

**Synthesis of highly active rGO supported mono and bi-metallic nanocomposites as catalysts for chemoselective hydrogenation of  $\alpha$ ,  $\beta$ -unsaturated ketone to alcohol**

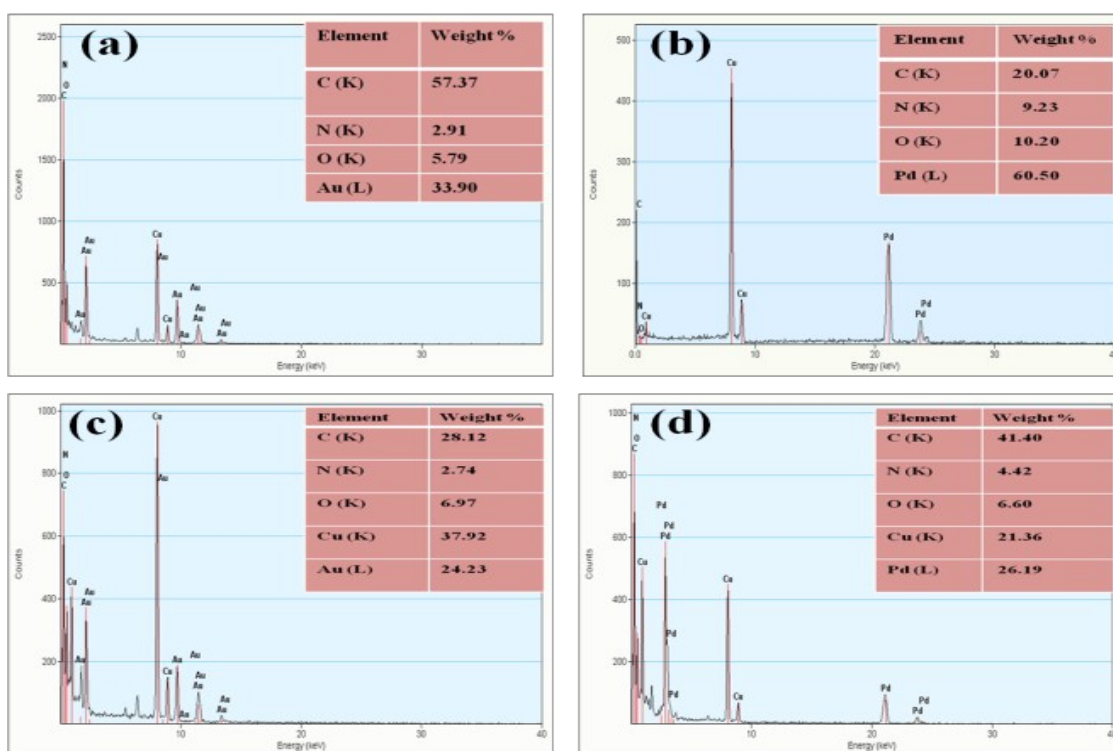
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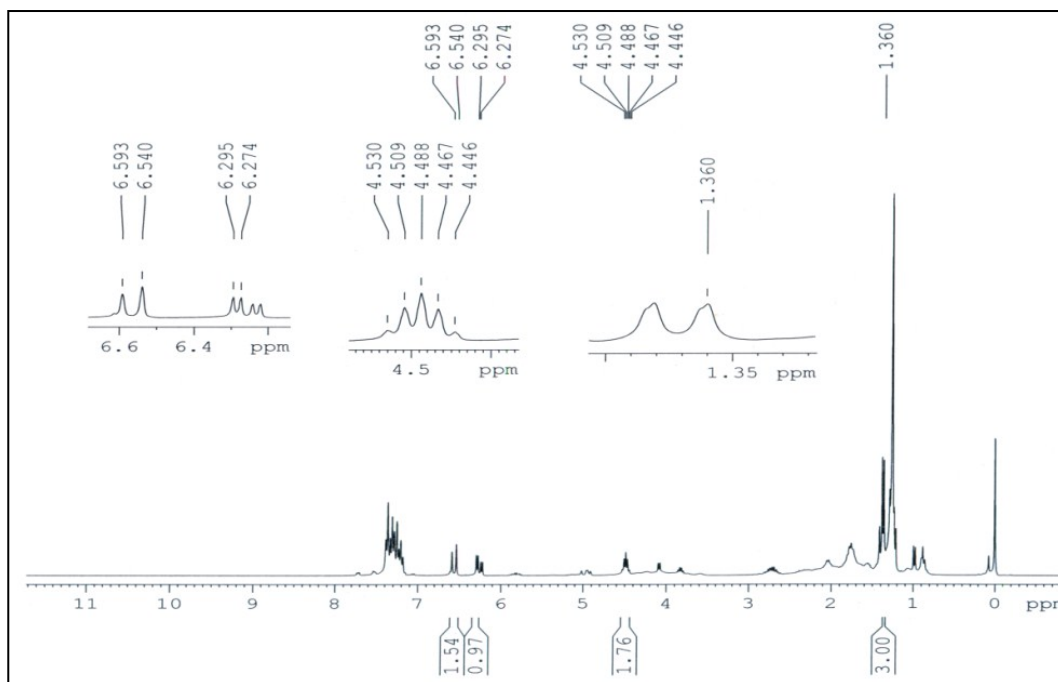
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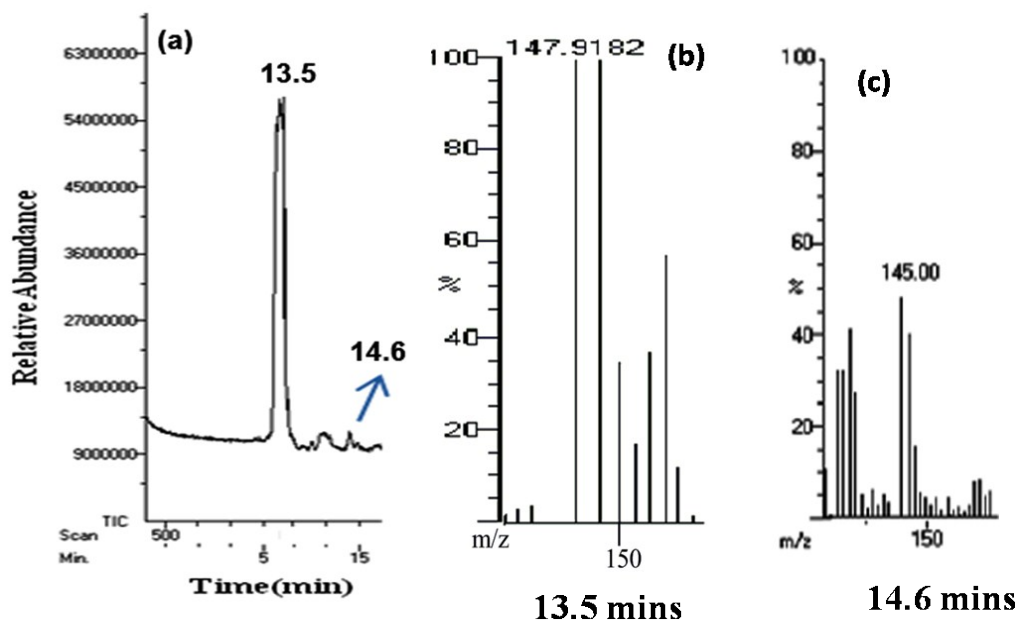
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**Figure S1.** EDAX spectra of (a) Au/rGO (b) Pd/rGO (c) Cu-Au/rGO and (d) Cu-Pd/rGO NCs



**Figure S2.**  $^1\text{H}$  NMR spectrum of the crude product arising from the hydrogenation of benzalacetone with the bi-metallic Cu-Pd/rGO NC catalyst



**Figure S3.** (a) GC and (b, c) mass spectra of the crude product obtained from the hydrogenation of benzalacetone with the bi-metallic Cu-Pd/rGO NC catalyst. Two species (unsaturated alcohol and residual starting material) are identified