



## Faculty Details proforma for Gargi College

Title	DR.	First Name	TRIPTI	Last Name	KUMARI	Photograph
Designation		ASSISTANT PROFESSOR				
Address		DEPARTMENT OF CHEMISTRY GARGI COLLEGE (UNIVERSITY OF DELHI)				
Phone No Office						
Residence *						
Mobile *		+91-9810403262				
Email		tripti.kumari@gargi.du.ac.in				
Web-Page						
<b>Educational Qualifications</b>						
Degree		Institution			Year	
Ph.D		University of Delhi			2014	
M.Sc. Chemistry		Department of Chemistry, University of Delhi			2009	
B.Sc. (H) Chemistry		Miranda House, University of Delhi			2007	
AISSCE (CBSE) XII		Pitts Modern School, Gomia, Jharkhand			2004	
AISSE (CBSE) X		Pitts Modern School, Gomia, Jharkhand			2002	
<b>Career Profile</b>						
<ol style="list-style-type: none"> <li>1. <b>Assistant Professor (Academic Level 12):</b> Department of Chemistry, Gargi College, University of Delhi</li> <li>2. <b>University Teaching Assistant (UTA):</b> Department of Chemistry, University of Delhi (2011 - 2013).</li> <li>3. <b>Guest Faculty:</b> Department of Chemistry, Daulat Ram College, University of Delhi (Jan 2013 – May 2013).</li> </ol>						
<b>Administrative Assignments</b>						
<ol style="list-style-type: none"> <li>1. NAAC Steering Committee Member, Gargi College (2020-2021)</li> <li>2. NIRF Committee Member, Gargi College (2017-2020)</li> <li>3. Computer Lab Committee</li> <li>4. Convenor of Chemical Society Rasgandhayan (2019-2020)</li> <li>5. Departmental Timetable Committee (2019-2020)</li> <li>6. Departmental Admission Committee (2019-2020)</li> </ol>						
<b>Areas of Interest / Specialization</b>						
Physical Chemistry, Computational Chemistry and Molecular Modeling, Environmental Chemistry						
<b>Subjects Taught</b>						

Physical Chemistry - Quantum Chemistry & Molecular Spectroscopy, Chemical Kinetics, Conductance, Electrochemistry, Phase Equilibrium, Chemical Energetics, Chemical Equilibrium, Ionic Equilibrium, Photochemistry, Applications of Computers in Chemistry, IT Skills for Chemists, States of Matter (Gaseous, Liquid and Solid State), BASIC Programming

#### Research Guidance

1. Mentored Pathfinder Winner Project “**From Waste to Essentials - Studying the Potential of Sawdust & Waste Tea Leaves for the Removal of Heavy Metal Ions: A Case Study of Water and Contaminated Soil from the Yamuna River Basin**” in the year 2018-2019 (under Star College Scheme DBT to Gargi College)
2. Mentored PathFinder Winner Project “**From Waste to Essentials- A Green Extraction of Limonene Oil from Waste Fruit Peels and Studying its Larvicidal, Insecticidal and Antimicrobial Properties**” in the year 2017-2018, (under Star College Scheme DBT to Gargi College)
3. Mentored PathFinder Winner Project “**Walking the Road – From Sugarcane Bagasse to Benign Bioplastics**” in the year 2016-2017, (under Star College Scheme DBT to Gargi College)
4. Mentored PathFinder Winner Project “**Solvent Systems: Exploring Various Facets from Utility to Benignity to Procurability**” in the year 2014 – 2015, (under Star College Scheme DBT to Gargi College)
5. Mentored students of Chem(H), Gargi College for the National Technex competition held at IIT(BHU) in February 2014. Gargi College won the 5th prize out of a total of 35 National teams that participated.

#### Recent Publications

##### *Articles in Journals*

1. **Kumari, T.**, Gill, M., Saini, D., Keisham, M. Potential of sawdust for the removal of heavy metal ions from soil and aqueous solutions: a case study of *Brassica juncea* grown in contaminated soil from the Yamuna of Delhi. *Proc. Indian Natl. Sci. Acad.* (2023). <https://doi.org/10.1007/s43538-023-00186-6>. **Electronic ISSN: 2454-9983 Print ISSN: 0370-0046**
2. Sinha, D.; Datta, S.; Mishra, R.; Agarwal, P.; **Kumari, T.**; Adeyemi, S.B.; Maurya, A.K.; Ganguly, S.; Atique, U.; Seal, S.; et al. Negative Impacts of Arsenic on Plants and Mitigation Strategies. *Plants (Basel)* **2023**, *12*(9), 1815.

<https://doi.org/10.3390/plants12091815>. ISSN: 2223-7747.

