

## **CURRICULUM VITAE**

### **PERSONAL DETAILS**

- Full Name : **Dr. Taruna Singh**
- Husband's Name : Himanshu
- Address : E-20/134-135, Sector-3, Rohini, New Delhi-110085
- Mobile No : 9999536058
- Email-ID : [taruna.singh@mirandahouse.ac.in](mailto:taruna.singh@mirandahouse.ac.in)
- Date of Birth : 22<sup>nd</sup> August, 1987
- Sex : Female
- Nationality : Indian
- Marital Status : Married
- Religion : Hindu
- Languages : English, Hindi

<b>Degree</b>	<b>University</b>	<b>Year</b>
<b>B.Sc</b>	University of Delhi	2007
<b>M.Sc Chemistry</b>	Jamia Millia Islamia	2009
<b>B. Ed</b>	University of Delhi	2010
<b>Ph.D Chemistry</b>	Jamia Millia Islamia	2014
<b>Post Doctrate</b>	University of Delhi	2015 – 2017

## EXPERIENCE SUMMARY

- Working as an **Assistant Professor** in **Miranda House College**, University of Delhi from 18<sup>th</sup> March, 2023.
- Worked as an **Assistant Professor** (Ad-Hoc) in **Gargi College**, University of Delhi from 20<sup>th</sup> July, 2017 to 17<sup>th</sup> March, 2023.
- Worked as a **Post Doc Fellow** in Department of Chemistry, University of Delhi under the project sanctioned by **DST (Women Scientist B Scheme)** on topic entitled **“Physiochemical interactions of MnO<sub>2</sub> nanoparticles with polypyrrole nanotube towards improved performance in super capacitor electrodes”** from 22<sup>nd</sup> July, 2015 to 19<sup>th</sup> July, 2017.
- Worked as an **Assistant Professor** (Ad-Hoc) in **Daulat Ram College**, University of Delhi from 19<sup>th</sup> Jan, 2015 to 21<sup>st</sup> July, 2015.
- Worked as an **Assistant Professor** (Ad-Hoc) in **Maitreyi College**, University of Delhi from 21<sup>st</sup> July 2014 to 15<sup>th</sup> Jan, 2015.
- **Ph.D. Research Topic: “Preparation, Characterization and Biomedical Studies of Metal Containing Matrix”.**
- **Research Area:** Polymer Chemistry, Metal Containing Polymer, Nanoparticles Synthesis and Supercapacitors.
- **Membership:** Life Membership, Asian Polymer Association (L 191).
- **Fellowship/Scholarship:**
  - Rajiv Gandhi National Fellowship (UGC) JRF and SRF
- Completed **“Online Refresher Course in Chemistry for Higher Education Faculty”** organized by Swayam Arpit Online Course Certification on March 30<sup>th</sup>, 2019.
- Member of **B.Sc Life Science and Physical Science Society ‘Zenith’** Gargi College from 2020 to 2023.
- Convener of **Rasgandhayan:** Chemical Society of Gargi College, University of Delhi, Academic Year 2021-22.
- Worked as **Online Mentor** in **Undergraduate Admissions** of Department of Chemistry, Gargi College, University of Delhi, Academic Year 2021-22.
- Worked on **NAAC Criterion V** from 2020 to 2023 Department of Chemistry Gargi College, University of Delhi.
- Worked on **Result Analysis** Department of Chemistry, Gargi College, University of Delhi for Academic Year 2022-23.
- Organised a three-day workshop on **‘Career Prospects for Science Students’** from October 18-20, 2021, Department of Chemistry, Gargi College, University of Delhi.
- Worked as **Refresher Committee Member** during NAAC Visit from 1<sup>st</sup> September, 2022 to 2<sup>nd</sup> September, 2022 Gargi College, University of Delhi

