

CURRICULUM VITAE

Dr. Pankaj Kumar Modi

Assistant Professor,

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EXAMINATION	SPECIALIZATION	BOARD/UNIVERSITY	YEAR
Ph.D.	Solid State Physics	B. R. Ambedkar Bihar University, Muzaffarpur	2016
Master of Science	Physics	B. R. Ambedkar Bihar University, Muzaffarpur	2009
Bachelor of Science	Physics	B. R. Ambedkar Bihar University, Muzaffarpur	2007

ACADEMIC ACHIEVEMENTS

- Qualified “Joint **CSIR-UGC** Test for Junior Research Fellowship - 2011” securing **83rd** rank in “**Physical Science**”
- Qualified in “Graduate Aptitude Test for Engineering (GATE) -2011” securing ALL INDIA RANK – 292th
- Qualified “ Research Eligibility Test Examination 2010 ” in B. R. A. Bihar University, Muzaffarpur with very good score

PROFESSIONAL DEVELOPMENT PROGRAMMES/ INITIATIVES

- Successfully completed UGC-Sponsored Orientation Programme with ‘A’ Grade from 20/11/2018 – 17/12/2018 held at UGC-HRDC B. R. A. Bihar University, Muzaffarpur, Bihar
- Participated in Training-cum-Workshop on E-learning in Higher Education organized by FDC, Iswar Saran PG College, Allahabad in February 07-13, 2019
- Participated in Regional Workshop on Research Based Pedagogical Tools organized by Central university of South Bihar, Patna, Bihar in April 10-12, 2018
- Participated in the one day awareness workshop on “ Advanced Materials Characterization & Synthesis facilities” by V. K. S. University , Ara, Bihar in collaboration with UGC-DAE and CSR , Indore on February 23rd 2019
- Participated in Nation training programme on Advanced Materials Characterization Techniques by FDC, IIT(ISM), Dhanbad in March 19-24, 2018
- Presented paper on the topic ‘Study of Barrier Layers on Mild Steel Substrates for the application in thin film solar cell’ in two day national seminar organized by Dr. J. M. College, Muzaffarpur, B.R.A.Bihar University in September 14-15, 2018
- Successfully completed one week Faculty Development Programme on “Academic Writing for Research” from 15-21May,2023 and obtained A Grade held at Ramanujan College,
- Successfully completed UGC-Sponsored Refresher Course (Physics) at HRDC University of Lucknow 12-27 Feb 2021.
- Successfully completed UGC-Sponsored Refresher Course (Physics) at HRDC University of Guwahati 07-22 Mar 2022.
- Successfully completed UGC-Sponsored Refresher Course (Physics) at HRDC Ranchi University, 18-31 Aug 2023.

WORK EXPERIENCE

Designation as a Assistant Professor (HJD Institute, Kera- Bhuj) [Jul'15-Till Date]

- Position as Branch Incharge (vice H.O.D.) in HMS department
- Teaching engineering physics with minor and major projects as a part of their course work

Designation as a Assistant Professor (BITS edu campus, Vadodara) [Mar'15-Jun'16]

- Guiding the students for electrical project during GTU bridge course
- Teaching subjects like Engineering physics and Elements of Electrical engineering

Designation as a Assistant Professor (Indian Institute of Teacher Education, Gandhinagar) [Jul'14-Jan'14]

- Coordinate B.Sc. student for their lab work by following standard operating processor (SOP) of instrument
- Following subject like Solid state, Nuclear, Laser, Mathematical Physics etc.

Profile as a Process Engineer (De Core Nano-semiconductor Limited) [Sep'13-Jul'14]

“Developing Technology for Solar Cell on Steel substrate”

- Aim of the project is to bring down the cost of solar cells and energy payback period by few years
- To understand various physical issues in fabricating thin film a-Si:H based solar cell on steel substrates
- Worked on Solar cells to increase the efficiency by intelligent tailoring of parameters

Position as a faculty (UGC Point coaching Institute, Delhi) [Jan'10-Dec'10]

- Motivated more than 200 students for competitive examination (Eg: JAM, NET) preparation for their bright future
- Subject like Solid State Physics, Semiconductor Physics etc. used to teach for UG & PG students

Position as a Head (Career Guide Coaching institute, Chakia, Part Time) [Mar'02-Dec'09]

- Assisted and evaluated students of different classes (8th, 9th, 10th, 10+2th) for best result in their examination
- Under my supervision about six faculties work

PUBLICATION

- Modi, K. P. (2018). Advanced Nanostructure Materials Fabrication Method: Chemical Vapour Deposition & Physical Vapour Deposition. *JASC: Journal of Applied Science and Computations* , 987-989.
- Modi, K. P. (2020). Indian Tourism Industries during COVID-19. *Kala Sarovar* , 55-60.
- Modi, K. P. (2019). Preparation of Magneto Electric (BaFe₁₂O₁₉/BiFeO₃) Composites using Sol-Gel Auto Combustion Method. *International journal of innovative technology and Exploring Engineering (IJITEE)* , 1484-1487.
- Modi, P. K. (2014). Transmission Probability of Electrons Traversing Two Dimensional Electron Gas. *Bulletin of Pure & Applied Sciences-Physics* , 25-28.

ACADEMIC PROJECTS

M.Sc. Project (Under Prof. Raghav Singh, B. R. A. Bihar University, Muzaffarpur)

“Study of piezo-resistive and photovoltaic effect in silicon”

- Understood the parameters affecting piezo-resistive performance and photovoltaic efficiency
- Compared the gauge factors of different forms of silicon with other materials

TECHNICAL EXPERTISE

- Physical Vapor Deposition (PVD)
 - Worked on **DC/RF** sputtering systems and thermal evaporation techniques. Also operated various vacuum pumps like **Diffusion, Rotary** and **Turbo Molecular Pump**
- Characterization Techniques
 - Analyzing the results of X-ray diffraction(**XRD**), X-ray Photo electron Spectroscopy(**XPS**), Raman spectroscopy, Fourier transform Infra-Red Spectroscopy(**FTIR**), **AFM, SEM** and **SIMS**
 - Hand on experience in Stylus & optical Profilometer, UV-Visible spectrometer, Optical Microscopy, Fourprobe Method, Hall-effect measurement

SUBJECT OF INTEREST

- | | |
|--|---|
| (a) Quantum Mechanics | (b) Solid State Physics and Superconductivity |
| (c) Science and Technology of Thin Films | (d) Atomic & Molecular Spectroscopy |
| (e) Nano-science and Nanotechnology | (f) Mathematical Physics |

SOFTWARE PROFICIENCY

- (a) Operating Systems: LINUX
- (b) Technical Software: ORIGIN, SOLID WORK
- (c) Languages: FORTRAN
- (d) IDE Software Packages: MATLAB, GNU OCTAVE, GNU PLOT

Declaration

I **Pankaj Kumar Modi** here by declare that all above statements are true, complete and correct to the best of my knowledge.

Place:

Date :

Signature