

Environmentally sustainable route to SiO₂@Au-Ag nanocomposites for biomedical and catalytic applications

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~~Synthesis of Pd/Cu-catalyzed tandem coupling/hydroarylation~~

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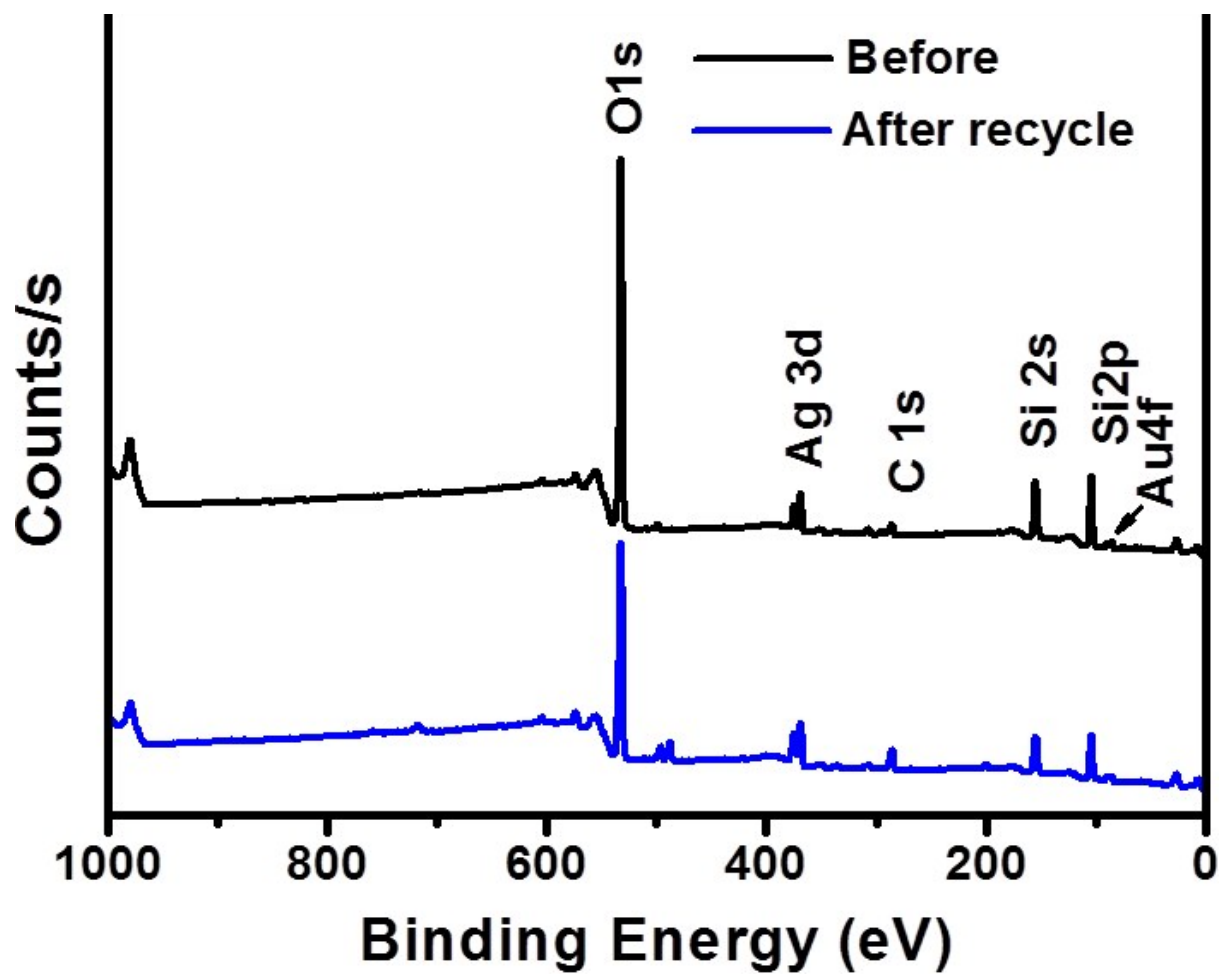
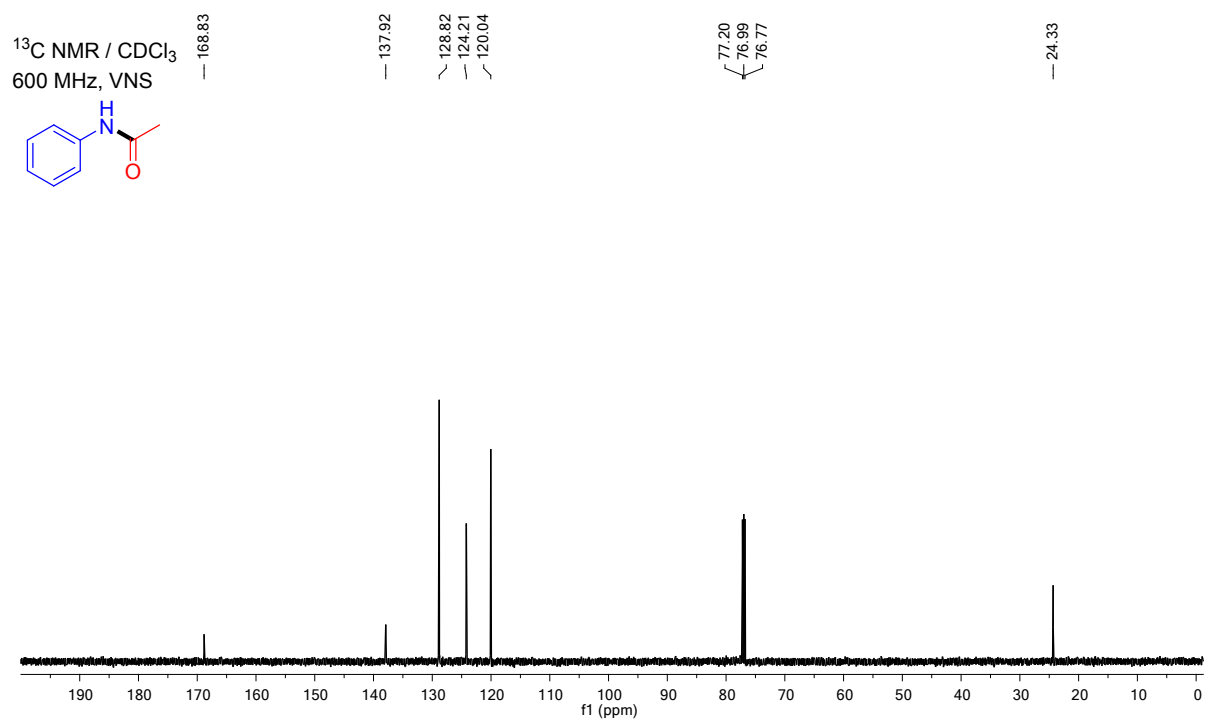
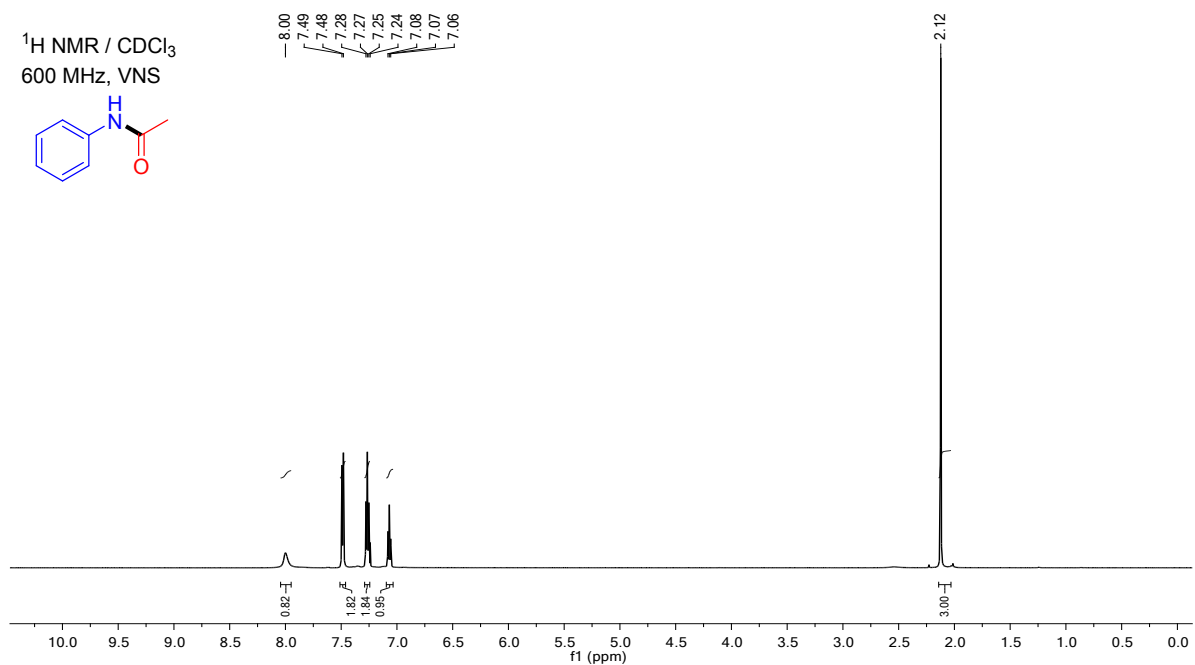


