

Electronic Supplementary Information (ESI) †

**Nanoclusters of Cu (II) Supported on Nanocrystalline W (VI)
Oxide: A Potential Catalyst for Single-Step Conversion of
Cyclohexane to Adipic Acid**

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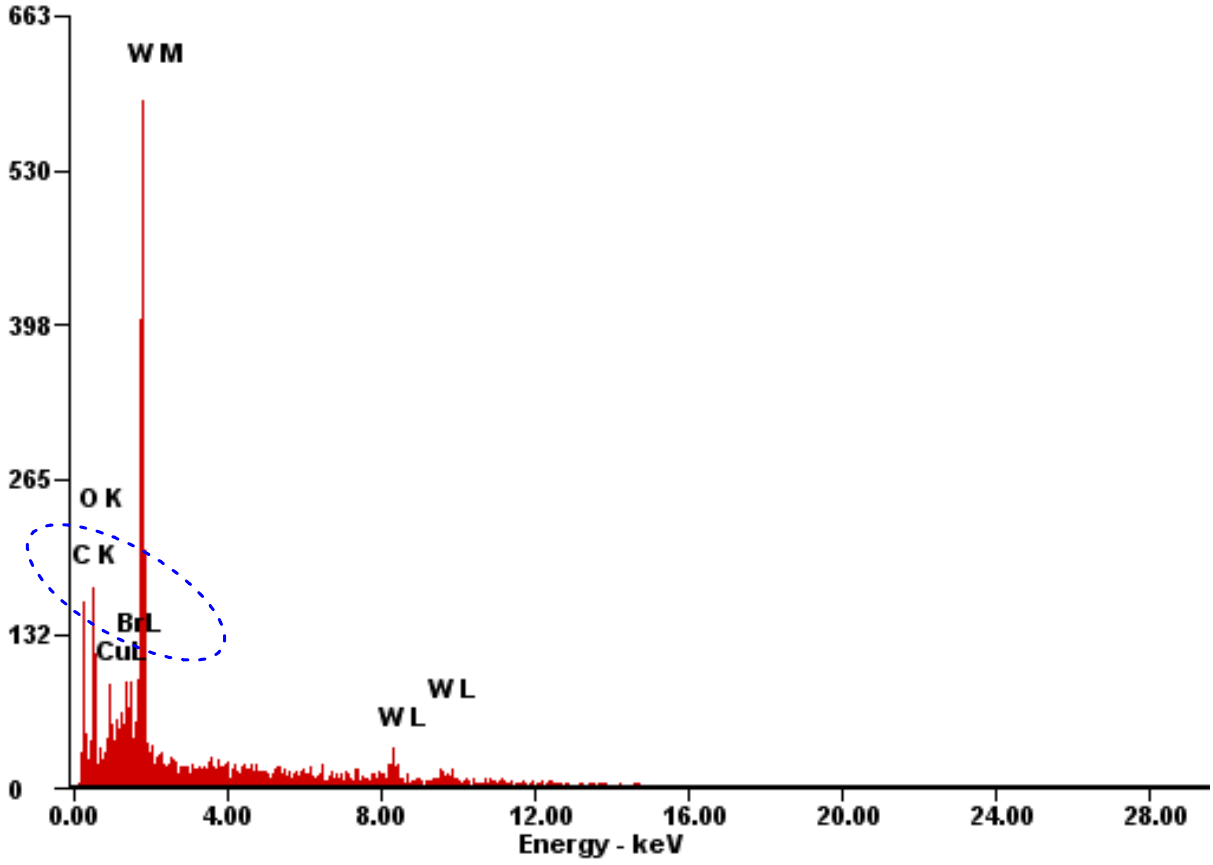


Fig. S1 SEM-EDX of the uncalcined Cu/WO₃ nanoparticles catalyst.

