

**Total publications - 122**

**Journals - SCI - 16, Scopus indexed - 28, Other refereed - 8 no.**

**Conference Papers – International - 59, National – 11, Scopus indexed - 3, ASME – 5.**

**JOURNAL PAPERS:**

- 1) V.U.Senthil Vadivel, Rayapati Subbarao, P.M.V.Subbarao, 'Mathematical modelling of incorporated Physico-Electrochemical processes and polarization distinctiveness in Solid Oxide Fuel Cells', **Advances in modelling and analysis. A, general mathematical and computer tools**, 2006, vol.7(1), pp. 78-89. **(Scopus indexed) Book chapter -1**
- 2) Rayapati Subbarao, V.U.Senthil Vadivel, P.M.V.Subbarao, 'Performance Analysis of Hybrid Solid Oxide Fuel Cell – Gas Turbine Power Generating System' **Journal of Institution of Engineers**, 2009, vol.90, pp. 1-5. **(Scopus indexed)**
- 3) K.Nantha Gopal and Rayapati Subbarao, 'Experimental investigation and performance evaluation of DI Diesel engine fueled by waste oil-diesel mixture in emulsion with water', **Journal of Thermal Science**, 2009, vol. 13(3), pp. 83-89. **(Scopus indexed, SCI)**
- 4) A.Sofi, Rayapati Subbarao, M.Venkatabilash, V.Uvaise Ahmed and B.Bharat, 'Experimental investigation on the utilization of pond ash for pavement blocks', **Journal of Civil Engineering and Construction Review**, April 2009, pp.72-79.
- 5) K. Nantha Gopal, Rayapati Subbarao, R. Natarajan, Sanjay Jain, Fulender K and Ram Vinoy K, 'Experimental Investigation on the Performance and Emission Characteristics of Two-Stroke Spark Ignition Engine with Hydrogen as Supplementary Fuel', **Journal on Future Engineering & Technology**, 2009, vol.4(4), pp. 22-28.
- 6) K.Nantha Gopal, Rayapati Subbarao, V. Pandiyarajan, R. Velraj, 'Thermodynamic analysis on Diesel Engine Integrated with PCM Based Energy Storage System', **Journal of Thermodynamics**, 2010, vol. 13(1), pp. 15-21. **(Scopus indexed, SCI)**
- 7) K.Nantha Gopal, Rayapati Subbarao, T.Elango, P.Bhaskar and K.Annamalai, 'Hydrogen enriched Compressed Natural Gas (HCNG) - A Futuristic fuel for internal combustion engines', **Journal of Thermal Science**, 2011, vol. 15(4), pp. 1145-1154. **(Scopus indexed, SCI)**
- 8) Rayapati Subbarao and M.Govardhan, 'Effect of axial gap on the aerodynamics of a single stage turbine', **International Journal of Earth Sciences and Engineering**, 2012, vol. 1, pp. 371-377.
- 9) Rayapati Subbarao and M.Govardhan, 'Effect of axial spacing between the components on the performance of a counter rotating turbine', **International Journal of Fluid Machinery and Systems**, 2013, vol. 6(4), pp. 170-176. **(Scopus indexed)**
- 10) Rayapati Subbarao and M.Govardhan, 'Effect of speed ratio on the performance and flow field of a counter rotating turbine', **Journal of Energy Procedia**, 2014, vol. 54, pp. 580-592. **(Scopus indexed)**
- 11) Rayapati Subbarao and M.Govardhan, 'Computational studies on the effect of speed ratio and stagger angle in a counter rotating turbine with respect to flow field and performance', **Lecture Notes in Mechanical Engineering**, 2014, pp. 933-944. **(Scopus indexed)**
- 12) A.H.Teja and Rayapati Subbarao and Chava Rajesh, 'Performance and emissions analysis of a diesel engine using various bio-fuels', **Applied Mechanics and Materials**, 2015, vols. 813-814, pp. 851-856. **(Scopus indexed)**
- 13) A.H.Teja and Rayapati Subbarao, 'Experimental studies on diesel engine with piston crown modification using an optimum alternative fuel', **Applied Mechanics and Materials**, 2015, vols. 813-814, pp. 830-835. **(Scopus indexed)**
- 14) Sai Sarath Kruthiventi, Subbarao Rayapati, Sai Nikhil Velpula and Manideep Parmi, 'Experimental studies involving flow visualization over non-circular geometries', **Recent Advances in Chemical Engineering**, 2016, pp. 21-28.
- 15) A.H. Teja and Rayapati Subbarao, 'Investigations on the performance of various bio-fuels along with low thermal conductivity piston crown in a diesel engine', **Lecture Notes in Mechanical Engineering**, 2016, pp. 293-301. **(Scopus indexed)**

