CURRICULUM – VITAE

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Citizenship: Indian

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Scopus Id: 55812143100

Web of Science Researcher: IDAIB-4124-2022

Google Scholar: https://scholar.google.com/citations?user=5DqrxLIAAAAJ&hl=en

Research Area: *Ionic Liquids, Catalysis, Medicinal Chemistry, Cancer Research, Breast Cancer, Lung Cancer, Drug Discovery, Material Science*

Education:

Degree	Course	University	Year
Ph. D.	Chemistry	University of Delhi, Delhi	2019
M.Tech.	Chemical Synthesis and Process Technologies	University of Delhi, Delhi	2015
M.S.	Material Sciences	School of Materials Sciences, JAIST, Japan	2015
B.Sc. (Hons.)	Chemistry	Hindu College, University of Delhi, Delhi	2012

Research Experience:

- **SERB-TARE Fellow, IIT Delhi** December 2021- March 2025
- **Research Associate (R&D),** Sharp Mint Ltd. New Delhi December 2019 -August 2020
- **Research Assistant & Senior Research Fellowship (SRF)**, June 2015- November 2019
  Department of Chemistry, University of Delhi, Delhi, INDIA

- **Special Visiting Student,** School of Materials Science, JAIST, JAPAN — June 2017-August 2017
- **Minor Research Project**, Department of Chemistry, University of Delhi, New Delhi, INDIA — May 2013– July 2013
- **Minor Research Project**, Department of Chemistry, University of Delhi, New Delhi, INDIA — November 2012– Jan. 2013

Academic Experience:

- **Assistant Professor,** Department of Chemistry, SRM IST, Delhi NCR Campus, Modinagar, Uttar Pradesh, India- 201204 — November 2023 to Till Date
- **Adjunct Researcher,** Isfahan University of Technology, Islamic Republic of Iran — Jan. 2024- Dec. 2025
- **Associate Professor,** Department of Chemistry Maharaja Surajmal Brij University, Bharatpur — June 2023- November 2023
- **Assistant Professor,** Department of Chemistry Chandigarh University — February 2023- June 2023
- **Assistant Professor,** Department of Chemistry SGT University — September 2020 - February 2023
- **Guest Lecturer**, Department of Chemistry, KM College University of Delhi, Delhi, INDIA — January 2019- March -2019
- **Guest Lecturer**, Department of Chemistry, Sri Guru Teg Bahadur Khalsa College, University of Delhi, Delhi, INDIA — February 2016-Mar.2016
- **Laboratory Assistant (LA),** School of Materials Science, JAIST, JAPAN — January 2014 - Dec. 2014

Administrative Experience:

- **Deputy Dean (Research),** Maharaja Surajmal Brij University, Bharatpur — June 2023- November 2023
- **Deputy Proctor,** Maharaja Surajmal Brij University, Bharatpur — June 2023- November 2023
- **Associate Dean, Students' Welfare**, SGT University, Gurugram — May 2021- February-2023
- **NCC Caretaker officer**, SGT University, Gurugram — Oct. 2021 - February-20233
- **Member,** Sanrachna, SGT University, Gurugram — November 2020 - February-2023
- **Member,** Academic Associations, SGT University, Gurugram — December 2020 - February-2023

Guest Editor/ Editor/ Editorial Board Member/Reviewer

- **Section Editor (Special Issues)-*Current Medicinal Chemistry,*** Bentham Science Publishers
- **Academic Editor-** ***PLOS ONE***, Public Library of Science (PLOS)
- **Editorial Board Member-** ***Scientific Reports,*** Nature Portfolio
- **Editorial Board Member-** ***Discover Chemistry*****,** Springer Nature
- **Editorial Board Member-** ***Current Indian Science*****,** Bentham Science Publishers
- **Editorial Board Member-** ***Current Science, Engineering and Technology,*** Bentham Science Publishers
- **Editorial Board Member-** ***BMC Methods***, Springer Nature
- **Guest Editor-** ***Current Organic Synthesis***, Bentham Science Publishers
- **Guest Editor-** ***Current Organic Chemistry,*** Bentham Science Publishers
- **Guest Editor-** ***ChemistrySelect,*** Wiley-VCH
- **Guest Editor-** ***Asian Journal of Organic Chemistry,*** Wiley-VCH
- **Guest Editor-** ***Chemistry & Biodiversity,*** Wiley-VCH

Symposium /Seminars/ International Conferences/FDP Organized:

- **Organizing Secretary-** International Conference on Viksit Bharat 2047: Reaching the Unreached Through Chemical and Biological Sciences (VBCB-2025) from 18th-20th Febrauary, 2025 at the Department of Chemistry, SRM Institute of Science and Technology, Delhi-NCR Campus, Modinagar, Uttar Pradesh, India- 201204 (530 Registration)
- **Faculty Coordinator-** Two days Vigyan Sangam – A Science Colloquium, 15th -16th October 2024, at the Department of Chemistry, SRM Institute of Science and Technology, Delhi-NCR Campus, Modinagar, Uttar Pradesh, India- 201204
- **Coordinator-** Three Days Workshops on “Research and Funding: Proposal Writing Techniques”, 09th-11th May 2024, at the Department of Chemistry, SRM Institute of Science and Technology, Delhi-NCR Campus, Modinagar, Uttar Pradesh, India- 201204
- **Coordinator-** Online one-week Faculty Development Program “Research & Innovation: Proposed Writing Tools, Techniques And Funding”(11th – 16th March, 2024) organized by Department of Chemistry, SRM Institute of Science and Technology, Delhi-NCR

Campus in collaboration with Mahatma Hansraj Faculty Development Centre, Hansraj College, University of Delhi.

- **Member-** SYNERGY 2022, the Flagship Technology Festival on 23rd - 24th August 2022 Organised by SGT University, Gurugram
- **Coordinator-** Online one-week Faculty Development Program “Chemistry and Biology Interface for Scientific Transformations” 25th -30th July 2022 organized by SGT University, Gurugram in collaboration with Mahatma Hansraj Faculty Development Centre, Hansraj College, University of Delhi.
- **Member-** International Conference on "Gandhi's Concept of Education and National Education Policy (NEPA-2020): Ideas, Opportunities and Implementation" organized by SGT University, Gugurgam at Nehru Memorial Museum and Library, New Delhi on 20-21 July 2022
- **Convenor-** Online one-week FDP "Applied Chemistry: A Catalyst for Scientific Transformation”, 23rd August - 28th August 2021 at SGT University, Gurugram. (around 900 participants)
- **Co-Convenor-** Online workshop “Role of Technology and Some Specific Tools in Research”, 28th June- 3rd July 2021, at SGT University, Gurugram. (around 1700 participants)
- **Member-** Online workshop “Research Methodology-2021”, 22nd -23rd July, 2021 at SGT University, Gurugram
- **Member-** 6th World Congress on Nanomedical Sciences ISNSCON-2018 and Chemistry-Biology Interface Synergistic in New Frontiers (CBISNF-2019) 7-9th January 2019 Venue: Vigyan Bhawan
- **Convenor-** National Conference on “Thieme Chemistry: Science of Synthesis” at Department of Chemistry, University of Delhi, Delhi-110007, India held on September 28th, 2018
- **Member-** National Workshop on "Molecular Docking, Dynamics & Biologics Discovery" at Department of Chemistry, University of Delhi, Delhi-110007, India held on 9th -10th August 2018.

Honors / Awards / Scholarships:

- **Best Teacher Award:** Teacher’s Day 2024 at SRM Institute of Science and Technology,

Delhi-NCR Campus, Modinagar, Uttar Pradesh, India- 201204

- **ACS Best Poster Award**, 6th World Congress on Nanomedical Sciences ISNSCON-2018 and Chemistry-Biology Interface Synergistic in New Frontiers (CBISNF-2019) 7-9 th January 2019 Venue: Vigyan Bhawan
- **JASSO Scholarship 2017**, JAIST from June to August 2017, awarded by the Japanese Government.
- **Senior Research Fellowship,** Department of Chemistry, University of Delhi, Delhi, INDIA
- **International Exchange Fellowship:** JAIST from January to December 2014, awarded by the Japanese Government.
- **All India Rank 38th rank:** Lectureship (NET) in JOINT CSIR-UGC TEST Dec 2013
- **1st rank: entrance test in May 2013 for MS conducted by JAIST.**
- **All India Rank 271 rank** in IIT-JAM (Joint Admission Test for M.Sc) conducted by IIT Bombay in 2012
- **58TH** rank in the Entrance exam for M.Sc conducted by the University of Delhi in June 2012
- **Scholarship** awarded by Central sector scheme of scholarship for college and university students for the year 2010.
- **Scholarship** awarded by Central sector scheme of scholarship for college and university students for 2009.

Membership of Scientific/Academic Societies:

Member- Royal Society of Chemistry, London, U.K.

