



# Dr Ronakkumar Shah

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## AREAS OF EXPERTISE

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### Energy and Fuels

Mechanical Engineering, Renewable Energy

## EDUCATION

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**PhD** 2018

CHARUSAT

## PROFESSIONAL EXPERIENCE

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**Charutar Vidya Mandal University (CVM University)** 2010 - Present

Assistant Professor

Anand

## RESEARCH PROJECTS

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**Performance enhancement of hybrid solar drying system for medical herb**

Role: Mentor

Year: 2024 | Amount: 60000

## HONOURS AND AWARDS

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**A P J ABDUL KALAM AWARD 2025** 2025

Awarded by: Association of Researchers and Academicians India

## PROFESSIONAL MEMBERSHIPS

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**Association of Researchers and Academicians India** 2025

Life Member (MARAI)

**Combustion Institute (India) 2013**

*Life Member - LMC 1320*

**ISHARE 2012**

*member*

**ISTE 2011**

*Life Member - LM 111378*

## **PUBLICATIONS**

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**1. Expert System-Based Selection of Carbide Tools for CNC Turning**

*Ronakkumar Shah, Vaishal Banker and Ruchir Desai*

Proceeding of International Conference on "Synergetic Development through Smart Technologies & Digital Transformation-2025 , Vol. (2025) , pp. 1-8

**2. Assessment of Various Solar Drying Methods for Deciding an Economical and Ecofriendly Solution for Better Quality of Dried Products**

*Kulkarni S.;Shah R.*

*Solar Energy and Sustainable Development , Vol. 14 (2025) , pp. 1-17*

**3. Miscibility Analysis of Ethanol-Diesel Blends with Additives: A Comprehensive Investigation**

*Patel A.M.;Shah R.R.;Patel V.K.;Sonawane C.*

*Engineering Technology and Applied Science Research , Vol. 14 (2024) , pp. 16049-16053*

**4. Performance & Emission Analysis of Diesel-Ethanol blend with Additive in Diesel Engine - A Review**

*Ronakkumar Shah and Amit Patel*

*International Journal for Scientific Research & Development] , Vol. 12 (2024) , pp. 81-91*

**5. Design and performance evaluation of inverted downdraft biomass gasifier cook stove for improving the kitchen environment of rural area**

*Shah R.;Galindo M.V.;Valencia A.B.M.;Gaur A.;Macedo V.D.J.;Pavithra G.;Kumar A.;Oza A.;Bhargav H.;Makvana N.;Patel K.*

*Applied Chemical Engineering , Vol. 7 (2024) , pp.*

**6. Design and performance analysis of hydrogen-fueled micro combustion chamber with focus on back pressure minimization**

*Shah R.;Chaudhary V.;Kumar M.;Shaik F.;Kulshrestha D.;Sonawane C.;Saxena P.;Oza A.;Kumar A.*

*Applied Chemical Engineering , Vol. 7 (2024) , pp.*

**7. Performance analysis of black gravel solar still**

*Shah R.;Makwana M.;Makwana N.;Desai R.*

*Materials Today Proceedings , Vol. 72 (2023) , pp. 1000-1006*

**8. Photovoltaic thermal technology with compound parabolic concentrator**

*Shah R.;Patel J.*

*International Journal of Ambient Energy , Vol. 43 (2022) , pp. 1098-1102*

**9. Modelling and performance analysis of electric vehicle**

*Sharmila B.;Srinivasan K.;Devasena D.;Suresh M.;Panchal H.;Ashokkumar R.;Meenakumari R.;Kumar sadasivuni K.;Shah R.R.*

International Journal of Ambient Energy , Vol. 43 (2022) , pp. 5034-5040

**10. Hydrogen Fueled Micro Combustion Chamber**

*Dr. Ronak Shah and Dr. Digvijay Kulshrestha*

3 rd NATIONAL CONFERENCE ON THERMAL FLUID AND MANUFACTURING SCIENCE – 2022 , Vol. (2022) , pp.

**11. Numerical Analysis of Lean Premixed Micro Scale Swiss Roll Combustor**

*Shah R.R.;Kulshreshtha D.B.*

Lecture Notes in Mechanical Engineering , Vol. (2021) , pp. 645-661

**12. Numerical Analysis of Lean Premixed Micro Scale Swiss Roll Combustor**

*Dr. Ronak Shah and Dr. Digvijay Kulshrestha*

Lecture Notes in Mechanical Engineering ((LNME)) , Vol. (2020) , pp.

**13. Experimental Studies on Recuperative Micro-Combustion Chamber for 1 W Gas Turbine Engine**

*Shah R.R.;Kulshreshtha D.B.;Shah P.D.*

Journal of the Institution of Engineers India Series C , Vol. 101 (2020) , pp. 785-792

**14. Micro combustor development using hydrogen as fuel**

*Shah R.;Kulshreshtha D.;Chaudhari N.*

ASME International Mechanical Engineering Congress and Exposition Proceedings Imece , Vol. 8A-2018 (2018) , pp.

