




Faculty Details proforma for DU College Web-site



Title	Dr.	First Name	SEEMA	Last Name	GUPTA	Photograph
Designation		Associate Professor				
Address		Department of Chemistry Acharya Narendra Dev College (University of Delhi) Govindpuri, Kalkaji, New Delhi				
Phone No Office		011-26294542				
Residence		-				
Mobile		-				
Email/		seemagupta@andc.du.ac.in Seema_and92@yahoo.com				
Web-Page		http://andcollege.du.ac.in/?q=departments/Chemistry/faculty/2				
Educational Qualifications: M. Phil., Ph.D						
Degree	Institution				Year	
Ph.D.	Department of Chemistry, University of Delhi, Delhi, INDIA				1992	
M.Phil.	Department of Chemistry, University of Delhi, Delhi, INDIA				1988	
M.Sc.	D.A.V. College, Jalandhar, Guru Nanak Dev University, Amritsar, Punjab, INDIA				1986	
B.Sc.	Govt. College, Ropar, Punjabi University, Patiala, Punjab, INDIA				1984	
Career Profile						
<ul style="list-style-type: none"> • Associate Professor/Reader, Acharya Narendra Dev College (University of Delhi) since 16.08.2000 						

- Senior Lecturer, Acharya Narendra Dev College (University of Delhi) from September 1996-August 2000
- Lecturer, Acharya Narendra Dev College (University of Delhi) from September 1992-September 1996
- Lecturer (Adhoc), Miranda House (University of Delhi) from January 1990- March 1990
- Lecturer (Adhoc), Daulat Ram College (University of Delhi) from August 1990- April 1992
- Lecturer (Adhoc), Gargi College (University of Delhi) from August 1992- September 1992

Administrative Assignments:

- | | | |
|---|---|--------------------|
| • Vice Principal | : | 2010- 2012 |
| • Bursar | : | 2001- 2003 |
| • Coordinator, Steering Committee for National Assessment and Accreditation Council | : | 2014- 2016 |
| • Teacher –in-charge(Chemistry Department) | : | 1995-1997, 2002-04 |
| • Proctor | : | 2008-2010 |
| • Convener, Disciplinary Committee | : | 1996-1997 |
| • Member College Complaints Committee in University of Delhi representing College | : | 2004-2006 |
| • Superintendent Examinations 'Category B' | : | 2002 |
| • Deputy Superintendent Examinations | : | 2008-2013 |
| • Liaison Officer | : | 2012-2014 |
| • Transparency Officer | : | 2010-2012 |
| • Convener, College Development Committee | : | 2007-2010 |
| • Convener, Fellowship Committee | : | 2004-2006 |
| • Convener, Internal Assessment Committee | : | 2006-2008 |
| • Convener, Attendance Committee | : | 2006-2008 |
| • Convener, Remedial Coaching Classes | : | 2012-2014 |
| • Convener, Annual Academic Events Committee | : | 2014-2016 |
| • Convener, Eco Club | : | 2016-2019 |
| • Convener, Library Committee | : | 2020-Present |

➤ OTHER ADMINISTRATIVE ASSIGNMENTS

- Member, Preparation of Document 'ANDC DOWN THE YEARS...'
- Coordinator, Committee for Antardhwani 2014 and 2015; Cultural Festival Organized by University of Delhi where college is awarded third and first position respectively in category of "Award for Good Practices"
- Coordinator Internal Quality Assurance Cell : 2015- 2018
- Member, Finance Committee : 2015- 2018

