# **CURRICULUM VITAE**

# DR. MUKTA TRIPATHI Assistant professor (Physics)

A.P.S. University, Rewa (M.P.)

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## **Personal information:**

Name: **Dr. Mukta Tripathi** 

Father's Name: Mr. D. N. Tripathi

Mother's Name: Mrs. Dropadi Tripathi

Date of Birth: **08-09-1988** 

Qualifications: Ph.D. (Physics)

Title of the Research: Ion Conducting Polymer Electrolytes for Electrochemical

**Devices** 

Areas of Interest: Supercapacitors, Activated-carbon, Polymer electrolytes,

Electric Vehicles, Battries, Nano-Materials, Space Physics.

# <u>Objective</u>:

To obtain a responsible position to utilize my research and teaching experience for new invention.

## **Educational Qualification:**

Course	Board/ University	Year	Percentage/CGPA
Ph.D.	Jaypee University of Engineering & Technology, Guna, (MP)	2019	8.3 (During course Work)
B. Ed.	Awdhesh Pratap SinghUniversity Rewa,(MP)	2014	66.0 (Average)
<b>M. Sc.</b> ( Physics )	Awdhesh Pratap SinghUniversity Rewa,(MP)	2012	79.66
B. Sc.	Awdhesh Pratap SinghUniversity Rewa,(MP)	2010	64.2
12 <sup>th</sup>	MPBSE Bhopal	2006	59.1
10 <sup>th</sup>	MPBSE Bhopal	2004	70

# Research Experience:

- 1. Project work at P.G. College Satna: entitled "Sun and its Activity (Fundamental information on Solar wind, solar flayers", Coronal mass ejection, etc. (Year 2010-11 in M.Sc.)
- 2. Research from JUET Guna: Working as PhD research scholar at Department of Physics from 2014 to 2018 on the topic "Ion Conducting Polymer Electrolytes for Electrochemical Devices"
- 3. Research work at Marwadi University, working as Assistant professor of department of physics from 12 July 2018 to till date on "*electrochemical devices*".

Teaching Experience (+11 years):

1. Institution: Govt. PG College Satna (MP) (NAAC B)

Department: **Physics** Designation: **Lecturer** 

Duration: **2012- 2013 (8 Months).** 

2. Institution: Autonomous SRKCS, Satna (MP)

Department: **Physics** 

Designation: Assistant Professor
Duration: 2013- 2014 (13 Months)

3. Institution: Jaypee University of Engineering & Technology, Guna

(M.P.)(NAACA)

Department: **Physics** 

Designation: **Teaching Assistant** 

Duration: 2014- 2018 (3 years 10 months)

4. Institution: Marwadi University, Rajkot, Gujarat (NAAC A+)

Department: **Physics** 

Designation: Assistant Professor

Duration: **2018-2021 (2 years 10 months)** 

5. Institution: Ravindranath Tagor P.G.College, Udaipur, Rajsthan

Department: **Physics** 

Designation: Assistant Professor

Duration: **2021-2022 (1 year 1 months)** 

6. Institution: Barkatullah University, Bhopal MP

Department: **Physics** 

Designation: Guest Faculty
Duration: 2023 (3 months)

7. Institution: Laxmi Narain College of Technology, Bhopal MP

Department: **Physics** 

Designation: Associate Professor
Duration: 2022-2023 (1 year)

8. Institution: Awadhesh Pratap Singh University, Rewa MP

Department: **Physics** 

Designation: Assistant Professor

Duration: 5 October 2023 to till date

## **Memberships:**

- 1. Member of Research Foundation in India (2024)
- 2. Member of Solid State Ionics(2023)
- 3. Member of Indian Association of Physics Teacher(2020)

#### Positions Held:

- 1. Professor of Physics SRKC/PG College/ Marwadi University/ LNCT
- 2. Assistant Teaching Assistant JUET
- 3. Research Scholar Department of Physics JUET,
- 4. Head of department of physics Library in Marwadi University.
- 5. Class coordinator of (B.Sc., I,II, III year Students ) in Marwadi university
- 6. Lab in charge (optical and mechanical lab) department of physics Marwadi University.
- 7. Student Academic and Research Mentor.
- 8. Supervisor M.Sc. project student in Marwadi University.
- 9. Coordinator of Advance English Communication for B.Sc. & M.Sc. Physics Students in Marwadi University.
- 10. Appointed as Faculty of in charge for Admission of Physics for B.Sc. and M.Sc. Physics.

