

Supporting Information

Novel triazole-modified chitosan @ nickel nanoparticles: efficient and recoverable catalysts for Suzuki Reaction

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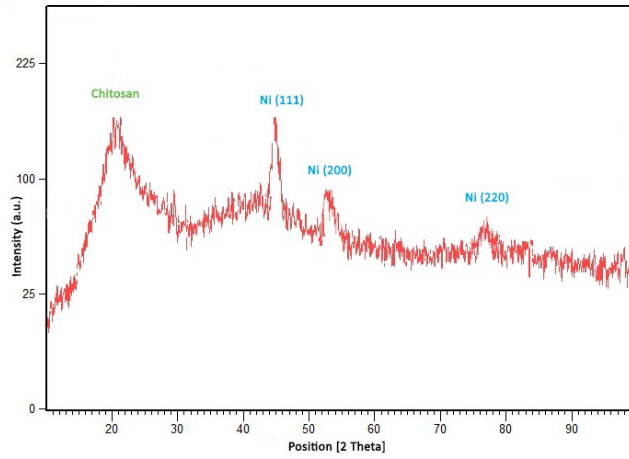


Fig S1 XRD pattern of the recovered catalyst

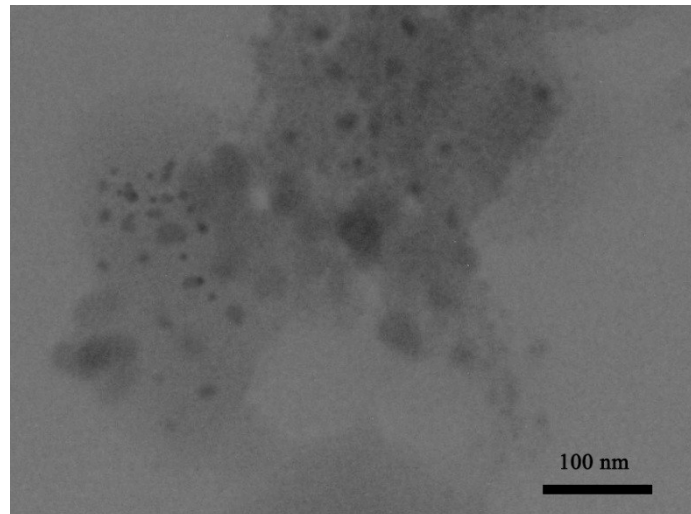
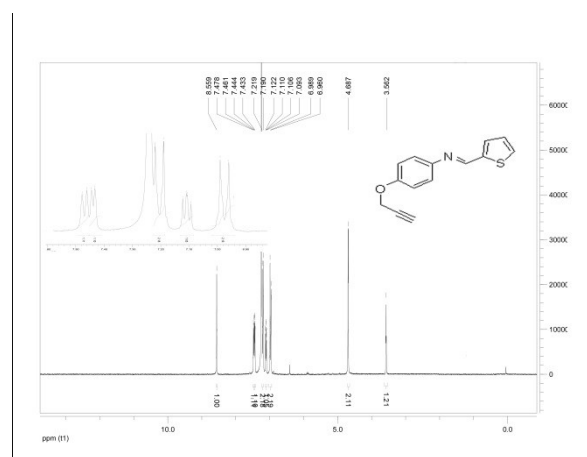
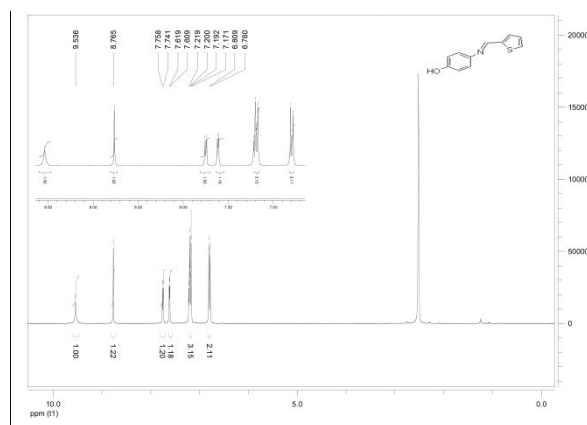


Fig S2 TEM micrograph of the recovered catalyst



¹H-NMR, FT-IR and boiling points of some biaryl derivatives

Data section

4-nitrobiphenyl

White solid, melting point: 88°C

¹H-NMR (400MHz, CDCl₃, ppm, TMS): δ = 8.3 (d, *J*= 8.7Hz, 2H), 7.7 (d, *J*= 8.7 Hz, 2H), 7.65 (dd, *J*= 1.8, 5.4Hz, 2 H), 7.55-7.40 (m, 3H).

FT-IR (KBr, cm⁻¹): ν = 3363, 3242, 1596, 1513, 1351, 853, 739, 711

4-Acetylbiphenyl

White solid, melting point: 121°C

¹H NMR (400 MHz, CDCl₃, ppm, TMS): δ = 8 (d, J=8.4 Hz, 2H), 7.66 (d, J= 8.4 Hz, 2H), 7.59-7.61 (m, 2H), 7.37-7.46 (m, 3H), 2.61(s, 3H)

FT-IR (KBr, cm⁻¹): ν = 2918, 1726, 1669, 1410, 1268, 1120, 768, 690, 591

4-Methoxybiphenyl

White solid, melting point 87 °C:

¹H NMR (400 MHz, CDCl₃, ppm, TMS): δ = 7.50-7.54 (m, 4H), 7.39 (t, J= 7.2 Hz, J=8 Hz, 2H), 7.28(t, J=8 Hz, J=6.8 Hz, 1H), 6.96 (d, J= 8.8, 2H), 3.83(s, 3H)

IR (KBr, cm⁻¹): ν = 3073, 2963, 2836, 1722, 1578, 1486, 1287, 1247, 1032, 819, 612, 507

2-Acetylbiphenyl

¹H NMR (400 MHz, CDCl₃, ppm, TMS): δ = 8.11(t, J=1.6 Hz, J= 2Hz, 1H), 7.87(d, J=7.6 Hz, 1H), 7.73(d, J=8.4Hz, 1H), 7.55(d, J=6.8Hz, 2H), 7.48(t, J=8Hz, J=7.6Hz, 1H), 7.40(t, J=7.2Hz, J=7.6 Hz, 2H), 7.33(d, J=7.2, 1H)