

Research Papers Published: 226

- **International Journals:** 80 [SCI: 51 (Q1:18, Q2: 13, Q3: 10, Q4: 10); Scopus: 18; Others: 11]

1. Ayushman Srivastava, Abhishek Kundu, **Akshoy Ranjan Paul**, "A detailed review of the recent development of needle-free drug delivery devices", Journal of Medical Engineering & Technology (T&F, Scopus, CiteScore=4.6, Q2), 49(6), 187–206, 2025. <https://doi.org/10.1080/03091902.2025.2508893>.
2. Ayushman Srivastava, Abhishek Kundu, **Akshoy Ranjan Paul**, "A Study on the Performance of a Needle-free Micro-Shock Tube Device using Different Pressure Ratios and Stand-off Distance." *accepted for publication* in Proceedings of IMechE: Part C: Journal of Mechanical Engineering Science (Sage, SCIE, IF=1.7, Q2) in Nov. 2025.
3. Xinlei Huang, **Akshoy Ranjan Paul**, Prashanta K. Mandal and Suvash C. Saha, "Transport and deposition of pharmaceutical aerosol in helium-oxygen mixture in a CT-based nose-to-lung respiratory tract", *accepted for publication* in Experimental and Computational Multiphase Flow (Springer, SCI, Q1, IF=5.4) in June 2025.
4. Shalini Verma, Aditya Joshi, **Akshoy Ranjan Paul**, "Optimization of Horizontal Axis Wind Turbine Blade with Integrated Winglet for Improved Aerodynamic Performance", Transactions of the Indian National Academy of Engineering (Springer, No Scopus/SCI), Oct. 2025. <https://doi.org/10.1007/s41403-025-00551-5>
5. Kazuo Matsuura, **Akshoy Ranjan Paul**, Arun Kumar Perumal, "Experimental and Computational Study on the Effects of Geometrical Misalignment on Ring Tone", Australia (Springer, SCI, IF=1.7), August 2025. <https://doi.org/10.1007/s40857-025-00354-2>
6. Anurag Tiwari, **Akshoy Ranjan Paul**, Anuj Jain, "Effect of inlet swirl on dry powder distribution through the oropharyngeal route of human respiratory tract", Journal of Drug Delivery Science and Technology (Elsevier, SCI, Q1, IF=4.9), vol. 110, August 2025, 107097. <https://doi.org/10.1016/j.jddst.2025.107097>
7. Naveen Kumar, Devesh Singh, Shalini Verma, **Akshoy Ranjan Paul**, Ivan Tolj, "Numerical Study of Joule-Thomson Effect for High-Pressure Hydrogen Injection", International Journal of Hydrogen Energy (Elsevier, Q1, SCI, IF=8.1) vol. 138, pp. 595–604, May 2025. <https://doi.org/10.1016/j.ijhydene.2025.05.081>
8. Shalini Verma, Devanuru Sairam Bhardwaj, **Akshoy Ranjan Paul**, "Aerodynamic and Aeroelastic Analyses of a Split-winglet Blade for Horizontal-axis Wind Turbine in Offshore Wind Conditions", Journal of Ocean Engineering and Marine Energy (Springer, SCI, Q2, IF=2.8), April 2025. <https://doi.org/10.1007/s40722-025-00389-7>
9. Ayushman Srivastava, Abhishek Kundu, **Akshoy Ranjan Paul**, "Numerical Analysis of the Influence of Driver Gases on the Penetration Depth of Particles Using a Micro-Shock Tube-based Needle-Free Delivery Device", "International Journal of Computational Methods (World Scientific, SCI, Q2, IF=1.6), Vol. 22, No. 07, 2550013 (2025). <https://doi.org/10.1142/S0219876225500136>
10. Abhishek Gupta, **Akshoy Ranjan Paul**, Anuj Jain, Ramesh K. Agarwal, "A study on effect of number of low permeability layers on geological carbon sequestration in an open aquifer", Greenhouse Gases: Science and Technology (Wiley, Q2, SCI, IF=2.7), vol. 15, pp. 208-216, March 2025. <https://doi.org/10.1002/ghg.2334>
11. Pushkal Jaiswal, Shalini Verma, **Akshoy Ranjan Paul**, Nawshad Haque and Warren Bruckard, "Economic Valuation of Metal Recovery from Mobile Phones in India", Minerals (MDPI, SCI, Q2, IF=2.2), vol. 15, 259, pp. 1-17, Feb. 2025. <https://doi.org/10.3390/min15030259>

