



# Kirori Mal College

(University of Delhi)

University of Delhi, Delhi-110007

(Phone No. - 011-7121 9084 : Email - principal@kmc.du.ac.in)



Print Date : 03-04-2026

## 1. Personal Profile

Title: **Dr.** First Name: **PRIKSHIT** Last Name: **GAUTAM**

Designation: **ASSISTANT PROFESSOR** Mobile No. -----

Phone No. (Office) ----- Phone No. (Residence): -----

Email: [prikshitphysics@kmc.du.ac.in](mailto:prikshitphysics@kmc.du.ac.in) Webpage: **Scopus Author ID: 25642573100** <http://www.scopus.com/authid/detail.url?id=25642573100>  
**ORCID ID: <http://orcid.org/0000-0002-0649-0253>**



Facebook: ----- Twitter: -----

LinkedIn: ----- Instagram: -----

Youtube: ----- Research Gate Link: <https://www.researchgate.net/profile/Prikshit-Gautam>

Google Scholar Link: -----

Address: -----

## 2. Educational Qualifications

Degree/ Certification	Institution	Year
PhD	University of Delhi	2011
mphil	HPU Shimla	2005
msc	HPU Shimla	2003
graduation	HPU Shimla	1999

## 3. Career Profile & Administrative Assignments

Category	Role/ Designation	Department/ Committee	Date From - To	Remarks
CAREER PROFILE	ASSISTANT PROFESSOR	PHYSICS Kirori Mal College University of Delhi	01.Mar.2011 - Till date	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	PORTAL COMMITTEE KIRORI MAL COLLEGE, DELHI	18.Jun.2023 - Till date	

ADMINISTRATIVE ASSIGNMENTS	MEMBER	ENACTUS SOCIETY KIRORI MAL COLLEGE, DELHI	18.Jun.2023 - Till date	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	FOREIGN STUDENTS' COMMITTEE KIRORI MAL COLLEGE, DELHI	18.May.2023 - Till date	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	NORTH EAST STUDENT CELL KIRORI MAL COLLEGE, DELHI	18.May.2023 - Till date	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	PHYSICS Kirorimal college	01.Jul.2024 - Till date	CCSD committee on student Diversification
ADMINISTRATIVE ASSIGNMENTS	ASSISTANT PROFESSOR	PHYSICS kmc	01.Jul.2024 - Till date	Practical superintendent physics department Nov Dec 2024
ADMINISTRATIVE ASSIGNMENTS	MEMBER	PHYSICS kmc	01.Jul.2024 - Till date	Library committee
ADMINISTRATIVE ASSIGNMENTS	MEMBER	PHYSICS physics KMC	01.Jul.2024 - 31.Oct.2025	

#### 4. Other Profiles

##### Other Profile Name/ Description

##### UG/ PG RESEARCH PROJECTS/ INTERSHIPS

Ø *Student Supervised: Four students, from Amity Institute of Nanotechnology, Amity University Uttar Pradesh,*

*M Tech. Dissertation: Supervision 02,*

1. **Synthesis of Anti-cancer drug loaded Folic Acid modified Eudragit L100 coated Super-Paramagnetic Iron Oxide Nanoparticles for targeted drug delivery**” submitted by Aprajita Singh
2. **Synthesis of Superparamagnetic MnFe<sub>2</sub>O<sub>4</sub> nanoparticles for hyperthermia therapy and drug delivery**” submitted by Gerik Ete

## UG/ PG RESEARCH PROJECTS/ INTERNSHIPS

Ø *Student Supervised: Four students, from Amity Institute of Nanotechnology, Amity University Uttar Pradesh, B*

**Tech. Dissertation: 02**

1. **Preparation of ABS/GO nanocomposites for EMI shielding application”** submitted by Rahul Kumar
2. **Synthesis and Characterization of Super-paramagnetic Iron Oxide Nanoparticles for Bio-medical Application”** submitted by Saransh Gosain

## MEMBERSHIPS IN ACADEMIC/ PROFESSIONAL BODIES

Ø **Affiliation to Professional Societies**

- Materials Research Society of India (MRSI) –LMB -1763 (7.06.2014)
- Electron Microscope Society of India (EMSI)- LM-489 (9.05.2011)
- Society for Technological Advanced Materials of India (STAMI) (15.12.2008)

