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

Supporting Information

Palladium nanoparticles loaded over N-doped graphene oxide: A mesoporous nanocatalytic system in Suzuki coupling and in reduction of nitroarenes

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1. Spectral details of the compounds listed in Table 2

Compound 2a, 4-acetylbiphenyl. 1H NMR (400 MHz, CDCl3): δ 8.06 (d, J = 8.4 Hz, 2H, ArH), 7.71 (d, J = 8.4 Hz, 2H, ArH), 7.65 (d, J = 7.2 Hz, 2H, ArH), 7.51 (t, J = 7.4 Hz, 2H, ArH), 7.45 (t, J = 7.3 Hz, 1H, ArH), 2.66 (s, 3H, COCH3); 13C NMR (100 MHz, CDCl3): δ 197.817, 145.835, 139.86, 135.84, 128.97, 128.951, 128.273, 127.507, 26.63.

Compound 2c, biphenyl. 1H NMR (400 MHz, CDCl3): δ 7.65 (d, J = 7.6 Hz, 4H, ArH), 7.47 (t, J = 7.6 Hz, 4H, ArH), 7.36 (t, J = 7.3 Hz, 2H, ArH); 13C NMR (100 MHz, CDCl3): δ 140.41, 128.91, 128.33, 127.29.

Compound 2f, 4-phenylbenzonitrile. 1H NMR (400 MHz, CDCl3): δ 7.82 (d, Hz, 2H, ArH), 7.76 (d, Hz, 2H, ArH), 7.64 (d, Hz, 2H, ArH), 7.45 (t, Hz, 2H, ArH), 7.37 (t, Hz, H, ArH); 13C NMR (100 MHz, CDCl3): δ 144.83, 140.41, 133.78, 131.23, 128.91, 128.33, 127.29, 119.12, 115.67.

Compound 2h, 4-phenylphenol. 1H NMR (400 MHz, CDCl3): δ 7.58 (d, J = 7.2 Hz, 2H, ArH), 7.52 (d, J = 8.6 Hz, 2H, ArH), 7.44 (t, J = 7.6 Hz, 2H, ArH), 7.36 (t, J = 7.3 Hz, 1H, ArH), 6.94 (d, J = 8.6 Hz, 2H, ArH), 5.08 (s, 1H, OH); 13C NMR (100 MHz, CDCl3): δ 155.27, 140.90, 133.96, 132.70, 128.74, 128.404, 126.72, 115.82.

Compound 2i, 4-(phenyl) aniline. 1H NMR (400 MHz, CDCl3): δ 7.62 (d, 2H, ArH), 7.44 (q, 4H, ArH), 7.35 (t, 1H, ArH), 6.75 (d, 2H, ArH), 3.99 (s, 2H, NH_2); 13C NMR (100 MHz, CDCl3): δ 144.38, 140.41, 130.40, 128.91, 128.33, 128.07, 127.29, 116.04.

2. Spectral details of the compounds listed in Table 4

Compound 4a, aniline. 1H NMR (400 MHz, CDCl3): δ 7.06 (t, J = 6.9 Hz, 2H, ArH), 6.70 (t, J = 7.9 Hz, 1H, ArH), 6.56 (d, J = 8.4 Hz, 2H, ArH), 3.79 (s, 2H, NH2); 13C NMR (100 MHz, CDCl3): δ 148.38, 129.45, 117.44, 115.19

Compound 4b, 2-aminophenol. 1H NMR (400 MHz, CDCl3): δ 6.62 (m, 2H, ArH), 6.54 (d, 1H, ArH), 6.53 (t, 1H, ArH), 3.66 (s, 1H, OH), 3.61 (s, 2H, NH_2); 13C NMR (100 MHz, CDCl3): δ 115.56, 115.50, 118.42, 121.29, 136.73, 144.13.

Compound 4c, *o*-phenylenediammine. 1H NMR (400 MHz, CDCl3): δ 6.49 (t, 2H, ArH), 6.32 (d, 2H, ArH), 3.48 (s, 4H, $2NH_2$); 13C NMR (100 MHz, CDCl3): δ 136.11, 119.63, 116.79.

