


Name	<b>Dr. KIRANDEEP KAUR</b>		<b>Photograph</b>
Designation	Assistant Professor		
Date of Birth	08.10.1984 (Eight October Nineteen Eighty-Four)		
Office Address	Department of Chemistry, Khalsa College, ASR		
Residence	22-F, Sandhu Colony, A-Block, Chheharta		
Phone No.	7042669572		
Email	<a href="mailto:dr.kirandeepkaur@khalsacollege.edu.in">dr.kirandeepkaur@khalsacollege.edu.in</a>		
<b>Educational Qualifications</b>			
<b>Degree</b>	<b>Institution</b>	<b>Year</b>	
B.Sc. (Hons.) School Chemistry	Department of Chemistry, G.N.D.U., Amritsar	2006	
M.Sc. (Hons.) School Chemistry	Department of Chemistry, G.N.D.U., Amritsar	2008	
Ph.D. (Green Chemistry)	Department of Chemistry, G.N.D.U., Amritsar	2014	
Dr. D.S. Kothari Post-Doctoral Fellowship	Department of Chemistry, University of Delhi,	2016	
Any Other	<b>Qualified UGC-NET (JRF) in 2008</b>		2008
<b>Career Profile</b>			
<b>Organisation</b>	<b>Designation and Duration</b>	<b>Role</b>	
Khalsa College Amritsar	Assistant Professor 2016- present	Teaching and Research	
Manav Rachna International University, Faridabad	Assistant Professor 2014-2015	Teaching and Research	
<b>Awards and Distinctions</b>			
<ol style="list-style-type: none"> <li>1. Awarded <b>Best Poster Presentation</b> in IV<sup>th</sup> National Seminar on “Recent Advances in Chemical Sciences” (RACS-IV) “Sustainable Chemistry” organized by Dunicliff Chemical Society, Khalsa College, Amritsar on 28 July, 2018.</li> <li>2. Awarded <b>Best Oral Presentation award</b> in <b>International Conference on Green Initiatives in Science and Technology</b> on January 15, 2015 organized by <b>Royal Society of London</b> in MRCE, Faridabad.</li> <li>3. Awarded <b>International Travel Grant</b> by DST India for attending 6<sup>th</sup> International Congress on Biocatalysis in September, 2-6, 2012 at <b>Hamburg, Germany</b>.</li> <li>4. Awarded a Research Fellowship from UGC India as <b>Senior Research Fellow (SRF)</b> (January 2011- January 2014).</li> <li>5. Awarded a Research Fellowship from UGC India as <b>Junior Research Fellow (JRF)</b> (January 2009- January 2011).</li> <li>6. <b>Harjit Singh Project Fellowship</b> from Department of Chemistry, Guru Nanak Dev University for doing research toward an advance degree (Ph.D.) (August 2008- December 2008).</li> </ol>			
<b>Research Projects</b>			
<b>Funding Agency</b>	<b>Title of the Project</b>	<b>Period and Grant</b>	
<b>UGC sponsored Dr. D.S. Kothari Project (2015)</b>	Application of chiral catalysts in the development of flavanoids and similar biologically active molecules	1 year, 100000+Stipend	
<b>Khalsa College sponsored Seed Money Project (2023)</b>	Evaluation of novel isoxazole and isothiazole derivatives as potential anticancer agents and antimicrobial agents	1 year, (36000)	

### Administrative Assignments

- Incharge, NCC Air Wing, Khalsa College Amritsar
- Incharge, Dunningcliff Chemical Society since 2021.
- Coordinator, ESPO-2022 & ESPO 2023
- Paper setting of M.Sc. & B.Sc. Exams of Kashmir University Member, Board of Studies, P.G. Department of Chemistry, Khalsa College Amritsar
- Reviewer in National Conference on Advances in Applied Sciences and Mathematics Organized by Department of Applied Science, CUIET, Chitkara University, Punjab held on 24-25 Sep. 2020.
- Reviewer in Bioorganic & Medicinal Chemistry, 2025
- Member, Model Display Committee in 52nd State Level, Science Seminar 2024-25 organized by NCERT and SCERT with DEO Amritsar.
- Member of Technical Committee in Festival of Science (VIGYAN UTSAV) organized by SPSTI and PSCST in collaboration with District Administration, Amritsar from 18-11-2024 to 20-11-2024 held at Khalsa College, Amritsar.
- Member of Poster Competition conduct committee for National Science Day-2025 on 28-03-2025 organized by Khalsa College, Amritsar with PSCST, Govt. of Punjab, Chandigarh, NCSTC and DST, Govt. of India.
- Member Board of Studies, Khalsa College Amritsar