## RESEARCH PUBLICATIONS AND BOOK CHAPTERS

1. **Taruna Singh**, Sheikh Shreaz, Luqman Ahmad Khan, and Athar Adil Hashmi, High Potential Bioactive Oil based Bimetallic Polymer: Anticandidal Effect is via Inhibition of Ergosterol Biosynthesis. **Materials Research Innovations**, 204-212, **16**, 2013, DOI: 10.1179/1433075X11Y.0000000048, **Impact Factor: 2.12**.
2. **Taruna Singh**, Sumbul Ambreen, Sheikh Shreaz and Athar Adil Hashmi, Effect of Bimetallic Soybean Oil Based Polymer on Growth and Plasma Membrane H<sup>+</sup>- ATPase activity among Fungi. **Journal of Polymers and the Environment**, 81-87, **21** (2013), DOI: 10.1007/S10924-012-0454-1, **Impact Factor: 4.705**.
3. Zaheer Khan, **Taruna Singh**, Javed Ijaz Hussain, Abdullah Yousif Obaid, Shaeel Ahmed AL-Thabaiti, E.H. El-Mossalamy, Starch-directed Green Synthesis, Characterization and Morphology of Silver Nanoparticles. **Colloids and Surfaces B: Biointerfaces**, 578-584, **102** (2013), 10.1016/j.colsurfb.2012.08.057, **Impact Factor: 5.999**
4. Zaheer Khan, **Taruna Singh**, Javed Ijaz Hussain, Athar Adil Hashmi, Au(III)–CTAB reduction by Ascorbic Acid: Preparation and characterization of gold nanoparticles. **Colloids and Surfaces B: Biointerfaces**, 11-17, **104** (2013). 10.1016/j.colsurfb.2012.11.017, **Impact Factor: 5.999**.
5. **Taruna Singh**, Sheikh Shreaz and Athar Adil Hashmi, Synthesis of Sunflower Oil Based Bimetallic Polymer and its Antifungal Studies. **International Journal of Polymeric Materials and Polymeric Biomaterials**, 653-662, **62** (2013), DOI: 10.1080/00914037.2013.769168, Impact Factor: 1.865 Citations -1
6. **Taruna Singh**, Nazia Umar Khan, Sheikh Shreaz and Athar Adil Hashmi, Anticandidal Activity of Cobalt Containing Sunflower Oil Based Polymer. **Polymer Engineering & Science**, 2650-2658, **53** (2013), DOI: 10.1002/pen.23508 **Impact Factor: 3.221**.
7. Md Iqbal Ahmed Talukdar<sup>a</sup>, Md.Khursheed Akram<sup>b</sup>, **TarunaSingh<sup>c</sup>**, Manzoor A.Malik<sup>a</sup>, Ovas A.Dar<sup>a</sup>, Athar A.Hashmi<sup>a</sup>--“*In-situ* modification of castor oil with divalent metal ions like Zn (II), Cu (II), Co (II) and Ba (II) and their comparative antioxidant study by *in-vitro* methods” **Food Chemistry**, 213-218, **284** (2019), DOI: <https://doi.org/10.1016/j.foodchem.2019.01.033>, **Impact Factor: 9.231**

### ▪ Book Chapter

1. **Taruna Singh** and Athar Adil Hashmi, “Cobalt and Zinc Containing Plant Oil Based Polymer: Synthesis and Physicochemical Studies”. **Chemistry of Phytopotentials: Health, Energy and Environment Perspectives**, Springer e book Section C, 275-278 (2012), DOI: 10.1007/978-3-642-23394-4\_58.
2. **Taruna Singh** and Athar Adil Hashmi, “Natural Oil-Based Polymer: A Sustainable Approach Toward Green Chemistry” Green Polymer Chemistry and Composites, **Apple Academic Press**, (2021) **ISBN 9781003083917**, DOI **10.1201/9781003083917-6**.

### Conference Proceeding:

1. **Taruna Singh**, Raj Kishore Sharma and Gurmeet Singh, MnO<sub>2</sub> Nanoparticles Embedded Polypyrrole Nanotubes for Supercapacitor Electrodes. **Green Chemistry in Environmental Sustainability and Chemical Education**, Conference Proceeding, 255-264 (2018), DOI: 10.1007/978-981-10-8390-7

## PAPERS PRESENTED IN CONFERENCES AND SYMPOSIUMS

### ORAL PRESENTATIONS

1. **Taruna Singh** and Athar Adil Hashmi --“Bioactive Organozinc and Nickel Materials: Synthesis, Characterisation and Biological Studies” presented in **First National Conference on Recent Advances in Polymer Nanocomposites** at Department of Physics, Zakir Hussain College, University of Delhi, New Delhi, India January 14-15, 2011
2. **Taruna Singh** and Athar Adil Hashmi --“Cobalt and Zinc Containing Plant Oil Based Polymer: Synthesis and Physicochemical Studies” presented in **International Conference on Chemistry of Phytopotentials: Health, Energy and Environmental Perspectives** at Dayalbagh Educational Institute, Agra, India, November 4-6, 2011.
3. **Taruna Singh** and Athar Adil Hashmi --“Preparation and Physicochemical Studies of Linseed Oil Based Polymer Nanocomposites” presented in the **Seminar on Recent Advances in Chemistry** at Department of Chemistry, Jamia Millia Islamia, New Delhi, India, March 12, 2012.