## List of published papers in International refereed Journals:

## <u>In year 2023</u>

- 1. Current Senario of Electric Vehicle in India, **Mukta Tripathi**, **Aditi Gautam**, **Santosh M.Bobade**, **Aparajita Dixit**, Journal of Vindhya Bharti-MultiDisiplinary Bilingual Peer Revieved Research Journal. ISSN-0976-9986
- 2. Synthesis and performance assessment of Silica dispersed nano-composite polymer gel electrolyte for high-performance solid-state Supercapacitors, **Mukta Tripathi**, **Bhupendra Dwivedi**, **Santosh Bobade**, **Yogesh Kumar**, **Anuj Kumar**, Journal of Electroanalytical Chemistry (*Elsevier*) [Impact Factor: **4.6**, SCI]
- 3. Acid-Based Polymer Gel as an Efficient Electrolyte, *Mukta Tripathi*, Aparajita Dixit, Anuj Kumar, P K Singh, Macromolecular Symposia (Wiley-VCH)[*Scopus*].

#### <u>In year 2022</u>

4. Variation in Capacitive Performance of Poly(3-methylthiophene) Nanosheet Electrodes with Liquid/Semi-Solid/Solid Electrolytes, Yogesh Kumara, Narbir Singha,f, Ashwani Kumar, Meenal Gupta, **Mukta Tripathi**, Vijay Sharma, Kamalika Banerjee, and N. H. M. Kaus, Journal of Polymer Science, Series A(Springer) [Impact Factor: 1.206,**SCI**]

### In year 2021

5. Nanocomposite polymer gel with dispersed alumina as an efficient electrolyte for application in supercapacitors *Mukta Tripathi and Anuj Kumar* Journal of Physics and Chemistry of Solids(*Elsevier*) [Impact factor: **4.0**, *SCI*].

## <u>In year 2020</u>

6. Fabrication of supercapacitor using banyan leaves-based activated carbon electrode and formic acid-based polymer electrolyte, **Mukta Tripathi, Aparajita Dixit, Santosh M. Bobade,** Materials today proceeding. (*Elsevier*) [Scopus].

## <u>In year 2019</u>

- 7. Preparation of Polyvinyldinefloroide co-hexafloropropylene based Polymer Gel Electrolyte and its performance evaluation for application in EDLCs, *Mukta Tripathi, Anuj Kumar and S. M. Bobade*, Bulletin of Materials Science (*Springer*), [Impact factor: 1.8 *SCI*].
- 8. Comparative studies on ionic liquid (IL) and IL based polymer gel electrolyte for its application in EDLCs, *Mukta Tripathi*, Macromolecular Symposia (Wiley-VCH) [*Scopus*].

#### In year 2018

- 9. Zinc oxide nano filler based composite polymer gel electrolyte for application in EDLCs, *Mukta Tripathi*, *Anuj Kumar*, Ionics (*Springer*), [Impact factor: 2.8, *SCI*].
- 10. Electrochemical studies of EDLC Cells fabricated using drum stick (DS) activated charcoal electrodes, *Mukta Tripathi and Anuj Kumar*, Materials today proceeding. *(Elsevier)* [*Scopus*].

## In year 2017

11. Electrical Studies on ionic liquid based polymer gel electrolyte for its application in EDLCs. *Mukta Tripathi and S. K. Tripathi*, Ionics (*Springer*), [Impact factor: 2.8, *SCI*].

