

# AVINASH ALAGUMALAI

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Profile: Male, Day-of-birth: April 14, 1992, Married ● Nationality: India ● Tel: +91 8012645399  
Google Scholar (Avinash Alagumalai) ● Citations: 2095 ● H Index: 25 ● i-10 index: 43

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## Education

Jan 2016 – Dec 2019 Anna University, Chennai Ph.D., (*Investigation on Sustainable Biodiesel Production and its utilization in a Reactivity Controlled Compression Ignition Engine*)

Sep 2013 – Jun 2015 Sri Venkateswara College of Engineering Sriperumbudur, Tamil Nadu, India  
*Internal Combustion Engineering, Master (M.Eng.), First class with distinction, CGPA 8.86 out of 10 (University second rank)*

Aug 2009 – April 2013 K. S. Rangasamy College of Technology Tiruchengode, Tamil Nadu, India  
*Mechanical Engineering, Bachelor (B.Eng.), First class with distinction, CGPA 9.52 out of 10 (Gold medalist)*

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## Experience (Academic)

Aug 2022-Present Associate Professor, Department of Mechanical Engineering, GMR Institute of Technology, Rajam-532127, Andhra Pradesh, India

Jun 2019- Jul 2022 Assistant Professor, Department of Mechanical Engineering, GMR Institute of Technology, Rajam-532127, Andhra Pradesh, India

Jul 2015-May 2019 Assistant Professor, Department of Mechanical Engineering, KPR Institute of Engineering and Technology, Coimbatore-641407, Tamil Nadu, India

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## Experience (Research)

May 2023-Present Postdoctoral associate, Department of Chemical and Petroleum Engineering, University of Calgary, 2500 University Drive NW, Calgary, Alberta, T2N 1N4, Canada

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## Languages

- Tamil Native
- English Fluent

## Certificates and Awards

- [1] Participated and presented Technical paper on **Bio-diesel production** at Velammal Engineering College, Chennai on 6<sup>th</sup> August 2011.
- [2] Participated and presented technical paper on **Bio-diesel performance characteristics** at Excel Engineering College, Namakkal on 26<sup>th</sup> August 2011.
- [3] Won **second prize** for presenting a technical paper entitled **Environmental impacts of Bio-diesel** in the national level environmental symposium conducted by Sona College of Technology, Salem held on 30<sup>th</sup> August 2011.
- [4] Enthusiastically participated in the debate on **Fossil fuel crisis** conducted by Sona College of Technology, Salem, held on 30<sup>th</sup> August 2011.
- [5] Secured **first prize** for presenting paper entitled **Experimental investigation of Pongamia methyl ester as fuel in CI engine** held at Hindusthan Institute of Technology, Coimbatore on 1<sup>st</sup> October 2011.
- [6] Received **outstanding PG student award (2015)** at Sri Venkateswara College of Engineering, Sriperumbudur.
- [7] Received **Innovative professional award** from Society of Professional Engineers, India on 28<sup>th</sup> August , 2016.
- [8] Received **Young researcher award** from TOP Engineers, Chennai on 1<sup>st</sup> October, 2016.
- [9] Received AUFAU International awards, 2016 under **Young scientist category**.
- [10] Received **Bharat Ratna Mother Teresa Gold Medal Award, 2016** by GEPRA.
- [11] Received **All India Best agricultural Extension worker award - 2016** from Society for the Advancement of Human and Nature.
- [12] Acted as an **evaluator for National Children science congress - 2016** organized by DST, Government of India.
- [13] Received **Jagar Nath Raina Memorial All India Best Publication Awards - 2017** from Society for the Advancement of Human and Nature.
- [14] Acted as an **evaluator for National Children science congress - 2018** organized by DST, Government of India.
- [15] Clean Technologies and Environmental Policy **Top 25 Reviewer Award 2018**
- [16] Renewable Energy Focus **Outstanding Contribution in Reviewing Award 2018**
- [17] Industrial Crops & Products **Outstanding Contribution in Reviewing Award 2018**
- [18] **Top 2% Scientists** in the world by Elsevier BV 2020 & 2021

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## Copyrights

- [1] **A Avinash (proprietor)**, A Murugesan, Biodiesel purification by cow dung ash, ROC Number: L-77720/2018.
- [2] **A Avinash (proprietor)**, R Vignesh, Biodiesel purification by bio-adsorbents, ROC

Number: L-76966/2018.

