Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Pronounced effect of pore dimension of silica support on Pd-catalyzed Suzuki coupling reaction under ambient conditions

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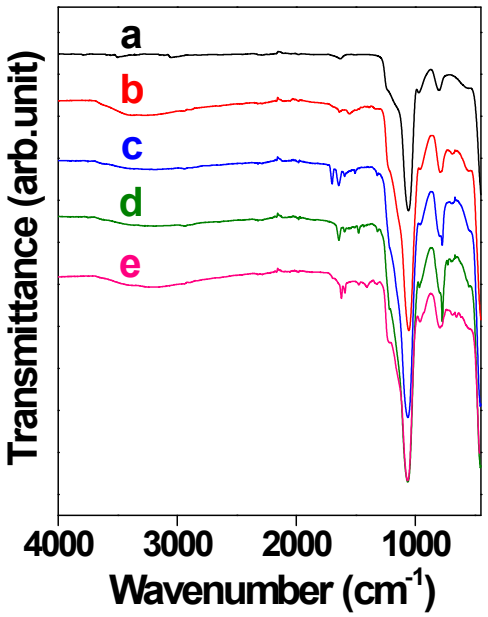


Fig. s1. FT-IR spectra of (a) calcined MCM-41, (b) 3-APTES functionalized MCM-41, (c) *tris*(4-formyl phenyl) amine loaded MCM-41, (d) 2-aminothiophenol grafted *tris*(4-formyl phenyl) amine MCM-41 and (e) **MCM-Pd**

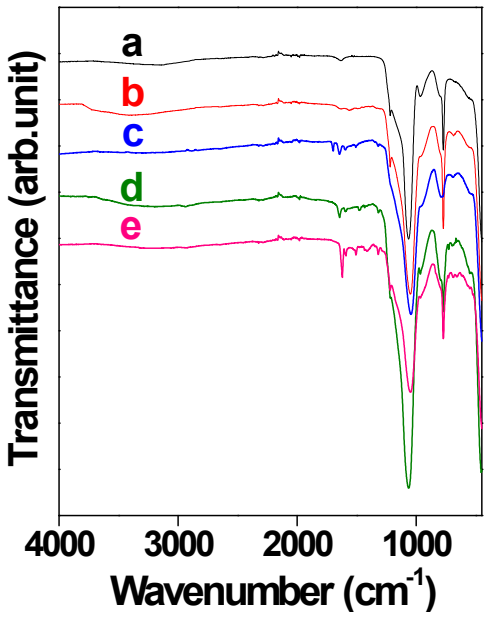


Fig. s2. FT-IR spectra of (a) calcined SBA-15, (b) 3-APTES functionalized SBA-15, (c) *tris*(4-formyl phenyl) amine loaded SBA-15, (d) 2-aminothiophenol grafted *tris*(4-formyl phenyl) amine SBA-15 and (e) **SBA-Pd**

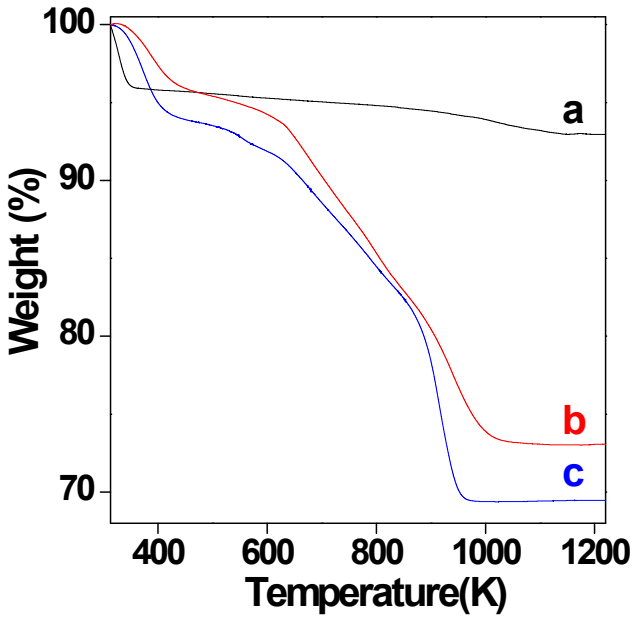


Fig. s3. Thermogravimetric analysis of (a) calcined MCM-41, (b) 3-APTES functionalized MCM-41 and (c) *tris*(4-formyl phenyl) amine loaded MCM-41

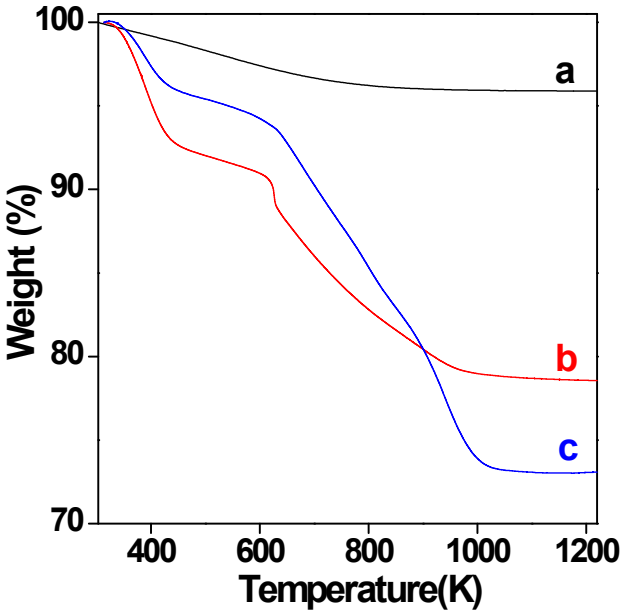


Fig. s4. Thermogravimetric analysis of (a) calcined SBA-15, (b) 3-APTES functionalized SBA-15 and (c) *tris*(4-formyl phenyl) amine loaded SBA-15

