



## Dr. Namrata Ghildiyal

**Gender:** Female


**DOB:** 29 August 1971

**Nationality:** Indian namrata

ghildiyal | LinkedIn

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namrata ghildiyal-Mendeley

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### Current Position and Contact Address:

Assistant Professor  
Department of Chemistry  
H. N. B. Garhwal University  
Srinagar (Garhwal), 246174, Uttarakhand, India  
Mobile: 9634432137  
Email id: namoo\_doon@yahoo.co.in

### Education:

- **D. Phil. (Chemistry), 2016, H. N. B. Garhwal University**, Srinagar-Garhwal, Uttarakhand, India  
D. Phil Topic: A Study on Metal Ion Uptake by Fluorescent Crown Ethers.
- **M. Tech. (Materials Science), 1996, Banaras Hindu University**, Varanasi, India.  
Dissertation work (D.M.S.R.D.E., Kanpur, India): Development of metal powder-epoxy composites. Determination of their tensile properties, toughness, hardness and wear.
- **M.Phil. (Chemistry), 1994, University of Madras**, Chennai, Tamil Nadu, India (Synthesis of Random Co-Polyesters using an acid chloride and two diols. Determination of their viscosities, UV-Visible spectra, IR spectra, NMR spectra and Thermal degradation patterns for these co polyesters).
- **M.Sc. (General Chemistry), 1993, University of Madras**, Chennai, Tamil Nadu, India
- **B.Sc. (Chemistry), 1991, University of Madras**, Chennai, Tamil Nadu, India.
- **XII, ISC Board, 1988.**
- **X, ICSE Board, 1986.**

### Scholarships:

1. National Scholarship for obtaining 5<sup>th</sup> rank in University of Madras in B. Sc. Level.
2. National Eligibility Test-JRF (NET-JRF) for research and lecturership- qualified in 1994
3. GATE

### Classes taught:

Graduate, Post Graduate and Pre-PhD classes

### Topics taught:

Physical Chemistry (Undergraduate level), Quantum Chemistry, Chemical Dynamics, Classical Thermodynamics, Electrochemistry, BioPhysical Chemistry, Group Theory, Stereochemistry (PostGraduate Level), Asymmetric Synthesis (Pre-Ph.D)

### Research Interests: Employment Details:

Macrocyclic Chemistry, Polymer Chemistry, Nanoparticles-based solar cells for energy harvesting

- **1997- 1999-Project Associate:** Center for Polymer Science and Engineering. Indian Institute of Technology -Delhi, India, Project Title: Development of polyolefin's for specialized applications under IPCL sponsored project.
- **2003-2005-Temporary Lecturer** Lucknow Christian P.G. College, Lucknow.
- **2005-2007-Temporary Lecturer** Sardar Bhagwan Singh P.G. Institute of Biomedical Sciences and Research, Deradun, Uttarakhand.
- **13/03/2007 onwards Assistant Professor**, H.N.B. Garhwal University, Srinagar –Garhwal Uttarakhand, India.

### Teaching Experience

Permanent: 15 Years  
Temporary: 04 Years

### Research Experience:

7 years (D. Phil and Project Associate IIT-Delhi)

