

CURRICULUM VITAE

DR. MRIDULA TRIPATHI

Associate Professor

Department of Chemistry, CMP Degree College,
(Constituent College of University of Allahabad),
Prayagraj - 211002

Contact No. : 8081499543, 9519790416

Email: mtcmpau@gmail.com

Date of Birth & Gender: 11th January, 1968, Female



Areas of Research

Nanotechnology, Solar Cell, Hydrogen Energy, Polymer Chemistry, Natural Products,

Research ID's

Google Scholar ID:i2YhEEAAAj

Vidawan ID:217667

Scopus Scholar ID:-20435023000

ORCID ID:-0000-0002-4498-1088

Educational Qualification:

B. Sc. Allahabad University 1986 Chemistry, Botany. Zoology

M.Sc. Allahabad University 1988 Chemistry

Ph.D. Allahabad University 1992 Chemistry

Teaching Experience:

1. Presently Working as Associate Professor Department of Chemistry, CMP Degree College, (Constituent College of University of Allahabad), Allahabad, U.P.(India) since September 11, 2003
2. Worked as Lecturer (Visiting) in the Department of Chemistry in Govt. Post Graduate College, Ramnagar (Nainital), Uttranchal from August 2001 to September 10 2003

Fellowships/Awards

1. Research Associate in the project of Ministry of Non-Conventional energy sources from April, 2000 to September, 2000 Department of Chemical Engineering , I T, Banaras Hindu University, Varanasi.
2. C.S.I.R. Research Associate from January,1996 to January, 2000 in the Hydrogen Energy centre, Department of Physics, Banaras Hindu University, Varanasi.
3. Research Associate from All India Council of Technical Education, New Delhi from August, 1995 to December,1995.
4. Post-Doctoral Research Fellowship from Ministry of Non-Conventional energy sources from Feb 1993 to July 1995.
5. International Travel Award from UGC and CICS for presenting a paper in international Conference World Renewable Energy Network at University of Kingston, London. .
6. International Travel Award from DST and CICS for presenting a paper in 6th International conference on hydrogen production on 03-06 May 2015, at university of Ontario, Canada.
7. Distinguished researcher, by Advanced Materials Congress bursary , Stockholm, Sweden 2023

Academic Visit of abroad

- 1- Paper presented on 6th International conference on hydrogen production on 03-06 May 2015, at university of Ontario, Canada.
- 2- Paper presented on World Renewable Energy Network at University of Kingston, London. , 3-8 August 2014.
- 3- Guest Scientist in Abdus Salam, International Centre for Theoretical Physics. Trieste, Italy from 12nd June to 13th July, 2010.

Techniques Learnt

Various techniques learnt like TLC, HPLC, UV-visible spectrophotometer and IR, . In addition to these, techniques used in Characterization of Materials like X-Ray Diffraction, SEM, and TEM are also integral of my research interest.

Research projects completed:

- 1- Major Project (2012-2015) Board of Research in Nuclear Sciences, Trombay, Mumbai(Twenty Two Lakh only) Title- “Synthesis and Characterization of natural dye sensitized solar cell using nanocompositebased polymer electrolyte”.
- 2- Major Project(2009-11) SERC Fast Track Young Scientist Govt. of India Ministry of Scienceand Technology, Department of Science and Technology, New Delhi (Seventeen lack eightythree thousand only) Title “*New Innovative*” low cost high efficiency wet dye sensitized photovoltaic solar cell”
- 3-Major Project (2007-10) Council of Science& Technology, U.P. Lucknow.(Five Lac Forty thousand only) Title-“Synthesis and characterization of novel nanostructured photoelectrode and development of photoelectrochemical solar cell for hydrogen production”.
- 4-UGC Minor Project New Delhi (2006-08) Title “New generation photoelectrochemical solar cells for solar hydrogen Production”.

Position Held-

1. Coordinator of the PG Course
2. Co- Convenor PG Admission Committee

Thesis Supervised

S.No	Research Topic	Name of Student	Completion/Registration Year
Ph.D. Completed:			
1	A study on the performance of natural betacyanin dye in nanometal oxides based solar cell	Dr.Ruby Upadhyay	2009RCY56
2	Studies on nanocomposite polymer electrolytes for electrochemical device application	Dr. Shivangi Trivedi	2009RCY57
Ph.D. Ongoing			
1.	Fabrication and investigation of nanostructured dye sensitized solar cell based on natural sensitizer and polymer electrolyte.	Kumari Pooja	1209/RES/2020
2.	Studies on synthesis, characterization and functional properties of polymeric nanocomposite.	Anshu Maurya	1934/RES/2022
Research Associate CSIR New Delhi			
1	Noval counter electrode and efficient natural photosensitizers for enhancement in performance of polymer electrolyte based dye sensitized solar cell	Dr. Priyanka Chawla	08/755(0001)/EMR-2020 (2021-23)

Post Graduate Dissertation :

S. No.	semester (PG) of offering	Name of the Students undertaking project work/field work/Internship	Topic of the undertaking Project
1.	IV (2017-2018)	Himanshu Kumar Yadav Anil Kumar	1. Natural Dye Sensitized solar cell 2. Hydrogen Energy as green energy
2.	IV (2018-2019)	Mohit Srivastav Garima Rozy	1. Synthesis of nanomaterial by different routes. 2. Application of nanomaterials in field of energy. 3. Nanoparticles characterization.
3.	IV (2019-2020)	Anchal Pandey Vandana Sakshi Sweta Shukla	1. Nanocomposite polymer electrolyte for solar cell. 2. Polymer electrolyte based solar cell. 3. Nanomaterials for environmental application. 4. Ion selective electrode for rare earth element detection
4.	IV (2020-2021)	Nitish Kumar Gupta Navneet Kumar Tiwari Nainshi Tripathi	1. Solar Cell 2. Hydrogen energy as green energy 3. Nanocomposite Polymer Electrolytes
5.	IV (2021-2022)	Ashish Kumar Yadav Ankita Tripathi Satyam Dwivedi	1. Solar Cell 2. Nanomaterial and their environmental application 3. Hydrogen Energy
6.	IV (2022-2023)	Varun Kumar Tripathi Manya Srivastava	1. Grafting and crosslinking of natural polymers and their application 2. Dye sensitized solar cell

