



# Kirori Mal College

(University of Delhi)

University of Delhi, Delhi-110007

(Phone No. - 011-7121 9084 : Email - principal@kmc.du.ac.in)



Print Date : 15-02-2026

## 1. Personal Profile

Title: Dr. First Name: **RUCHI SHARMA** Last Name: **PANDEY**

Designation: **ASSISTANT PROFESSOR** Mobile No. -----

Phone No. (Office) **011-71219084** Phone No. (Residence): -----

Email: **s.ruchi@kmc.du.ac.in** Webpage: -----

Facebook: ----- Twitter: -----

LinkedIn: <https://www.linkedin.com/in/chemrsp/> Instagram: -----

Youtube: ----- Research Gate Link: [https://www.researchgate.net/profile/Ruchi\\_Sharma\\_Pandey](https://www.researchgate.net/profile/Ruchi_Sharma_Pandey)

Google Scholar Link: <https://scholar.google.com/citations?user=WEkgPWQAAAAJ&hl=en>

Address: -----



## 2. Educational Qualifications

| Degree/ Certification   | Institution                             | Year |
|-------------------------|---|------|
| B.Sc. (Hons.) Chemistry | Miranda House, University of Delhi      | 1998 |
| M.Sc. (Chemistry)       | Indian Institute of Technology - Kanpur | 2000 |
| JRF-NET Qualification   | CSIR-UGC                                | 2002 |
| Ph.D.                   | Indian Institute of Technology - Delhi  | 2010 |

## 3. Career Profile & Administrative Assignments

| Category       | Role/ Designation   | Department/ Committee                        | Date From - To               | Remarks |
|----------------|---------------------|--|------------------------------|---------|
| CAREER PROFILE | ASSISTANT PROFESSOR | CHEMISTRY<br>UNIVERSITY OF DELHI,<br>DELHI   | 21.Jul.2011 -<br>30.Apr.2018 |         |
| CAREER PROFILE | ASSISTANT PROFESSOR | CHEMISTRY ST.<br>STEPHEN'S COLLEGE,<br>DELHI | 25.Sep.2019 -<br>15.Nov.2019 |         |

|                            |                     |   |                           |  |
|----------------------------|---------------------|---|---------------------------|--|
| CAREER PROFILE             | ASSISTANT PROFESSOR | CHEMISTRY KIRORI MAL COLLEGE, DELHI                             | 28.Jan.2020 - 13.Oct.2022 | LEVEL 10   |
| CAREER PROFILE             | ASSISTANT PROFESSOR | CHEMISTRY KIRORI MAL COLLEGE, UNIVERSITY OF DELHI               | 14.Oct.2022 - Till date   | LEVEL 11   |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER              | CHEMISTRY Kirori Mal College                                    | 01.May.2024 - 30.Apr.2025 | Member - Lab Management Committee, Member - Purchase Committee,  |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER              | PORTAL COMMITTEE KIRORI MAL COLLEGE, DELHI                      | 01.May.2023 - Till date   |  |
| ADMINISTRATIVE ASSIGNMENTS | CONVENER            | CHEMISTRY KIRORI MAL COLLEGE, DELHI                             | 09.May.2023 - 30.Apr.2024 | Convenor - Seminar Committee   |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER              | CHEMISTRY Kirori Mal College                                    | 01.May.2023 - 30.Apr.2024 | Member - Library Committee, Member - Lab Management Committee  |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER              | PARIVARTAN-THE GENDER FORUM KIRORI MAL COLLEGE, DELHI           | 01.May.2023 - Till date   |  |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER              | CHEMISTRY UNIVERSITY OF DELHI, DELHI                            | 13.Feb.2023 - 01.Apr.2023 | Moderation Committee, Department of Chemistry, DU  |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER              | CHEMISTRY KIRORI MAL COLLEGE, DELHI                             | 01.Apr.2022 - 31.Mar.2023 | Admission-in-charge for B.Sc (H) Chemistry and M.Sc. Chemistry, Member - Library Committee, Member - Lab Management Committee, Member - Seminar Committee, Member - Discipline Committee |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER              | THE SPIC MACAY UNIT KIRORI MAL COLLEGE, DELHI                   | 01.May.2023 - Till date   |  |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER              | EQUAL OPPORTUNITY CELL Kirori Mal College                       | 01.Jul.2025 - Till date   |  |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER              | CHEMISTRY UNIVERSITY OF DELHI, DELHI                            | 10.Nov.2022 - 30.Dec.2022 | Moderation Committee, Department of Chemistry, DU  |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER              | THE PLAYERS – THE THEATRE SOCIETY Kirori Mal College            | 01.May.2025 - 05.Nov.2025 |  |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER              | STANDING COMMITTEE FOR MONITORING ADMISSIONS Kirori Mal College | 01.May.2025 - Till date   |  |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER              | OTHERS KIRORI MAL COLLEGE, DELHI                                | 01.Nov.2021 - 30.Nov.2022 | NAAC - Criterion VI Committee  |