[3] **A Avinash (proprietor)**, A Murugesan, C Vijayakumar, Vegetable oil pretreatment by bubble washing, ROC Number: L-76790/2018.

[4] **A Avinash (proprietor)**, A Murugesan Advantages & disadvantages of biodiesel, ROC Number: L-76839/2018.

[5] S Rameshbabu, N Udhayakumar, **A Avinash (author)**, Cost efficient catalytic Converter, ROC Number: L-77851/2018.

[6] **A Avinash (proprietor)**, A Murugesan, Barriers in promotion of sustainable agriculture, ROC Number: L-79033/2018.

[7] P Sasikumar, **A Avinash (author)**, A Murugesan, Barriers of Biodiesel Production from Waste Cooking Oil, ROC Number: L-79032/2018.

[8] **A Avinash (proprietor)**, A Murugesan, Potential biodiesel feedstocks, ROC Number: L-79307/2018.

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## Publications

Google Scholar (Alagumalai Avinash)

<http://scholar.google.co.in/citations?user=Oh9nklYAAAAJ&hl=en>

*Research Interests: Biofuels, IC Engines, Nanotechnology, Energy harvesting, Machine learning*

### Science Citation Index Expanded (SCI/SCIE) Journals

**First author: 19; Corresponding/Co-corresponding author: 16 ; Q1: 38;  
Highest impact factor: 46**

- [1] **Avinash, A.**, Devarajan, B., Song, H., Wongwises, S., Ledesma-Amaro, R., Mahian, O., Sheremet, M., Lichtfouse, E., 2023. Machine learning in biohydrogen production: a review. *Biofuel Res. J.* 10, 1844–1858. <https://doi.org/10.18331/BRJ2023.10.2.4>
- [2] Priya, A.K., Devarajan, B., **Avinash, A.**, Song, H., 2023. Artificial intelligence enabled carbon capture: A review. *Sci. Total Environ.* 886, 163913. <https://doi.org/https://doi.org/10.1016/j.scitotenv.2023.163913>
- [3] Priya, A.K., **Avinash, A.**, Balaji, D., Song, H., 2023. Bio-based agricultural products: a sustainable alternative to agrochemicals for promoting a circular economy. *RSC Sustain.* <https://doi.org/10.1039/D3SU00075C>
- [4] **Avinash A.**, Yang, L., Ding, Y., Marshall, J.S., Mesgarpour, M., Wongwises, S., Rashidi, M.M., Taylor, R.A., Mahian, O., Sheremet, M., et al. (2022). Nano-engineered pathways for advanced thermal energy storage systems. *Cell Reports Phys. Sci.* 3, <https://doi.org/10.1016/j.xcrp.2022.101007>. (**Role: First author; impact factor: 7.8; JCR:Q1**)