## List of papers to be communicated in international refereed Journals:

 Fabrication and electrochemical characterization of Electrochemical Double Layer Capacitor using biomass pea-cover based activated charcoal (AC) (Communicated). 2. Evaluating Hybrid Energy Storage Device In Operation Of Electrical Vehicle (Communicated)

## List of papers/research work presented in conferences/webinar:

## In year 2023

- 1. Presented invited talk on "Role of Energy Storage Device in the Application of the Spacecraft" in National conference on Solid State Ionics [NCSSI-15] on 2<sup>nd</sup>-4<sup>th</sup> December 2023 Organized by Department of Physics Institute of Science, BHU Varanasi (U.P.)
- **2.** Presented invited talk on "Importance of Energy Storage Device in the Application of Electrical vehicles and Spacecraft" in International conference on Contemporary Research Innovations and Trends in Engineering Applied Sciences, Management & Humanities on 24<sup>th</sup>-25<sup>th</sup> November 2023 Organized by VITS, Satna (M.P.)
- 3. Presented Oral talk on "Short Review on Perovskite solar cells type photo supercapacitor" in National conference on Physics and Environment on 30 June to 1 st July 2023 Organized by Department of Engineering Physics, Laxmi Narain College of Technology Bhopal (MP).
- 4. Presented Oral talk on "Studies of nano-composite polymer gel electrolyte for application in Supercapacitors" in 38<sup>th</sup> M.P. Young Scientist Congress to be 17-19 March, 2023 organized by MPCST, at Samrat Ashok Technological Institute, Vidisha (MP).

#### In year 2022

5. Presented Oral talk on "Role of Mathematics in Quantum Physics" in National Seminar on Importance of Mathematics in science and Technology Catalyzed & supported by NCSTC and MPCST, Bhopal 28<sup>th</sup> December 2022 organised by Department of Enigineering Mathematics Laxmi Narain College of Technology, Bhopal (M.P.)

#### <u>In year 2021</u>

6. Presented Oral talk on "**Hybrid energy storage device for various electrical Devices**" **14**<sup>th</sup> **National Conference On Solid State Ionics (NCSSI-14) on 16**<sup>th</sup>-**18**<sup>th</sup> **December 2021** organised by Department of Physics and Astrophysics, University of Delhi-110007

- 7. Presented Invited talk on "Hybrid energy storage device in the operation of electrical vehicle" Online International Conference on Environment & Energy Materials (INCEEM-2021) on 29<sup>th</sup>-31<sup>st</sup> July 2021 organised by Department of Environmental Science and Physics School of Basic Sciences and Research Sharda University.
- 8. Given Webinar on "Hybrid energy storage device for Electric vehicle" on 17<sup>th</sup> May 2021 organized by Department Of Mechanical and Automobile Engineering, Sree Sastha Institute of Engineering and Technology, Chennai India.
- 9. Presented research paper on "Biomass activated carbon and nano filler based composite polymer for energy storage devices" Under Institute Diamond Jubilee Celebration "Virtual International Conference On Physical Sciences (ICPS 2021) 5<sup>th</sup> 6<sup>th</sup> February, 2021 organised by Department of Physics Department of Chemistry Department of Applied Mathematics and Humanities Sardar Vallabhbhai National Institute of Technology (SVNIT) Surat 395007, India.

## <u>In year 2020</u>

- 10. Invited talk in "Past, present and future of energy storage devices" on "National Conference On Materials And Devices (NCMD-2020)" 18-19 December 2020 Organized by Department of Physics, Faculty of Engineering and Computing Sciences Teerthanker Mahaveer University, Moradabad, India.
- 11. Research paper on "Electrical studies on TiO<sub>2</sub> Nano-Composite Polymer Gel Electrolytes" presented in Online National Conference on "Recent Trends in Acoustics and Material Science"-2020 (RTAMS-2020) 28<sup>th</sup> to 30<sup>th</sup> November 2020 Organized By Department of Physics, School of Basic Sciences and Research (SBSR) Sharda University.
- 12. Research paper "Fabrication and electrochemical characterization of Electrochemical Double Layer Capacitor using biomass pea-cover based activated charcoal (AC) electrodes for the improved performance" presented in "International Conference on Advanced Materials Science & Engineering and High Tech Devices Applications; Exhibition" (ICMATSE-2020) on October 2-4, 2020, held at Gazi University, Ankara, TURKEY.
- 13. Research paper "Electrical studies on Al<sub>2</sub>O<sub>3</sub> nano filler based composite polymer for energy storage devices", presented in Online National

**Conference on Functional Materials: Emerging technologies and applications in materials science (NCFM-2020)** held at Department of physics School of Basic Sciences and Research Sharda University, Greater Noida (U.P.) 25 - 26 July 2020.