Member- American Chemical Society, Washington, D.C., United States

Advisor/ Supervisor of The Ph.D./ M.Sc. Thesis:

- Ph.D.: 4 (1 Awarded and 3), 3 (ongoing as co-supervisor)
- M.Sc.: 2 (completed)

Research Projects Sanctioned/ Undertaken/Submitted:

S.No.	Title	Funding Agency	Amount	Role	Status
1	Development of Ionic Liquid based electrochemical biosensor for breast cancer detection	Council of Science and Technology, U.P.(Govt. of U.P.)	Rs. 15,36,000	Co-PI	ongoing
2	Design & Development of 3rd Generation Ionic Liquid for Treatment of Breast Cancer	Council of Science and Technology, U.P.(Govt. of U.P.)	Rs. 13,86,000	PI	ongoing
3	Design and development of intercalation of ionic liquids into LDH structures for carbon dioxide fixation of organic molecules	Call for Selective Excellence Research Initiative (SERI), SRM IST	Rs. 3,10,000	Co-PI	ongoing
4	International Conference on Viksit Bharat 2047: Reaching the Unreached Through Chemical and Biological Sciences (VBCB-2025) 18th-20th Febrauary, 2025	ANRF, CSIR, ACS, RSC	Rs. 5,50,000	Organizing Secretary	completed
5	Development of Carbon Dioxide Fixation in the Organic Transformations using Solid Based Catalyst.	SERB-DST	Rs. 18,30,000	PI	Completed

Selected Publications:

S.No.	Authors & Title	Impact Factor (I.F)
1	Chinmay, Singh, S.; Yogita, Raza, J.; Rajni, Chauhan, V.; Bendi, A.; **Tomar, R.** Exploring the potential of cobalt ferrite and its nanocomposites in photocatalytic wastewater treatment. ***Coordination Chemistry Reviews***, **2025**, https://doi.org/10.1016/j.ccr.2025.217440	**23.4**
2.	Rajni, Taruna, Udayasri, K; Raghav, N.; Bendi, A.; **Tomar, R.** Revolutionizing wastewater treatment: Polymeric metal oxide nanocomposites for effective dye and heavy metal removal. ***Chemical Engineering Journal***, **2025**, https://doi.org/10.1016/j.cej.2025.161694	**13.2**

Publications:

2026

1. Chinmay, Singh, S.; Yogita, Raza, J.; Rajni, Chauhan, V.; Bendi, A.; **Tomar, R.** Exploring the potential of cobalt ferrite and its nanocomposites in photocatalytic wastewater treatment. ***Coordination Chemistry Reviews***, **2025**, https://doi.org/10.1016/j.ccr.2025.217440
2. Sonaxi, Singh, A,; Tomar, R.. Formyl-Benzyl-tagged Ionic Liquid Derivatives: Synthesis, Molecular Docking, and Dynamic Simulation Approach for Anticancer Drug Discovery. *J. Mol. Liq.* **2025** ***(Accepted)***

2025

3. Rajni, Taruna, Udayasri, K; Raghav, N.; Bendi, A.; **Tomar, R.** Revolutionizing wastewater treatment: Polymeric metal oxide nanocomposites for effective dye and heavy metal removal. *Chem. Eng. J.*, 2025, **(Accepted),**

https://doi.org/10.1016/j.cej.2025.161694

4. Sonaxi, Singh, A.; Afshari, M.; Tomar, R. Unveiling the Anticancer Potential of Formylbenzyl-N,N-dimethylmethanaminium-based Ionic Liquids via Cheminformatics approaches, *Journal of Chemistry*, **2025** ***(Accepted)***
5. Sangeeta; Sarkar, A.; Kumari, N; Maruthi, M.; **Tomar, R.** Procaine and salicylate-based ionic liquid: synthesis, in silico, in vitro, biophysical and biological studies. Ionics **2025**. **(Accepted)** https://doi.org/10.1007/s11581-025-06082-x
6. Sangeeta, Mehra, K.; Tomar, R. Advances in ionic liquids for Parkinson's disease: from detection to in-vitro analysis. *J. Mol. Liq.* **2025** ***(Accepted)***
7. Pandey, G.; Ahlawat, N.; Gupta, K.; Tomar, R. An Overview on Total Synthesis of Nor Furanocembranoids: Ineleganolide, Sinuchlomodin C, Scabrolide A, Scabrolide B, and Horiolide, ChemistrySelect, **2025** ***(Accepted)***
8. Sangeeta, Mehra, K.; Sarkar. A.; **Tomar, R**. Exploring Biophysical and Chemoinformatics Approaches for Interactions of Ionic Liquids with Hemoglobin, DNA, BSA, and HSA. *Chem. Biodiversity,* **2025, (Accepted)**
9. Yadav, G.; Megha,: Yadav, S.; **Tomar, R**. An Overview: Total Synthesis of Arborisidine, and Arbornamine, *Mol. Divers.* **2024,** doi: https://doi.org/10.1007/s11030-024-10978-7

