DEBAYAN SARKAR, Ph.D

Work Address (Preferred):

Department of Chemistry, Indian Institute of Technology, Indore
Simrol, Khandwa Road, Madhya Pradesh, India, Pin- 453552
Tel: +91 0731 660 3179; Cell: +91 7735588382 (Preferred) ;
Email : sarkard@iiti.ac.in/ sarkar_debayan@yahoo.co.in
Website : **https://chemistry.iiti.ac.in/people/faculty/dr-debayan-sarkar/**
http://scholar.google.co.in/citations?user=tobGYYsAAAAJ&hl=en
https://www.researchgate.net/profile/Debayan_Sarkar3

Personal Information:

Date of Birth	:	7th April, 1982
Sex	:	Male
Nationality	:	Indian
Age	:	43 yrs

Present status:

Associate Professor, Department of Chemistry, Department of Chemistry, Indian Institute of Technology, Indore, from 19th May 2022 - Continuing.

Past Employment & Post-Doc Fellowship Positions:

IGP Visiting Associate Professor – Department of Chemie and Pharmazie , University of Regensburg, Prof. Oliver Reiser Group, May – August 2025

IGP Visiting Associate Professor – Department of Chemie and Pharmazie , University of Regensburg, Prof. Burkhard Koenig Group, June – August 2024

Associate Professor of Chemistry, Department of Chemistry, National Institute of Technology, Rourkela, Odisha, India, Pin- 769 008, from 02nd Feb 2018 – 17th May 2022.

ICMR International Fellow, Prof. Burkhard Koenig Group, University of Regensburg, Germany, Jan 2020- Dec 2020

Assistant Professor of Organic Chemistry, Department of Chemistry, National Institute of Technology, Rourkela, Odisha, India, Pin- 769 008, ***from 17th October 2011 to 01st Feb 2018***.

DAAD Associate Professor (Academics)- Dec 2018-Jan 2019 With Prof. Christoph Schneider, University of Leipzig, Germany

Visiting Senior Assistant Professor: **Dec. 2015 – March 2016**, With **Prof. Masahiko Yamaguchi**, Graduate School Of Pharmaceutical Sciences, Tohoku University, Japan

(INDO-US Postdoctoral Research Fellow) with **Prof. B M Trost**, Department of chemistry, Stanford University, California, USA-94305 ***(2012- 2013)***

Academic Background :

- **Ph. D** (Organic Chemistry): **01-12-2011**, Jadavpur University, Jadavpur, Kolkata, India.

- **Thesis Title**: "***Synthesis of Biologically Active Natural Products***"

  Institute: Department of Organic Chemistry, **Indian Association For The Cultivation of Science**, Jadavpur, Kolkata - 700032, India.

  Supervisor: Professor R.V.Venkateswaran

- **M. Sc.** (Chemical sciences) (specialization in **Organic Chemistry**): **2003 - 2005**, Department of Chemistry, University Of North Bengal, West Bengal, India (**First Class**)

- **B. Sc.** (Chemistry (**Honours**), Physics & Mathematics): **2000 - 2003**, University of North Bengal, West Bengal, India.

No. Of Ph.D & Master's Students Guidance: Organic Synthesis and Molecular Engineering Group

Ph.D students – 8 (Completed)
14 (Fourteen)....Ongoing

Two Year Masters Project Student – 2 (Two)....Ongoing

Ph.D Thesis Supervised: 8 (Eight) Completed

1. Manoj Kumar Ghosh (2018)- Title: New Intrigues with Oxidative Dearomatisation and Related Strategies, Presently -National Post doc fellowship- University of Warsaw Poland
2. Nilendri Rout (2019) – Title: Solving Molecular Complexities with Oxidative Dearomatisation and Transition metal catalysis
3. Sagarika Behera (2020)- Tiltle: Synthetic Approaches Towards Biologically Active Heterocycles Employing Catalytic Strategies''
4. Sushree Ranjan Sahoo (2020) – Title: Synthetic Efforts toward Carbon-Heteroatom Bond Generations Employing Dearomatisation, Alkene and Alkyne Intrigues
5. Puspendu Kuila (2022) – Title: Tribromides in Oxidative Dearomatisation: A Toolbox to Solve Molecular Complexities
6. Nabakumar Bera (2022)- Title : Synthesis of Heterocyclic Molecules Employing Metal Catalysed Atom-economic Couplings and Sustainable Dearomatization Techniques
7. Biswajit Das (2023) – Title - Synthetic Attempts with Visible Light Catalysis and Metal Catalysis Towards Dearomatization and Related Intrigues
8. Barnali Roy (2024) – Title - Exploring Molecular Intricacy: Development of Facile Carbon-Heteroatom Bonds via Oxidative Dearomatization Reactions (ODRs)

Master Thesis Supervised: 17 (Seventeen)

