ELECTRONIC SUPPLEMENTARY INFORMATION

Highly active Ni–Fe/β-Mo_2C and Ni–Co/β-Mo_2C catalysts derived from hydrotalcites via nitrogen atmosphere: Promising noble-metal-free catalysts for nitroarene and biomass derived molecule hydrogenation

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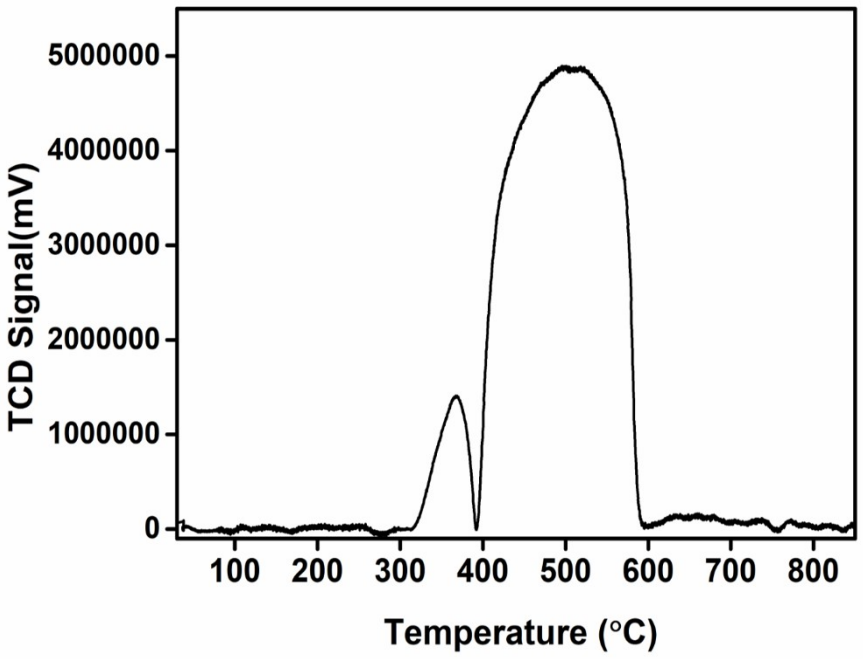


