



CURRICULUM VITAE

Dr. SONU KUMAR

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SUMMARY

A highly talented and enthusiastic chemist with research experience in the field of ‘**Transition Metal Catalysis reaction**’

OBJECTIVE

I wish to enhance my technical and experimental skills to ultimately pursue a career in **Chemistry Research and Development** in order to contribute towards the development and betterment of science for the benefit of all. I currently aim to pursue research in “**Synthetic Organometallic Chemistry**” following which I would like to see myself research scholars/ working with one of the leading research projects based pharmaceutical companies in their drug discovery wing.

EDUCATION / QUALIFICATIONS

- **Teaching Experience: Faculty at Hansraj College, Department of Chemistry University of Delhi** (From: 17th September 2018 to till date)
- **Teaching Experience: Faculty at Department of Chemistry University of Delhi** (From: 2nd August 2017 to 30th April 2018)
- **Ph.D. in Chemistry from the Department of Chemistry, University of Delhi, India.**
Thesis entitled “*Tandem Approaches for the Synthesis of Fused N-Heterocycles via 6-endo-dig Ring Closure of Alkynes*” **PhD. Viva on 21 August 2017.**
- **M.Sc. in Chemistry, Meerut University, India**

June 2007 - June 2009

Secured - 65.22 % Aggregate (1st Division).
- **B.Sc. in Chemistry, Meerut University, India**

Maharaj Sing College, Saharanpur, Meerut University, India

June 2003 - June 2007

Secured – 62.22 % Aggregate (1st Division).

WORKSHOPS/ CONFERENCES ATTENDED

1. Participated in **53rd Annual Convention of Chemists 2016** organized by Indian Chemical Society at Visakhapatnam for **Poster presentation (Palladium-Catalyzed Intramolecular Fujiwara-Hydroxylation: Synthesis of Benzo[a]phenazines Derivatives)**
2. Participated in **52rd Annual Convention of Chemists 2015** organized by Indian Chemical Society at JECRC University Jaipur Rajasthan India for **Oral presentation (Tandem Approach to Benzothieno- and Benzofuopyridines from *o*-Alkynyl Aldehydes via Silver-Catalyzed 6-*endo-dig* Ring Closure)**
3. Participated in **19th CRSI National Symposium in Chemistry 14th-16th July 2016** organized by Department of Chemistry University of North Bengal **Poster presentation (Tandem Approach to Benzothieno- and Benzofuopyridines from *o*-Alkynyl Aldehydes via Silver-Catalyzed 6-*endo-dig* Ring Closure)**
4. Participated in **5th NIPER (RBL)-CDRI Symposium** organized by Atul Goel at the CSIR-Central Drug Research Institute, Lucknow India for research Scholars for **Poster presentation** in 21st-23rd March 2013 (**Regioselective Synthesis of Pyrrolo[1,2-*a*]quinolines and Indolizines via Silver-Catalyzed/Iodine-Mediated Electrophilic Cyclization with Concomitant Ring Opening**)
5. Participated in **20th ISCBC International Conference** organized by Professor Ashok K Prasad Department of Chemistry University, Delhi, India for **Poster presentation** in 1st-4th March 2014 (**Regioselective Synthesis of Pyrrolo[1,2-*a*]quinolines and Indolizines via Silver-Catalyzed/Iodine-Mediated Electrophilic Cyclization with Concomitant Ring Opening**)
6. **Poster: "Regioselective Synthesis of Pyrrolo[1,2-*a*]quinolines via Electrophilic Cyclization/[3 + 2] Annulation with Concomitant Ring Opening of Iodo-Pyranoquinolines"** Emerging Trends in development of Drugs and Devices" organised by the Department of Chemistry, University of Delhi, India, 21st- 23th January 2013
7. **Poster:"Regioselective Synthesis of Pyrrolo[1,2-*a*]quinolines and Indolizines via Silver-Catalyzed/Iodine-Mediated Electrophilic Cyclization with Concomitant Ring Opening"**DU-JAST Indo-Japan Symposium on Chemistry of Funtional Molecules/Materials 26th - 27th February 2016
8. **"Participant"**Workshop on Information Literacy and competency 19th February, 2014.
9. Participated in a two-week online Faculty Development Programme (equivalent to Refresher Course) on **"Chemistry-The catalyst for Change"** from 14 July -28 July 2021.
10. Participated in the online workshop on **"Role of Technology and some specific tools in Research"** Organized by the Academic Association, SGTU in collaboration with Prodigy-A Science, FOSC during "28 June-3 July, 2021.
11. Participated in Refresher Course on **"Swayam Arpit Online Course Certification"**, held on 16 February 2020.
12. Mentor Ship Program/ career counselling for Class BSc(H) Sem-V 2020.
13. Organizing committee member at the National Seminar on **"Environment and Sustainability in The Third World"** organized by Department of Chemistry & IQAC, Hansraj College, University of Delhi. held on Feb 28th 2020
14. Organized a Webinar on **"Digital Transformation and Climate Change"** organized by Department of Chemistry in association with IQAC, Hansraj College, University of Delhi on 9th October, 2021.
15. Coordinator in a one-day International Conference on **"Emerging trends in Chemical and Applied Sciences for Sustainable Future"** organized by Department of Chemistry in collaboration with IQAC, Hansraj College, University of Delhi. held on 30th October 2021.

