Prof. (Dr.) Nandkishor Chandan

MSc. D.Phil. (Ph.D.) Oxford University, England

Professor & Head, Department of Chemistry

Siddharth College of Arts, Science and Commerce, Mumbai

Research Interests:

- Synthesis of Heterocyclic compounds and study of biological activities.
- Development of Methodologies for the five-member heterocyclic compounds like substituted pyrrolidines and piperidones.
- Synthesis of Natural products (Kaitocephaline) and study of bio-activities.
- Synthesis of MOF and its nanocomposites as bimetallic composites and study of applications.
- Green Synthesis nanoparticles with its bimetallic composites and study applications.
- Conventional synthesis nanoparticles with its composites and study applications.
- Study of impurities in pharma industries.

Ph.D and M.Sc. by research students who completed their degree.

Sr. No.	Name of the students	Topic of the PhD	Fellowship Awarded for the Topic	Status of work
1	Mr. Atul S. Mawande	To develop a new method for recover of di-isopropyl ether from iso propyl alcohol mixture	NIL	**Ph.D**. Degree Awarded (2017)
2	Mr. Mahendra D. Sawant	Acylation of Phenols	NIL	**M.Sc.** Degree Awarded (2018)

PhD Students: Presently, 06 students are enrolled for PhD Degreeunder my Supervision. Details are as given below.

Sr. No.	Name of the students	Topic of the PhD	Fellowship Awarded for the Topic	Status of work
1.	MS. ROHINI RAJDATTA KADAM	Synthesis of Copper-Carboxylate Organic Metal-Framework composites and its Multifarious Applications	NIL	Undergoing
2.	MS. KAMBLE DEEPASHREE DINKAR	Synthesis of Zinc carboxylate Organic Metal Framework composites and its Multifarious Applications	NIL	Undergoing

3.	MS. ANSARI AZRA ISMAIL RIZWANA	Dye-sensitized solar cell and photocatalytic performance towards the nano-composites of TiO2 and ZnO	NIL	Undergoing
4.	MS. KHAN ALISHA KHANAM	Metal-Organic Framework derived C-doped ZnO2 /TiO2 /CuO Nanocomposites and its Multifarious applications	NIL	Undergoing
5.	MS. KADAM NAMRATA DATTA SANDHYA	Synthesis, Characterization and multifarious applications of mixed ZnO nanocomposites	NIL	Undergoing
6.	MS. NIKITA UMESH POWAR	Synthesis, Characterization and Various applications of mixed TiO2 nanocomposites	NIL	Undergoing

Research Publications

International Journals: List of all published papers can be seen in thelink given below.

1. https://scholar.google.com/citations?user=hzeq-DgAAAAJ&hl=en
2. https://orcid.org/my-orcid?orcid=0009-0009-8234-845X

Sr. No.	Title	Publisher	Impact Factor
1.	Rajeshwari Athavale, Sailee Gardi, Fatima Choudhary, Daya nand Patil, **Nandkishor Chandan**, Paresh More Novel acidic ionic liquid [BEMIM][HSO_4]: A highly efficient and recyclable catalyst for the synthesis of bis-indolyl methane derivatives *Applied Catalysis A: General* *Volume 669, 5 January 2024, 119505*	Elsevier	**5.723**
2.	**Nandkishor Chandan**, Amber L. Thompson and Mark G. Moloney Rapid synthesis of substituted pyrrolines and pyrrolidines by nucleophilic ring closure at activated oximes *Organic and Biomolecular Chemistry, 2012,10, 7863-7868*	Royal Society ofChemistry London	**2.9**
3.	***Nandkishor Chandan,*** *Amber L. Thompson and Mark G. Moloney* Rapid synthesis of substituted pyrrolines and pyrrolidines by nucleophilic ring closure at activated oximes *Organic and Biomolecular Chemistry*, 2012,10, 7863-7868	Royal Society of Chemistry London	**2.9**

