



# Kirori Mal College

(University of Delhi)

University of Delhi, Delhi-110007

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



Print Date : 15-04-2026

## 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

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

*M Tech. Dissertation: 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

*BTech. Dissertation: 02*

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

## 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/S0254270117311111">https://www.sciencedirect.com/science/article/abs/pii/S0254270117311111</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 |
|----------|-----------|-------|----------------|-------------------|
|----------|-----------|-------|----------------|-------------------|

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

**Dr. PRIKSHIT GAUTAM**