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Name: Dr Sujata Sengupta

Department: Chemistry

Current Designation: Assistant Professor

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Academic Qualifications: MSc., BSc.

Master of Science University of Delhi, Dept. of Chemistry, New Delhi, India
2003

Bachelor of Science University of Delhi, Miranda House, New Delhi, India
2001 First Class

Research Degree: Ph.D.

Ph.D (2010) Organic Chemistry
C. Eugene Bennett Department of Chemistry, West Virginia
University, Morgantown, West Virginia, USA.

Field of Specialization under the Subject/Discipline: Organic Chemistry

Total Teaching Experience: 10+ Years

Teaching at Miranda House since: July 2016

Permanent Appointment: 18 March, 2023

Administrative Roles:

- Member IQAC 2023-25
- Faculty Coordinator: G 20 Events Organized by Culture Council, University of Delhi 2023

List of Publications:

- Sengupta, S., Sonkar, S.M. & Singh, S. The Green Chemistry Challenge Awards. Reson 28, 465–474 (2023). <https://doi.org/10.1007/s12045-023-1566-8>
Published: 21 March 2023 and Issue Date: March 2023



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- Qualitative and Quantitative Analysis of Chocolates: An Undergraduate Science Experiment Sengupta, S., Sonkar, S.M., Rani, N., Sonkar, A., IJFANS, Vol.11, Iss. 12, Dec 2022, e-ISSN 2320-7876.
- Sengupta, S., Sonkar, S.M., Sonkar, A., Rawat Bisht, R., Debnath, R., Kingar, K., Gautam, D.K. 2022; Volume 11, Issue 11 : Page: 527-544 CURCUMIN – EXTRACTION, SYNTHESIS AND APPLICATION IN MODERN DRUG RESEARCH: A MINI REVIEW. International Journal of Food and Nutritional Sciences, ISSN PRINT 2319 1775 Online 2320-7876.
<https://ijfans.org/uploads/paper/d7260c4bc325a0bd5e20cfa4577bdaea.pdf>
- **Sengupta, S.**, Sonkar, S.M., Singh, S., Duggal, A. & Siwach, M. 2022. 10(3), 110-113 Greening Qualitative Organic Analysis: Spot Test to Detect Aromatic Hydrocarbons and Aryl Halides. World Journal of Chemical Education.
- Sonkar, S.M., **Sengupta, S.**, Singh, S., Sonkar, A., Fathima, H., Chandran, A.R., Singh, M., Manisha & Kumari, R. 2022. Drug Discovery and Development - with Special Focus on COVID-19. Zeichen Journal. 8(3): 436- 455 ISSN: **0932-4747** Impact Factor: 4.7
- Sonkar, S.M., **Sengupta, S.** & Singh, S. 2022. Spot Test to Differentiate between D-Glucose and D-Fructose. Journal of Laboratory Chemical Education. 10(1): 1-3 p-ISSN: **2331-7450** e-ISSN: **2331-7469**.
- Sonkar, S.M., **Sengupta, S.**, Singh, S. & Lumb, A. 2022. Derivatization of Alcohols Using (bmim)HSO₄: A Green Approach for the Undergraduate Chemistry Laboratory. World Journal of Chemical Education. 10(2) (2022): 62-64 ISSN **2375-1657**.
- Singh, S., **Sengupta, S.**, Sonkar, S.M., Kaur, N., Kumari, R., Sanna, Sakshi, Paliwal, S., Sonkar, A. 2021. Impact of Covid-19 Pandemic on The Environment: A General Review for the Lockdown Period in India from March 2020 to April 2020. International Educational Applied Scientific Research Journal, 6.
- **Sengupta, S.**, Singh, S., Sonkar, S.M., Sonkar, A., Kapoor, N., Tomar, G., Gaur, S. & Bajaj, A. 2021. The Chemistry of Essential Oil and its Role as Natural Fragrances in Perfumes, International Education and Research Journal (IERJ), 7(11). ISSN 2454-9916. Impact Factor of 1.
- Triazole-Au(I) Complexes: Effective and stable catalysts for promoting Intermolecular and Non-Protected Aniline Condensation with Alkynes, Duan, H.; **Sengupta, S.**; Petersen, J. L., Akhmedov, N. G.; Shi, X. *J. Am. Chem. Soc.* 2009, 131, 12100-12102. (DOI: 10.1021/ja9041093), ISSN 0002-7863. Impact Factor of 10.677.
- Synthesis and Characterization of NH-triazole Co-ordinated Rh(I) Complexes: Substituted group effect in controlling the regioselectivity of 1,2,3-triazole binding site, Duan, H.; **Sengupta, S.**; Petersen, J. L.; Shi, X. *Organometallics* 2009, 28(8), 2352-2355. (DOI: 10.1021/om8011163), Impact Factor of 4.145, ISSN 0276-7333.
- Highly efficient synthesis of vinyl substituted triazoles by Au(I) catalyzed alkyne activation. Duan, H.; Yan, W.; **Sengupta, S.**; Shi, X. *Bioorg. Med. Chem. Lett.* 2009, 3899-3902. (DOI: 10.1016/j.bmcl.2009.03.096), ISSN: 0960-894X.
- One Step Cascade Synthesis of 4,5-Disubstituted-1,2,3-(NH)-Triazoles" **Sengupta, S.**; Duan, H.;