2024

10. Shilpa, Sangeeta, Singh, L.; **Tomar, R**. Triethylamine-based Ionic Liquids as Anticancer Agent: Synthesis, Characterization, *In-Silico* and DFT Studies, *Indian Journal of Chemistry* **2024** ***(Accepted)***
11. Sangeeta; Sonaxi; Kumari, N; Maruthi, M.; Agrawal, S.; Sarkar, A.;**Tomar, R.** Biophysical insight into the binding mechanism of 1,3-benzodioxole-based lidocaine tagged ionic liquids with BSA: An in-silico, and spectroscopic studies *J. Mol. Liq.* **2024,** 398, 124284. doi: *https://doi.org/10.1016/j.molliq.2024.124284*
12. Yadav, S.; Sarkar, A.; **Tomar, R.** Unveiling the Potential: 1,3-Benzodioxole-based Ionic Liquids as Dynamic Players Against Cancer, *J. Mol. Liq.* **2024** ***(Accepted)***
13. Yadav, S.; Yadav, S.; Natarajan, M.; Pant, K. K.; **Tomar, R.** An Overview: Dinuclear Palladium Complexes for Organic Synthesis, *Catal. Sci. Technol.* **2024,** *doi:*

https://doi.org/10.1039/D4CY00425F

14. Tomar, R.; kundra, P.; Sharma, J; Sangeeta. Role of Ionic Liquids as Solvent & Catalyst for Heck and Suzuki Reactions: A Comprehensive Review. *Catal Surv Asia*, **2024, (Published)** https://doi.org/10.1007/s10563-024-09430-5
15. Yadav, S.; Baweja, K.; Kumar, C.; Sarkar, A.; **Tomar, R**. A Review: Applications of Ionic Liquids in Medicinal Chemistry *Chem. Afr.* **2024,** *7,* 2975–2988, doi: https://doi.org/10.1007/s42250-024-00960-z
16. Sangeeta; Onisha; Sandhu, N.; Kumar, C.; Mohajer, F; **Tomar, R**. A Critical Review on Titania-Based Nanoparticles: Synthesis, Characterization, and Application as Photocatalyst. *Chem. Afr.* **2024**, *7*, 1749–1768, doi: https://doi.org/10.1007/s42250-023-00875-1
17. **Tomar, R.**; Kundra, P.; Sharma, J,; Mohajer, F,; Ziarani, G.M.; Yadav, S. An overview: Synthesis of Menthol using Heterogeneous Catalysis. *Lett. Org. Chem.* **2024,** *21 (1***)**, 16-28. doi: 10.2174/1570178620666230623114308

2023

18. Sangeeta; Sonaxi; Kumari, N; Agrawal, S.; Maruthi, M.; Sarkar, A.;**Tomar, R.** Synthesis of 1,3-benzodioxole-based procaine-tagged ionic liquids and investigation of its physiochemical and anti-cancer properties against A549 cells. *J. Mol. Liq.* **2023,** 391, 123325. doi: https://doi.org/10.1016/j.molliq.2023.123325
19. Shilpa; Sonaxi; Sangeeta; Tomar, R. Azomycin Based Ionic Liquids as an Anticancer Agent: A Computational Approach, Rasayan J. Chem., **2023**, 16(4), 2353-2360. doi: http://doi.org/10.31788/RJC.2023.1648581
20. Kharab, S.;Yadav, S.; Singh, A.; Sarkar, A.; **Tomar, R.** Molecular Docking and Physicochemical Studies of 1,3-Benzodioxole tagged Dacarbazine Derivatives as an anticancer agent. *Artif. Cells, Nanomedicine Biotechnol. Artif. Cells, Nanomedicine Biotechnol.* **2023**, *51* (1), 520–530. doi: https://doi.org/10.1080/21691401.2023.2253470
21. Yadav, S.; Kharab, S.; Tomar, R.; Agrawal, S.;Sarkar, A. 1,3-benzodioxole tagged lidocaine based ionic liquids as anticancer drug: Synthesis, characterization and in silico

study, ChemistrySelect **2023**, 8, e202204535. doi: https://doi.org/10.1002/slct.202204535

22. Kumar, L.; Verma, N.: Tomar, R.: Sehrawat, H.: Chandra, R.: Development of bioactive 2-substituted benzimidazole derivatives using an MnOx/HT nanocomposite catalyst, Dalton Trans., 2023, 52, 3006-3015 doi: https://doi.org/10.1039/D2DT02923E
23. Akbari, A.; Faryabi M. F.; Tomar, R. Efficient method for the synthesis of novel methyl 4-cinnolinecarboxylate, Molecular Diversity, 2023, 27,1401–1408 doi: https://doi.org/10.1007/s11030-022-10497-3