12. Xinlei Huang, Goutam Saha, **Akshoy Ranjan Paul**, Adele Tahan, Suvash C. Saha, "BiPAP efficacy across the spectrum: From treating sleep apnea to chronic obstructive pulmonary disease", *Respiratory Physiology & Neurobiology* (Elsevier, SCI, IF=1.9), Volume 333, 104397, 16 Jan. 2025. <https://doi.org/10.1016/j.resp.2025.104397>
13. Ahmed A.Y. Al-Waaly, **Akshoy Ranjan Paul**, Goutam Saha, Suvash C. Saha, "Exploring Heat Transfer and Entropy Generation in a Dual Cavity System", *Heat Transfer* (Wiley, SCI, IF=2.8, Q2), pp. 1-14, Jan. 2025. <https://doi.org/10.1002/htj.23281>
14. Devesh Singh, **Akshoy Ranjan Paul**, Abdus Samad, Nawshad Haque, "Life Cycle Environmental Impact Assessment of a Wave Energy Harvester", *IMEchE Journal of Engineering for the Maritime Environment: Part-M* (Sage Q3, SCI, IF=1.8), pp. 1-13, Nov. 2024. <https://doi.org/10.1177/14750902241292500>
15. Devesh Singh, **Akshoy Ranjan Paul**, Abdus Samad, "Performance Estimation of a Two-Body Wave Energy Converter for the East Coast of India", *Environmental Progress & Sustainable Energy* (Wiley, SCI, IF=2.8), e14468, pp. 1-12, 2024. <https://doi.org/10.1002/ep.14468>
16. Ahmed A.Y. Al-Waaly, **Akshoy Ranjan Paul**, Goutam Saha, Suvash C. Saha, "Entropy Generation Analysis of Natural Convection Flow in Porous Diamond-shaped Cavity", *International Journal of Thermofluids* (Elsevier, Q1, Scopus, CiteScore=10.1), 23 (2024) 100801, pp. 1-12, on 11 August 2024. <https://doi.org/10.1016/j.ijft.2024.100801>
17. Ahmed Abdul-Rida Al-Waaly, Sadia Alam Tumpa, Preetom Nag, **Akshoy Ranjan Paul**, Goutam Saha and Suvash C. Saha, "Entropy Generation Associated with Natural Convection within a Triangular Porous Cavity Containing Equidistant Cold Domains", *Frontiers in Energy Research* (Frontiers, Q2, SCI, IF=3.4), in Section: Process and Energy Systems Engineering, vol. 12, pp. 1-12, 17 June 2024. doi: 10.3389/fenrg.2024.1422256
18. Ritesh Singh, Abhishek Gupta, **Akshoy Ranjan Paul**, Bireswar Paul and Suvash C. Saha, "Improving Heat Transfer in Parabolic Trough Solar Collectors by Magnetic Nanofluids", *Energy Engineering (Tech Science)*, Q2, Scopus, CiteScore=0.9), 121(4), pp. 835-848, March 2024. <https://doi.org/10.32604/ee.2024.046849>
19. Digamber Singh, Bholu Kumar Anuj Jain, **Akshoy Ranjan Paul**, "Toxic Particles Deposition in the Human Respiratory Tract under Natural Inspiratory Flow", *International Journal of Mathematical, Engineering and Management Sciences* (ESCI, IF=1.6, Scopus, CiteScore=3.2), Vol. 8, No. 6, pp. 1225-1254, Oct. 2023. <https://doi.org/10.33889/IJMEMS.2023.8.6.069>
20. Abhishek Gupta, **Akshoy Ranjan Paul**, Suvash Saha, "Decarbonizing Atmosphere using Carbon Capture, Utilization, and Sequestration: Challenges, Opportunities, and Policy Implications in India", *Atmosphere* (MDPI, Q2, SCI, IF=3.1), 14, 1546, 1-17, Oct. 2023. <https://doi.org/10.3390/atmos14101546>
21. Aman R. Anand, Vivek K. Srivastav, Mohammad R. Al-Mousa, **Akshoy R. Paul**, Srinivasarao Thota, "Numerical Analysis of Friction Stir Welding on an Aluminium Butt Joint", *Information Science Letters* (Natural Sciences Publishing, Q2, Scopus, CiteScore=1.7), vol. 12, issue 9, article 34, pp. 2299-2311, Sept. 2023. E-ISSN: 2090-956X. <http://dx.doi.org/10.18576/isl/120933>
22. KrishnaKumar Rajnath Yadav, **Akshoy Ranjan Paul**, Anuj Jain and Firoz Alam, "Effects of Synthetic Jets on Swirl Inflow in a Variable Geometry Twin Air-Intake", *Flow, Turbulence and Combustion* (Springer, Q1, SCI, IF=2.566), vol. 111, pp. 1193–1225, Sept. 2023. <https://doi.org/10.1007/s10494-023-00481-8>
23. Suvanjan Bhattacharyya, Arpan K Sharma; Devendra K Vishwakarma; Karuna Saini; **Akshoy Ranjan Paul**, Zhongjie Huan, "Thermo-Hydraulic Performance of Magnetic Baffles for Cooling using Magnetic Nanofluid in a Mini Channel", *Sustainable Energy Technologies and Assessments* (Elsevier, Q1, SCI, IF=7.632), vol. 57, 103194, April 2023. <https://doi.org/10.1016/j.seta.2023.103194>