LIST OF PUBLICATIONS

1. Efficient natural dye-sensitized solar cells from PVDF based polymer electrolyte filler with layered graphite. Kumari pooja. **Mridula Tripathi**, Priyanka Chawla. International Journal of Materials Research 113 (2022) 1045- 1052. ISSN- 2195-8556
2. Development of polymer electrolyte based on graphite/MWNTs filler for sustainable dye sensitized solar cell. Kumari Pooja, Anant P Pandey, Kalpana Awasthi, **Mridula Tripathi** and Priyanka Chawla. Chemical Papers 76, pp. 7623-7632 (2022).
3. Low- cost and efficient counter electrodes for solid-state natural dye- sensitized solar cells. Priyanka Chawla, Anant prakash pandey, Kumari Pooja, and **Mridula Tripathi**, Journal Applied Electrochemistry 1 (2022) 1-10. ISSN- 0021-891X.
4. New trends in carbon nanostructured based counter electrode for dye sensitized solar cell: A review Kumari Pooja, Priyanka Chawla and **Mridula Tripathi**. Journal of Applied Sciences, 22(2), 48-50.
5. PVA Based Polymer Electrolyte with Layered Filler Graphite for Natural Dye Sensitized Solar Cell. Kumari Pooja, Mridula Tripathi and **Priyanka Chawla**. Non-Metallic Material Science (2021) 3:1.
6. Performance of chitosan based polymer electrolyte for natural dye sensitized solar cell. Priyanka Chawla and **Mridula Tripathi**. Environmental Progress & Sustainable Energy (2018) DOI 10.1002/ep.12965. Wiley.
7. Dielectric studies of [PEO: CH₃COOLi] graphite system synthesized by hot press and solution cast technique. Priyanka Chawla, Shivangi Trivedi, Kamlesh Pandey and **Mridula Tripathi**. Proceedings of national academy of sciences Indian Section A: Physical Sciences (2018) 88: 187-193. Springer
8. Surface modification of semiconductor photoanode for photoelectrochemical water splitting. Priyanka Chawla and **Mridula Tripathi**. International journal of hydrogen energy (2016) 41: 7987-7992. Elsevier
9. Optimization of semiconductor ns TiO₂-CuO admixed photoelectrode for photoelectrochemical solar cell in regard to hydrogen production. Priyanka Chawla and **Mridula Tripathi**. International journal of hydrogen energy (2016) 41: 7993-7996. Elsevier
10. Novel improvements in the sensitizers of dye-sensitized solar cells for enhancement inefficiency—a review. Priyanka Chawla and **Mridula Tripathi**. International Journal of energy Research (2015) 39: 1579-1596. Wiley

