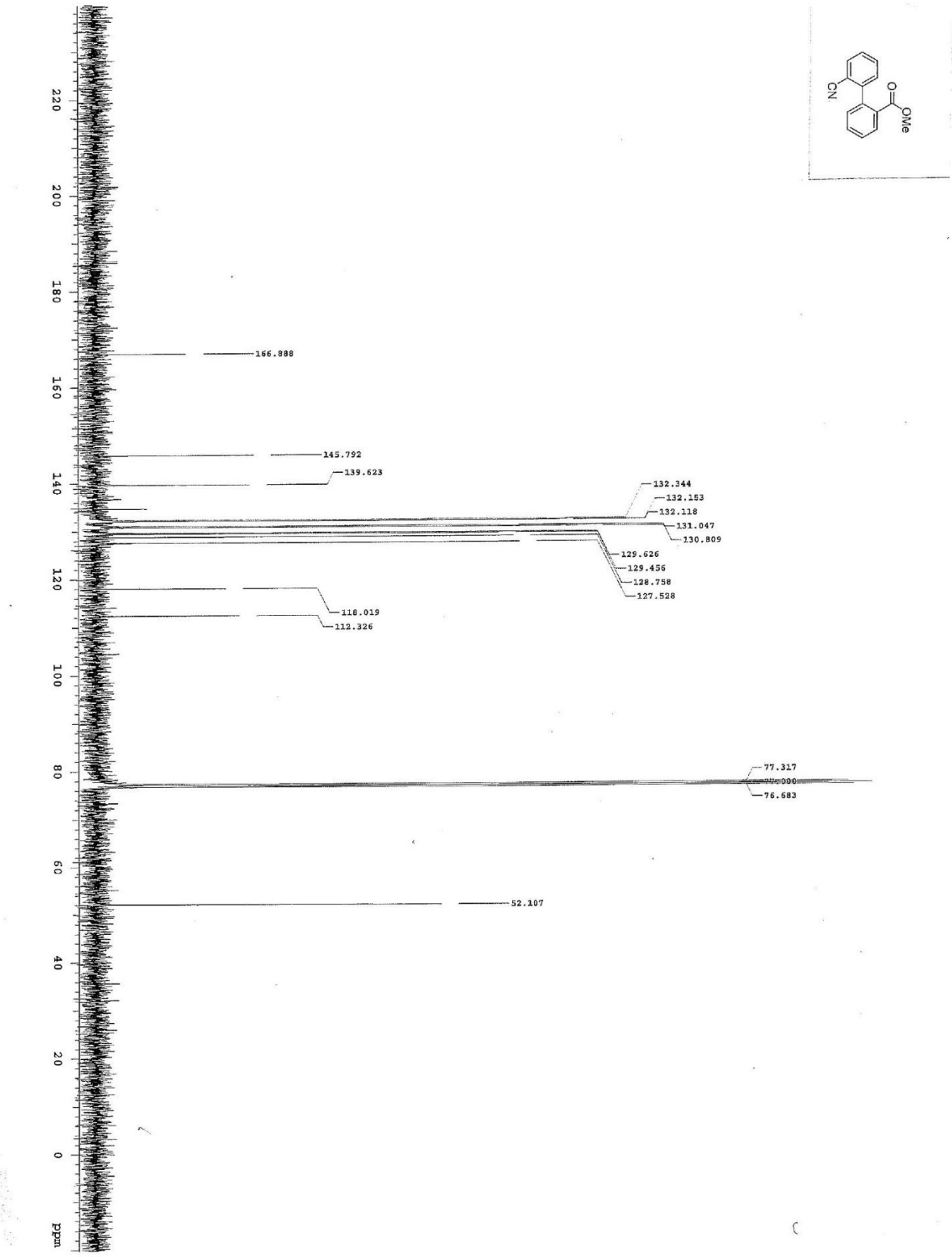

Figure S22. ^{13}C NMR spectrum of Methyl 2-(2-Cyanophenyl)benzoate

