



St. Xavier's College

Dr. Camil Bulcke Path, Ranchi

Faculty Profile

Name of Faculty Member	:	Dr. Mitesh Chakraborty
Gender	:	Male
Email ID	:	miteshsxc@gmail.com
Name of Department	:	Department of Physics
Designation	:	Assistant Professor
Level of Teaching	:	Undergraduate
Academic Qualification	:	M.Sc., Ph. D.
Total Teaching Experience	:	13 Years and 07 Months
CSIR/UGC-NET/SET Qualified	:	Yes

Research Papers Published:

- 1) **M. Chakraborty**, D. Banerjee, S. Singh, J. Dutta, **Photoluminescence and EPR investigation in ZnO: Gd³⁺, Yb³⁺ phosphors for application in light emitting diode**, *Mater. Sci. Semicond. Process.*, **166** (2023) 107758.
- 2) J. Dutta, **M. Chakraborty**, V. K. Rai, **Tm³⁺, Yb³⁺: Zn₂TiO₄ near infrared to blue upconversion phosphors for anti-counterfeit applications**, *RSC Adv.*, **13 (34)** (2023) 23386.
- 3) **M. Chakraborty**, V. K. Rai, **Theoretical investigation of magnetic parameters @ Mn²⁺ @ Co²⁺ in distorted octahedron**, *Pramana-J. Phys.*, **95 (3)** (2021) 1.
- 4) **M. Chakraborty**, S. Chaudhuri, **A. Mukherjee**, **Mathematical modelling of induced magnetization @ Mn (II) ion doped in perovskite host**, *Pramana-J. Phys.*, **95 (2)** (2021) 1.
- 5) J. Dutta, **M. Chakraborty**, V. K. Rai, **Investigation on ZnTiO₃ codoped Er³⁺/ Yb³⁺ nanophosphors with enhanced upconversion emission and in temperature sensing application**, *Optik*, **233** (2021) 166558.
- 6) **M. Chakraborty**, V. K. Rai, K. Mitra, **Investigation on the electrical and optical properties of some zinc titanate ceramics**, *Pramana-J. Phys.*, **92 (3)** (2019) 1.

- 7) **M. Chakraborty**, V. K. Rai, **Theoretical study of Diaquamalonato Zinc (II) single crystal for applications in non-linear optical devices**, *Pramana-J. Phys.*, **89 (6)** (2017) 1.
- 8) **M. Chakraborty**, S. Chaudhuri, V. K. Rai, V. Mishra, **Nd doped lead titanate crystals for microelectronic memory device applications**, *J Mater Sci: Mater Electron*, **27** (2016) 7478.
- 9) **M. Chakraborty**, V. K. Rai, V. Mishra, **Theoretical study on the zero field splitting and dopant position of Mn²⁺ in KH₃(SeO₃)₂**, *Optik*, **127** (2016) 4333.

Participation in UGC-HRDC Course/FDP/OC/RC:

- 1) Participated in Inter-Disciplinary online Two-Week Refresher Course/ Faculty Development Programme on “**Environmental Science**” from (4th-18th) September, 2022 at Teaching Learning Centre, Ramanujan College, University of Delhi under the aegis of Pandit Madan Mohan Malviya National Mission on Teachers and Teaching, Ministry of Education, Government of India.
- 2) Participated in two-week Online Faculty Development Programme on “**Numerical & Engineering Computation, Optimization for Physicists, Scientists & Engineers using open-source SCILAB**” from 21st February-5th March, 2022 at Electronics and ICT Academies of Ministry of Electronics and Information Technology, Government of India.
- 3) Participated in Inter-Disciplinary online Two-Week Refresher Course/ Faculty Development Programme on “**Managing Online Classes & Co- creating MOOCS 8.0**” from 4th-18th September, 2021 at Teaching Learning Centre, Ramanujan College, University of Delhi under the aegis of Pandit Madan Mohan Malviya National Mission on Teachers and Teaching, Ministry of Education, Government of India.
- 4) Participated in two-week Online Faculty Development Programme on “**ICT Tools for Teaching, Learning Process and Institute**” from 15th-26th March, 2021 at Electronics and ICT Academies of Ministry of Electronics and Information Technology, Government of India.
- 5) Attended Faculty Development Program in **Cyber Security and Cryptography** from 7th-11th October, 2020 at Electronics and ICT Academy, IIT Roorkee, India.
- 6) Participated in the UGC-Sponsored Inter/ Multi-Disciplinary Refresher course in **Research Methodology** from 2nd-15th September, 2020 at HRDC, Ranchi University, Ranchi.

