

Research Article:

1. **Gupta, U.**; Krishnapriya, R.; Sharma, R. K., A sustainable palladium-intercalated montmorillonite clay catalytic system for imine hydrogenation under mild conditions, *ChemPlusChem* 2021, 86, 4, 540–548.
2. **Gupta, U.**; Yadav, M.; Saini, B.; Krishnapriya, R.; Sharma, R. K., Fe_xNi_y/ SiO₂-Al₂O₃ catalyzed hydrodeoxygenation of biorenewable platform molecules. *Fuel* 2024, 360, 130588.
3. Krishnapriya, R.; **Gupta, U.**; Soni, V. K.; Sharma, R. K., Catalytic conversion of methyl oleate to hydrocarbons: impact of cobalt oxide species integration in SiO₂-Al₂O₃. *Sustainable Energy & Fuels* 2020, 4 (7), 3308-3317.
4. Laishram, D.; Krishnapriya, R.; Saini, B.; **Gupta, U.**; Soni, V. K., Sharma, R. K., Nickel and cobalt transfigured natural clay: a green catalyst for low-temperature catalytic soot oxidation, *New J. Chem* 2021, 45, 14751-14758.

Book chapters:

1. Krishnapriya, R.; **Gupta, U.**; Kumar, D.; Laishram, D.; Sharma, R. K., Recent Progress in Synthesis of Nano- and Atomic-Sized Catalysts. *Advanced Heterogeneous Catalysts Volume 1: Applications at the Nano-Scale*; ACS Symposium Series; American Chemical Society, 2020, 3, 95– 128.
2. Laishram, D.; Kumar, D.; **Gupta, U.**; Krishnapriya, R.; Sharma, R. K., State of the Art in the Characterization of Nano- and Atomic-Scale Catalysts, *Recent Progress in Synthesis of Nano- and Atomic-Sized Catalysts. Advanced Heterogeneous Catalysts Volume 1: Applications at the Nano-Scale*; ACS Symposium Series; American Chemical Society, 2020, 2, 51-93.

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Annexure A

Materials and Methods

A.1 Reagents

To conduct the experiments and reactions the following list of chemicals were procured from various sources and listed below:

Chemicals/Reagents	Make/Source
Natural montmorillonite clay	Local source, Rajasthan
Palladium nitrate hydrate	Alfa Aesar
Extra dry methanol	Acros organics
Aniline	Acros organics
Nitric acid	Acros organics
Trans Cinnamaldehyde	Spectrochem
Absolute ethanol	Changshu Hongsheng Fine Chemical Co., Ltd, China
Aluminum acetylacetonate 99%	Sigma Aldrich
Methyl oleate 99%	Sigma Aldrich
Oleyl amine 70%	Sigma Aldrich
Tetraethyl orthosilicate 98%	Sigma Aldrich
Cobalt nitrate hexahydrate (98%)	Sigma Aldrich
Iron (III) nitrate nonahydrate	Alfa Aesar
Nickel nitrate	Alfa Aesar

A.2 Software Used

Origin, Image J, CASA XPS, and Chem Draw.

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