

SHYAMAL MONDAL



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Objective:

To obtain a position in a progressive research group, that can best utilize my skills and experience in the field of chemistry.

Profile

Enthusiastic, resourceful research chemist with academic and professional background in synthetic organic chemistry. Ability to establish priorities and meet challenges head-on. Strong project management skills.

Education

Indian Institute of Chemical Biology - Kolkata 2008-2012
(Jadavpur University-India)

PhD, Synthetic Organic Chemistry
Thesis title: "Synthesis of some novel polynuclear heteroaromatics based on quinolines and isoquinolines."

Bengal Engineering and Science University, 2006-2008
M.Sc., Applied Chemistry

Sree Gopal Banerjee College, Bagati 2003-2006
(University of Burdwan-India)
B.Sc., Chemistry

Bansberia High School 2001-2003
(West Bengal Council of Higher Secondary Education)
Higher Secondary Examination (Science)

Bansberia High School
(West Bengal Board of Secondary Education)
Matriculation

1999-2001

Skills

Hands on experience in synthesis and bioevaluation of structurally unique organic heterocycles, mainly based on nitrogen & oxygen containing heterocyclic templates.

Experience in the isolation and characterization of bioactive natural products from Indian medicinal plant.

Interpretation of the structure of organic compounds by using 2D-NMR, FT-IR and Mass spectroscopic data.

Experience in the field of High Performance Liquid Chromatography (HPLC), NMR Spectroscopy, Mass Spectrometry, UV-Vis spectrophotometer, Polarimeter, FT-IR in the analysis of organic compounds.

Experience in purchasing of chemicals in the research laboratory. Highly Computer proficient with sound knowledge in Microsoft office, Chemdraw etc.

Critical thinker & quick learner having excellent communication & research skills.

Computer Competence

Operating System- MS DOS, WINDOWS XP, WINDOWS-7, 8

Software- MS Office 2010, Excel, Origin, Chem Draw, Oasis, Power Point

Teaching Experience

Assistant Professor
New Alipore College
West Bengal

2015-Till now

Teaching Assistant
Sultan Qaboos University,
Department of Chemistry,
College of Science,
Muscat, Oman

2013- 2014

Research Experience

Postdoctoral Research

2014-2015

University of the Witwatersrand, Johannesburg, South Africa
Research Associate

PostDoctoral Research

2012-2014

Sultan Qaboos University, Oman, Muscat
Research Associate

Total Synthesis of Aracarpene-1 and Aracarpene-2 and bio-evaluation of
their antifungal property

Doctoral Research

Indian Institute of Chemical Biology-Kolkata
Senior Research Fellow – CSIR

2010-2012

Indian Institute of Chemical Biology -Kolkata
Junior Research Fellow – CSIR

2008-2010

Bengal Engineering and Science University
Master degree project scholar

2007-2008

Isolation of natural products from the flower of ‘Tabebuia Chrysantha’

Highlights

1. Advanced Chemical Research
2. Compound Optimization
3. Trained in Organic Chemistry
4. Multistep Synthesis
5. Polymer Synthesis
6. Fluent in English
7. Lab Maintenance Expert

Accomplishment

Developed a new process method, to increase production by means of
amount and cost reduction.

Awards/ Scholarships

- i} Awarded JRF - (CSIR) in November, 2008.
 - ii} Awarded SRF - (CSIR) in November, 2010.
 - iii} Qualified NET (CSIR) in December, 2007
 - iv} Qualified NET (CSIR) in June, 2008
 - v} Ranked among the top 20 candidates in NET-2007 (December) and in NET-2008 (June) and was nominated for SPM-Fellowship.
 - vi} Qualified in GATE-2007 (All India Rank-1155).
 - vii} Qualified in GATE-2008 (All India Rank-288)
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Workshops/ Conferences Attended:

Commemoration of the 150th Birth Anniversary of Acharya Prafulla Chandra Ray; “**National Seminar on Chemistry in Human Welfare**” - held on August 2, 2011 at Science City, Kolkata-700046.