4.	**Nandkishor Chandan**, Mark G. Moloney A direct route to 2,2,5-trisubstituted pyrrolidines of relevance to kaitocephalin, *Tetrahedron Letters* *Volume 54, Issue 15, 10 April 2013, Pages 1987-1990*	Elsevier	1.5
5.	**Nandkishor Chandan** One-pot synthesis of spiro-3,4-dihydro-2hpyrroles through tandem nucleophilic cyclisation reaction *Rasayan journal of Chemistry, Vol. 14/No. 2/974-980/ April – June/2021*	Elsevier	0.81 Peer-reviewed, indexed And Scopus
6.	Nandkishor Chandan Synthesis of 1,1,2-trisubstituted cyclopropane ring through carbon-carbon bond nucleophile intercepted Beckmann fragmentation reaction *Rasayan Journal of Chemistry, Vol. 13/No. 4/2352-2360/ October – December/2020*	Elsevier	0.81 Peer-reviewed, indexed and Scopus
7.	**Nandkishor Chandan** Synthesis of substituted amides through activated oximes as competitive Beckmann rearrangement reaction *Vidyabharati International Interdisciplinary Research Journal 11(1),152-158, Sept. 2020*	Peer and Editorial Reviewed Open Access, India	**0.90** Peer-reviewed, indexed and Web of Science
8.	**Nandkishor Chandan, P. Atta** Green synthesis of silver nanoparticles by using black tea extract *Vidyabharati International Interdisciplinary Research Journal 11(1), 159-163, Sept. 2020*	Peer and Editorial Reviewed Open Access, India	**0.90** Peer-reviewed, indexed and Web of Science
9.	**Nandkishor Chandan** Conversion of oxime and tosyl aldoxime to nitriles as competitive reaction to nucleophilic ring closure *Vidyabharati International Interdisciplinary Research Journal 9(2), 171-175, Dec. 2019*	Peer and Editorial Reviewed Open Access, India	**0.90** Peer-reviewed, indexed and Web of Science
10	**Nandkishor Chandan**, Mahendra Sawant Friedel-Craft Acylation of Phenols in 1-Ethyl-3-Methylimidazolium Tetrachloroaluminate Ionic Liquid *Am. J. PharmTech Res. 2018; 8(5),108-114*	American Journal of PharmTech Research	**0.98** Peer-reviewed, indexed and UGC
11	**Nandkishor Chandan**, Mahendra Sawant Simple and Inexpensive Nucleophilic Acyl Substitution of Phenols using Thiol Acetic Acid and Base Catalyst. *Am. J. PharmTech Res. 2018; 8(5), 337-342*	American Journal of PharmTech Research	**0.98** Peer-reviewed, indexed and UGC
12	**Nandkishor Chandan**, Mahendra Sawant Aromatic C-acylation of Phenols by using Acid and Acid Anhydride in Presence of Lewis Acid Catalyst *Am. J. PharmTech Res. 2018; 8(5), 131-139*	American Journal of PharmTech Research	**0.98** Peer-reviewed, indexed

			and UGC
13	**Nandkishor Chandan**, Paresh Kamble Synthesis of Highly Substituted Functionalized Piperidine Derivatives via Oximation Reaction and its Anti-Microbial Activity *Am. J. PharmTech Res. 2017; 7(5)267-275*	American Journal of PharmTech Research	**0.98** Peer-reviewed, indexed and UGC
14	S. K. Patil**, Nandkishor Chandan,** A S Nirmalkar Synthesis and Anti-Microbial Activity of the Highly Substituted 2-(1H-Benzo[d] Imidazol-2-yl)-3-Oxobutanenitrile *Am. J. PharmTech Res. 2015; 5(3), 582-592*	American Journal of PharmTech Research	**0.98** Peer-reviewed, indexed and UGC
15	**Nandkishor Chandan** Synthesis of Highly Substituted pyrrolidines via Double Michael Addition Reaction and its Anti-Microbial Activity *Am. J. PharmTech Res. 2016; 6(5),*	American Journal of PharmTech Research	**0.98** Peer-reviewed, indexed and UGC

Research papers Presented in conferences

1) Synthesis, Characterisation, Complexation behavior and pass prediction of Novel Coumarin Derivatives. National Conference on Sustainable Chemistry: Frontiers and Challenges (NCSC-2015), January 30-31, 2015, Biyani College, Amravati, M.S.
2) Sensitization of Pyrocatechol Violet by Cetyldimethylethylammonium Bromide for the Spectrophotometric Determination of Lead. National Conference on Sustainable Chemistry: Frontiers and Challenges (NCSC-2015), January 30-31, 2015, Biyani College, Amravati, M.S.
3) Synthetic Study and Biological Evaluation of 1-Tetra-*o*-Benzoyl- β-D Glucopy-3,3- Disubstituted Alkyl-Aryl/Alkyl/Aryl Thiocarbamides. National Conference on Chemistry-Sustainability and Environment, February 20-21, 2015 Ruia College, Mumbai.
4) Efficient one Pot Synthesis of Substituted Pyrrolidines. National Workshop on Green Chemistry, January 21, 2015, Gov. Maharashtra Elphinstone College, Mumbai.

