



Dr. Sadananda Ranjit

Designation	Assistant Professor
Department	Chemistry
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Educational Qualifications:

2007-2011	Ph. D., in Organic chemistry, National University of Singapore (NUS). Dissertation: "Development of Transition-Metal-Catalyzed C—C and C—S Cross-Coupling Reactions" Supervisor: Prof. Liu Xiaogang
2004-2006	M. Sc. in Chemistry, Indian Institute of Technology Madras (IIT-Madras), India Dissertation: "Novel Routes to Make Shell Protected Nanoparticles" Supervisor: Prof. T. Pradeep
2001-2004	B. Sc. (Honors) in Chemistry, Ramakrishna Mission Residential College Narendrapur, University of Calcutta, India

Career Profile:

1. Ramnagar College, Department of Chemistry, Assistant Professor (HOD), 2018-Present
2. National Institute of Technology Jamshedpur (NIT JSR), DST-INSPIRE Faculty, 2014-2017
3. IIT-Kharagpur, Postdoctoral Fellow, D-Mal-Lab. 2014
4. Institute for Materials Research and Engineering (IMRE) Singapore, Scientist, 2012-2014
5. Kyoto University, Japan, Postdoctoral Fellow, 2011-2012
6. National University of Singapore (NUS), Research Assistant, 2011

Awards/Honors/Fellowships:

- 1) Dr. B. N. Mankad Award for Best Oral Presentation: Presented at the International conference and the 55th Annual Covention of Chemist 2018
- 2) APC Roy Memorial Award for Best Oral Presentation: Presented at the International conference: Recent Advances in Molecules and Materials (RA2M-18) on 02-03 Aug, 2018 at HIT, Haldia, West Bengal, India.
- 3) Awarded the INSPIRE Faculty fellowship in July 2014 by The Department of Science and Technology, Government of India.
- 4) Awarded the "NUS Research Scholarship" from National University of Singapore for 2007 to 2011.

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| 5) Qualified in Lectureship-National Eligibility Test (NET) Chemical Sciences, held on December, 2006, conducted by Council of Scientific and Industrial Research (CSIR), Government of India. |
| 6) Qualified in Graduate Aptitude Test in Engineering (GATE) Examination in Chemistry held by the Ministry of Human Resource Development (MHRD), Government of India for Research Fellowship, 2005. |
| 7) Recipient of “Merit Scholarship” at first & third semester from Indian Institutes of Technology Madras in the academic year 2005. |
| 8) Selected for Education Scholarship in M.Sc. from Government of West Bengal, India 2005. |
| 9) Selected for FFE (Foundation for Excellence) scholarship in B.Sc. (2001-2004). |

Teaching Experiences:

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| 1. Assistant Professor (Jan 2018- Continuing) at Ramnagar College, Depal, West Bengal |
| 2. DST- INSPIRE Faculty (Aug 2014 – Dec 2017) at NIT Jamshedpur
Conducted Course: Stereochemistry and Reaction mechanism (CHG5112), Photochemistry and Pericyclic Reactions (CHG5115), Engineering Chemistry (CH1101), Surface Science and Engineering Practices (CHG1101), Kinetic Theory of Gases, Classical Thermodynamics |
| 4. Lab instructor (2007-2009) for the general chemistry laboratory course of undergraduate students at the National University of Singapore |
| 5. Development of Post Graduate course in Chemical Sciences at NIT Jamshedpur |
| 6. Development of Under Graduate and Post Graduate Laboratory infrastructure at Ramnagar College & NIT Jamshedpur |

Research Experiences:

Jan 2018- continuing	DST-INSPIRE Project: “Transition Metal mediated C-C and C-S cross-Coupling Reactions” at Ramnagr College
Aug 2014- Dec 2017	DST-INSPIRE Project: “Transition Metal mediated C-C and C-S cross-Coupling Reactions” at NIT Jamshedpur
Aug 2014- Dec 2017	Project: “Transition Metal mediated C-C and C-S cross- Coupling Reactions” at IIT Kharagpur Supervisor: Prof. Dipak Ranjan Mal
May 2012- Apr 2014	Project: “Solid supported Metal-catalysts for high performances” Institute for Materials Research and Engineering (IMRE), Singapore
Oct 2011- Apr 2012	Project: “Rhodium-Catalyzed Asymmetric 1,4-addition reaction of Arylethenylboronic Acids to Enones: 1,4-Shift of Rhodium from 2-Aryl-1-alkenylrhodium to 2-Alkenylaryl rhodium Intermediate” Supervisor: Prof. Tamio Hayashi, Kyoto University, Japan