1. Visible Light Mediated Sustainable Transformation of α, β-Unsaturated Lactones- Arindam Bhatta -2025
2. Trials Towards Visible Light Catalysed Dearomative Spiro-Amidation- Dhrutiman Rout - 2025
3. Total Synthesis of Biologically Active Natural Product Employing Catalytic Asymmetric Dearomatization (2023-24) – Raghunath Pollai
4. Sustainable Transformation of Plastic Arenes to Fine Chemicals – Nabanita Dey (2023-24)
5. Visible Light Assisted Oxidation at Benzylic Position of Homologated Ynones with Aerobic Oxygen, Leading to Diketone Synthesis- Ankush Kumar (2021-22)
6. Ruthenium Catalysed Synthesis of Synthesis of Azepines- Ipsita Majhi (2021-22)
7. BF3·Et2O-Promoted Cascade Reactions: Direct Synthesis of Sulfinylated Spiro-trieneone-Sangam Jha (2021-22)
8. Synthetic Attempts with Tribromides towards Dearomatisation – Sayan Halder (2018-2020)
9. Towards the sysnthesis of Tocopherol – Kunika Gupta(2018-2020)
10. Gold(l)-Catalyzed Atom-Economic Synthesis of 2-Substituted indole via 5-endo-dig Cyclization- Ms. Moni Singh-2019
11. Synthesis of 1-ethylpyridine tribromide; Utilization in Spirofurano Naphthalone Synthesis : Footsteps towards

Asymmetric Synthesis- Mr. Devasish Sood-2019
12. Halo-azido Ketones : Synthesis, Applications and Activity – Ms. Prithwa Das-2018
13. Asymmetric Synthesis of Tocopherol and Tocotrienol family employing C-2 methylation of 2-carboxy-4-Chromanones- 2017-18- Mr. Sudeep Sarkar, Presently Ph.D fellowship University of Warsaw Poland
14. Asymmetric Synthesis of Tocopherol (Vitamin-E) Employing C-2 Methylation of 2-Carboxy-4-Chromanones2017-18-Mr. Subhradip Kundu, Presently Ph.D fellowship University of Strosbourg, France 2017
15. Approach towards the Synthesis of Biologically Active Chromone Systems-2016-17- Mr. Chandak Adhikari
16. Synthetic Efforts towards Medicinally Important Aryl Naphthofurans and Benzofurans Mediated by Quaternary Ammonium Salt- 2016-17- Mr. Suchit Gupta
17. Trials towards functionalising α-ketols – 2014-16- Miss. Samapika Mishra
18. Concise synthesis of Napthoquinones- 2014-16- Miss. V. Chandurani
19. Facile Hyvervalent Iodine mediated Oxidative dearomatization of Naphthols- 2012-2014- Mr. Sushree Ranjan Sahoo.
20. Attempts towards total synthesis of spiroliganones (2013-2015)- Mr. Punabasu Bhattacharya.
21. Efforts towards alkyne insertion reactions via Oxidative Dearomatisation (2013-2015) – Mr. Rahul Kumar

Awards & Fellowships

1. **IIT Indore Mobility Award Grant 2024-25**
2. **IIT Indore Best Research Paper Award – 2024**
3. **Chemcomm RSC Pioneering Investigator 2023**
4. **Prof. R C Tripathy Memorial Award for Excellence in Research, Orissa Chemical Society 2021**
5. **SERB TETRA AWARD 2021 by Department of Science and Technology (DST), Govt. Of India**
6. **ICMR- DHR Long Term Fellowship to University of Regensburg, Germany, 12 months, Govt. Of India 2019**
7. **DAAD-Research Stay Award 2018, University of Leipzig, Germany**
8. **Bentham Ambassador on Bentham Science Publishers 2020-21**
9. **VIFA International Young Scientist Award 2017**
10. **Tohoku University Visiting Professor – Awarded (Dec 2017 – June 2018)**
11. **" Certificate of Appreciation" by Education Expo-FBA- 2017 (Young Scientist Category)**
12. **Tohoku University, Japan Visiting Professor Award (December 2015 to March 2016)**
13. **DST-INSA- INSPIRE Faculty Award-2013** in Chemical Sciences
14. **Board of Research in Nuclear Sciences, Govt. of India - Young Scientist Award- 2014** in Chemical Sciences.
15. **Department of Science and Technology, Govt. of India -Fast Track Projcet award for Young Investigators- 2012**
16. **INDO-US RESEARCH FELLOWSHIP Award 2012** in Chemical Sciences, Stanford University, California, US.
17. **Doctoral Research Fellowship**: Qualified with Rank among Top 100 students. National Eligibility Test (NET-December'**2004**); Council of Scientific and Industrial Research (CSIR), New Delhi, India.
18. **Junior Research Fellowship** (CSIR): September, **2005 -** September, **2007**
19. **Senior Research Fellowship** (CSIR): October, **2007** - May **2010**

Ongoing Research Projects at IIT Indore:

1. Title : Building 3D chemical space by Dearomatization of Electronically Challenging 2D (hetero)arenes Employing Visible Light and NIR , 55 Lakhs, PI

   Funding Agency : *ANRF, Department of Science and Technology, Govt. Of India, 2025-28*

2. Title: Fostering Innovation to Environmental Sustainability and Energy Technologies for a Greener Future. Total amount: Rs. 33.5 Crores out of Rs. 100 Crores (2025-2030)

   Funding Agency: ANRF PAIR- Project SAKSHAM – (Green- FIEST) (Theme Lead)

3. Title: Development of Portable Kit -An Alternative to Traditional Post Harvest Management
   Total amount: Rs. 1.26 Crores (2025-2030)

   Funding Agency: TIH- IIT Bombay

4. Title: Developement of Portable Kit – An Alternative to Traditional Post Harvest Management Employing Photodynamic Inactivation. Total amount: 12.5 lakhs.

   Funding Agency: AgriHub: Innovation Hub for Agriculture (AI/ML & Deep Learning Center of Excellence) scheme, IIT Indore. Duration- 2025-2027

5. Title : Livelihood interventions for Scheduled Caste labourer through "Shramik Vikas" community partnered training programs in Simrol Block, Indore District, Madhya Pradesh State, Rs. 1 Crore, Co-PI, 2025-28

   Funding Agency : Department of Science and Technology, Govt. Of India

6. Title : Sustainable Synthesis of Drug Targets, Machine Learning, Chemoenzymatic Resolution and Advancing Tech-transfer Chemical Education in India and Norway, Rs. 1.14 Crores, PI, 2024-27

   Funding Agency : UGC, Govt. Of India

7. Title - Photo and Electro Catalytic Approaches Towards Carbon Heteroatom Bond generations, 30 Lakhs, PI
   Funding Agency – MOE STARS , 2023-2026

8. Title : Chemical Innovations For Sustainable Future 2020- 2025 (Principal Investigator), 192 Lakhs
Funding Agency : UGC-DAAD, Under Indo-German Higher Education Partnerships, PI

9. Title: Developing Sustainable Enantioselective Carbonheteroatom Bond Formations Employing Dearomatisation reactions (EDRs), 30 Lakhs, 2021-2024
Funding Agency: CSIR, PI

10. Title : Technology Dissemination of Compressed Colored Composite for a wide range of products to support sustainable rural infrastructure, INR 59,40,000, 2023-2025, *Funding agency - DST, GOI Co-PI*

11. Title: Alternative treatment approaches for individuals with mutations in thyroid hormone transporters, INR 30,00,000, *2025-2027*, *Funding agency - ICMR, GOI Co-PI*

Completed Research Projects:

1. Title: Developing Enantioselective Carbon-heteroatom Bond Formations Employing Visible Light, 44 Lakhs, 2021-2024 Funding Agency: SERB, Department of Science and Technology, PI

2. Title: Developing of Efficient Tribromides as Versatile Fine Oxidative Dearomatisation Reagents, 30 Lakhs, 2021-2023 Funding Agency: SERB, Department of Science and Technology, SERB TETRA AWARD, PI

3. Title: WASTE-TO-WEALTH" - Sustainable and Innovative Organic Farming Techniques, 45 Lakhs, 2021-2025 Funding Agency: CSR, Rourkela Steel Plant, PI (Transferred to another PI at NIT Rourkela)

4. Title : Exploring Molecular Intricacy – Developing Facile Catalytic Asymmetric Oxidative Dearomatisation Reactions (CAODRs) 2017- 2020 (Principal Investigator), 42 Lakhs Funding Agency : SERB, Department of Science and Technology, PI

5. Title : Injectable Nanocrystalline Hydroxyapatite- Polyanhydride Based Paste for Bone Substitution, 48 Lakhs
   Funding Agency : Department of Biotechnology. (Co- Investigator)
   Status : 2017-2020

6. Title : Intramural Project on Preparation of Low Cost Oxygen Concerntrator with Start up Yarev Technologies, FTBI NIT Rkl, 2 Lakhs
   Funding Agency : NIT Rourkela. (Principal Investigator)
   Status : 2021-22

7. Title : Intramural Project on Organic Farming, 5 Lakhs
   Funding Agency : National Institute of Technology Rourkela (Principal Investigator)
   Status : 2018-2019

8. *Title :* Ruthenium catalysed Non-Metathesis Couplings, 35 Lakhs

Funding Agency : Department of Science and Technology – Indian National Science Academy- INSPIRE FACULTY AWARD. (Principal Investigator)

Status : 2014-2019

9. *Title:* Synthesis of Medicinally Important Natural Products employing Cyclopropyl Ring- Cleavage and Oxidative de-aromatization reactions, 25 Lakhs

Funding Agency : SERB, Department of Science and Technology, Govt. of India (Fast Track Scheme for Young Scientists)
Status: 2013 – 2016

