

Curriculum Vitae

Dr. DIPAK A BAUSKAR



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Personal:

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Nationality: Indian

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Flat No.104, B-Wing, Anuradha Building,
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Objectives:

I am passionately interested in physics with especially material science and its structural, engineering, industrial applications & area of corrosion, sensors based on mainly conducting polymer, metal oxides, nanocomposites, thin films technique and their application.

Research Skills:

- Ψ Knowledge of materials science, polymer science, metal oxides, nanocomposite, polymer/filler interface chemistry, nanocomposite processing, and structure-property correlations.
- Ψ Nanomaterial's synthesis & Thin film deposition techniques.
- Ψ Hands on experience and good understanding of several technologies in the area of physics such as Nanotechnology, Sensors and Electrochemistry.

Education Qualification:

Course	College	Year of Passing	Marks (%)	Board/ University
B.Sc (PHYSICS)	M J College, Jalgaon	June 2007	58.16	North Maharashtra University, Jalgaon
M.Sc (PHYSICS)	Department of Physics, NMU, Jalgaon	June 2009	71.75	North Maharashtra University, Jalgaon
Ph.D in Physics	School of physical sciences, NMU, Jalgaon	Jan. 2016	Nil	North Maharashtra University, Jalgaon

Work Involved:

- Preparation of conducting polymers such as PANI, PPY, POA, POT, PLA, PP based nanocomposites by using in-situ chemical polymerization method.
- Synthesized metal oxides such as ZnSnO₃, CeO₂, BaTiO₃, ZnO, Fe₂O₃, CuO, ZnS etc.
- To characterize these materials by using techniques like as XRD, Ultraviolet visible spectroscopy, FTIR, FESEM, TEM, SAED pattern, TEM, TGA and XPS etc.
- To study & improving their different properties like as Electrical, Mechanical, Thermal, Luminescence, Chemical & anticorrosion and Application in Humidity, Gas and Bio sensors.

Methods adopted for Synthesis:

- Chemical polymerization.
- In situ chemical polymerization.
- Electrochemical polymerization.
- Sol gel method.

- Hydrothermal synthesis.
- Microwave.
- Mechanical mixing.
- Non-Isothermal.
- Co-precipitation.

Experience:

Research:

M.Sc. Project - Influence of synthesis temperature on the anticorrosive properties of poly (o-anisidine) electrodeposited on brass from an aqueous saccharin solution.

Project Fellow - Department of Physics, North Maharashtra University, Jalgaon, India.

I worked as a Project fellow from June 23rd 2009 to 31st March 2012 under a UGC sponsored research project entitled “**Conducting polymer/Metal oxide nanocomposites: Synthesis, characterization and application to gas sensing**” approved to Prof.P.P.Patil by UGC, New Delhi.

Ph.D. Thesis Title - “**Investigation of Conducting Polymer/Metal Oxide nanocomposite films for Humidity Sensing Application**” Under the guidance of **Prof.P.P.Patil**.

Teaching:

- (i) Assistant Professor in Physics – From 1-3-2016 to 21-7-2018 at **A. C. Patil College of Engineering and Technology**, Kharghar, Navi Mumbai.
- (ii) Assistant Professor in Physics (University Approved Post)– 1-8-2018 to till date at **Fr. C. Rodrigues College of Engineering**, Fr. Agnel Ashram, Bandstand, Bandra (West) Mumbai.

Fellowships:

- Junior Research Project Fellowship from UGC, New Delhi, India during the tenure of 2009-2012.
- “Shri. Gyanchand H. Rasoni doctoral fellowship” from 2013-2014.

Workshops:

- 1) UGC – SAP sponsored one day National Workshop on “**Advances in Materials Processing**” on **8th March 2014** organized by school of Physical Sciences, North Maharashtra University, Jalgaon.
- 2) DAE-BRNS 3rd National Workshop on **Materials Chemistry(NWMC-2015) on November 20-21, 2015** organized by Chemistry Division, Bhabha Atomic Research Centre, Mumbai.
- 3) One day National Workshop on “**MATERIALS CHARACTERIZATION TECHNIQUES**” on **8th January, 2016** organized by School of Physical Sciences, North Maharashtra University, Jalgaon.
- 4) SAMCO MEMS Workshop 2016 Bombay on “**MEMS and Nano Processes**” **Organized by SAMCO INC., Japan** with Department of Electrical Engineering, Indian Institute of Technology Bombay on 2nd February 2016.
- 5) One day National Workshop on “**Application of Radiation and Radioisotopes in Diagnosis and Therapy of Cancer**” jointly organized by Vidyalkar Institute of Technology and Society for Radiation Research (SRR) on 15th October 2016, Wadala (E), Mumbai.
- 6) Indo-German-Teachers-Program “**One day Hands-on-Workshop on Organic Electronics**” on 6th December 2017 organized and conducted by Prof. Amitabh Banerji (University of Cologne, Institute for Chemistry Education) and Prof. Arnab Bhattacharya (TIFR, Mumbai).
- 7) “**Learning Physics Through Simple Experiments**” (2nd April to 10th June 2020) **Organized by Indian Institute of Technology Kanpur (IIT KANPUR)**.
- 8) “**Preparation of Physics NET/SET Examination**” Organized by Sadguru Gadge Maharaj College, Karad from 29th -2nd Aug 2020.
- 9) “International Workshop on X-ray Diffraction Analysis” Organized by Department of Physics, Siddaganga Institute of Technology, Tumakuru, Karnataka on 16th to 20th Oct 2020.

Faculty Development Programs:

- 1) One Week Online Faculty Development Programme on **"ICT ENABLED TEACHING LEARNING"** 7th– 13th September 2020 and obtained grade organized by Teaching Learning Centre Ramanujan College University of Delhi & Janki Devi Memorial College University of Delhi.
- 2) ONE WEEK FACULTY DEVELOPMENT PROGRAM 11th – 17th October 2020 on **"Learning Management System (MOODLE) For Online Teaching-Learning"** organized by Guru Angad Dev Teaching Learning Centre, S.G.T.B. Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of MHRD.(**Grade A**)
- 3) ONE WEEK FACULTY DEVELOPMENT PROGRAM 09-15 September 2020 on **"Research Ethics & Characterizations Techniques in Materials Science"** organized by Guru Angad Dev Teaching Learning Centre, S.G.T.B. Khalsa College, University of Delhi under the PMMMNTT of MHRD and Bishop Moore College, Mavelikara, Affiliated to the University of Kerala & St. John's College, Agra. .(**Grade A**)
- 4) AICTE Training And Learning (ATAL) Academy Online FDP on **"Novel Materials"** from 2020-10-5 to 2020-10-9 at Pillai College of Engineering.
- 5) AICTE Training And Learning (ATAL) Academy Online FDP on **"Novel Materials"** from 2020-11-2 to 2020-11-6 at Shri Shankaracharya Technical Campus Shri Shankaracharya Group of Institutions.
- 6) AICTE Training & Learning (ATAL) Academy Online Elementary FDP on **"Energy storage"** from 2021-05-17 to 2021-05-21 at INSTITUTE OF AERONAUTICAL ENGINEERING.

Orientation Programs:

- 1) Physics Teacher Orientation Programme ON Revised **"ENGINEERING PHYSICS"** SYLLABUS OF UNIVERSITY OF MUMBAI from Academic Year 2019-20 on 25th Sep.2019 at Shah & Anchor Kutchhi Engineering College, Chembur, Mumbai.

Short Term Training Programs (STTP):

- 1) Two-Week Short Term Training Program on **"Process Design & Intensification: Fundamentals to Applications"** Dec. 26, 2016 – Jan. 4, 2017 Organized by Department of Chemical Engineering, UICT, North Maharashtra University, Jalgaon, Maharashtra. Sponsored by **MHRD, GoI, TEQIP-II.**
- 2) **ISTE** Approved Short Term Training Program (STTP) on **"Energy, Environment and Conservation"** 26th June – 1st July 2017 Organized by Department of Mechanical Engineering, A C Patil College of Engineering, Kharghar.
- 3) AICTE Sponsored Two-Week Short-Term Training Program on **"Research Areas in Technologies for Societal and Rural Development"** Organized by Department of Electronics and Computer Science, Fr. Conceicao Rodrigues College of Engineering during 21st December 2020 to 1st January 2021.
- 4) AICTE Sponsored One Week STTP on **"Emerging Trends in Nanomaterials for Electronic & Optoelectronic devices"** "Organized by Swarnandhra College of Engineering & Technology, Narsapur-534-280, (A.P.), INDIA from 24th-29th May 2021.