## In year 2019

- 14. Research paper "Formic acid based electrolyte for application of supercapacitor", Presented 13th *National Conference on Solid State Ionics* [NCSSI-13], held at IIT Roorkee, Uttarakhand (U.P.) 16-18, and December 2019.
- 15. Research paper "Comparative studies on ionic liquid (IL) and IL based polymer gel electrolyte for its application in EDLCs" presented, *Mukta Tripathi, National conference on Exotic Materials and Devices (NCEMD-2019)* held at Department of Physics (MMV) Banaras Hindu University Varanasi 8-9 January 2019.

## In year 2018

- 16. Research paper "Utilization of Formic Acid for Application of Supercapacitor", presented *Mukta Tripathi S. M. Bobade and Anuj Kumar*, *AIP conference proceeding AMN-2018*, held at JIIT Noida 15-17 March 2018.
- 17. Research paper "Electrical Study of Ionic liquid (IL) and IL based polymer gel electrolyte for its application in EDLCs", presented *Mukta Tripathi*, 33<sup>rd</sup> MP Young Scientist Congress [MPCST], held at Rani Durgavati Vishwavidyalaya, Jabalpur during 15-16, March 2018.

## <u>In year 2017</u>

- 18. Research paper "Preliminary studies on nano-composite polymer gel electrolyte", presented *Mukta Tripathi and Anuj Kumar*, Presented in *12<sup>th</sup> National Conference on Solid State Ionics* [NCSSI-12], held at Birla Institute of Technology Science, Pilani 21-23 December 2017.
- 19. Research paper "Polymer Gel Electrolyte for its Application in EDLCs", *Mukta Tripathi, Dr. Anuj Kumar*, Presented in, *10<sup>th</sup> National Conference on Solid State Chemistry and Allied Areas* [ISCAS-2017] held at Delhi Technological University, Delhi, India, 1<sup>st</sup> to 3<sup>rd</sup> July 2017.

## In year 2016

20. Research paper "Electrical Studies on ionic liquid based polymer gel electrolyte for its application in EDLCs", *Mukta Tripathi and S. K. Tripathi*, Presented in, *15<sup>th</sup> Asian Conference on Solid State Ionics* [ACSSI-15], held at Indian Institute of Technology, [IIT] Patna, India. 27-30<sup>th</sup> November, 2016.

## In year 2015

21. Research paper "Preliminary studies on ionic liquid based polymer electrolyte", *Mukta Tripathi and S. K. Tripathi*, Presented in, 11<sup>th</sup> National Conference on Solid State Ionics [NCSSI-11], held at Tezpur University, Assam from 21-23 December 2015.

## Workshops/STTP/ Webinar/Conferences Attended:

#### In year 2023

1. Participated in, *National Workshop on Research Methodology(NWRM-2023)*Organized by Department of Physics, SRM Institute of Science and Technology,
Ramapuram Campus Chennai, India,12-19 December 2023.

## In year 2021

- 2. Attended in "Webinar on Energy storage system Opportunities and challenges in India" by Dr. Rahul Walawalkar organized by PDPU Innovation & Incubation Centre on 19 June 2021.
- 3. Participated in webinar **on "Renewable energy for sustainable development in India"** by Dr. K. S. Reddy IIT Madras, organised by Department of Mechanical Engineering and Institution's innovation Council Karpaga Vinayaga College of Engineering and Technology 5<sup>th</sup> June 2021.
- 4. Participated in Short term training Program on "Advances in Internal Combustion Engines" organised by Department of Automobile, Mechanical, Mechatronics Engineering of Ganpat University-UV Patel College of Engineering Sponsored by GUICOST, 24 th-27 th May 2021.