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Lu, W.; Petersen, J. L.; Shi, X. *Org. Lett.*, 2008, 10(7), 1493-1496. (DOI: 10.1021/ol8002783), Impact Factor: 6.142, ISSN 1523-7060.

- Intermolecular Cross-Double Michael Addition between Nitro and Carbonyl Activated Olefins as a New Approach in C-C Bond Formation. Sun, X.; **Sengupta, S.**; Petersen, J. L.; Wang, H.; Lewis, J. P.; Shi, X. *Org. Lett.*, 2007, 9(22), 4495-4498. (DOI: 10.1021/ol702059x), Impact Factor: 6.142, ISSN 1523-7060.
- Mitsunobu Coupling of Nucleobases and Alcohols: An Efficient, Practical Synthesis for Novel Nonsugar Carbon Nucleosides. Lu, W.; **Sengupta, S.**; Petersen, J. L.; Shi, X. *J. Org. Chem.*, 2007, 72(13), 5012-5015., (DOI: 10.1021/jo070515+), ISSN 0022-3263, Impact Factor of 4.564.
- Synthesis of Novel Oxime Functionalized Aldol Products via Michael Addition of Oximes onto Baylis-Hilman Adducts. Bhuniya, D.; Gujjary, S.; **Sengupta, S.** *Synth. Comm.*, 2006, 36(2), 151-164., (DOI:10.1080/00397910500334132), Impact Factor: 1.060, ISSN 0039-7911 (Print), 1532-2432 (Online).
- Sengupta, S. and Shi, X. (2010), Recent Advances in Asymmetric Gold Catalysis. *ChemCatChem*, 2: 609–619. (DOI: 10.1002/cctc.201000070), Online ISSN: 1867-3899, Impact Factor: 5.181

Book Published

- Green Chemistry: An Introduction, **Dr. Sujata Sengupta** and Dr. Sharda M. Sonkar, April 2019, Prestige Publication, ISBN-10: 8194063817

Faculty Development Programs Attended

- Completed online Inter-Disciplinary two-week Refresher Course in “Managing Online Classes & Co-creating MOOCs 27.0” from 06 – 20 June, 2023 organized by Teaching Learning Centre, Ramanujan College, University of Delhi under the aegis of Ministry of Education, Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching and obtained Grade A+.
- Completed 4-Week Faculty Induction/Orientation Programme for “Faculty in Universities/Colleges/Institutes of Higher Education” from 23 April – 22 May, 2023 organized by Teaching Learning Centre, Ramanujan College, University of Delhi in collaboration with Army Institute of Education (AIE), affiliated to Guru Gobind Singh Indraprastha University, Delhi under the aegis of Ministry of Education, Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching and obtained Grade A+.