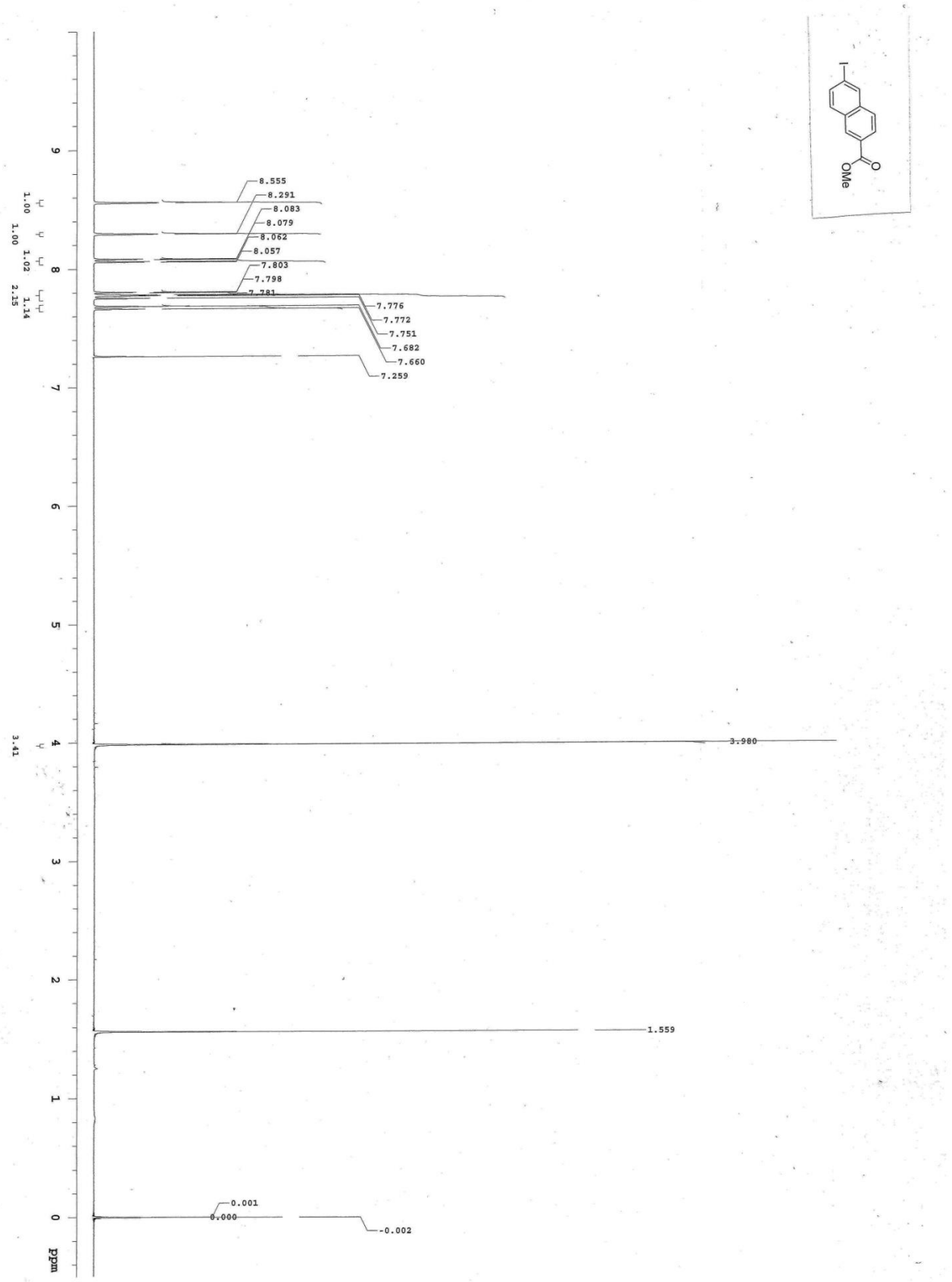

Figure S23. ^{1}H NMR spectrum of methyl 6-iodo-2-naphthoate