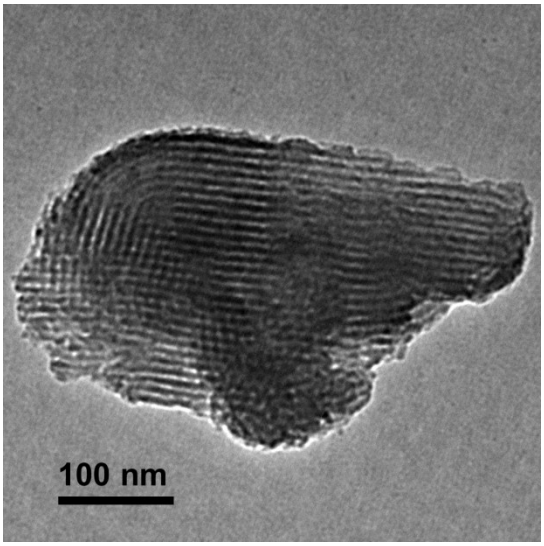


Fig. s5. TEM image of **SBA-Pd** after three reaction cycles

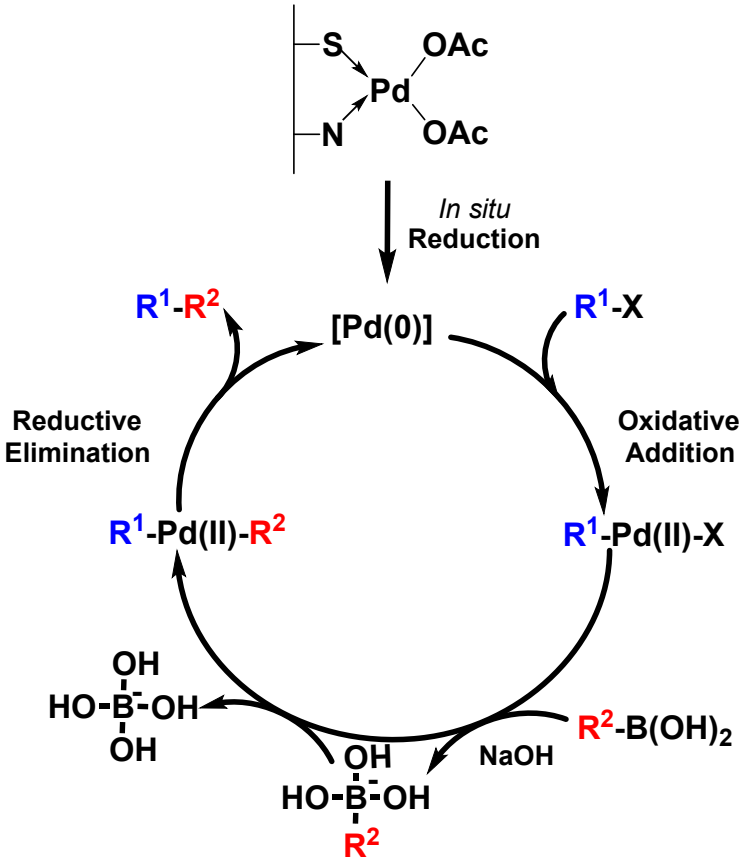
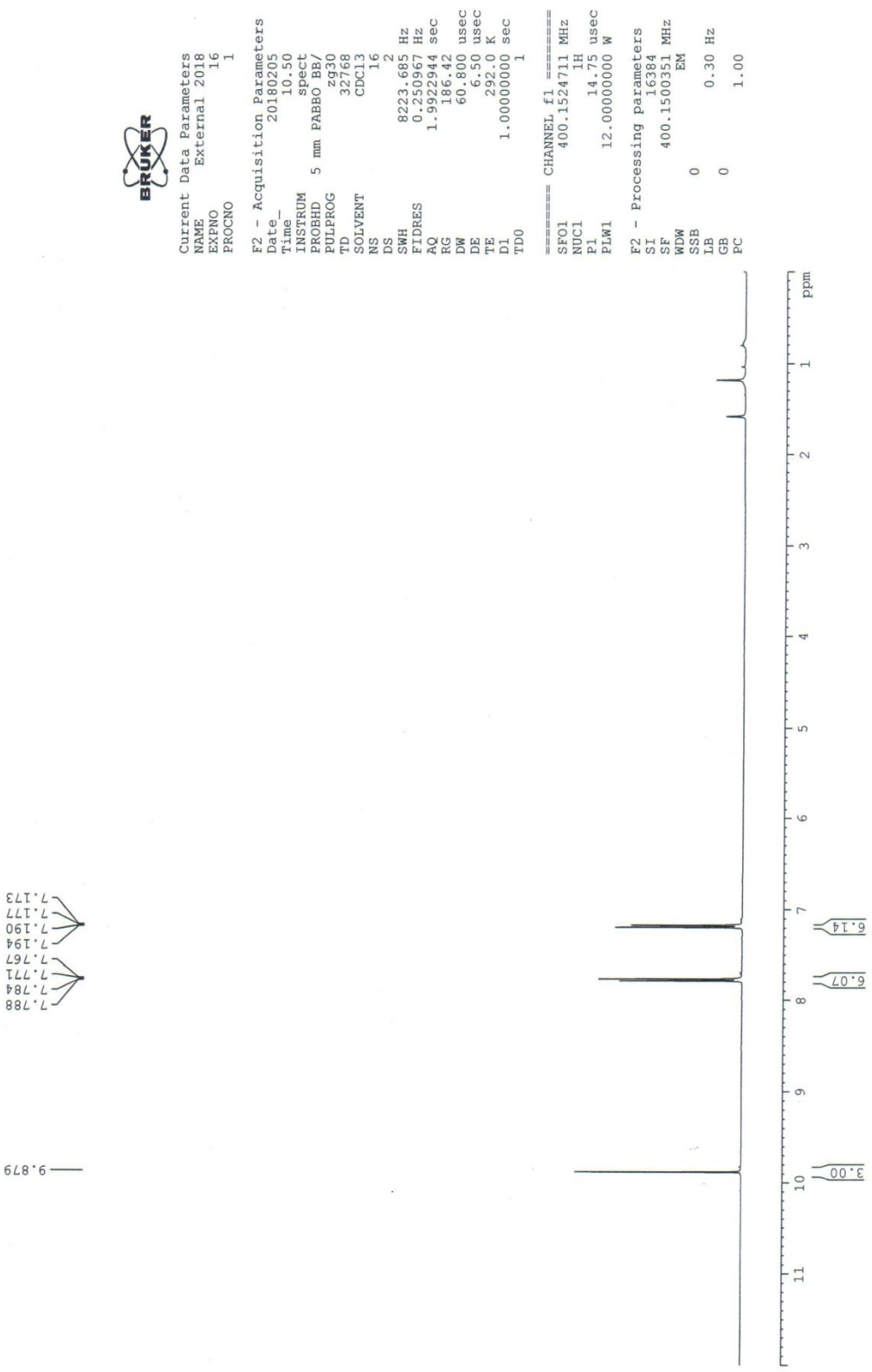