Industrial Research Experience

- Junior Research Scientist, Dr. Reddy's Laboratories Ltd., Hyderabad, India from Sept. 2003 to May 2005
- Independently synthesized and characterized more than thirty (30) novel and proprietary analogs for biological screening against various metabolic disorders through standard synthetic techniques.



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Research Guidance:

- Experimental Summer Workshop for undergraduate science students, Flavor of Research - Investigative Projects in Multidisciplinary Contexts, under D. S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, June - July, 2023.
- Experimental Summer Workshop for undergraduate science students, Flavor of Research - Investigative Projects in Multidisciplinary Contexts, under D. S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, June - July, 2022.
- Experimental Summer Workshop for undergraduate science students, Flavor of Research - Investigative Projects in Multidisciplinary Contexts, under D. S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 3 June - 12 July, 2020.
- Experimental Summer Workshop for undergraduate science students, Flavor of Research - Investigative Projects in Multidisciplinary Contexts, under D. S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 3 June – 12 July 2019
- Experimental Summer Workshop for undergraduate science students, Flavor of Research, Investigative Projects in Multidisciplinary Contexts, under D. S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 07 June - 13 July 2018.

Membership Of Professional Bodies:

- American Chemical Society

Invited talks/Session chair/Resource person:

- Invited as Judge for the event “*Alimentare Analisi* - Food Adulteration Test” part of ‘*Festival della Scienza 2.0*’ - Inter School Science Fest held on Saturday, 29th April 2023 at DPS R.K. Puram, New Delhi.
- Resource Person for delivering Extension Lecture titled” The Chemistry of Terpenes, Terpenoids and Essential Oils – their role in everyday life” on 26.03.2023 for DGHE Sponsored International Blended 35 Hours Value Added Certificate Course on “Chemistry in Day-to-Day Life” for Session 2022-23 organized by Pt. N.R. S. Government College, Rohtak, Haryana, from 21-27 March, 2023.
- Subject matter expert/Resource person for Online session titled “Greening the Chemistry Laboratory Experiments” for the Teachers of The Delhi Public Schools teaching Chemistry in Classes 9-12 on Thursday, November 10, 2022.
- Resource Person for the Bridge Course on Laboratory Safety and Handling of Equipment for B.Sc.(H) Chemistry I Year, conducted by Department of Chemistry, Miranda House on 24 - 25 November, 2022.
- Resource Person for the Bridge Course on Laboratory Safety and Handling of Equipment for B.Sc.(H) Chemistry I Year, conducted by Department of Chemistry, Miranda House on 23



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November and 6 December, 2021.

- Invited Speaker in an Online Workshop cum Guest Lecture series on Chemistry Education for Undergraduates: Opportunities and Career Prospects organized by Sibsagar College, Joysagar, Assam on 17 December, 2020. Title of the lecture: Green Chemistry: Introduction, Applications and Career Opportunities”
- Invited Speaker in short term course “Understanding our Environment “organized by Department of Botany, Miranda House, University of Delhi on 18 July 2020. Title of the delivered talk: Green Chemistry: Introduction, Applications and Career Opportunities”
- Resource Person for the Bridge Course on Laboratory Safety and Handling of Equipment for B.Sc. (H) Chemistry, conducted by Department of Chemistry, Miranda House on 1 and 9 August, 2019.
- Resource Person for the Bridge Course on Laboratory Safety and Handling of Equipment for B.Sc. Life Sciences, Miranda House on 7 Aug, 2019.
- Resource person on Bridge Course on Laboratory Safety and Handling of Equipment for B.Sc.(H) Chemistry I Year students on 2nd and 3rd August 2018.
- Resource person for the Bridge Course on Laboratory Safety and Handling of Equipment for B.Sc.(H) Chemistry I Year students on 1st and 3rd August 2017.
- Resource person for the Bridge Course on Laboratory Safety and Handling of Equipment for B.Sc.(H) Chemistry I Year students on 3rd and 4th August 2016.