|                            |          |   |                           |   |
|----------------------------|----------|---|---------------------------|---|
| ADMINISTRATIVE ASSIGNMENTS | CONVENER | CHEMISTRY KIRORI MAL COLLEGE, UNIVERSITY OF DELHI | 01.May.2024 - 30.Apr.2025 | Convenor - Seminar Committee                    |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER   | CHEMISTRY KIRORI MAL COLLEGE, DELHI               | 01.Jul.2022 - 30.Dec.2022 | Member, Department of Chemistry, NAAC Committee |

## 4. Other Profiles

### Other Profile Name/ Description

#### AREAS OF INTEREST/ SPECIALIZATION

Broad Area of Specialization: Physical Chemistry

- Computational Chemistry: Molecular Dynamics and Monte Carlo Simulations
- Water-like Anomalies
- Network Forming Liquids
- Molecular Modeling
- Condensed Matter Physics

#### AWARDS AND DISTINCTIONS

- Recognition for **outstanding contribution of using ICT based teaching and learning methodology** by Spoken Tutorials, IIT Bombay (National Mission on Education through ICT, MoE, Govt. of India).
- **Ph.D. Thesis** titled, “**Computational Studies of Network Forming Liquids: Multiple time-scale behavior and water-like anomalies**”, under [Professor Charusita Chakaravarty](#), Department of Chemistry, IIT-Delhi
- **Highest cumulative impact factor for 6 international publications** during PhD, from the Department of Chemistry, IIT Delhi, in 2008-09, for which I received cash award and certificate of appreciation.
- Recipient of highly coveted **Junior Research Fellowship** (Nov'03-Nov'05) and **Senior Research Fellowship** (Dec'05 to Nov'08) through the [National Eligibility Test \(NET\) \(CSIR/UGC\)](#) for research fellowship and eligibility for lectureship held in Dec, 2002 in Chemical Sciences
- Qualified **GATE** (Graduate Aptitude Test in Engineering) for research fellowship held in Feb'02 in chemistry
- **All India Sanskrit Board scholarship & certificate of merit** for securing 98% in Sanskrit in Class X (CBSE'93)

## SUBJECTS TAUGHT

Odd Sem (2023-2024)

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## **CERTIFICATE COURSE/ SHORT TERM COURSE ORGANIZED**

Member, Organizing Committee, Certificate Course on " Forensic Science, Sep 30 - Oct 18 2022 sponsored by Department of Chemistry, KMC in collaboration with Department of Forensic Medicine and Toxicology, AIIMS Delhi.

## **WORKSHOP/ SEMINAR/ CONFERENCE/ WEBINAR ORGANIZED**

Organized the Inaugural Seminar of the Seminar Committee of Department of Chemistry, KMC on "Role of Molecular Chirality in the Living World", on 29th August 2023, by Prof. Ravi P. Singh, Department of Chemistry, IIT - Delhi, as the Convenor, Seminar Committee.

## **WORKSHOP/ SEMINAR/ CONFERENCE/ WEBINAR ORGANIZED**

Organized an International Webinar on " Dye-Sensitized Solar Cells: Materials, Mechanisms and Applications", by Prof. Neil Robertson, School of Chemistry, University of Edinburgh, UK, on 28th Oct 2023, as the Convenor, Seminar Committee, Department of Chemistry, KMC under aegis of DBT Star Scheme.

