

## Faculty Profile (For booklet and website)

**Name:** Purnima Hazra  
**Designation:** Assistant Professor  
**Department:** Electronics and Communication Engineering  
**Email ID:** purnima.hazra@smvdu.ac.in



**Contact Number and Extn.:** 962223338, office ext: 2344

**Qualification:** M.Tech., Ph. D.

### **Experience:**

**Teaching:** 3.5 years      **Research:** NA      **Administration:** NA      **Total:** 3.5 years

### **Areas of Interest / Specialization:**

- 1 Semiconductor Devices and circuits
- 2 Nanoelectronics and Nanomaterials

### **Brief Bio-data:**

#### **Academic Qualification**

1. Awarded **Ph. D. Degree** in Electronics Engineering from Indian Institute of Technology (Banaras Hindu University), Varanasi, Uttar Pradesh in **2014**.
2. Awarded **M. Tech. Degree** in Electronics and communication Engineering (Microwaves) from The University of Burdwan, West Bengal in **2009**.
3. Achieved **B. Tech. degree** in Electronics and Telecommunication Engineering from Institute of Electronics and Telecommunication Engineers, New Delhi in **2006**.
4. Passed **12<sup>th</sup>** from West Bengal Council of Higher Secondary Education in **2001**.
5. Passed **10<sup>th</sup>** from West Bengal Board of Secondary Education in **1999**.

#### **Scholarship**

1. Qualified **GATE 2007** in **Electronics and Communication Engineering** and awarded GATE fellowship for pursuing M. Tech.
2. Awarded **SRF Fellowship** from March, 2011 for pursuing Ph. D.

#### **Work Experience**

1. Presently working as an Assistant Professor in Shri Mata Vaishno Devi University, Katra, Jammu and Kashmir from January, 2015.
2. Worked as a Visiting faculty in Motilal Nehru National Institute of Technology, Allahabad, Uttar Pradesh from August, 2014 to December, 2014.

3. Worked as a lecturer in Mallabhum Institute of Technology, Bishnupur, Bankura, West Bengal from January, 2010 to August, 2010.

#### Personal Profile

**Sex:** Female  
**Marital Status:** Married  
**Language Proficiency:** Bengali, English, Hindi

#### Subjects Taught to Undergraduate Students

Basic Electrical Engineering, Basic Electronics, Network Theory and Synthesis, Linear Integrated Circuits, Digital electronics, Analog Communication Engineering, Microprocessor, Instrumentation and Measurement, Signals and Systems.

#### Administrative Duties Performed

1. Under Graduate course coordinator from March, 2017.
2. Departmental Research committee member from April, 2017
3. Girls hostel Warden for 2015-16 academic session.
4. 1<sup>st</sup> year coordinator of UG students for 2015-16, 2016-17, 2017-18 academic session.
5. Departmental data collection and assessment committee coordinator for 2015-16, 2016-17, 2017-18 academic session.
6. Examination Flying Squad member for 2017-18 academic session.

#### Research Profile

##### Research Projects Undertaken:

S. No.	Role	Title	Funding Agency	Current Status (Closed/ Running)
NA				

##### Research Publications:

S. No.	Year	Publication
1	2017	Satyendra Kumar Singh, <b>Purnima Hazra</b> , "Performance of RF Sputtered p-Si/n-ZnO Nanoparticle Thin Film Heterojunction Diodes in High Temperature Environment", <i>Applied Surface Science</i> , Vol. 400, pp. 206-211. (SCI IF-3.15)
2	2016	Satyendra Kumar Singh, <b>Purnima Hazra</b> , Shweta Tripathi and P.Chakrabarti, "Performance analysis of RF-sputtered ZnO/Si heterojunction UV photodetectors with high photo-responsivity", <i>Superlattices and Microstructures</i> , Vol. 91, pp. 62-69. (SCI IF-2.01, Citation-13)
3	2015	Satyendra Kumar Singh, <b>Purnima Hazra</b> , Shweta Tripathi and P.Chakrabarti, "Fabrication and experimental characterization of a sol-gel derived nanostructured n-ZnO/p-Si heterojunction diode", <i>Journal of Materials Science: Materials in Electronics</i> , Vol. 26, pp. 7829-7836. (SCI IF- 1.59, Citation-2)
4	2014	<b>Purnima Hazra</b> , Satyendra Kumar Singh and S. Jit, "Impact of Surface Morphology of Si Substrate on Performance of Si/ZnO Heterojunction Devices Grown by ALD Technique", <i>Journal of Vacuum Science and Technology A</i> , Vol. 33, No. 1, 01A114 (5 pages). (SCI IF- 2.14, Citation-2)