Compound 4d, 4-aminophenol. 1H NMR (400 MHz, CDCl3): δ 6.55 (d, 2H, ArH), 6.40 (d, 2H, ArH), 3.39 (s, 2H, NH2), 3.16 (s, 1H, OH); 13C NMR (100 MHz, CDCl3): δ 148.71, 141.78, 117.27, 116.92.

Compound 4e, p-phenylenediammine. 1H NMR (400 MHz, DMSO): δ = 5.06 (s, 4H), 2.87 (s, 4H) ppm. 13C NMR (126 MHz, DMSO): δ = 139.31, 116.09 ppm

3. 1H NMR and 13C NMR spectra of compounds listed in Table 2

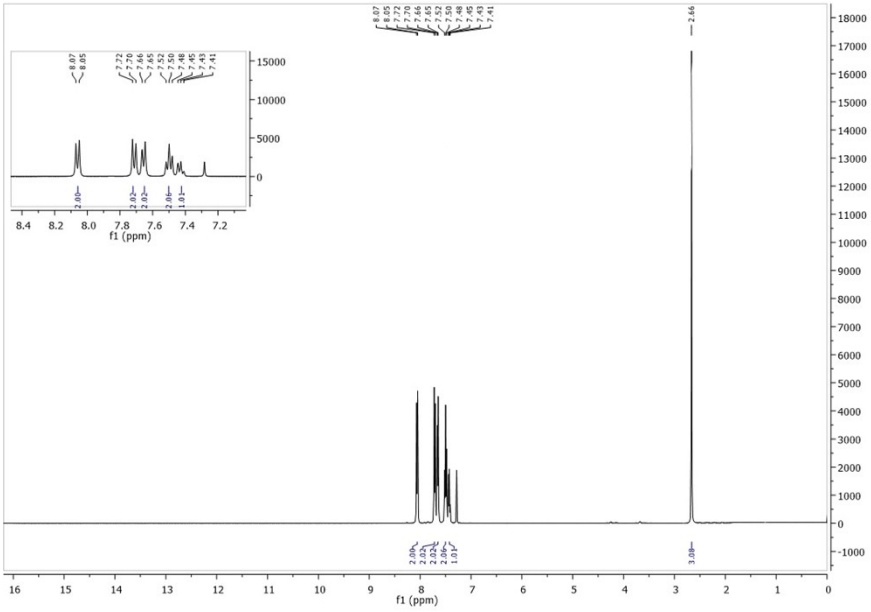

Figure S1. [1]H NMR spectrum of 4-acetylbiphenyl

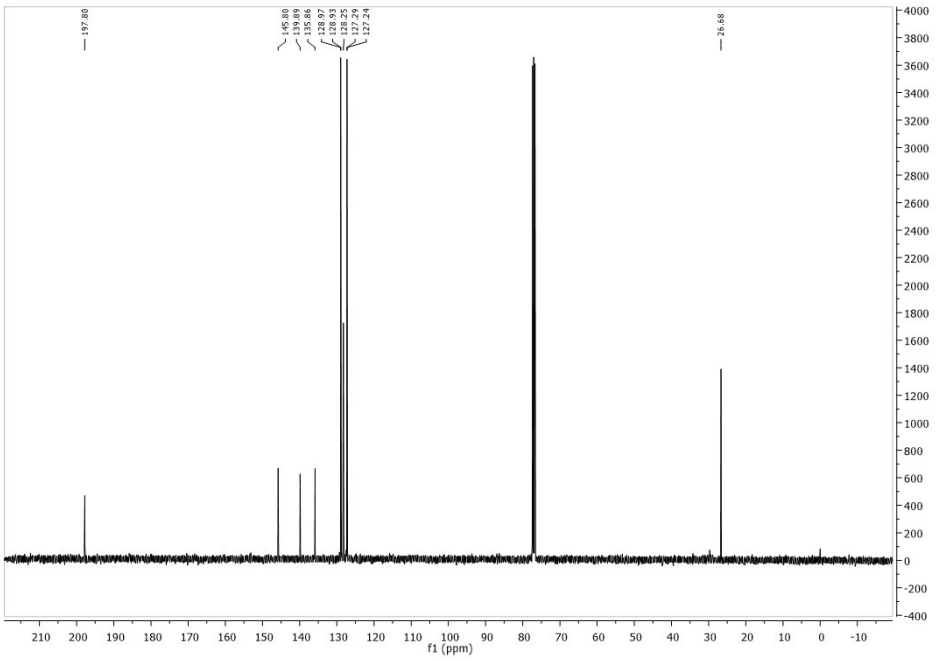

Figure S2. ^{13}C spectra of 4-acetylbiphenyl