2022

24. Ziarani, G. M.; Khademi, M.; yadav, S.; Mohajer, F. **Tomar; R.** Recent Advances in the Application of Barbituric Acid Derivatives in Multicomponent Reactions. *Curr. Org. chem.* **2022,** 26 (2), 162-188 doi: https://doi.org/10.2174/1385272826666211229150318
25. **Tomar, R**.;Jain, S.; Yadav, P..; Bajaj, B.;Mohajer, F.; Ziarani, G. M.; Conversion of Limonene over Heterogeneous Catalysis: An Overview. *Curr. Org. Syn.* **2022**, 19 (3), 414-425, doi: https://doi.org/10.2174/1570179418666210824101837
26. Bendi, A.; Singh, L.; Tomar, R.; Sharma, N. Solvent-Free Synthesis of Glycoside Annulated 1,2,3-Triazole Based Dihydropyrimidinones using Copper Ferrite Nanomaterials as Heterogeneous Catalyst and DFT Studies. ChemistrySelect, **2022**, 7 (7), e202103910, doi: https://doi.org/10.1002/slct.202103910
27. Kumar, L.; Verma, N.; Sehrawat, H.; Tomar, R.; Kumar, R.; Chandra, R. Successive Oxidation- Condensation Reactions using Multifunctional Gold supported Nanocomposite (Au/MgCe-HDO), New J. Chem., 2022, 46, 3472-3481. doi: https://doi.org/10.1039/D1NJ05690E

2021

28. Sehrawat, H.; Kumar, N.; Sood, D.; Kumar, L.; **Tomar, R**; Chandra, R. Unraveling the interaction of an opium poppy alkaloid noscapine ionic liquid with human hemoglobin: Biophysical and computational studies. *J. Mol. Liq.* **202**1, 338,, 116710 https://doi.org/10.1016/j.molliq.2021.116710
29. Yadav, P.; Yadav, S,; Atri, S,; **Tomar, R.** A Brief Review on Key Role of Perovskite

Oxides as Catalyst. ChemistrySelect **2021**, *6* (45), 12947-12959, doi: https://doi.org/10.1002/slct.202102292

30. Atri, S.; **Tomar, R.** A Review on the Synthesis and Modification of Functional Inorganic-Organic-Hybrid Materials via Microwave-Assisted Method. ChemistrySelect **2021**, *6* (34), 9351-9362, doi: https://doi.org/10.1002/slct.202102030
31. Ziarani, G. M.; RadM.; Mohajer, F.; Sehrawat, H.; **Tomar, R**. Synthesis of Heterocyclic Compounds through Multicomponent Reactions using 6-Aminouracil as starting reagent. *Curr. Org. Chem.* **2021**, *25(9)*, 1070-1095. https://doi.org/10.2174/1385272825666210303112858

2020

32. Sehrawat, H.; Kumar, N.; Tomar, R.; Kumar, L.; Tomar, V.; Madan, J.; Dass, S. K.; Chandra, R. Synthesis and Characterization of Novel 1,3-Benzodioxole Tagged Noscapine Based Ionic Liquids with in Silico and in Vitro Cytotoxicity Analysis on HeLa Cells. J. Mol. Liq. 2020, 302, 112525. doi: https://doi.org/10.1016/j.molliq.2020.112525
33. Sehrawat, H.; Kumar, N.; Sood, D.; Kumar, L.; Tomar, R.; Dass, S. K.; Chandra, R. Mechanistic Interaction of Triflate Based Noscapine Ionic Liquid with BSA: Spectroscopic and Chemoinformatics Approaches. J. Mol. Liq. 2020, 315, 113695. https://doi.org/10.1016/j.molliq.2020.113695

2019

34. Kumar, N.; Sood, D.; **Tomar, R**.; Chandra, R. Antimicrobial Peptide Designing and Optimization Employing Large-Scale Flexibility Analysis of Protein-Peptide Fragments. *ACS Omega* **2019**, *4* (25), 21370–21380. https://doi.org/10.1021/acsomega.9b03035
35. Tomar, V.; Kumar, N.; Tomar, R.; Sood, D.; Dhiman, N.; Dass, S. K.; Prakash, S.; Madan, J.; Chandra, R. Biological Evaluation of Noscapine Analogues as Potent and Microtubule-Targeted Anticancer Agents. Sci. Rep. 2019, 9 (1), 19542. https://doi.org/10.1038/s41598-019-55839-8

36. Rathee, G.; Awasthi, A.; Sood, D.; Tomar, R.; Tomar, V.; Chandra, R. A New Biocompatible Ternary Layered Double Hydroxide Adsorbent for Ultrafast Removal of Anionic Organic Dyes. Sci. Rep. 2019, 9 (1), 16225. https://doi.org/10.1038/s41598-019-52849-4
37. Tomar, R.; Singh, N.; Kumar, N.; Tomar, V.; Chandra, R. Base-Free Suzuki–Miyaura Coupling Reaction Using Palladium(II) Supported Catalyst in Water. *Catal. Letters* **2019**, *149*,1589–1594. https://doi.org/10.1007/s10562-019-02723-9
38. Tomar, R.; Ebitani, K.; Chandra, R. Hydrotalcite-Supported Ceria Nanoparticles as a Heterogeneous Catalyst for One-Pot Synthesis of Imines under Atmospheric Air. ChemistrySelect 2019, 4 (12), 3577–3581. https://doi.org/10.1002/slct.201900750