Celebration of International Year of Chemistry-2011, “**A One-day UGC Sponsored National Symposium on Current Trends In Chemical Research**” - held on June 24, 2011 at Department of Chemistry, Ramkrishna Mission Residential College (Autonomous), Narendrapur, Kolkata-700103.

National symposium on “Organic Chemistry-IV (NSOC-IV): Modern Trends and Perspectives” - held on February 02-03, 2011 at Department of Chemistry, Jadavpur University.

International Symposium (ISOC-09) on “Organic Chemistry: Trends in 21st Century” - held on December 10-12, 2009 at Department of Organic Chemistry, Indian Association for the Cultivation of Science, Kolkata.

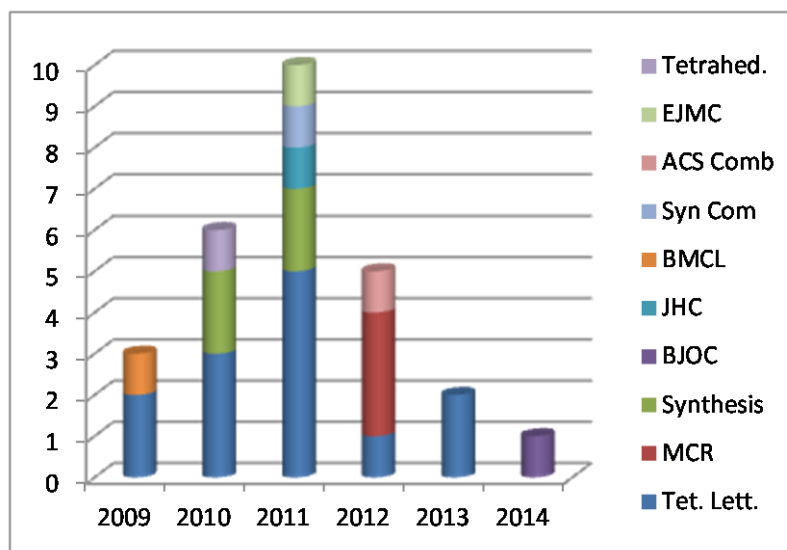
Achievement and recognition in the published papers

1. My Research Publications have been cited 314 Times by other authors (Without self-citation) until September 2013. (From SCOPUS - ISI Web of Sciences).

2. Citations in Each year (From ISI Web of Sciences).

(Average citation per Item – 11.21;)

Published items in
each year



Research

Publication

1. Rupankar Paira, Tarique Anwar, Maitreyee Banerjee, Yogesh P. Bharitkar, **Shyamal Mondal**, Sandip Kundu, Abhijit Hazra, Prakas R. Maulik and Nirup B. Mondal* *Copper–phenanthroline catalysts for regioselective synthesis of pyrrolo[3',4':3,4] pyrrolo[1,2a] furoquinolines/phenanthrolines and of pyrrolo[1,2-a] phenanthrolines under mild conditions. Beilstein Journal of Organic Chemistry, 2014, 10, 692-700.*
2. *Synthesis of tetracyclic pyrrolidine/isoxazolidine fused pyrano[3,2-h]quinolines via intramolecular 1,3-dipolar cycloaddition in ionic liquid Tetrahedron Letters, 2013, 54, 32, 7, 4339-4342.*
3. *Traceless synthetic approach towards oxazadicyclopenta[a,h]naphthalenes under solvent-free condition: a basic alumina-supported green protocol. Tetrahedron Lett., 2013, 54, 24, 3046-3050.*
4. **Mondal, Shyamal**; Maity, Arindam; Naskar, Subhendu; Paira, Rupankar; Hazra, Abhijit; Sahu, Krishnendu Bikash; Saha, Pritam; Banerjee, Sukdeb; Mondal, Nirup Bikash; *Facile Synthesis of Tricyclic Oxazino- or Oxazepino-Fused Tetrahydroquinolines via Intramolecular Reductive Amidation Synthesis, 2011, 13, 2079-2084.*