- 7) Attended National Training Program on **Lasers: Technology and Applications in Engineering** from 16th- 20th May, 2016 in ISM Dhanbad, India.
- 8) Attended Short-term course on **Advances in New and Renewable Energy Materials & Technology** from 23rd-27th March, 2015 in ISM Dhanbad, India.
- 9) Attended 7th International Summer School of the European Federation of EPR groups on **Advanced EPR** from 24th-31st August, 2015 in Berlin and Elstal, Germany.

Seminar/Conference attended/Paper Presented (National/International):

- 1) Mitesh Chakraborty, Joydip Dutta, Lakshmi Mukhopadhyay, Vineet Kumar Rai, **Ho³⁺- Yb³⁺ codoped CaMoO₄ nanophosphors for display device applications**, National Conference on Advanced Materials and its Applications, NCAMA-2024, 8th-9th, February, 2024, National Institute of Advanced Manufacturing Technology (NIAMT), Ranchi, Jharkhand, India (Paper presented)
- 2) Participated in One-Week National e-Workshop on **“Using Open-Source Learning Management system for online Teaching”** from 17th-25th August, 2020 at Visva-Bharati Santiniketan, West Bengal, India.
- 3) Mitesh Chakraborty, Vineet Kumar Rai, **Zero Field Splitting of Mn²⁺ in doped perovskites**, National Conference on Advances in Spectroscopic Techniques and Materials, ASTM-2018, 14th-16th, March, 2018, IIT (ISM) Dhanbad, Jharkhand, India (Paper presented)
- 4) Participated in the Physics Exposure Camp under the National Olympiad Programme from 3rd-7th December, 2018 at Homi Bhabha Centre for Science Education (TIFR), Mumbai, India.

Seminar/Conference/Workshop Organized

- 1) Co-Convenor, International Conference on **Advances in Novel Materials: Towards Sustainable Future (ICAN-2024)**, 20th -22nd, January, 2024, Department of Physics, St. Xavier's College, Ranchi, India.
- 2) Convenor, XXXIII Annual IAPT Convention-2018 & National Symposium on **Innovations and Excellence in Physics Teaching and Research**, 29th-31st October, 2018, University Department of Physics, Ranchi University, Ranchi, India.

Book Authored/Edited/Chapter(s) in Book:

- 1) Joint CSIR-UGC NET **Popular Master Guide**, Author: Dr. Mitesh Chakraborty, R. Gupta Publications, New Delhi, 2010

On-going Ph. D, Supervision:

- 1) Name of the candidate: Swagata Chakraborty, Lecturer, Department of Physics, St. Xavier's College, Ranchi. Topic of research: **Study of the electrical and optical properties of some phosphors for electronic and lighting applications**, Date of Ph.D. registration: 07/01/2023
- 2) Name of the candidate: Rakesh Prasad, Research Fellow, University Department of Physics, Ranchi University, Ranchi. Topic of research: **Study of the optical properties of some ceramics for temperature sensing applications**, Date of Ph.D. registration: 07/01/2023

Any Special Award/Achievement:

- 1) Mitesh Chakraborty, Outstanding Researcher Award, Nanomaterials and Spectroscopy, 2023, Asia Research Awards.
- 2) Mitesh Chakraborty, Junior Research Fellowship (JRF) and Lectureship, 2009, Council for Scientific Industrial Research (CSIR), New Delhi, India
- 3) Mitesh Chakraborty, Gold Medalist, 2002-05, Physics Honours, St. Xavier's College, Ranchi University, Ranchi.

[Dr. Mitesh Chakraborty]