2018

39. Tomar, R.; Rathee, G.; Chandra, I.; Kumar, N.; Tomar, V.; Chandra, R. Synthesis and Characterization of Magnesium Hydroxide & Cerium Oxide Composite: Application in Organic Transformation. ChemistrySelect 2018, 3 (6), 1645–1649. https://doi.org/10.1002/slct.201702947
40. Kumar, N.; **Tomar, R**.; Pandey, A.; Tomar, V.; Singh, V. K.; Chandra, R. Preclinical Evaluation and Molecular Docking of 1,3-Benzodioxole Propargyl Ether Derivatives as Novel Inhibitor for Combating the Histone Deacetylase Enzyme in Cancer. *Artif. Cells, Nanomedicine Biotechnol.* **2018**, *46* (6), 1288–1299. https://doi.org/10.1080/21691401.2017.1369423
41. **Tomar, R**.; Sahni, A.; Chandra, I.; Tomar, V.; Chandra, R. Review of Noscapine and Its Analogues as Potential Anti-Cancer Drugs. *Mini. Rev. Org. Chem.* **2018**, *15* (5), 345–363. https://doi.org/10.2174/1570193x15666180221153911
42. Kumar, N.; Chugh, H.; Sood, D.; Singh, S.; Singh, A.; Awasthi, A. D.; **Tomar, R**.; Tomar, V.; Chandra, R. Biology of Heme: Drug Interactions and Adverse Drug Reactions with CYP450. *Curr. Top. Med. Chem.* **2018**, *18* (23), 2042–2055. https://doi.org/10.2174/1568026619666181129124638
43. Kumar, N.; Chugh, H.; **Tomar, R**.; Tomar, V.; Singh, V. K.; Chandra, R. Exploring the Interplay between Autoimmunity and Cancer to Find the Target Therapeutic Hotspots. *Artif. Cells, Nanomedicine Biotechnol.* **2018**, *46* (4), 658–668.

https://doi.org/10.1080/21691401.2017.1350188

2017

44. Tomar, R.; Singh, N.; Rathee, G.; Kumar, N.; Tomar, V.; Chandra, R. Synthesis and Characterization of Hybrid Mg(OH)2 and CeCO3OH Composite with Improved Activity Towards Henry Reaction. Asian J. Org. Chem. 2017, 6 (12), 1728–1732. https://doi.org/10.1002/ajoc.201700485

2016

45. Tomar, R.; Sharma, J.; Nishimura, S.; Ebitani, K. Aqueous Oxidation of Sugars into Sugar Acids Using Hydrotalcite-Supported Gold Nanoparticle Catalyst under Atmospheric Molecular Oxygen. Chem. Lett. 2016, 45 (7), 843–845. https://doi.org/10.1246/cl.160364

2015

46. Arya, K.; **Tomar, R**. Microporous Zeolite Catalyst System: An Eco-Approach for Regioselective Synthesis of Pyrimidobenzimidazoles. *Res. Chem. Intermed.* **2015**, *41* (6), 3389–3400. https://doi.org/10.1007/s11164-013-1441-4

2014

47. Arya, K.; **Tomar, R.**; Rawat, D. S. Greener Synthesis and Photo-Antiproliferative Activity of Novel Fluorinated Benzothiazolo[2,3-b]Quinazolines. *Med. Chem. Res.* **2014**, *23* (2), 896–904. https://doi.org/10.1007/s00044-013-0689-y

Editorial Articles

1. Tomar,R.; Madan, J. Ionic Liquids: Synthesis, Characterization and their Applications. *Curr. Org. Syn.* **2022**, *19(8),847-848 https://doi.org/10.2174/1570179419082210051127 44*
2. Chandra, R; **Tomar, R**. Organic Transformation Using Heterogeneous Catalysts. *Curr. Org. Chem.* **2021**, *25(3),* 331-331. https://doi.org/10.2174/1385272825032101221431 59

Books

(1) **Title : Cerium-based materials: synthesis, properties and applications**

Editors: Ramesh Chandra and Ravi Tomar

Publisher: Bentham Books Publisher

ISBN: 978-981-5080-09-4 Link: https://www.eurekaselect.com/ebook_volume/3506

(2) **Title: Hydrotalcite: Synthesis, Characterization and Applications**

Editors: Ravi Tomar

Publisher: Bentham Books Publisher

ISBN: 978-981-5256-12-3 Link: https://www.eurekaselect.com/ebook_volume/3754

(3) **Title: Solid Base Catalysts: Synthesis, Characterization and Applications**