## **FACULTY DEVELOPMENT PROGRAM (FDP) ORGANIZED**

Member, Organizing Committee for FDP on Environmental Sciences and Public Health, sponsored by Department of Chemistry, Kironi M. College, University of Delhi in collaboration with Mizoram University under the aegis of Pandit Madan Mohan Malviya National Mission on Teachers and Training (Ministry of Education, Government of India) from 1st to 5th Feb 2022.

## **OUTREACH PROGRAM ORGANIZED**

Organized Outreach program in Bal Bharti Public School, Pitampura, New Delhi, 20<sup>th</sup> April 2022 for Class 11 and 12 students. A delivered a Lecture Titled, "*Emerging Trends and Careers in Chemistry*".

## OTHERS

### Conferences Attended

#### Presenting Author

|   |  |
|---|--|
| ? | <b>R. Sharma</b> , M. Agarwal and C. Chakravarty<br><i>Entropy, Diffusivity and Structural Order in Liquids with Waterlike Anomalies</i><br>Spring College on "Water in Physics, Chemistry and Biology", 10 - 20 April, 2007 held at Abdus Salam International Centre for Theoretical Physics, Trieste, Italy. |
| ? | <b>R. Sharma</b> , S. N. Chakraborty and C. Chakravarty<br><i>Entropy, Diffusivity and Structural Order in Liquids with Waterlike Anomalies</i><br>School on Understanding Molecular Simulations (SUMS-07), 22 - 27 January 2007 held at JNCASR, Bangalore, India.   |
| ? | <b>R. Sharma</b> , A. Mudi and C. Chakravarty<br><i>Multiple Time-Scale Behaviour and Diffusional Anomaly in Tetrahedral Liquids</i><br>Winter School on Computational Approaches to Materials Science (CAMS-06), 18 - 21 January 2006 held at JNCASR, Bangalore, India.                                       |
| ? | <b>R. Sharma</b> and C. Chakravarty<br><i>Multiple Time-Scale Behaviour and Hydrogen Bond Dynamics in liquid Methanol</i><br>DAE-BRNS Symposium on Theoretical Chemistry, 9 - 12 December 2004 held at BARC, Mumbai, India.  |
| ? | Attended Unifying Concepts in Glass Physics-III, International Conference and School, 28 June - 1 July 2004 held at JNCASR, Bangalore, India.  |

#### Co-Author

|   |  |
|---|--|
| ? | M. Agarwal, <b>R. Sharma</b> and C. Chakravarty<br><i>Entropy, Mobility and Structural Order in Ionic Melts with Waterlike Anomalies</i><br>Gordon Research Conference: Water and aqueous solutions, 27 July- 1 Aug 2008, held at Holderness, NH, USA  |
| ? | M. Agarwal, <b>R. Sharma</b> and C. Chakravarty<br><i>Ionic Melts: Relationship between Structure, Entropy and Transport Properties</i><br>and<br>M. Agarwal, S. N. Chakraborty, T. Goel, M. Majumder, R. Sharma and C. Chakravarty<br><i>Chemistry in Silico</i><br>I2Tech "Open House", 21 April 2007 held at Indian Institute of Technology, Delhi. |

## OTHERS

### Computational Skills

**Languages:** Proficient in PYTHON, FORTRAN and BASIC and familiar with C/C++

**Document Markup Language:** LaTex

**Chemical Softwares:** HyperChem, ACD/Chemsketch, ISIS/Draw, MATLAB, DIAMOND, GAUSSIAN, NAMD, DL\_POLY, PACKMOL, AVOGADRO, Mocubed, JMol, ORCA

**Simulation Methods:** Monte Carlo, Molecular Dynamics

**Operating System:** Windows:XP/7/8/10; Mac:OSX; Linux- Redhat, Fedora, Ubuntu

**Utility:** MS Office – Excel, Word, Powerpoint, Google-Meet, Zoom, Sheets Microsoft-Teams

### WORKSHOP/ SEMINAR/ CONFERENCE/ WEBINAR ORGANIZED

Member, Organizing Committee, Student Development program on "Molecular Modeling with JMol", March 31st to April 2023, sponsored by DBT Star College Scheme, Department of Chemistry, KMC in collaboration with Spoken Tutorials, Bombay