## SUBJECTS TAUGHT

**Subject taught:**

**Elements of Modern Physics,**

**Mathematical physics I, II, III,**

**Electricity and Magnetism,**

**Mechanics**

**Numerical Analysis**

**Renewable Energy**

**Electrical Circuit and Network Skill**

**Python,**

Vedic Maths 1

## FIELD TRIPS ORGANIZED

1. Education Trip at CSIR-National Physical Laboratory, New Delhi on 28 September 2022 (30 student)
2. Education Trip at CSIR-National Physical Laboratory, New Delhi on 4 October 2023 (54 students).
3. Student excursion to attend the "International workshop on Advanced Materials Challenges and Standardization Needs for Net Zero Technologies (AMCSNZT-2023)" held on 9-10th, Oct. 2023 as a coordinator for Physics and chemistry students (65 students).
4. Education Trip at CSIR-National Physical Laboratory, New Delhi on 1 October 2024 (35 students).

## RESEARCH COLLABORATIONS

Department of Applied Physics Guru Jambheshwar University of Science and Technology Hisar Haryana

## AREAS OF INTEREST/ SPECIALIZATION

Ø **Current and Proposed Research Area: I n Collaboration**

**\*Investigation of Natural Radioactivity in the Mineralized Zone of Khandela, Rajasthan**

**\*Study of Leakage current conduction mechanism and optical properties of ferroelectric thin films**  
**Study of Leakage current conduction mechanism and optical properties of ferroelectric thin films**

**? Synthesis and Characterisation of Magnetic Nanoparticles For Use In Hyperthermia For Cancer Treatment**

**? Synthesis and Characterisation of Solution-Processed Reduced Graphene Oxide ( rGO) Films as Transparent Electrode Material for Organic Solar Cell, Lithium ion Battery and Bio-sensor Applications.**

**?Bio-functionalized graphene-graphene oxide nanocomposite based electrochemical immunosensing and glucose sensor**

**? Photo super capacitor using graphene-graphene oxide nanocomposite**

**. Organic and inorganic Nanomaterials, Gas/Chemical Sensors.**

**Ultraviolet-Photodetectors,**

**Light Dependent Resistors,**

**Dielectric Spectroscopy.**

**Electromagnetic Interference (EMI) shielding, etc.**

## OTHERS

Ø **Reviewer to many International Journals:** Journal of Magnetism and Magnetic Materials, Materials Science and Engineering B, Journal of Alloys and Compounds, Applied Physics Letters, Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry, ceramic international.

## OTHERS

Ø *Workshop Attended: Material synthesis and Characterisation Workshop Attended (07)*

1. Electron Microscopy Workshop, 7 July 2014, at **University of Chicago** center New Delhi.
2. “**Advanced Workshop on Broad Band Dielectric Spectroscopy**”,17-18 January,2014, at University of Delhi, Delhi. 110007.
3. **Workshop on Atomistix Toolkit and Virtual NanoLab, By Quantumwise and USIC JNU, 15 January,2014 at Jawaharlal Nehru University**, New Delhi. 110067
4. National Workshop on “**XRD techniques and Applications**” (NWXR) (17-19 March, 2010), Saurashtra University, Rajkot, Gujarat.
5. Workshop on “**Information Literacy and Competency**”, 23<sup>rd</sup> February, 2010, at University of Delhi, Delhi.
6. Workshop on “**WVASE32 Data Analysis and Fundamentals Training on Spectroscopic Ellipsometry**” at National Physical Laboratory, New Delhi-12, September 22-25, 2009
7. Workshop on “**Material Characterization Techniques**”, **July 7-11, 2008** at National Physical Laboratory, New Delhi-12.

## OTHERS

Ø **Material Characterisation Technique Known and Apparatus used:**

1. **Structure and Morphology:** X-ray Diffraction (XRD), Atomic force microscopy (AFM), Scanning Electron Microscope (SEM), Transmission Electron Microscope (TEM),
2. **Electrical, Ferroelectric and Magnetic**, Polarization vs Electric field (**P-E Loop tracer**), Complex Impedance Spectroscopy (**Wayne-kerr**), Leakage current characterization (Source meter-2400), LCR meter (Fluke PM 6306), M-H loop,
3. **Optical - Spectroscopic Ellipsometry (J A Woollam)**, UV-spectroscopy (Shimadzu), Photoluminescence (Dongwoo-optron), Raman spectroscopy (inVia Renishaw),
4. **BET (Surface area and pore size analysis) Nova win.**