16. Coordinator in a two-day workshop on “**ICT TOOLS FOR CHEMISTRY LABORATORY STAFF**” organized by Department of Chemistry in association with IQAC, Hansraj college, University of Delhi. Held on 6-7th October 2021.
17. Departmental Representative in open book exam Nov.-December 2021: I have helped to solve students’ problems they have faced during the filling of examination form on student Portal for OBE 2021
18. Departmental Admission Committee: worked as verification of certificates: SC category certificate verification, ST cast certificate verification, EWS category certificate for courses: BSc(H) Chemistry, BSc(P) Life science, BSc(P) Physical science with Chemistry, BSc(P) Physical science with Computer Science
19. Research Project Sanctioned from Hansraj college with Dr. Manoj Kumar details as:
Title: “DFT investigation on theoretical spectroscopic, ELF, MEP, Hirshfeld Surface and Molecular Docking Studies of Phenyl Benzothiazole, Mercaptobenzimidazole, Dibenzothiophene and 2-Aminothiazole” Submitted Date: 03/03/2022 Project Amount: 42,000 Rs
20. Participated in a webinar on “**Mitigating Global warming and Climate Change: Need of hydrogen Energy**” organized by Department of Physics and Electronics in association with IQAC, Hansraj College, University of Delhi. held on 18th September 2021.
21. Participated in a webinar on **Environmentally benign solvents for Sustainable Developments** organized by Department of Chemistry in collaboration with IQAC, Hansraj College, University of Delhi. held on 23th October 2021.
22. Organized a Webinar on “**Path towards progress: Now and Beyond**” organized by Department of Chemistry, Hansraj College, in association with IQAC, Hansraj College, University of Delhi on 22nd January, 2022. **Speaker Name:** Dr. B. S. Balaji: School of Biotech. JNU, New Delhi, **Number of Participant:** 100
23. Organized a Webinar on “**Problem Solving and ideation**” organized by IIC, HRC in association with IQAC, Hansraj College, University of Delhi on 22nd February, 2022. **Speaker Name:** Prof. Mahendra P. Darokar, IIC, Chief Scientist technology Management directorates (SeMI), CSIR, Anusandhan Bhawan, New Delhi, **Number of Participant:** 98
24. Co-convenor Dreams Foundation (CDF) from Date: 25/3/2022
25. Worked as Co-convenor for the lecture: To celebrate Hundred Glorious Years of University of Delhi, Department of Chemistry, Hansraj College, Presents The centenary year Lecture Series (May 2022- April 2023) Lecture 1: “**Recent Advances in Global**