Conferences Organized:

- Organizing Secretary, IUPACGWB 2023 - International Conference on Recent Trends in Chemistry, organized by Department of Chemistry, Miranda House on 14-15 February 2023.
- Organizing Committee member, Lecture on Metal and Modern Medicine, organized by *Rasayanika*, The Chemical Society, Department of Chemistry, Miranda House in collaboration with IQAC, Miranda House on 19 March 2022.
- Organizing Committee member, Inaugural Lecture of the Chemical Society and National Webinar on Recent Advances in Chemistry – GWC 2022, organized by Department of Chemistry, Miranda House on 16 February 2022.
- Organizing Committee member, International Conference on “Contributions of Acharya Prafulla Chandra Ray as a Chemist and Freedom Fighter”, organized by Vijnana Bharati and Ministry of Culture, Government of India in association with Indraprastha Vigyan Bharati and Department of Chemistry, University of Delhi on 2-3 August 2022.
- Organizing Committee member, IUPAC_GWB-International Webinar on Chemistry: Catalyst of Change, organized by Department of Chemistry, Miranda House on 19-20 February 2021.
- Organizing Secretary, International Webinar on Empowering Diversity in Science organized by Department of Chemistry, Miranda House on 12 February 2021.



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- Organizing Committee member, National Workshop Nano Road Show-2020 organized by Department of Chemistry, Miranda House on 1 February 2020.
- Organizing Committee member, National Webinar online on Learnings from the Corona Pandemic organized by Department of Chemistry, Miranda House, September 24-25, 2020.
- Organizing Committee member, IUPAC GWB2020: Symposium on Bonding to Create Future Leaders in Sciences organized by Department of Chemistry, Miranda House on 12 February 2020.
- Organizing committee member of DBT–Biotechnology Popularization Programme held on 2 Aug, 2019 by Miranda House, Under CTEP Programme of DBT, Govt. of India.
- Organizing committee member in National Workshop Nano Road Show-2020 on 1 Feb. 2020 at Miranda House, Univ. of Delhi.
- Organizing Committee member, Symposium on Empowering Women in Chemistry: A Global Networking Event organized by Department of Chemistry, Miranda House, University of Delhi, 12 February 2019.
- Organizing Committee member, One-day Indo-Hungarian Symposium on Recent Advances in Chemistry and Biology, Department of Chemistry, Miranda House, University of Delhi, Delhi, 11 December 2017.
- Organizing Committee member, Catalyzing a Cultural Shift in Youth Entrepreneurship organized by 'D S Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi & Biotechnology Industry Research Assistance Council (BIRAC), Department of Biotechnology, Government of India on 9 November, 2017.
- Organizing Committee member, Indian Science & Engineering Fair, Regional Fair (Delhi), Miranda House, University of Delhi, Delhi, 13 October 2017.

Seminars/Workshops/Conferences attended:

- Webinar on “Green Approach to Chemistry Experiments” held on 18th December 2021, organized by Department of Chemistry, Guru Nanak Vidyak Society's, Guru Nanak College of Arts, Science & Commerce, G.T.B Nagar, Sion, Mumbai – 400037 under the aegis of STAR-DBT.
- Webinar on the topic “Chemistry: A Central Science of Nature” by Professor Ashok Kumar Prasad, being organized by the Department of Chemistry, Shivaji College on August 28, 2021 under the aegis of DBT sponsored Star College Scheme of Shivaji College.
- National Webinar on Battling Environmental Woes: Peace Policy for Future organised by Tricord, The Life Science Society, Miranda House, 10 October 2020.
- Webinar on “Women, Educator, Scientist, Entrepreneur: Future is Yours” by Dr Pratibha Jolly Academic Consultant – NAAC organised by Vigyan Prasar, An Autonomous Organisation, Under the Department of Science and Technology, Government of India. on September 29, 2020.
- Webinar entitled “Environmental Challenges in Front of Society in Current Scenario and Future Strategies” delivered by Dr. Sandeep Lal, Principal Scientist (IARI), organised by Department of Chemistry, Shivaji College, University of Delhi on October 09, 2020.