11. Solid nanocomposite polymer electrolyte for enhancement in stability of natural dye sensitized solar cell. Priyanka Chawala and **Mridula Tripathi**. *Material Research Innovations* (2015) 19: 328-331. Maney
12. Nanocomposite Polymer Electrolyte for Enhancement in Stability of Betacyanin Dye Sensitized Solar Cells. Priyanka Chawla and **Mridula Tripathi**. *ECS Solid State Letters* (2015) 4: 21-23.
13. CeO₂-TiO₂ photoanode for solid state natural dye-sensitized solar cell. **Mridula Tripathi** and Priyanka Chawala. *Ionics* (2015) 21: 541-546. Springer
14. Performance of CeO₂-TiO₂ Admixed Photoelectrode for Natural Dye Sensitized Solar Cell. Ruby Upadhyay, **Mridula Tripathi**, Priyanka Chawla and Ashutosh Pandey. *Journal of Solid State Electrochemistry* (2014) 18: 1889-1892.
15. Surface modification of Semiconductor photoelectrode for better photoelectrochemical performance. Ruby Upadhyay, **Mridula Tripathi** and Ashutosh Pandey. *High Energy Chemistry* (2013) 47: 308-314.
16. Novel dye based photoelectrode for improvement of solar cell conversion efficiency. **Mridula Tripathi**, Ruby Upadhyay, Ashutosh Pandey. *Applied solar energy Journal* (2013) 49: 54-57.
17. Natural dye based photoelectrode for improvement of Solar Cell performance. **Mridula Tripathi**, Ruby Upadhyay, Ashutosh Pandey and P. K. Dubey. *Ionics* (2012) 19: 1179-1183.
18. Semiconductor photoelectrochemical solar cells based on admixing of nano materials for renewable energy. **Mridula Tripathi**, Ruby Upadhyay and Ashutosh Pandey. *Journal of Ambient energy* (2012) 33: 171-176.
19. Structural, Thermal and Dielectric Studies of [PVA -LiAc]:TiO₂ polymer nano composite system. **Mridula Tripathi**, Shivangi Trivedi, Ravindra Dhar, Markandey Singh, N.D. Pandey and S. L. Agrawal. *Phase Transition* (2011) 84: 972-980.
20. Production of solar hydrogen energy by nanostructured semiconductor photoelectrode. **Mridula Tripathi**, Ruby Upadhyay, Shivangi Trivedi, Ashutosh Pandey and Kamlesh Pandey. *Bhartiya Vaigyanik evam Audyogik Anusandhan Patrika (NISCARE)* (2011) 19:75-78.
21. Study of Dehydrated Salts: Electrolyte for Intermediate Temperature Fuel Cell. Kamlesh Pandey, Mrigank M. Dwivedi and **Mridula Tripathi**. *Portugalete Electrochemica Acta* (2009) 27: 99-110
22. Dielectric Relaxation studies on (PEO:SiO₂): NH₄SCN Nano Composite polymer electrolyte films. Kamlesh Pandey, Mrigank Mauli Dwivedi S. L. Agrawal, Markandey Singh and **Mridula Tripathi**. *Journal of material Science* (2009).
23. Structure, Interaction and Thermal study in Electrolyte of Polyethylene Oxide/ Silica/Ammonium Thiocyanate Nanocomposite Electrolyte. **Mridula Tripathi**, Kamlesh Pandey and M.M. Dwivedi. *Polymer Composites* (2008) 30: 503-509.
24. Structural, Thermal and Ion Transport studies on Nano polymer composite Electrolyte (PEO+SiO₂):NH₄SCN system. Kamlesh Pandey, Mrigank Mauli Dwivedi S. L. Agrawal Markandey Singh and **Mridula Tripathi**. *Ionics* (2008) 14: 515-523.
25. Surface modification of semiconductor photoelectrode for improved solar cell performance. **Mridula Tripathi**, Kamlesh Pandey and Shiv Datt Kumar. *Solar energy solar materials* (2008) 9: 1663-1668.
26. Study of dehydrated salt: Electrolyte for fuel cell. **Mridula Tripathi**, Kamlesh Pandey and Mrigank Mauli Dwivedi. *Vigyan Pragati Bhartiya Vaigyanik Evam Audyogik Anusandhan Patrika* (2007) 15: 117-123.
27. Production of Solar Hydrogen Employing Semiconductor Septum (n-TiO₂/Ti and ns TiO₂-In₂O₃ Admixed/Ti) Electrode based Photoelectrochemical Solar Cells. **M. Misra**, R. Karn, R.N. Pandey and O.N. Srivastava. *International Journal of Hydrogen Energy* (2000).
28. Semiconductor-Septum Photoelectrochemical Cell for Solar Hydrogen Production. O.N. Srivastava, R. Karn and **Mridula Misra**. *International Journal of Hydrogen Energy* (2000) 25: 495- 503.
29. Semiconductor-Septum Photoelectrochemical Cell for Solar Hydrogen Production. R.Karn, **Mridula Misra** and O.N. Srivastava. *International Journal of Hydrogen Energy* (2000) 25: 407- 413.
30. Solar Hydrogen Production Using Semiconductor Septum (n-CdSe/Ti and ns TiO₂/Ti) Electrode Based Photoelectrochemical Solar Cells. K.S. Babu, R.N. Pandey, **Mridula Misra** and O.N. Srivastava. *International Journal of Hydrogen Energy* (1998) 23: 861-865.
31. Solar Hydrogen Production Employing n-TiO₂/Ti SC-SEP Photoelectrochemical Solar Cell. **Mridula Misra**, R.N. Pandey and O.N. Srivastava. *International Journal of Hydrogen Energy* (1997) 22: 501-508.

32. Synergistic antioxidant activity of tea with ginger, black pepper and tulsi. Ravindra Kumar Gupta, Priyanka Chawla, **Mridula Tripathi**, A.K. Shukla and Archana Pandey. Int., J.Pharmacy and Pharmaceut. Sci., (2014) 6: 477-479.
33. Synergistic Antioxidant activity of tea with zinger, black pepper and tulsi, RavindraKumaGupta, Priyanka Chawla, **Mridula Tripathi**, A.K. Shukla and ArchanaPandey, Published in Int. J. Pharmacy & Pharmaceutical Sciences, (2014).
34. Essential Oils from Family Zingiberaceae for Antimicrobial Activity- A Review. **MridulaTripathi**, Priyanka Chawla, Ruby Upadhayay and Shivangi Trivedi. Int., J. Pharma, BioSci., (2013) 4: 149-162.
35. Phytochemical Investigation of Cassia glauca Bark, H.P.Tiwari, **Mridula Misra** and P.C. Gupta, J. of Indian Chem. Soc., (CSIR) (1993) 70: 653.
36. Fatty Acid Composition and Characteristics of Cassia kleinii Seed Oil , H.P.Tiwari, **Mridula Misra** and P.C. Gupta, J. of Indian Chem. Soc., (CSIR) (1993) 70:781.
37. Fatty Acid Composition and Characteristic of Ipomoea pileata Seed Oil, H.P. Tiwari, **Mridula Misra** and P.C. Gupta, Nat. Acad. Sci. India, (INSA) (1994) 64.
38. Chitosan based polymer electrolyte for natural dye sensitized solar cell, Priyanka chawala, Ghanshayam mani mishra and **Mridula Tripathi**, J of Nehru grammbharti University, 2016/v/6-13.ISSN 2319-9997.
39. Negative photoconductivity effects of titanium dioxide and tungsten oxide prepared by sol gel method, S. Srivastava, R.K. Srivastava, S. Trivedi and **M. Tripathi**, J. of International Academy of Physical Science, (2010),14 (2), 265-71.

Edited Books ;