### POSTER PRESENTATIONS

1. **Taruna Singh**, Kumud Ranjan, Anujit Ghosal and Saiqa Ikram --“Development of Chitosan Aliginate Based Haemostatic Materials” presented in **National Seminar on Polymer Science & Technology Vision & Scenario (Polymer – 08)** at Jamia Millia Islamia, New Delhi, India, December 3, 2008.
2. **Taruna Singh**, Nazia Umar Khan, Urvashi Singh and Athar Adil Hashmi --“Bimetallic Supramolecular Polymer: Preparation, Characterization and Antimicrobial Studies” presented in **International Conference on Supramolecular Chemistry** at Department of Chemistry, University of Mumbai, Mumbai, India, February 14–16, 2011.
3. **Taruna Singh**, Urvashi Singh and Athar Adil Hashmi --“Development of Metal containing Polymer and its Physicochemical and Biological Studies” presented in **International Conference on Chemistry: Frontiers and Challenges** at Department of Chemistry, Aligarh Muslim University, Aligarh, India, March 5-6, 2011.
4. **Taruna Singh** and Athar Adil Hashmi --“Synthesis and Characterization of Sunflower Oil Based Polymer Nanocomposites” presented in the Seminar on **Recent Advances in Chemistry** at Department of Chemistry, Jamia Millia Islamia, New Delhi, India, March 22, 2011.
5. **Taruna Singh** and Athar Adil Hashmi --“Synthesis of Oil based Polymer using Microwave Radiation Polymerisation Technique: Characterization and Biological Studies” presented in **Aligarh Nano-I Workshop on Nanoscience and Nanotechnology** at Department of Applied Physics, Aligarh Muslim University, Aligarh, India, March 26-27, 2011.

## POSTER PRESENTATIONS

6. **Taruna Singh** and Athar Adil Hashmi --“Linseed Oil Based Polymer Nanocomposites: Preparation and Biological Studies” presented in the **Seminar on Chemistry in our lives- Issues and Challenges** at Department of Chemistry, Jamia Millia Islamia, New Delhi, India, March 28, 2011.
7. **Taruna Singh** and Athar Adil Hashmi --“Edible Oil Based Bimetallic Bioactive Polymer: Preparation, Characterization and Biological Studies” presented in **7<sup>th</sup> National Symposium and Conference on Solid State Chemistry and Allied Areas, ISCAS- 2011** at Department of Chemistry, Jamia Millia Islamia, New Delhi, India, November 24-26, 2011.
8. **Taruna Singh** and Athar Adil Hashmi --“Biological and Physicochemical Studies of Soybean Oil Based Polymer Nanocomposites” presented in **First National Workshop on Fibre Optics, Photonic and Nanoelectronics [FOPN-1]** at Department of Physics, Zakir Hussain College, University of Delhi, New Delhi, India, February 6-7, 2012.
9. **Taruna Singh** and Athar Adil Hashmi --“Synthesis, Characterization, Thermal and Biological Studies of Sunflower Oil Based Polymer” presented in **APA International Congress on Advances in Human Health Care Systems**, organized by IIT Delhi and Jamia Hamdard at Indian Habitat Centre, New Delhi, India, February 20-24, 2012.
10. **Taruna Singh** and Athar Adil Hashmi --“Synthesis, Characterization and Biological Studies of Zinc Containing Soybean Oil Based Polymer” presented in **Fourth Conference on Recent Advances in Polymer Technology** at Department of Chemical Technology, North Maharashtra University, Jalgaon, India, March 2-3, 2012.
11. **Taruna Singh** and Athar Adil Hashmi --“Bimetallic Plant Oil based Polymer: Preparation and Physicochemical Studies” presented in **International Conference “Chemical Constellation Cheminar-2012” [CCC-2012]** at Department of Chemistry, NIT-Jalandhar (Punjab) India, September 10-12, 2012.
12. **Taruna Singh** and Athar Adil Hashmi --“Synthesis and Characterization of Natural Oil Based Metal containing Polymer” presented in **International Conference on Interface between Chemistry and Environment** at Ramjas College, University of Delhi, Delhi-110007, India. December 13-14, 2012.
13. **Taruna Singh** and Athar Adil Hashmi --“Plant Oil Based Polymer: Synthesis and Physicochemical Studies” presented in **National Workshop on Innovative Green Techniques for Safe Potable Water in Villages** at Department of Physics, Zakir Hussain College, University of Delhi, New Delhi, India, January 10-11, 2013.