Figure S1 XPS survey spectra of SiO₂@Au-Ag NCs before and after catalysis

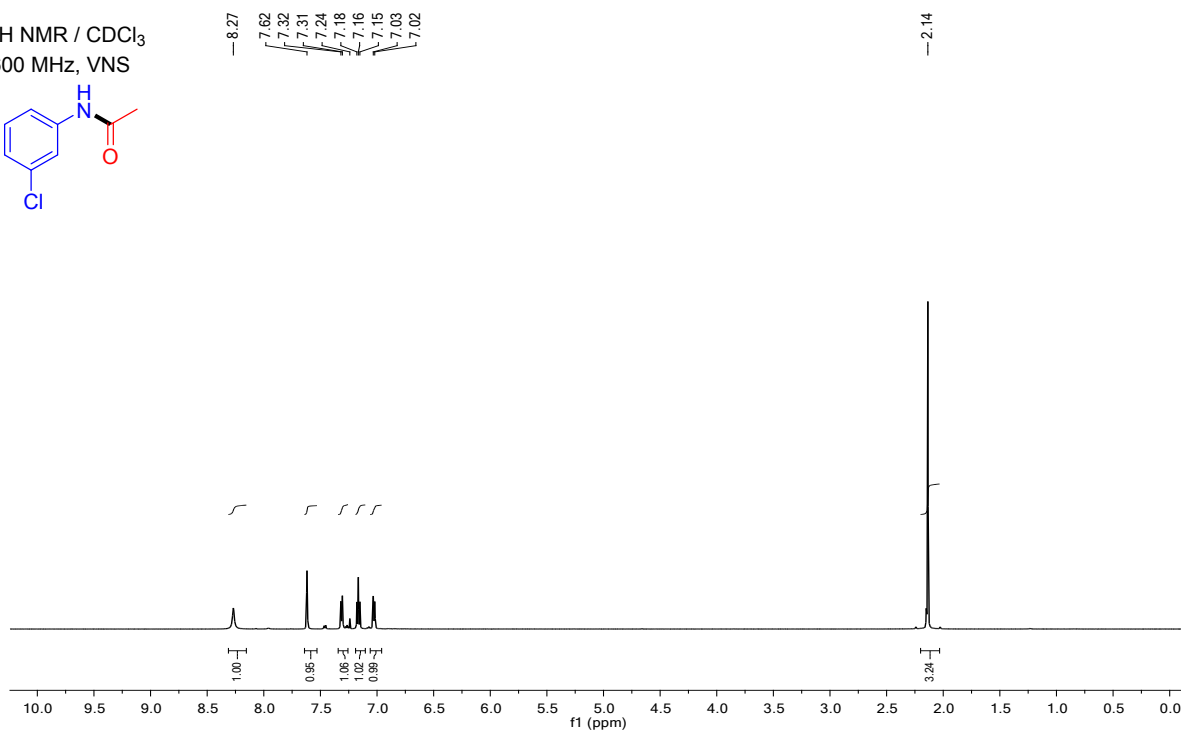
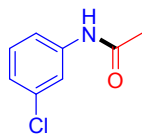
^1H NMR and ^{13}C NMR data and spectra of compounds 3a-3d