- [5] **Avinash A**, Mahian, O., Vimal, K.E.K., Yang, L., Xiao, X., Saeidi, S., Zhang, P., Saboori, T., Wongwises, S., Wang, Z.L., et al. (2022). A contextual framework development toward triboelectric nanogenerator commercialization. *Nano Energy* 101, 107572, <https://doi.org/https://doi.org/10.1016/j.nanoen.2022.107572>. (**Role: First author; impact factor: 19; JCR:Q1**)
- [6] **Avinash A**, Wan Shouc, Omid Mahian, Mortaza Aghbashlo, Meisam Tabatabaei, Somchai Wongwises, Yong Liu, Justin Zhan, Antonio Torralb, Jun Chen, ZhongLin Wang, Wojciech Matusik, Self-powered Sensing Systems with Learning Capability. *Joule* 2022. DOI: <https://doi.org/10.1016/j.joule.2022.06.001>. (**Role: First author; impact factor: 46; JCR:Q1**)
- [7] **Avinash A**, Qin C, K E K V, Solomin E, Yang L, Zhang P, et al. Conceptual analysis framework development to understand barriers of nanofluid commercialization. *Nano Energy* 2022;92:106736. <https://doi.org/https://doi.org/10.1016/j.nanoen.2021.106736>. (**Role: First author; impact factor: 17.8; JCR:Q1**)
- [8] Shanmugam SKM, Muthusamy S, Ramasamy RK, **Avinash A**. Towards improved performance and lower exhaust emissions using exhaust gas recirculation coupled compression ignition engine fuelled with nanofuel blends. *Energy Sources, Part A Recover Util Environ Eff* 2022;0:1–17. <https://doi.org/10.1080/15567036.2022.2038734>. (**Role: Corresponding author; impact factor: 3.44; JCR:Q2**)
- [9] Moorthi M, Murugesan A, **Avinash A**. Enhancement of fuel properties of Manilkara zapota biodiesel blend by doping green-synthesized silver nanoparticles. *Appl Nanosci* 2021. <https://doi.org/10.1007/s13204-021-02088-9>. (**Role: Co-corresponding author; impact factor: 3.6; JCR:Q2**)
- [10] Kalil Rahiman M, Santhoshkumar S, Subramaniam D, **Avinash A**, Pugazhendhi A. Effects of oxygenated fuel pertaining to fuel analysis on diesel engine combustion and emission characteristics. *Energy* 2022. <https://doi.org/10.1016/j.energy.2021.122373>. (**Role: Co-author; impact factor: 7.14; JCR:Q1**)
- [11] Moorthi M, Murugesan A, **Avinash A**. Effect of nanoparticles on DI-CI engine characteristics fueled with biodiesel–diesel blends—A critical review. *J Therm Anal Calorim* 2022. <https://doi.org/10.1007/s10973-022-11234-6>. (**Role: Co-corresponding author; impact factor: 4.6; JCR:Q1**)
- [12] Ravindiran G, Saravanan P, **Avinash A**, Subbarayan S. Soft computing-based models and decolorization of Reactive Yellow 81 using *Ulva Prolifera* biochar. *Chemosphere* 2022;287:132368. <https://doi.org/https://doi.org/10.1016/j.chemosphere.2021.132368>. (**Role: Co-corresponding author; impact factor: 7.08; JCR:Q1**)
- [13] Sujatha S, Joga Rao H, Kalyani G, Gokulan R, **Avinash A**, Towards sustainable biodiesel production by solar intensification of waste cooking oil and engine parameter assessment studies, *Science of The Total Environment*, Volume 804, 2022, 150236. (**Role: Co-corresponding author; impact factor: 7.9; JCR:Q1**)

- [14] Gowda, S.H., **Avinash, A.**, and Raju. Production optimization of Vateria Indica biodiesel and performance evaluation of its blends on compression ignition engine. *Sustain. Chem. Pharm.* 2021. **(Role: Co-author; impact factor: 4.5; JCR:Q2)**
- [15] Fan Fangfang, **Avinash A**, Omid Mahian, Sustainable biodiesel production from waste cooking oil: ANN modeling and environmental factor assessment, *Sustainable Energy Technologies and Assessments*, 46, 2021, 101265, <https://doi.org/10.1016/j.seta.2021.101265>. **(Role: Co-author; impact factor: 5.35; JCR:Q1)**
- [16] Bo L, Zhang X, Luo Z, Saboori T, Dehghan M, Ghasemizadeh Karimi-Maleh H, **Avinash A**, Omid M. An overview of the applications of ionic fluids and deep eutectic solvents enhanced by nanoparticles. *J Therm Anal Calorim* 2021. <https://doi.org/10.1007/s10973-021-11097-3>. **(Role: Co-author; impact factor: 4.6; JCR:Q1)**
- [17] Omid Mahian, Evangelos Bellos, Christos N. Markides, Robert A. Taylor, **Avinash A**, Liu Yang, Caiyan Qin, Bong Jae Lee, Goodarz Ahmadi, Mohammad Reza Safaei, Somchai Wongwises, Recent advances in using nanofluids in renewable energy systems and the environmental implications of their uptake, *Nano Energy*, 86, 2021, 106069, <https://doi.org/10.1016/j.nanoen.2021.106069>. **(Role: Co-author; impact factor: 17.8; JCR:Q1)**
- [18] A.V. Prabhu, **Avinash. A**, A. Jodat, Artificial neural networks to predict the performance and emission parameters of a compression ignition engine fuelled with diesel and preheated biogas-air mixture, *J. Therm. Anal. Calorim.* (2021). doi:10.1007/s10973-021-10683-9 **(Role: Corresponding author; impact factor: 4.6; JCR:Q1)**
- [19] Khadijeh Firoozirad, **Avinash A**, Evgeny Solomin, Fan Fangfang, Ho Seon Ahn, Omid Mahian, Study on thermophysical properties of alumina nanoparticles enhanced ionic liquids (NEILs): A modeling approach, *Journal of Molecular Liquids*, 332, 2021, 115827 **(Role: Co-author; impact factor: 6.16; JCR:Q1)**
- [20] **Avinash A**, Omid Mahian, Mortaza Aghbashlo, Meisam Tabatabaei, Somchai Wongwises, Zhong Lin Wang, Towards smart cities powered by nanogenerators: Bibliometric and machine learning-based analysis, *Nano Energy*, 83, 2021, 105844. **(Role: First author; impact factor: 17.8; JCR:Q1)**
- [21] **Avinash A**, Omid Mahian, Frank Hollmann, Wuyuan Zhang, Environmentally benign solid catalysts for sustainable biodiesel production: A critical review, *Science of The Total Environment*, 768, 2021, 144856. **(Role: First author; impact factor: 7.9; JCR:Q1)**
- [22] Manigandan Sekar, Thangavel Mathimani, **Avinash A**, Nguyen Thuy Lan Chi, Pham Anh Duc, Shashi Kant Bhatia, Kathirvel Brindhadevi, Arivalagan Pugazhendhi, A review on the pyrolysis of algal biomass for biochar and bio-oil - Bottlenecks and scope, *Fuel*, 283, 2021, 119190. **(Role: Co-author; impact factor: 5.5; JCR:Q1)**
- [23] A. Vijin Prabhu, S. Antony Raja, **A. Avinash**, Arivalagan Pugazhendhi, Parametric optimization of biogas potential in anaerobic co-digestion of biomass wastes, *Fuel*,

