CURRICULUM VITAE

- Name: Dr. Akhilesh Pramod Patil
- **Permanent Address:** 584E/13, Sunita Vihar, Rajendra Nagar, Kolhapur- 416 004, Maharashtra State, India
- Academic Qualification: B.Sc.-M.Sc. (5 year integrated), Ph.D. in Nanoscience and Technology (equivalent to M.Sc. Physics, as per Shivaji University Academic Council)
- **Date of Birth**: 07th February 1993 **M**

Marital Status: Married Mobile No. 8530406340

- **Religion/Caste**: Hindu-Maratha
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1	Ph.D.	Shivaji	2022
2 B	S.ScM.Sc.	Shivaji	2019

Educational Qualification:

Title of the PhD thesis: Investigation on resistive switching properties of chemically synthesised oxide materials

• Academic Achievements:

- 1. Awarded student exchange fellowship at PEML laboratory, Chonnam National University, South Korea and successfully completed project on an advanced perovskite solar cells and achieved highest 15% photon conversion efficiency (21.12.2018).
- 2. Won consolation prize for the poster presentation at the 4th International conference on Physics of Materials and Materials based device fabrication organized by Department of Physics, Shivaji University, Kolhapur during 2018-2019.
- 3. Best paper presentation award winner in an International conference organised by Y. C. institute of Satara, during 2019-2020.

• Papers/Publications :

- A.D. Sheikh, Akhilesh P. Patil, Chang Kook Hong, S. S. Mali, P.S. Patil, New insights into active-area-dependent performance of hybrid perovskite solar cells, Journal of Materials Science, 54, (2019), 10825-10835, (Impact Factor= 4.22)
- 2. J. V. Patil, S. S. Mali, J. S. Shaikh, Akhilesh P. Patil, P. S. Patil, C. K. Hong, Efficient mixed halide perovskite solar cells via solvent engineering process, Pigments and Dyes, 168, (2019), 311-316, (Impact factor = 4.61)
- J. V. Patil, S. S. Mali, Akhilesh P. Patil, J. S. Shaikh, P. S. Patil, C. K. Hong, Influence of reduced graphene oxide – TiO₂ composite nanofibers in organic indoline DN350 based dye sensitized solar cells, Synthetic Metals, 30, (2019), 12555-12565, (Impact Factor = 4.22)
- S, A. Beknalkar, V. L. Patil, N. H. Harale, P. S. Patil, J. H. Kim, Akhilesh P. Patil, M. S. Suryavanshi, 2-D to 3-D conversion of WO₃ nanostructures using structure directing agent for enhanced NO₂ gas sensing performance, Sensors and Actuators, 304, (2020), 111882, (Impact Factor = 4.29)
- 5. V. L. Patil, S. A. Beknalkar, N. S. Harale, M. S. Suryavanshi, Akhilesh P. Patil, Vikas Patil, J. H. Kim, P. S. Patil, Construction of Cu doped ZnO nanorods by chemical method for low temperature detection of NO₂ gas, Journal of Alloys and Compounds, 299, (2019), 111611, (Impact Factor = 4.29)
- J. S. Shaikh, J. V. Patil, S. A. Beknalkar, Akhilesh P. Patil, N. L. Tarwal, K. Pongsakorn, C. K. Hong, P. S. Patil, Quantum dot solar cells: Role of nanoarchitectures, Pervoskites, Quantum dots and charge transport layers, Chemical Communication, 12, (2019), 4724-4753, (Impact Factor = 7.8)
- J. V. Patil, S. S. Mali, Akhilesh P. Patil, P. S. Patil, C. K. Hong, Electrospun TiO₂ nanofibres for metal free indoline dye sensitised solar cells, Journal of Materials Science: Materials in Electronics, 256, (2019) 116146, (IF = 4.62)
- J. V. Patil, S. S. Mali, Akhilesh P. Patil, J. S. Shaikh, P. S. Patil, C. K. Hong, Highly efficient mixed halide cation perovskite solar cells based on rGO-TiO₂ composite nanofibers, Energy, 256, (2019), 116146, (Impact Factor= 7.14)
- Akhilesh P. Patil, K. A. Nirmal, S. S. Mali, C. K. Hong, T. G. Kim, P. S. Patil, T. D. Dongale, Tuning the analogue and digital resistive switching properties of TiO₂ by nanocompositing Al doped ZnO, Materials Science in semiconductor processing, 115, (2020), 105110, (Impact Factor = 3.92)
- 10. S. B. Dhavale, V. L. Patil, S. A. Beknalkar, A. M. Teli, A. H. Patil, Akhilesh P. Patil, J. C. Shin, P. S. Patil, Study of solvent variation on controlled synthesis of different nanostructured NiCO₂O₄ thin films for supercapacitive applications, J. of Colloid and Interface Science, Accepted, 588, (2021), 589-601, (Impact factor- 9.9)

- 11. S. A. Kundale, Akhilesh P. Patil, S. L. Patil. P. B. Patil, R. K. Kamat, D. K. Kim, T.G. Kim, T. D. Dongale, Effects of switching layer morphology on resistive switching behaviour: a case study of electrochemically synthesised mixed phase copper oxide memristive devices, Applied Materials Today, 27, (2022), 101460, (Impact factor -8.6)
- 12. Akhilesh P. Patil. C. Revadekar, S.A. Kundale, S. Patil, T. D. Dongale, Investigation of resistive switching effect and time series statistical analysis of solution combustion synthesised ZnTiO₃ memristive device, Materials Science and Engineering B, 33, (2022), 23390-233403, (Impact factor- 3.9).

• List of papers/posters presented in the conference:

- 1. 1st International conference on recent trends in Physical, Chemical, Biological Nanoscience organised by LBS Satara during 2022.
- 2. One day International conference on recent trends in science and technology, Willingdon college, Sangli on 29th June 2022.
- 3. ACAMMMC 2021, International conference, SRM Institute of science and technology in association with IISc, Bangalore,
- 4. 4th International conference on Physics of Materials and Materials based device fabrication organized by Department of Physics, Shivaji University, Kolhapur during 2019 December.
- 5. International conference on (MHMEE-2020) international conference at Yashwantrao Chavan institute of sciences, organised by Y. C. institute of Satara.
- 6. Won 2nd prize in poster presentation in NCPM-MDF-2023, department of Physics, Shivaji University.

• Skills:

- 1. Fabrication of perovskite photovoltaic device
- 2. Band gap engineering of perovskite materials
- 3. Handling and operating X-ray diffractometer, Bruker D2 phaser
- 4. Excellent English communication skill

• References:

- Prof. Dr. Kiran Kumar Sarma, Director, School of Nanoscience and Technology, Shivaji University, Kolhapur, Contact No: 9881920369 Email: kk_sarma@hotmail.com
- Dr. T. D. Dongale, Research Supervisor, School of Nanoscience and Technology, Shivaji University, Kolhapur, Contact No: 9975460937 Email: tdd.snst@unishivaji.ac.in