<p><b>Publications :</b></p>	<ol style="list-style-type: none"> <li>1. Development of Epoxy –Metal Particulate Composite, Singh,N., Ghildiyal, N., Khelawan, R., Singh R.,S., Venkatramani, P., S., Mathur, G., Shankar,V., (in <i>Proceedings of the Second International Conference on Advances in Composites, ADCOMP-96, 1996, I.I.Sc.,Bangalore, Foundation for Advanced Materials Education, Paper 45</i>),Advances in Composites ADCOMP-96, Author(s) : Dwarakadasa, E.S. Eds.;Nair, C.G.K. Eds, Allied Publishers, 257-260, <b>1996</b>.</li> <li>2. <b>Ghildiyal, N.</b>; Joshi nee Pant, G.; Rawat and M. S. M. and Singh, K., Spectral investigation of the effect of anion on the stability of non covalent assemblies of 2,3,5,6,8,9,11,12-octahydro-1,4,7,10,13-benzopentaoxacyclopentadecene (benzo-15-crown-5) with sodium halides, <i>Spectrochimica Acta, Part A: Molecular and Biomolecular Spectroscopy</i>, <b>2017</b>, 171, 507–514, doi: 10.1016/j.saa.2016.07.044, ISSN:1386-142. Impact Factor -2.5. Citations 2</li> <li>3. <b>Ghildiyal, N.</b>; Joshi nee Pant, G. and Rawat, M. S. M., Benzo-15-crown-5 (2,3,5,6,8,9,11,12-octahydrobenzo[<i>b</i>] [1,4,7,10,13] pentaoxacyclopentadecine) and dibenzo-15-crown-5 (6,7,9,10,17,18-hexahydrodibenzo[<i>b,h</i>][1,4,7,10,13] pentaoxacyclopentadecine as fluorescent probes for physiologically important potassium ion, <i>Inorganica Chimica Acta</i> , 2019, (available online from November <b>2018</b>), 487, 120-127, doi: 10.1016/j.ica.2018.11.052 ISSN: 0020-1693. Impact Factor- 2.2.</li> </ol>
<p><b>Other Published Work:</b> <b>Book Chapters - National</b></p>	<p><b>2012</b></p> <ul style="list-style-type: none"> <li>• <b>Book chapter: 01</b>; Problem solving skills, <i>Chemical Education</i>, edited by Savita Ladage and S. D. Samant, Narosa Publishing House Pvt. Ltd, New Delhi, 2012, 105-112, ISSN/ISBN No. 978-81-8487-336-9.</li> </ul> <p><b>2022</b></p> <ul style="list-style-type: none"> <li>• <b>Book Chapters - 07</b> ; Unit 10: Phase Equilibria, Unit 11: Partition Coefficient, Unit 12: Phase Diagram Of Simple Eutectic System, Unit 13: pH Titration, Unit 14: Conductometric Titrations, Unit 15: Potentiometric Titrations, Unit 16: Kinetics, (BSCCH-204) B.Sc. II Year, Laboratory Course III, Editor-Om Prakash / Published by Uttarakhand Open University,, Haldwani, Nainital-263139, SBN/ISSN number 978-93-90845-06-4, allotted in 2022 and communicated on <b>20/07/2022</b></li> </ul>
<p><b>Popular Articles: 2016</b></p>	<ol style="list-style-type: none"> <li>1. Geeta Joshi, Namrata Ghildiyal, Vigyan Paricharcha, 6:4, April-June 2016, 44-46, ISSN-2394- 4501</li> <li>2. Namrata Ghildiyal, Geeta Joshi” Mukta Mulaka Vah Koshika Kshati”, Vigyan Paricharcha,7:2, October-December,2016, 45-46, ISSN-2394-4501.</li> </ol>
<p><b>Membership of Scientific Organisations:</b></p>	<ol style="list-style-type: none"> <li>1. Life Member of Indian Association of Chemistry Teachers (IACT), IACT LM No.626 .</li> <li>2. Life Member of Indian Science Congress</li> <li>3. ACS Community Member, Membership number:32379581</li> <li>4. IEEE membership</li> </ol>
<p><b>Reviewer</b></p>	<p>Reviewer for Elsevier Journal: Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy</p>
<p><b>Projects Undertaken:</b></p>	<ol style="list-style-type: none"> <li>1. U.G.C. Minor Project “A study on metal ion uptake by fluorescent crown ethers”, F.No. 36-359/2008(SR)-Rs 2Lakhs -Completed.</li> <li>2. UGC-DAE, Indore-Collaborative Research Scheme, “Effect of solvent system on the stability of fluorescent crown ether complexes of metal ions”, Ref: CSR-I/CRS-59/2011-12, Rs.90,000, 2011 to 2013 - Completed.</li> </ol>
<p><b>International/National Conference/Symposium /Workshop/ and online Webinars attended:</b></p>	<ul style="list-style-type: none"> <li>• <b>International / National Workshop and Conferences attended</b></li> </ul> <p><b>2008</b></p> <ol style="list-style-type: none"> <li>1. Workshop on Advanced Polymers and Turbulent Drag Reduction in ICTP, Trieste, Italy, March 2008.</li> </ol> <p><b>2009</b></p> <ol style="list-style-type: none"> <li>2. Poster Presentation in International Conference on Methods and Applications of fluorescence held in Budapest, Hungary from 6-9 September 2009.</li> </ol>

