

# Curriculum Vitae

## Dr. DIPAK A BAUSKAR



### Contact Information:

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### Personal:

Name: DIPAK ANANT BAUSKAR

Nationality: Indian

Sex: Male

Language: Marathi, Hindi, English.

### Address for Communication:

Flat No.501, Swati Building,  
Kores Nakshatra Housing Society,  
Vartak Nagar, THANE (M.S) – 400606. India.

### 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	University	Year of Passing	Class
B.Sc. (PHYSICS)	M J College, Jalgaon, North Maharashtra University, Jalgaon 2007	June 2007	1 <sup>st</sup> Class
M.Sc. (PHYSICS)	Department of Physics, North Maharashtra University, Jalgaon 2009.	June 2009	Distinction
Ph.D. in Physics	School of physical sciences, North Maharashtra University, Jalgaon January 2016	Jan. 2016	Nil

### 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 ZnSnO<sub>3</sub>, CeO<sub>2</sub>, BaTiO<sub>3</sub>, ZnO, Fe<sub>2</sub>O<sub>3</sub>, 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 23<sup>rd</sup> 2009 to 31<sup>st</sup> 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. 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.

#### **Other Responsibility:**

- ✓ Sports Incharge.
- ✓ Rotract Incharge.
- ✓ LLC Co-ordinator.
- ✓ Admission committee member.
- ✓ Unnat Bharat Abhiyaan

#### **Fellowships:**

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

#### **Workshops:**

- 1) UGC – SAP sponsored one day National Workshop on **“Advances in Materials Processing” on 8<sup>th</sup> 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 8<sup>th</sup> 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 2<sup>nd</sup> February 2016.
- 5) One day National Workshop on **“Application of Radiation and Radioisotopes in Diagnosis and Therapy of Cancer”** jointly organized by Vidyalankar Institute of Technology and Society for Radiation Research (SRR) on 15<sup>th</sup> 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”** (2<sup>nd</sup> April to 10<sup>th</sup> 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 29<sup>th</sup> -2<sup>nd</sup> Aug 2020.

9) "International Workshop on X-ray Diffraction Analysis" Organized by Department of Physics, Siddaganga Institute of Technology, Tumakuru, Karnataka on 16<sup>th</sup> to 20<sup>th</sup> Oct 2020.

### Faculty Development Programs

- 1) One Week Online Faculty Development Programme on "**ICT ENABLED TEACHING LEARNING**" 7<sup>th</sup>–13<sup>th</sup> 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 11<sup>th</sup> – 17<sup>th</sup> 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 (PMMMNMTT) 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 PMMMNMTT of MHRD and Bishop Moore College, Mavelikkara, 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 **25<sup>th</sup> 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**" 26<sup>th</sup> June – 1<sup>st</sup> 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 1<sup>st</sup> 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 24<sup>th</sup>-29<sup>th</sup> May 2021.

### Universal Human Values (UHVs)

- 1) AICTE Sponsored Three Day Faculty Development Programme on "**Student Induction Program through Universal Human Values**" held on 6<sup>th</sup> June 2019 to 8<sup>th</sup> 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 18<sup>th</sup> June 2019 to 24<sup>th</sup> 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**" 2<sup>nd</sup> to 7<sup>th</sup> 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 (PMMMNMTT) of Ministry of Education from **14<sup>th</sup> July to 03<sup>rd</sup> August 2021. (GRADE "A+").**

## Add on Certificate Programme

1) "REAL ESTATE LAWS" conducted by the Vidya Prasarak Mandal's Thane Municipal Council Law College, Thane during November – February, 2022-2023.

## NPTEL

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  $ZnSnO_3$  cubic crystallites. DIPAK BAUSKAR, B. B. KALE & PRADIP PATIL. SENSORS AND ACTUATORS B: CHEMICAL 161 (2012) 396\*400.

2. High performance  $H_2$  sensor based on  $ZnSnO_3$  cubic crystallites synthesized by a hydrothermal method. PARMESHWAR WADKAR, DIPAK BAUSKAR & PRADIP PATIL. TALANTA 105 (2013) 327.

3. Synthesize, Characterize and Evaluating the humidity-sensing properties of POA- $CeO_2$  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.