

Dr. Tulshi Shiyani

Curriculum Vitae

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EDUCATION

Central University of Gujarat, India - Ph.D in Nanosciences

August 2017 – February 2023

Title: Hybrid nanostructures for solar energy conversion applications.

Saurashtra University, India — M.Sc. in Physics

July 2006 – July 2008

Dissertation Title: Nanostructured ZnO thin films

Saurashtra University, India — B.Sc. in Physics

July 2003 – July 2006

Shri Lal Bahadur Shastri Vidyalaya, India — 12th Science

July 2001 – July 2003

Shri Mahavir Vidyalaya, India — 10th / SSC

June 2000 – May 2001

EXPERIENCE

E-YUVA centre, Atmiya University, India — Post Doctoral Fellow

March 2023-Current

Startup project to develop proof of concept in Green hydrogen

Galaxy EcoEnergy Private Limited, Rajkot — Director

August 2023 – Current

DPIIT recognized Startup company in green energy and hydrogen

Central University of Gujarat, India - Doctoral Research Fellow

August 2017 – February 2023

Research & Development in solar energy conversion

VVPEC-Gujarat Technological University, India — Lecturer

July 2015 – July 2017

Education and Research in Department of Nanotechnology

Shiyani Research Institute, Rajkot — Project Head

June 2014 – June 2015

Administration, Research & Development, Consultancy

Pandit Deendayal Petroleum University — Jr. Research Fellow

August 2012- August 2014

Research & Development in solar energy materials and devices

The Galaxy Academy, Rajkot — Coordinator & Teacher

October 2010- July 2012

Indian Institute of Technology Kanpur — Project Associate

September 2008 – September 2010

Research & Development in Quantum informatics and spintronics

PROJECTS (RUNNING/COMPLETED)

Green Hydrogen Generation, funded by BIRAC, DBT, GoI, 5 Lac

March 2023 to June 2024

Solar energy charging station, funded by SUSSIP, 2 Lac

2022-2023

Photonic nanostructures and devices, supported by INUP

One month in 2018

PERSONAL INFORMATION

Date of Birth: 09/12/1985

Place of Birth: Rajkot, (IN)

Citizenship: Indian

Marital Status: Married

Languages known: Gujarati, English, Hindi, Sanskrit

SKILLS

Science & Technology

Teaching

Research & Development

Materials Synthesis &

Characterization

Device fabrication & Testing

Skill development

Publishing articles

Administration

Project management

Computing

Microsoft office, SQL,

Matlab,

Labview

ACHIEVEMENTS/

AWARDS

DAE Project Fellow

2008-2010

DRDO Jr. Research Fellow

2012-2014

UGC Research Fellow,

2017-2022

E-YUVA Innovation Fellow,

2023-2024

MEMBERSHIP /

AFFILIATION

Life Member

Solar Energy Society of India

Indian Laser Association

Member in BoD

Galaxy EcoEnergy Pvt. Ltd.

Member, Board of Trustees

SRI Society, Rajkot

PUBLICATIONS

Research Articles

1. T. Shiyani, et al., Materials for Renewable and Sustainable Energy, 2022.
2. T. Shiyani et. al., Bul. Mat. Sci., 2022
3. T. Shiyani et. al., J. Mat. Sci. & Mat. Ele., 2021.
4. T. Shiyani et al., Journal of Nanoscience, nano engineering and applications, 2021
5. T. Shiyani et al., Journal of Renewable and Sustainable Energy, 12, 044701, 2020.
6. T. Shiyani et al., Nanomaterials and Energy, Vol. 9, Issue 2, pp. 1-9, 2020.
7. T. Shiyani et al., Materials Today Proceedings, Vol. 32, Part 3, pp. 412-416, 2020.
8. T. Shiyani et al., IETE Journal of Research, pp. 1-8, 2020.
9. T. Shiyani et al., Nanomaterials and Energy, Vol. 9, Issue 1, pp. 1-7, June, 2020.
10. T. Shiyani et al., IJSRR, 7(1) Suppl., 434-440, 2018.
11. T. Shiyani et al., Bulletin of Laser and Spectroscopy Society of India, 23, 83-90, 2017.
12. T. Shiyani et al., Journal of Nanoscience, nano engineering and applications, vol. 6, pp 3, 2016. ISSN: 2231 - 1777
13. T. Shiyani et al., Materials Chemistry and Physics, Vol. 171, pp. 63-72, 2016.
14. Journal of Nano Research, 42, 92-99, 2016.
15. J. Bioelectron Nanotechnol, 1:1, 5, 2016.
16. T. Shiyani et al., IETE Tech. Rev., pp. 1-5, 2015.
17. Adv. Mater. 22 (40), 4448-4451, 2010.

Books / Chapters

1. T. Shiyani, Transparent Solar PV panels, InTech publishing, 2022.
2. T. Shiyani et al., Nanomaterials and Applications, Guj. Uni. Granthnirman Board, 2021.
3. T. Shiyani et al., Chapter 2, Plasmonic solar cells, Fundamentals of Solar Cells Design, Wiley-Scrivener, 2021. ISBN: 9781119724704
4. T. Shiyani et al., Nanodevices, T. Shiyani and J. H. Markna, Grin Publication, 2019. ISBN:334600208X, 9783346002082
5. T. Shiyani et al., Phototonics: Micro to Nano, T. Shiyani and J. H. Markna, Shiv Shakti Publication, 2017. ISBN: 978-81-936853-8-9

Conference Proceedings

1. T. Shiyani et al., AIP Conf. Proc. 1349, 967, 2011.
2. IEEE ICEE-2014.
3. T. Shiyani et al., AIP Conference Proceedings 1837, 040006, 2017.
4. AIP Conference Proceedings 1837, 030004, 2017.
5. 53rd DAE Solid State Physics Symposium Proceedings, 53, 1009-1010, 2008.

Patents

1. Indian patent, 2023 on Green hydrogen generation (provisional)

PUBLICATIONS

Research Articles 17

Book/chapter: 5

Conference proceedings: 5

Patents: 1 (provisional)

PoC Development

Solar Energy Charging station
TRL 7

Green hydrogen PEC reactor
TRL 5

Piezoelectric mobile charger
TRL 6

R&D INTEREST

Physical Sciences

Materials Science

Engineering Physics

Nanoscience & Nanotechnology

Semiconductors devices & IC

Photonics

Spintronics

Solar energy conversion

Green hydrogen

Superconductivity & Magnetism

Green energy applications

Sensors

Quantum optics