### **Invited Positions:**

- Invited Talk in an International Conference on Recent Advances on Green and Sustainable Developments (ICRAGSD-2023) organized by Green Chemistry Network Centre Talwandi Sabo in collaboration with GCNC, Delhi University, DRDO (New Delhi), Bentham Science (UAE) & De Gruyter (Germany) (Department of Chemistry) held from 4-6 Sep. 2024
- Chairperson in Online Poster Presentation Session in ACS & RSC sponsored International conference on Integrative Chemical Science for Health & Environment, ICHE-2023 (Department of Chemistry), Delhi University in Collaboration with Augusta University, USA held from 06.10.23 to 08.10.23

Area of Interest/ Specialization	
Asymmetric Catalysis i.e. Organocatalysis & Biocatalysis	
Subjects Taught	
Undergraduate	Post Graduate
Organic Chemistry Molecular Spectroscopy Engineering Chemistry	Organic Spectroscopy Asymmetric Synthesis Heterocyclic Chemistry
Research Guidance	
<b>PhD Thesis/M.Phil.</b>	
M.Sc. (Dissertation): <b>25</b> (Completed) Ph.D. Enrolled: Nil	
Research Publications	
<b><u>Publication Profile</u></b>	
<ul style="list-style-type: none"> <li>• Publications: Total 14; International (13) + National (1)</li> <li>• Citation: 476; h index:10; i10-index:13</li> <li>• Book Published: 1</li> <li>Chapters in books: 1</li> </ul>	

