**BIO-DATA**

1. Name and full correspondence address: **Dr. Vandana B PATIL**

Assistant Professor

Department of Physics,

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2. Email(s) and contact number(s) : [vandana.patil@dypiu.ac.in](mailto:vandana.patil@dypiu.ac.in)

+919922916083

3. Institution: : Department of Physics, Department of Physics,

D Y Patil International University Akurdi Pune -411044

.

4. Date of Birth : 07/06/1982

5. Gender (M/F/T) : Female

6. Category Gen/SC/ST/OBC : Open

7. Whether differently abled (Yes/No) : No

8. Academic Qualification (Undergraduate Onwards)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Degree | Year | Subject | University/Institution | % of marks |
| Ph.D. | 2017 | Physics | Solapur University, Solapur | -- |
| M.Sc. | 2007 | Physics | Shivaji University, Kolhapur | 68.96 |
| B.Sc. | 2005 | Physics | Shivaji University, Kolhapur | 77.60 |

9. Ph.D thesis title, Guide’s Name, Institute/Organization/University, Year of Award.

Title :“Synthesis and characterization of Tungsten Trioxide nanostructures by chemical method for gas sensing and supercapacitor applicatons”

Guide’s Name: Prof. Sharad Suryavanshi (M.Sc., Ph.D.)

Material Science Laboratory, Department of Physics, Solapur University, Solapur-413233,Maharashtra, India.

PhD Awarded : August 2017

10. Work experience (in chronological order).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sr.No. | Positions  held | Name of the  Institute | From | To | Pay Scale |
|  | Assist. Prof | Department of Physics  D Y Patil international University Akurdi Pune 44 | 1/08/2024 | Until now | 15600/- + 6000 AGP |
| 1 | Assist. Prof. | Department of Physics Dr. D. Y. Patil Institute of Engineering, Management & Research | 1/12/2017 | 30/07/2024 | 15600/- + 6000 AGP |
| 2 | Lecturer . | Department of Physics Dr. D. Y. Patil Institute of Engineering, Management & Research, | 1/6/2012 | 30/11/2017 | 36000/- 5th pay |
| 3 | Lecturer | Department of Physics D Y Patil College of Engineering Akurdi Pune 44 | 10/07/2009 | 31/5/2012 | 20,000/- Consolidated per month. |

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No. | Name of Award | Awarding Agency | Year |
| 1. | Best Guide Award | Marathi Vidnyan Parishad | 2024 |
| 2. | Convener of Innovation conference sponsored by SPPU Pune | - | 2015 |
| 3. | Best Mentor Award | Dassult system pvt Ltd Pune | 2021 |
| 4. | Best Teacher Award | Dr. D. Y. Patil Institute of Engineering, Management & Research | 2017 |