- 2021, 119574. **(Role: Co-author; impact factor: 5.5; JCR:Q1)**
- [24] Ashwin Jacob, B. Ashok, **Avinash A**, Ong Hwai Chyuan, Phung Thi Kim Le, Critical review on third generation micro algae biodiesel production and its feasibility as future bioenergy for IC engine applications, Energy Conversion and Management, 2020, 113655, <https://doi.org/10.1016/j.enconman.2020.113655>. **(Role: Co-corresponding author; impact factor: 10; JCR:Q1)**
- [25] Seela CR, **Avinash A**, Pugazhendhi A. Evaluating the feasibility of diethyl ether and isobutanol added Jatropha Curcas biodiesel as environmentally friendly fuel blends. Sustain Chem Pharm 2020;18:100340. <https://doi.org/https://doi.org/10.1016/j.scp.2020.100340>. **(Role: Co-corresponding author; impact factor: 4.5; JCR:Q2)**
- [26] Murugesan A, **Avinash A**, Gunasekaran EJ, Murugaganesan A. Multivariate analysis of nano additives on biodiesel fuelled engine characteristics. Fuel 2020;275:117922. <https://doi.org/https://doi.org/10.1016/j.fuel.2020.117922>. **(Role: Co-corresponding author; impact factor: 5.5; JCR:Q1)**
- [27] Prabhu AV, **Avinash A**, Brindhadevi K, Pugazhendhi A. Performance and emission evaluation of dual fuel CI engine using preheated biogas-air mixture. Sci Total Environ 2021;754:142389. <https://doi.org/https://doi.org/10.1016/j.scitotenv.2020.142389>. **(Role: Co-author; impact factor: 7.9; JCR:Q1)**
- [28] **Avinash A**, Mathimani T, Pugazhendhi A, Atabani AE, Brindhadevi K, Duc Canh N. Experimental insight into co-combustion characteristics of oxygenated biofuels in modified DIC engine. Fuel 2020. <https://doi.org/10.1016/j.fuel.2020.118303>. **(Role: First author; impact factor: 5.5; JCR:Q1)**
- [29] **Avinash A**, Sasikumar P, Pugazhendhi A. Analysis of the limiting factors for large scale microalgal cultivation: A promising future for renewable and sustainable biofuel industry. Renew Sustain Energy Rev 2020. <https://doi.org/10.1016/j.rser.2020.110250>. **(Role: First author; impact factor: 14.98; JCR:Q1)**
- [30] Abdulrahman Alrobaian, Vignesh Rajasekar, **Avinash Alagumalai** (2020) "Critical insight into biowaste-derived biocatalyst for biodiesel production", Environmental Progress & Sustainable Energy, <https://doi.org/10.1002/ep.13391>. **(Role: Corresponding author; impact factor: 2.4; JCR:Q2)**
- [31] **Avinash Alagumalai** (2019) "Reduced smoke and nitrogen oxide emissions during low-temperature combustion of ethanol and waste cooking oil", Environmental Chemistry Letters, <https://doi.org/10.1007/s10311-019-00954-1>. **(Role: First author; impact factor: 9; JCR:Q1)**
- [32] U Sai Akhil, **A Avinash** (2019) "A Short Review on Valorization of Slaughterhouse Wastes for Biodiesel Production", ChemistrySelect, 4 13356-13362. **(Role: Corresponding author; impact factor: 2.1; JCR:Q2)**
- [33] R Gokulan, **A Avinash**, G Ganesh Prabhu, J Jegan (2019) "Remediation of remazol