## POSTER PRESENTATIONS

14. **Taruna Singh** and Athar Adil Hashmi --“Synthesis and Characterization of Cobalt Containing Oil Based Polymer” presented in **National Seminar on Frontier & Challenges in Pharmaceutical and Environmental Chemistry** at Department of Chemistry Dyal Singh College, University of Delhi, New Delhi, India, March 1-2, 2013.
15. **Taruna Singh** and Athar Adil Hashmi --“Preparation of plant oil based bimetallic polymer and its biological Studies” presented in **National Seminar on Chemistry in Interdisciplinary Applications** at Department of Chemistry Hans Raj College, University of Delhi, New Delhi, India, March 19, 2013.
16. **Taruna Singh**, Raj Kishore Sharma and Gurmeet Singh - “Manganese Oxide Nanoparticles Immobilized Polypyrrole Nanotubes for Supercapacitor Electrodes” presented in **International Conference on Advances in Nanomaterials and Nanotechnology (ICANN-2016)** at Centre for Nanoscience and Nanotechnology, Jamia Millia Islamia (A Central University), New Delhi, India, November 4 & 5, 2016.
17. **Taruna Singh**, Raj Kishore Sharma and Gurmeet Singh - “Preparation and Characterization of MnO<sub>2</sub> Nanoparticles embedded Polypyrrole Nanotubes for Electrochemical Supercapacitor” presented in **International Conference on Green Chemistry in Environmental Sustainability and Chemical Education (ICGC-2016)** at Department of Chemistry, Daulat Ram College, University Of Delhi, New Delhi, India, November 17 & 18, 2016.

## AWARDS AND RECOGNITION

- Ranked 3<sup>rd</sup> in Oral Presentation on topic entitled --“Preparation and Physicochemical Studies of Linseed Oil Based Polymer Nanocomposites” presented in the Seminar on Recent Advances in Chemistry at Department of Chemistry, Jamia Millia Islamia, New Delhi, India, March 12, 2012.
- Participated as an active volunteer in 7<sup>th</sup> National Symposium and Conference on Solid State Chemistry and Allied Areas, ISCAS- 2011 at Department of Chemistry, Jamia Millia Islamia, New Delhi, India, November 24-26, 2011.
- Best Poster Award on topic entitled “Plant Oil Based Polymer: Synthesis and Physicochemical Studies” presented in National Workshop on Innovative Green Techniques for Safe Potable Water in Villages at Department of Physics, Zakir Husain College, University of Delhi, New Delhi, India, January 10-11, 2013.

## CONFERENCE AND SYMPOSIUMS ATTENDED

- Participated in the Seminar on “**Recent Advances in Chemistry 2009**” held at Department of Chemistry Jamia Millia Islamia, New Delhi. January 19, 2009.
- Participated in National Seminar on “**Advance Trends in Nanoscience and Nanotechnology**” held at Department of Applied Science and Humanities, Jamia Millia Islamia, New Delhi. February 25, 2013.