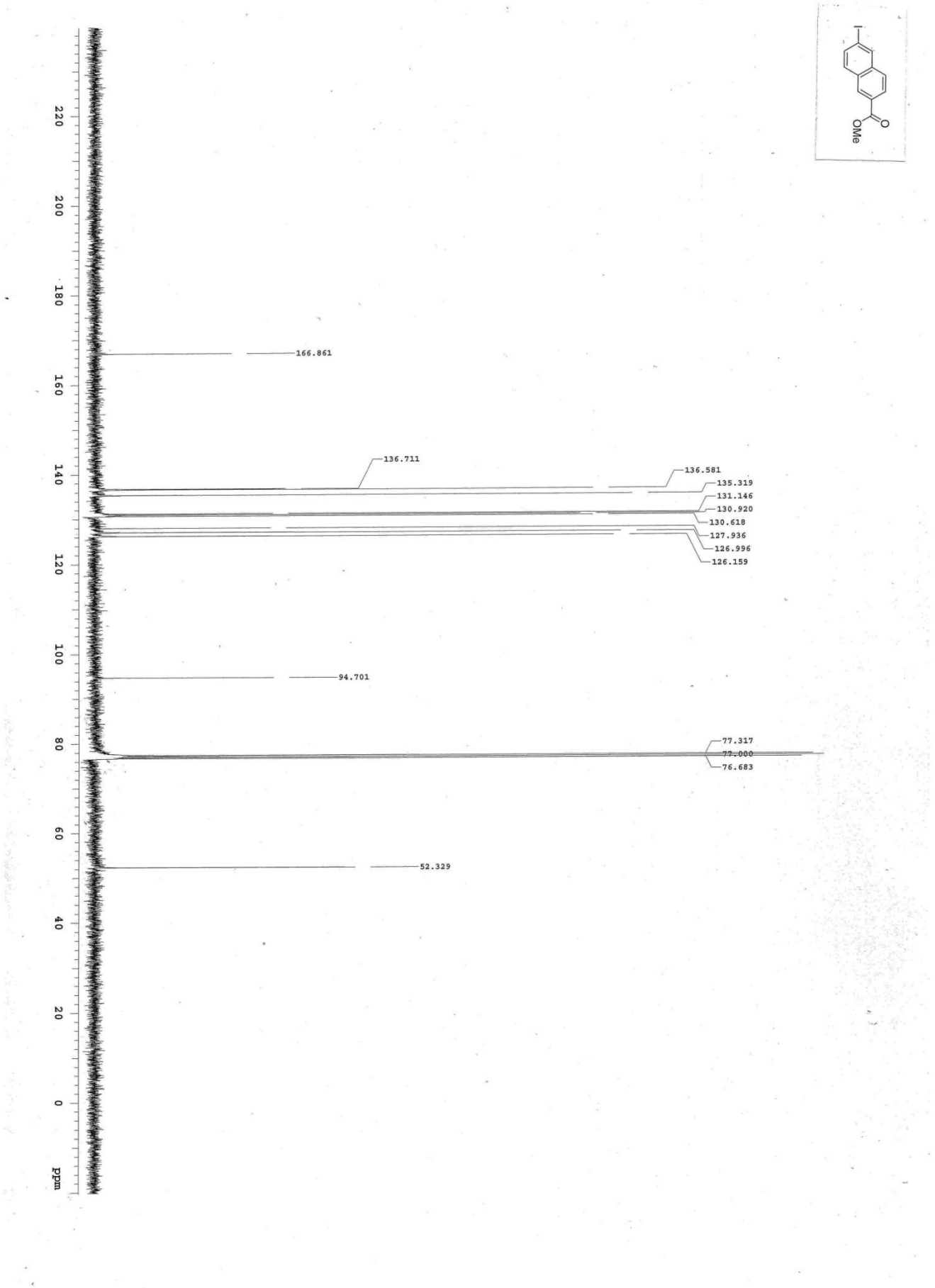

Figure S24. ^{13}C NMR spectrum of methyl 6-iodo-2-naphthoate