Universal Human Values (UHV):

- 1) AICTE Sponsored Three Day Faculty Development Programme on **"Student Induction Program through Universal Human Values"** held on 6th June 2019 to 8th June 2019 Organized by A.P.SHAH Institute of Technology, Thane (W).
- 2) AICTE Sponsored Seven Day Faculty Development Programme on **"Student Induction Program through Universal Human Values"** held on 18th June 2019 to 24th June 2019 Organized by A.P.SHAH Institute of Technology, Thane (W).

Refresher Courses:

- 1) **AICTE- ISTE** sponsored One-Week Induction / Refresher Programme on **"Inclusion of Nanotechnology in Various Commercial Area"** 2nd to 7th July 2018 Organized by K. J. Somaiya Institute of Engineering & Information Technology, SION, MUMBAI.
- 2) Online Refresher Course on **"Outcome based Education and Technology in Higher Education"** Organized by Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of Ministry of Education from 14th July to 03rd August 2021. (GRADE "A+").

NPTELs:

- 1) NPTEL course on **"Fundamentals of Electronic Materials and Devices"** (8 Weeks) during the Jan-Apr 2020 organized by Indian Institute of Technology, Madras.
- 2) NPTEL course on **"Electronic Theory of Solids (12 Weeks)"** during the Jan-Apr 2020 semester organized by Indian Institute of Technology, Kharagpur.

Conferences:

1. National Conference on **"Recent Innovations In Oil & Food Technology"** held on 23rd August 2010 Organized by Division of Oil, Fat & Waxes Technology and Division of Food Technology, UICT, North Maharashtra University, Jalgaon (MAHARASHTRA). Sponsored by Systronics, Ahmadabad.
2. National Conference on **"Materials & Devices for Future Technology"** held at School of Physical Sciences, North Maharashtra University, and Jalgaon on 7th March 2011. Sponsored by UGC – SAP.
3. **AMPICON-NC 2016 on Exploring Diverse Applications of Medical Physics in Cancer Management during February 20-21, 2016.** Organized by Department of Radiotherapy & Radiation Medicine Institute of Medical Sciences, BHU, Varanasi – 221005.
4. **Conference on Radiation in Health Care (CRHC 2K16)"** Organized by Department of Radiological Physics, SMS Medical College, Jaipur Under the Auspices of Association of Medical Physicist of India (AMPI) **November 7th – 8th 2016.**
5. Annual Conference of Association of Medical Physicists of India (WC). Theme: The Present Challenges and Future Expectations of Physics in Oncology held on 6th & 7th **MAY 2017. ADITYA BIRLA MEMORIAL HOSPITAL, PUNE.**
6. **National Symposium on "Intellectual Property Rights: A Prerequisite In Higher Education & Research"** Jointly Organized by IQAC & Research Promotion Committee of DES's Kirti College, N.M.I.T. & Smt. J. S. Kothari B. School, Dadar(W) on 15th Feb.2020.

International Journal Publications

1. Synthesis and humidity sensing properties of ZnSnO₃ cubic crystallites.
DIPAK BAUSKAR, B. B. KALE & PRADIP PATIL. SENSORS AND ACTUATORS B: CHEMICAL 161 (2012) 396*400.
2. High performance H₂ sensor based on ZnSnO₃ cubic crystallites synthesized by a hydrothermal method.
PARMESHVAR WADKAR, DIPAK BAUSKAR & PRADIP PATIL.TALANTA 105 (2013) 327.
- 3) Synthesize Characterize and Evaluating the humidity-sensing properties of POA-CeO₂ nanocomposites.
DIPAK BAUSKAR & PRADIP PATIL. Sensors and Actuators B: Chemical (2018).

Paper Presented In National Conferences.

- 1) Humidity sensing properties of ZnS nanoparticles synthesized via hydrothermal method.
Dipak Bauskar, Sharada Thakur & Pradip Patil.
Presented in 2nd **International symposium on Physics & Technology of sensors held at Pune during March 8-10, 2015.** Venue: Yashada, Pune.