- 16) Rayapati Subbarao and M.Govardhan, 'Studies on the effect of staggering the rear rotor in a counter rotating turbine with respect to flow and performance parameters', **International Journal of Turbo and Jet Engines**, 2016, 36(1), pp. 75-87. (SCI, Scopus indexed)
- 17) B. Ashok, R. Thundil Karuppa Raj, K. Nanthagopal, R. Krishnan, Rayapati Subbarao, 'Lemon peel oil - a novel renewable alternative energy source for diesel engine', **Journal of Energy Conversion and Management**, 2017, vol. 139, pp. 110–121. (SCI, Scopus indexed)
- 18) Rayapati Subbarao and K.Saisarath, 'Analysis of a gas turbine plant suitable for distributed power generation along with heating, refrigeration and air conditioning', **Distributed Generation and Alternative Energy Journal**, vol. 32(2), pp. 56-72, 2017. (Scopus indexed)
- 19) K.Saisarat, Rayapati Subbarao, I.D.Murthy, Ravi Gujjula, 'Influence of heat treatment on mechanical and micro structural properties of titanium alloys for enhanced applications', **Materials Today: Proceedings** vol. 4(8) pp. 8111-8116, 2017. (Scopus indexed)
- 20) B. Ashok, K. Nanthagopal, Rayapati Subbarao, AjithJohny, AravindMohan and A.Tamilarasu, 'Experimental studies on the effect of metal oxide and antioxidant additives with Calophyllum Inophyllum Methyl ester in compression ignition engine', **Journal of Cleaner Production**, vol. 166, pp. 474-484, 2017. (SCI, Scopus indexed)
- 21) Rayapati Subbarao and Sadananda Chakraborty, 'Microscopic studies on the characteristics of different alloys suitable for gas turbine components', **Materials Today: Proceedings**, vol. 5, pp. 11576-11584, 2017. (Scopus indexed)
- 22) Saisarath Kruthiventi, M Cheeranji, Rayapati Subbarao, Md Abid Ali, 'Computational and experimental studies on the flow arrangement over flat plates of different configurations', **Journal of Mechanical Engineering for Sustainable Development**, Ch. 40, pp. 1-12, 2019. **Book chapter -2**
- 23) B. Ashok, K. Nanthagopal, Balusamy, SenthilKumar Muniappan, MadhuSudanReddy, Vishal, Pravin, Rayapati Subbarao, 'Mitigation of NOx and smoke emissions in a diesel engine using novel emulsified lemon peel oil biofuel', **Environmental Science and Pollution Research**, Volume 25, Issue 25, pp 25098–25114, 2018. (SCI, Scopus indexed)
- 24) A. Ramesh, B. Ashok, K. Nanthagopal, M. Ramesh Pathy, Abhijeet Tambare, Prajwal Mali, Pratik Phuke, Sumit Patil, Rayapati Subbarao, 'Influence of Hexanol as Additive with Calophyllum Inophyllum Biodiesel for CI Engine Applications', **Fuel**, 249 (2019) 472–485, 2019. (SCI, Scopus indexed).
- 25) Rayapati Subbarao and Mukul Kashiwal, 'Computational Design and Analysis of a Piston with Different Head Thicknesses and Top Land Widths', **Emerging Trends in Mechanical Engineering, Lecture Notes in Mechanical Engineering**, 2019, pp 43-53 (Scopus indexed)
- 26) Rayapati Subbarao and M.Govardhan, 'Identification of Flow Structure in a Counter Rotating Turbine', **Journal of Applied Fluid Mechanics**, May 2020, vol. 13(3), pp. 767-777 (SCI, Scopus indexed).
- 27) Rayapati Subbarao and M. Govardhan, 'Blade-To-Blade Flow Distribution in a Counter Rotating Turbine with Flow Rate', **Recent Asian Research on Thermal and Fluid Sciences, Lecture Notes in Mechanical Engineering**, 2020, pp. 481-494. (Scopus indexed)
- 28) Rayapati Subbarao, Flow Rate and Axial Gap Studies on One and a Half Stage Axial Flow Turbine, **Recent Asian Research on Thermal and Fluid Sciences, Lecture Notes in Mechanical Engineering**, 2020, pp. 379-392. (Scopus indexed)
- 29) Rayapati Subbarao and Rathijit Dey, Selection of Lathe Spindle Material Based On Static and Dynamic Analysis Using Finite Element Method, **Materials Today: Proceedings**, 22P4 (2020) pp. 1642-1653. (Scopus indexed)
- 30) Rayapati Subbarao and Satya Vart Gupta, Thermal and structural analyses of an internal combustion engine piston with suitable different super alloys, **Materials Today: Proceedings 22P4 (2020) pp. 2901-2907. (Scopus indexed)**
- 31) Rayapati Subbarao and M.Govardhan, 'Axial Gap Studies on the Flow Behavior and Performance of a Counter Rotating Turbine', **Journal of Applied Fluid Mechanics**, Sept 2020, vol. 13(5), pp. 1515-1525. (SCI, Scopus indexed)
- 32) V.Dhana Raju, P.S. Kishore, R. Subbarao, 'Investigations on the Effects of Diethyl Ether as Fuel Additive in Diesel Engine Fueled with Tamarind Seed Methyl Ester', **Advances in Energy Research, Springer Proceedings in Energy**, 2020, Vol. 2, pp 447-456.