<ul style="list-style-type: none"> • Member, Research Monitoring Committee : 2014- 2016 • Member, College New Building Committee : 2015- 2016 • Coordinator, Silver Jubilee Celebrations ‘Rajatotsav’: 2015-2016 • Department Coordinator, STAR Scheme : 2016-2018
Areas of Interest / Specialization <ul style="list-style-type: none"> • Coordination Chemistry, Inorganic and material Chemistry, Bioinorganic Chemistry, Inorganic Nanomaterials • Synthesis and Characterization of new metallic nanomaterials and their biological applications
Subjects Taught <ul style="list-style-type: none"> • Atomic Structure • Periodic Table and periodic properties • Chemical Bonding • s, p ,d and f block elements and their compounds • Metallurgy • Coordination Chemistry • Bioinorganic Chemistry • Organometallic Chemistry • Novel inorganic solids, Nanomaterials
Research Guidance <p>Recognized as Ph.D. Supervisor by Department of Chemistry (University of Delhi) Guided undergraduate students under the externally funded projects (ANDC; Innovation and Entrepreneurship Development Cell, Department of Science and Technology, Government of India, DU Innovation Project) and Acharya Narendra Dev College funded scheme ‘ELITE’ since 2012.</p>
Publications Profile <ul style="list-style-type: none"> • REFREED PUBLICATIONS • Deka S.R., Seema Gupta, Pradeep Kumar. (2021) Applications of Chitosan in Tissue Engineering. Trends In Carbohydrate Research, Vol.13, No.1; 1-11 • Singh, I., Dhawan, G., Gupta, S., & Kumar, P.(2021) Mannosylated and mannan-modified nanovectors targeting Resident Tissue Macrophages (RTM) for efficient pharmacotherapy. (2021) Trends In Carbohydrate Research, Vol.13, No.1; 71-81 • Singh, I., Gupta, S., Gautam, H. K., Dhawan, G., & Kumar, P. (2020). Antimicrobial, radical scavenging, and dye degradation potential of nontoxic biogenic silver nanoparticles using Cassia fistula pods. Chemical Papers, 1-13.

- Singh, I., Dhawan, G., **Gupta, S.**, & Kumar, P. (2020). Recent Advances in a Polydopamine-Mediated Antimicrobial Adhesion System. *Frontiers in Microbiology*, 11.
- Sharma, B., Singh, I., Bajar, S., **Gupta, S.**, Gautam, H., & Kumar, P. (2020). Biogenic silver nanoparticles: evaluation of their biological and catalytic potential. *Indian Journal of Microbiology*, 60, 468-474.
- **Gupta, S.**, Singh, I., Sharma, A. K., & Kumar, P. (2020). Ultrashort peptide self-assembly: Front-runners to transport drug and gene cargos. *Frontiers in bioengineering and biotechnology*, 8.
- G. Dhawan, S. Gupta, M. Jain, U. Dhawan, Deepika , P. Dungriyal , Z. Zaidi , Y. Singh , J. Thakur , Dharmendra , A. Chauhan and K. Sharma,” An Explorative Study on Knowledge and Awareness of Health Problems Related to Usage of Fabric Dyes by Road Side Dyers in Delhi, India”*DU Journal of Undergraduate Research and Innovation Volume 1, Issue 3 pp 20-25, 2015*
- B.S.Garg, Vinod Kumar and Seema Walia “Evaluation of Thermodynamic functions for complexation reactions involving bimetal ions and ethyl-2,3 dioxobutyrate-2p-bromophenylhydrazone” *Journal of Chemical Sciences Volume 104, Number 5(1992), 543-547*
- B.S.Garg, Seema Walia and V.K.Jain “Investigation of complexation Equilibria and evaluation of thermodynamic parameters of complexes of bivalent metal ions with 2,4-pentanedione-1-(3-chlorophenylhydrazone)PD3CPH using potentiometric technique” *Thermochimica Acta,185(1991)263-269*
- B.S.Garg, V.K.Jain and Seema Walia ”Determination of thermodynamic parameters and stability constants of various dipositively charged metal ions with 2,4-pentanedione-1-(2-chlorophenylhydrazone)PD2CPH using potentiometric technique” *Thermochimica Acta,182(1991)329-335*
- B.S.Garg, R.K.Sharma and Seema Walia”Liquid-Solid Phase extractions of Complexes of acenaphthaquinonemonoxime with Pd(II) and Co(II) and their spectrophotometric determination” *Vijana Parishad Anusandhan PtriKa Vol.32.No.2,1989*
- **BOOK/Chapter/eChapter PUBLICATIONS**
- Chapter ‘Hydrogels for drug delivery’ in Book entitled *Nanomaterials: Evolution and Advancement towards Therapeutic Drug Delivery (Part II)*
- Content Contributor and Reviewer of the Global Edition of ‘*Chemistry,7/E* by Mcmurry, Fay, Robinson
- Content Contributor and Reviewer of *Introductory Chemistry*, 6th edition Nivaldo J. Tro
- Book entitled “*How to face Chemistry*” (2005), Class XI by Dr. Sunita Hooda, **Dr. Seema Gupta**, Dr. Pooja Bhagat ; Publisher: Pyragon, International Publication