12. Publications *(List of papers published in SCI Journals, in year wise descending order). :* ***10***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sr No.** |  | **Paper Title** | **Conference/ Journal Name** | **Date of Publication** | **Venue/Vol. & Issue No.** | **DOI No/ISBN No** | **Page No (from-to)** | **Link For the Paper** | **Impact Factor** |
| **1** |  | [Oxalic acid induced hydrothermal synthesis of single crystaline tungsten oxide nanorods](https://www.sciencedirect.com/science/article/pii/S0925838813030818) | journal of alloys and compounds | 25 March 2014 | **590** | [10.1016/j.jallcom.2013.12.102](https://doi.org/10.1016/j.jallcom.2013.12.102) | 283-288 | [**https://www.sciencedirect.com/science/article/abs/pii**](https://www.sciencedirect.com/science/article/abs/pii)  **/S0925838813030818?via%3Dihub** | 6.2 |
| **2** |  | [Enhanced NO2 response of hydrothermally grown Ti doped WO3 nanostructures](https://link.springer.com/article/10.1007/s10854-016-5702-z) | Journal of Materials Science: Materials in Electronics | **2017/1** | **28** | **10.1007/s10854-016-5702-z** | 1612-1619 | **https://link.springer.com/article/10.1007/s10854-016-5702-z** | **3.0** |
| **3** |  | [Effect of annealing on the properties of CTAB assisted lead tungstate](https://www.sciencedirect.com/science/article/pii/S0167577X16309120) | Materials Letters | 2016/10/15 | **181** | [10.1016/j.matlet.2016.05.140](https://doi.org/10.1016/j.matlet.2016.05.140) | **350-353** | **https://www.sciencedirect.com/science/article/abs/pii/S0167577X16309120** | **2.5** |
| **4** |  | Bottom of Form  High performance single crystalline PbWO4 nanorod field effect transistor | Journal of Materials Science: Materials in Electronics, | 2015 | **26** | **10.1007/s10854-015-3685-9** | 3685-3689 | **https://link.springer.com/article/10.1007/s10854-015-3685-9** | **2.8** |
| **5** |  | Macroporous WO 3 : Tunable morphology as a function of glycine concentration and its excellent acetone sensing performance | [Ceramics International](https://www.sciencedirect.com/journal/ceramics-international) | January 2019 | **25/141** | [10.1016/j.ceramint.2018.09.181](https://doi.org/10.1016/j.ceramint.2018.09.181) | 409-414 | **https://www.sciencedirect.com/science/article/abs/pii/S0272884218326488?via%3Dihub** | **5.0** |
| **6** |  | Enhanced energy density and stability of self-assembled cauliflower of Pd doped monoclinic WO3 nanostructure supercapacitor | MATERISL CHFMISTRY PHYSICS | 2019/12 | **225/5** | [10.1016/j.matchemphys.2018.12.077](https://doi.org/10.1016/j.matchemphys.2018.12.077) | **192-199** | **https://www.sciencedirect.com/science/article/abs/pii/S0254058418310502** | **5.2** |
| **7** |  | [**Spray deposited superhydrophobic ZnO coatings via seed assisted growth**](https://www.sciencedirect.com/science/article/pii/S0257897211008607) | Surface and Coatings Technology | **2011/12** | **206/6** | [10.1016/j.surfcoat.2011.08.050](https://doi.org/10.1016/j.surfcoat.2011.08.050) | 1336–1341 | **https://www.sciencedirect.com/science/article/abs/pii/S0257897211008607** | **5.2** |
| **8** |  | [Photoluminescence And Photoelectrochemical Properties Of Nanocrystalline Zno Thin Films Synthesized By Spray Pyrolysis Technique](https://www.sciencedirect.com/science/article/pii/S0169433211011664) | Applied surface science | **2011** | **257** | [10.1016/j.apsusc.2011.07.099](https://doi.org/10.1016/j.apsusc.2011.07.099) | 10789– 10794 | **https://www.sciencedirect.com/science/article/abs/pii/S0169433211011664** | **6.0** |
| **9** |  | Spray Deposition OfThe Nanostructured Zno Thin Films For Non-Volatile Resistive Switching Memory Applications | Applied Physics A | **2022/2023** | **129/7** | **10.1007/s00339-022-06253-x** | **401-410** | **https://link.springer.com/article/10.1007/s00339-022-06253-x** | **2.5** |
| **10** |  | Morphology And Crystal Structure Dependent Pseudocapacitorperformance Of Hydrated WO3 Nanostructures | **Material Advances** | 2020 | **1** | 10.1039/C8SE00476E | , 2492-2500 | **https://pubs.rsc.org/en/content/articlehtml/2020/ma/d0ma00518e** | **3.8** |

13.Detail of patents: **7**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sr.  No | Patent Title | Name Of Applicant(S) | Patent No. | Award Date | Agency/Country | Status |
| 1 | An Intelligent Management For Electricity Charge Settlement For Energy Storage Power Station Based On Blockchain & Machine Learning | Dr Vandana B Patil Dr Ankur Gupta | 2022/11105 | 29/01/2024 | South African | Granted |
| 2 | Smart Pen To Detect Human Mental Focus Concentration  With Pressure Sensors On The Grip Using Machine Learning | Vandana B Patil Ankur Gupta | 20 2022 100 433.1. |  | German | Granted |
| 3 | ***A Smart Trolley*** | Vandana B Patil  Sunil Dambhare | ***202221007373*** |  | Indian | Granted |
| 4 | ***Portable Hitch Mounted Cargo Carrier*** | Vandana B Patil  Sunil Dambhare | ***364402-001*** |  | Indian | Granted |
| 5 | An Artificial Intelligence Based Biomedical Sensing Systemfor High Throughput Biomolecule Testing | Vandana B Patil  Mukesh Soni | 202011019959 A |  | Indian | Published |
| 6 | A System To Harvest Electrical Energy | Vandana B Patil  Sunil Dambhare | 202221007222 |  | Indian | Published |
| 7 | A Portable Solar Lamp | Vandana B Patil  Sunil Dambhare | 202221007372 |  | Indian | Published |
| 8 | A Scientific Image ProcessingMethodology Foraparticular Focus On Single | Vandana B Patil Ankur Gupta | L-128033/2023 |  | Indian | Granted |

