

List of Publications

Publications from Thesis

1. **Nath B**, Das B, Kalita P, Basumatary S. Waste to value addition: Utilization of waste *Brassica nigra* plant derived novel green heterogeneous base catalyst for effective synthesis of biodiesel. *Journal of Cleaner Production*, **2019**;239:118112 (Elsevier, Impact Factor = 11.072).
2. **Nath B**, Kalita P, Das B, Basumatary S. Highly efficient renewable heterogeneous base catalyst derived from waste *Sesamum indicum* plant for synthesis of biodiesel. *Renewable Energy*, **2020**;151:295-310 (Elsevier, Impact Factor = 8.634).
3. Basumatary S, **Nath B**, Das B, Kalita P, Basumatary B. Utilization of renewable and sustainable basic heterogeneous catalyst from *Heteropanax fragrans* (Kessuru) for effective synthesis of biodiesel from *Jatropha curcas* oil. *Fuel*, **2021**;286:119357 (Elsevier, Impact Factor = 8.035).
4. **Nath B**, Basumatary B, Brahma S, Das B, Kalita P, Rokhum SL, Basumatary S. *Musa champa* peduncle waste-derived efficient catalyst: Studies of biodiesel synthesis, reaction kinetics and thermodynamics. *Energy*, **2023**;270:126976 (Elsevier, Impact Factor = 8.857)

Other Publications

1. Basumatary S, **Nath B**, Kalita P. Application of agro-waste derived materials as heterogeneous base catalysts for biodiesel synthesis. *Journal of Renewable and Sustainable Energy*, **2018**;10(4):043105 (AIP Publishing, Impact Factor = 2.847).
2. Basumatary B, **Nath B**, Kalita P, Das B, Basumatary S. Yellow oleander (*Thevetia peruviana*) seed as a potential bioresource for industrial applications. *Mini-Reviews in Organic Chemistry*, **2020**;17(7):855-871 (Bentham Science Publisher, Impact Factor = 2.159).
3. Basumatary B, Das B, **Nath B**, Basumatary S. Synthesis and characterization of heterogeneous catalyst from sugarcane bagasse: Production of jatropha seed oil methyl esters. *Current Research in Green and Sustainable Chemistry*, **2021**;4:100082 (Elsevier).
4. Basumatary B, Basumatary S, Das B, **Nath B**, Kalita P. Waste *Musa paradisiaca* plant: An efficient heterogeneous base catalyst for fast production of biodiesel. *Journal of Cleaner Production*, **2021**;305:127089 (Elsevier, Impact Factor = 11.072).
5. Brahma S, **Nath B**, Basumatary B, Das B, Saikia P, Patir K, Basumatary S. Biodiesel production from mixed oils: A sustainable approach towards industrial biofuel production. *Chemical Engineering Journal Advances*, **2022**;100284 (Elsevier).
6. Basumatary SF, Patir K, Das B, Saikia P, Brahma S, Basumatary B, **Nath B**, Basumatary B, Basumatary S. Production of renewable biodiesel using metal organic frameworks based materials as efficient heterogeneous catalysts. *Journal of Cleaner Production*, **2022**;358:131955 (Elsevier, Impact Factor = 11.072).
7. Kalita P, Basumatary S, **Nath B**. Agricultural Waste: Sustainable Valuable Products. *Title of Book: Advanced Materials from Recycled Waste*. ISBN: 9780323856058, 2022 (Elsevier).

8. Basumatary B, **Nath B**, Basumatary S. Homogeneous catalysts used in biodiesel production. *Title of Book: Biodiesel Production: Feedstocks, Catalysts and Technologies*. ISBN: 9781119771364. John Wiley & Sons Ltd. 2022, <https://doi.org/10.1002/9781119771364.ch5>.
9. Basumatary B, Brahma S, **Nath B**, Basumatary SF, Das B, Basumatary S. Post-harvest waste to value-added materials: *Musa champa* plant as renewable and highly effective base catalyst for *Jatropha curcas* oil-based biodiesel production. *Bioresource Technology Reports*, **2023**;21:101338 (**Elsevier**)

Presentations in Conference/Seminar

1. **Nath B**, Kalita P, Basumatary S. Novel Green Heterogeneous Catalyst from Waste *Sesamum Indicum* Plant: An Efficient Protocol for Synthesis of Biodiesel. International Conference on Recent Advances in Interfaces of Physical and Life Sciences (RAIPLS-2019), 28-30 January, 2019, University of Rajasthan, Jaipur, India.
2. **Nath B**, Kalita P, Basumatary S. Heterogeneous catalyst derived from waste plant for biodiesel synthesis. International Conference on Advanced Materials for Energy Science and Technology (AMEST-2019), 26-28 February, 2019, North Eastern Hill University, Shillong, Meghalaya, India.
3. **Nath B**, Basumatary B, Kalita P, Basumatary S. Investigation of Heterogeneous Base Catalyst Derived from Agro-Waste for Biodiesel Production. National Conference on Green, Sustainable and Evolving Sciences (GSES-2019), 28-29 June, 2019, Cotton University, Guwahati, Assam, India.
4. **Nath B**, Das B, Kalita P, Basumatary S. Plant Derived Materials as Heterogeneous Base Catalyst for Biodiesel Production. National Seminar on Frontiers of Chemical Sciences, 25-26th of August, 2019, Kokrajhar Govt. College, Kokrajhar, Assam, India.
5. **Nath B**, Das B, Kalita P, Basumatary S. A Novel Heterogeneous Catalyst Derived from Kesseru Plant for Green Production of Biodiesel. International Conference on Future Aspects of Sustainable Technologies (**FAST 2019**), 11-12th of November, 2019 at Central Institute of Technology, Kokrajhar, Assam, India
6. **Nath B**, Das B, Kalita P, Basumatary S. *Brassica nigra* Derived Materials as Highly Efficient and Renewable Heterogeneous Catalyst for Biodiesel Synthesis. International Conference on Emerging Trends in Chemical Sciences (ETCS-2020), 13-15th of February, 2020 at Department of Chemistry, Gauhati University, Guwahati.
7. **Nath B**, Das B, Kalita P, Basumatary S. Environment friendly heterogeneous catalyst from waste plant for green synthesis of biodiesel. International Conference on Future Aspects of Sustainable Technologies (FAST 2020), 20-21th of October, 2020 at Central Institute of Technology, Kokrajhar, Assam, India.
8. **Nath B**, Basumatary S. *Musa champa* peduncle: A highly efficient and green catalyst for transesterification of *Jatropha curcas* oil. National Conference on Advances in Sustainable Chemistry and Material Science (ASCMS-2022), 29-30th of April, 2022 at Department of Chemistry, Bodoland University, Kokrajhar.