### Papers in research Journals

- 1) Navneet Kaur, Mamta Bansal, Prabhjot Kaur, **Kirandeep Kaur**, Dr. Amit Awasthi, Satya Krishna Nippani, Sumanta Das and Abhishek Lodh . Mitigating Surface Water pollution with ZnO Nanoparticles: A Sustainable Strategy for Climate Resilience" *Frontiers in Environmental Science*, Accepted.
- 2) Navneet Kaur, Mamta Bansal, **Kirandeep Kaur**, Prabhjot Kaur. (2025) Evaluation of seasonal variations on surface water quality metrics in the slum areas of Tricity- Chandigarh, Mohali and Panchkula of Northern India. *Research Review International Journal of Multidisciplinary* |10(6) 113-129. <https://doi.org/10.31305/rrijm.2025.v10.n6.012>
- 3) Navneet Kaur, **Kirandeep Kaur**, Mamta Bansal, Ishu Sharma, Garima (2025) Exploring E. Coli and Coliform in water at slums and residential area of Tricity (Mohali, Panchkula and Chandigarh), *International Refereed Journal of Engineering and Science (IRJES)* 14:147-151. (IF-6.1) <https://www.irjes.com/Papers/vol14-issue2/1402147151.pdf>
- 4) Kaur, Sukhmeet, Jasneet Kaur, **Kirandeep Kaur**, Talwinder Kaur, Amit Anand, Harmanjeet Kaur, and Rajesh Kumari Manhas (2024) Investigating the antibacterial potential of novel N-Boc isatin Schiff bases: Combining synthesis with in-vitro and in-silico studies. *Journal of Molecular Structure* 1314 (2024): 138731. (IF-3.81) DOI: [10.1016/j.molstruc.2024.138731](https://doi.org/10.1016/j.molstruc.2024.138731)
- 5) Kaur, Sukhmeet, Jasneet Kaur, **Kirandeep Kaur**, Raghav Mahajan, Jyotisina, and Kulwinder Kaur (2024). Evaluation of 3, 3'-Disubstituted Oxindoles Derivatives as a Potential Anti-Cancer Tyrosine Kinase Inhibitors-molecular Docking and ADME Studies. *Current Indian Science* 2, 1: e2210299X310595. (IF-1.0) [10.2174/012210299x310595240626104426](https://doi.org/10.2174/012210299x310595240626104426)
- 6) Kaur, Jasneet, Sukhmeet Kaur, and **Kirandeep Kaur** (2024) Aldol Insights: The Route to Chiral Synthesis of 3-Substituted 3-Hydroxy-2-Oxindoles. *Chemistry Select* 9, 10, e202305181. (IF-1.9) [10.1002/slct.202305181](https://doi.org/10.1002/slct.202305181)
- 7) Kaur, Sukhmeet, Jasneet Kaur, Amit Anand, **Kirandeep Kaur**, and Vishal Choudhary (2024). "Chalcones: effective agents for fighting cancer across multiple cell lines." *Chemistry Select*, 9, 9, e202304546 (IF-1.9) [10.1002/slct.202304546](https://doi.org/10.1002/slct.202304546)
- 8) Punita Tiwari, **Kirandeep Kaur**, Kuljit Kaur, Seema (2023) In Silico ADMET studies of Pyrimidine based antimalarial drugs. *Current Reports on Science and Technology (CRST)*
- 9) Photocatalytic degradation of organic pollutants in water using ZnO nanomaterials. Navneet Kaur, **Kirandeep Kaur**, Mamta Bansal, Punita Tiwari *Current Reports on Science and Technology (CRST)* 2023, Vol-03, Issue-01, 88-103.
- 10) **Kirandeep Kaur**, Swapandeep Singh Chimni, Harvinder Singh Saini, Bhupinder Singh Chadha (2015) *Pseudomonas gessardii* growing cells as a new biocatalyst for asymmetric synthesis of  $\alpha$ - bromohydrins. *Biocatalysis and Agricultural Biotechnology*, 4, 49–54. (IF- 3.8) <https://doi.org/10.1016/j.bcab.2014.10.004>
- 11) Swapandeep Singh Chimni, **Kirandeep Kaur**, Neeraj Bala. (2013) Highly enantioselective kinetic resolution of trans-2-(phenylthio)cyclohexanol derivatives by immobilized *Candida antarctica* B lipase. *Journal of Molecular Catalysis B: Enzymatic*, 96, 67– 74. (IF- 1.74) <https://doi.org/10.1016/j.molcatb.2013.06.006>
- 12) Neeraj Bala, Kirandeep Kaur, Swapandeep Singh Chimni, Harvinder Singh Saini and Shamsher Singh Kanwar. Bioresolution of benzyl glycidyl ether using whole cells of *Bacillus alcalophilus*. (2011) *J. Basic Microbiol.* 52, 383-9. (IF-3.5) DOI: [10.1002/jobm.201100204](https://doi.org/10.1002/jobm.201100204)
- 13) Pankaj Chauhan, Kirandeep Kaur, Neeraj Bala, Vikas Kumar, Swapandeep Singh Chimni 2011 Catalyst-free and solventless Hantzsch-ester mediated reduction of nitroolefins at elevated temperature. *Indian Journal of Chemistry* 50B, 304. (IF-0.546) <https://nopr.niscpr.res.in/bitstream/123456789/11181/1/IJCB%2050B%283%29%20304-309.pdf>
- 14) Kirandeep Kaur (2010) Hexafluoroacetone: An Appealing Key Player in Organic Chemistry., *Synlett*, , 2363-2364. (IF-1.7) DOI: [10.1055/s-0030-1258051](https://doi.org/10.1055/s-0030-1258051)

### Chapters in Books/ Proceedings

#### **Books Published:**

- 1) Book "Fundamentals of Chemistry Volume I" by UVW International Publication House. May 2022.