Ø **Software used for data analysis**

Msoffice, Origin (data analysis), SPMLab (AFM), ImageJ (SEM), Zview (impedance analysis)

Rietveld Analysis, POWDX, CHEKCELL (XRD), SRIM (Stopping and Range in Matter), TRIM (Transport of Ions in Matter) both as (simulation codes For Swift Heavy Ion Irradiation), WVASE32 (J. A. Woollam)-for Model fitting in **Spectroscopic ellipsometry studies.**

## WORKSHOP/ SEMINAR/ CONFERENCE/ WEBINAR ORGANIZED

Ø as a member Local Organizing Committee

### International / National Conference organized –

As Member of organizing team of

- International Conference and Workshop on Nano-Structured Ceramics and other Nanomaterials (ICWNCN), International conference on Electron microscopy, 09-11 July 2014, University of Delhi, Delhi, India.
- International Conference and Workshop on Nanostructured Ceramics and other Nanomaterials (ICWNCN-2012), University of Delhi, March 13-16,2012 (one day workshop on material characterisation techniques)
- International Conference on Electroceramics (ICE-2009), New Delhi, December 13-17,2009
- National Conference on Electron Microscopy and Allied Fields (EMSI-2007), 26-28 November-2007, University of Delhi, New Delhi, India.

## UG/ PG RESEARCH PROJECTS/ INTERNSHIPS

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1. **Synthesis of Anti-cancer drug loaded Folic Acid modified Eudragit L100 coated Super-Paramagnetic Iron Oxide Nanoparticles for targeted drug delivery”** submitted by Aprajita Singh
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*BTech. Dissertation: 02*

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## 5. Research Guidance

Year	Guide For	Title of the Dissertation/ Thesis	Scholar Name	Status
2024	Ph. D.	Investigation of Natural Radioactivity in the Mineralized Zone of Khandela, Rajasthan	Bhupesh	Pursuing

## 6. Research Projects

Year	Title of Project	Sponsorship Agency	Duration	Amount Sanctioned	Date of Sanction
2014	Synthesis and Characterisation of Magnetic Nanoparticles For Use In Hyperthermia For Cancer Treatment	INMAS (DRDO)	two years	10,00,000	28.May.2013

## 7. Publications

Category	Publication Name	Title	Name of Author	Reference Link/ DOI Link
JOURNAL PAPER (International)	Dielectric Functions and Energy Band Gap Variation Studies of Manganese doped Bi <sub>3.25</sub> La <sub>0.75</sub> Ti <sub>3</sub> O <sub>12</sub> Thin Films using Spectroscopic Ellipsometry	Journal of Alloys and Compounds	Prikshit Gautam, Anupama Sachdeva, Sushil K. Singh, R. P. Tandon, (First Author, Corresponding Author)	10.1016/j.jallcom.2014.07.216
JOURNAL PAPER (International)	Mechanism for leakage current conduction in manganese doped Bi <sub>3.25</sub> La <sub>0.75</sub> Ti <sub>3</sub> O <sub>12</sub> (BLT) ferroelectric thin films	Journal of Alloys and Compounds	Prikshit Gautam, Sushil K. Singh, R. P. Tandon, (First Author, Corresponding Author)	10.1016/j.jallcom.2014.03.139
JOURNAL PAPER (International)	Effect of zirconium doping on ferroelectric properties and leakage current conduction mechanism in Bi <sub>3.25</sub> La <sub>0.75</sub> Ti <sub>3</sub> O <sub>12</sub> (BLT) thin films	Physica status solidi-B Wiley	Prikshit Gautam, S. Bhattacharyya, Sushil K. Singh, Ravi Kumar, R. P. Tandon (First Author)	<a href="http://dx.doi.org/10.1002/pssb.201046308">http://dx.doi.org/10.1002/pssb.201046308</a>
JOURNAL PAPER (National)	Assessment of Age-Dependent Radiation Dose and Toxicological Risk of Uranium in Ground Water around Uranium Mines in Sikar, Rajasthan	Indian Journal of Pure & Applied Physics	Bhupesh Khyalia, Naresh Kumar, Rajesh Beniwal, Shakuntala, Amanjeet Panghala, Navish Kataria, Prikshit Gautam, Ranjeet Dalal (Joint Author)	DOI: 10.56042/ijpap.v61i10.2690

