

**Publication**  
**Madhumita Patel**

**PUBLICATIONS**

---

**Journal Publication**

1. **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
2. **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.
3. **Patel M**, Oyedun A, Kumar A, Gupta R. A techno-economic assessment of renewable diesel and gasoline production from aspen hardwood, **Waste Biomass Valorization**, 10 (10) 2019, 2745-2760
4. **Patel M**, Oyedun A, Kumar A, Gupta R. Predicting the biomass conversion performance in a fluidized bed reactor using isoconversional model free method, **The Canadian Journal of Chemical Engineering** 97, 2019, 1263-1273.
5. **Patel M**, Kumar A. Production of renewable diesel through the hydroprocessing of lignocellulosic biomass-derived bio-oil: A review, **Renewable & Sustainable Energy Reviews**, 2016, 97: 151-160.
6. **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.
7. **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
8. 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.

**Book Chapter**

1. **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
2. Oyedun A, **Patel M**, Kumar M, Kumar A, The upgrading of bio-oil via hydrodeoxygenation. *In*: Crocker M, Santillan-Jimenez E (Eds.) **Chemical Catalysts for Biomass Upgrading**, John Wiley and Sons Inc., Indianapolis, IN 46256, USA, 2018 (*accepted, in press*).

**Conference Presentation**

1. Bowen M, Oyedun AO, **Patel M\***, Kumar A. Prospects of renewable natural gas in North America: A review of feedstock availability, conversion technology, economic

**Publication**  
**Madhumita Patel**

- viability and emissions reduction potential. Abstract submitted to the CSBE/SCGAB AGM and Technical Conference, July 14-17, 2019, Vancouver, BC.
2. Rahman W\*, **Patel M**, Kurian V, Kumar A. Techno-economic assessment of introducing intermediate pyrolysis in small community landfills across Alberta. Abstract submitted to the CSBE/SCGAB AGM and Technical Conference, July 14-17, 2019, Vancouver, BC.
  3. **Patel M\***, Oyedun A, Kumar A, Gupta R.. Comparative experimental and techno-economic analysis of production cost of renewable diesel from woody biomass and agricultural residue, abstract presented to the 15th International Symposium on Bioplastics, Biocomposites and Biorefining Conference, July 24 - 27, 2018, Guelph, Ontario.
  4. **Patel M\***, Oyedun A, Kumar A. A techno-economic comparison of centralized and distributed mobile pyrolysis systems for the production of bio-oil from hardwood, abstract presented to the 67th Canadian Chemical Engineering Conference, October 22-25, 2017, Edmonton, AB.
  5. **Patel M\***, Oyedun AO, Kumar A. Production of renewable diesel from woody biomass and agricultural residue: a techno-economic analysis comparative study, abstract presented for the ASABE 2017 Annual International Meeting, July 16-19, 2017, Spokane, Washington, USA.
  6. **Patel M\***, Oyedun AO, Kumar A. Techno economic analysis of bio-oil production from poplar hardwood for renewable diesel in Western Canada, poster presentation for the ASABE 2016 Annual International Meeting, July 17-20, 2016, Orlando, Florida, USA.
  7. **Patel M\***, Oyedun AO, Kumar A, Gupta R. Thermogravimetric analysis (TGA) and pyrolysis kinetic study of aspen and pine hardwood, abstract presented for the ASABE 2016 Annual International Meeting, July 17-20, 2016, Orlando, Florida, USA.
  8. **Patel M\***, Kumar A. Review on production of hydrogenation-derived renewable diesel from bio-oil, presented at the CSBE/SCGAB Technical Conference and AGM 2015, Innovation in Water, Energy and Biosystems (iWEB) Positioning the Globe for 2050, July 5-8, 2015, Edmonton, AB, Canada.
  9. **Patel, M\***, Kumar, A. Techno-economic comparison of a centralized and distributed mobile pyrolysis system for conversion of hardwood, presented at the 2015 ASABE Annual International Meeting, July 26-29, 2015, New Orleans, Louisiana, USA.
  10. **Patel, M\***, Zhang, X, Kumar, A. A review of economics and environmental footprints of lignocellulosic biomass thermochemical conversion technologies, presented at the 2015 ASABE Annual International Meeting, July 26-29, 2015, New Orleans, Louisiana, USA.

**Publication**  
**Madhumita Patel**

11. **Madhumita Patel;** Amit Kumar Techno-economic and life cycle assessment of renewable diesel production from lignocellulosic biomass in Western Canada poster presentation in Biological Solutions, Sept 30-Oct 2, 2014 in Edmonton, Alberta.
12. **Patel M\***, Kumar, A. A Techno-economic analysis of bio oil production from woody biomass for renewable diesel production in western Canada, presented at the American Society of Agricultural and Biological Engineers Annual International Meeting, July 13-16, 2014, Montreal, QC
13. **Patel M\***, Kumar A. Hydrogenation-derived renewable diesel production from bio-oil: A review, presented at the 2013 ASABE Annual International Meeting, July 21-24, 2013, Kansas City, Missouri, USA.
14. **Patel, M\***, Kumar, A. Thermogravimetric analysis (TGA) and pyrolysis kinetic study of corn stover and wheat straw, presented in Faculty of Engineering Graduate Research Symposium, June 22-23, 2016, University of Alberta, Edmonton, AB