Jan 2011- Aug 2011	Project: "Transition-Metal-Catalyzed C—N Cross-Coupling Reactions" Supervisor: Prof. Liu Xiaogang, NUS, Singapore
Jan 2007- Jan 2011	PhD Thesis: "Development of Transition-Metal-Catalyzed C—C and C—S Cross-Coupling Reactions" PhD Supervisor: Prof. Liu Xiaogang, NUS, Singapore
Aug 2006-Dec 2006	Project: "Environmentally friendly rare earthbased sulfides for surface colorant applications" Supervisor: Prof. Varadaraju U.V., IIT Madras, India
Aug 2005-Apr 2006	MSc Project: "Novel Routes to Make Shell Protected Nanoparticles" Supervisor: Prof. Pradeep T, IIT Madras, India

Research area of Interest:

1. Regioselective Functionalization of Aryl C-H Bonds
2. Decarboxylative cross-coupling reactions
3. Nanocatalysis

Publications:

1. Ketaki Ghosh, Sadananda Ranjit* and Dipakranjan Mal*. "A convenient method for the synthesis of aryl methyl sulfides via Cu(I)-mediated methylthiolation of haloarenes with DMSO" *Tetrahedron Letts.* 2015, 37, 5199-5202.
2. Chao Shen, Haijun Xia, Hua Yan, Xinzhi Chen, Sadananda Ranjit, Xiaoji Xie, David Tan, Richmond Lee, Yanmei Yang, Bengang Xing, Kuo-Wei Huang, Pengfei Zhang and Xiaogang Liu. "A Concise Efficient Synthesis of Sugar-based Benzothiazoles through Chemoselective Intramolecular C—S Coupling" *Chem. Sci.* 2012, 3, 2388-2393.
3. Sadananda Ranjit and Xiaogang Liu. "Direct Arylation of Benzothiazoles and Benzoxazoles with Arylboronic Acids" *Chem.—Eur. J.* 2011, 17, 1105-1108.
4. Sadananda Ranjit, Richmond Lee, Dodi Heryadi, Chao Shen, Ji'En Wu, Pengfei Zhang, Kuo-Wei Huang, and Xiaogang Liu. "Copper-Mediated C—H Activation/C—S Cross-Coupling of Heterocycles with Thiols" *J. Org. Chem.* 2011, 76, 8999-9007.
5. Sadananda Ranjit, Zhongyu Duan, Pengfei Zhang and Xiaogang Liu. "Synthesis of (Z)-Vinyl Sulfides by Copper-Catalyzed Decarboxylative C—S Cross-Coupling" *Org. Letts.* 2010, 12, 4134-4136.
6. Zhongyu Duan, Sadananda Ranjit and Xiaogang Liu. "One-Pot Synthesis of Amine-Substituted Aryl Sulfides and Benzo[b]thiophene Derivatives" *Org. Letts.* 2010, 12, 2430-2433.
7. Zhongyu Duan, Sadananda Ranjit, Pengfei Zhang and Xiaogang Liu. "Synthesis of Aryl Sulfides by Decarboxylative C—S Cross-Couplings" *Chem.—Eur.J.* 2009, 15, 3666-3669.
8. Changlong Jiang, Sadananda Ranjit, Zhongyu Duan, Yu Lin Zhong, Kian Ping Loh, Chun Zhang and Xiaogang Liu. "Nanocontact-induced catalytic activation in palladium nanoparticles" *Nanoscale* 2009, 1, 391-394.

Symposia/Conference Presentations:

1. Sadananda Ranjit*, Tamio Hayashi "Rhodium Catalyzed Conjugate Addition of (E)-1,2-diphenylethenylboronic Acids to Enones: A 1,4-Shift of Rhodium" Presented at the International Symposium on Recent Advances in Chemistry and Material Science (2019) and the Celebration of the International Year of the Periodic Table on 02-03 Aug, 2019 at Saha Institute of Nuclear Physics(SINP), Kolkata, West Bengal
2. Sadananda Ranjit*, "Aryl acids as Surrogates of Aryl halides and Organometallic reagents" (Selected as Best Oral Presentation), Presented at the 55th Annual Covention of Chemist 2018 and International conference: Recent Advances in Chemical Science and Allied Areas on 28-30 Dec, 2018 at G. B. College, Naugachia, T. M. Bhagalpur University, Bhagalpur-853204, Bihar, India
3. Sadananda Ranjit*, "New Approaches for Decarboxylative C–S Cross-Coupling" (Selected as Best Oral Presentation) Presented at the International conference: Recent Advances in Molecules and Materials (RA2M-18) on 02-03 Aug, 2018 at HIT, Haldia, West Beng
4. Sadananda Ranjit. "Methylthiolation of haloarenes with DMSO-CuI-DABCO" DST-INSPIRE Faculty Monitoring-cum-Interaction Meet (Chemical and Material Sciences), 16-17 January, 2017, KIIT University, Bhubaneswar, Odisha, India.
5. Sadananda Ranjit. Ketaki Ghosh, and Dipakranjan Mal, "Methylthiolation of haloarenes with DMSO-CuI-DABCO" 21st International Conference on Organic Synthesis (IOCS-21), 11-16 December, 2016, IIT Bombay, India.
6. Sadananda Ranjit, Keigo Sasaki, Eric Assen B. Kantchev, and Tamio Hayashi. "Tandem 1,4-Shift/1,4-Addition of cis-2-Arylethenylboronic Acids to Enones Catalyzed by a Diene/Rhodium Complex" 3rd Molecular Materials Meeting @ Singapore, 14-16 January 2
7. Sadananda Ranjit, Keigo Sasaki, Eric Assen B. Kantchev, and Tamio Hayashi. "Tandem 1,4-Shift/1,4-Addition of cis-2-Arylethenylboronic Acids to Enones Catalyzed by a Diene/Rhodium Complex" Inaugural Conference on Molecular & Functional Catalysis(ICMFC-2)
8. Sadananda Ranjit, Zhongyu Duan, and Xiaogang Liu. "One-Pot Synthesis of Amine-Substituted Aryl Sulfides and Benzo[b]thiophene Derivatives" Inaugural Conference on Molecular & Functional Catalysis(ICMFC-1), 11-15 July 2010, Singapore.
9. Sadananda Ranjit, Zhongyu Duan, and Xiaogang Liu. "Synthesis of Aryl Sulfides via Decarboxylative C—S Cross-Couplings" The 5th Mathematics and Physical Sciences Graduate Congress (5th MPSGC), 7-9 December 2009, Faculty of Science, Chulalongkorn University
10. Sadananda Ranjit, Changlong Jiang, Zhongyu Duan, and Xiaogang Liu. "Highly Efficient Palladium Nanowire Catalyzed Suzuki-Cross coupling Reactions under mild and Aerobic Conditions" Singapore International Chemistry Conference (SICC-5), 16-19 December 20
11. Sadananda Ranjit. "Magnetic Nanoparticles for Drug Delivery" 7th Graduate Student Symposium, 19-20 November 2007, Faculty of Science, National University of Singapore, Singapore.

Public Service / University Service / Consulting Activity:

1. Resource Person for Public Awareness Programme: (i) Misuses of Chemicals in Fruits, Vegetables and Fishes (ii) Nutritional Food for Child Development, organized by Department of Chemistry, Ramnagar College, at Nimtala High School, June, 2018

2. **Coordinator** of Work-shop Programme on Pest-controlled at Library Area, organized by Ramnagar College at Central Library, Ramnagar College 2019

3. **Chief Secretary** and **Convener** of National Seminar on Health Risk of Processed Food organized by Department of Chemistry and Nutrition, Ramnagar College in collaboration with Department of Chemistry, Egra S. S. B. College, 2018

4. **Editor** of the Proceedings of National Seminar on Health Risk of Processed Food Published by Department of Chemistry, Ramnagar College, 2018

5. **Head** of the Department of Chemistry, Ramnagar College (2018 – present)

6. Member of Class – Routine Committee, Ramnagar College (2018 – present)

7. Member of Eco-Club Committee, Ramnagar College (2018 – present)

8. Member of Class – Monitoring Committee, Ramnagar College (2018 – present)

9. Member of Grievance - Redressal Committee, Ramnagar College (2018 – present)

10. Member of Central Library Development Committee, NIT-Jamshedpur (2015 – 2017)

11. Member of Departmental Purchase Committee (DPC), NIT-Jamshedpur (2014 – 2017)

Professional Societies Memberships:

1. Life Member of Indian Chemical Society (ICS)

2. Member of American Chemical Society (ACS)

Projects (Major Grants):

Department of Science and Technology, Govt. of India, India

Title: “Recyclable Nano-particle bound Transition -Metal based Catalysts for C-C bond formation”

Period: 5 years, Rs 35, 00, 000.00 (Oct 28, 2014- Oct. 27, 2019)