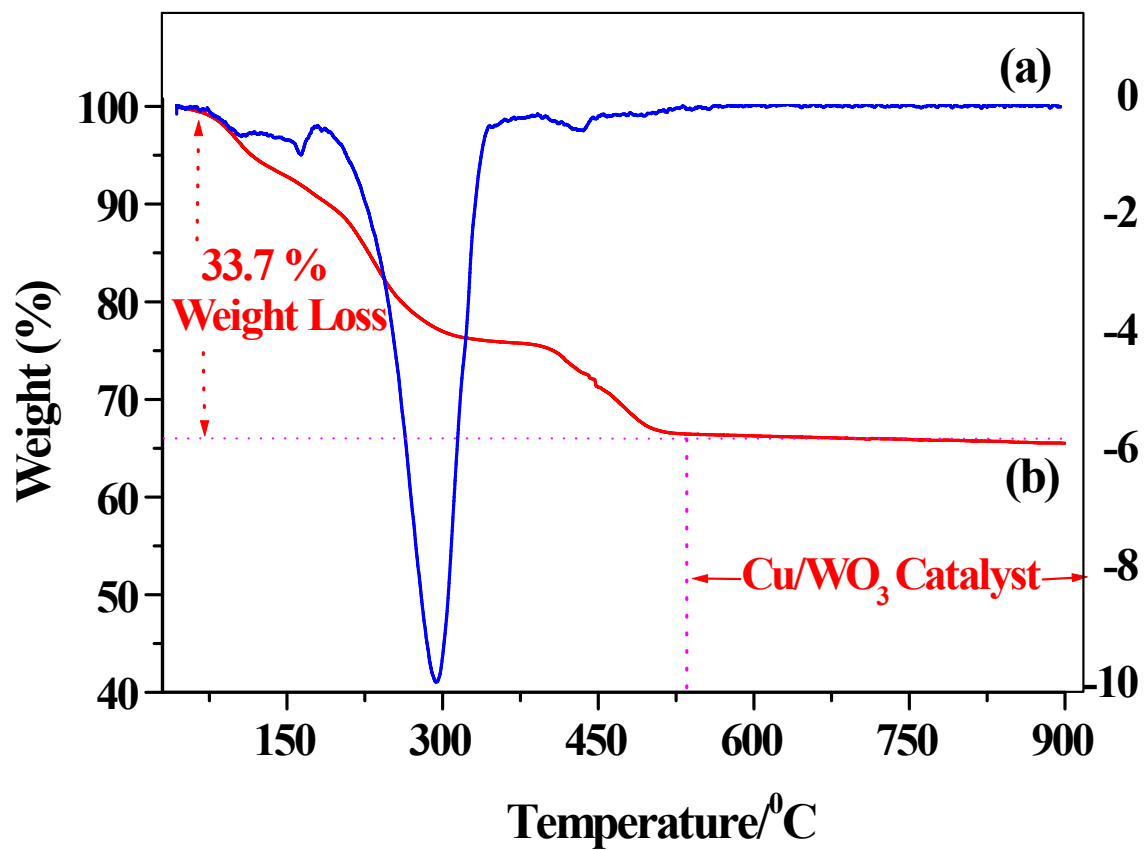


Fig. S2 (a) — DTG and (b) — TGA diagram of uncalcined Cu/WO₃ nanoparticles catalyst.

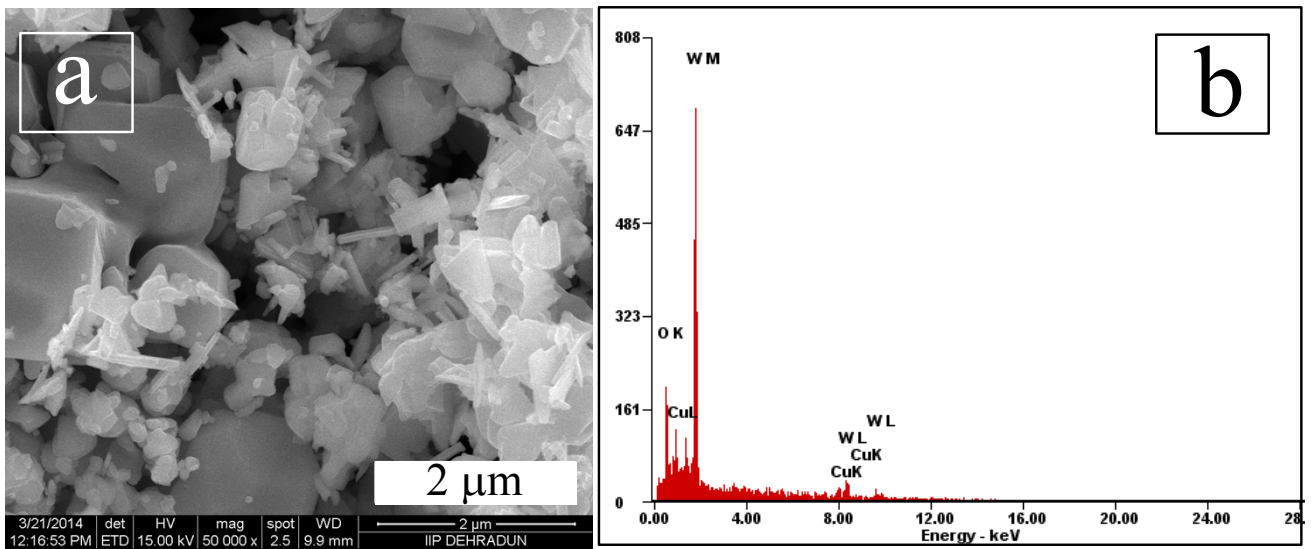


Fig. S3 (a) SEM image and (b) SEM-EDX image of Cu/WO₃ catalyst where loading of Cu is 5.5 %

Synthesis of CuO/WO₃ catalyst (CuO-WO₃^{IMP}) by impregnation (incipient wetness) method.