Fig. s6. Mechanism of Suzuki coupling reaction*

*(i) P. Veerakumar, P. Thanasekaran, K.-L. Lu, S.-B. Liu and S. Rajagopal, ACS Sustainable Chem. Eng., 2017, 5, 6357. (ii) C. Len, S. Bruniaux, F. Delbecq, V. S. Parmar, Catalysts, 2017, 7, 146 (1-23).

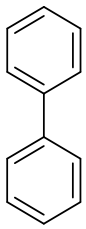
^{1}H NMR of *tris*(4-formyl phenyl) amine

Tris(4-formyl phenyl)amine. ^{1}H NMR ($CDCl_3$) δ 9.88 (s, 3H), 7.76-7.78 (d, 6H), 7.17–7.19 (d, 6H)



^{1}H NMR of Biphenyl

Biphenyl. ^{1}H NMR ($CDCl_3$) δ 7.39–7.43 (m, 2H), 7.48–7.53 (m, 4H), 7.65–7.68 (m, 4H)



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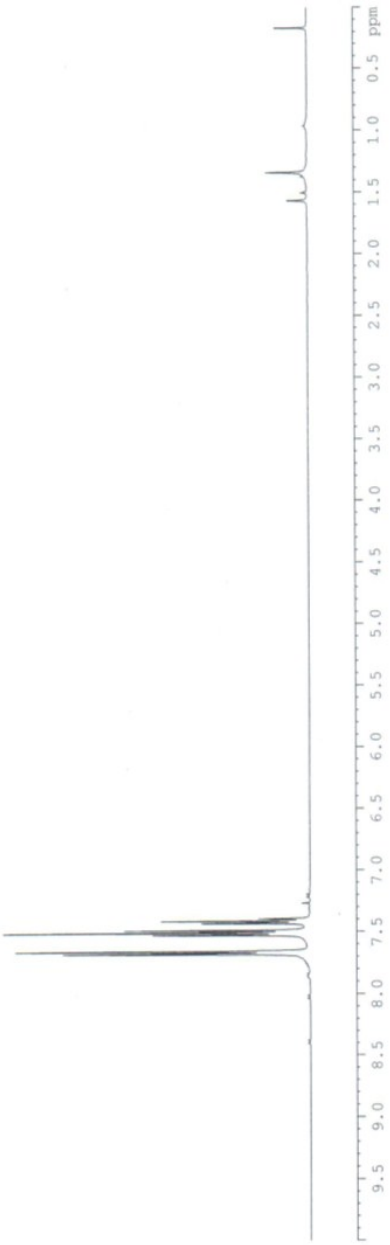
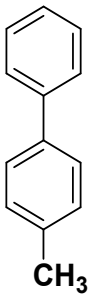
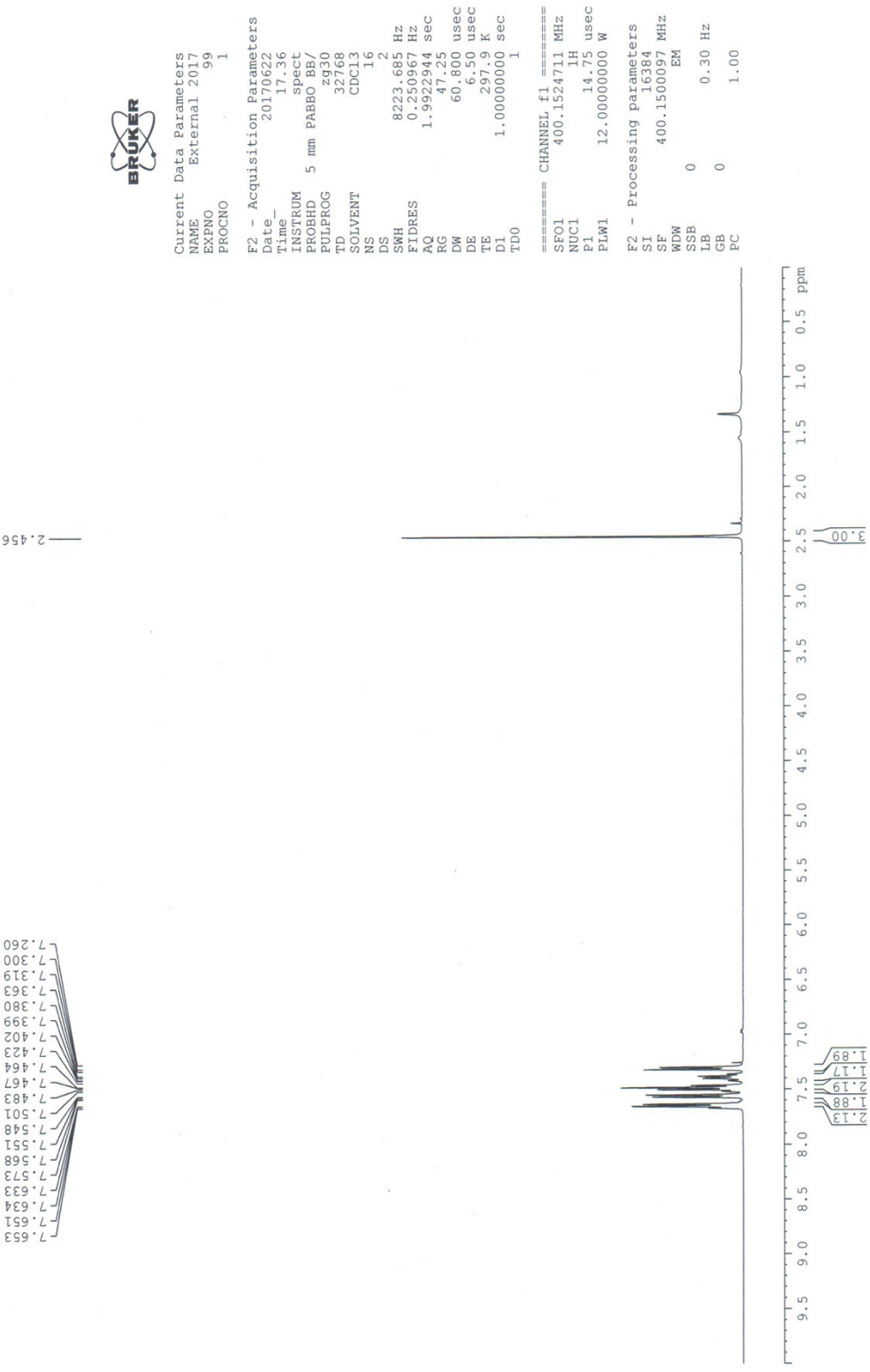


^{1}H NMR of 4-methyl-1,1'-biphenyl

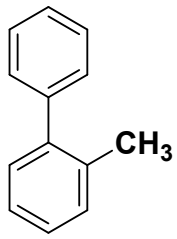
4-methyl-1,1'-biphenyl. ^{1}H NMR ($CDCl_3$) δ 2.45 (s, 3H), 7.30–7.31 (d, 2H), 7.40 (m, 1H), 7.46-7.50 (t, 2H), 7.54-7.57(d, 2H), 7.63-7.65 (d, 2H)