3. Participant Lecture in Workshop on Principles of fluorescence techniques, , CNIC, Madrid, Spain, 14-17 September 2009.  
**2013**
  4. Oral Presentation entitled “Complexes of aromatic crown ethers with inorganic salts of sodium and potassium”, International conference on Chemistry-Frontiers and Challenges, ICCFC-13, Department of Chemistry, Aligarh Muslim University, Aligarh, 2-3 March, 2013.
  5. Attended Workshop on Mass and NMR Techniques, SAIF, CSIR-CDRI, Lucknow, 28-29 January 2013.
  6. Attended National Academy Of Sciences India (NASI), Allahabad & Uttarakhand State Council For Science & Technology (UCOST), Uttarakhand, Dehradun sponsored workshop on Science & Technology and Sustainable Bioeconomy for Women's Welfare" on May 17th & 18th 2013, Dehradun.  
**2015**
  7. Poster presentation entitled “Crown Ether Assemblies with Lithium Salts” in NCAICS-2015, Department of Chemistry, University of Mumbai, Mumbai, 12-13 February 2015.
  8. Attended National Workshop on Basic Aspects of Quantum and Theoretical Chemistry and Applications (BAQTCA 2015) organized by Government PG College, Tonk at Poornima University, Jaipur, 17- 21 August, 2015.  
**2018**
  9. Invited Speaker: ‘Crown Ether modified Nanoparticles and Self-Assemblies’ in International conference on Nanomaterials: Synthesis, Characterization and Applications (ICN 2018), International and Inter University Centre for Nanoscience and Nanotechnology , Mahatma Gandhi University, Kottayam, Kerela, India, 11-13 May 2018.  
**2019**
  10. Oral presentation “Synthesis and Characterization of Fluorescent Complexes of Dibenzo-15-Crown-5 (6,7,9,10,17,18-hexahydrodibenzo[b,h] [1,4,7,10,13]pentaoxacyclopentadecine) with Sodium Halides” in XVth International Conference on Molecular Spectroscopy, Wrocław and Wojanów Hotel, Poland, 15 – 19 September **2019**.  
**2021**
  11. **Virtual Winter School for Computational Chemistry** held from **15-18 February 2021**, CECAM. Single Figure Presentation titled “Effect of Frontier Molecular Orbitals on The Fluorescence Response of Some Benzocrown Ethers”.
  12. **Poster presentation Online Workshop**, April 23-24, **2021** “Computer Simulation And Theory Of Macromolecules” A Comparative Study of Computational and Experimental Results of Spectral Investigation of Benzo-15-Crown-5 organized by Center for Bioinformatics, Saarland University, and Department of Theoretical and Computational Biophysics, Max Planck Institute for Biophysical Chemistry Participated in the **2021**.
- **National Seminar, Conferences, Workshops and online Webinars attended**
- 2014**
  1. Participated in seminar -UGC Women Safety Measurements in Campus, 2014, Dept. Of Political Science, H.N.B. Garhwal University, Srinagar-Garhwal, Uttarakhand.
  - 2015**
  2. Attended one day Training programme on Rights of Women sponsored by National Human Rights Commission New Delhi at DBS PG college, Dehradun, 18th December 2015.
  - 2016**
  3. Participant in Refresher Course, Chemistry, ASC, UGC-HRDC, Rani Durgavati Vishwavidyalaya, Jabalpur, MP, 30/05/2016 to 18/06/2016.
  - 2019**
  4. Attended Seminar on Draft of New Education Policy held at ACL Hall, Birla Campus, H. N. B. Garhwal University, Srinagar-Garhwal, Uttarakhand, on 13 August 2019.
  5. Attended Fulbright workshop on 4 November 2019 in Senate Hall, Birla Campus H. N. B. Garhwal University, Srinagar-Garhwal, Uttarakhand, on 13 August 2019.