- dyes by biochar derived from *Caulerpa scalpelliformis* – An eco-friendly approach”, *Journal of Environmental Chemical Engineering* 7 103297. **(Role: Coauthor; impact factor: 5.9; JCR:Q1)**
- [34] A Murugesan, **A Avinash**, K Arumugam (2019) “An experimental insight into optimized biodiesel production and external re-breathing of burned gases on biodiesel combustion”, *Journal of Thermal Analysis and Calorimetry*, <https://doi.org/10.1007/s10973-019-08620-y>. **(Role: First author; impact factor: 4.6; JCR:Q1)**
- [35] Gokulan Ravindiran, Raja Murugadoss Jeyaraju, Jegan Josephraj, **Avinash Alagumalai** (2019) “Comparative Desorption Studies on Remediation of Remazol Dyes Using Biochar (Sorbent) Derived from Green Marine Seaweeds”, *ChemistrySelect*, 4 7437-7445. **(Role: Coauthor; impact factor: 2.1; JCR:Q2)**
- [36] Gokulan Ravindiran, Ganesh Prabhu Ganapathy, Jegan Josephraj, **Avinash Alagumalai** (2019) “A Critical Insight into Biomass Derived Biosorbent for Bioremediation of Dyes”, *ChemistrySelect*, 9762-9775. **(Role: Coauthor; impact factor: 2.1; JCR:Q2)**
- [37] **A Avinash**, A Murugesan (2019) “Judicious Recycling of Biobased Adsorbents for Biodiesel Purification: A Critical Review”, *Environmental Progress & Sustainable Energy*, 38, <https://doi.org/10.1002/ep.13077>. **(Role: First author; impact factor: 2.4; JCR:Q2)**
- [38] **A Avinash**, P Sasikumar, A Murugesan (2018) “Understanding the interaction among the barriers of biodiesel production from waste cooking oil in India-An interpretive structural modeling approach”, *Renewable Energy* 127, 678-684. **(Role: First author; impact factor: 8; JCR:Q1)**
- [39] **A Avinash**, A Murugesan (2018) “Prediction capabilities of mathematical models in producing a renewable fuel from waste cooking oil for sustainable energy and clean environment”, *Fuel* 216, 322-329. **(Role: First author; impact factor: 5.5; JCR:Q1)**
- [40] Udhayakumar Natarajan, **Avinash Alagumalai** (2017) “Experimental and Chemometric Analysis on Attenuation of Emission with Optimized E-Diesel Dual Fuel Blend”, *ChemistrySelect* 2, 10931-10935. **(Role: Co-corresponding; impact factor: 2.1; JCR:Q2)**
- [41] **A Avinash**, A Murugesan (2017) “Chemometric analysis of cow dung ash as an adsorbent for purifying biodiesel from waste cooking oil” *Scientific Reports* 7, 9526. **(Role: First author; impact factor: 4.37; JCR:Q1)**
- [42] **A Avinash**, A Murugesan (2017) “Economic analysis of biodiesel production from waste cooking oil”, *Energy Sources, Part B: Economics, Planning, and Policy*, 12, 890-894. **(Role: First author; impact factor: 3.20; JCR:Q1)**
- [43] A Murugesan, **A Avinash** (2017) “Optimization of biodiesel production from raw and purified bio-oil”, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* 39 978-84. **(Role: Corresponding; impact factor: 3.44; JCR:Q2)**
- [44] **A Avinash**, P Sasikumar (2016) “A comprehensive study on the emission