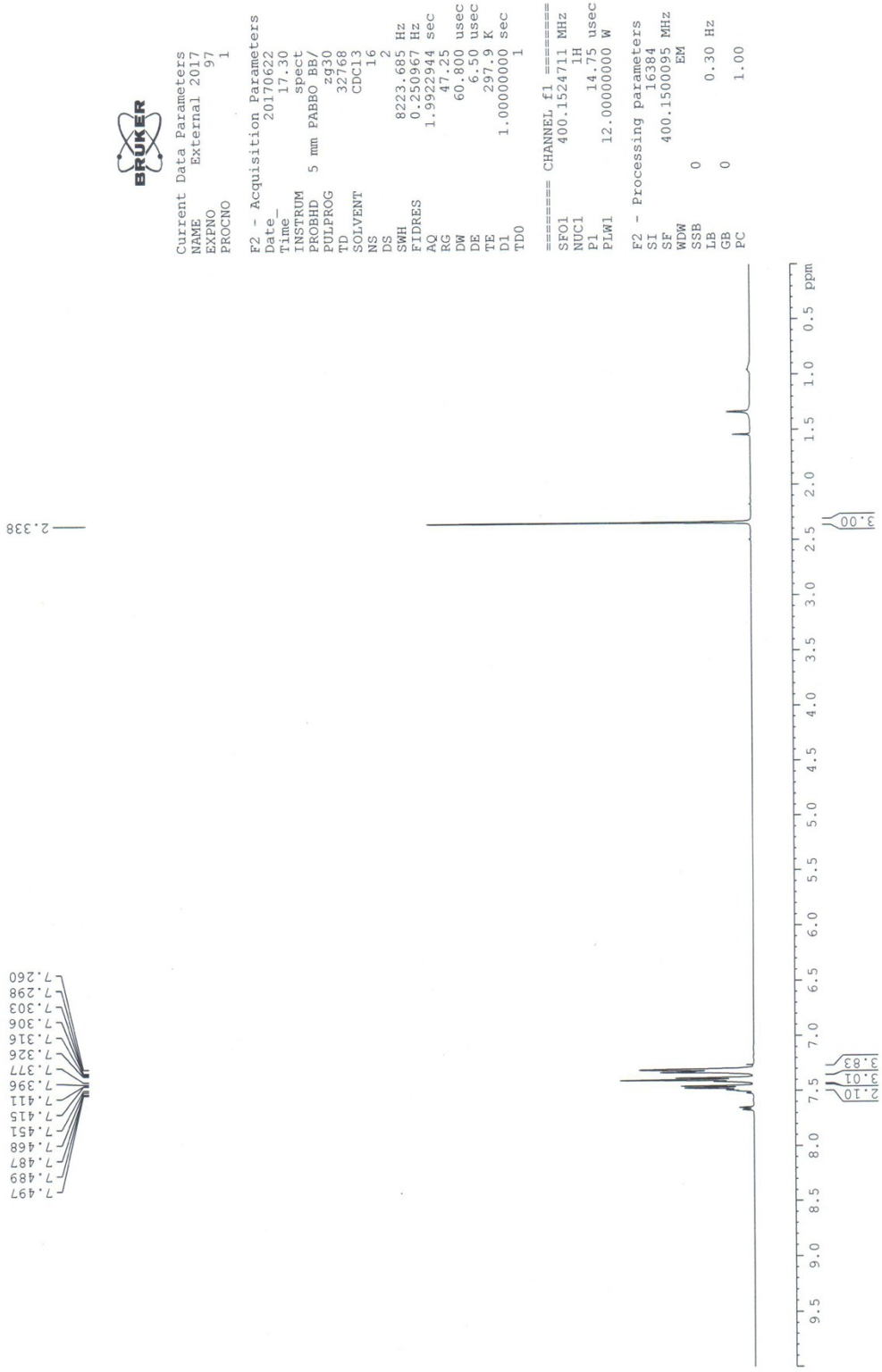




[1]H NMR of 2-methyl-1,1'-biphenyl

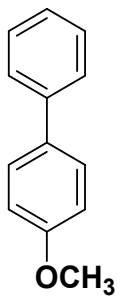
2-methyl-1,1'-biphenyl. [1]H NMR ($CDCl_3$) δ 2.338 (s, 3H), 7.26–7.32 (m, 4H), 7.37-7.41 (m, 3H), 7.45-7.49 (t, 2H)