Editos: Dr. Ravi Tomar, Prof. Ramesh Chandra, and Prof. K. K. Pant

Publisher: Wiley VCH

ISBN: 978-3-527-84669-6 Link: https://onlinelibrary.wiley.com/doi/book/10.1002/9783527846719

(4) **Title: Ionic Liquids for Organic Synthesis**

Editors: Ravi Tomar

Publisher: Bentham Books Publisher

ISBN: 978-981-5313-42-0 Link: https://www.eurekaselect.com/ebook_volume/3870

(5) **Title: Third Generation Ionic Liquids: Synthesis to Applications**

Editors: Ravi Tomar and Vivek Mishra

Publisher: Bentham Books Publisher

Status: Accepted

(6) **Title: Recent Advancements in Applications of Ionic Liquids for Electrochemical Reactions**

Editors: Prof. Ramesh Chandra, Neha Gopal and Ravi Tomar

Publisher: Bentham Books Publisher

Status: Submitted

(7) **Title: New Frontier in Solid Base Catalysis for Sustainable Development**

Editors: Ravi Tomar, Vivek Mishra, Kapil Arya, and Garima Pandey

Publisher: Bentham Books Publisher

Status: Submitted

(8) **Title: Artificial Intelligence and In Silico Studies of Small Molecules: Drug Design to Toxicological Investigation**

Editors: Ravi Tomar, Garima Pandey, Sandeep Kumar Singh, Prashant Singh, and Kamlesh Kumari

Publisher: Bentham Books Publisher

Status: Submitted

Conference Abstract Published

1. **Tomar, R.**; Tomar, V.; Chandra, R. Synthesis and Characterization of CeBearing Solid Base Catalyst and its Application in Henry Reaction *J. Biomed. Ther. Sci.,***2018**, *5 (1),* S5
2. Rathee, G.; **Tomar, R**.; Tomar, V.; Chandra, R, Synthesis and Characterization of Mixed Magnesium Hydroxide and Cerium dioxide: its Application in Organic Reactions, *J. Biomed. Ther. Sci.,***2018**, *5 (1),* S7
3. Singh N.; **Tomar, R.**; Tomar, V.; Chandra, R, Synthesis and Characterization of Ce-Bearing Solid Base Catalyst and its Application in Suzuki-Miyaura Reaction, *J. Biomed. Ther. Sci.,***2018**, *5 (1),* S11

Patents

S.No.	Title of Patent	Registration No./Patent No.	Status (Submitted/Published /Granted)
1	Automated Sheet Holder Cleaning Device	202111036399	Published
2	Secured Infant Caressing Device	202211002208	Published
3	Solid-base catalyst composition for preparation of Diosmin via transesterification and method for Synthesis thereof	202411003461	Published

Invited Talk/Resource Person/Jury Member in Conference/Seminar/Workshop/State level Exhibition

Resource Person: Two Days Skill Enhancement Workshop on Research Methodology from 21st

-22nd March, 2025 organized by the Chemical Society "Rasion", Department of Chemistry, Kalindi College, University of Delhi, Delhi.

Resource Person: दो-दिवसीय राष्ट्रीय संगोष्ठी, रसायन विज्ञान में भाषा की भूमिका, 6 - 7 मार्च, 2025 , आयोजित द्वारा: रसायन विभाग, एसआरएम इंस्टीट्यूट ऑफ़ साइंस एंड टेक्नोलॉजी, दिल्ली एनसीआर परिसर, मोदीनगर, गाज़ियाबाद एवं वैज्ञानिक तथा तकनीकी शब्दावली आयोग, शिक्षा मंत्रालय, भारत सरकार

Resource Person: दो-दिवसीय राष्ट्रीय संगोष्ठी, रसायनशास्त्रस्य शिक्षणे भाषायाः भूमिका, 23 - 24 जनवरी, 2025, आयोजित द्वारा: मानव रचना विश्वविद्यालय, फरीदाबाद एवं वैज्ञानिक तथा तकनीकी शब्दावली आयोग, शिक्षा मंत्रालय, भारत सरकार

Jury member: State Level Science Exhibition on 29th-30th January, 2025 organized by State Council of Educational Research & Training (SCERT), Haryana

Resource Person: Workshop on Development of Project-based Learning Materials in Chemistry for Class XI from 23/09/2024 to 27/09/2024 organized by DESM, NCERT, New Delhi.