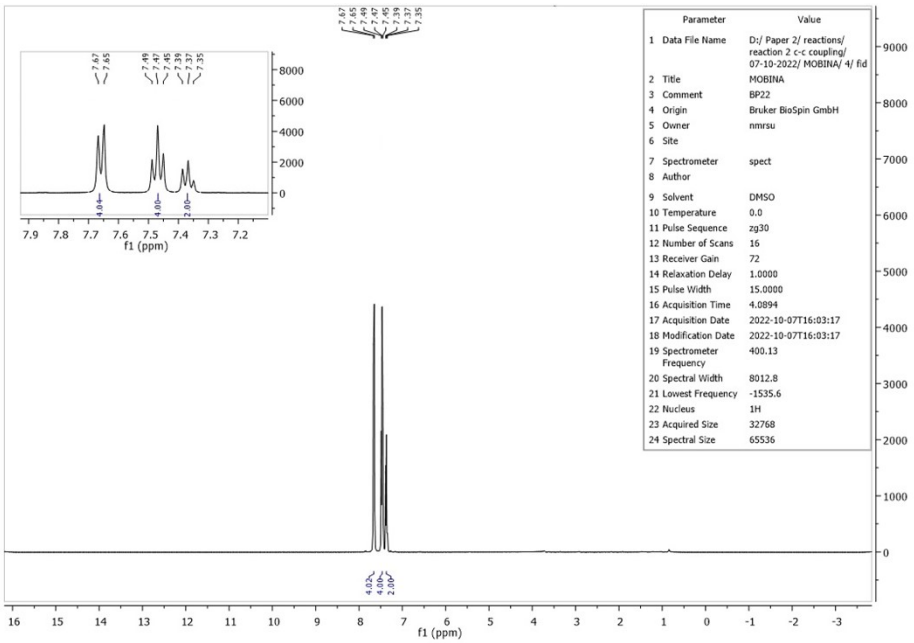

Figure S3. ^{1}H NMR spectrum of biphenyl

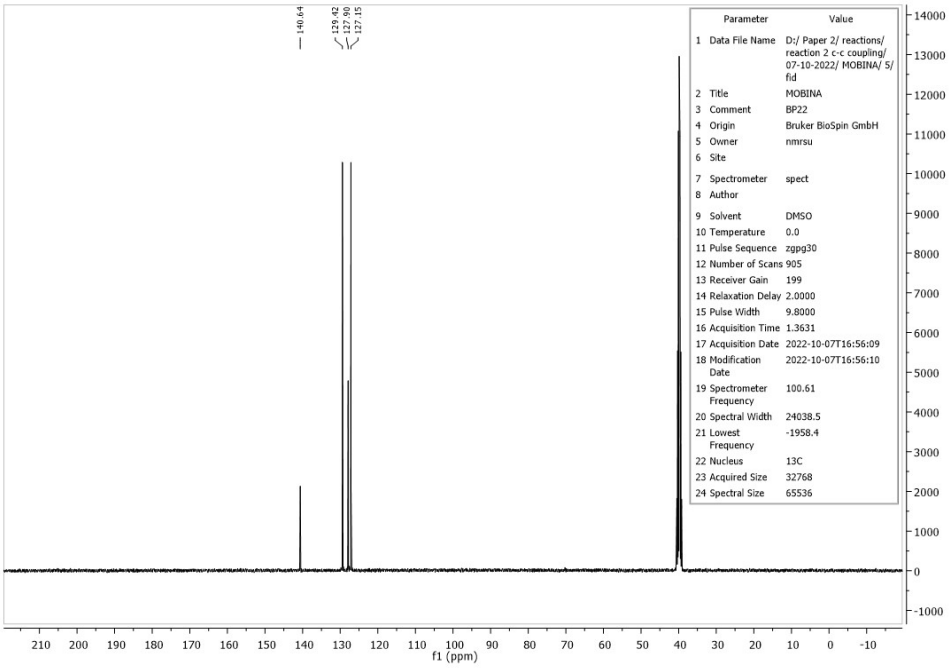

Figure S4. ^{13}C NMR spectrum of biphenyl

4. 1H NMR and 13C NMR spectra of compounds listed in Table 4

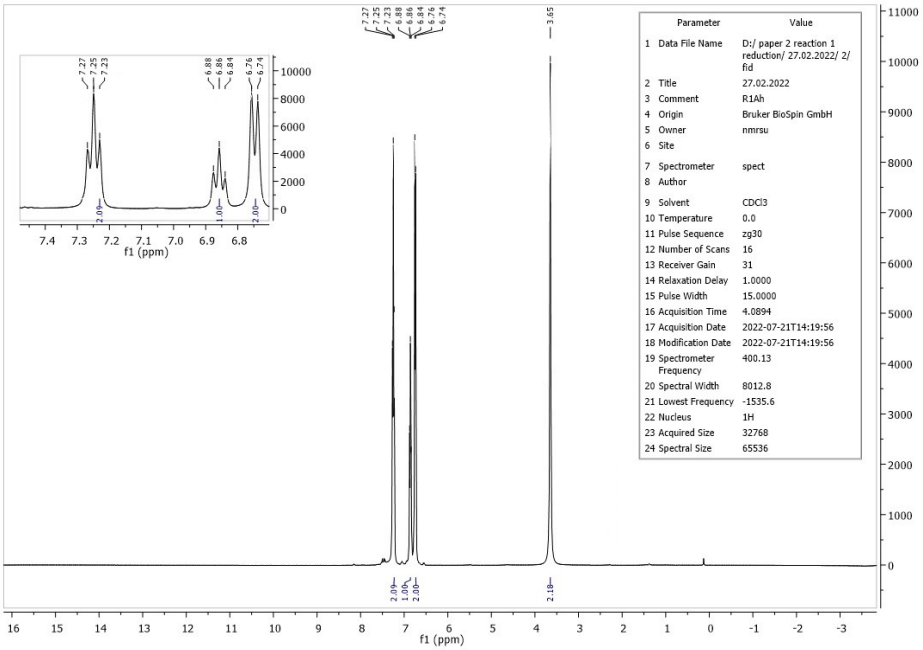