3. **Tripti Kumari**, Muskan Gill, Divya Saini (2023) Waste Tea Leaves as an Adsorbent for the Removal of Heavy Metal Ions from Aqueous Solutions: Quantitative Estimation using Spectrophotometry and Titrimetry, *Research Journal of Chemistry and Environment*, Res. J. Chem. Environ., Vol. 27 (3), **2023**, 27-33. E-ISSN: 2278-4527 Print ISSN: 0972-0626.
4. **Tripti Kumari**, Nandana Pal Chowdhury, Ritika Chauhan and Nawin Kumar Tiwary Eco-friendly extraction of Mosambi (*Citrus limetta*) essential oil from waste fruit peels and its potential use as a larvicidal, insecticidal and antimicrobial agent. *Int. J. Environment and Waste Management*, Vol. 29, No. 3, **2022**, ISSN No. 1478-9876.
5. Upasana Issar, Richa Arora, **Tripti Kumari**, Rita Kakkar (2019) Combined Pharmacophore-Guided 3D-QSAR, Molecular Docking and Virtual Screening on bis-benzimidazoles and ter-benzimidazoles as DNA-Topoisomerase I poisons. *Structural Chemistry*. Volume , Pages 1-17. **Online ISSN: 1572-900**.
6. Upasana Issar, **Tripti Kumari**, Richa Arora & Rita Kakkar (2017) Conformational properties of DNA minor groove binder Hoechst 33258 in gas phase and in aqueous solution. *Computational and Theoretical Chemistry*. Volume 1113, Pages 32-41. **ISSN: 2210-271X**.
7. **Tripti Kumari**, Ritika Chauhan, Neha Sharma, Kohinoor Kaur, Aparna Krishnamurthy, Priya Pandey, Shivangi Aggarwal (2016) Zinc Chloride and Acetamide as Deep Eutectic Solvent *DU Journal of Undergraduate Research & Innovation*, Volume 2, Pages 203-210. **ISSN: 2395 – 2334**.
8. Upasana Issar, **Tripti Kumari** & Rita Kakkar (2015) Assessment of Molecular Binding of Hoechst 33258 Analogues into DNA Using Docking and MM/GBSA approach. *Journal of Computational Science*. Volume 10, Pages 166-177. **ISSN: 1877-7503**.
9. **Tripti Kumari**, Upasana Issar & Rita Kakkar (2014) Docking modes of BB-3497 into the PDF active site – a comparison of the pure MM and QM/MM based docking strategies. *Current Computer-Aided Drug Design*, Volume 10, Issue No. 4, Pages 315-326. ISSN: 1875-6697 (Online) **ISSN: 1573-4099** (Print)
10. **Tripti Kumari**, Richa Arora & Rita Kakkar (2013) Peptide deformylase inhibitors for addressing the issue of bacterial resistance. *Int. Rev. Biophys. Chem. (IREBIC)* Volume 4, Issue No. 1, Pages 19-48. **ISSN: 2038-0321**

#### **Chapter in Book**

1. **Tripti Kumari**, Science in Indian Scriptures – The Great Ocean of Knowledge in *Indian and Western Knowledge Traditions* (2016), Shivalik Prakashan, Pages 197-211. **ISBN: 978-93-8514-82-0**.
2. **Tripti Kumari**, Anushka Mishra & Anupam (2017) Walking the Road - From Sugarcane Bagasse to Benign Bioplastics in *Environmental Concerns of 21<sup>st</sup> Century – Indian and Global Context*, Book Age Publications, Pg. 59-71. **ISBN: 978-93-**

## Conference Organization/ Presentations

1. Organized **Hands-On Workshop on Python Programming for Beginners** from July – November 2022 (**Conveners**).
2. **Oral Presentation** in an **International Conference (received I prize)** on the “*Contributions of Acharya Jagdish Chandra Bose – A Satyagrahi Scientist*” organized by Vijnana Bharati (VIBHA) and Ministry of Culture, Government of India in association with Indraprastha Vigyan Bharati and IUAC, Delhi on November 30 – December 01, 2022.
3. **Oral Presentation** in an **International Conference (received III prize)** on the “*Contributions of Acharya Prafulla Chandra Ray as a Chemist and Freedom Fighter*” organized by Vijnana Bharati (VIBHA) and Ministry of Culture, Government of India in association with Indraprastha Vigyan Bharati and Department of Chemistry, University of Delhi on August 2-3, 2022.
4. **Resource-person** in *Inter-College Workshop for Laboratory Staff* organized by Department of Chemistry, Gargi College from July 13-15, 2022.
5. **Member of the Organizing Committee in One Week Online National Faculty Development Program** on “*Safer and Greener Chemistry*” organized by Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of Ministry of Education held from July 19-25, 2022.
6. **Member of the Organizing Committee in One Week Online National Faculty Development Program/Refresher Course** on “*Enhancing Quality of Chemistry Education in India*” organized by Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of Ministry of Education held from 04th March to 10th March 2021.
7. **Convenor** of Virtual Visit to Yamuna Biodiversity Park (30 December 2020)
8. **Coordinator of National Conference on Combating Industrial Pollution for Sustainable Environment – A Fusion of Industrial and Scientific Efforts** held on 22-23 September 2016 at Gargi College, University of Delhi.

