

## Teacher Profile

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### Academic qualifications

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Ph.D. (Synthetic Organic Chemistry)	University of Delhi	1993	Title of thesis: Synthesis of some new heterocyclic compounds containing pyrimidines
M.Sc. Chemistry	University of Delhi	1989	I division; Specialization in Organic Chemistry
B.Sc. (Hons.) Chemistry	Hindu College, University of Delhi	1987	I division

### Other Qualification

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Diploma in Bioinformatics (2003)

### Teacher Award

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Received Teacher Award from Government of NCT of Delhi, Directorate of Higher Education (2017-18)

### Classes Taught

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B.Sc.(H) Chemistry ; B.Sc.(programme) L.Sc. and P.Sc. ; B.Sc. (General) ; B.Sc.(H) Microbiology , Botany & Zoology ; Science & Life (Foundation Course) in FYUP to other disciplines

### Publications

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#### Books

1. **Comprehensive Practical Organic Chemistry**; (Publisher:- Universities Press (India) Ltd Distributed in India by Orient Longman Ltd.
2. **Organic synthesis special Techniques**; (Publisher:- Narosa Publishing house)
3. **Alicyclic Chemistry**; Publisher-Ane Books Pvt.Ltd.)
4. **Laboratory techniques in Organic Chemistry**; (Publisher- I.K.International)
5. **Intermediates for Organic Synthesis**; (Publisher- I.K.International)

### Research Articles

1. Monitoring of Heavy Metal Contamination in Dietary vegetables, *International Journal of Ecology and Environment Sciences*, **2022**, 48,609, ISSN 0377-015X.
2. Fabrication of Low Cost , Natural Dye-sensitized Solar Cells (DSSCs), *International Journal of Innovative Research in Technology*, **2022**, 9,415, ISSN No. 2349-6002.
3. Possible Interaction of Water-Soluble Vitamins with Nitric Oxide and its Significance – Evidence from Reversed phase – High Pressure Liquid Chromatography (RP-HPLC), *International Journal of Innovative Research in Technology*, **2022**, 9, 547, ISSN No. 2349-6002.
4. A convenient synthesis of some new Pyrano[2,3-d]pyrimidines, *Org.prep.proc.Int.*,Vol.24,No.6,1992,pp.675, ISSN:0030-4948.
5. A convenient one pot synthesis of 5-aryl-7-methyl-1,2,3,4-tetrahydro-2,4-dioxo-5H-pyrano[2,3-d]pyrimidines, *Indian J. of Chemistry*,Vol 32B,1993,pp.963-964.ISSN:0376-4699.
6. A convenient one pot synthesis of 1,3-dimethyl-2,4-dioxo-1,2,3,4-tetrahydro-10H-pyrimidines[5,4-b][1,4]benzothiazines, *Indian J. of Chemistry*,vol.33B,1994,pp.65-66, ISSN:0376-4699.
7. Synthesis of some 1,3-diaryl-5-[2,3-dihydro-benzothiazol-2-ylidene]-2-thiobarbituric acids, *Indian J. Chem*,vol.33 B,1994,pp.1089-1090, ISSN:0376-4699.
8. Synthesis of some new C5-substituted pyrimidine derivatives as potential insecticides, *Indian J. Chem*,vol.35B,1996,pp.976-979, ISSN:0376-4699.
9. Synthesis of 3-(1,3-diaryl-4,6-dioxo-2-thioxoperhydropyrimidin-5-yl)-2H-[1,4]benzothiazines, *J.Chem.Research(S)*,1997,pp.16-17,ISSN: 1747-5198.
10. A convenient synthesis of some new pyrano[2,3-d]pyrimidines, *Indian J.Chem*,vol.35B,1205(1996), ISSN:0376-4699.
11. Synthesis of some new 2-(pyrazol-1-yl)-4-(pyrimidine-5-yl)thiazol, *Indian J. Chem*,vol.36B,920(1997), ISSN:0376-4699

### Review article

1. Chemistry of Thiobarbituric Acid, *Proc.Indian national Sci.Acad.*,62A,No.5,1996,pp 369-413,ISSN:0370-0046

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### Contributions to corporate life at college Level

- IQAC: Coordinator (April2023- Till date)
- NAAC Steering Committee (Cycle 2): Convener (2020-2022)
- NAAC Steering Committee (cycle 1): Member (2014-2016)
- NIRF: Member (2017-2019)
- Bursar: (2019-2021)
- Admission Committee: Convener (2022-2023)
- Student Union: Advisor (2010-2013)
- Main Time Table Committee: Science Coordinator (2013-2019)
- Internal Assessment Committee: Convener (2019-2021)

- Foundation Course Committee: Co-Convener Science (2014-2015)
- Building Maintenance Committee: Convener (2014-2015)
- B.Sc.(P)Physical Sciences: Coordinator (2008-2010)
- Deputy Superintendent of Annual Exam: 1999-2000
- Study Leave Committee : Member (2021- Till date)
- Purchase Committee : Convener (2019-2021)
- Provident Fund Committee : Member (2019-2021)
- Building Maintenance and Infrastructure Committee: Member (2019-2021)
- Building Maintenance Committee : Member (2013-2014)
- Canteen Committee : Member (2010-2013)
- Placement and Higher Education Committee : Member (2010-2011)
- Auditorium Committee : Member (2008-2009)
- Admission Committee : OBC admissions (2008)
- Prospectus Committee : Member (2005-2007)

