



A. D. PATEL INSTITUTE OF
TECHNOLOGY
(The Charutar Vidya Mandal (CVM) University)
Mechanical Engineering Department



List of Research Papers Published (AY: 2024-2025)

1. **V. J. Banker, Harsh Joshi**, Raj Joshi, Jay Patel, Kandarp Patwa, Shivam Prajapati, "Design and development of rotor profile for screw pump- A Review" pumps valves and systems (Book Chapter).
2. **Ronak Shah**, Vishal Chaudhary, Manoj Kumar, Feroz Shaik et al, "Design and performance analysis of hydrogen fueled micro combustion chamber with focus on back pressure minimization", Applied chemical Engineering (2024) Vol.7 Issue 1.
3. Amit Patel and **Dr. Ronakkumar Shah**, "Performance & Emission analysis of Diesel ethanol blend with additive in diesel engine- A review, IJSRD,(2024) Vol.12 Issue 4.
4. **Roank Shah**, Miguel Villagomez Galindo et al "Design and performance evaluation of inverted downdraft biomass gasifier cook stove for improving the kitchen environment of rural area", Applied Chemical Engineering (2024) Vol. 7, Issue 2.
5. **Ruchir Desai and Y. D. Patel** of department of Mechanical Engineering published a research paper on "12 DOF Bipedal Robot Design: Kinematic Analysis and Dynamic Simulation" in Indian Journal of Science and Technology, Volume 18 (Jan 2025), pp. 390-402, ISSN: 0974-5645. (International) (WEB of Science)
6. **Manisha Makawana** of department of Mechanical Engineering published a research paper on "FEM simulation of SARS-CoV-2 sensing in single-layer graphene-based bionanosensors" in Journal of Molecular Modeling, Volume 30 (Sept 2024) pp. 327, ISSN: 0948-5023 (International) (SCOPUS)
7. **Manisha Makawana** and Ajay Patel of department of Mechanical Engineering published a research paper on "Bionanosensor utilizing single-layer graphene for the detection of iridovirus" in Journal of Molecular Modeling, Volume 30 (July 2024) pp. 256, ISSN: 0948-5023 (International) (SCOPUS)



A. D. PATEL INSTITUTE OF
TECHNOLOGY
(The Charutar Vidya Mandal (CVM) University)
Mechanical Engineering Department



8. **Manisha Makawana** of department of Mechanical Engineering published a research paper on “Advanced biosensing of human papilloma virus using bilayer graphene” in Graphene and 2D mater, Volume 18 (May 2025), ISSN: 2731-6513 (International) (SCOPUS)
9. Jvalant Trivedi and **Mitesh Shah** of department of Mechanical Engineering published a research paper on Synthesis, characterisation and stability testing of graphene enhanced paraffin wax phase change material for energy storage” in International Journal of Power and Energy Conversion, Volume 15 (July 2024), pp. 294-312, ISSN: 1757-1154. (International) (SCOPUS)
10. Simit Prajapati of department of Automobile and **Mitesh Shah** of department of Mechanical Engineering published a research paper on “Experimental Characterization and thin layer convective drying modeling of Jamun (Indian Blackberry) slices” in Sadhana, Volume 49 (Oct 2024), 272. (International) (SCOPUS)
11. **Manisha Makawana** of Department of Mechanical Engineering presented oral presentation on “Sensing of a Papilloma virus by using by layer graphene” at AsiaNANO 2024, a conference focused on Nanoscience and Nanotechnology, organized by IIT Madras, Chennai, India during September 23-25, 2024.
12. **Vaishal Banker and Dr. A. Y. Joshi** of Department of Mechanical Engineering, Experimental study of surface roughness in dry turning of Inconel 600 and 625 Alloys using ANOVA in International Conference on Recent Trends in Engineering and Sciences (RTES – 2025), Sardar Vallabhbhai National Institute of Technology, Surat during 14th – 15th February 2025 (Hybrid-Mode).
13. **Dr. Ronakkumar Shah** of Department of Mechanical Engineering, Performance analysis of gas turbine based micro combustor with hydrogen as a fuel in International conference on sustainable energy and environment 2025, BITS Pilani, KKBirla Goa Campus during 8th – 10th March 2025.



A. D. PATEL INSTITUTE OF
TECHNOLOGY
(The Charutar Vidya Mandal (CVM) University)
Mechanical Engineering Department



14. **Ruchir Desai, Vaishal Banker, Ronak Shah** of Department of Mechanical Engineering, Expert system Based Selection of Carbide Tools for CNC Turning, International Conference on “Synergetic Development through Smart Technologies & Digital Transformation-2025 (SDSTD 2025) at CVMU during 25th - 26th June 2025.
15. **Vaishal Banker, Dr. A.Y.Joshi, Harsh B Joshi, Sankalp Bhatia, krunal J Shah** of Department of Mechanical Engineering, Design and Analysis of a hydrostatic Bearing using CAD and FEM Simulation, International Conference on “Synergetic Development through Smart Technologies & Digital Transformation-2025 (SDSTD 2025) at CVMU during 25th - 26th June 2025.