9. **Convener** of a three-day inter-disciplinary seminar on “*Exploring New Dimensions of Knowledge*” on **July 17-19, 2017** at Department of Chemistry, Gargi College.
10. Presented paper titled “*Walking the Road – From Sugarcane Bagasse to Benign Bioplastics*” at a **National Conference on Environmental Concerns of 21<sup>st</sup> Century: Indian and Global Context** organized by Zakir Husain Delhi College (Evening) on 21<sup>st</sup> & 22<sup>nd</sup> March’ 2016.
11. Presented Poster Titled “*Walking the Road – From Sugarcane Bagasse to Benign Bioplastics*” in the **National Conference on “Combating Industrial Pollution for Sustainable Environment – A Fusion of Industrial and Scientific Efforts”** in Gargi College on September 22-23, 2016 and won III prize.
12. Presented Poster Titled *DES: A Benign Solvent: A Greener Solution* in the **National Conference on “Combating Industrial Pollution for Sustainable Environment – A Fusion of Industrial and Scientific Efforts”** in Gargi College on September 22-23, 2016.
13. Presented Poster in the **Recent Advances in Computer Aided Drug Design Workshop** organized by Schrödinger at IISc, Bangalore in September’2013. **Awarded III prize.**
14. **Resource person** in Summer Workshop on “Chemistry in Day to Day Life” organized by Department of Chemistry, Gargi College on July 17 & 18 2018, with support from DBT under Star College Scheme.
15. **Resource person** in the workshop on **Electronic Structure, Atomistic and Statistical Modeling in Chemistry, Materials and Life Sciences** organized by **Schrödinger Materials** and **Royal Society of Chemistry** in the University of Delhi from 8<sup>th</sup> – 10<sup>th</sup> October’ 2014.
16. **Resource-person in Molecular Modelling workshop** organized by Department of Chemistry, Ramjas College, University of Delhi in March’ 2013.

#### Research Projects (Major Grants/Research Collaboration)

NA

#### Awards and Distinctions

- **University Ranker’s Prize in M. Sc. Chemistry** by Miranda House.
- “**All India Post Graduate Scholarship, 2008-09**” by the University of Delhi.
- “**Jeans and Ashit Ganguly Fellowship**” by the Department of Chemistry, University of Delhi.

- **“Post-Graduate Science Meritorious Award”** for two consecutive years from 2007-09 by the University of Delhi.
- **Undergraduate and Post-Graduate Book Grants** by the University of Delhi during B.Sc and M.Sc.
- **Neeta Bhattacharya Memorial Prize** in Miranda House.

#### Association With Professional Bodies

NA

#### Other Activities

1. Delivered a YouTube live session on **“Women in STEM: Breaking the glass ceiling”** on March 13, 2023 for Takshashila Institution Youtube handle "*All Things Policy*"
2. **Delivered a series of invited lectures at the Nehru Memorial Museum and Library, Nehru Planetarium on the following topics**
  - *The Story of Helium – Beyond Balloons*” on 11<sup>th</sup> September 2018 & July 10, 2021.
  - *From Cosmos to Daily Life – The World of Elements*” on 19<sup>th</sup> July 2018
  - *AstroChemistry - Finding Molecular Fingerprints in Space* on 30<sup>th</sup> November 2019
  - *Chemistry in Day-to-Day Lives* on 20<sup>th</sup> May 2020
  - *Chemistry Tales to Tell – Scientists, Discoveries and Interesting Stories* on September 5, 2020
  - *Chemistry Tales to Tell – Manmade and Natural Chemical Disasters* on September 12, 2020
  - *Chemistry in Forensic Science* on September 19, 2020
  - *Chemistry in Human Body* on September 26, 2020
  - *Our Unsung Heroes of Science* on 28 February, 2022.
  - *On Mole concept, periodic table* on June 2-4, 2022
  - *Bharat ki Vidushi Betiyaan* on February 28, 2023
3. Chaired a technical session in **2<sup>nd</sup> International Conference** on *“Green and Sustainable Chemistry”* organized by Department of Chemistry, Manav Rachna University, Faridabad on November 17-19, 2022.
4. **Moderator** of the **Panel Discussion Event** at the **National Conference** on *“Innovations in Chemistry Laboratory Teaching”* held in Zakir Husain Delhi College on February 8-9, 2017.
5. **Transmission Assignee** with General Overseas Service of **All India Radio, Akashvani** (March 2018 - July 2018)