- 1- Editor of Versatile Solicitations of Material Science .in Diverse Science Fields, Nova Science Publisher, New york ,2021, ISSN 978-1-53619-798-3.
- 2- Editor of Physical and Biological Sciences know-how Social Solicitation, Krishna computer sansthan,ISBN- 978-81-956345-9-0,2022.
- 3- Editor of Insights in chemistry and Applied Sciences, First Print Publicatoin, ISBN- 978-93-93647-07-8,2022.
- 4- Editor of Materials Science future aspects, Nova Science Publisher, New York, ISSN : 979-8-88697-008-1, 2022.
- 5- Editor of the CSTT Comprehensive Glossary: Volume 1-8, Publisher Commission for Scientific and Technical terminology, MHRD, Higher Education , New Delhi,2019, ISBN -97881-936060-6-3
- 6- Editor of the ADVANCES IN CHEMICAL AND APPLIED SCIENCES VOL2, Publisher **FRIST** PRINT PUBLICATION ,TAGORE TOWN ALLAHABAD211002, ISBN -978-93-88018-17-3, 2019
- 7- Associate editor of the ADVANCES IN CHEMICAL AND APPLIED SCIENCES VOL2, Publisher **FRIST** PRINT PUBLICATION ,TAGORE TOWN ALLAHABAD211002ISBN -978-93-88018019-7,2020
- 8- Editor of the Proceedings of National Conference “Application of the material science in the service of society”funding agency U.G.C.2009
- 9- Member of editorial board Antibacterial Activity in Natural and Synthetic Compounds Arvind Prakashan, 15/131, Shahgang Agra2013, ISBN: 978-81-88492-57-2
- 10- Associate editor “Advances in Chemical and Applied Sciences Vol I”,First print Publication, Allahabad.ISSN :2019978-81-9350520-5,2019.
- 11- Editor of Advances in Chemical and Applied Sciences Vol II”,First print Publication, Allahabad.ISSN :2019978-81-9350520-5,2020
- 12- Editor of Versatile Solicitations of Material Science .in Diverse Science Fields, Nova Science Publisher, New york ,2021, ISSN 978-1-53619-798-3
- 13- . Editor of Material Science A field of Diverse Industrial Applications ,Bentham Science Publisher Singapore, ISBN;978-981-051-25-4 ,2023

Articles/Chapters published in Books :

1. Biopolymer for mankind, **Mridula Tripathi**, Arti Srivastava, Priyanka Chawla, Kumari Pooja and Anshu Maurya published in book entitled “Advanced research trends in chemistry” published by Bright sky publication (2022) ISBN 978-93-92804-35-9.
2. Use of Nano composite Polymer electrolyte in Dye sensitized solar cell, Kumari Pooja, **Mridula Tripathi**, Priyanka Chawla and Anshu Maurya, published in book entitled “Physical and Biological Sciences know-how Social Solicitation” published by Krishna computer sansthan. (2022) ISBN-978-81-956345-9-0.
3. Extraction of beta-carotene from carrot and its spectroscopic study, Shivam kumar, Nilesh kumar Rai and **Mridula Tripathi**, published in book entitled “Insights in chemistry and Applied Sciences” published by First Print Publication. (2022), ISBN-978-93-93647-07-8.
4. Hydrogen Production in regard to clean fuel for the future world, Kumari pooja, Priyanka chawla, Arti Srivastava, Anshu Maurya and **Mridula Tripathi**, published in book entitled “Insights in chemistry and Applied Sciences” published by First Print Publication. (2022), ISBN- 978-93-93647-07-8.
5. PVDF – based nanocomposite polymer electrolyte for enhancement in stability of dye sensitized solar cells, Priyanka Chawla, Kumari Pooja and **Mridula Tripathi**, published in book entitled “Proceedings of the National Workshop on Recent Advances in Condensed Matter and High Energy Physics”. 278, **2022**, published by Springer Nature Singapore Pte Ltd. ISBN 978-981-19-2592-4.
6. Hydrogen: Energy of the future, Priyanka Chawla, Kumari Pooja, and **Mridula Tripathi** published in book entitled “Chem-World” published by First Print Publication, pg-74-77. ISBN no. 978-93-93647-09-2, (2022).
7. Dye sensitized solar cells need of an hour, Priyanka Chawla, **Mridula Tripathi** and Kumari Pooja published in book entitled “Recent research in physical and chemical sciences published by MKS Publication ISBN NO. 978-93-91248-18-5, (2021)
8. Carbon nanotubes for dye sensitized solar cells Priyanka Chawla, **Mridula Tripathi** and Kumari Pooja published in book entitled “Advanced research trends in material science and engineering” 978-81-949305-5-6, (2021).
9. Dye sensitized Solar Cell: Approach to clean energy, **Mridula Tripathi**, Arti Srivastava, Priyanka Chawla and Abha Tripathi , In book: Advances in chemical and applied sciences, Vol 3, **2020**, published by CMP Chemical Society, Allahabad, ISBN 978-93-88018-19-7.
10. Synthesis and characterization of cross-linked graft copolymer based on carrageenan and acrylamide using redox system , Arti Srivastava, Rajesh kumar, Mridula Tripathi and Savitri Dewangan, Society Of Biological Sciences and Rural Development, **2020**, pp 193-199, ISBN: 978-81-923535-7-9.
11. Determination of Antioxident activity of flower of cassia glauca. Mridula Tripathi, Arti srivastava, Abha Tripathi and Priyanka Chawla, **2020**, pp 71-73 193-199, ISBN: 978-81-923535-7-9.
12. Expansion of Agricultural field using biodegradable polymers, Arti Srivastava, **Mridula Tripathi** and Rajesh Kumar, Book title: Earth –I (Environmental Challenges and issues in present scenario), **2019**, pp. 106, Published by Krishna Computer Sansthan, Allahabad, ISBN 978-81-942034-4-5.
13. Environmental friendly low cost adsorbents for the removal of organic pollutants, Arti Srivastava, Pratibha Mandal, **Mridula Tripathi** and Rajesh Kumar, In book: Innovation in agriculture, environment and health research for ecological restoration, **2019**, pp.291-298, published by society of rural development and biological sciences, Allahabad, INDIA, ISBN: 978-81923535-5-5.
14. Smog: A hazardous Air pollutant, Abha Tripathi, Arti Srivastava and **Mridula Tripathi**, In book: Innovation in agriculture, environment and health research for ecological restoration, **2019**. pp.340, published by society of rural development and biological sciences, Allahabad, INDIA, ISBN: 978-81923535-5-5.
15. Chemical Toxicology and its Influence on Environment Arti Srivastava, Pratibha mandal, **Mridula Tripathi** and Rajesh Kumar, In book:: Environmental Challenges and issues in present scenario, **2019**, published by CMP Chemical Society, Allahabad, ISBN 978-93-88018-18-0.
16. Properties and Biomedical Applications of different copolymeric micelles, Arti Srivastava, Rajesh Kumar, **Mridula tripathi** and Pratibha Mandal , In book: Advances in chemical and applied sciences, Vol 1, **2018**, pp.38, publisher CMP Chemical Society, ISBN 978-81-9350520-5