24. Yagya Dutta Dwivedi, Prasanta Kumar Mohanta, **Akshoy Ranjan Paul**, Xilang Tang, "3-D CFD analysis of bio-inspired corrugated wings for MAVs", *Materials Today: Proceedings* (Elsevier, Scopus, CiteScore: 2.3), Published online on 28th March 2023. <https://doi.org/10.1016/j.matpr.2023.03.213>
25. KrishnaKumar Rajnath Yadav, Anuj Jain and **Akshoy Ranjan Paul**, "Flow Characteristics and Separation Control in a Transitional Twin Air-Intake", *Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering* (IMechE, Q2, SCI, IF=2.242), vol. 237, no. 3, pp. 516–526, 2023. <https://doi.org/10.1177/09544100221103652>
26. Abhishek Gupta, **Akshoy Ranjan Paul**, Nawshad Haque, "Life Cycle Assessment of a CCS in Saline Aquifers for Coal-Fired Power Generation: An Indian Scenario", *Greenhouse Gases: Science and Technology* (Wiley, Q3, SCI, IF=2.518), vol. 13, pp. 81–98, 2023. <https://doi.org/10.1002/ghg.2198>
27. Suvanjan Bhattacharyya, Arpan K Sharma, Devendra K Vishwakarma, Varun Goel, **A.R. Paul**, "Influence of Magnetic Baffle and Magnetic Nanofluid on Heat Transfer in a Wavy Minichannel", *Sustainable Energy Technologies and Assessments* (Elsevier, Q1, SCI, IF=7.632), vol. 53, 102954, 2023. <https://doi.org/10.1016/j.seta.2022.102954>
28. **Akshoy Ranjan Paul**, Anuj Jain, Suvash C Saha, "Exposure Assessment of Air Pollution in Lungs", *Atmosphere* (MDPI, Q3, SCI, IF=3.1), vol. 13, 1767, pp. 1-22. Oct. 2022. <https://doi.org/10.3390/atmos13111767>
29. Suvanjan Bhattacharyya, Arpan K. Sharma; Devendra K. Vishwakarma, **Akshoy Ranjan Paul**, "Thermo-hydraulic Characteristics of Magnetic Nanofluid in Opposing and Assisting Minichannel under the Influence of External Magnetic Field", *Physics of Fluids* (AIP, Q1, SCI, IF=4.98), vol. 34, 103609 (2022); published online on 19th Oct. 2022. <https://doi.org/10.1063/5.0104710>
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33. Shalini Verma, **Akshoy Ranjan Paul**, Nawshad Haque, "Selected Environmental Impact Indicators Assessment of Wind Energy in India using a Life Cycle Assessment Methodology", *Energies journal* (MDPI, Q3, SCI, IF=3.252), vol. 15, 3944, pp. 1-16, 2022, published online on 26th May 2022. <https://doi.org/10.3390/en15113944>
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35. Suvash C Saha, Isabella Francis, Xinlei Huang, **Akshoy Ranjan Paul**, "Heat Transfer and Fluid Flow Analysis in a Realistic 16-Generation Lung", *Physics of Fluids* (AIP, Q1, SCI, IF=4.98), vol. 34, 061906, pp. 1-12, June 2022. <https://doi.org/10.1063/5.0093912>

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38. Deepak Kumar Singh, Anuj Jain and **Akshoy Ranjan Paul**, "Active Flow Control over a NACA23012 Airfoil using Hybrid Jets", *Defence Science Journal* (SCI, Q4, IF=0.667, DRDO), vol. 71, no. 1, pp. 721-729, Nov. 2021. <https://doi.org/10.14429/dsj.71.16468>
39. **Akshoy Ranjan Paul**, Abdulaziz Aldiab, Somnath Chattopadhyaya, Altab Hossain, Zinat Tasneem, Nawshad Haque, Anupam Basu, Tashi Gyeltshen, Yangdon, Reza Jazar and Firoz Alam, "Impact of COVID-19 on Online Education in Developing Countries – An Overview", *International Journal of Engineering Education* (SCI, Q4, IF=0.971, Tempus), Vol. 37, No. 6, pp. 1–22, 2021.
40. KrishnaKumar Rajnath Yadav, **Akshoy Ranjan Paul** and Anuj Jain, "Performance Evaluation of a Twin Air-Intake: Effects of Geometry, Reynolds Number and Jet Momentum Coefficient", *The European Physical Journal (EPJ) Plus* (SCI, Q2, IF=3.758, Springer), 136:988, pp. 1-21, Oct. 2021. <https://doi.org/10.1140/epjp/s13360-021-01959-y>
41. Vivek Kumar Srivastav, Rakesh Kumar Shukla, **Akshoy Ranjan Paul**, Anuj Jain, "Computational study on the effect of human respiratory wall elasticity", *International Journal of Biomedical Engineering and Technology* (ESCI, IF=1.1, Scopus, CiteScore=1.9, Inderscience), vol. 37, no. 1, pp. 46-64, Sept. 2021. <https://dx.doi.org/10.1504/IJBET.2021.117514>
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