➤ **ORAL/ POSTER PRESENTATION IN INTERNATIONAL/NATIONAL CONFERENCES**

- Gupta S., *Gold Nanoparticles Based Optical Biosensor for Trypsin Sensing* Oral presentation at International Conference on 'Innovative Approaches in Applied sciences and technologies' held from 25-29 June, 2019 at Kuala Lumpur, Malaysia.
- Vajpayee S., Shandheep A., Arora H., Tiwari S., **Gupta S.**, Kumar R., Arora K., Mittal N., Mewari K., Gupta S., Bhagat P., Biswas K. and Dhawan G. *Synthesis and biological analysis of oxindole-based isoxazolines leading to analog synthesis of marine natural product Flustraminol-B with prime biological significance* Oral presentation at International conference on "Green Chemistry in Environmental Sustainability & Chemical Education"- ICGC2016 held at Department of Chemistry, Dault Ram College from 17-18 November, 2016
- Shandheep A., Vajpayee S., Arora H., Tiwari S., **Gupta S.**, Kumar R., Arora K., Mittal N., Mewari K., Gupta S., Bhagat P., Biswas K. and Dhawan G. *Design, synthesis and biological evaluation of oxindole-based isoxazolines towards the analog synthesis of marine natural product Flustraminol-B* Poster presentation at International conference on "Green Chemistry in Environmental Sustainability & Chemical Education"- ICGC 2016 held at Department of Chemistry, Dault Ram College from 17-18 November, 2016
- Saurabh Yadav, **Seema Gupta** and Gagan Dhawan *Synthetic Fabrication of Gold Nanoparticle with Controlled Shape, Size and Surface Functionality* Poster presentation at India International Science Festival (IISF) - Young Scientists' Conclave (YSC), held at CSIR-National Physical Laboratory (NPL) Campus, New Delhi during 7-11 December, 2016
- Nitish Kumar, Ritika Madaan, **Seema Gupta** and Gagan Dhawan *Characterisation and comparison of different synthesis methods of CuS nanoparticles* Poster presentation at India International Science Festival (IISF) - Young Scientists' Conclave (YSC), held at CSIR-National Physical Laboratory (NPL) Campus, New Delhi during 7-11 December, 2016
- Anmol, Jayati Khanna, **Seema Gupta** and Gagan Dhawan *Synthesis of Zinc Sulfide and Lead Sulfide Nanoparticles by Chemical Precipitation Method using Different Capping Agents* Poster presentation at India International Science Festival (IISF) - Young Scientists' Conclave (YSC), held at CSIR-National Physical Laboratory (NPL) Campus, New Delhi during 7-11 December, 2016
- Harshit Arora, Sandeep Gupta, Aparna Shandheep, Srishti Vajpayee, Sumit Tiwari, Kanika Arora, Rajeev Kumar, Nitin Mittal, Komal Mewari, **Seema Gupta**, Pooja Bhagat, Kallolmay Biswas and Gagan Dhawan *One Pot Synthesis and Antimicrobial Activity of Oxindole-Based Spirocyclic Isoxazolines* Poster presentation at National conference on Recent Advances in Biomedical Science: Diagnosis & Research and 2nd Annual Scholar's

Meet at SBMLS” organised by The Society of Biomedical Laboratory Scientists, India held at Gandhi Peace Foundation, University of Delhi on December 16, 2016

- Arora H., Vajpayee S., Shandheep A., Tiwari S., Gupta S., Kumar R., Arora K., Mittal N., Mewari K, **Gupta S.**, Bhagat P., Biswas K and Dhawan G. *Design, synthesis and biological evaluation of oxindole- based isoxazolines towards the analog synthesis of marine natural product Fluustraminol-B* Poster presentation at Innovation Conclave-2016, Nurturing Research at the UG level held at Acharya Narendra Dev College(University of Delhi) during October 25-26,2016
- Priya, Zainab, Aayush, Deepika, Dharmendra, Jyoti, Keshav, Yashaswi, **Seema Gupta**, Manisha Jain and Gagan Dhawan *Survey-based study to identify the health hazards associated with occupational exposure of textile dyes used by dyers to colour the fabrics.* Poster presentation at National Conference: Redefining Science Teaching: Future of Education, March 7-9, 2013, Conference Room, South Campus, University of Delhi.
- Oral Presentation on ‘*Environment Management by Chemical Waste Treatment and Recycling at the source*’ Neha Kumari, Sweta Sharma, Shubham Biswas, **Seema Gupta** and Manisha Jain at international Conference on Harnessing Engineering Technology and Innovation for Sustainable Development held at Dr S S B University of Chemical Engineering and Technology, Punjab University, Chandigarh, India on 19-20 September 2014 under Technical Education Quality Improvement Program.
- Oral Presentation on entitled “*Linear free energy relationship of substituents in 2-,3-,and 4- position of phenyl nucleus with respect to N-atom of substituted hydrazone*’ at 2007 - (28th) - International Conference on Science & Technology held at Prague, Czech Republic during July 5-6,2007.
- Poster Presentation entitled “*Comparative studies of dipositively charged metal ions with 2,4-pentanedione-1-(2-chlorophenylhydrazone)PD2CPH,PD3CPH and PD4CPH using potentiometric technique*” at International symposium on ‘Current trends in Chemical Research’ at Department of Chemistry, University of Delhi, January 7-8.1991.

