Publications:

Journal Publications:

1. Dhibar N, Reddy R and **Patel M*.** Investigation of kinetics, reaction mechanisms, thermodynamics, and synergetic effects in co-pyrolysis of wood sawdust and linear low-density polyethylene using the thermogravimetric approach, Environmental Science and Pollution Research, 2024, 31: 56113 **(Impact Factor 5.8)**
2. Agarwal K, Bardia M, Bhar R, Das A, Yadav B, Mahata S, **Patel M***, Kumari A and Dubey B Biofuel Production from Organic Fraction of Municipal Solid Waste and their Environmental Implications via Life Cycle Assessment Approach: Turning Trash into Treasure **(Under Review in Journal of Environmental Chemical Engineering)**
3. Rahman W, **Patel M,** Kurian V, Kumar A. A comparative techno-economic assessment of fast pyrolysis, hydrothermal liquefaction, and intermediate pyrolysis of municipal solid waste for liquid transportation fuels production, Energy Conversion and Management, 2022, 267: 115877. (Impact factor 11.53)
4. **Patel M,** Oyedun AO, Kumar A, Gupta R. What is the production cost of renewable diesel from woody biomass and agricultural residue-based on experimentation? A comparative assessment, Fuel Processing Technology, 2019, 191: 79-92. (Impact factor: 8.129)
5. **Patel M,** Oyedun AO, Kumar A, Doucette J. The development of a cost model for two supply chain networks of the decentralized pyrolysis system to produce bio-oil, Biomass, and Bioenergy, 2019, 128: 105287. (Impact factor: 5.774)
6. **Patel M,** Oyedun AO, Kumar A, Gupta R. Predicting the biomass conversion performance in a fluidized bed reactor using an isoconversional model-free method, The Canadian Journal of Chemical Engineering, 2018, 9999:1-11. (Impact factor: 2.500)
7. **Patel M**, Oyedun A, Kumar A, Gupta R. A techno-economic assessment of renewable diesel and gasoline production from aspen hardwood, Waste and Biomass Valorization, June 2018, 1-16 (Impact factor: 3.703)
8. **Patel M,** Kumar A. Production of renewable diesel through the hydroprocessing of lignocellulosic biomass-derived bio oil: a review, Renewable and Sustainable Energy Reviews, 2016, 58:1293-1307. (Impact factor: 16.8)
9. **Patel M,** Zhang X, Kumar A. Techno-economic and life cycle assessment of lignocellulosic biomass-based thermochemical conversion technologies: a review, Renewable and Sustainable Energy Reviews, 2015, 53: 1486-1499. (Impact factor: 16.8)
10. **Madhumita Patel**, Tarun K. Jindal, and Kamal K. Pant. 'Kinetic Study of Steam Reforming of Ethanol on Ni-Based Ceria–Zirconia Catalyst. Ind. Eng. Chem. Res., 2013, 52 (45),15763–15771. (Impact factor: 4.326)
11. Pravakar Mohanty, **Madhumita Patel** and Kamal K Pant. 'Hydrogen production from steam reforming of acetic acid over Cu–Zn supported calcium aluminate' Bioresource Technology, 2012 123, 558-565. (Impact factor: 11.88)
12. Singh R, Joshi A, Kundu T, Gupta M and **Patel M*.** Enhancing Cellulose Extraction Efficiency from Lignocellulosic Biomass: A Review of Current Techniques and Microstructural Dynamics. (**Review proposal submitted to ACS Chemical Review Journal**)

13. Susheen A, Bisai A and **Patel M***. Integrating GIS and FAHP for landfill site selection in Ranchi, India and sensitivity analysis of identified parameters. (to be Submitted to Waste Management)
14. Dhibar N, **Patel M*** and Dewangan N. Hydrothermal Co-Liquefaction of Wood sawdust for the production of Bio-oil: Effect of Temperature, Solvent, catalyst and overall Reaction Mechanism. (To be submitted)

Book Chapters:

1. Oyedun A, **Patel M,** Kumar M, Kumar A, The upgrading of bio-oil via hydrodeoxygenation. **Book Chapter** submitted to Chemical Catalysts for Biomass Upgrading for Wiley, Mark Crocker and Eduardo Santillan-Jimenez ISBN: 978-3-527-34466-6 (accepted).
2. **Madhumita Patel**, K K Pant, Pravakar Mohanty 'Renewable hydrogen generation by steam reforming of acetic acid over Cu-Zn-Ni supported calcium aluminate catalysts' **Book Chapter** for American Chemical Society (ACS) Books, Nanocatalysis for Fuels and Chemicals, 2011
3. Asish Bisai and **Madhumita Patel,** Recent advances in pretreatment of waste biomass" Elsevier book entitled "PROCESSING OF BIOMASS WASTE: TECHNOLOGICAL UPGRADATION AND ADVANCEMENT