#### **Corporate Participation at the Departmental Level**

- Teacher -In-charge (2006-2008)
- Admission Committee: Member (2006-2008)
- Library Committee member
- Involved in purchase and stock checking of chemicals and apparatus
- Lab maintenance committee member. I took the initiative to start paperless work in our lab e.g. transfer the records of apparatus and chemicals in store , issue of these to students and balance to computer.
- Time Table Committee member
- Superintendent of Annual Practical Examinations (2006-07 &2007-08)
- Conducted Practical of IGNOU
- Organized student's visits to various educational institutes and R&D of pharmaceutical companies
- Organized an add-on course on 'Forensic Science

#### **Contribution to University level activities: Examination, Evaluation, Syllabus revision**

- Member of BRS
- Member of the committee for formulating courses under undergraduate curriculum Framework (UGCF 2022) based on NEP 2020 (Involved in designing DSC,DSE ,GE and SEC papers)

- Involved in designing course content of Discipline Course I, Discipline Course II and Applied Course of FYUP (2013)
- From time to time I take the initiative to bring improvement in the existing syllabus and discuss the same in the meetings organized by the parent department for all colleges.
- Involved in preparation of question bank of different topics of organic chemistry in semester system.
- Question paper setting of different papers of Organic Chemistry of B.Sc.(H) Chemistry and B.Sc. (Programme)
- Involved in Answer script evaluation work

### Seminars / Workshop organized

- Convener of the **Webinar on CUET** (2022)
- Convener of the National Conference “**Combating Industrial Pollution for Sustainable Environment – A Fusion of Industrial and Scientific Efforts**” sponsored by ICSSR and SERB (DST) (September 2016)
- Member of the organising committee of **IUPAC Sponsored second International symposium on Green Sustainable Chemistry** (Jan 2006)
- Member of the organising committee of **Chemistry, Environment and you- Challenges for the Future** (2007)
- Member of the workshop to train the laboratory staff in the maintenance of commonly used instruments (August- 2013)

### Workshops attended

- Workshop on “**Foldscope**” organized by DBT and Prakash Lab at Stanford University, USA in Gargi College (December 2015)
- Workshop on **Introduction to Bioinformatics**, DBT, Ministry of Science and Technology
- ICT workshop “ **Role of e-technology in Academic Research and Teaching-Learning Interactions**” organized by ILLI, Delhi University (December-2011)
- Interdisciplinary Seminar on **New Frontiers in Biotechnology**, DBT
- Winter School on **Magnetic Resonance: Recent Advances**. This workshop was organized by DU in association with TIFR (Tata Institute for fundamental research, Mumbai) and only few participants were allowed to attend the workshop

### Research Projects with Students

1. Removal of toxic textile dyes from water using benign aq. Biphasic systems: A case study of the dupatta dyeing industries of the NCR (2011)
2. Ecofriendly methods of removal of textile dyes from effluents.

3. Extraction and Use of Natural Dyes obtained from waste material: A move towards Green Textiles.
  4. “Monitoring of heavy metals contaminants in Dietary Vegetables” (2012)
  5. “Dye Sensitized Solar Cell” 2016.
  6. Synthesis of Natural dye from different flowers which are discarded as waste.
  7. Reduction of different functional groups present in organic compounds by using juice of Amla. Also tried reactions with Aloe vera.
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Audio-Visual lectures for **CEC programme of UGC** - Topic: Arenes and Aromaticity; Six episodes

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### **Work in Collaboration with other Institutes**

1. Learning from nature: “A Green chemistry involving the Use of Extract of Amblica as reducing agents instead of chemicals”.
  - It was a joint project with **Dr. Sunita Dhingra of Miranda House**
  - This work was presented as Poster in 11<sup>th</sup> Green Chemistry & Engineering Conference , Washington DC, 2006
2. Possible Interaction of Water-Soluble Vitamins with Nitric Oxide and its Significance – Evidence from Reversed phase – High Pressure Liquid Chromatography (RP-HPLC), International Journal of Innovative Research in Technology, 2022, 9, 547, ISSN No. 2349-6002
  - **Joint work with Department of Botany, Delhi University**
3. Conducted Add-on course “Forensic Science” in collaboration with Directorate of Forensic Science, Govt. of India. Around 75 students attended the course and also arranged their visit to Forensic Science Centre, Chandigarh. Afterwards many students selected Forensic Science as their career option.
  - **Joint work with Directorate of Forensic Science**

### **Industrial Visits Organized**

**Central Forensic Science Laboratory**, Chandigarh; **UFLEX**, Noida; **Dabur**; **Dhampur Sugar Mill**; Taragram

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### **Fellowship & Membership**

- Junior research Fellowship (CSIR) from 1990-92
- Senior research fellowship (CSIR) from 1992-94.
- Life member of Indian Science congress Association. Kolkata
- Life member Indian Society of Analytical Scientists. Delhi Chapter
- Member of Green Chemistry Network Center. Delhi

