


## Curriculum Vitae

<b>Full Name</b>	Dr. Om Prakash			
<b>Designation</b>	Assistant Professor			
<b>Department</b>	Applied Sciences & Humanities			
<b>Campus</b>	HNB Garhwal, Central University, Srinagar Uttarakhand-246174			
<b>Mobile</b>	+91-9501242909			
<b>E-mail</b>	<a href="mailto:ompnphy@gmail.com">ompnphy@gmail.com</a>			
<b>Education Qualification</b>	<ul style="list-style-type: none"> <li>• Bachelor of Science (B.Sc. Non-Medical), PCM.</li> <li>• Master of Science (M.Sc.) Physics, (Nano Science &amp; Technology).</li> <li>• Doctor of Philosophy, (Ph.D.), Solar Photovoltaics.</li> <li>• Qualified “Graduate Aptitude Test in Engineering” (GATE), in Physics, 2016, 2019, Organized by the Indian Institute of Science, Bangalore (IISc), and Indian Institute of Technology (IIT), Madras, Chennai India.</li> </ul>			
<b>Teaching Expertise</b>	7 years +	<b>Research Expertise</b>	10 Years +	
<p><b>Areas of Interest:</b></p> <ul style="list-style-type: none"> <li>❖ Material Science, Thin Film for Organic Photovoltaics, Electrode Material for Energy Storage Devices.</li> </ul> <p><b>Specialization:</b></p> <p><b>Device Fabrication Based Expertise:</b></p> <ul style="list-style-type: none"> <li>❖ Dye-Sensitized Solar Cells (DSCs), Perovskite Solar Cells.</li> </ul> <ul style="list-style-type: none"> <li>• Expertise in synthesizing of Nano thin films of metal oxides and 2D materials using spin coating, e-beam deposition, Physical vapor deposition, Langmuir Blodgett techniques, chemical vapor deposition (CVD) and their composites with carbon-based materials such as CNT, using hydrothermal, and chemical route method for the applications of energy storage and power conversions devices.</li> </ul> <p><b>Material Science Based Expertise:</b></p> <ul style="list-style-type: none"> <li>➤ Solar Photovoltaics, Organic Solar Cells</li> <li>➤ Energy conversions and storage devices</li> <li>➤ Metal Oxide Semiconductors, 2D materials</li> <li>➤ Thin Film Deposition (Inorganic/ Organic Materials)</li> </ul>				

### **Administrative Expertise:**

- Co-ordinator, B.Tech. 1<sup>st</sup> Year, 2025-26.
- Member of the Departmental Purchase Committee.
- Member of B.Tech. 1<sup>st</sup> Year Classes Committee.
- Member of the B. Tech. Admission Committee, CUCET, H.N.B. Garhwal Central University, Srinagar Uttarakhand.
- Member of the Institute Innovation Council (IIC), Wall of Fame, H.N.B. Garhwal Central University, Srinagar Uttarakhand.
- Member of the Science Festival, 2023, H.N.B. Garhwal Central University, Srinagar (Garhwal).

### **Conferences/Workshops:**

1. Paper entitled “Study of Dielectric & Ferroelectric Behaviour in Mn Modified BaTiO<sub>3</sub>” has been presented in DAE-SSPS (2025), held at IIT Roorkee, Uttarakhand, India, during 19<sup>th</sup> – 23<sup>rd</sup> December, 2025.
2. Participation in the Two-day **National Workshop on, Ion Beam in Energy Materials (IBEM-2024)** during August 6-7, 2024, organized by Inter-University Accelerator Centre, New Delhi.
3. One-day **International Workshop on Translating Glass Science into Technology** Akal University, Talwandi Sabo, Punjab, India, (July 25, 2022).
4. Participated in Global Initiatives of Academic Network (GIAN) course “**Characterizing nanomaterials through X-ray photoemission spectroscopy**” from 9<sup>th</sup> Dec 2022 to 13<sup>th</sup> Dec. 2022, organized by Punjab University Chandigarh, Punjab, India.
5. Organizing Member of, **General Physics Lecture Series**, organized by department of Physics H. N. B. G. U. Central University, Garhwal, Srinagar, Uttarakhand, India.
6. Organizing Member of, **Mini-Workshop, on Getting Involved with Physics** organized by department of Physics H. N. B. G. U. Central University, Garhwal, Srinagar, Uttarakhand, India.
7. CERTIFICATE OF REVIEWING in INTERNATIONAL CONFERENCE OF MULTIDISCIPLINARY ASPECTS OF MATERIALS IN ENGINEERING – 2021, Organised by UNIVERSITY INSTITUTE OF ENGINEERING & TECHNOLOGY, PANJAB UNIVERSITY, CHANDIGARH.
8. Paper entitled “Growth of Few Layered Molybdenum Disulphide.” has been presented in DAE-SSPS (2018), held at Guru Jambheshwar University of Science & Technology, Hisar, Haryana, India, during 18<sup>th</sup> – 22<sup>th</sup> December 2018.
9. Paper entitled “Tungsten Disulfide Nanoparticles Anchored on Reduced Graphene Oxide for Dye-Sensitized Solar Cell Applications.” has been presented in DAE-SSPS (2017), held at Bhabha Atomic Research Center, Mumbai, India, during 26<sup>th</sup> – 30<sup>th</sup> December 2017.
10. Pre-conference workshop on “Thin Film Solar Cells”, held at CSIR-National Physical Laboratory, New Delhi, India, on 13<sup>th</sup> November 2017.