JOURNAL PAPER (International)	Hydrogen environment-assisted temperature-dependent space charge-limited current conduction in n-ZnO/p-Si <sup>++</sup> hetero-junction device,	DOI:10.1007/s10854-023-09863-0	Ishpal Rawal, V Kumar, V Kumar, Prikshit Gautam (Joint Author)	10.1007/s10854-023-09863-0
JOURNAL PAPER (International)	Study of conduction mechanism in p-Zn <sub>1-x</sub> Sb <sub>x</sub> O/n-Si? (x = 0.00, 0.03, 0.05) hetero-junction devices”	Journal of Materials Science: Materials in Electronics,	Ishpal Rawal, Vipin Kumar, Vinod Kumar, Prikshit Gautam, Vijay Kumar Sharma (Joint Author)	10.1007/s10854-021-06809-2
JOURNAL PAPER (International)	Quantum efficient fast UV photodetectors based on nanocrystalline Zn <sub>1-x</sub> P <sub>x</sub> O (x=0.00, 0.03, 0.07) thin films deposited by pulsed laser deposition technique’	Materials Science in Semiconductor Processing	Karmvir Singh, Ishpal Rawal, Neeru Sharma, Prikshit Gautam, Rakesh Dhar, (Joint Author)	<a href="https://doi.org/10.1016/j.mssp.2019.02.004">https://doi.org/10.1016/j.mssp.2019.02.004</a>
JOURNAL PAPER (International)	Diluted Magnetic Semiconducting Properties of Nanocrystalline Zn <sub>0.98</sub> X <sub>0.02</sub> O (X=Fe, Ga, Ni) Thin Films Deposited by PLD Technique for Spintronic	Journal of Magnetism and Magnetic Materials	Karmvir Singh, Ishpal Rawal, Prikshit Gautam. Neeru Sharma. Rakesh Dhar (Joint Author)	<a href="https://doi.org/10.1016/j.jmmm.2018.08.024">https://doi.org/10.1016/j.jmmm.2018.08.024</a>
JOURNAL PAPER (International)	Effect of Processing Conditions on Electrical Properties of CaCu <sub>3</sub> Ti <sub>4</sub> O <sub>12</sub> Ceramics	Modern Physics Letters B,	Raman Kashyap, Tanuj Dhawan, Prikshit Gautam, O. P. Thakur, N. C. Mehra, R. P. Tandon (Joint Author)	DOI: 10.1142/S021798491002327X
JOURNAL PAPER (International)	Dielectric properties of nanocrystalline Pb <sub>0.8</sub> Sr <sub>0.2</sub> TiO <sub>3</sub> thin films at different annealing temperature	Materials Chemistry and Physics,	K.C. Verma, R.K. Kotnala, M.C. Mathpal, N. Thakur, Prikshit Gautam, N.S. Negi, (Joint Author)	<a href="https://www.sciencedirect.com/science/article/abs/pii/S0272884218300000">https://www.sciencedirect.com/science/article/abs/pii/S0272884218300000</a>

JOURNAL PAPER (International)	Room Temperature Long Rang Ordering in (BiFeO <sub>3</sub> ) <sub>1-x</sub> (PbTiO <sub>3</sub> ) <sub>x</sub> Nano-Crystallites	J. Appl. Phys	Kuldeep Singh, Ashish, K Sen, R K Kotnala, Mahesh Kumar, Prikshit Gautam, M. Singh (Joint Author)	scitation.aip.org/content/aip/journal/jap
JOURNAL PAPER (International)	Synthesis of high surface area transitional alumina from Al(OPh) <sub>3</sub>	Journal of Sol-Gel Science and Technology	Epsita Ghanti, Nobel Tomar, Prikshit Gautam and R. Nagarajan (Joint Author)	DOI: 10.1007/s10971-010-2316-4
JOURNAL PAPER (International)	Photocatalytic Activity of MWCNT?Reinforced MoS <sub>2</sub> Nanosheets”	Journal of Electronic Materials	1. Shweta, Varsha Singh, Vinamrita Singh, Sridharbabu Yarramaneni, ,Mohammad Ashiq, Kaushal Kumar, Prikshit Gautam, Arun Kumar (Joint Author)	<a href="https://doi.org/10.1007/s11664-024-11187-6">https://doi.org/10.1007/s11664-024-11187-6</a>
JOURNAL PAPER (International)	Estimation of radionuclides in the soil samples from the uranium mining zone of Sikar, Rajasthan, India	Journal of Radioanalytical and Nuclear Chemistry,	Bhupesh Khyalia· Jyoti Yadav · Naresh Kumar · Balvinder Singh · Sanjeet S. Kaintura · Prikshit Gautam · Pushpendra P. Singh · Hardev Singh · Ranjeet Dalal, (Joint Author)	<a href="https://link.springer.com/article/10.1007/s10967-024-09">https://link.springer.com/article/10.1007/s10967-024-09</a>
CONFERENCE PAPER/ PROCEEDINGS (International)	Fabrication and characterization of ABS/rGO nano-composites for EMI shielding Application	AIP Conference Proceedings	S. K. Sharma, D. Tripathi, R. Kumar, P. Gautam, V. K. Sachdev, and R. P. Tandon, (Joint Author)	<a href="http://aip.scitation.org/toc/apc/2009/1">http://aip.scitation.org/toc/apc/2009/1</a>