- Leishmania Control**” Friday 13 May 2022 time: 10: 30 am Seminar Hall, Hansraj College, Delhi University. Speaker Name: Prof. Ravi Durvasula, Chair, Department of Medicine, Division of Infectious Diseases Mayo Clinic, Jacksonville, FL, USA
26. Worked as Co-convener for the lecture: To celebrate Hundred Glorious Years of University of Delhi, Department of Chemistry, Hansraj College, Presents The centenary year Lecture Series (May 2022- April 2023) Lecture 2: “**Methodological Considerations in Translating targeted radiopharmaceutical for theranostics**” Tuesday 28th June 2022 Time: 2: 30 pm Online Mode. Speaker Name: Dr. Puja Panwar Hazari, Scientist “F” Institute of Nuclear Medicine and Allied Science Timarpur, Delhi-110054
27. Coordinator in a Online workshop on “**Design Thinking, Critical Thinking and Innovation Design**” organized by IIC, Hansraj College, University of Delhi on 28th March, at 4: 00 pm to 5:30 pm 2023. Speaker Name: Dr. Ketan Patel, Senior Scientist CSMCRI, India
28. Worked as a seminar Coordinator for the lecture on “**Problem Solving and Ideation**” organized by IIC, Hansraj College, University of Delhi on 29th March, at 11:40 am to 1:00 pm 2023. Speaker Name: Dr. Dipan Sahu, Asst. Innovation Director, Ministry of Education’s Innovation Cell & AICTE, Govt. of India
29. Worked as a Activity Coordinator for the Innovation & Entrepreneurship Outreach Program “**Hands-on Training for making Herbal Soaps, Herbal Colours, Sanitizers**” organized by IIC, Hansraj College, University of Delhi on 18th March, 2023 at 9:30 am at Sarvodya Kanya Vidyalaya, Naraina, New Delhi.

RESEARCH PUBLICATIONS

1. “*Palladium-Catalyzed Intramolecular Fujiwara-Hydroarylation: Synthesis of Benzo[a]phenazines Derivatives*” Sonu Kumar, Rakesh K. Saunthwal, Mohammad Mujahid, Trapti Aggarwal, and Akhilesh K. Verma* *J. Org. Chem.* **2016**, *81*, 9912.
2. “*Regio- and Stereoselective Domino Synthesis of Oxazolo Fused Pyridoindoles and Benzofurooxazolo Pyridines from ortho-Alkynylarylaldehydes*” Shilpi Pal, Deepak Choudhary, Mohit Jainth, Sonu Kumar, Rakesh K. Tiwari and Akhilesh K. Verma* *J. Org. Chem.* **2016**, *81*, 9356.
3. “*Palladium Meets Copper: One-Pot Tandem Synthesis of Pyrido Fused Heterocycle via Sonogashira Conjoined Electrophilic Cyclization*” Sonu Kumar, Rakesh K. Saunthwal, Trapti Aggarwal, Siva K. Reddy Kotla and Akhilesh K. Verma* *Org. Biomol. Chem.* **2016**, *14*, 9063.