10. *Title :* Design of Multipurpose Photo reactor and Photoreactions, 5 Lakhs
Funding Agency : Technical Education Quality Improvement Programme-II, National Institute of Technology, Rourkela, India
Status : 2014-15

11. *Title :* Ruthenium Catalysed Atom-economic Transformations, 17 Lakhs

Funding Agency : Board of Research in Nuclear Sciences, Govt. of India (Young Scientist Research Award Scheme)
Status : 2014-2017

Courses Taught: 13 Years of Teaching Experience

Course on "Structural Determination of Organic Compounds" taught for one semester at Graduate School of Pharmaceutical Sciences, Tohoku University, Japan

Courses Taught:

CH103 General Chemistry……..Credits -4 (One semester)
CH 153 Chemistry Laboratory…….Credits-2 (One semester)
RDT 601 Design Thinking ……..Credits-3 (One semester)
CH 614 Synthesis of Natural Products and Heterocycles (One semester)
CY 313 Chemistry of Natural products …Credits- 4 (Four Semesters)
CY 317 Spectroscopic Methods of Analysis..Credits – 3 (One Semester)
CY 374 Inorganic Chemistry Lab……Credits – 3 (One Semester)
CY-542 Methods in Organic Synthesis……Credits- 3 (Three Semester)
CY- 571 Stereochemistry and Reaction Mechanism…Credits- 6 (Six Semesters)
CY-1101 Chemistry……Credits 3 --- 1 (One Semester)
CY- 2701 Structural Determination of Organic Compounds 1 (One Semester)

Courses and Conferrences Organised:

1. **Convenor of GIAN Course on " Advanced Organic Synthesis and Catalysis For a Sustainable Future" , March 24-28, 2025**
2. **Convenor of International Conference on Sustainable Chemistry III 2024 under the INDO-GERMAN Higher education Partnerships March 18-20 2025**
3. **Convenor of Rural Innovators Conclave – II at IIT Indore – 21-22nd March 2025 (Funded by ANRF- Rs. 4.5 Lakhs)**
4. **Convenor of Rural Innovators Conclave – I at IIT Indore – 5-6th January 2024 (Funded by SERB- 2 Lakhs)**
5. **Convenor of International Conference on Sustainable Chemistry II 2024 under the INDO-GERMAN Higher education Partnerships Feb 20-22 2024.**
6. **Convenor of International Conference on Sustainable Chemistry 2023 under the INDO-GERMAN Higher education Partnerships Feb 22-23 2023.**
7. **Convenor of a 3-day hands-on workshop (8th to 10th May 2022) on "Artificial Intelligence (AI) and Machine Learning" for class VIII & IX students from different schools located in Rourkela at FTBI NIT Rourkela**
8. **Virtual Symposium on Chemical Innovations For Sustainable Future Under INDO-German Higer Education Partnerships , NOV 16, 2021**

9. **Convenor of a seminar cum workshop at FTBI Smart seminar hall, Sponsored by MCL, in collaboration with Biotez Agrinovation Pvt. Ltd. The concerned seminar and workshop, titled 'Advanced Innovation and Opportunities in Agri-Tech Entrepreneurship', is to be conducted from 5th-7th May 2022.**
10. **Workshop on Newer Directions Towards Agri- Tech Entreprenuership 11th Nov. 2021**
11. **Conducted NIDHI-EIR Round-4 selection Meeting on 19th January 2022.**
12. **Convenor of FTBI Innovation Carnival – 22nd – 26th March 2021**
13. **Waste to Wealth- Sustainable and Innovative Organic farming techniques especially for Women farmers of The Peripheral areas of RSP- 30th Nov 2021- 2nd Dec 2021**
14. **Waste to Wealth- Sustainable and Innovative Organic farming techniques especially for Women farmers of The Peripheral areas of RSP- 31 March 2022- 2nd April 2022**
15. **Webinar " "Engagement Programme for Budding Entrepreneurs" Saturday, 17th October 2020 convenor**
16. **Coordinator of MHRD GIAN Course on "Photochromic Molecules and Materials for a Sustainable Future" by Prof. Burkhard Koenig Universität Regensburg, Germany on 14th-18th February 2019**
17. **Five Days Training Programme On Organic Farming for Sustainable Agriculture (2nd July to 6th July, 2019)**
18. **First NIT RKL Golden Lecture by Prof. Goverdhan Mehta 10th January 2014**
19. **National Conferrence " Advances in Chemistry With Biology and Industrial Relevance- ACBIR-2014"- 10th-11th January 2014**
20. **Workshop On Recent Trends in Chemical Science and its Industrial and Biological Relevance (RTCSIBR-2018) February 14-18, 2018**
21. **Workshop Analytical Techniques in Chemistry Tequip II 06 Apr 2016- 07 Apr 2016**

Membership of Societies and Organising :

