




Faculty Details for College Web-site

**Hansraj College,
University of Delhi,
Delhi-110036**



Title	Dr.	First Name	Taruna	Last Name	Singh	Photograph
Designation		Assistant Professor (Chemistry)				
Address		Department of Chemistry, Hansraj College, University of Delhi, Delhi-110054				
Phone No Office		011 – 27667548				
Residence		-				
Mobile		9911309555				
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Educational Qualifications: M.Sc., Ph.D						
Degree		Institution			Year	
B.Sc. (H) Chemistry		University of Delhi			2004	
M.Sc. (Chemistry)		University of Delhi			2006 Specialization: Inorganic Chemistry	
Ph.D (Chemistry)		University of Delhi			2011 Thesis Title: “ Synthesis, Characterization and Reactivity Studies of Ruthenium (II) and Palladium (II) complexes of <i>N,N',N''</i> -Triarylguani dines and <i>N,N'</i> -Diaryl thiourea”.	

Career Profile
<p>Adhoc Experience: Hansraj College, January 2012-December 2014. Permanent: 15-12-2014 to Till date, Assistant Professor , Department of Chemistry, HansRaj College, University of Delhi, Delhi</p>
Administrative Assignments
<ol style="list-style-type: none"> 1. Canteen Committee (Member) 2015-16. 2. Departmental Instrumentation Committee (Member) 2015-17. 3. Life science society (Convener), 2016-17. 4. Haritima Society (Member) 2016-17. 5. Canteen Committee (Member) 2016-17. 6. Suprintendant, Language exams conducted in Hansraj college May-June 2017-18. 7. Deputy Suprintendant, Theory exams conducted in Hansraj college May-June 2017-18. 8. Departmental Chemical Society (Member) 2017-18. 9. Departmental Chemical Society (Convener) 2018-19. 10. Treasurer, Alumni Association Hansraj College March 2018-2021. 11. Departmental Chemical Society (Member) 2019-20. 12. Departmental Instruments Committee (Member) 2019-20. 13. Women Development Cell (Member) 2021-2022.
Areas of Interest / Specialization
Inorganic Chemistry
Subjects Taught
<ol style="list-style-type: none"> 1. Inorganic Chemistry 2. Bio-Inorganic Chemistry 3. Environmental Science 4. Inorganic Materials
Publications Profile
<p>Research Publications (International Journals)</p> <ol style="list-style-type: none"> 1. Ruthenium half sandwich complexes ligated by monoanionic <i>N,N',N''</i>-triaryl guanidines; synthesis, structure, solution behavior and reactivity studies. Taruna Singh, Ramkishan, N. Thirupathi, M. Nethaji, <i>Inorg. Chem.</i> 2012, <i>51</i>, 157-169.(Print Edition ISSN: 0020-1669, Web Edition ISSN: 1520-510X, DOI: 10.1021/ic201343w, IF:4.593) 2. Structural Aspects, Biological and Nonlinear Optical Response of New N, N'-Di(2-tolyl) Formamidinium Tosylate. Ramkishan, Taruna Singh, Sandeep Garg, N. Vijayan, Rustam Singh, Yogesh Kumar, <i>Adv. Chem. Lett.</i> 2013, <i>1</i>(2), 1-6. (ISSN: 2326-747X (Print); EISSN: 2326-7488 (Online), DOI: 10.1166/acl.2013.1025). 3. Entry of chiral phthalimides with significant second order nonlinear optical and piezoelectric properties. Anil K. Singh, Ram Kishan, N. Vijayan, V.

Balachandran, Taruna Singh, Hemandra K. Tiwari, Brajendra K. Singh, *RSC Adv.* 2013, 3, 14750-14756.(DOI: 10.1039/C3RA41089G, ISSN: 2046-2069 IF: 2.562(Partial)