- characteristics of E-diesel dual-fuel engine”, Alexandria Engineering Journal, 55, 351-56. **(Role: First author; impact factor: 3.73; JCR:Q1)**
- [45] A Saravankumar, **A Avinash**, R Saravankumar (2016) “Optimization of biodiesel production from Pungamia oil by Taguchi’s Technique”, Energy Sources, Part A: Recovery, Utilization, and Environmental Effects 38 2524-29. **(Role: Co-author; impact factor: 3.44; JCR:Q2)**
- [46] M Senthil, K Visagavel, **A Avinash** (2016) “Effects of exhaust gas recirculation on emission characteristics of Mahua (Madhuca Indica) biodiesel using red mud as catalyst”, Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, 38, 876-81. **(Role: Co-author; impact factor: 3.44; JCR:Q2)**
- [47] A Murugesan, D Subramaniam, **A Avinash**, (2016) “Heating value of bio-diesel: An Empirical and Theoretical Exploration”, Energy Sources, Part A: Recovery, Utilization, and Environmental Effects 38 1293-98. **(Role: Corresponding author; impact factor: 3.44; JCR:Q2)**
- [48] N Panneerselvam, A Murugesan, C Vijayakumar, A Kumaravel, D Subramaniam, **A.Avinash**, (2015) “Effects of injection timing on bio-diesel fuelled engine characteristics—An overview”, Renewable and Sustainable Energy Reviews, 50, 17-31. **(Role: Co-author; impact factor: 14.98; JCR:Q1)**
- [49] A Murugesan, D Subramaniam, **A Avinash**. (2015) “Empirical and Statistical analysis of Biodiesel Production by Transesterification process”, Biofuels, 6, 79-86. **(Role: Corresponding author; impact factor: 2.95; JCR:Q2)**
- [50] **A Avinash**, S Natarajan, N.V Mahalakshmi, (2015), “Lean homogeneous combustion of e-diesel using external mixture formation technique”, Alexandria Engineering Journal, 54, 271-279. **(Role: First author; impact factor: 3.73; JCR:Q1)**
- [51] **Avinash Alagumalai**, (2015) “Combustion characteristics of Lemon grass (Cymbopogon flexuosus) oil in a partial premixed charge compression ignition engine”, Alexandria Engineering Journal. 54, 405-413. **(Role: First author; impact factor: 3.73; JCR:Q1)**
- [52] **Avinash Alagumalai** (2014) “Internal Combustion Engines: Progress and Prospects”, Renewable and Sustainable Energy Reviews 38 561-571. **(Role: First author; impact factor: 14.98; JCR:Q1)**
- [53] **A Avinash**, D Subramaniam, A Murugesan. (2014) “Bio-diesel-A Global Scenario”, Renewable and Sustainable Energy Reviews 29 517-27. **(Role: First author; impact factor: 14.98; JCR:Q1)**
- [54] D Subramaniam, A Murugesan, **A Avinash**. (2013) “Performance and emission evaluation of biodiesel fueled diesel engine abetted with exhaust gas recirculation and Ni coated catalytic converter”, Journal of Renewable and Sustainable Energy 5 (2013) 023138. **(Role: Co-author; impact factor: 2.2; JCR:Q3)**



- [55] A Murugesan, D Subramaniam, **A Avinash**, N Nedunchezian. (2013) "A comprehensive view on performance, emission, and combustion characteristics of biodiesel-diesel blends at advanced injection timings", *Journal of Renewable and Sustainable Energy* 5 033103. **(Role: Co-author; impact factor: 2.2; JCR:Q3)**
- [56] D Subramaniam, A Murugesan, **A Avinash**. (2013), "An inclusive view on biodiesel production by heterogeneous catalyst and its engine operational characteristics", *Journal of Renewable and Sustainable Energy* 5 033135. **(Role: Co-author; impact factor: 2.2; JCR:Q3)**
- [57] D Subramaniam, A Murugesan, **A Avinash**, A Kumaravel. (2013), "Bio-diesel production and its engine characteristics—An expatiated view", *Renewable and Sustainable Energy Reviews* 22 361-370. **(Role: Co-author; impact factor: 14.98; JCR:Q1)**
- [58] A Murugesan, D Subramaniam, C Vijayakumar, **A Avinash**, N Nedunchezian. (2012) "Analysis on Performance, Emission and Combustion Characteristics of Diesel Engine Fueled With Methyl-Ethyl Esters", *Journal of Renewable and Sustainable Energy* 4 063116-063127. **(Role: Co-author; impact factor: 2.2; JCR:Q3)**