17. Review on Amphiphilic copolymer, Arti Srivastava, Rajesh Kumar, Pratibha Mandal and **Mridula Tripathi**, In book: Advances in chemical and applied sciences, Vol 1, **2018** ,pp. 189, publisher CMP Chemical Society, ISBN 978-81-9350520-5
18. Determination Of Antioxidant activity Of Flower Of Cassia Glauca, **Mridula Tripathi** And Priyanka Chawala, Emerging Trends In Agricultural Environmental And Rural Development challenges And Solution, ISBN-978-81-923494-9-7, **2017**.
19. Antioxidant Activity Of Fruits Of Morus Rubra, 208-212, , **Mridula Tripathi** And Priyanka Chawla, Natural resource management For Sustainable Agriculture And Rural Development, 978-81-923494-8-0. **2016**.
20. Water Purification By Nanomaterials, **Mridula Tripathi**, Vigyan Patrika, Publisher-Csir New Delhi, ISSN No. 373-1200, **2016**.
21. Synergistic Antioxidant Activity Of Essential Oils Of Zingiber Officinale And Curcuma Longa, Page No. 91-95, **Mridula Tripathi** And Priyanka Chawala Role Of Antioxidants In Health And Disease Prevention. Published By National Publisher Anubhav Publishing House, Allahabad, ISSN; 978-81-923494-6-6, **2016**.
22. Antioxidant activity of methanolic and aqueous extract of beta vulgaris roots published by society of rural development and biological sciences, Priyanka Chawla, **Mridula Tripathi** and Arti Srivastava, **2016**, Allahabad, INDIA, **2016**, ISBN 978-81-923494-6-6.
23. Innovation in agriculture via polymeric hydrogel, Arti Srivastava, Rajesh Kumar and **Mridula Tripathi**, published by society of rural development and biological sciences, Allahabad, INDIA, **2016**, ISBN 978-81-923494-6-6
24. Synergistic antioxidant activity of essential oils of Zingiber officinale and Curcuma longa, **Mridula Tripathi**, Mamta Tripathi, Arti Srivastava and Priyanka Chawla, published by Anubhav publishing house, Allahabad, India and edited by Archana Pandey and Babita Agrawal, **2016**, ISBN 978-93-80134-75-8
25. Importance of polysaccharides as antioxidant, Arti Srivastava, Rajesh Kumar and **Mridula Tripathi**, published by Anubhav publishing house, Allahabad, India and edited by Archana Pandey, and Babita Agrawal, **2016**, ISBN 978-93-80134-75-8.
26. Water Purification by Nanomaterials, Mridula Tripathi, CSIR, New Delhi and vigyan Allahabad, ISSN No. 373-1200, **2016**.
27. Surface Modification And Optimization Of Semiconductor $\text{Ni-TiO}_2\text{-WO}_3$ Admixed Photoelectrode In Regard To Solar Hydrogen Production 1-9, **Mridula Tripathi** And Priyanka Chawla Renewable Energy In The Service Of Mankind Vol 1 Springer, International Publishing Switzerland , A. Sayigh (Ed.) ISSN DOI 10.1007/978-3-319-18215-5_37 ISBN:978-3-319-17777-9, **2015**
28. Enhancement In Conversion Efficiency By Surface Modification Of Photoanode For Natural Dyesensitized Solar Cell Pp 377-384, **Mridula Tripathi** And Priyanka Chawla, Renewable Energy In The Service Of Mankind Vol 1 Springer, International Publishing Switzerland , A. Sayigh (Ed.) ISSN DOI 10.1007/978-3-319-18215-5_37, ISBN:978-3-319-17777-9, **2015**.
29. Advances In Conductive Polymers For Sensors And Solar Cells Applications 283-288, **Mridula Tripathi** And Priyanka Chawla , Yesterday, Today And Tomorrow Publisher-DESIDOC, DRDO, New Delhi, ISBN NO. 9678-81-86514-71-9, **2015**
30. Dielectric Studies Of [PEO: CH_3COOLi]: MMT System Synthesized By Hot Press Technique 289-292, **Mridula Tripathi** And Priyanka Chawla Yesterday, Today And Tomorrow Publisher-DESIDOC, Drdo, New Delhi, ISBN No. 9678-81-86514-71-9, **2015**
31. Synthesis And Characterization Of $\text{pvdf-(nH}_4)_2(\text{c}_6\text{H}_8(\text{coO})_2)$:Gel Electrolyte For Fuel Cell Application 189-194, Kamlesh Pandey, **Mridula Tripathi** , And Nidhi Asthana, Non-Conventional Energy Publisher –IEEEEXPLORE CALCUTTA, 978-1-47993340-2, **2014**.
32. Bio-Synthesis Nanoparticles 291-96, **Mridula Tripathi** And Priyanka Chawala, Information Technology: Yesterday, Today And Tomorrow, Publisher-DESIDOC, DRDO, New Delhi, ISBN 9678-81-86514-71-9, **2014**.
33. Natural Photosensitizers for Solid State Dye Sensitized Solar Cell 43-46, **Mridula Tripathi** And Priyanka Chawala, Non- Conventional energy publisher –IEEEEXPLORE Calcutta, ISBN 978-1-47993340-2, **2014**.
34. Biosynthesized Silver Nanoparticles As Antimicrobial Agents 339-346, **Mridula Tripathi** And Priyanka Chawala, Innovative And Modern Technologies For Sustainable Agriculture And Rural Development , SBSRB , Allahabad, ISBN- 978-81-923494-3-5, **2014**