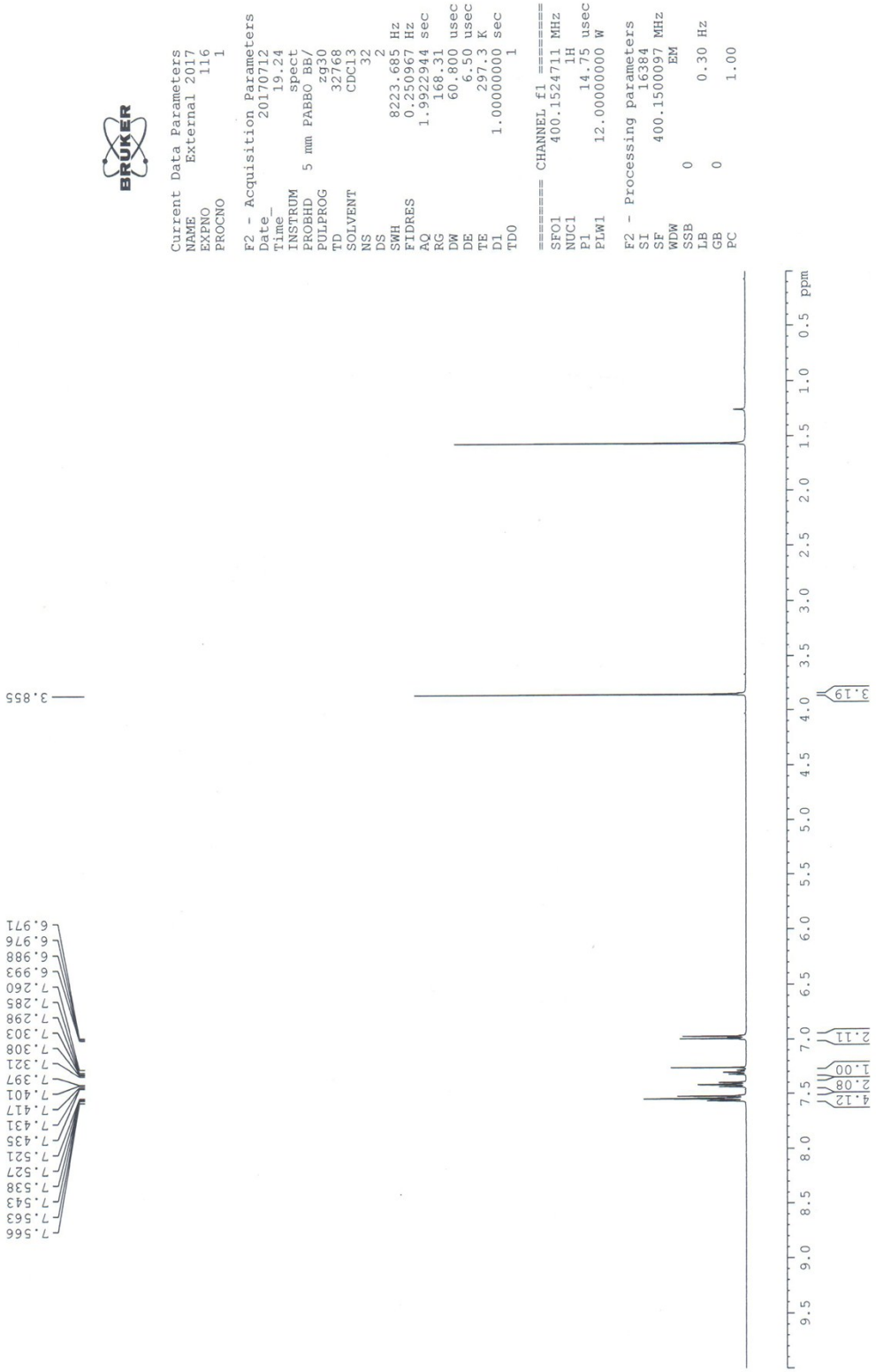




^{1}H NMR of 4-methoxy-1,1'-biphenyl

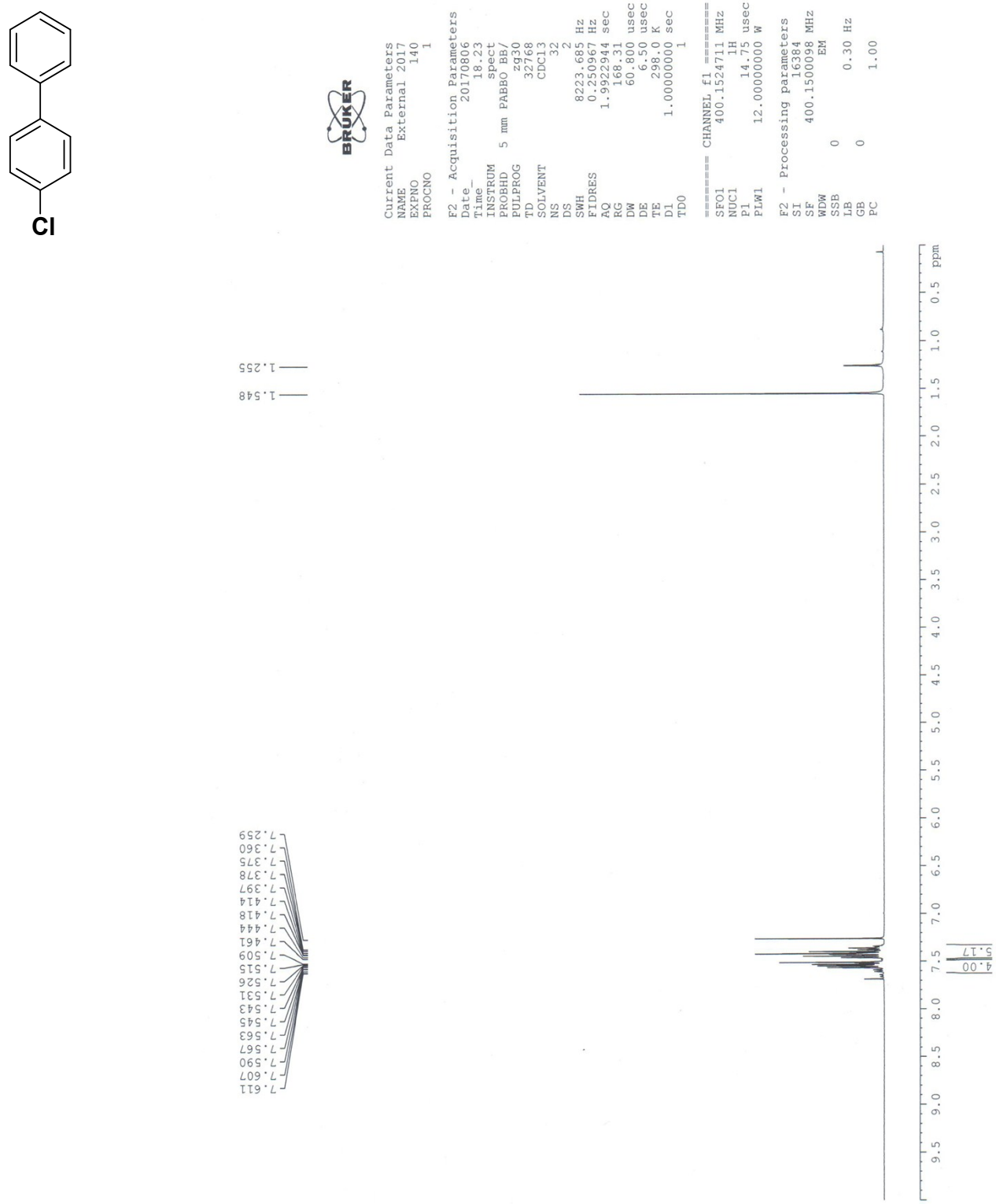
4-methoxy-1,1'-biphenyl. ^{1}H NMR ($CDCl_3$) δ 3.85 (s, 3H), 6.97 (d, 2H), 7.28 (t, 1H), 7.36 (t, 2H), 7.52–7.56 (m, 4H)