International Conferences Attended

1. RSC Organic Division Regional Meeting (South-West), 8th Jan 2008, Oxford University, UK.

2. RSC Organic Division Regional Meeting (South), 21st Jan 2009, Southampton University, UK.

3. Functional Molecules from Natural sources (RSC), Magdalene College, Oxford University, UK, 6-8 July 2009.

4. Biological and Medicinal Chemistry symposium for postgraduates, Department of Chemistry, University of Cambridge, UK. 11 Dec. 2009.

5. EPR Symposium programme, Application and development of EPR, ICL, New College, Oxford University, UK, 2-3 Feb. 2010.

6. RSC Organic Division Regional Meeting, 29th March 2010, Bath University, UK.
7. Organic Chemistry Symposium and poster competition sponsored by Pfizer, Oct 2010, Oxford University, UK.

8. 2010 Pfizer Poster Symposium, Chemistry center, Burlington House RSC, London, 7th Dec. 2010.

9. Oxford India Business Forum 2012, at Taj Mahal Palace Hotel, Mumbai on 19th March 2012.

Books Authored and Published

1) Book on Oxidation and Reduction authored by Dr. Nandkishor Chandan, 2018
2) Book on Advanced Organic Synthesis authored by Dr. Nandkishor Chandan, 2019

3) Book on Organic Name Reactions authored by Dr. Nandkishor Chandan, 2020
4) College Organic chemistry for SYBSc 2023
5) College Organic chemistry for TYBSc 2024
6) College Organic chemistry Sceme-III for FYBSc 2024
7) College Organic chemistry Sceme-I for FYBSc 2024

Research Projects

1) **2004-2005 Mumbai University** sponsored research grant for the minor research project entitle "the formal synthesis of the biologically active molecules including five-member heterocyclic pyrroles and its derivatives".
2) **2012-2013 Mumbai University** sponsored research grant for the minor research project entitle "novel methodology for the synthesis of tri-substituted pyrrolidines and their biological activity".
3) **2011-2013 University Grant Commission (UGC) Delhi** sponsored research grant for the minor research project entitle "Synthesis of tri and tetra-substituted tetrahydro azine and its biologically active against a wide range of antibiotics".
4) **2017-2018 Mumbai University** sponsored research grant for the minor research project entitle "Synthesis of Highly Substituted Functionalized

Piperidine Derivatives via Oximation Reaction and its Anti-Microbial Activity".

Life Membership

1) The Royal Society of Chemistry (Associate Member) **AMRSC** (M. No.426491)

2) The Indian Science Congress Association (Chemical Sci.) (M No. L26862).

Recognitions as Research Guide/supervisor

1) Recognized Research Guide/Supervisor for the research Degree **Ph.D.** in the subject of Organic Chemistry by the University of Mumbai.
2) Recognized Research Guide/Supervisor for the research Degree **Ph.D.** in the subject of Organic Chemistry by the JJT University, Rajasthan.
3) Recognized Research Guide for **M.Sc. by research** as well as the **M.Sc. by paper** degrees affiliated to the University of Mumbai.

Awards Honored

1) **2001-2002**-Junior Research Fellowship (NET-JRF-CSIR) awarded by CSIR-Delhi at the Department of Organic Chemistry Technology (OCT), at National Chemical Laboratory (NCL).
2) **2007-2011**- **National Overseas Scholarship** (NOS) awarded (**worth 1.5 Cr rupees**) by Ministry of Social Justice and Empowerment, Government of India for

   studying at the University of Oxford, England.

3) **5th September 2011- Mahatma Phule Ideal Teacher award** honored by MUPTA, Mumbai
4) **2013** "**Shiksha Ratatan Puraskar**" given by India International Friendship Society, Delhi.

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