### 5. Research Guidance

| Year | Guide For | Title of the Dissertation/ Thesis | Scholar Name | Status |
|------|-----------|-----------------------------------|--------------|--------|
|      |           |                                   |              |        |

### 6. Research Projects

| Year | Title of Project | Sponsorship Agency | Duration | Amount Sanctioned | Date of Sanction |
|------|------------------|--------------------|----------|-------------------|------------------|
|------|------------------|--------------------|----------|-------------------|------------------|

## 7. Publications

| Category                      | Publication Name   | Title                                | Name of Author  | Reference Link/ DOI Link  | Publication (Month-Year) |
|-------------------------------|--|--------------------------------------|---|---|--------------------------|
| JOURNAL PAPER (International) | Relationship between Structure, Entropy, and Diffusivity in Water and Water-Like Liquids                             | J. Phys. Chem. B/ACS                 | Manish Agarwal, Murari Singh, Ruchi Sharma, M. Parvez Alam and Charusita Chakravarty (Joint Author) | <a href="https://doi.org/10.1021/jp101956u">https://doi.org/10.1021/jp101956u</a>                 | May 2010                 |
| JOURNAL PAPER (International) | Estimating the entropy of liquids from atom-atom radial distribution functions: silica, beryllium fluoride and water | Molecular Physics / Taylor & Francis | Ruchi Sharma, Manish Agarwal and Charusita Chakravarty (First Author)                               | <a href="https://doi.org/10.1080/00268970802378662">https://doi.org/10.1080/00268970802378662</a> | October 2008             |
| JOURNAL PAPER (International) | Multiple Time Scale behaviors and Network Dynamics in Liquid Methanol  | J. Phys. Chem. B/ACS                 | Ruchi Sharma, Charusita Chakravarty and Edoardo Milotti (First Author)                              | <a href="https://doi.org/10.1021/jp802085v">https://doi.org/10.1021/jp802085v</a>                 | July 2008                |
| JOURNAL PAPER (International) | Ionic melts with waterlike anomalies: Thermodynamic properties of liquid BeF <sub>2</sub>                            | J. Chem. Phys / AIP                  | Manish Agarwal, Ruchi Sharma and Charusita Chakravarty (Joint Author)                               | <a href="https://doi.org/10.1063/1.2794766">https://doi.org/10.1063/1.2794766</a>                 | October 2007             |
| JOURNAL PAPER (International) | Entropy, diffusivity, and structural order in liquids with waterlike anomalies                                       | J. Chem. Phys / AIP                  | Ruchi Sharma; Somendra Nath Chakraborty; Charusita Chakravarty (First Author)                       | <a href="https://doi.org/10.1063/1.2390710">https://doi.org/10.1063/1.2390710</a>                 | November 2006            |
| JOURNAL PAPER (International) | Diffusional anomaly and network dynamics in liquid silica  | J. Chem. Phys / AIP                  | Ruchi Sharma; Anirban Mudi; Charusita Chakravarty (First Author)                                    | <a href="https://doi.org/10.1063/1.2219113">https://doi.org/10.1063/1.2219113</a>                 | July 2006                |

## 8. Books

| Category | Book Name | Title | Name of Author | ISSN/ ISBN Number |
|----------|-----------|-------|----------------|-------------------|
|----------|-----------|-------|----------------|-------------------|