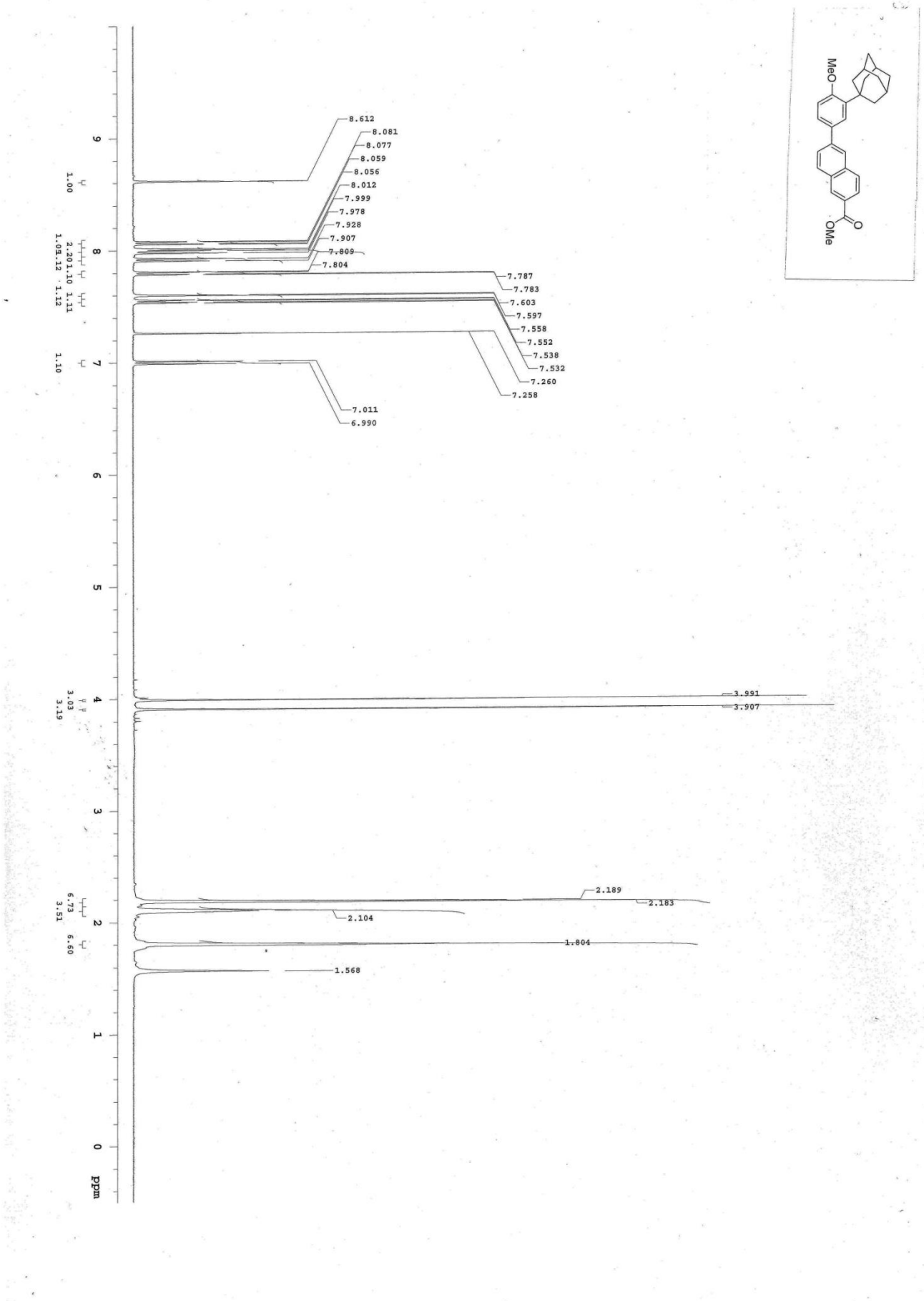

Figure S25. ^{1}H NMR spectrum of methyl 6-(3-(1-adamantyl)-4-methoxyphenyl)-2-naphthoate