ORAL/ POSTER PRESENTATION IN INTER COLLEGE CONFERENCES

- **Seema Gupta**, Gagan Dhawan, Anmol, Jayati Khanna *Synthesis and Characterisation of ZnS and PbS Nanoparticles by Chemical Precipitation Method using different Capping Agents* Poster presentation at Innovation Conclave-2016, Nurturing Research at the UG level held at Acharya Narendra Dev College(University of Delhi) during October 25-26,2016 and **won third prize.**
- Nitish Malhotra, Eshant Bhatia, Divyansh Mittal, **Seema Gupta**, Manisha Jain and Gagan Dhawan *Detection of proteases using gold nanoparticle-based optical biosensor.* Poster presentation at Annual Symposium on Frontiers in Biomedical Research-2015 (FBR-2015) Comprehending Genes @ work: From Structural Biology to Drug Discovery, 29-31 October, 2015. Venue: Conference Centre, University of Delhi.
- Eshant Bhatia, Divyansh Mittal, Nitish Malhotra, **Seema Gupta**, Manisha Jain and Gagan Dhawan *Design and development of optical biosensor for protease sensing.* Poster presentation at National Conference on Understanding the Mechanism and Challenges of

Complex Diseases, December 29-30, 2014 organized by Shaheed Rajguru College of Applied Sciences for Women, University of Delhi and got the **First prize with a Trophy**.

- Eshant Bhatia, Divyansh Mittal, Nitish Malhotra, **Seema Gupta**, Manisha Jain and Gagan Dhawan *Design and development of gold nanoparticle based optical biosensor for protease sensing*. Oral presentation at Annual Science and Technical Festival, TRYST-2015, February 27- March 2, 2015 organized by IIT Delhi.
- Priya, Zainab, Aayush, Deepika, Dharmendra, Jyoti, Keshav, Yashaswi, **Seema Gupta**, Manisha Jain and Gagan Dhawan *Survey-based study to identify the health hazards associated with occupational exposure of textile dyes used by dyers to colour the fabrics*. Poster presentation at University of Delhi, Academic and Cultural Festival “Antardhwani” (February, 2013). Shortlisted by the University of Delhi to present the same work again at “Antardhwani” (February, 2014).

Research Projects (Major Grants/Research Collaboration)

1. Guest Researcher “Effective Delivery of Therapeutic Drugs: Design, Synthesis and Evaluation of Biodegradable Carriers”
Duration: February 2019-April 2020
Research Collaboration: Dr. Pradeep Kumar, Senior Scientist, CSIR-Institute of Genomics and Integrative Biology, Mall Road, Delhi-110007, India
2. Co-investigator in Project entitled ‘Extraction of microbial enzymes from kitchen waste and preparation of Biological Detergent’
Funding Agency: Innovation and Entrepreneurship Development Cell, Department of Science and Technology (IEDC-DST), Government of India.
Amount: Rs. 1,00,000/-
Duration: July 2015-June 2016
3. Co-investigator in Project entitled ‘Design, synthesis and biological evaluation of oxindole-based isoxazolines towards the analog synthesis of marine natural product Flustraminol-B’
Funding Agency: Innovation Project for Colleges Scheme of University of Delhi- 2015-16
Amount:Rs.5,00,000/-
Duration: July 2015-June 2016
4. Co-investigator in Project entitled ‘Design and development of gold nanoparticle based optical biosensor for protease sensing’
Funding Agency: Innovation and Entrepreneurship Development Cell, Department of Science and Technology (IEDC-DST), Government of India.
Amount: Rs. 92,000/-
Duration: July 2014-June 2015
5. Co-investigator in Project entitled ‘Environment Management by Chemical Waste Treatment at the Source’
Funding Agency: Innovation and Entrepreneurship Development Cell, Department of Science and Technology (IEDC-DST), Government of India.
Amount: Rs. 68,000/
Duration: July 2013-June 2014