Cupric nitrate [Cu(NO₃)₂·3H₂O], tungsten (III) oxide (commercial), were obtained from Sigma-Aldrich. All these reagents were used as received. Commercial W (VI) oxide was calcined at 540 °C. Then 0.11g Cu(NO₃)₂·3H₂O (taking 3% loading of Cu on WO₃) was dispersed on 1g support (tungsten oxide), added in 50 ml distilled water by an incipient wetness technique. After impregnation, the catalysts were dried at 110 °C, followed by calcination at 500 °C for 6 h in air.

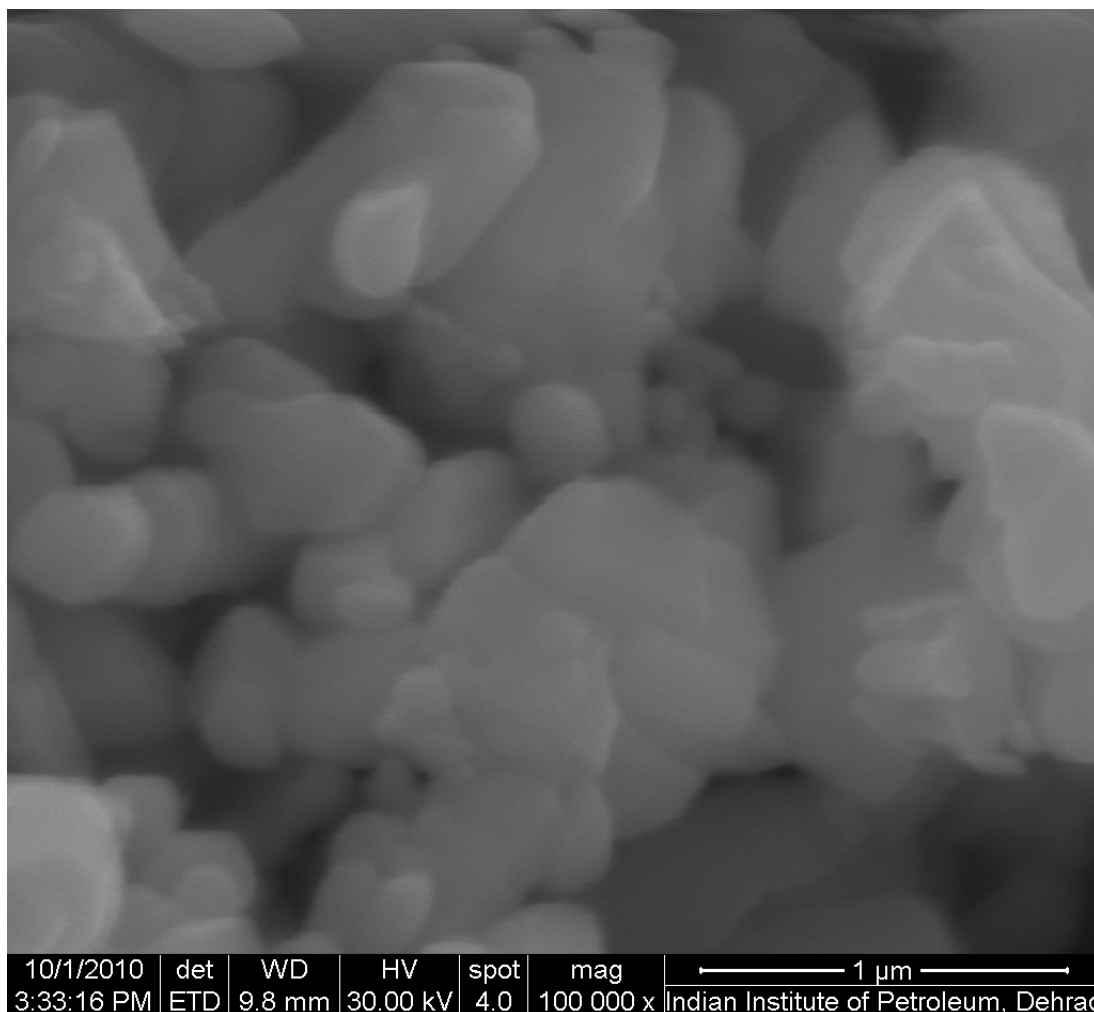


Fig. S4 SEM image of CuO/WO₃ catalyst (CuO-WO₃^{IMP}) by impregnation method.