35. Natural Sensitizers For Polymer Gel Electrolytes Based Dye Sensitized Solar Cells 331-338, **Mridula Tripathi** And Priyanka Chawla, Innovative And Modern Technologies For Sustainable Agriculture And Rural Development ,SBSRB ,Allahabad, ISBN-978-81-923494-3-5, **2014**
36. Natural Solid Dye Sensitized Solar Cell- Approach To Green Energy 186-189, **Mridula Tripathi** And Priyanka Chawla Health,Environment And Industrial Biotechnology,Publisher MCGRAW Hill education (India), ISBN 978-9-33-290137-7, **2013**
37. White Musali Ki Sukhi Root Ko Methanol filtrate Ki Oxidative Activation 222-227, Visw Ki Pragati Me Vedings Of Vigyan Aur Technology Ka Yugdaan Drdo. **Mridula Tripathi** Delhi.Publisher DESIDOC DRDO, New Delhi, ISBN No. 9678-81- 86514-71-10, **2013**.
38. Antimicrobial activity of asparagus racemosus. **Mridula Tripathi**, Ruby Upadhyay and Priyanka Chawla. Antibacterial activity in natural and synthetic compounds. ISBN No. 978-81-88492-57-2, **(2013)**.
39. Use of nanomaterials as antimicrobial agents in water and waste treatment. **Mridula Tripathi**, Ruby Upadhyay, Shivangi Trivedi and A.K. Shukla. Antibacterial activity in natural and synthetic compounds. ISBN No. 978-81-88492-57-2, **(2013)**.
40. Phytochemicals- Future Nutrients. **Mridula Tripathi**, Priyanka Chawla and Ruby Upadhyay, Article published in Cure environment Bulletin, ISSN No. 2319-1333, **(2013)**.
41. Rang sugrahikrit solar cell. **Mridula Tripathi** and Ruby Upadhyay, Article Published in Vigyan Patrika. ISSN No. 373-1200, **(2013)**.
42. Natural Polymer- Advanced Materials for Pharmaceutical Industry, **Mridula Tripathi**, A.K. Shukla, Priyanka Chawla, Ruby Upadhyay and Shivangi Trivedi, Chem World,Department of Chemistry, C.M.P. Degree College, **(2013)**.
43. Study Of Ion Transport Behavior In (PVANH4):SiO₂ Nanocomposite Polyme Electrolyte 418-423,**Mridula Tripathi**, Shivangi Trivedi And Kamlesh Pandey, World Scientific Publishing Co. Pte. Ltd. Solid State Ionics for Sustainable World Proceedings of the 13th Asian Conference On Solid Stateionics, Japan, 978-981-4439-90-9, **2012**.
44. Nanotechnology: Today and Tomorrow, **Mridula Tripathi**, Ruby Upadhyay, Shivangi Trivedi and A.K. Shukla, Chem World, Department of Chemistry, C.M.P. Degree College, **(2012)**.
45. Extraction and Characterization of water soluble natural polymer for commercial use, **Mridula Tripathi**, Shivangi Trivedi and Ruby Upadhyay, pp. 121-125, ISBN No. 978-81- 923494-0—4 **(2012)**.

Invited Talk delivered :

1. Delivered lecture in the conference on lecture series under DBT Scheme organized by department of physics K.N.P.G. Govt. College Gyanpur, Bhadohi on 20 May 2023.
2. Delivered lecture in the conference on Hydrogen energy and advanced materials organized by department of physics Banaras Hindu University from 24-25 April 2023.
3. Delivered lecture in the International conference on renewable agriculture and sustainable environment organized by Society of Biological Sciences and Rural Development, Prayagraj on 25-26 March 2023.
4. Delivered lecture in national conference on Environment & Energy Materials (NCEEM - 2020) organized by Sharda University on 27-28 June, 2020.
5. Delivered lecture in National Conference on 'Green Technology: A Roadmap for Sustainable Development' HNB Govt.PG college, Prayagraj, 23 Feb 2020.
6. Delivered lecture in the Conference on Forestry Interventions in eco rehabilitation, organized by Forest Research Centre for Eco Rehaibility Prayagraj, 3 March 2020.
7. Delivered lecture in the Conference on Emergence of materials science organized by K.N. Government PG College Gyanpur.
8. Delivered lecture in Conference on "Innovative Approaches Towards Sustainable Development" Organised by KNPG College, Gyanpur, 9 Jan 2020.
9. Delivered lecture in Innovative Frontiers in Applied Sciences, organized by Chemical Society, Department of Chemistry, CMP College, 27 Sept 2019.
10. Delivered in National Seminar on Eco Centric Development and Smart City organized by India Thank Council, New Delhi, 1 Sept 2019.