<p>Orientation Courses/ Refresher Courses/ FDP Online Training programmes attended</p> <p>Research (Ph.D) Supervisor:</p>	<p><b>2020</b></p> <ol style="list-style-type: none"> <li>6. <i>Medha Webinar Series</i>, Directed Assembly Methods for the Rational Fabrication of Functional Materials organised by the PG &amp; Research department of Chemistry in association with IQAC, Dewaswom Board College, Thalayolaparambu, Kottayam, Kerala on 25 May 2020.</li> <li>7. ASC Webinar ;”Fundamentals of Effective Scientific Writing: Manuscripts and Grants’- American Chemical Society Perfect Tuesday, Jun 09, 2020, 6.00 P.M. To 7 P.M. IST by Americal Chemical Society.</li> <li>8. ASC Webinar on “A Perfect Match: Vibrational Spectroscopy And Sustainable Chemistry” Thursday, Jun 11, 2020, 2.00 P.M. To 3 P.M. EDT by Americal Chemical Society.</li> <li>9. <i>ASC Webinar ;”</i> Chemistry of fireworks: Ignition, Sensitivity and Analysis of Energetic Materials- American Chemical Society Perfect Tuesday, Jun 14, 2020, 12.30 A.M.. IST Americal Chemical Society.</li> </ol> <p><b>2011</b></p> <ol style="list-style-type: none"> <li>1. Participant in Orientation Course, ASC- Nainital, Kumaon University, 18/02/2011-17/03/2011.</li> </ol> <p><b>2012</b></p> <ol style="list-style-type: none"> <li>2. Participant in Refresher Course, ASC- NEHU, Shillong, 22/03/2012-11/04/2012.</li> </ol> <p><b>2017</b></p> <ol style="list-style-type: none"> <li>3. Attended short- term course in Research Methodology in Basic Sciences, UGC-HRDC, University of Kerala, Trivandrum, Kerala from 20-25 March 2017.</li> </ol> <p><b>2020</b></p> <ol style="list-style-type: none"> <li>4. Online Training Programme on Educational Video Creation (E-Content Development) organised by Toshniwal ACS College Segaon Dist. Hingoli-431542, Maharashtra, India, 11 to 13 May 2020</li> <li>5. Five-day Online Training Programme on “Research Methodology and Ethics: Plagiarism Issues Reference Management Tools and Altmetrics” from 15th – 19th June 2020 organized by Shodhganga Team, INFLIBNET Centre, Gandhinagar, An Inter University Centre of University Grants Commission, Infocity Gandhinagar - 382007. Gujarat, India.</li> <li>6. UGC-HRDC-RUSA Sponsored One Week Online FIP Online Short Term Course-Osmania University on Motivation And Leadership For Teachers (22-06-2020 to 27-06-2020)</li> </ol> <p><b>2021</b></p> <ol style="list-style-type: none"> <li>7. Five Day Long Online Faculty Development Programme on Research Skill Enhancement” held from 21st June 2021 to 25th June 2021 through virtual platform, Research and Development Cell, Amity University, Jharkhand, Ranchi.</li> <li>8. Online Faculty Development Programme-National, ‘Open Source Tools for Research’ Teaching Learning Centre, Ramanujan College, New Delhi , 09/12/2021-15/12/2021 for 07 Days</li> <li>9. Online Faculty Development Programme- National , on ‘Developing Moocs Concepts and Tools’, Teaching Learning Centre, Ramanujan College, New Delhi from 16/12/2021-22/12/2021 for 07 Days</li> </ol> <p>Number of Ph.D scholars under supervision- 02</p>