Fig. S1 H_2-TPR profile of $Co(OH)_2$ precursor

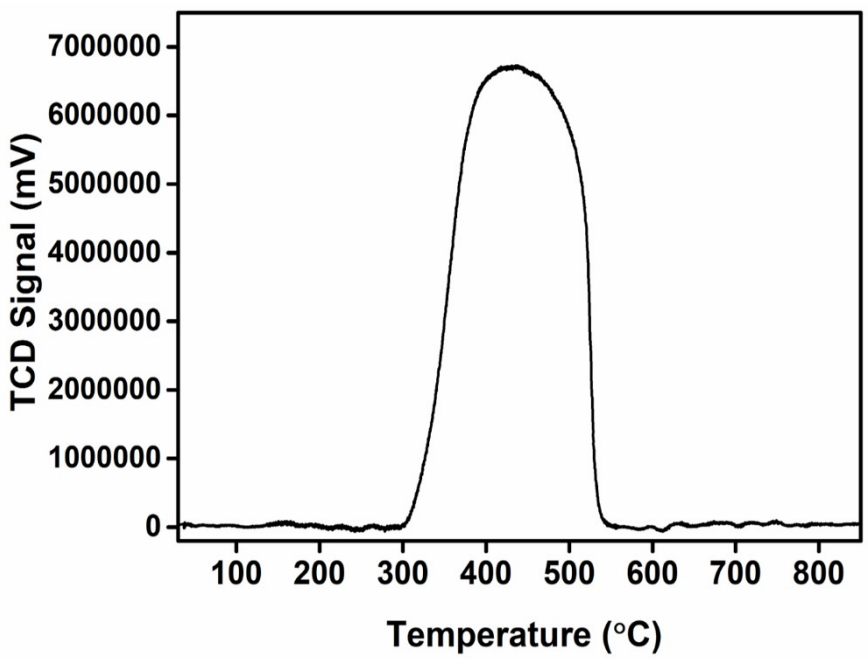


Fig. S2 H_2-TPR profile of $Ni(OH)_2$ precursor

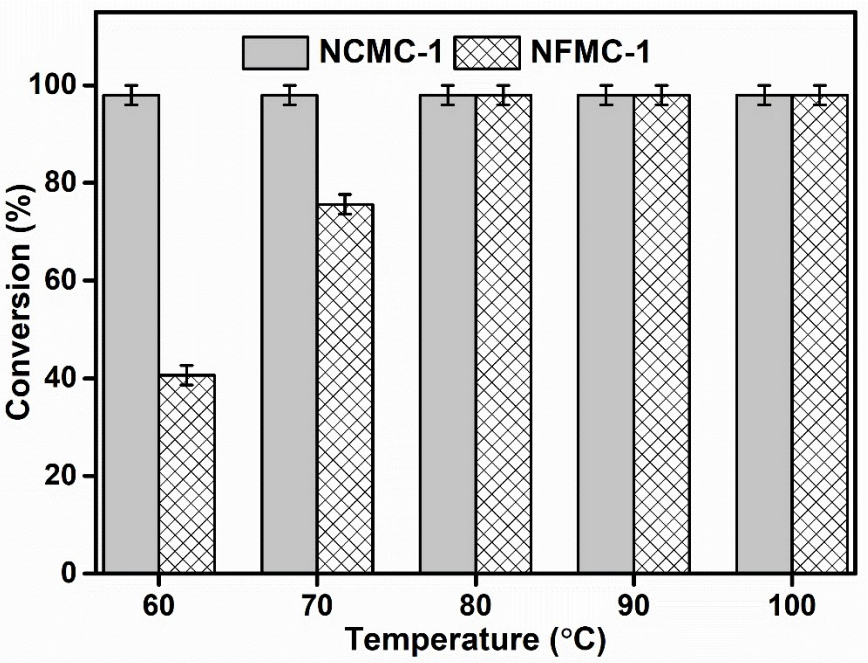


Fig. S3 Effect of reaction temperature on the conversion of nitrobenzene over NFMC-1 and NCMC-1 catalysts.

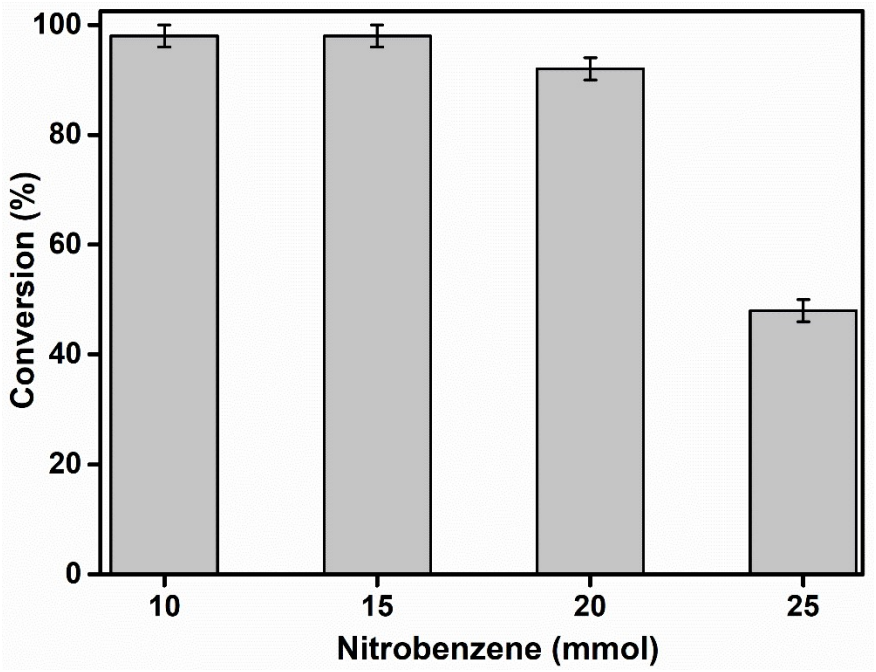


Fig. S4 Effect of Increasing Nitrobenzene and Hydrazine-Hydrate Loading (with fixed 1:2 Ratio) on Catalytic Conversion over NCMC-1