CONFERENCE PAPER/ PROCEEDINGS (International)	Fabrication and Characterization of Bismuth Lanthanum Titanate (Bi <sub>3.25</sub> La <sub>0.75</sub> Ti <sub>3</sub> O <sub>12</sub> ) thin films for FeRAM devices	" Integrated Ferroelectrics,	Prikshit Gautam, S. Bhattacharyya, Sushil K Singh, R P Tandon (First Author)	DOI: 10.1080/10584587.2010.492293.
CONFERENCE PAPER/ PROCEEDINGS (International)	Dielectric functions of Niobium doped Bi <sub>3.25</sub> La <sub>0.75</sub> Ti <sub>3</sub> O <sub>12</sub> thin films using spectroscopic ellipsometry	Integrated Ferroelectrics,	Prikshit Gautam, Anupama Sachdeva, Manoj Arora, Sushil K Singh, R P Tandon " (First Author)	DOI: 10.1080/10584587.2010.492293
CONFERENCE PAPER/ PROCEEDINGS (International)	Dielectric and Ferroelectric studies on sol-gel derived calcium modified lead Zirconate Titanate ceramics	Dielectric and Ferroelectric studies on sol-gel derived calcium modified lead Zirconate Titanate ceramics	Anupama Sachdeva, VandanaLuthra, Prikshit Gautam, R P Tandon (Joint Author)	DOI: 10.1080/10584587.2010.492289
CONFERENCE PAPER/ PROCEEDINGS (International)	Structural and electrical properties of Lead Zirconate Titanate 0-3 composite films	Integrated Ferroelectrics	Anupama Sachdeva, Vandana Luthra, Prikshit Gautam, R P Tandon (Joint Author)	DOI: 10.1080/10584587.2010.492294.

## 8. Books

Category	Book Name	Title	Name of Author	ISSN/ ISBN Number
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## 9. Faculty Achievements

Year	Category of Achievement	Role	National/ International etc.	Name	Date From-To
2023	FACULTY INDUCTION PROGRAM ATTENDED	ASSISTANT PROFESSOR	National	Four -Week 'Induction/Orientation Programme' for "Faculty in Universities/Colleges/Institutes of Higher Education",	21.Dec.2023 - 19.Jan.2023
2023	REFRESHER COURSE ATTENDED	ASSISTANT PROFESSOR	National	Two Week Online REFRESHER COURSE	27.Oct.2022 - 11.Nov.2022

2024	INVITED LECTURES/ RESOURCE PERSON/ PAPER PRESENTATIONS ATTENDED	PAPER PRESENTER	National	Two Days National Conference on " Functional Materials and Sensors"	16.Feb.2024 - 17.Feb.2024
2024	WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED	PARTICIPANT	International	International workshop on Advanced Materials Challenges and Standardization Needs for Net Zero Technologies (AMCSNZT-2023)"	09.Oct.2023 - 10.Oct.2023
2024	WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED	PAPER PRESENTER	International	Recent Advances in Functional Materials(RAFM-2024)	14.Mar.2024 - 16.Mar.2024
2025	FACULTY DEVELOPMENT PROGRAM ATTENDED	PARTICIPANT	National	Exploring AI and its Application	17.Feb.2025 - 21.Feb.2025

**Dr. PRIKSHIT GAUTAM**