- Participated in Skill Development Certification Course on “Green Synthesis of Nanoparticles and Application” organized by Daulat Ram College, University of Delhi.
- Participated in “**5<sup>th</sup> National Conference on Agrochemicals-2015**” held at FICCI, New Delhi. November 18, 2015.
- Participated in “**National Workshop on Nanotechnology: Emerging Frontiers and Applications**” held at Department of Physics and Department of Chemistry, University of Delhi. January 30 and 31, 2017.
- Participated in “**National Seminar on Mentoring the Teacher-Mentors: Capacity Building Programme**” organized by Internal Quality Cell (IQAC) of Gargi College, University of Delhi held on January 19 and 20, 2018.
- Contributed as **Resource Person** in the **Summer Workshop on “Chemistry in Day to Day Life”** organized by Department of Chemistry, Gargi College in association with IQAC on July 17 & 18, 2018.
- Attended the **Faculty Development cum Workshop on ‘Climate Across the Curriculum: Resources for Integrating Climate Topics in Discipline – Specific Teaching’** organized by IQAC, Sri Venkateshwara College (SVC), University of Delhi in collaboration with TROPICSU, a climate Education Project funded by the International Council for Science (ICSU) & IISER, Pune on 13-14 October, 2018.
- Contributed as **Resource Person** in the **Workshop on “Adulteration in Food and Preparation of Herbal Cosmetics”** organized by **AVNI: The Eco Club**, Gargi College, University of Delhi in association with Star College Scheme on January 19, 2019.
- Participated in the National Workshop organized by Commission for Scientific and Technical Terminology by Gargi College on 14-16 March, 2019.
- Participated in **National Multidisciplinary Conference on “Emerging Trends in Tertiary Education: Assessing Challenges and Possibilities”** held on 29<sup>th</sup> and 30<sup>th</sup> March, 2019.
- Participated in National Webinar on “**Virtual Classes Tools: Google Classroom, Google meet and Youtube**” organized by Department of Botany, Gargi College, University of Delhi on 11 May, 2020.
- Participated in Webinar on “**Role of Teachers in Teaching, Learning and Curriculum Enrichment with Modern Technology**” organized by Maharashtra’s Union of Secular Teachers on 14 May, 2020.
- Participated in National Webinar on “**Open Educational Resource**” organized by Department of Chemistry, Gargi College, University of Delhi on 21 May, 2020.
- Participated in National Webinar on “**Achieving Excellence in Higher Education in India in The 21<sup>st</sup> Century: Challenges and Opportunities**” organised by School of Business Studies and IQAC, Sharda University on June 3, 2020.
- Participated in National Webinar on “**Our Environment and Covid-19**” organized by Eco Club, *Paritantra*, Acharya Narendra Dev College, University of Delhi on 5 June, 2020.

- Participated in National Webinar on “**Covid-19: Impact on Environment and Social Change**” organized by Pranahi the Eco Club of BCAS, University of Delhi on 5 June, 2020.
- Participated in two days National Webinar on “**Learnings from Corona Pandemic**” organized by Miranda House, University of Delhi on 24-25 September, 2020.

#### **Pathfinder Project:**

1. Worked as **Mentor in Pathfinder winning Project** on “**Negative Impact of Aluminium Foil on Youth’s Health and Environment**” in Academic Year 2018-19.  
Student : Jayantika Kalani, B.A. Programme III Year.
2. Worked as **Mentor in Pathfinder Project** on “**Preparation of activated carbon from tea leaf waste**” in Academic Year 2018-19.  
Students : Divya Chawla and Rachna Singh, B.Sc (H) Chemistry II Year.
3. Worked as **Mentor in Pathfinder Project** on “**Preparation of Metal Nanoparticles Incorporated Paper Using Organic Waste**” in Academic Year 2019-20.  
Students : **Yuktika** and **Sanchita Mitra**, B.Sc. Life Science III Year.
4. **Worked as Mentor in Pathfinder Project** on “**Effectiveness of Biodiesel Fuel Produced from Algal Bloom** in Academic Year 2019-20.  
Students : **Shrushti Rout** and **Shreya Shambhavi**, B.Sc H (Botany) III Year.
5. Worked as **Mentor in Pathfinder Project** on “**Herbal mask**” in Academic Year 2021-22.  
Students: **Sweta** and **Vaani Oberoi**, B.Sc. Life Science III Year.

#### **Faculty Development Programme:**

1. Participated in the “**Faculty Development cum Workshop on ‘Climate Across the Curriculum: Resources for Integrating Climate Topics in Discipline – Specific Teaching**” organized by IQAC, Sri Venkateshwara College (SVC), University of Delhi in collaboration with TROPICSU, a climate Education Project funded by the International Council for Science (ICSU) & IISER, Pune on 13-14 October, 2018.
2. National Webinar entitled “**Towards Excellence in Higher Education in India in the 21<sup>st</sup> Century: Challenges and Opportunities**” organized by Guru Angad Dev Teaching Learning Centre SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNTT) of MHRD held on April 29, 2020.

#### **Workshop for Teachers:**

1. Participated in “**Virtual Pedagogy: Tools, Techniques and Debates, A Capacity-building Workshop for Teachers of Gargi College**” organised by Gargi College 17-21 August, 2020.