- 33) Rayapati Subbarao, 'Flow improvement aspect with stagger angle variation of the subsequent rotor in contra- rotating axial flow turbine', **Springer Proceedings in Energy**, 2020, pp. 1297-1307.
- 34) Pritam Sadhukhan and Rayapati Subbarao, 'Study of mechanical and tribological properties of hybrid copper metal matrix composite reinforced with graphite and SiC', **Materials Today: Proceedings, Volume 39, Part 4, 2021, Pages 1801-1806, 2020. (Scopus indexed)**
- 35) Rayapati Subbarao and K.Saisarath, 'Feasibility of biofuels as a substitute to conventional fuels in IC engines for mass transport and distributed power generation', **Distributed Generation & Alternative Energy Journal**, 2020, Vol. 35(1), 47–74. (Scopus indexed)
- 36) Rayapati Subbarao, 'Gas turbine blade failure scenario due to thermal loads in case of Nickel based super alloys', **Materials Today: Proceedings**, 46, 8119–8126, 2021. (Scopus indexed)
- 37) Geetika K. Salwan, Rayapati Subbarao, Subrata Mondal, 'Comparison and Selection of Suitable Materials Applicable for Gas Turbine Blades', **Materials Today: Proceedings**, 46, 8864–8870, 2021. (Scopus indexed)
- 38) Geetika K. Salwan, Rayapati Subbarao, 'Studies on the selection of cutting parameters of ti-6al-4v alloy turning operation using principal component analysis', **Materials Today: Proceedings**, 46, 8615–8620, 2021. (Scopus indexed)
- 39) Rayapati Subbarao and Nityanando Mahato, 'Simulation studies on the comparison of different superalloys used in gas turbine blades', IOP Conf. Ser.: Mater. Sci. Eng. 1248 012034, 2022. (Scopus indexed)
- 40) Geetika Kumari Salwan, Rayapati Subbarao, Subrata Mondal, 'Analysis on the Suitability of Powder Metallurgy Technique for Making Nickel Based Superalloys', 2022 IOP Conf. Ser.: Mater. Sci. Eng. 1248 012036, 2022. (Scopus indexed)
- 41) Rayapati Subbarao, 'Outcome Based Approach Applied to a Mechanical Engineering Course to Advance the Teaching-Learning Processes', International Journal of Engineering Education, Vol. 39 (2), pp. 369–375, 2023. (SCI, Scopus indexed)
- 42) Rayapati Subbarao, 'Analysis of the Ability of 'Understanding' in Support of its Measurability', International Journal of Engineering Education, Volume 39 (3), pp. 584-591, 2023. (SCI, Scopus indexed)
- 43) Rayapati Subbarao, 'Computational Studies on a Two-Stage Axial Flow Turbine Aiming Flow Losses and Performance', FMFP2021–10–129, Fluid Mechanics and Fluid Power (Vol. 2), **Lecture Notes in Mechanical Engineering**, pp. 141-146, April 2023. (Scopus indexed)