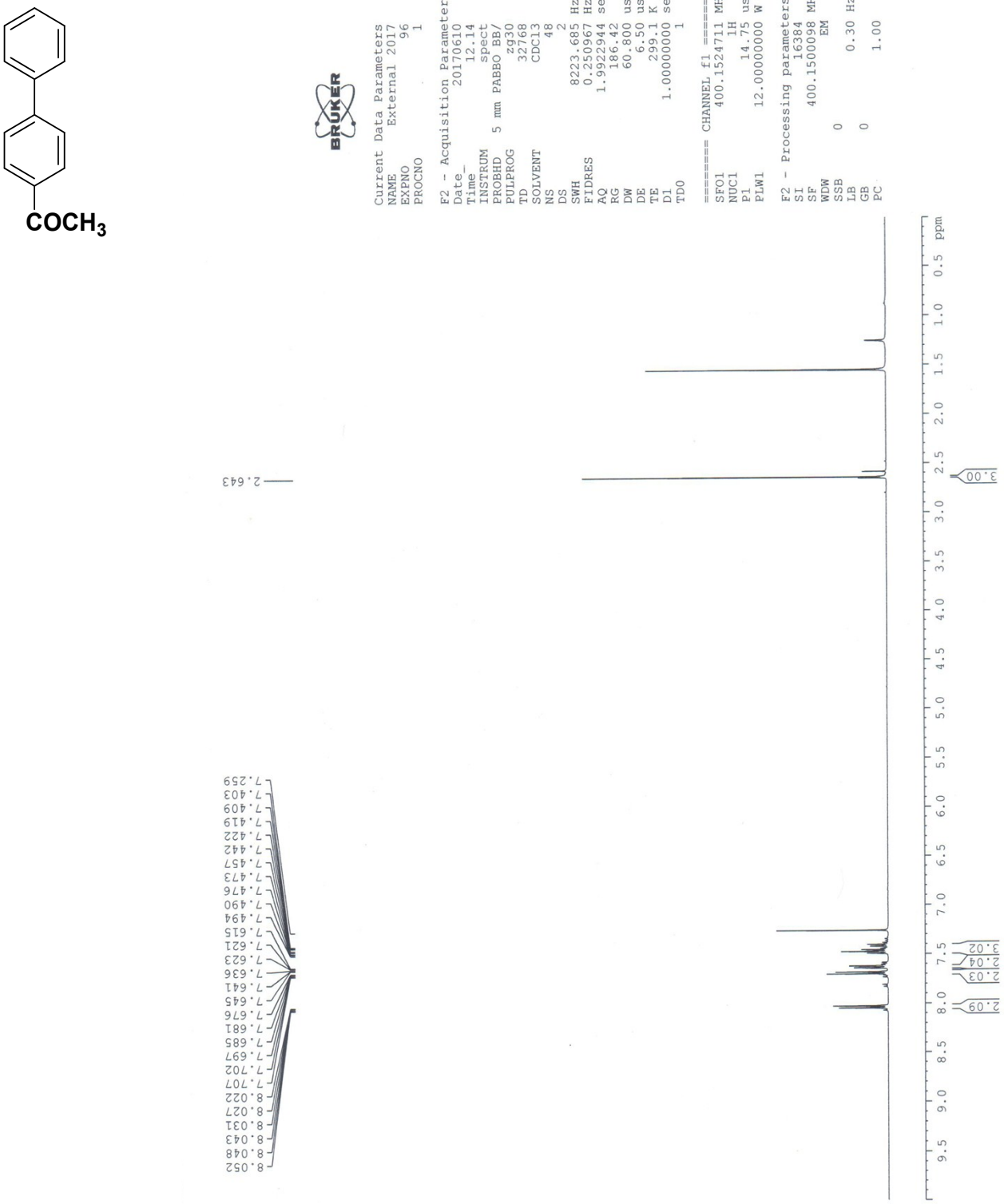
^{1}H NMR of 4-chloro-1,1'-biphenyl

4-chloro-1,1'-biphenyl. ^{1}H NMR ($CDCl_3$) δ 7.26-7.46 (m, 5H), 7.51-7.61 (m, 4H)