- 5. Participated in Short term training Program on "Latest Trends and Advance in Automobile Engineering" organised by Department of Automobile Engineering of Ganpat University-UV Patel College of Engineering Sponsored by GUJCOST, 12-16 April 2021.
- 6. Participated in "Virtual International Workshop on Energy Storage Technology For E-Mobility (IWESTE-2021)" held at Department of Chemistry SRM Institute of science and technology,25-27 March 2021.

#### In year 2020

- 7. Participated in a Workshop on "Research Methodology & Preparation of Research Proposal Research Report & Research Paper online" held at Marwadi University, Sponsored by GUICOST, IEEE, 14-18 December 2020.
- 8. Participated in "Two Days virtual workshop on Scratching the back of the quantum world & Impact of lockdown on climate/weather" held at Department of physics, Marwadi University, Rajkot, Gujarat 14 -15 October 2020
- 9. Participated in One week short term course in "Recent Advances in the Nanoscience and Nano Technology (RANN-2020)" held at Department of Physics National Institute of Technology Srinagar, (J&K) 24-28 August 2020.
- 10. Participated in International Webinar Series "Novel Electrochemical Energy Devices for Storage (NEEDS-2020)" held at Department of Analytical chemistry and Department of Energy, University of Madras, Department of Chemistry IIT, Madras and Abinnovus consulting private limited -India 17-19 August 2020.
- 11. Participated in "Online National Conference on Functional Materials: Emerging technologies and applications in materials science" (NCFM-2020) held at Department of physics School of Basic Sciences and Research Sharda University, Greater Noida (U.P.) 25 26 July 2020.
- 12. Participated in "Online National Conference On Environment & Energy Materials: Innovation of Tomorrow (NCEEM-2020)(27 28 June, 2020) held at Department of physics School of Basic Sciences and Research Sharda University, Greater Noida (U.P.) 25 26 July 2020.

#### In year 2019

13. Participated in "13<sup>th</sup> National Conference on Solid State Ionics" [NCSSI-13], held at IIT Roorkee ,Uttarakhand (UP) 16-18, December 2019.

- 14. Participated in **"Short term training program"** (STTP-2019) Sponsored by Gujarat council of science and technology held at Department of Electrical engineering Marwadi University Rajkot, Gujrat,17-21 June 2019
- 15. Participated in *National conference on Exotic Materials and Devices (NCEMD-2019)* held at Department of Physics (MMV) Banaras Hindu University Varanasi (BHU) 8-9 January 2019.

#### <u>In year 2018</u>

- 16. Participated in *National Conference on Advanced Materials and Nanotechnology* (AMN-2018) held at JIIT Noida 15-17 March 2018.
- 17. Participated in 33<sup>rd</sup> MP Young Scientist Congress [MPCST], held at Rani Durgavati Vishwavidyalaya, Jabalpur during March 15-16, 2018.

#### In year 2017

- 18. Participated in **12**<sup>th</sup> **National Conference on Solid State Ionics** [NCSSI-12], held at Birla Institute of Technology & Science, Pilani 21-23 December 2017.
- 19. Participated in, **10**<sup>th</sup> **National Conference on Solid State Chemistry and Allied Areas** [ISCAS-2017] held at Delhi Technological University, Delhi, India, 1 3<sup>rd</sup>
  July 2017.

#### In year 2016

- 20. Participated in, *15<sup>th</sup> Asian Conference on Solid State Ionics* [ACSSI-15], held at Indian Institute of Technology, [IIT] Patna, India, 27 30<sup>th</sup> November, 2016.
- 21. Participated in, *Research Training Workshop on Concepts & Practice of Materials Characterization*, held at Indian Institute of Technology, [IIT] Patna, India 24<sup>th</sup>-26<sup>th</sup> November, 2016.