- 44) Rayapati Subbarao, 'Computational Studies on the Flow Aspects Through the Nozzle in Case of a Counter Rotating Gas Turbine Stage', FMFP2021–10–279, Fluid Mechanics and Fluid Power (Vol. 3), **Lecture Notes in Mechanical Engineering**, pp. 375-380, April 2023. (Scopus indexed)
- 45) Geetika K. Salwan, Rayapati Subbarao, Subrata Mondal, 'Investigation on Compaction Pressure and Sintering Temperature Suitable for Nimonic 90 Superalloy', **Materials Today: Proceedings**, 2023.
- 46) Rayapati Subbarao, 'Analysis on the appropriate Pedagogy approaches applicable for 'Engineering Thermodynamics' Course', International Journal of Engineering Education, Volume 40 (1), pp. 75-82, 2024. (SCI, Scopus indexed)
- 47) Rayapati Subbarao, 'Comparison of Flow and Loss Aspects in the Rotors of a Counter Rotating Turbine', Transactions of the Canadian Society for Mechanical Engineering, TCSME-2023-0100, Volume 48(1), March 2024, DOI: 10.1139/tcsme-2023-0100. (SCI, Scopus indexed)
- 48) Geetika Salwan, Rayapati Subbarao and Subrata Mondal, Effect of compaction pressure and sintering time on characteristics of nickel based superalloy, Recent Advances in Material, Manufacturing, and Machine Learning, PP. 606-612, June 2024. **Scopus indexed, Book chapter -3.**
- 49) Geetika Salwan, Rayapati Subbarao and Subrata Mondal, 'Investigation of Mechanical Properties and Wear Behavior of Nickel-Based Superalloys Synthesized by Powder Metallurgy', JOM, The Minerals, Metals & Materials Society, <https://doi.org/10.1007/s11837-024-06800-2>, 2024. (SCI, Scopus indexed)

- 50) Rayapati Subbarao ‘Studies on the flow capture through blade rows in a two-stage axial flow turbine’, Lecture Notes in Mechanical Engineering, Krishna Mohan Singh et al. (Eds): Fluid Mechanics and Fluid Power, Volume 8, pp. 143-160, July 2024.
- 51) Geetika Salwan, Rayapati Subbarao and Subrata Mondal, ‘Experimental Studies on Ti-6Al-4V Alloy for Its Suitability in Gas Turbine Engines’, Lecture Notes in Mechanical Engineering, Krishna Mohan Singh et al. (Eds): Fluid Mechanics and Fluid Power, Volume 8, pp. 77-88, July 2024.
- 52) Geetika Salwan, Rayapati Subbarao and Subrata Mondal, ‘Experimental Studies on Microscopic and Mechanical Properties of Nimonic 90 Superalloy Synthesized Using Powder Metallurgy’, Journal of Materials Engineering and Performance, <https://doi.org/10.1007/s11665-024-10093-6>, Sept 2024.