# PANEL OF EXPERTS

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**No. of Publication : 52**

**No. of Publication** (for last five years) **: 42**

**Specialization : Process Optimization, Catalytic Technology for biodiesel**

## List of publication for last five years:

1. Elakkiya E, Niju S. Simultaneous treatment of lipid rich ghee industry wastewater and power production in algal biocathode based microbial fuel cell. Energy Sources, Part A: Recovery, Utilization, and Environmental Effects. **2020** Sep 30:1-1.
2. Sai Bharadwaj AV, Niju S, Begum KM, Anantharaman N. Statistical analysis of experimental factor optimization in acid esterification of rubber seed oil. Environmental Quality Management. **2020**.
3. Sai Bharadwaj AV, Niju S, Begum KM, Anantharaman N. Process parameter optimisation in acid value minimisation of rubber seed oil conversion to biodiesel using Al2O3/Calcined Eggshells as catalyst–RSM and ANN studies. International Journal of Ambient Energy. **2020** Sep 15:1-8.
4. Satya Lakshmi SB, Niju S, Begum KM, Narayanan A. Catalyst Reusability and Kinetic Modeling of Biodiesel Produced from Rubber Seed Oil. Energy Sources, Part A: Recovery, Utilization, and Environmental Effects. **2020** Jul 18:1-6.
5. Niju S, Elakkiya E. Synthetic alkali soluble lignin supplementation to sucrose-rich wastewater fed mfc. IWRA (India) Journal (Half Yearly Technical Journal of Indian Geographical Committee of IWRA). **2020**;9(2):18-21.
6. Lakshmi SB, Pillai NS, Begum KM, Narayanan A. Biodiesel production from rubber seed oil using calcined eggshells impregnated with Al 2 O 3 as heterogeneous catalyst: A comparative study of RSM and ANN optimization. Brazilian Journal of Chemical Engineering. 2020 Feb 28:1-8.

7. Balajii M, Niju S. Banana peduncle–A green and renewable heterogeneous base catalyst for biodiesel production from Ceiba pentandra oil. Renewable Energy. 2020 Feb 1;146:2255-69.
8. Niju S, Vijayan V. Paper Mill Sludge as a Potential Feedstock for Microbial Ethanol Production. InMicrobial Strategies for Techno-economic Biofuel Production 2020 (pp. 35-57). Springer, Singapore.
9. Niju S, Swathika M. Lignocellulosic Sugarcane Tops for Bioethanol Production: An Overview.
10. Elakkiya E, Niju S. Application of Microbial Fuel Cells for Treatment of Paper and Pulp Industry Wastewater: Opportunities and Challenges. InEnvironmental Biotechnology Vol. 2 2020 (pp. 125-149). Springer, Cham.
11. Niju S, Swathika M, Balajii M. Pretreatment of lignocellulosic sugarcane leaves and tops for bioethanol production. InLignocellulosic Biomass to Liquid Biofuels 2020 Jan 1 (pp. 301-324). Academic Press.
12. Sai, Bharadwaj AVSL, Niju S, Begum KM, and Narayanan A. "Optimization of continuous biodiesel production from rubber seed oil (RSO) using calcined eggshells as heterogeneous catalyst." *Journal of Environmental Chemical Engineering* 8, no. 1 (2020): 103603.
13. Niju S, Kirthikaa M, Arrthi S, Dharani P, Ramya S, Balajii M. Fish-bone-doped sea shell for biodiesel production from waste cooking oil. Journal of The Institution of Engineers (India): Series E. 2020 Jun;101(1):53-60.
14. Niju S, Vishnupriya G, Balajii M. Process optimization of Calophyllum inophyllum-waste cooking oil mixture for biodiesel production using Donax deltoides shells as heterogeneous catalyst. Sustainable Environment Research. 2019 Dec 1;29(1):18.
15. Niju S, Nishanthini T, Balajii M. Alkaline hydrogen peroxide-pretreated sugarcane tops for bioethanol production—a process optimization study. Biomass Conversion and Biorefinery. 2020 Mar;10(1):149-65.
16. Niju S, Ajieth Kanna SK, Ramalingam V, Satheesh Kumar M, Balajii M. Sugarcane bagasse derived biochar–a potential heterogeneous catalyst for transesterification process. Energy Sources, Part A: Recovery, Utilization, and Environmental Effects. 2019 Oct 26:1-2.
17. Bharadwaj AS Niju S, Begum KM, Narayanan A. Free fatty acid optimization and modeling of biodiesel production from high viscous rubber seed oil–A comparative study of RSM and ANN. Energy Sources, Part A: Recovery, Utilization, and Environmental Effects. 2019 Sep 23:1-5.

18. Bharadwaj AS, Niju S, Meera Sheriffa Begum KM, Narayanan A. Performance and evaluation of calcined limestone as catalyst in biodiesel production from high viscous nonedible oil. Environmental Progress & Sustainable Energy. 2020 May;39(3):e13342.
19. Niju S, Raj FR, Anushya C, Balajii M. Optimization of acid catalyzed esterification and mixed metal oxide catalyzed transesterification for biodiesel production from Moringa oleifera oil. Green Processing and Synthesis. 2019 Aug 6;8(1):756-75.
20. Elakkiya E, Niju S. Power Production in Microbial Fuel Cells (MFC): Recent Progress and Future Scope. Biochemical and Environmental Bioprocessing. 2019 Jul 25:179-202.
21. Niju S, Balajii M. 4 Waste Sea Shells for Biodiesel Production–Current Status and Future Perspective. Biochemical and Environmental Bioprocessing: Challenges and Developments. 2019 Jul 25:53.
22. Niju S, Balajii M, Anushya C. A comprehensive review on biodiesel production using Moringa oleifera oil. International Journal of Green Energy. 2019 Jul 15;16(9):702-15.
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24. Balajii M, Niju S. A novel biobased heterogeneous catalyst derived from Musa acuminata peduncle for biodiesel production–Process optimization using central composite design. Energy Conversion and Management. 2019 Jun 1;189:118-31.
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27. Bharadwaj AS, Singh M, Niju S, Begum KM, Anantharaman N. Biodiesel production from rubber seed oil using calcium oxide derived from eggshell as catalyst–optimization and modeling studies. Green Processing and Synthesis. 2019 Jan 28;8(1):430-42.
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32. Niju S, Rabia R, Devi KS, Kumar MN, Balajii M. Modified Malleus Malleus shells for biodiesel production from waste cooking oil: An optimization study using box–behnken design. Waste and Biomass Valorization. 2020 Mar;11(3):793-806.
33. Balaji M, and Niju S. Biodiesel Production Using Biochar as a Heterogeneous Catalyst. Non-Soil Biochar Applications 1 2018.
34. Bharadwaj AS, Begum KM, S Niju. Optimization and modeling of biodiesel production using fluorite as a heterogeneous catalyst. Energy Sources, Part A: Recovery, Utilization, and Environmental Effects. 2019 Aug 3;41(15):1862-78.
35. Eswararao Y, Niju S, Begum KM, Anantharaman N. Investigation of boiler scale deposits as heterogeneous base catalyst for biodiesel production from jatropha oil. Biofuels. 2017 Nov 1:1-6.
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42. Anupama R, Niju S, Begum KM, Anantharaman N. Agro-Residues as Fuel and as a Feedstock for Other Products. InAdvances in Bioprocess Technology 2015 (pp. 247-255). Springer, Cham.