

# Dr. Piyush K. Patel

Subjects: Green & Sustainable Science & Technology

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## Basic Information



**Name:** Dr. Piyush K. Patel  
(Feb 1986–)

<b>Birth Location:</b>	U.P., India
<b>Title:</b>	Assistant Professor
<b>Affiliation:</b>	Renewable Energy Lab., Dept. of Physics, Maulana Azad National Institute of Technology, Bhopal, M.P.
<b>Honors:</b>	Winner of Materials Today Cover Competition 2016 Best Research Paper Award: ICAM 2023, National Conference on Advances in Physics-2012, IIT Roorkee University top 1% rank in NGPE/ IAPT 2006-2007 (D.D.U. Gorakhpur University, Gorakhpur) Memberships (Life Time): 1. Indian Physics Association, 2. Indian Science Congress Association Memberships(Life Time):3. Indian Association of Physics Teacher, 4.Materials Research society India CSIR-JRF-NET 2009, GATE 2009, JEST 2010

## 1. Introduction

Dr. Piyush K. Patel is currently working at Maulana Azad National Institute of Technology Bhopal, India as Assistant Professor in the Department of Physics. He has done Ph.D. from I.I.T. Roorkee, India. In his academic carrier till date, he has published more than 40 research papers, book chapters and conference proceedings in reputed international journals. He is conqueror of Materials Today Cover Competition, 2016. He was granted best research paper award in NCAP-2012, I.I.T. Roorkee and iCAM 2022. He is among the university's top 1% rankers in NGPE/ IAPT 2006-2007 (D.D.U. Gorakhpur University, Gorakhpur). His major research interests are Photovoltaic Solar Cell Devices, Functional Nanomaterials, Dielectric, Polymer and Quantum dot. His recent research interest is focused on designing and development of photovoltaic devices.

## 2. Achievements

He is a Member of renowned Editorial Boards: 1. American Journal of Nanosciences (Science Publishing Group), 2. Review Editor on the Editorial Board of Dielectric Materials (specialty section of Frontiers in Electronic Materials).

He is a Reviewer in famous International Journals: 1. Sustainable Energy & Fuels (The Royal Society of Chemistry), 2. Solar Energy Materials and Solar Cells (Elsevier), 3. Materials Research Bulletin (Elsevier), 4. Open Journal of Applied Sciences (Scientific Research) 5. Materials Today: Proceedings Journal (Elsevier), 6. Journal of Nanostructures, 7. Journal of Electronic Material (Springer), 8. Progress in Color, Colorants and Coatings, 9. Materials (MDPI), 10. (Wiley).

"Device simulation of highly efficient eco-friendly  $\text{CH}_3\text{NH}_3\text{SnI}_3$  perovskite solar cell", "Origin of giant dielectric constant and magnetodielectric study in  $\text{Ba}(\text{Fe}_{0.5}\text{Nb}_{0.5})\text{O}_3$  nanoceramics", "Structural, dielectric and conductivity properties of  $\text{Ba}^{2+}$  doped  $(\text{Bi}_{0.5}\text{Na}_{0.5})\text{TiO}_3$  ceramic", "Reduced dielectric loss in  $\text{Ba}_{0.95}\text{Sr}_{0.05}(\text{Fe}_{0.5}\text{Nb}_{0.5})\text{O}_3$  thin film grown

by pulsed laser deposition” and “Effective strategies for reduced dielectric loss in ceramic/polymer nanocomposite film” are some of his famous contributions to the scientific community.

He has organized three national workshops: Organised National Workshop:

1. Organized two-week online STTP as a coordinator entitled “Online Short-Term Training Course on X-ray Diffraction: Theory, Methods and Workflow (XRD 2021)” held during 6– 15th September, 2021 at Department of MME in the collaboration of Department of Physics, Maulana Azad National Institute of Technology Bhopal.
2. Organized one-week online STTP as a coordinator entitled “Advanced Methods of Material Characterization and Surface Analysis” held during 27 February, 2021 to 03 March, 2021 at Department of Physics in the collaboration of Department of Chemistry and Chemical Engineering, Maulana Azad National Institute of Technology Bhopal.
3. Organized one-week national workshop as a coordinator entitled National Workshop on “Emerging Technologies for Synthesis and Characterization of Nanostructured Materials” held during 02 December, 2019 to 06 December, 2019 at Department of Physics, Maulana Azad National Institute of Technology Bhopal.

He holds Life Time Membership in prestigious Indian Scientific Communities and Associations: 1. Indian Physics Association (IPA), 2. Indian Science Congress Association (ISCA) 3. Indian Association of Physics Teacher (IAPT) and 4. Materials Research Society of India, 4. Materials Research society of India (MRSI).

He has delivered guest lecture at many international platforms:

1. Talk delivered online on “Impact of Defects and Work Function of Electrode in Solar Cell Devices” in World congress on Materials Science Research and Nanotechnology (May 22-23, 2023) as invited speaker on 22th May 2023 organised at Rome, Italy.
2. Talk delivered online on “Influences of Local Electric Field at Interfaces in Solar Cell Devices” in 5th Virtual Congress on Materials Science & Engineering (September 26, 2022- September 29, 2022) as invited speaker on 29th September 2022 organised by Mind Authors, Inc., USA.
3. Talk delivered online on “Device Simulation of Highly Efficient Eco-Friendly Solar Cell” in International Online Conference on Materials Science and Technology (ICMT-2021) (Nov 11, 2021- Nov 13, 2021) as invited speaker on 13th Nov 2021 organised by Mahatma Gandhi University, P.D Hills P.O, Kottayam Kerala, India & Gdansk University of Technology, Gdansk, Poland & Wroclaw University of Technology, Wroclaw, Poland.
4. Talk delivered online on “Device Simulation of Highly Efficient Eco-Friendly Solar Cell” in Graphene Summit 2021 entitled “Global Virtual Summit on Carbon, Graphene, 0D, 1D, and 2D materials” with theme “Contemporary Innovations and Emerging Novel Research in Catalysis and Chemical Engineering” (July 22, 2021- July 23, 2021) as invited speaker on 23rd July 2021 organised by Mind Authors, Inc., USA.
5. Talk delivered online on “Complex Impedance analysis: A potential tool for characterization” in an International Conference and Exhibition on Materials and Engineering (ICEME-2021) as invited speaker on 8th June, 2021 organised by Helix Group Scientific Network in association with ICEME leadership committee at Seoul, South Korea.

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