5. **Mondal, Shyamal**; Paira, Rupankar; Maity, Arindam; Naskar, Subhendu; Hazra, Abhijit; Sahu, Krishnendu Bikash; Saha, Pritam; Banerjee, Sukdeb; Mondal, Nirup Bikash; *Basic alumina supported tandem synthesis of bridged polycyclic quinolino/ isoquinolino oxazocines under microwave irradiation. **Tetrahedron Lett.** 2011, 52, 4697-4700.*
6. **Shyamal Mondal**, Arindam Maity, Rupankar Paira, Maitreyee Banerjee, Yogesh P. Bharitkar, Abhijit Hazra, Sukdeb Banerjee, and Nirup B. Mondal*. *Efficient synthesis of novel tetrahydropyrrolo[3',4':3,4]pyrrolo[2,1-a] isoquinoline derivatives via a simple and convenient MCR in aqueous micellar system. **Tetrahedron Lett.** 2012, 53, 46, 6288-6291.*
7. Hazra, Abhijit; Bharitkar, Yogesh; Chakraborty, Debanjana; Mondal, Susanta; Singal, Nupur; **Mondal, Shyamal**; Maity, Arindam; Paira, Rupankar; Banerjee, Sukdeb; Mondal, Nirup; "Regio- and Stereoselective Synthesis of a Library of Bioactive Dispiro-Oxindolo/Acenaphthoquino Andrographolides via 1,3-Dipolar Cycloaddition Reaction Under Microwave Irradiation". **ACS Comb. Science.** 2012, 15, 41-48.
8. Maity, Arindam.; Hazra, Abhijit.; Palit, Partha.; **Mondal, Shyamal.**; Lala, Sanchaita.; Mondal, B. Nirup.; The Cytotoxic effects of Diketopiperaizes against Leishmania donovani Promastigotes and Amastigotes; **Medicinal chemistry Research, 2012** (Accepted, DOI:10.1007/s00044-012-0355-9).
9. Sahu, Krishnendu Bikash; Ghosh, Soma; Banerjee, Maitrayee; Maity, Arindam; **Mondal, Shyamal**; Paira, Rupankar; Saha, Pritam; Naskar, Subhendu; Hazra, Abhijit; Banerjee, Sukdeb; Samanta, Amalesh; Mondal, Nirup Bikash; "Synthesis and invitro study of antibacterial, antifungal activities of some novel bisquinolines" **Medicinal Chemistry Research, 2012**, DOI; 10.1007/s00044-012-0001-6.
10. Sahu, Krishnendu Bikash; Banerjee, Maitrayee; Ghosh, Soma; Maity, Arindam; **Mondal, Shyamal**; Paira, Rupankar; Hazra, Abhijit; Banerjee, Sukdeb; Samanta, Amalesh; Mondal, Nirup Bikash; "I₂

*catalyzed Friedel–Crafts alkylation reaction of substituted anilines with ninhydrin: formation of novel products and their antimicrobial evaluation” **Medicinal Chemistry Research**, 2012, (DOI 10.1007/s00044-012-0202-z).*

11. Hazra, Abhijit; **Mondal, Shyamal**; Maity, Arindam; Naskar, Subhendu; Saha, Pritam; Paira, Rupankar; Sahu, Krishnendu Bikash; Paira, Priyankar; Ghosh, Soma; Sinha, Chandrima; Samanta, Amalesh; Banerjee, Sukdeb; Mondal, Nirup Bikash; *Amberlite–IRA-402 (OH) ion exchange resin mediated synthesis of indolizines, pyrrolo [1,2-a] quinolines and isoquinolines: Antibacterial and antifungal evaluation of the products; **European Journal of Medicinal Chemistry**, 2011, 46, 2132-2140.*
12. Maity, Arindam; **Mondal, Shyamal**; Paira, Rupankar; Hazra, Abhijit; Naskar, Subhendu; Sahu, Krishnendu Bikash; Saha, Pritam; Banerjee, Sukdeb; Mondal, Nirup Bikash; *A novel approach for the one-pot synthesis of linear and angular fused quinazolinones; **Tetrahedron Letters**, 2011, 52, 3033-3037.*
13. Paira, Rupankar; **Mondal, Shyamal**; **Maity, Arindam**; Sahu, Krishnendu Bikash; Naskar, Subhendu; Saha, Pritam; Hazra, Abhijit; Kundu, Sandip; Banerjee, Sukdeb; Mondal, Nirup Bikash; *An easy access to diversely fused dioxo-2-azatricyclo[n.3.1.0^{2,n}]tetra/pentadecanes under solvent-free condition; **Tetrahedron Letters**, 2011, 52, 5516-5520.*
14. Paira, Rupankar; Maity, Arindam; **Mondal, Shyamal**; Naskar, Subhendu; Sahu, Krishnendu Bikash; Saha, Pritam; Hazra, Abhijit; E. Padmanaban; Banerjee, Sukdeb; Mondal, Nirup Bikash; *Basic alumina supported one-pot synthesis of structurally diverse pyridine/quinoline-fused novel diazepanium, diazocanium, imidazodilinium and tetrahydro-pyrimidiniums; **Tetrahedron Letters**, 2011, 52, 1653-1657.*
15. Naskar, Subhendu; Banerjee, Maitreyee; Hazra, Abhijit; **Mondal, Shyamal**; Maity, Arindam; Paira, Rupankar; Sahu, Krishnendu Bikash; Saha, Pritam; Banerjee, Sukdeb; Mondal, Nirup Bikash; *Novel*