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<p><b>Member of Local Organization Committee of Conferences:</b></p>	<ol style="list-style-type: none"> <li>1. National Conference on “Emerging Trends in Chemistry” was organized on November 8 and 9, 2008 in the Department of Chemistry, H.N.B. Garhwal University, Srinagar Garhwal</li> <li>2. Member of Local Organization Committee for National Conference on Recent Frontiers of Chemistry (NCRFC-2018) organized by Department of Chemistry, HNBGU, Srinagar-246174, Uttarakhand, India on 27 and 28 April 2018.</li> <li>3. Member of Local Organization Committee for National Conference on “Recent Advances in Natural Products Chemistry And Nanotechnology”, 9-10 September 2019 (RANCPN-2019).</li> </ol>
<p>MOOCs with e-certification completed:</p>	<p><b>2020</b></p> <ol style="list-style-type: none"> <li>1. Completed Fundamentals of Macroscopic and Microscopic Thermodynamics an online self-paced non-credit course authorized by University of Manchester and offered through Coursera 07/08/2020.</li> <li>2. Completed Quantum Mechanics an online self-paced non-credit certificate course authorized by University of Colorado Boulder and offered through Coursera - 07/09/2020.</li> <li>3. Completed an online self-paced certificate course ‘Science &amp; Cooking: From Haute Cuisine to Soft Matter Science (chemistry) ’ through HarvardX, an online learning initiative of Harvard University -24/08/2020.</li> <li>4. Completed an online self-paced non-credit certificate course Introduction to Molecular Spectroscopy authorized by University of Manchester and offered through Coursera- 06/10/2020.</li> </ol>
<p>Radio Talk (2020):</p>	<p>Radio talk titled “Online mode of learning in Education” on 15.9.2020 at 8 PM on School Radio</p>
<p><b>Sessions Chaired in a National/International conference:</b></p>	<p><b>2018</b></p> <ol style="list-style-type: none"> <li>1. <b>Chaired a session in International conference</b> on Nanomaterials: Synthesis, Characterization and Applications (ICN 2018) organized by International and Inter University Centre for Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam, Kerala, India, 11-13 May 2018.</li> <li>2. <b>Chaired the poster presentation session</b> in National Conference on Recent Frontiers of Chemistry (NCRFC-2018) organized by Department of Chemistry, HNBGU, Srinagar-246174, Uttarakhand, India on 27 and 28 April 2018</li> </ol>
<p><b>Invited Lectures:</b></p>	<p><b>2018</b></p> <ol style="list-style-type: none"> <li>1. ‘Crown Ether modified Nanoparticles and Self-Assemblies’ International conference on Nanomaterials: Synthesis, Characterization and Applications (ICN 2018), International and Inter University Centre for Nanoscience and Nanotechnology, Mahatma Gandhi University, during 11-13 May 2018. Kottayam, Kerala, India.</li> </ol>
<p><b>Student related co-curricular:</b></p>	<p>Student related co-curricular activities like discipline related seminars, Teacher in charge of Induction/ Orientation programme Programme on CBSE and E-learning platforms 2017,2018 &amp; 2019 and General student career counselling</p>
<p><b>University Administrative responsibility:</b></p>	<p>Warden of Higher Studies Girls Hostel and Research Hostel, Chauras Campus, H. N. B. Garhwal University, Srinagar-Garhwal, (2007-20014)</p>
<p><b>Member of University and Departmental Committees:</b></p>	<p>Member of University and Departmental Admission and Administrative Committees like Student Admission Committee, Student Election duty, Library Committee, Board of Studies etc.</p>