### Conferences Attended

1. Presented Oral presentation "Organocatalytic synthesis of medicinally important isatin Derivatives." in 28<sup>th</sup> Punjab Science Congress organized by Faculty of Sciences, Khalsa College Amritsar.
2. Organized and presented a poster in the XI National Seminar (Online) on "Recent Advances in Chemical Sciences" in (RACS-XI) held on 04-04-2025 in the Department of Chemistry, Khalsa College, Amritsar.
3. Organized and presented a poster in X National seminar on "Recent Advances in Chemical Sciences" (RACS-X "Molecular Engineering and Catalysis" organized by Dunicliff Chemical Society, Khalsa College, Amritsar on April 04,2024.
4. Organized and presented a poster in IX National seminar on "Recent Advances in Chemical Sciences" (RACS-IX) "Medicinal and Bioorganic Chemistry" organized by Dunicliff Chemical Society, Khalsa College, Amritsar on Jan. 19, 2023.
5. Organized and presented a poster in VIII National seminar on "Recent Advances in Chemical Sciences" (RACS-VIII) "Sustainable chemistry" organized by Dunicliff Chemical Society, Khalsa College, Amritsar on March 11, 2022.
6. Organized and presented a poster in the VII National Seminar (Online) on "Recent Advances in Chemical Sciences" (RACS-VII) "Green Catalysis:An Effective Approach for productive Synthesis" held on 08-04-2021 to 09-04-2021 in the Department of Chemistry, Khalsa College, Amritsar.
7. Organized UGC Sponsored National Seminar on Recent Advances in Chemical Sciences (RACS-VI) on the theme of Material Chemistry on 26 February, 2020.
8. Organized and presented a poster in Vth National Seminar on Recent Advances in Chemical Sciences (RACS-V) by Chem. Dept. Khalsa College, Asr on 30 March, 2019.
9. Organized and presented a poster in IV National seminar on "Recent Advances in Chemical Sciences" (RACS-IV) "sustainable chemistry" organized by Dunicliff Chemical Society, Khalsa College, Amritsar on 28 July, 2018.
10. Organized and participated in the 3<sup>rd</sup> National Seminar on "Recent Advances in Chemical Sciences" in (RACS-III) held on 08-04-2017 in the Department of Chemistry, Khalsa College, Amritsar.
11. Organized and participated in the 2<sup>nd</sup> National Seminar on "Recent Advances in Chemical Sciences", (RACS-II) on "Supramolecular Developments" held on April 02, **2016** in the Department of Chemistry, Khalsa College, Amritsar.
12. Poster presentation on NMR interpretations in biotransformation of phenacyl bromides at 21st Conference of National Magnetic Resonance Society (India) on 6-9 March, **2015** in Guru Nanak Dev University, **Amritsar**.
13. Attended 1<sup>st</sup> National Seminar on "Recent Advances in Chemical Sciences" on Feb. 07, **2015** at Khalsa College, **Amritsar**.
14. Oral presentation on whole cell catalyzed bioreduction of 3-nitrophenacyl bromide with optimized culture conditions at International Conference on Green Initiatives in Science and Technology on January 15, **2015** in MRCE, **Faridabad**.
15. Poster presentation on kinetic resolution of glycidyl ethers by recombinant epoxide hydrolase SGEH at National Symposium on Chemistry in 21<sup>st</sup> Century at Guru Nanak Dev University, **Amritsar**, February 28-29, **2014**.
16. Poster presentation on Lipase mediated highly enantioselective kinetic resolution of  $\beta$ -hydroxysulfides by Kirandeep Kaur, 6th International Congress on Biocatalysis held from September 2-6, **2012**, in **Hamburg, Germany**.
17. Poster presentation on Highly selective bioreduction of phenacyl bromides by bacterial whole cells by Kirandeep Kaur, 6th International Congress on Biocatalysis held from September 2-6, **2012**, in **Hamburg, Germany**.
18. Abstracts were selected for oral presentation in 15<sup>th</sup> International congress on catalysis in Munich **Germany** and American Chemical Society annual meeting in **San Diego, USA**.

19. Poster presentation on Kinetic resolution of trans-2-(phenylthio) cyclohexanols by CAL-B at “Mid- Year Symposium of the Chemical Research Society of India (CRSI) at University of **Jammu**, India, September 22-25, **2011**.
20. Poster presentation on Biocatalytic Approach Towards  $\alpha$ -Functionalized Chiral Alcohols in “7<sup>th</sup> Junior National Organic Symposium Trust Conference (J-NOST)” at IISER **Mohali**, India December 15-18, **2011**
21. Poster presentation on Asymmetric reduction of substituted acetophenones with bacterial whole cells in National Symposium on Chemistry in 21st Century at Guru Nanak Dev University, **Amritsar**, December 23-24, **2011**.
22. Participated in 3<sup>rd</sup> Bruker pre-NMRS symposium organized at Guru Nanak Dev University, **Amritsar-2011**.
23. Oral presentation on Microwave assisted synthesis in water in “3<sup>rd</sup> Junior National Organic Symposium Trust Conference (J-NOST)” at Department of Chemistry, Guru Nanak Dev University, **Amritsar**, India, November 15-18, **2007**.