1. Nominated as a Core member of International steering Committee of Royal Society of Chemistry, 2016
2. Nominated as Core member of Royal Society of Chemistry(Eastern India) 2015-2019
3. Member of Royal Society of Chemistry, UK *(MRSC)*
4. Life Member of Chemical Research Society of India
5. Organising Secretary of National Conferrence " Advances in Chemistry with relevance to Industry and Biology" – January10-11, 2014- Royal Society Best Poster Prize
6. Patron Member Orissa Chemical Society 2019.
7. Convenor of Recent Trends in Chemical Science and its Industrial and Biological Relevance (RTCSIBR-2018)" during February 14-18, 2018 at NIT, Rourkela.
8. Fellow & Life Member of Indian Chemical Society

EDITORIAL SERVICE

1. Reviewer for Journals – ACS, Wiley, Elsevier, Taylor and Francis, RSC 2. Bentham Science Ambassador
2. Associate Editorial Board Member- Current Indian Science(Organic Chemistry)

Editor of a book entitled " Sulphonamides- An Overview " by NOVA Science Publishers , USA ISBN: 978-1-53618-157-9, 2020

LIST OF LABORATORIES DEVELOPED at Institutes

At IIT Indore

Organic Synthesis and Molecular engineering laboratory, 1E -201, POD Building

At NIT Rourkela

Organic Synthesis and Molecular engineering laboratory, Lab No. 405, BM-BT, NIT Rourkela

Chemical Innovation Laboratory, Under the INDO-German Higher Education Partnership (IGP), lab No. 420, BM-BT, NIT Rourkela

Patents

1. **Development of Efficient Tribromides as Versatile Fine Dearomatisation Reagents- Granted 2023 : Patent Application No. 201931024717**
2. **A portable kit for visible light photodynamic inactivation of microbes Filed 2024 : 202421010243**

Publications:

https://scholar.google.co.in/citations?user=tobGYYsAAAAJ&hl=en

Total Citations= 2039, h-index = 17, i-10 index= 37

Publications:

61. Tribromide enabled step-up generation of spirolactams from esters employing oxidative dearomatization of arenols Barnali Roy, Vidya Avasare and Debayan Sarkar * ***Chem Comm*** 2024 https://pubs.rsc.org/en/content/articlelanding/2024/cc/d4cc02527j

60. g-C3N4 Photocatalyzed Decarboxylative Oxidation ofCarboxylic Acids and the Oxidation of Alkenes and Alkanes, Sangita Bishi, Bhabani Sankar Lenka, Peter Kreitmeier, Oliver Reiser and Debayan Sarkar*, ***Advanced Synthesis and Catalysis*** 2024, https://doi.org/10.1002/adsc.202400117

59. High Yield Synthesis of Spirocyclic Dienones from Phenols Employing Tribromide Catalysed Dearomatization, Puspendu Kuila, Barnali Roy, Debayan Sarkar*, ***European Journal of Organic Chemistry*** 2024, https://doi.org/10.1002/ejoc.202400267

58. BF3·Et2O-assisted synthesis of sulfinylated spiro [5.5]trienones from biaryl ynones†, Barnali Roy, Puspendu Kuila, Sangam Jhaa and Debayan Sarkar*, ***Organic & Biomolecular Chemistry*** **2024**, 22, 4292-4296

57. g-C3N4 Catalysed Sustainable Synthesis of (Hetero)aryl Acids and Regioselective α- bromo ketones In One Pot Under Visible Light Catalysis Sangita Bishi, Debayan Sarkar **2024** ***Catalysis Science and Technology*** CY-ART-01-2024-000029

56. Visible-light Catalysed Trifluoromethylthiolation and Related Dearomative Spirocyclizations Barnali Roy, Puspendu Kuila, Debayan Sarkar **2024** ***Advanced Synthesis & Catalysis*** 2024, 366 (7), 1627-1635

55. Sustainable Organic Photocatalysis for Site-Selective Hydrazocoupling of Electron-Rich Arenes. Biswajit Das, Sushree Ranjan Sahoo, Amitabha Das, Biswarup Pathak, Debayan Sarkar ***Organic Letters.*** 2023, 2023, 25, 42, 7733-7738

54. Visible Light Promoted Brominative Dearomatization of Biaryl Ynones To Spirocycles Roy, Barnali; Kuila, Puspendu; Sarkar, Debayan ***J. Org. Chem*** 2023, 88, 15, 10925-10945

53. Riboflavin Photocatalyzed Dearomative Spiro-etherification of Naphthols, jo-2022-03037p.R2 Bera, Nabakumar ; Lenka, Bhabani; König, Burkhard; Sarkar, Debayan ***J. Org. Chem*** 2023, 88, 13, 7977-7987

52. Photoredox Catalyzed Thiocyanative Cyclization of Biaryl Ynones to Thiocyanated Spiro[5.5]trienones: An External Oxidant and Transition-Metal Free Approach. Samanta, Shantanu; Sarkar, Debayan ***Chem Photo Chem*** *2023* 87, (Accepted Article) doi/abs/10.1002/cptc.202200335