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**Book  
Chapters**

- [1] **A Avinash** (2020) "Biodiesel Production: Processes and Technologies", in *Recent Technologies for Enhancing Performance and Reducing Emissions in Diesel Engines*, IGI Global, ISBN13: 9781799825395
- [2] **A Avinash**, Simin Anvari and Mohamed M. Awad (2021) "Water: a global grand challenge and a path forward" in *Solar-Driven Water Treatment*, Elsevier. <https://doi.org/10.1016/B978-0-323-90991-4.00005-0>
- [3] **A Avinash**, Amin Jodat, Omid Mahian, and B. Ashok (2021) "NO<sub>x</sub> formation chemical kinetics in IC engines" in *NO<sub>x</sub> Emission Control Technologies in Stationary and Automotive Internal Combustion Engines*, Elsevier. <https://doi.org/10.1016/B978-0-12-823955-1.00002-4>
- [4] Ashwin Jacob, B Ashok, R Vignesh, Saravanan Balusamy, **A Avinash**. (2021) "NO<sub>x</sub> and PM trade-off in IC engines" in *NO<sub>x</sub> Emission Control Technologies in Stationary and Automotive Internal Combustion Engines*, Elsevier. <https://doi.org/10.1016/B978-0-12-823955-1.00003-6>
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**Conference**

- [1] **A Avinash**, V Arivadivan, D Subramaniam, KR Balamurugan. Performance and emission characteristics of Low Heat Rejection Engine Fuelled with punnai methyl ester (PME), National conference on “Emerging Technologies”, organized by Kumarasamy College of Engineering, karur, Tamil Nadu on 25<sup>th</sup> FEB 2012.
- [2] M. Kowshik Dhev, R. Sheshathri, **A. Avinash**, S. Natarajan, Experimental Study on NO<sub>x</sub> Reduction in CI Engine Fuelled with Biodiesel (Cotton Seed Methyl Ester Blends) Using Selective Catalytic Reduction (SCR) System with ANOVA Analysis, ISERMAT 2015, organized by Sri Sivasubramaniya Nadar College of Engineering, Chennai on January 8-9, 2015.
- [3] **A Avinash**, R Saravanakumar R Vigneshkumar SM Sakthivel , S Ravinkumar. Fabrication and examination of port fuel injection in diesel engine, “Technological Advancements in Materials and Manufacturing for Industrial Environment (TAMMIE’16)”, organized by KPR Institute of Engineering and Technology, Coimbatore, Tamil Nadu on 4<sup>th</sup> and 5<sup>th</sup> March 2016.
- [4] Murugesan Arthanarisamy, **Avinash Alagumalai**, Subramaniam Dhanakotti. (2019) Experimental investigation on performance and emission characteristics of lime treated and preheated biogas, “National Conference on Internal Combustion Engines and Combustion,” organized by NIT, Kurukshetra on 4<sup>th</sup> Nov 2019.

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**Reviewer**

- [1] International Journal of Energy Research, John Wiley & Sons, Ltd.
- [2] Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, Taylor & Francis.
- [3] Energy and Fuels, ACS publications.
- [4] Biofuels, Taylor and Francis.
- [5] International Journal of Ambient Energy, Taylor and Francis
- [6] Transportation Research Part D: Transport and Environment, Elsevier
- [7] RSC Advances, The Royal Society of Chemistry
- [8] Current Alternative Energy, Bentham Science Publishers
- [9] Sustainable Energy Technologies and Assessments, Elsevier
- [10] Renewable Energy Focus, Elsevier
- [11] Clean Technologies and Environmental Policy, Springer
- [12] Environmental Progress & Sustainable Energy, John Wiley & Sons, Ltd.

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**Editorial Board**

- [1] Editorial board-Scientific reports (Nature Publishing Group)
- [2] Associate Editor-International Journal of Energy and Water Resources (Springer)

- [3] Editorial board -Nanotechnology for environmental engineering (Springer)
  - [4] Editorial board -Toxicology and environmental health sciences (Springer)
  - [5] Junior Editorial board - Energy sources part A: Recover, Utilization & Environmental Effects (Taylor & Francis)
  - [6] Editorial board- Resources, Environment and Sustainability (Elsevier)
- 

## **Courses Teaching**

- Advanced internal combustion engines
- Alternative fuels
- Fuels & combustion
- Applied thermodynamics

### **DECLARATION**

I do hereby declare that all statements made in the application are true, complete and correct to the best of my knowledge and belief.



Signature,  
(Avinash)

Place : Andhra Pradesh

Date : 06-06-2023