**15. Enhancing Thermal Performance of Medium and High Temperature Thermal Energy Storage System Using Phase Change Material**

*Ronak Shah, Mayur Solanki*

International Conference on Energy Storage Technologies and Systems , Vol. (2018) , pp.

**16. Variable Cross Section Swiss Combustor: Experimental Investigations using Hydrogen as Fuel**

*Ronak Shah and Dr. Digvijay Kulshrestha*

25th National Conference on I.C.Engines and Combustion 2017 , Vol. (2018) , pp.

**17. The Design of Photovoltaic Thermal Technology with Compound Parabolic Concentrator**

*Ronak Shah and Jigar patel*

International Journal of Engineering Research and Advanced Development , Vol. 3 (2017) , pp. 1-10

**18. Pyramid Solar Still with Polyvinyl Fluoride Cover: Experimental Analysis**

*Ronak Shah, Rajesh chokshi*

2 nd International Conference on Emerging Trends in Mechanical Engineering , Vol. (2017) , pp.

**19. A Review: The Design of Photovoltaic Thermal Technology with Compound Parabolic Concentrator**

*Ronak Shah and Jigar patel*

Journal of Thermal Engineering and Applications , Vol. 3 (2016) , pp. 38-45

**20. Analytical and Numerical Analysis of Micro Combustor for Gas Turbine Engine**

*Ronak Shah and Dr. Digvijay Kulshrestha*

Indian Journal of Science and Technology , Vol. 9 (2016) , pp. 1-6

**21. Design and dimple Jacketed evaporator plate for 5KL bulk milk cooler**

*Ronak Shah and Yogi Ketan*

National conference on Advance in Refrigeration and Energy System - 2015 , Vol. (2015) , pp.

**22. Numerical analysis of micro gas turbine combustion chamber**

*Shah R.;Kulshrestha D.*

Aspacc 2015 10th Asia Pacific Conference on Combustion , Vol. (2015) , pp.

**23. Recuperative Combustion Chamber for Micro Gas Turbine: Numerical Analysis**

*Ronak Shah and Dr. Digvijay Kulshrestha*

24th National Conference on IC Engines and Combustion, Dehradun , Vol. (2015) , pp.

**24. Geothermal Energy : An Alternative Source of Energy**

*Ronak shah and Bala Dutt*

Int. Journal of Engineering Research and Applications , Vol. 4 (2014) , pp. 63-68

**25. Experimental Analysis Of 80 Tr Capacity Air Cooled Scroll Chiller Using R-22 & R-407c**

*Ronak Shah, Bhikhu B, Bala Dutt*

Int. Journal of Engineering Research and Applications , Vol. 4 (2014) , pp. 212-216

**26. Flame stability on trapped vortex combustor**

*Ronak Shah and Dr. Digvijay Kulshrestha*

International Workshop on Novel Combustion Concepts for Sustainable Energy Development , Vol. (2014) , pp.

**27. Design and Performance Evaluation of a Cold Room for Ice Cream**

*Darshan Gajdhar, Ronak Shah, Bala Dutt*

International Journal of Futuristic Trends in Engineering and Technology , Vol. 1 (2014) , pp. 12-19

**28. Reduction of air micro flora using clean air system in packaging area of a dairy plant**

*Ronak Shah*

Discovery Engineering , Vol. 3 (2014) , pp. 3-7

**29. Experimental studies on optimization of premixer and flame regimes in LP combustor with hydrogen as a fuel**

*Ronak Shah and Dr. Digvijay Kulshrestha*

9 th Asia- Pacific Conference on Combustion, ASPACC2013 , Vol. (2013) , pp.

**30. Performance improvement of double slope solar still using heat absorbing material**

*Ronak Shah and Alpesh Damor*

International Journal of Mechanical and Production Engineering Research and Development , Vol. 3 (2013) , pp. 143-148

**31. Psychrophiles: Defects triggering organisms in pasteurized milk**

*Ronak Shah, Chauhan, D R Shah, B P Shah*

Discovery , Vol. 4 (2013) , pp. 60-64

**32. Study of photoelectrochemical solar cell using WSe<sub>2</sub> crystal**

*Parmar R.;Sahay D.;Pathak R.J.;Shah R.K.*

Advanced Materials Research , Vol. 665 (2013) , pp. 330-335

**33. Study of MoSe<sub>2</sub> crystal as a photoelectrochemical solar cell**

*Sahay D.;Parmar R.;Shah R.;Pathak R.*

Advanced Materials Research , Vol. 665 (2013) , pp. 326-329

**34. Seasonal Variation of Airborne Micro flora in Dairy Processing Plant**

*Ronak Shah, D R Shah*

Species , Vol. 2 (2013) , pp. 18-22

35. **Material Selection and Hygienic Design consideration for Dairy and Food Processing Equipment**

*Ronak Shah, B P Shah*

Indian Dairyman , Vol. 57 (2005) , pp. 57-62

36. **Management of refrigeration plant for conservation of energy in dairy plants**

*Ronak Shah*

Advances in Renewable Energy Technologies , Vol. (2003) , pp.

37. **Effect of temperature on solar hot water collection**

*Ronak Shah*

Advances in Renewable Energy Technologies , Vol. (2003) , pp.