51. Temperature-Controlled Chemoselective Synthesis of Multisubstituted 4-Alkynyl/trans 4-Alkenyl Coumarins. Sushree Ranjan Sahoo, Biswajit Das, Debayan Sarkar*, and Hans Reuter ***J. Org. Chem*** 2022, 87, 21, 13529–13541

50. Synthetic Attempts Towards α-Tocopherol – An Overview Subhradip Kundu, Debayan Sarkar* ***Journal of heterocyclic Chemistry, 2022*** 33(17): 1723-1728

49. Introducing C2–Asymmetry in Chromans – A Brief Story, Subhradip Kundu, Sangita Bishi, Debayan Sarkar* ***New Journal Of Chemistry***, 2022 https://doi.org/10.1039/D2NJ00944G

48. Unprecedented Rearrangement of β-difluoroboryloxy Ethers- A Route to C-2 alkyl-chromenones

Sushree Ranjan Sahoo, Debayan Sarkar*, Prathap Somu, Subhankar Paul and Peter Lönnecke ***Synlett*** 2022 doi.org/10.1055/a-1833-8927

47. Empowering Visible Light Catalysis: Brominative Dearomatizationof Biaryl Ynones. Barnali Roy, Puspendu Kuila, Debayan Sarkar* ***ChemRxiv*** 2022 https://chemrxiv.org/engage/chemrxiv/article-details/621776e1c3e9da0d30755e2b

46. Gold(I) Catalyzed Efficient Synthesis of Heterocycles via Allene Oxide from Propargylic Alcohols ***J. Org. Chem*** *2022* 87, 15, 9729−9754 Bera Nabakumar; Samanta, Shantanu; Sarkar, Debayan

45. Stereoselective Synthesis of Oxacycles via Ruthenium Catalyzed Atom-Economic Coupling of Propargyl Alcohols and Michael Acceptors ***J. Org. Chem*** 2021, 86, 23, 16369-16395 Nabakumar; Samanta, Shantanu; Sarkar, Debayan

44. Gold(III) Catalyzed Synthesis of 2,5-disubstituted Furans from substituted 5-methoxyhex-3-yn-2-ols - Mechanistic Outlook– Sagarika Behera, Nabakumar Bera, Debayan Sarkar* **Synthetic Communications 2021**; 51; 3090-3098

43. Synthetic Attempts Towards Eminent Anti-Viral Candidates of SARS-CoV. Subhradip Kundu and Debayan Sarkar*. ***Mini-Reviews in Medicinal Chemistry*** **2022**, *22*, 232-47

42. Organo-Acid Catalysed Synthesis of 2,2-Disubstituted Chromans and 1,1-Disubstituted Indanols/ Indenols. Sagarika Behera, Nabakumar Bera, Debayan Sarkar* ***Chemistry Select*** **2021**, 6, 6193-6196

41. A combined experimental and theoretical analysis on the solid-state supramolecular assemblies of pent-2-ynol derivatives- Nabakumar Bera, Debayan Sarkar*, Saikat Kumar Seth* ***Journal of Molecular Structure*** 2021,1243, 5, 130813

40. Ruthenium (VIII) Catalysed Dearomative Pyridyl C-X activation- Direct Synthesis of N- Alkyl-2-pyridones – Biswajit Das, Nilendri Rout, Debayan Sarkar* ***Asian Journal of Organic Chemistry*** **2021**, *10*, 1786-1794

39. "A Year Away to 100th Year of Vitamin E Synthesis"- Subhradip Kundu, Debayan Sarkar* ***Journal of Heterocyclic Chemistry*** **2021** , *58*, 1741-1748

38. Regioselective C(sp2) – C(sp3) Oxidative Bond Cleavage of 1-(1-hydroxyalkyl) naphthalen-2-ols: First Synthesis of 1-azido-halo-naphtahalene-2(1H)-ones Barnali Roy, Manoj Kumar Ghosh and Debayan Sarkar* ***Israel Journal Of Chemistry*** **2021**, 60, 327-331

37. Synthesis and Structural Anomaly of Xyloketals-Unique Benzoxacycles: A Review Barnali Roy,, Nilendri Rout, Puspendu Kuila,, Debayan Sarkar* ***Journal of Heterocyclic Chemistry Journal of Heterocyclic Chemistry*** **2021;58:8–27**

36. Gram Scale Synthesis of alpha-cyanoalkylboronic esters via Direct B-B and C-N Bond Cleavage. Sushree Ranjan Sahoo[a], Debayan Sarkar* ***Synthetic Communications*** 2020 50 3308-3313

35. Copper(I) Catalyzed Synthesis of Selanyl methylene 4-chromanol and aurone Derivatives

Sushree Ranjan Sahoo and Debayan Sarkar* ***Organic and Biomolecular Chemistry*** **2020**, *18*, 4619-4627