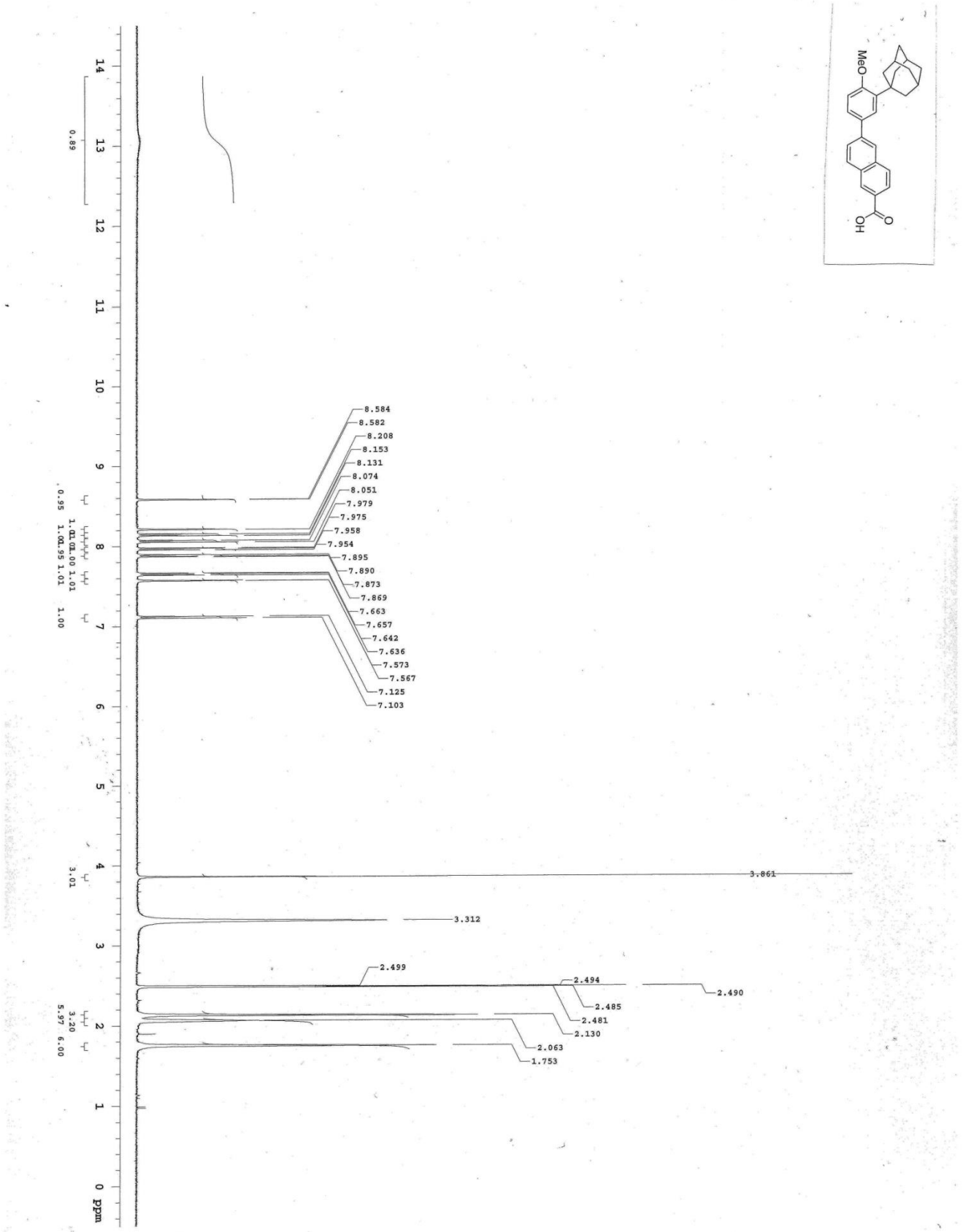

Figure S26. ^{1}H NMR spectrum of 6-(3-(1-adamantyl)-4-methoxyphenyl)-2-naphthoic acid (Adapalene)

General Procedure of GC Analysis

GC analysis was performed on a SHIMADZU GC-2014 gas chromatograph equipped with a flame ionization detector using a fused silica capillary column (column, CBPI; 0.25 mm x 25 m; initial oven temperature, 50 ºC; rate of temperature increase, 10 ºC/min; final oven temperature, 250 ºC keeping time after reaching final oven temperature, 10 min). GC yield was calculated by using an internal standard (tetradecane).

Table S1. Retention Time List of Products obtained by Cross-Coupling Reaction in GC Analysis

Cross-Coupling Products	Retention Time in GC Analysis (min)
Biphenyl-4-carbonitrile	21.4
Methyl 4-Phenylbenzoate	22.9
Biphenyl	17.0
4-Methoxybiphenyl	20.7
2-Phenylthiophene	25.6
4,4'-Dicyanobiphenyl	25.4
3,4'-Dicyanobiphenyl	25.2
2,4'-Dicyanobiphenyl	24.2
Methyl 4-(4-Cyanophenyl)benzoate	26.5
Methyl 4-(3-Cyanophenyl)benzoate	26.3
Methyl 4-(2-Cyanophenyl)benzoate	25.6
2,2'-Bithiophene	25.6
4-(Thiophen-2-yl)benzonitrile	25.6
Methyl 4-(Thiophen-2-yl)benzoate	25.6
2-Cyano-4’-formylbiphenyl	24.0
2,2'-Dicyanobiphenyl	22.8
Methyl 2-(2-Cyanophenyl)benzoate	23.3