## 9. Faculty Achievements

| Year | Category of Achievement   | Role            | National/ International etc. | Name  | Date From-To              |
|------|---|-----------------|------------------------------|---|---------------------------|
| 2022 | REFRESHER COURSE ATTENDED                                       | PARTICIPANT     | National                     | Online 2-week Refresher Course in Chemistry   | 29.Nov.2022 - 13.Dec.2022 |
| 2022 | FACULTY INDUCTION PROGRAM ATTENDED                              | PARTICIPANT     | National                     | 4-week Online Faculty Induction/Orientation Program for Faculty in Universities/ Colleges/ Institutes of Higher Education | 20.Oct.2022 - 18.Nov.2022 |
| 2022 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED                          | PARTICIPANT     | University                   | Workshop on Computational Methods and Molecular Modeling  | 02.Sep.2022 - 03.Sep.2022 |
| 2022 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED                          | PARTICIPANT     | University                   | Workshop on Introduction to Python Programming  | 01.Jul.2022 - 02.Jul.2022 |
| 2022 | INVITED LECTURES/ RESOURCE PERSON/ PAPER PRESENTATIONS ATTENDED | RESOURCE PERSON | College                      | Outreach Program on Emerging Trends and Careers in Chemistry  | 20.Apr.2022 - 20.Apr.2022 |
| 2022 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED                          | PARTICIPANT     | International                | International Workshop on Drug Discovery and Development  | 21.May.2022 - 15.Jun.2022 |
| 2022 | FACULTY DEVELOPMENT PROGRAM ATTENDED                            | PARTICIPANT     | University                   | FDP on Environmental Sciences and Public Health   | 01.Feb.2022 - 05.Feb.2022 |
| 2021 | FACULTY DEVELOPMENT PROGRAM ATTENDED                            | PARTICIPANT     | University                   | FDP on Programming in Python  | 06.Dec.2021 - 10.Dec.2021 |
| 2021 | ONLINE CERTIFICATE COURSE/ TRAINING PROGRAMS ATTENDED           | PARTICIPANT     | National                     | Short Term Course in Practical Numerical Methods in Python  | 19.Nov.2021 - 25.Nov.2021 |
| 2021 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED                          | RESOURCE PERSON | College                      | Students Skill Development Workshop on Online Tools for Chemistry   | 22.Oct.2021 - 23.Oct.2021 |
| 2021 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED                          | RESOURCE PERSON | College                      | Hands-on Workshop on UV Visible Spectrophotometry and its Applications  | 19.Jul.2021 - 19.Jul.2021 |
| 2021 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED                          | PARTICIPANT     | University                   | Workshop on Tools for Exploring Chemistry   | 12.Jul.2021 - 13.Jul.2021 |
| 2021 | WEBINAR ATTENDED  | PARTICIPANT     | International                | International Webinar on Empowering Diversity in Science  | 12.Feb.2021 - 12.Feb.2021 |
| 2020 | FACULTY DEVELOPMENT PROGRAM ATTENDED                            | PARTICIPANT     | University                   | FDP on Innovation in Scientific Research Method   | 14.Oct.2020 - 18.Oct.2020 |
| 2020 | FACULTY DEVELOPMENT PROGRAM ATTENDED                            | PARTICIPANT     | National                     | FDP on ICT: Instructional Design, Development & Learning  | 24.Jul.2020 - 30.Jul.2020 |

|      |   |                 |               |   |                           |
|------|---|-----------------|---------------|---|---------------------------|
| 2020 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED                | RESOURCE PERSON | College       | Online workshop on Computational Chemistry and Molecular Modeling in Drug Design              | 19.May.2020 - 20.May.2020 |
| 2020 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED                | PARTICIPANT     | National      | National Seminar on "ICT Enabled Higher Education in India : Challenges and Opportunities"    | 17.Apr.2020 - 17.Apr.2020 |
| 2024 | FACULTY DEVELOPMENT PROGRAM ATTENDED                  | PARTICIPANT     | National      | E-learning & MOOCs in Chemistry Teaching Using Avogadro                                       | 24.Sep.2028 - 24.Oct.2011 |
| 2024 | ONLINE CERTIFICATE COURSE/ TRAINING PROGRAMS ATTENDED | PARTICIPANT     | National      | Short Term (30 hour) Translation Certificate Course   | 28.Sep.2024 - 04.Dec.2024 |
| 2025 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED                | PARTICIPANT     | International | International Conference on Chemical, Biological and Environmental Sciences 2025 (IUPAC 2025) | 11.Feb.2025 - 12.Feb.2025 |
| 2025 | FACULTY DEVELOPMENT PROGRAM ATTENDED                  | PARTICIPANT     | National      | NEP 2020 Orientation and Sensitization Program  | 14.Feb.2025 - 22.Feb.2025 |
| 2025 | ONLINE CERTIFICATE COURSE/ TRAINING PROGRAMS ATTENDED | PARTICIPANT     | National      | Recent Trends in Chemical Sciences and Drug Discovery   | 25.Jun.2025 - 25.Jun.2025 |

**Dr. RUCHI SHARMA PANDEY**