34. Direct Synthesis of Regioselective α-allyl α-selanyl Ketones and selanyl tetra-hydrofurans

Sushree Ranjan Sahoo, Rajat Kumar Singh and Debayan Sarkar* ***Tetrahedron Letters*** **2020**, 61, 151290

33. Revisiting the addition of *Insitu* Nucleophiles to Allenic Ketones: An Entry Towards Synthesis of Benzodioxins. Sushree Ranjan Sahoo and Debayan Sarkar* ***European Journal of Organic Chemistry*** **2020**, *11*, 1727-1731

32. Stereoselective synthesis of para-quinone monoketals through tri-bromide (TBr) mediated oxidative dearomatization of phenols. Sushree Ranjan Sahoo and Debayan Sarkar* ***Tetrahedron Letters*** ,**2020 (cover page Article), 61, 151646**

31. Stereoselective Synthesis of Spiro-Azacycles Through Tri-bromide Mediated Oxidative Dearomatization. Sushree Ranjan Sahoo and Debayan Sarkar* ***European Journal of Organic Chemistry*** **2020**, 397-401

30.Copper(I) Catalyzed Synthesis of Functionalized N-Fused Indolizinone from Substituted Pyridine Homologated-ynones

Sushree Ranjan Sahoo Debayan Sarkar*, ***Journal of Organic Chemistry*** **2020**, 85, 2, 902-911

29. Visible Light Catalysed Selenylative Intramolecular Dearomative Carbo-spirocyclisation (IDCS) of Homologated-ynones. Sushree Ranjan Sahoo and Debayan Sarkar* ***European Journal of Organic Chemistry*** **2020**, 7, 891-896

28. [2+2] Photochemical Cycloaddition in the Synthesis of Natural Products and Related Molecules

DebayanSarkar, Nabakumar Bera and Subrata Ghosh ***European Journal of Organic Chemistry*** **2020**,*10*, Special Issue: Photochemical Synthesis1310-1326

27. Copper(I) Catalysed Direct Synthesis of 2-Methylene-4-Chromanols Debayan Sarkar* Sagarika Behera ***Tetrahedron Letters*** Volume 61, Issue 1, 2020, 151341

26. Redox Economic Synthesis of Trisubstituted Piperidones via Ruthenium Catalyzed Atom-economic Couplings of N-protected 1,5-Aminoalcohols and Michael Acceptors Barry M Trost*, Debayan Sarkar*, Nabakumar Bera ***Advanced Synthesis and Catalysis*** 2019, 361, 24, 5648-5653. **(Most Downloaded Paper 2020)**

25. Ruthenium (VIII) catalysed ipso-Dearomative Spiro-etherification and Spiro-amidation of Phenols Debayan Sarkar* and Nilendri Rout ***Organic Letters*** 2019 21, 11, 4132-4136

24. Hydchloride Promoted Synthesis of Functionalised Isoxazoles and Pyrazoles from Allenic Ketones – First Synthesis of (Z)-2-methyl -7H benzo[b]pyrazolo[5,1-d][1,5]oxazocines

Debayan Sarkar* and Sushree Ranjan Sahoo ***European Journal of Organic Chemistry*** 2019 , 2035-2049

23. Controlling Stereoselectivity in Tribromide Mediated Oxidative Dearomatisations – Tuning The Synthesis of Selective Spirofurano-naphthalones Debayan Sarkar *, Puspendu Kuila, Devasish Sood 2019 ***European Journal of Organic Chemistry*** 2019,34, 5894-5904

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3. A biomimetic type expedient approach to the tricyclic core of xyloketals. Application to a short, stereocontrolled synthesis of alboatrin and a remarkable epi to natural isomerisation. Debayan Sarkar, Subroto Ghosh, RamanathapuramV.Venkateswaran* ***Tetrahedron Letters***, 2009, 50, 1431- 1434

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Administrative Positions:

1. Professor-in-Charge , Centre for Rural Technology and Devcelopment, IIT Indore, From April 2023

2. Faculty and Mentor, Centre for Rural Technology and Devcelopment, IIT Indore, From May 2022

2. Professor-in- charge of the Foundation For Technology and Business Incubation (FTBI), founded by DST in 2016; 1st July 2020- May 2022

2. Professor-in-charge, Organic Farming Project, NIT Rourkela, Oct 2018-continuing

3. Professor-in-Charge, Institute Guest Houses, NIT Rourkela, July 2016- June 2018

4. Vice President, Games, Student Activity Centre, NIT Rourkela, July 2014-June 2016

Selected List of papers presented in conferences & Symposia

32. Invited lecture in the Department of Chemistry, University of North Bengal, 13th December 2022 entitled "Tribromide Catalysis – Newer Directions of Dearomative Syntheses "

31.Invited Talk at annual conference on August 2-3, 2022 by Indian Chemical Society conference at Kolkata

30.Invited Talk at CIAE Bhopal in a National Workshop on Processing and Storage, 22-23 December 2022.