- route for the synthesis of structurally diverse pyrrolo[2,1-a]isoquinoline in aqueous micellar medium; **Tetrahedron Letters**, **2011**, 52, 1527-1531.
16. Paira, Rupankar; Sahu, Krishnendu B.; **Mondal, Shyamal**; Maity, Arindam; Hazra, Abhijit; Naskar, Subhendu; Saha, Pritam; Padmanaban, E.; Banerjee, Sukdeb; Mondal, Nirup Bikash. "Effective Suzuki-Miyaura Arylation and Sonogashira Aryl Alkynylation on N-Heteroaromatic Cations: Synthesis of Substituted Pyridine-Fused Cationic Heterocycles." **Synthesis**, **2011**, 3006-3014.
 17. Sahu, Krishnendu Bikash; Maity, Arindam; **Mondal, Shyamal**; Paira, Rupankar; Saha, Pritam; Naskar, Subhendu; Hazra, Abhijit; Banerjee, Sukdeb; Mondal, Nirup Bikash. "Basic Alumina-Supported Synthesis of Aryl-Heteroarylmethanes via Palladium-Catalyzed Cross-Coupling under Microwave Irradiation." **Journal of Heterocyclic Chemistry**, **2011**, DOI: 10.1002/jhet.1099.
 18. Saha, Pritam; Naskar, Subhendu; Maity, Arindam; **Mondal, Shyamal**; Paira, Rupankar; Hazra, Abhijit; Sahu, Krishnendu Bikash; Banerjee, Sukdeb; Mondal, Nirup Bikash. "Palladium-catalyzed 8-exo trig intramolecular Heck reaction under microwave irradiation in the presence of basic alumina." **Synthetic Communications**, **2011**.
 19. Naskar, Subhendu; Paira, Priyankar; Paira, Rupankar; **Mondal, Shyamal**; Maity, Arindam; Hazra, Abhijit; Sahu, Krishnendu Bikash; Saha, Pritam; Banerjee, Sukdeb; Luger, Peter; Weber, Manuela; Mondal, Nirup Bikash; *Montmorillonite K-10 clay catalyzed solvent-free synthesis of bis-indolylindane-1,3-dione, 2-(10,30-dihydro-1H-[2,30]biindolyl-20-ylidene)-indan-1,3-dione and bisindolylindenol[1,2-b]quinoxaline under microwave irradiation;* **Tetrahedron**, **2010**, 66, 5196-5203.
 20. Saha, Pritam; Naskar, Subhendu; Paira, Rupankar; **Mondal, Shyamal**; Maity, Arindam; Sahu, Krishnendu Bikash; Paira, Priyankar; Hazra, Abhijit; Bhattacharya, Diptendu; Banerjee, Sukdeb; Mondal, Nirup Bikash; *One-pot tandem synthesis of furo [3,2-h]*

*quinolines by a Sonogashira cross-coupling and cyclization reaction supported by basic alumina under microwave irradiation; **Synthesis**, 2010, 486-492.*