<p>6. Co-investigator in Project entitled ‘Formulation of biodegradable and low-cost Liquid detergent for laboratory glassware’ Funding Agency: Innovation and Entrepreneurship Development Cell, Department of Science and Technology (IEDC-DST), Government of India. Amount: Rs. 1,00,000/- Duration: July 2012-June 2013</p> <p>7. Co-investigator in Project entitled ‘Survey-based study to identify the health hazards associated with occupational exposure of chemically reactive dyes used by dyers to color the fabrics’ Funding Agency: Innovation Project for Colleges Scheme of University of Delhi Amount: Rs. 10,00,000/-(Rupees ten lakh only) Duration: One year (15th May, 2012- 14th May, 2013)</p>
Awards and Distinctions
<ul style="list-style-type: none"> • Meritorious Teachers Award -2017 by Govt. of NCT of Delhi • Service Award- पद्मश्री for completing twenty five years of regular service at Acharya Narendra Dev college(University of Delhi) • SERS Women Scientist Award by Scientific Educational Research Society, Meerut(U.P.) India in June, 2019 at Kuala Lumpur, Malaysia
Association With Professional Bodies
<ul style="list-style-type: none"> • Indian Society of Analytical Scientists(Regd.),-DELHI CHAPTER(Sr. No.013) • Association of Chemistry Teachers(LM No.466)
Other Activities
<p>➤ E CONTENT: For Undergraduate Students</p> <ul style="list-style-type: none"> • Question bank on Chemical Bonding and Organometallic Compounds at Institute of Life Long Learning, Univ. of Delhi • Study materials on chemistry. http://wikieducator.org/User:Seemagupta/Atmosphere • How to weigh a compound https://www.youtube.com/watch?v=1oH4JGLzx-8 • How to prepare a standard solution https://www.youtube.com/watch?v=bV7vdzi6MxE • Lecture on Titrimetric Analysis https://www.youtube.com/watch?v=RyG3U1vQky8 • Demo Titration of Potassium Permanganate Vs. Oxalic acid https://www.youtube.com/watch?v=yO9kIqaQBGE <p>➤ Contribution towards Secondary Education: Expert/Resource Person /Participation in workshops Expert/Resource Person Participation in workshops</p> <ul style="list-style-type: none"> • ‘A study of Syllabi of Chemistry at Higher Secondary Stage’ March 18-20, 2019, at Department of Education in Science and Mathematics, NCERT, New-Delhi

- “Review of Modules(Chemistry) developed by Subject Matter Expert for MOOCs for School Education” 09/05/2017 at Department of Education in Science and Mathematics, NCERT, New-Delhi
- “Field Trial and Finalization of Training Package in Chemistry at Higher Secondary Stage” March 16-20, 2015 at Department of Education in Science and Mathematics, NCERT, New-Delhi
- “Field Trial and Finalization of Training Package in Chemistry at Higher Secondary Stage” February 16-20, 2015 at Department of Education in Science and Mathematics, NCERT, New-Delhi
- Programme entitled “Review and Development of Microscale Chemistry Kit at Higher Secondary Stage” at Division of Educational Kits, NCERT, New-Delhi,
- Programme entitled “Development of Exemplar Problems in Chemistry for Class XII” at NCERT, New Delhi
- Validations of VCDs in UDAAN programme to train the girls for the Engineering Entrance Examination by CBSE.
- Conducted session 3 Days PGT Summer Workshop for the Teachers of Bal Bharati Public School, all across the Country organized by that BBPS Training Centre, empanelled by the Central Board of Secondary Education, a Unit of Child Education Society, In-service Training Programmes; 18-20 May, 2015
- Steward for the Guinness World Record in the category ‘Largest Practical Science Lesson’ by Vijana Bharti on 7th December 2015 at IIT Campus, New Delhi

Seema Gupta

Signature of Faculty Member

- You are also requested to also give your complete resume as a DOC and PDF file to be attached as a link on your faculty page.