4. Hydroxyethylamine based small molecules as inhibitors of BACE-1. Amit Kumar Gautam, Taruna Singh, Sonal Bhatnagar, Reeta Kumari and Rishi Pal Singh, *J Integr Sci Technol*, 2014,2, 1, 5-8. (ISSN 2321-4635).
5. Functionalized organic frameworks explored as second order NLO agents. Anil k Singha, Volodymyr V Medvediev, Oleg V Shishkin, Vijay Bahadura, Taruna Singh, Brajendra k K Singh, N Vijayan, V Balachandran and Nikolay Yu Gorobets. *J. Chem. Sci.* Vol. 128, No. 2, February 2016, pp. 297–309.(IF: 1.406 ISSN: 0974-3626).
6. Solution behavior of half sandwich ruthenium(II) complexes ligated by sym N,N'-diarylthiourea: Structural aspects and temperature dependent NMR. Taruna Singh , Ram Kishan and Pramod Kumar. *J. Mol. Struct.* 1267 (2022) 133575. (DOI: <https://doi.org/10.1016/j.molstruc.2022.133575>)

Chapters Published

1. Modifications and Applications of Chitosan-Based Nanocomposites in Orthopaedics and Dentistry. Taruna Singh, Parul Pant and Sarthak kaushik

Contribution in Conferences /Symposia/Seminars/Workshops:

Organized Seminar

1. Served as Member, Advisory Committee at National Conference on New Frontiers In Biosensing organized by Department of Chemistry, Hansraj College, University of Delhi held on 3rd April 2021.
- 2.
3. Served as Organizing Secretary in National Seminar on "Environment and Sustainability in The Third World" organized by Department of Chemistry & IQAC, Hansraj College, University of Delhi held on 28th February 2020.
4. Served as Organizing Secretary in Ist International Conference on Integrative Chemistry, Biology and Translational Medicine held on 25-26 February 2019, organized by Department of Chemistry, Hansraj College, University of Delhi.
5. Served as an Organizer in one day workshop on “Chemistry laboratory working skills and safety Education” organized by Department of Chemistry, Hansraj College, University of Delhi on 17 July 2017.
6. Served as an organizing committee member in the National seminar on "Role of Analytical Sciences in sustainable development" organized by Department of Chemistry, Hans Raj

College University of Delhi, in collaboration with Indian Society of Analytical Scientists-Delhi Chapter (ISAS-DC) Petrotech Society of India, from March 4-5, **2016**.

7. Served as the organizing committee member in Indo-Portuguese workshop on Emerging trends of nanotechnology in chemistry and biology, jointly Organized by Department of Chemistry Hansraj College and Deshbandhu College, University of Delhi, India. February 12-13, **2016**.
8. Served as the organizing committee member in DBT sponsored workshop on Relevance of Experimental Chemistry to Biotechnology organized by Hansraj College on March 12-13, 2014.
9. Served as the organizing committee member in **INSPIRE** Internship Program-2012 organized by Hansraj College on December 17-21, 2012.

Attended symposia

- Attended One Day Webinar “Teachers and Technology: The Road Ahead” (25th April, 2020) organized by Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi.
- Attended one day webinar on “Strengthening the immune system with Naturopathy” held on May 6, 2020 organized by Department of Botany and IQAC, Hansraj College, University of Delhi.
- Attended National workshop on Technology Outreach as an Enabler for Inclusive and Sustainable Development on 10-12th August **2019** at IIT Delhi.
- Attended National Seminar on “Recent innovations in Chemical Science and Environment Technology”, Organized by Sri Aurobindo College, University of Delhi, from March 16-3-4, **2017**.
- Attended National Workshop on “Role of scientific and technical terminology in Higher Education”, Organized by Hansraj College, University of Delhi, and Commission for Scientific and Technical Terminology, Ministry of Human resource and Development, Govt. of India, from July 23-24, **2015**.
- Attended International conference on “**Emerging Trends of Nanotechnology in Drug Discovery**” organized by Sri Venkateswara College, University of Delhi and Department

of Biochemistry, UDSC India in association with CQM, University of Madiera, Portugal held on 26-27 May, 2014