***N*-Phenylacetamide (3a):** ^1H NMR (600 MHz, CDCl_3) δ 8.00 (s, 1H), 7.49 (d, $J = 7.9$ Hz, 2H), 7.27 (t, $J = 7.9$ Hz, 2H), 7.07 (t, $J = 7.4$ Hz, 1H), 2.12 (s, 3H); ^{13}C NMR (150 MHz, CDCl_3) δ 168.8, 137.9, 128.8, 124.2, 120.0, 24.3.

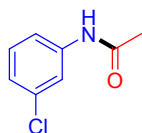


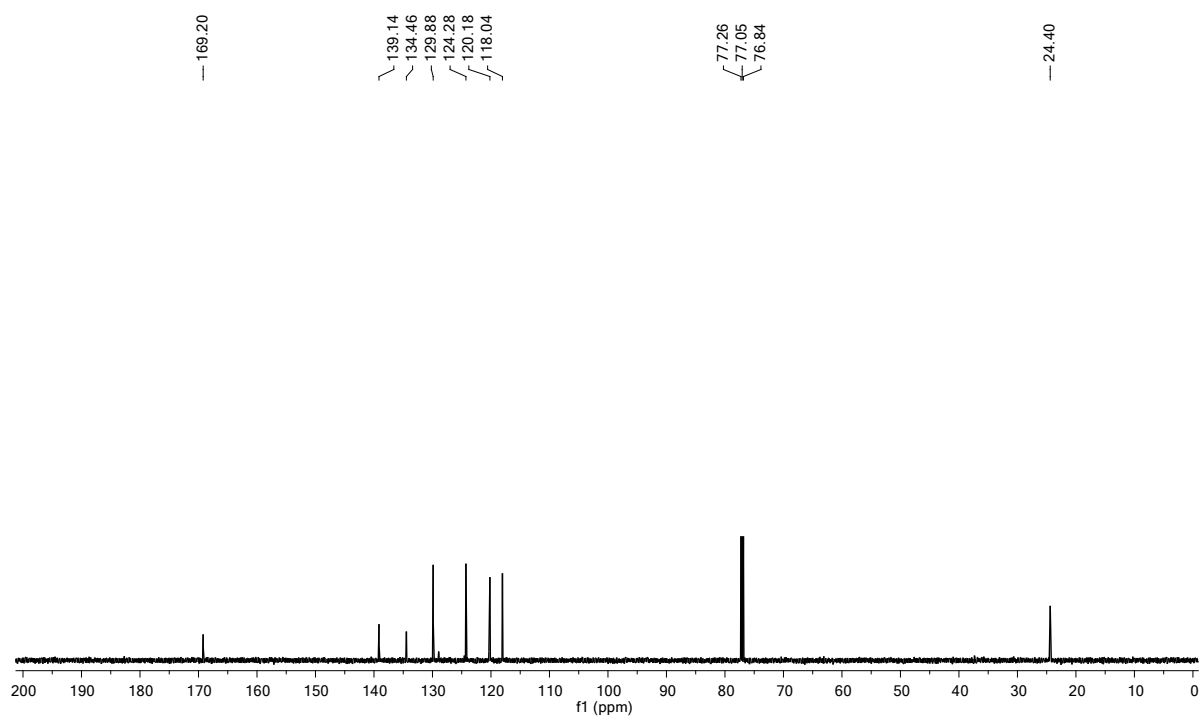
***N*-(3-chlorophenyl)acetamide (3b):** ^1H NMR (600 MHz CDCl_3) δ 8.27 (s, 1H), 7.62 (s, 1H), 7.31 (d, $J = 8.0$ Hz, 1H), 7.16 (t, $J = 8.1$ Hz, 1H), 7.03 (d, $J = 7.8$ Hz, 1H), 2.14 (s, 3H); ^{13}C NMR (150 MHz, CDCl_3) δ 169.2, 139.1, 134.4, 129.8, 124.2, 120.1, 118.0, 24.4.