### **Workshops/FDPs:**

- Participated in the Faculty Development Programme on “International Patent Search and Filing” Under the aegis of Punjab State Council for Science and Technology on 08-02-2025 held at Khalsa College, Amritsar.
- Participated in IP Awareness/Training program under NIPAM on 19-03-2024 organized by Intellectual Property Office, India.
- Attended the seven-day (January 2-9, 2023) Faculty Development Programme, FDP (IQAC) held in Khalsa College, Amritsar.
- UGC Sponsored online refresher course in Basic and Applied Sciences (Pharma, Health Sciences and Sports Sciences) held from 24.12.2021 to 6.01.2022
- Participated in IP Awareness/Training program under NIPAM on 25-07-2022 organized by Intellectual Property Office, India.
- Participated in Five Days National Workshop on Radiochemistry and Applications of Radioisotopes on May 2-6, 2022 jointly conducted by DAE-BRNS, IANCAS and PG Department of Physics, Khalsa College, Amritsar.
- Participated in One Day faculty Enrichment Programme under UGC-CPE phase III scheme on 15-04-2022 organized by IQAC of Khalsa College, Amritsar.
- 3 days Cloud Based Hands on workshop on topic “Computational Structure Based & Ligand Based Drug design and quantum Mechanics” co organized by Schrodinger and Khalsa College Amritsar on 18-20 Oct 2021.
- Attended the seven-day Faculty Development Programme by IQAC of Khalsa College Amritsar from 6th August to 13th August, 2021
- Attended the seven-day Faculty Development Programme by IQAC of Khalsa College Amritsar from 17.4.2021 to 24.4.2021
- 4-week Induction/orientation Programme for “Faculty in universities/colleges/Institutes of higher education” by TLC Ramanujan College, University of Delhi under PMMMNMTT, MHRD New Delhi from June 26 to July 24, 2020
- Attended the seven-day (July 22-28, 2020) Faculty Development Programme, FDP (Sponsored by UGC-CPE, New Delhi) held in Khalsa College, Amritsar.
- One day Faculty Development Programme under UGC-CPE Phase-III, on “Promoting Scientific Temper in Education” organized by Internal quality assurance Cell, Khalsa College Amritsar 7th March, 2020.
- Participated in One Day faculty Enrichment Programme under UGC-CPE phase III scheme on 29-02-2020 organized by IQAC of Khalsa College, Amritsar.
- Attended Faculty Development Program “Scientific Temperament Teaching on March 07, 2019 at Amritsar.
- Faculty Development Program “Language Proficiency in Teaching by from February 02, 2019 at Amritsar.

- Attended the seven-day (26-12-2018 to 01-01-2019) Faculty Development Programme, FDP (Sponsored by UGC-CPE, New Delhi) held in Khalsa College, Amritsar.
- Participated in National Seminar on “Female Foeticide: A Social Menace” sponsored by UGC on March 31, 2018 at Khalsa College Amritsar.
- Attended UGC sponsored Faculty Development Program from December 22-29, 2017 at Amritsar, Punjab.
- Attended GIAN (Global Initiative for Academic Networks) from August 6-10, 2017 at Guru Nanak Dev University, Amritsar
- Attended the seven-day (January 6-13, 2017) Faculty Development Programme, FDP (Sponsored by UGC-CPE, New Delhi) held in Khalsa College, Amritsar.
- Conducted Environmental Protection and Green Technology workshop at Manav Rachna International University, Faridabad, Haryana.
- Participated in Faculty Development Programme on “Promoting Quality of Academic Environment through Soft Skills “from December 15-24, 2014 at Faridabad, Haryana. Quality Workshop for Engineering Faculty on September 27, 2014 by Internal Quality Assurance Cell, Faridabad, Haryana.

#### **Associations with Professional Bodies**

Life Member of CRSI, India  
 Life Member of Indian Thermodynamic Society

#### **Curricular activities**

- i) An N.C.C. “CEE” certificate holder.
- ii) Done Certificate Course in French.
- iii) Won various prizes in debates, declamations, handwritings.
- iv) Best athlete in school and won prizes in relays, 100 meters and slow cycling

**Signatures**