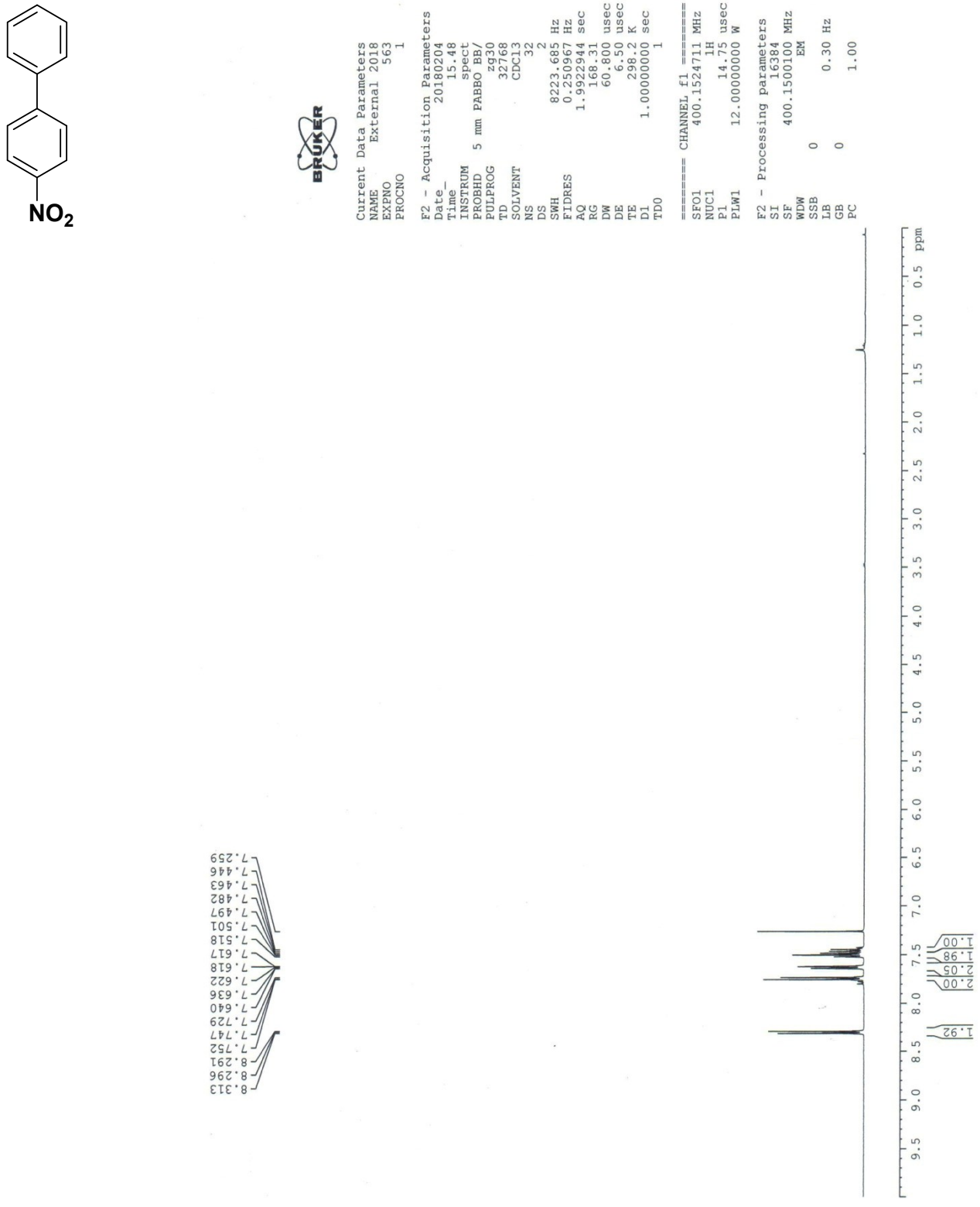
^{1}H NMR of 4-acetyl-1,1'-biphenyl

4-acetyl-1,1'-biphenyl. ^{1}H NMR ($CDCl_3$) δ 2.64 (s, 3H), 7.40-7.49 (m, 3H), 7.61-7.64 (m, 2H), 7.67-7.70 (d, 2H), 8.05 (d, 2H)



^{1}H NMR of 4-nitro-1,1'-biphenyl

4-nitro-1,1'-biphenyl. ^{1}H NMR ($CDCl_3$) δ 8.30 (d, 2H), 7.72-7.75 (d, 2H), 7.62–7.64 (m, 2H), 7.47-7.52 (m, 2H), 7.44 (m, 1H)



^{1}H NMR of 1,1'-biphenyl-4-carboxylic acid

4-COOH substituted biphenyl. ^{1}H NMR (DMSO-d_6) δ 13.07 (s, 1H), 8.07-8.12 (d, 2H), 7.85-7.87 (d, 2H), 7.81 (m, 1H), 7.72 (m, 1H), 7.52-7.58 (t, 2H), 7.38 (t, 1H)