- National Seminar “**Chemistry in interdisciplinary Applications**” held on March 19th, 2013 at Hans Raj College, University of Delhi.
- National Symposium on **Chemistry and Environment**, held on March 22-23, 2013 at Department of Chemistry, Deen Dayal Upadhyaya College, University of Delhi.
- **Inspire Internship Program-2012**, DST held on December 17-21.
- **3rd Asian Conference on Coordination Chemistry** held on October 17-20, 2011 at Indian habitat centre, New Delhi.
- National Workshop on “**Role of Analytical Techniques in Industry**” held on January 21-22, 2010 at Conference Center and Kirori Mal College, University of Delhi.
- National Seminar on “Chemistry Education and Research in 21st Century” held on February 5-6, 2009 at Dayal Singh College, University of Delhi.
- **9th CRSI National Symposium in Chemistry**, Department of Chemistry, University of Delhi, Delhi-07, India. February, (1st to 4th 2007).
- National Workshop on “**Recent Trends in Analytical Techniques**”, held on February 14-15, 2007 at Department of Chemistry, Deen Dayal Upadhyaya College, University of Delhi.
- **Workshop on green chemistry education**, held on March 10, 2007 at Department of Chemistry, University of Delhi.
- National Symposium on **Chemistry in sustainable development**, Hans Raj College, University of Delhi (December 18-19 2006).

Association With Professional Bodies

1. Life member of “**Indian Society of Analytical Scientists**” (ISAS), Analytical Chemistry Division, BARC, Mumbai-400085, Delhi Chapter.

Other Activities

Orientation/Refresher Course/FDP

1. Attended one month “**Orientation course** ” organized by **HRDC, JNU, Delhi**, from 24th August to 19th September **2015**.
2. Attended Online “**Refresher Course in Chemistry**” for Higher Education Faculty offered by Offered by Sri Guru Tegh Bahadur Khalsa College, Delhi. (November 2018-February 2019, **examination held on 30.03.2019**).
3. Attended Online “**Refresher Course in Chemistry**” for Higher Education Faculty offered by Offered by Sri Guru Tegh Bahadur Khalsa College, Delhi. (October 2019-January 2020, **examination held on 16.02.2020**).
4. Two Weeks **Faculty Development Programme** on "ADVANCED CONCEPTS FOR DEVELOPING MOOCS" from July 02 - July 17, 2020 organized by Teaching learning centre, Ramanujan College, University of Delhi.
5. Attended online one week Faculty Development Program, Development of MOOCs, e-Content and Teacher’s e-Kit in Four Quadrant (08th December to 14th December 2022) Format organized by Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of Ministry of Education.
6. Attended One Week (Online) International Faculty Development Programme on ““Modern scientific technologies – Ways to enhance research skills” (26th December– 31 st December, 2022) organised by Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi in collaboration with K.R. Mangalam University, Gurugram & Motilal Nehru College, University of Delhi.

Resource Person In Add-On Course

7. Actively Participated as a “**Resource Person**” in one day workshop on “Chemistry laboratory working skills and safety Education” organized by Department of Chemistry, Hansraj College, University of Delhi on 17 July 2017.
8. Actively Participated as a “**Resource Person**” in the Workshop on “Design and Development of Low cost, Light weight and Environment friendly boxes for kit items” held from 11 to 13 February, 2014 in NCERT, New Delhi.
9. Actively Participated as a “**Resource Person**” in the “**INSPIRE Internship Programme-2012**,” organised by Department of Science and Technology (DST), Government of India and Hans Raj College, University of Delhi, from December 17-21st, **2012**.

Editorial Board/Edited Proceedings

10. Member of Editorial Board, **Journal of Integrated Science and Technology**, 2015-2017 (ISSN: 2321 – 4635)

11. Edited the proceedings for **Indo-Portuguese workshop** on Emerging trends Of nanotechnology in chemistry and biology, jointly Organized by Department of Chemistry Hansraj College and Deshbandhu College, University of Delhi, India. February 12th-13th **2016**, published by *Journal of Materials Nanoscience*, **2016**, 3(1), S15, ISSN: 2394-0867.

SKILLS

- Operated CHNSO Analyser Instrument for 6 months in University Science Instrumentation Centre, University of Delhi.
- Performed reactions in inert atmosphere using schlenk line.
- Expertise in handling reagents like *n*-BuLi.
- Can solve single crystal X-Ray diffraction data using wingx and shelx-L software.
- Analysis of NMR data (including Variable temperature data).
- **Software Skills:** Chemdraw, Scifinder, MS-Excel, Word, PowerPoint, ORIGIN, Chemdraw Ultra, WinGx, Encifer, Diamond, Mercury, Olex, Shelx-L

(Dr. Taruna Singh)
Signature of Faculty Member