Jury member: State Level Science Exhibition on 29th-30th January, 2024 organized by State Council of Educational Research & Training (SCERT), Haryana

Guest Speaker: One-day National Webinar on "Recent Research & Innovations in Physical, Chemical and Biological Sciences" 28th May 2024 organized by the Department of Chemistry, Govt. Indira Gandhi Home Science Girls P.G. College, Shahdol, M.P.

Jury member: State Level Science, Mathematics & Environment Exhibition on 9th-11th January, 2023 organized by State Council of Educational Research & Training (SCERT), Haryana

Resource Person: Training Programme on Awareness cum Sensitization on Environment Education in Middle Schools on 7th December 2022 organized by SCERT Haryana Gurugram

Invited Talk: Online One Week Short Term Program on "Bio privilege and Sustainable Chemistry" from 17.01.2022 to 21.01.22 Organized by the Department of Chemistry, Manav Rachna University, Faridabad–121004, Haryana

Abstracts in Scientific Meetings/Conferences

1. **Tomar, R.**; Chandra. R. Employment of Cerium-Based Catalysts in Organic Chemistry, *Japan-India Symposium*, School of Materials Science, Japan Advanced Institute of Science and Technology. 7th March 2019 [Poster Presentation]

2. **Tomar, R.**; Tomar, V.; Chandra, R. Greener Approaches Towards Organic Transformation Using Heterogeneous Catalysis, 6th World Congress on Nanomedical Sciences ISNSCON-2018 & Chemistry Biology Interface Synergistic in New Frontiers 7-9th January 2019 (Poster Presentation)
3. **Tomar, R**.; Tomar, V.; Chandra, R. Development of Cerium-Bearing Heterogeneous Catalyst: Application in Organic Chemistry, Emerging Trends in Drugs Development and Natural-Products, Department of Chemistry, University of Delhi, January 12-14th 2018, [Oral Presentation]
4. **Tomar, R**.; Tomar, V.; Chandra, R. Synthesis and Characterization of Ce-Bearing Solid Base Catalyst and its Application in Henry Reaction, One-Day Indo-Hungarian Symposium on Recent Advances in Chemistry and Biology, Miranda House, University of Delhi, December, 11th, 2017 [Oral Presentation]
5. **Tomar, R**.; Verma, A. K.; Chandra, R. New Insight for Synthetic Elaboration of Noscapine and Its Derivatives as Anticancer Drug, Du-JAIST Indo-Japan Symposium on chemistry of Functional Molecules/Materials. February 26-27, 2016. [Poster Presentation]
6. Sehrawat, H.; **Tomar, R.**; Tomar, V.; Chandra, R. Synthesis and Characterization of Ionic Liquids with Various Applications, Emerging Trends in Drugs Development and Natural-Products", Department of Chemistry, University of Delhi, 12th-14th January 2018 [Poster Presentation]
7. Sehrawat, H.; **Tomar, R**.; Tomar, V.; Kumar, N.; Chandra, R. Synthesis, In-silico and In-vitro Evaluation of Novel Noscapine based Ionic Liquids showing Potential Anticancer activity, "6th world congress on Nanomedical Sciences-ISNSCON-2018", "Chemistry-Biology Interface 2019" and "Conference on "Science and Technology for the Future of Mankind" from 7th-9th January 2019 at Vigyan Bhawan, New Delhi. [Poster Presentation]
8. Sehrawat, H.; **Tomar, R.**; Tomar, V.; Chandra, R. Synthesis and Characterization of 1,3-Benzodioxole-MIM/Py Ionic Liquids with their anticancer activity on various cell lines. Thieme Chemistry: Science of Synthesis", Department of Chemistry, University of Delhi, September 28th, 2018 [Poster Presentation]

9. **Tomar, R**.; Chandra, I.; Chandra, R. A Chemical approach towards an innovative anti-cancer drug, 23rd Annual Convention of Chemists 2016 (National Conference), GITAM University, Visakhapatnam, Andhra Pradesh, India, December 27-29, 2016. [Poster Presentation]
10. **Tomar, R.**; Sharma, J.; Nishimura, S.; Ebitani, K. Synthesis of Aldonic Acids from Aldose Sugars over Hydrotalcite Supported Gold Catalyst in Water with Molecular Oxygen under Base-Free condition, 5th Asia Oceania Conference on Green and Sustainable Chemistry (AOC-5-GSC), New Delhi, India 2015.1.15-17 [Poster Presentation]
11. **Tomar, R**.; Sharma, J.; Nishimura, S.; Ebitani, K. Base-Free Oxidation of Sugars into Sugar Acids using Supported Gold Catalyst in Water using Molecular Oxygen, The Irago Conference 2014, Tsukuba, Ibaraki, Japan, 2014.11.7 [Poster Presentation]

References

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I hereby declare that the facts given above are correct to the best of my knowledge.

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