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- Participated in two-day international webinar on “Emerging Trends in Chemistry Education and Research (ETCER)” Organized by Wilson College in association with University of Mumbai And Association of Chemistry Teachers, June 25-26, 2020.
- Participated in Three Day Webinar “Covid 19: Challenges and Road Ahead” organized by Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi, May 07-09, 2020.
- Participated in webinar on topic “Online Teaching and Learning Technology” organized by ARSD College, Dhaula Kuan held on 27th April, 2020.
- ACS Workshop on Greening our Education System: Initiatives for Propagating and Preaching Beyond Benign Concepts in Classrooms and Laboratories jointly organised by ACS International Student Chapter University of Delhi, Green Chemistry Network Centre, University of Delhi and Hindu College, Conference Centre, University of Delhi, 19 December 2019. Dr. Sharda M Sonkar and Dr Sujata Sengupta were awarded Best Poster (2019) for the poster titled: Green Methods in Qualitative Organic Analysis: Spot Test to Detect Hydrocarbons.
- Conclave on “Biodiversity for Everyone’s Life” organised by Miranda House in collaboration with Institute of Bioresources and sustainable development (ISBD), Manipur at Miranda House, University of Delhi, 31 August 2018
- Workshop on Catalysing a Cultural Shift in Youth Entrepreneurship, D. S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, Delhi, 09 November 2017.
- International Conference on Advancing Green Chemistry: Building a Sustainable Tomorrow, University of Delhi, Delhi, 03-04 October 2017.
- Workshop on Active Learning as a Transformational Tool for the University Classroom, Organized by Miranda House, 15th May, 2017.
- International Conference/Lecture Workshop on Emerging Trends in Development of Drugs and Devices, conducted by Department of Chemistry, University of Delhi, Delhi, India, January 21-23, 2013. (Poster Presentation)
- 238th ACS National Meeting held at Washington DC, United States between August 16-20, 2009. Presented Oral Presentation titled: Development of readily available triazole derivatives as a new class of ligands in transition metal catalysis
- 237th ACS National Meeting held at Salt Lake City, UT, United States between March 22-26, 2009. Presented Oral Presentation titled: Triazole-Au(I) complexes: A new class of stable and active cationic Au(I) complexes.
- 236th ACS National Meeting held at Philadelphia, PA, United States from August 17-21, 2008. Presented Oral Presentation titled: One step cascade synthesis of 4,5-disubstituted-1,2,3-(NH)-triazoles.
- 234th ACS National Meeting, Boston, MA, United States, August 17-21, 2007. (Poster Presentation titled: Mitsunobu Coupling of Nucleobases with Alcohols: An efficient practical synthesis of novel non-sugar carbon nucleosides.

Synergy (work with other organizations outside the college):



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- Faculty Advisor, MH *Vatavaran*, The Environment Society (2018-19, 2019-20, 2020-21, 2021-22, till present)
- Volunteer, ISLF-Vigyanika 2020 conducted from 22-25 December 2020 as part of India International Science Festival 2020 (IISF 2020) organised by Ministry of Science and Technology; Ministry of Earth Sciences and Ministry of Health and Family Welfare, Gol in collaboration of Vijnana Bharati (Vibha) by Council of Scientific and Industrial Research (CSIR).
- Teacher mentor for the ECHO 2021-22 Programme organized by WWF India.
- Teacher mentor for the ECHO 2019-20 Programme organized by WWF India.