11. The paper entitled “Synthesis and characterization of MoS<sub>2</sub> few-layered films.” was presented at the International Conference on Thin Films (ICTF 2017)”, held at CSIR-National Physical Laboratory, New Delhi, India, from 13<sup>th</sup> – 17<sup>th</sup> November 2017.
12. The paper entitled “Optimization of scattering enhancement by varying the morphology of photoanode in dye-sensitized solar cells.” was presented at the International Photovoltaic Solar Energy Conference (IPSEC) SOLAR ASIA-2015”, held at the Department of Physics, Savitribai Phule Pune University, Pune, India, during 30<sup>th</sup> July – 1<sup>st</sup> August 2015.

### **Publications:**

#### **Journals**

1. Experimental and first-principle insight into Structural, optical and electrical properties and photocatalytic water purification application of Zn<sub>1-x</sub>Mg<sub>x</sub>O, Jasvir Singh, Gurdev Preet Singh, Ravish Kumar Jain, Sahil Gasso, **Om Prakash**, K. J. Singh, Ravi Chand Singh, **Inorganic Chemistry Communications**, 162, (2024), 112238. (I.F. = 3.8).
2. Experimental and DFT+ U Investigations of the Cu<sub>1-x</sub>Cd<sub>x</sub>O Nanoparticles Synthesized for Photocatalytic Degradation of Organic Pollutants: Environmental Application, Gurdev Preet Singh, Jasvir Singh, Khalid Mujasam Batoo, Ahmed Ahmed Ibrahim, Om Prakash, Amritpal Singh Nindrayog, KJ Singh, **Water, Air, & Soil Pollution**, 235, (2024), 117. (I.F. = 2.9).
3. Solution processable transition metal oxide ultra-thin films as alternative electron transport and hole blocking layers in dye sensitized solar cells. **Om Prakash**, Vibha Saxena, R. K. Bedi, A.K. Debnath, Aman Mahajan, **Journal of Photochemistry and Photobiology A: Chemistry**, 418, (2021), 113385. (I.F. = 4.3).
4. Low temperature processable ultra-thin WO<sub>3</sub> Langmuir-Blodgett film as excellent hole blocking layer for enhanced performance in dye-sensitized solar cell. **Om Prakash**, Vibha Saxena, Sipra Choudhury, Tanvi, Ajay Singh, A.K. Debnath, A. Mahajan, K.P. Muthe, D.K. Aswal, **Electrochimica Acta**, 318, (2019), 405-412. (I.F. 7.336).
5. Improved performance of dye-sensitized solar cell via fine-tuning of ultrathin compact TiO<sub>2</sub> layer. Tanvi, Vibha Saxena, Ajay Singh, **Om Prakash**, A. Mahajan, A.K. Debnath, K.P. Muthe, S.C. Gadkari, **Solar Energy Materials and Solar Cells**, 170, (2017), 127–136. (I.F. 7.305).

#### **Book Chapters:**

1. Application of Inorganic and Organic Materials as Ozone Gas Sensors, **Om Prakash**, Jasvir Singh, Ramandeep Kaur, and Rajan Saini, Ozone Gas Sensing Technologies Innovations and Challenges, (2026), 205-228. <https://doi.org/10.1016/B978-0-443-33839-7.00001-X>.

#### **Proceedings:**

1. Growth of Few Layered Molybdenum Disulphide, **Om Prakash**, Aman Mahajan, R. K.

Bedi and Vibha Saxena, AIP Conf. Proc. 2115, **(2019)**, 030616.

2. Tungsten Disulfide Nanoparticles Anchored on Reduced Graphene Oxide for Dye Sensitized Solar Cell Applications, Sanjeev Kumar, **Om Prakash**, Aman Mahajan, and Vibha Saxena, AIP Conf. Proc. 1942, **(2018)**, 050101.

#### **Membership:**

- ❖ Life Time Membership of Indian Science Congress Association.
- ❖ Life Time Membership of Vijnana Bharati (VIBHA), India

#### **Project and Grants Submitted/Sanctioned: (01) As Co -PI**

**Project Title:** Corrosion Mitigation of metal by using Ionic Liquids in Acidic Medium.

**Total Grants:** 2,10,000/-

#### **Ph.D./M.Sc./UG Students Guided**

- ❖ Guided 03, Master of Sciences (M.Sc.) students in their dissertations and 02 Graduate students.

#### **Research Collaboration/Teamwork**

- ❖ Guru Nanak Dev University, Amritsar, India
- ❖ Bhabha Atomic Research Centre (BARC) Mumbai, Trombay, India

#### **Hands on Expertise of Scientific Instrument:**

##### **Synthesis and operating method:**

Spin Coater  
Langmuir-Blodgett System for thin film deposition  
Chemical Vapour Deposition (CVD)  
Physical Vapour Deposition (PVD)  
Electron Beam Systems (e-beam)  
Hydrothermal method  
Glove Box

##### **Characterization Techniques:**

UV Visible spectroscopy, X-rays Diffractometer, Raman spectroscopy, Field emission scanning electron microscopy (FESEM), HR-TEM (JEOL JEM 2100), Photoluminescence spectrophotometer, AUTOLAB Galvanostat/Potentiostat System, UV-Ozone Cleaner, Solar Simulator, Keithley Source Meter.

Google Scholar link:

<https://scholar.google.co.in/citations?user=VcNceQoAAAAJ>

Vidwan Link:

<https://vidwan.inflibnet.ac.in/profile/520367>

ORCID Link:

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Web of Science Link:

<https://www.webofscience.com/wos/author/record/AAH-7211-2021>