#### <u>In year 2015</u>

- 22. Participated in, 11<sup>th</sup> National Conference on Solid State Ionics [NCSSI-11], held at Tezpur University, Assam, India, 21 23 December, 2015.
- 23. Participated in, *Workshop on Ancillary Tools for Research*, held at Department of Mathematics and physics Jaypee University of Engineering & Technology, Guna, India, 16<sup>th</sup>-18<sup>th</sup> June 2015.

### <u>In year 2013</u>

- 24. Participated in, *National Workshop on Safe Water and Communicable Diseases* sponsored by BER-Chapter Chitrakoot, The National Academy of Sciences India, held at Government Autonomous P.G. College, Satna (M.P.) and M.G. Chitrakoot Gramodaya Vishwavidhyalaya, Chitrakoot, Satna (M.P.) India, 2<sup>nd</sup> -3<sup>rd</sup> May 2013.
- 25. Participated in, the *National Seminar on Cosmic ray Modulation in Inner Heliosphere*, held at the Department of Physics Govt. Model Science College, Rewa (M.P.), 9-10<sup>th</sup> February 2013.

## **Awards & Honours:**

- 1. **Youth Leadership Award:** Vocational Award Recognition in the Rotary Youth Leadership Award (RYLA) 2024 organised by Rotary Club Satna in association with Rotaract Club of Satna.
- 2. **Best Oral Talk Award:** Best oral presentation award at national conference on functional material (NCFM-2020) by Department of physics and research, Sharda, University, Greater Noida, (U.P.) 2020
- 3. **Social Work Award:** Second rank in the State level conference, VigyanevamTaknikkemadhyam se mahilao me vaigyanikchintanutpannakarna at Government Autonomous P.G. College ,Satna (M.P.), 16th to 17th April 2013.

## **Educational Activities:**

- 1. Participated the **16<sup>th</sup> Faculty Induction Program** organised by **UGC**"Malviya Mission Teachers Training Centre organised Doctor Harishingh
  Gaur Central University Sagar, From 09 January to 06 February 2024.
- 2. Participated in *International Faculty development Program/ training Program* on "Statistical Analysis with Excel" Organized by World Innovators University (WIU, Research Foundation of India, From 23 January to 29 January 2024.
- 3. Participated in *International Faculty development Program/ training Program* on "*Innovative Teaching and Learning Padagogy*" Organized by World Innovators University (WIU), MKES Khandawala College- Mumbai, Research Foundation of India, From 09 January to 13 January 2024.
- 4. Attended the Faculty development Program on "Novel Techniques for Sustainable Product Development organised by AICTE IDEA Lab LNCT Bhopal. From 26 December to 30 December 2022

- 5. Attended **Six Days Faculty Development Programme** on **Curriculum Designing, outcome Based Learning, Effective Assessment and Life Skills for Holistic & Multidisciplinary Education** held at Amity Academic Staff College Amity University, Uttar Pradesh, on 15th March to 20th March 2021.
- 6. Attended *Two Week Faculty Development Program on Advances in Computational and Experimental Research in Physics*, held at the Department of Physics, SRM Institute of Science & Technology, Ramapuram, Chennai, India, on 27<sup>th</sup> July to 8<sup>th</sup> August 2020.
- 7. Participated **Faculty Development program** held organised by Marwadi University, Rajkot, Gujarat, India (2019-21).

## Other Activities:

Presented research article titled "Mahilao ki utkristata, samashya evam samadhan, got Second rank in the State level conference", Vigyan evam Taknik ke madhyam se mahilao me vaigyanik chintan utpanna karna held at Government Autonomous P.G. College ,Satna (M.P.), 16<sup>th</sup> to 17<sup>th</sup> April 2013.

## Project Guided (M. Sc. Students):

- 1. Acid based polymer electrolytes and Biomass based activated carbon for Supercapacitors.
- 2. Theoretical Studies of the supercapacitors by COMSOL Multiphysics.
- 3. Hybrid electrical vehicle.