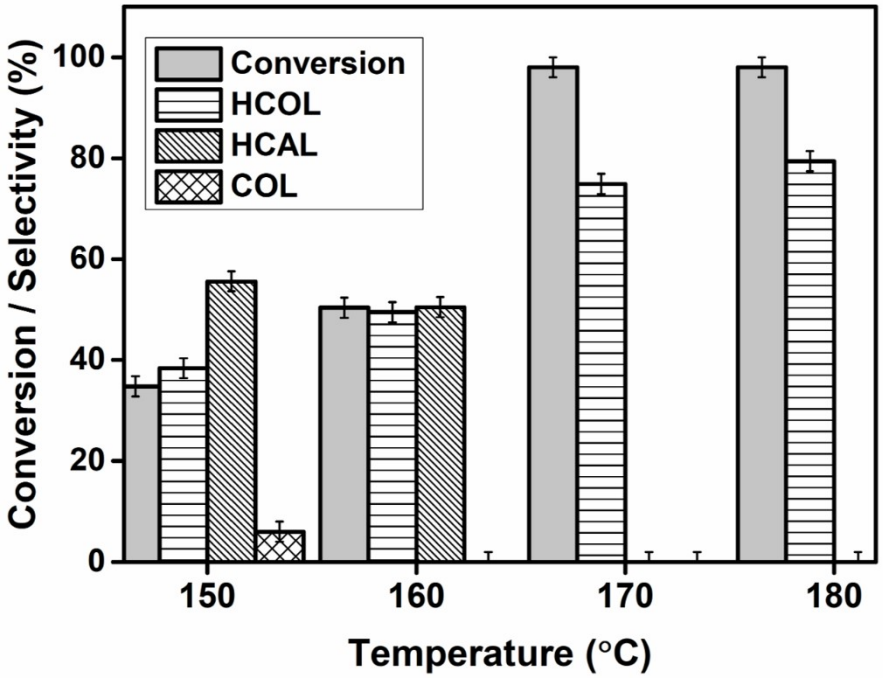
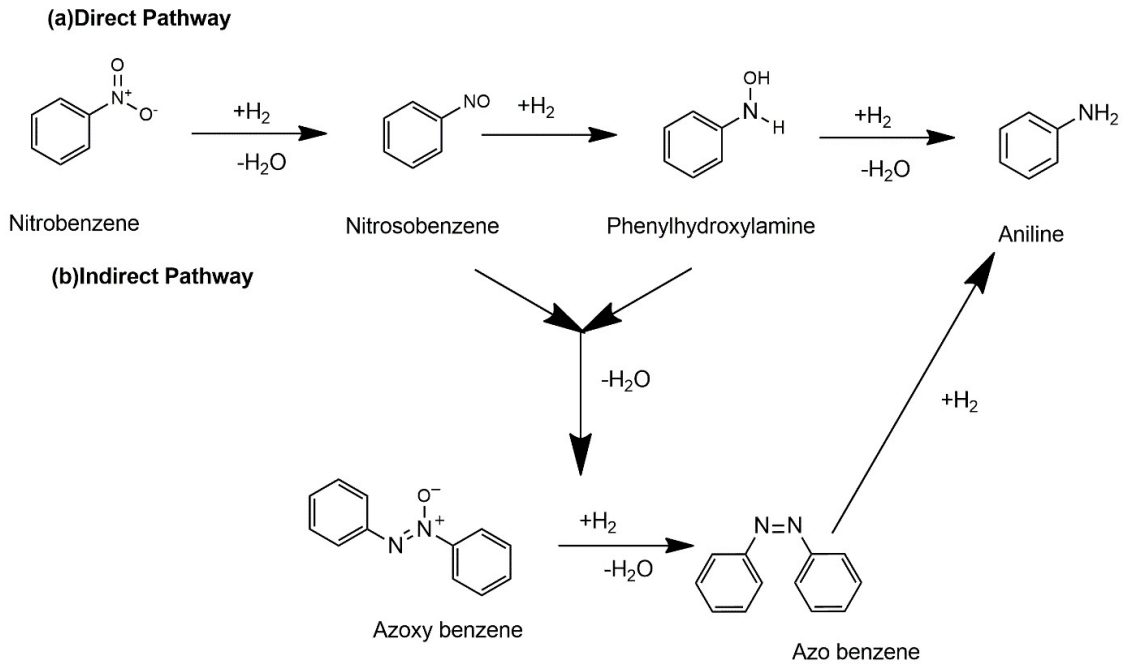


Fig. S5 Effect of temperature on conversion and selectivity toward HCOL (hydrocinnamyl alcohol), HCAL (hydrocinnamaldehyde) and COL (cinnamyl alcohol) in cinnamaldehyde hydrogenation.



Scheme S1. Literature-reported reaction pathways for nitrobenzene hydrogenation.[1]

References

1. A. Mahata, R. K. Rai, I. Choudhuri, S. K. Singha and B. Pathak, *Phys. Chem. Chem. Phys.*, 2014, **16**,26365