5	2014	<b>Purnima Hazra</b> and S. Jit, " <i>p</i> -Si Nanowires/ <i>n</i> -ZnO Thin Film Based Core-Shell Heterojunction Diodes with Improved Effective Richardson Constant", <i>Journal of Nanoscience and Nanotechnology</i> , Vol. 14, no. 7, pp. 5380-5385. (SCI IF -1.34, Citation-3)
6	2014	<b>Purnima Hazra</b> , S. K. Singh and S. Jit "Ultraviolet photodetection properties of ZnO/Si heterojunction diode fabricated by ALD technique without using a buffer layer", <i>Journal of Semiconductor Technology and Science</i> , Vol. 14, no. 1, pp. 117-123. (SCI IF- 0.62, Citation-16)
7	2014	<b>Purnima Hazra</b> and S. Jit, "A <i>p</i> -Silicon nanowire/ <i>n</i> -ZnO thin film heterojunction diode prepared by thermal evaporation technique", <i>Journal of Semiconductors</i> , Vol. 35, no. 1, 014001 (5 pages). (SCI, Citation-14)
8	2013	<b>Purnima Hazra</b> and S. Jit, "An In-house Approach for Fabrication of Silicon Nanowire Arrays using Electroless Metal Deposition and Etching Method", <i>International Journal of Surface Science and Engineering</i> , Vol. 7, no. 3, pp. 285-294. (SCI IF- 0.44, Citation-6)
9	2013	<b>Purnima Hazra</b> , S. K. Singh and S. Jit, "Studies on ZnO/Si Heterojunction Diode grown by ALD Technique", <i>Journal of Nanoelectronics and Optoelectronics</i> , Vol. 8, no. 4, pp. 378-382. (SCI IF- 0.67, Citation-1)

#### Books Publications:

S. No.	Year	Publication
NA		

#### Conference Publications:

S. No.	Year	Conference	Publication
1	2017	2 <sup>nd</sup> International Conference on Condensed Matter and Applied Physics (ICC-2017), 24/11/2017 to 25/11/2017, Govt. Engineering College, Bikaner, Rajasthan	Satyendra Kumar Singh, <b>Purnima Hazra</b> , "Investigations on Structural and Electrical parameters of <i>p</i> -Si/ Mg <sub>x</sub> Zn <sub>1-x</sub> O Thin Film Heterojunction Diodes Grown by RF Magnetron Sputtering Technique", <i>AIP Conference Proceedings (Accepted)</i>
2	2017	2 <sup>nd</sup> International Conference on Condensed Matter and Applied Physics (ICC-2017), 24/11/2017 to 25/11/2017, Govt. Engineering College, Bikaner, Rajasthan	Mamta Sharma, <b>Purnima Hazra</b> , Satyendra Kumar Singh, "Study of Thickness and Uniformity of Oxide Passivation with DI-O <sub>3</sub> on Silicon Substrate for Electronic and Photonic Application", <i>AIP Conference Proceedings (Accepted)</i>
3	2016	International Conference on Condensed Matter and Applied Physics (ICC-2015), 29/10/2015 to 31/10/2015, Govt. Engineering College, Bikaner, Rajasthan	Satyendra Kumar Singh, <b>Purnima Hazra</b> , Shweta Tripathi and P. Chakrabarti, "Optical Characterization of Mg-doped ZnO Thin Films Deposited by RF Magnetron Sputtering Technique", <i>AIP Conference Proceedings</i> , Vol. 1728, pp. 020168.

4	2015	International Conference on Materials Science and Technology (ICMST 2012), 09-13 June, 2012, St. Thomas College, Kottayam, Kerala.	<b>Purnima Hazra</b> , P. Chakrabarti and S. Jit, "Fabrication and characterization of p-type silicon nanowire (SiNW)/n-type ZnO based core-shell heterostructures for optoelectronic applications", <i>IOP Conference Series Materials Science and Engineering</i> , Vol. 73, pp. 012092. (Citation-1)
5	2014	International Workshop on the Physics of Semiconductor Devices (IWPSD-2013)", 10-13 December, 2013, Amity University, Noida, Uttar Pradesh.	<b>Purnima Hazra</b> and S. Jit, "Electrical characteristics of Si/ZnO core-shell nanowire heterojunction diode", <i>Physics of Semiconductor Devices</i> , ed. by V.K. Jain and A. Verma, <i>Springer</i> , pp. 673-675. (Citation-1)
6	2013	Recent Trends in Applied Physics and Material Science (RAM-2013), 01-02 February, 2013, Govt. College of Engineering and Technology, Bikaner, Rajasthan.	<b>Purnima Hazra</b> and S. Jit, "Study of n-ZnO/ p-SiNW heterostructures grown by thermal evaporation method", <i>AIP Conference Proceeding</i> , Vol. 1536, pp. 529-530.

#### **Research Supervised:**

S. No.	Year	Role	Research Topic	Status
1.	2016-17	M. Tech. Supervisor	Parametric Analysis of Nanoscale MOSFET Device Structures using SILVACO TCAD	Completed

#### **Patents:**

S. No.	Name	Status
NA		

#### **Award and Honours:**

S. No.	Title	Activity/Event	Given by	Year
1.	Excellent poster presentation	International Conference on Optics & Optoelectronics, held at IRDE, Dehradun	Optical society of India	2014

#### **Professional Affiliation:**

S. No.	Designation	Organization