21. Paira, Rupankar; Maity, Arindam; Naskar, Subhendu; **Mondal, Shyamal**; Paira, Priyankar; Hazra, Abhijit; Sahu, Krishnendu Bikash; Saha, Pritam; Banerjee, Sukdeb; Mondal, Nirup Bikash; *Naphtho- and benzo[g]quinoxalino-fused oxazocinoquinolinones and their diaryl and alkynyl analogues from quinolin-8-ols: A library of novel polynuclear heteroaromatics; **Synthesis**, 2010, 3520-3535.*
22. Paira, Rupankar; Paira, Priyankar; Maity, Arindam; **Mondal, Shyamal**; Hazra, Abhijit; Sahu, Krishnendu Bikash; Naskar, Subhendu; Saha, Pritam; Banerjee, Maitreyee; Mondal, Nirup Bikash; Amberlite IRA 402(OH): *an efficient mediator for the exclusive synthesis of fused tricyclic oxaza quinolinium salts; **Tetrahedron Letters**, 2010, 51, 3200-3204.*
23. Naskar, Subhendu; Saha, Pritam; Paira, Rupankar; Hazra, Abhijit; Paira, Priyankar; **Mondal, Shyamal**; Maity, Arindam; Sahu, Krishnendu Bikash; Banerjee, Sukdeb; Mondal, Nirup Bikash; *Synthesis of polycyclic fused 2-quinolones in aqueous micellar system; **Tetrahedron Letters**, 2010, 51, 1437-1440.*
24. Hazra, Abhijit; Paira, Priyankar; Sahu, Krishnendu Bikash; Naskar, Subhendu; Saha, Pritam; Paira, Rupankar; **Mondal, Shyamal**; Maity, Arindam; Luger, Peter; Weber, Manuela; Mondal, Nirup Bikash; Banerjee, Sukdeb; *Chemistry of andrographolide: formation of novel di-spiropyrrolidino and di-spiropyrrrolizidino-oxindole adducts via one-pot three-component [3+2] azomethine ylide cycloaddition; **Tetrahedron Letters**, 2010, 51, 1585-1588.*
25. Paira, Rupankar; Paira, Priyankar; Maity, Arindam; **Mondal, Shyamal**; Hazra, Abhijit; Naskar, Subhendu; Sahu, K. B, Saha, Pritam; Banerjee, Sukdeb; Mondal, N. B. *synthesis of fused quinolinium salts using Amberlite IRA 402 (OH). **Synfacts**, 2010, 8, 0960-0960.*
26. Paira, Priyankar; Paira, Rupankar; Hazra, Abhijit; Naskar, Subhendu; Sahu, Krishnendu. Bikash; Saha, Pritam; **Mondal, Shyamal**; Maity,

- Arindam; Banerjee, Sukdeb; Mondal, Nirup Bikash; *Facile synthesis of 6,6,8,6,6-ring fused pentacyclic heterocycles: Annelation of quinolines to quinoxalines under PTC condition; **Tetrahedron Letters**, 2009, 50, 4619–4623.*
27. Paira, Priyankar; Paira, Rupankar; Hazra, Abhijit; Naskar, Subhendu; Sahu, Krishnendu Bikash; Saha, Pritam; **Mondal, Shyamal**; Maity, Arindam; Banerjee, Sukdeb; Mondal, Nirup Bikash; *Synthesis of biaryl pentacyclic quinolonoquinoxalino-oxazocines in aqueous medium using Amberlite IRA 402 (OH); **Tetrahedron Letters**, 2009, 50, 5505-5509.*
28. Paira, Priyankar; Hazra, Abhijit; Kumar, Shrabanti; Paira, Rupankar; Sahu, Krishnendu Bikash; Naskar, Subhendu; Saha, Pritam; **Mondal, Shyamal**; Maity, Arindam; Banerjee, Sukdeb; Mondal, Nirup Bikash; *Efficient synthesis of 3,3-diheteroaromatic oxindole analogues and their in vitro evaluation for spermicidal potential; **Bioorg. Med. Chem. Lett.** 2009, 19, 4786–4789.*
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