^1H NMR / CDCl_3
600 MHz, VNS

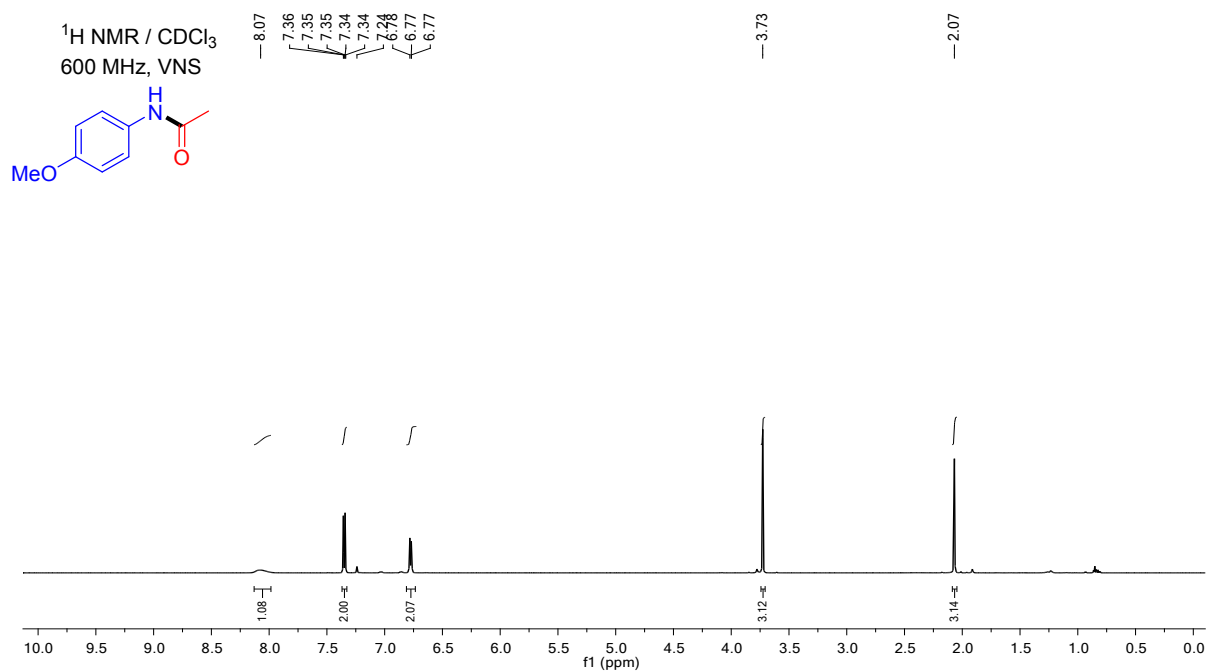


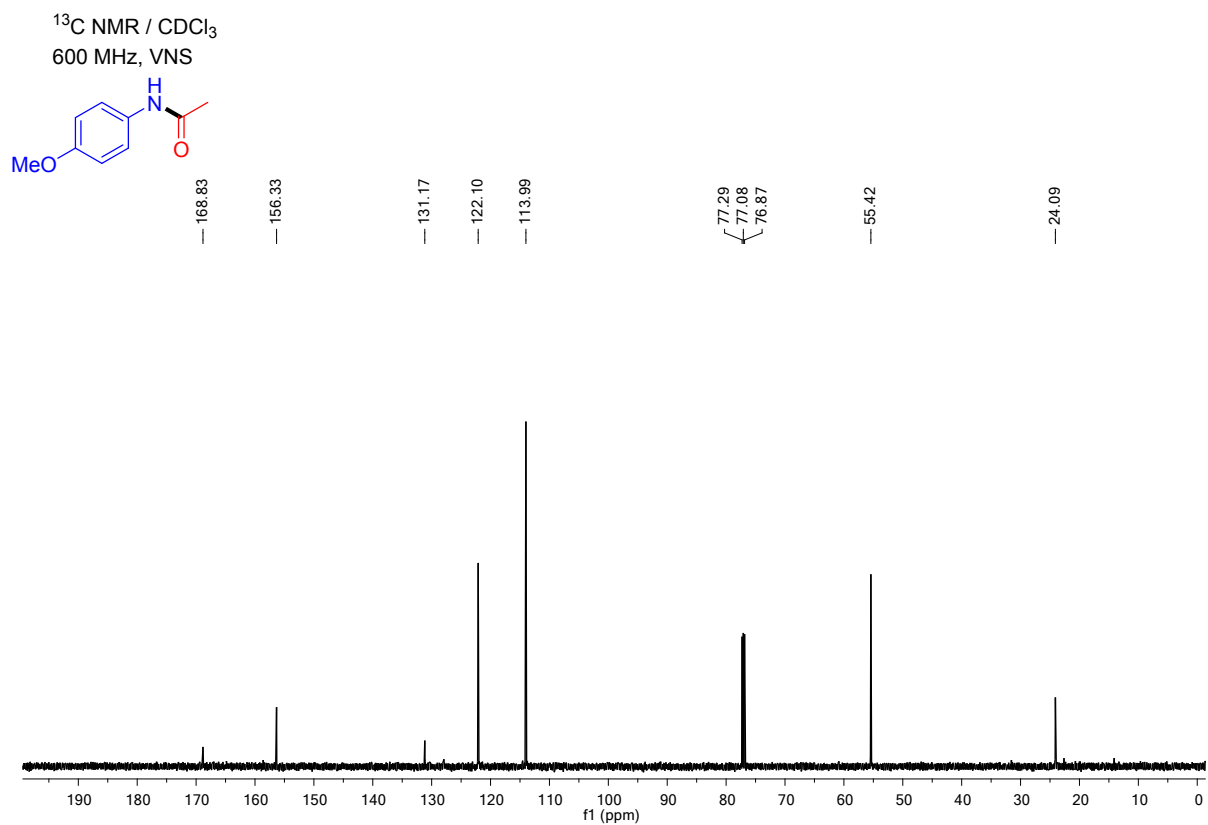
^{13}C NMR / CDCl_3
600 MHz, VNS





***N*-(4-Methoxyphenyl)acetamide (3c):** ^1H NMR (600 MHz, CDCl_3) δ 8.07 (s, 1H), 7.37 – 7.33 (m, 2H), 6.81 – 6.73 (m, 2H), 3.73 (s, 3H), 2.07 (s, 3H); ^{13}C NMR (150 MHz, CDCl_3) δ 168.8, 156.3, 131.1, 122.1, 113.9, 55.4, 24.0.





2,2,2-trifluoro-*N*-phenylacetamide (3d): ¹H NMR (600 MHz, CDCl₃) δ 8.13 (s, 1H), 7.59 – 7.55 (m, 2H), 7.39 (dd, *J* = 10.8, 5.1 Hz, 2H), 7.26 (dd, *J* = 11.7, 4.3 Hz, 1H); ¹³C NMR (150 MHz, CDCl₃) δ 159.6, 154.9 (q, *J* = 37.5), 135.0, 129.2, 126.3, 120.6, 115.7 (q, *J* = 286.5 Hz).