11. Delivered lecture in Faculty Development Programme sponsored by DST, Govt of India, and EDII, Allahabad, 16 Feb 2019. Recent trends and advancements in chemical sciences Department of Chemistry University of Delhi, Delhi, 31 March 2019.
12. Delivered lecture in Workshop on Technical Terminology sponsored by CSTT MHRD, New Delhi MG PG College, Ghorakhpur, 9 Feb 2019.
13. Delivered lecture in Climate Resilience of Agriculture Biodiversity Organised by University of Allahabad, Allahabad, 10 March 2019.
14. Delivered lecture in National conference on Impact of Applied Science on Engineering Rajkiya Engineering College, Banda, 23 Feb 2019.
15. Delivered lecture in National Conference on Recent Advances in Material Sciences and Electronic, Dr Rammanohar Lohia Avadh University, Ayodhya, 27 Feb 2019.
16. Delivered lecture in National Conference on Present Scenario of Environmental Challenges and issues Department of Chemistry, CMP Degree College, University of Allahabad, 16 Dec 2018.
17. Delivered lecture in National Conference on Nutritional Security Environmental Protection Society of biological sciences and rural development, Allahabad, 11 Nov 2017.
18. Delivered lecture in National Conference on Advanced nanomaterials and their Applications, Department of Physics, Motilal Nehru National Institute of Technology Allahabad, 23 Dec. 2018.
19. Delivered lecture in International Conference on Recent trends in Agriculture biodiversity and social sustainability Botanical Survey of India, Allahabad, and 30 Sept 2018.
20. Delivered lecture in DST Inspire programme, Prayag Institute of Technology and Management, Karchana Allahabad, 30 April 2019.
21. Delivered lecture in National conference on Recent Advances in Biofilms and Environmental Biotechnology, Department of Biotechnology Motilal Nehru National Institute of Technology Allahabad, 23 Sept 2017.
22. Delivered lecture in National Conference on Energy Environment and its impact on Society, KN Govt P.G. College, Gyanpur, Bhadohi Jan 19-20, 2017.
23. Delivered lecture in National workshop organized by Council of Science and Technical Terminology in Engineering and Science, Vivekananda P.G. College Auriya, 21-22 Sep. 2016.
24. Delivered lecture in National workshop organized by CMP Degree College University of Allahabad on antioxidants in health and disease prevention, 23-29 Sep. 2015.
25. Delivered lecture in National Workshop on Use of Nanomaterial in Aerospace Industry held on 20 June 2015, at HAL Lucknow.
26. Delivered lecture in program in Short term course on Synthesis and characterization and application of nanomaterials on 9 June 2014 at Department of Chemistry Motilal Nehru National Institute of Technology, Allahabad.
27. Delivered lecture in National Workshop on Soft strategies for the scalable synthesis of nanomaterials held on 27-31 May 2013, at Department of Chemistry Motilal Nehru National Institute of Technology, Allahabad.
28. Delivered lecture in the national workshop on Advances in materials science and engineering organized by Department of Physics, MNNIT, Allahabad during 15-21 July, 2013.
29. Delivered lecture in the national workshop on Advances in materials science and engineering organized by Department of Physics, MNNIT, Allahabad during 15-21 July, 2013.
30. Delivered a lecture in the national symposium on Innovation and modern technologies for sustainable agriculture and rural development organized by Society of biological sciences and rural development, Allahabad during 19-20 October, 2013.
31. Delivered a lecture in the national conference on Applications of high pressure techniques and novel materials on the frontier of science organized by National Centre of Experimental Mineralogy and Petrology, University of Allahabad, Allahabad during 25-26 October, 2013.
32. Delivered lecture in the national workshop on 29 October 2013, at Etawah, Organized by Human Resource Development, New Delhi.
33. Delivered lecture in the National seminar on Computer assisted drug designing and green chemistry held during 19th to 20th Jan. 2013, organized by Department of Chemistry, Career College, Bhopal.
34. Delivered lecture in the National Workshop on Smart Nanomaterial held on 6-7 June 2012, at Eng. College Ajmer, Organized by Human Resource Development, New Delhi.
35. Delivered lecture in the National Workshop on Antibacterial Sensitivity Testing in Synthetic and Natural Compounds held on 7-13 May 2012. Organized by Department of Chemistry, C.M.P. Degree College, Allahabad.

36. Delivered lecture in the National Workshop on Smart Nanomaterial held on 26-27 May 2011, at HAL Kanpur, Organized by Human Resource Development, New Delhi.
37. Delivered lecture in the National Workshop on Application of Nanomaterial held on 2-3 March 2011, at VGM Oriya, Organized by Human Resource Development, New Delhi.
38. Delivered lecture in the National Workshop on Smart Nanomaterial held on 29-30 Sep 2011, at PG College Bakewar, Organized by Human Resource Development, New Delhi.
39. Delivered lecture in the National Workshop on applications of Nanomaterial held on 16-17 February 2011, at Department of physics BHU, Varanasi, Organized by Human Resource Development, New Delhi.
40. Delivered lecture in the National Workshop on Synthesis of Nanomaterial held on 10-11 Feb 2010, at UP College Varanasi, Organized by Human Resource Development, New Delhi.
41. Delivered lecture in National Workshop on Smart Nanomaterial held on 11-12 Nov.2010, at NCERT, Solan, Organized by Human Resource Development, New Delhi.
42. Delivered lecture in the National seminar on “Nanotechnology for Sustainable Development” held during 9th to 10th Dec. 2010, Organized by Kulbhashkar Ashram PG College, Allahabad, sponsored by UGC New Delhi in collaboration with Indian Society of Agricultural Biochemists, Kanpur, UP.
43. Delivered lecture in the National Workshop on Characterization of Nanomaterial held on 8-9 January 2009, at KA P.G. Allahabad, Organized by Human Resource Development, New Delhi.

Paper presented in national and International conference: 35

Conference /workshop attended: 40

Refresher /Orientation Courses/ FDP attended:

- 1-UGC Orientation Course ,Allahabad University , Allahabad 18/8/2006 to 14/9/2006
- 2-UGC,Refresher Course ,Department of Chemistry, Allahabad University Allahabad 18/8/2006 to 14/9/2006
- 3-UGC,Refresher Course, Department of Chemistry,Allahabad University , Allahabad, 10/11/08 to 30/11/08
- 4- UGC,Refresher Course, Department of Chemistry,Allahabad University , Allahabad ,10 Dec-30 Dec 2011
- 5-International Workshop on Emergence of New States of Matter in Magnetic System and Beyond, organised by International Centre of Theoretical physics, Trieste ,Italy , 5-9 July 2010.
- 6-Participated in National Workshop on “Antibacterial sensitivity testing in synthetic and natural compounds” held during 07th to 13th May 2012, organized by CMP Degree College, University of Allahabad in association with Vigyaan Parishad Prayag, Allahabad.
- 7-Participated in National workshop ‘Nanomaterials with special reference to energy security held during March 11 to 17. 2013.
- 8- Participated in National workshop organised by society of Biological Sciences and Rural Development, Allahabad held during 13-20 December 2015.
- 9-UGC Net working programme on Practical Crystallography and structure solution ,department of physics ,BHU. Varanasi held during 5-11 March 2014.
- 10-Faculty development Programme ,by DST New Delhi, 7-26 Feb 2019
11. Participated in the one week “NAAC Orientation Workshop” from 9-13 January 2023 organized by Internal Quality Assurance Cell (IQAC) and National Assessment and Accreditation Committee (NAAC), C.M.P.Degree College, University of Allahabad, Prayagraj.
12. Participated in Online Workshop on Emerging Trends in Teaching- Learning Process from November 9-15,2022 organized by Iswar Saran College in Collaboration with T.N.B. College, Bhagalpur, Bihar.
- 13.. Participated online five days workshop on NAAC organized by UGC from 23-27 August 2021.
14. National Workshop organised by society of Biological Sciences and Rural Development, Allahabad held on 13-20 December 2015.
15. UGC net working programme on Practical Crystallography and structure solution, Department of Physics, BHU, Varanasi held on 5-11 March 2014.

Member of College Committees-

3. Advisor of the Self –Financing Course 2019-21
4. Convener of the Internal Audit committee 2016-21
5. Working as **N.S.S. Officer** in the CMP Degree College, University of Allahabad, Allahabad from 2009-2015.
6. Worked as Assistant **Proctor** in the CMP Degree College, University of Allahabad, Allahabad from 2005 to 2008.
7. Worked as Assistant **Dean** in the CMP Degree College, University of Allahabad, Allahabad from March, 2009 to 2010.
8. Working as member of different committees (purchase, library, souvenir, Co-curricular activity) in the CMP Degree College, University of Allahabad, Allahabad from 2007 to 2016

Awards

1. **Academic excellence Award** on the occasion of “**Edushine**” on 23th May 2012, by UnitedGroup of Institution, Allahabad.
2. **Best Teacher Award** by Rotary Club, Allahabad on the occasion of Teachers Day on 5September 2014.
3. **Distinguish Scientist in field of nanotechnology by SBSRD Allahabad Dec.2016**

Conference Organised

1. **Convener of the National workshop on Psychological Wellbeing organized by CMP PG College University of Allahabad, 20 Nov. 2018,**
2. _Convener of the national Conference on “Material Science in Service of the Society” during 5-6 February, 2008, at CMP Degree College, Allahabad.
3. Convener of National conference “Application of Material Science in the Service of the Society” during 12-13 September, 2009, at CMP Degree College, Allahabad.
4. Convener of the national Conference on “Chemistry and Life” during 16-17 September 2012, at CMP Degree College, Allahabad
5. Convener of the lecture series organized by Department of Chemistry and Physics during 18-21 Feb 2006 at CMP Degree College Allahabad.
6. Convener of the National Conference on environment on 22 April 2021 in CMP Degree College, Prayagraj
7. Conference of the National Conference on environment on 22 April 2022 in CMP Degree College, Prayagraj

Extra-curricular activities

1. Chairperson in National Conference on Hydrogen Energy and Advanced Materials (NCHEAM-2023) organized by Department of Physics, Institute of Science, Banaras Hindu University, Varanasi, on April 24-25, 2023.
2. Judge in a National Conference held on 30 November 2011, Organized by Vigyan Parishad Prayag, Allahabad.
3. Judge in a One Day Seminar held on 15 october 2011, Organized by Ewing Christian College, Allahabad.
4. Judge in National Children Science Congress held on 24 october 2011, at MPVM, Allahabad.
5. Judge in National Children Science Congress held on 8 November 2012, at Tagore Public School, Allahabad.
6. Member of Organizing Committee in a National Conference held on 7 February 2011, Organized by Department of Chemistry, University of Allahabad.
7. Invited as judge in Science exhibition on 24/10/2011 in Indian children congresss MPVM Allahabad.
8. Subject Expert in Commission for Scientific & Technical Terminology, Govt. of India, New Delhi.(17-20 Oct.2008).

9. Member of evaluating committee in national seminar on “Effect of chemical in our life” on 30 November 2011 at SPM Govt. College Allahabad.
10. Invited as judge for the evaluating poster competition entitled “Jal Hi Jeevan Hai” On 14/2/13 at department of chemistry, CMP College Allahabad.
11. Member of organizing committee in one day seminar “Jan Jan me Vigyan, organized by local chapter of vigyan parishad and C.M.P. Degree College, Allahabad during 18 November 2012.
12. Member of organizing committee in seminar “Advanced Biology: Emerging Trends in Biological, Galaxy, organized by C.M.P. Degree College, Allahabad during October 6-7 2012.
13. Invited as a Judge in One Day Seminar organized by Department of Chemistry, Ewing Christian College, Allahabad held on 22 September, 2010.
14. Subject Expert in Commission for Scientific & Technical Terminology, Govt. of India, New Delhi.(17-20 Dec.2017).
15. Coordinator of 10 day Workshop on Faculty Development Programme organized by DST New Delhi at CMP degree college, 14-24 Feb 2019.
16. Coordinator of programme Mission Sahaas (Self Defence) organized by CMP Degree College, Allahabad, 22-28 Oct 2018.
17. Jury member in Regional level National Children Science Congress 2018 on 30-31 oct 2018 in Kendriya Vidyalaya old Cantt, Allahabad.
18. Chair person in International Seminar on climate Resilience of Agriculture on March 9-10 2019 organised University of Allahabad.
19. Member of Advisory Board in National Seminar on Present Scenario of Environmental Challenges and Issues on 16 DEC 2018 organized by CMP PG College University Of Allahabad.
20. Chairperson in National Conference on Hydrogen Energy and Advanced Materials (NCHEAM-2023) organized by Department of Physics, Institute of Science, Banaras Hindu University, Varanasi, on April 24-25, 2023.