29.Invited Talk at International Conference on Oil, Gas Chemicals & Additive Conference (IOGCA) Ahmedabad, 22-23 September 2022.

28.Invited Talk at ICAT - IIT Indore Joint Symposium on Catalysis, September 28, 2022

27.Participated as a selected participant in National Organic Symposium Trust Conference at Aurangabad Feb 18-21 2023.

26. Invited lecture in the Department of Chemistry, University of North Bengal, 13th December 2022 entitled "Tribromide Catalysis – Newer Directions of Dearomative Syntheses "

25. Invited Lecture at " Workshop on Sustainable Chemical Technology" 23rd March 2021, by FTBI, NIT Rourkela

24. Invited lecture in Webinar organized by Indian Chemical society, University of North Bengal, 1st July 2020 entitled " Recent Advances in Chemistry and Material Sciences 2020"

23. Invited Lecture at International Conference on "Recent Developments in Organic and Applied Chemistry-2020 (RDOAC-2020) 6th - 7 July, 2020 organised by KIIT Bhubhaneswar

22. Lecture in Prof. Burkhard Koenig's Lab, University of Regensburg, Germany, April 2020

21. Invited to **NOST-OCC** Goa 6th-9th August 2018 GOA

20. Paper Presentation on "**Asymmetric Dearomatisation**" at International Conferrence on Organometallic Chemistry, Florence, Italy, 15th-20th July 2018.

19. Invited Speaker at **Institute of Chemistry** , **University of Rennes**, 10th-14th July 2018.

18. Invited Talk at **Rajabazar Science College**, **Kolkata, August 2017**

17. Oral Presentation at National Conferrence at **IIEST 2017- August**

16. Invited Lecture in " *International Conferrence in Chemistry For Human Health (ICCHD) 2017*, 8-10 January 2018 at HIT Kolkata on 100th Birth Centenary of Prof. Asima Chatterjee

15. Solving Molecular Complexity Using Oxidative Dearomatization & Metal Catalysed Atom economic Transformations- **Invited Lecture** 23rd September 2016 at Dr. Reddy's Institute of Life Sciences, Hyderabad

14. **Invited Lecture**: Indian Institute of Engineers – on World's standard day- 14th October 2015

13. Solving Molecular Complexity Using Oxidative Dearomatization & Metal Catalysed Atom economic Transformations- **Invited Lecture** 23rd September 2016 at Dr. Reddy's Institute of Life Sciences, Hyderabad

12. **Invited Lecture**: Indian Institute of Engineers – on World's standard day- 14th October 2015.

11. **Invited Lecture** in " ***Science Academics Lecture workshop on Organic and Inorganic Self Assembly" Department of Chemistry, KIIT University, Bhubhaneswar***, 22nd February 2015.

10. Invited Lecture in " National Symposium on Chemistry and its interface with other Scientific Disciplines " , organized by Chemistry Dept. - Sitananda College and ***Royal Society of Chemistry (Eastern India section)- 12th December 2014***

9. *Exploring Molecular Intricacy- Ruthenium Catalysis and Oxidative Dearomatisation* - Challenges in Organic Chemistry- ISACS 2014- 7th- 10th August, Shanghai, China

8. Towards Natural Product Synthesis-Ruthenium Catalysed Non-Metathesis Couplings and Oxidative Dearomatisation-Oral Presentation- ***NIT Hamirpur- 29-30 May 2014***

7. *Exploring Molecular Complexity- Application to Natural Product Synthesis ;* **Invited Lecture- NIT-Raipur, Recent Trends in Heterocyclic Compounds and Material Science,** 26-30 May 2014

6. *Efficient Transformations towards biologically Important Natural Products*; **Indo-US Research Conclave, March 15-17, 2013, Pune, India.**

5. *The Benzoxacyclic Saga - High excitement and Entrigues;* Trost Group Seminar Talk, 19th December 2012**, Stanford University, California, US.**

4. *'Acid catalysis'-A simple but versatile synthesis in Organic synthesis;* National Seminar on " A journey through Recent Developments in Chemistry" (March 1-2, 2012), **A.B.N.S (Govt. College & University Of North Bengal)**

3. *A simplified approach towards the development of 2,5-dihydro-1-benzoxepin and Synthesis of Radulanins;* National seminar on ' International Year of Chemistry: Chemistry in our lives.(March 15-17, 2011), **University of Burdwan.**

2. *Synthesis of bioactive natural products;* ISOC on " Organic Chemistry' Trends in 21st Century," 10th-12th December, 2009, **Indian Association For The Cultivation Of Science, Jadavpur, India.**

1. *Biomimetic type expedient synthesis of Alboatrin & xyloketal G;* Fourth J-Nost Conference , 6th-9th December, 2008, **Madurai Kamaraj University and NOST , India**

REFERENCES

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**********END**********