## **Research collaboration:**

- 1. **Dr. Bhaskar Bhattacharya** Professor of Physics Department of Physics (MMV) Banaras Hindu University, Varanasi, India
- **2. Dr. Yogesh Kumar Assistant** Professor Department of Physics ARSD College, University of Delhi, India.
- **3. Dr. Perumal Elumalai,** Professor, Centre for Green Energy Technology, Pondicherry University, India.
- **4. Dr. Pramod Kumar Singh,** HOD, Professor of Physics, Physics Department School of Basic Sciences and Research Sharda University, Greater Noida (U.P.), India
- 5. Dr. Santosh M. Bobade, Assistant Professor, JUET, Guna, MP, India.
- **6. Dr. Anuj Kumar,** Assistant Professor, Department of Physics, C.C.S. University Meerut-200004, Uttar Pradesh, India

## Industrial/Research Visits:

- 1. Visited Muniseva ashram "Solar thermal power plant" Vadodara, Gujarat,
- 2. Visited Vikram Sarabhai Science Community Center, Ahmedabad, Gujarat.
- 3. IIT Roorkee, Uttarakhand (UP) 16-18, December 2019.

- 4. Banaras Hindu University Varanasi (BHU) 8-9 January 2019.
- 5. JIIT Noida 15-17 March 2018.
- 6. Rani Durgavati Vishwavidyalaya, Jabalpur during March 15-16, 2018.
- 7. Birla Institute of Technology & Science, Pilani 21-23 December 2017
- 8. Delhi Technological University, Delhi, India, 1 3<sup>rd</sup> July 2017.
- 9. Indian Institute of Technology, [IIT] Patna, India, 27 30<sup>th</sup> November, 2016.
- 10. Tezpur University, Assam, India, 21 23 December, 2015

## Courses Taught to M. Sc. M. Tech. Students:

- 1. Electrostatics
- 2. Solid state physics
- 3. Mathematical physics
- 4. Digital Electronics
- 5. Electrochemical Energy Storage Devices

## Courses Taught to B. SC. / B. Tech. Students/Diploma:

- 1. Fundamental of Physics
- 2. Engineering physics
- 3. Applied physics
- 4. Electromagnetism etc.
- 5. Statistical and Mathematical Physics
- 6. Wave Optics
- 7. Wave theory
- 8. Thermodynamics
- 9. Classical Mechanics
- 10. Electronics

## Courses Taught to B. Physiotherapy:

- 1. Biomedical Physics (Theory)
- 2. Biomedical physics (Lab)

# <u>Laboratory-Experiments Handled:</u>

- 1. Mechanics Laboratory
- 2. Optics Laboratory
- 3. Electronics Laboratory
- 4. Engineering Physics Laboratory
- 5. Diploma Engineering Laboratory
- 6. Virtual Labs- Optics

- 7. Virtual Labs- Advance Mechanics
- 8. Virtual Labs- Laser Optics
- 9. Virtual Labs- Electronics,
- 10. Virtual Labs- Thermodynamics

## **Internship:**

Teaching in M.L.B. Girls Hr. Sec. School, Satna, M.P. (Year - 2011-12 during M.Sc. trainings)

#### **Practical work:**

- 1. B.Sc. & B. Tech./M.Sc. Physics Practical's
- 2. Design four new experiments
- 3. Synthesis of activated carbon.
- 4. Synthesis of polymer electrolyte.
- 5. Fabrication of Supercapacitor cell.

## **Computer Skills:**

- MS-Office Suit and Language's (C, C++, Fox pro etc.)
- COMSOL MULTIPHYSICS-SOFT WARE
- Designing of models

## Others area of interest/Hobbies:

- 1. Research activity
- 2. Completing work in short duration
- 3. Social services
- 4. Visiting various places
- 5. Reading holy books (Upanishad, Shrimad Bhagwat, Shree Ram Charita Manas)
- 6. Singing with playing Harmonium
- 7. Following Indian culture,
- 8. Industrial work,
- 9. Dancing
- 10. Journal Writing

Date: 8-02-2024 Dr. Mukta Tripathi