14. Books/Reports/Chapters/General articles etc. **3**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S. No | Title | Author’s Name | Publisher | Year of Publication |
| 1. | Nanostructured materials and design concept for electronic nose | K. V. Patil, R. S. Redekar, A. A. Bhoite, V. B. Patil, K. V.Gurav, N. L. Tarwal | Springer | 2024 |
| 2. | Performance and Security Issues Management During Online Classes | V B Patil ,Ankur Gupta | Wiley (10.1002/9781119867647) | 2023 |
| 3. | Blockchain, IoT, and AI Technologies for Supply Chain Management | V B Patil ,Ankur Gupta | CRC Press Taylor & Francies | 2023 |
| 4 | Innovation, Business to Society | V B Patil ,Mr Arupkumar Sarkar | Redshine (UK) | 2022 |
| 5 | NEP-2020 | V B Patil Mr Rohit Ade | Redshine (UK) | 2023 |
| 6 | Vikshit Bharat 2047 | V B Patil Mr Rohit Ade | Redshine (UK) | 2024 |
| 7 | Engineering Physics | V B Patil, Alka Sawaikar | Techknowledge publication | 2022 |

15. Any other Information (maximum 500 words)

Dr. V.B.P ATIL received a B.Sc. degree in physics (2005), M.Sc. degree in Physics (2007), and Ph.D. degree (2011) in Physics from Shivaji University, Kolhapur (India). Currently, She is working as an Assistant Professor at Department of Physics, D. Y. Patil International University Akurdi, Pune District, Maharashtra , (India). Before joining this post, he has been shouldered the responsibility of Head of Innovation and Incubation in DR D Y Patil Institute of Engineering Management and Research Akurdi Pune, Maharashtra, India.She has published more than 12 articles international journals with good impact factor. She has published a book Chapter ‘Wiley Publication’ and also published 3 article in edited books. Dr. She has obtained a national award best mentor by Marathi Vidyan Parishad funded by CSIR New Delhi. She has granted 4 Patents and 1 Copyright. One of her notable research projects involved the synthesis of nanostructured tungsten

trioxide (WO3) for sensing and supercapacitor applications. This work led to the publication of several research papers, such as "Oxalic acid induced hydrothermal synthesis of single crystalline tungsten oxide nanorods" in the Journal of Alloys and Compounds and "EnhancedNO2 response of hydrothermally grown Ti doped WO3 nanostructures" in the Journal of Materials Science: Materials in Electronics. These studies provided new insights into the properties and potential applications of tungsten trioxide in energy storage and environmental sensing. Dr. Patil's research has also extended to the development of high-performance semiconductor devices. For instance, her work on "High performance single crystallinePbWO4 nanorod field effect transistor" published in the Journal of Materials Science: Materials in Electronics demonstrated the potential of lead tungstate nanorods in advanced electronic applications. Furthermore, her innovative approaches in materials science have resulted inpatents such as "An Artificial Intelligence Based Biomedical Sensing System for High Throughput Biomolecule Testing," which was published in 2021.

In addition to her research, Dr. Patil has significantly contributed to mentoring and guiding student projects, leading to recognitions such as the KPIT Sparkle 2019 award. The project, titled "Generation of Water from Thin Air Using Peltier Module," emphasized the recovery of waste heat from common gas stoves to generate additional electrical energy, addressing energy conservation and resource optimization.