4. **“Iodine-mediated Synthesis of Heterocycles via Electrophilic Cyclization of Alkynes”** Trapti Aggarwal, **Sonu Kumar** and Akhilesh K. Verma* *Org. Biomol. Chem.* **2016**, *14*, 7639. (Review article)
5. **“Tandem Approach to Benzothieno- and Benzofuopyridines from o-Alkynyl Aldehydes via Silver-Catalyzed 6-endo-dig Ring Closure”** **Sonu Kumar**, Carlos Cruz-Hernandez, Shilpi Pal, Rakesh K. Saunthwal, Monika Patel, Rakesh K. Tiwari, Eusebio Juaristi, and Akhilesh K. Verma* *J. Org. Chem.* **2015**, *80*, 10548.
6. **“Pd(II)-Catalyzed C-H Activation of Styrylindoles: Short, Efficient, and Regioselective Synthesis of Functionalized Carbazoles”** Rakesh K. Saunthwal, Monika Patel, **Sonu Kumar**, Abhinandan K. Danodia, and Akhilesh K. Verma* *Chem. Eur. J.* **2015**, *21*, 18601.
7. **“Tandem Synthesis of Pyrroloacridones via [3+2] Alkyne Annulation/Ring-Opening with Concomitant Intramolecular Aldol Condensation”**Akhilesh K. Verma*, Siva K. Reddy Kotla, Trapti Aggarwal, **Sonu Kumar**, Hemlata Nimesh and Rakesh K. Tiwari. *J. Org. Chem.* **2013**, *78*, 5372.
8. **“Palladium-Catalyzed Regioselective [3 + 2] Annulation of Internal Alkynes and Iodopyranoquinolines with Concomitant Ring Opening.”** Trapti Aggarwal, Rajeev R. Jha, Rakesh K. Tiwari, **Sonu Kumar**, Siva K. Reddy Kotla, Sushil Kumar and Akhilesh K. Verma* *Org. Lett.*, **2012**, *14*, 5180.
9. **“Site-Selective Electrophilic Cyclization and Subsequent Ring-Opening: A Synthetic Route to Pyrrolo[1,2-a]quinolines and Indolizines”** Trapti Aggarwal, **Sonu Kumar**, Devendra K. Dhaked, Rakesh K. Tiwari, Prasad V. Bharatam and Akhilesh K. Verma* *J. Org. Chem.* **2012**, *77*, 8562.
10. **“Regioselective 6-endo-dig Iodocyclization: An accessible approach for Iodobenzo[a]phenazines”** Sonu Kumar, Mohammad Mujahid and Akhilesh K. Verma * *Org.Biomol.Chem.* **2017**, *15*, 4686.
11. **“Trifluoroacetic Acid Mediated One-Pot Synthesis of Furo-FusedQuinoxalines/Pyrazines”** Kapil Mohan Saini, Sonu Kumar, Monika Patel, Rakesh K. Saunthwal and Akhilesh K. Verma* *Eur. J. Org. Chem.* **2017**, *2017*, 3707.
12. **“Exploring the Behavior of NFSI Reagent as Nitrogen Source”** Sushmita, Trapti Aggarwal, Sonu Kumar and Akhilesh K. Verma. *Org. Biomol. Chem.*, **2020**,*18*, 7056-7073.
13. **“Optically superior fluorescent probes for selective imaging of cells, tumors, and reactive chemical species”** Abhishek Saini, Jyoti Singh and Sonu Kumar *Org. Biomol. Chem.*, **2021**,*19*, 5208.
14. **“Medicinal Active Application of Dibenzofurans Derivatives”** Mohammad Roshan Shoab Savanur, Abhishek Kumar, Manoj Kumar, * Sonu Kumar* *Chem. Biol.Lett.*,

AWARDS AND SCHOLARSHIPS

- Awarded **Junior Research Fellowship (JRF)** by Council of Scientific and Industrial Research (CSIR), India for excellent performance in **CSIR-NET (National Eligibility Test)** held on 19/06/2011 in chemical science.

SKILLS

- Expertise in Column Chromatography and 1D- NMR Spectroscopy, Delta software for ¹H NMR and ¹³C NMR
- Expertise in Windows, MS Office Applications, Chem Bio Office 2010 and Other Technology

PERSONAL STRENGTHS

- An analytical mind with the ability to think clearly and logically, proactive attitude and problem-solving skills.
- A systematic, organized, hardworking and dedicated team player with an analytical bent of mind, determined to be a part of a growth-oriented organization.
- Innovative, creative and interested in taking up challenges with a keen aptitude to learn new things
- Effective team player and a good leader with excellent managerial and interpersonal skills.
- I consider myself as an energetic, enthusiastic person to make things happen under hard circumstances with a “can-do” attitude.

PERSONAL DOSSIER

Gender	:	Male
Linguistic Abilities	:	English and Hindi
Nationality	:	Indian
Hobbies	:	Playing basketball and chess, visiting monuments.
Permanent Address	:	D-40, Village Sarakadi Khumar Post- Nagrajpur Distt-Saharanpur Pin Code-247120, Uttar Pradesh, India

Declaration

I declare that the information given above is true to the best of my knowledge and belief and nothing has been hidden.