Figure S5. ^{1}H NMR spectrum of aniline

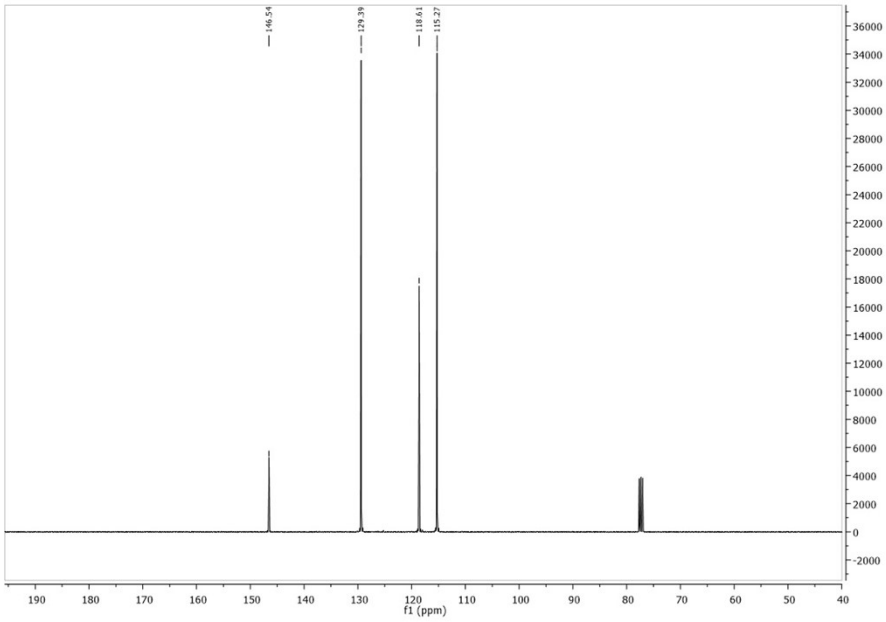

Figure S6. ^{13}C NMR spectrum of aniline

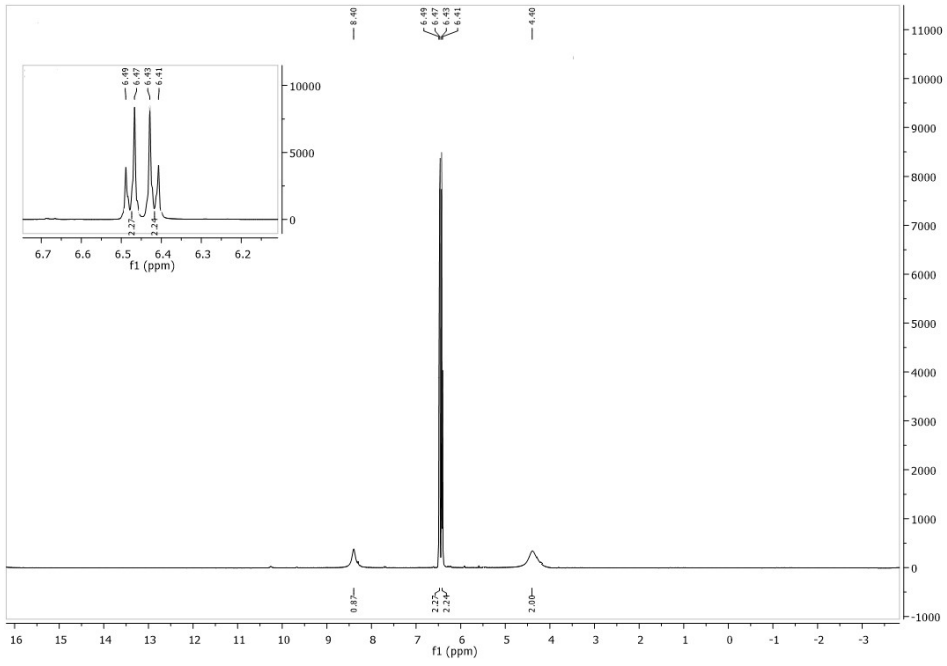

Figure S7. ^{1}H NMR spectrum of 4-aminophenol

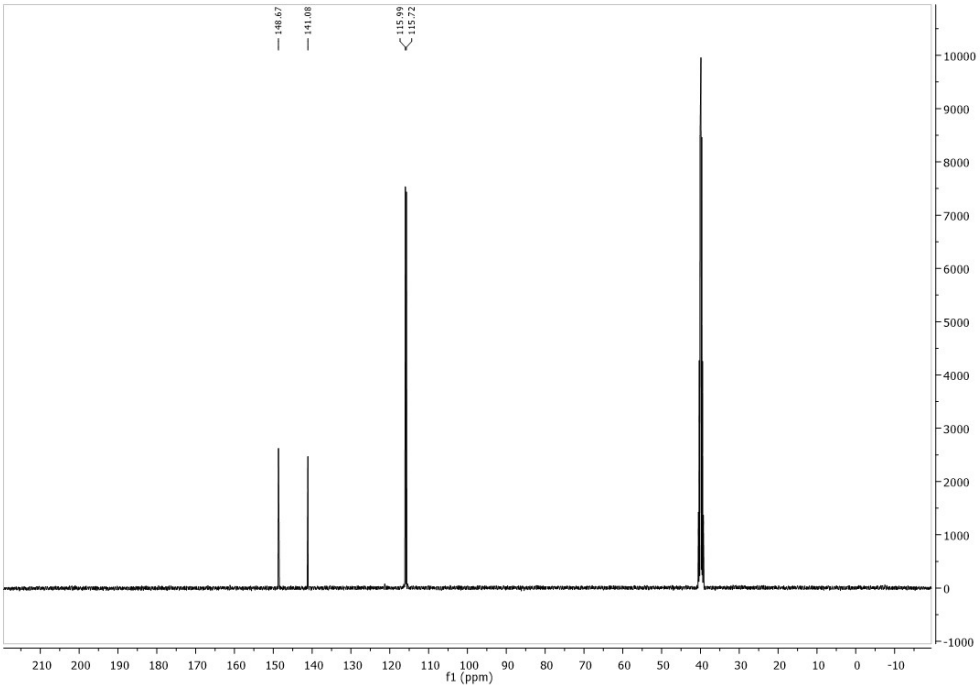

Figure S8. ^{13}C NMR spectrum of 4-aminophenol