## Dr. ARCHANA SANJAY RAJMANE



Present Designation: Research Scholar

**Department of Chemistry** 

Vivekanand College, Kolhapur

(Empowered Autonomous)

Maharashtra, India

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#### **Personal Details**

**Date of birth**: 1st March 1996 **Gender**: Female

Category: SC Nationality: Indian

Marital status: Unmarried Languages Known: English, Marathi,

Hindi,

Blood Group: A+

Academics						
Sr. No.	Degree	University	Year of Passing	Subject	Percentage	
1	Ph. D. (Awarded)	Shivaji University Kolhapur	May 2024	Studies on Development of Synthetic Methodologies for Organic Transformations	-	
2	M.Sc.	Shivaji University Kolhapur	2018	Organic Chemistry	72.83	
3	B.Sc.	Shivaji University Kolhapur	2016	Chemistry	66.08	
4	H.S.C.	Divisional Board, Kolhapur	2013	PCB	51.67	
5	S.S.C	Divisional Board, Kolhapur	2011	-	83.45	

#### **Awards & Achievements**

- Awarded BARTI Fellowship by Dr. Babasaheb Ambedkar Research Training Institute (BARTI), Pune (January 2020-December 2024).
- Awarded Doctor of Philosophy (Ph.D) in Chemistry at Shivaji University Kolhapur (May 2024).
- Highlighted in World Scientists Rankings: 2023 and 2024.
- Developed Software for Calculation of Green Metrics in Organic Processes.

### **Research & Teaching Experience**

1. Teaching: a) UG-03 Years

b) PG-03 Years

**2.** Research: **05 Years** 

3. Research Guidance: a) M. Sc.: 3 Years

b) M. Sc.: 5 Years

# **Technical Skills Developed**

**1)** MS-CIT: 2011

2) English and Marathi Typewriting 2015

- **3)** Chem-draw Software
- 4) Mendeley Reference Manager Software
- 5) MestReNova Spectral Analysis Software
- **6)** Origin Pro8 Software
- **7)** Industrial Training: Quality Aspects in Pharmaceutical Analysis from Insta Vision Laboratories and Services.

### **Field and Research Projects**

- 1) Orange Peel Ash Water Extract (OPAWE): A Naturally Sourced Catalyst for Synthesis of Pyrazolones (2018)
- 2) CuO Nanoparticles using Multicomponent Reactions (2019)
- **3)** Alginic Acid in Water: A Natural Combination for the Synthesis of 2,3-Dihydroquinazolin-4(1H)-ones (2023)
- **4)** Synthesis of Dihydropyrano[3,2-c]chromenes Using DABCO Surfactant in Water (2023)
- 5) A Novel Brønsted Basic TMMM-Hydrotrope Combined Catalytic System for the Synthesis of Diverse Chromenes in Aqueous Solution at Ambient Temperature (2024)
- 6) Brønsted Acid Saponin Combined Catalyst (BASapC) for the Synthesis of Diverse 1,1-Dihomoarylmethane Scaffolds in Aqueous Solution (2024)

## Publications, Citations, h-Index, i-10-index

Sr. No.		Total
1.	Publications	17
2.	Citations	24
3.	h-index	3
4.	i10-index	1

# **List of Publications**

Sr No.	Title of Paper	Name of Journal	Year	Impact Factor	Citations
1.	A Novel Brønsted Basic TMMM- Hydrotrope Combined Catalytic System for the Synthesis of Diverse Chromenes in Aqueous Solution at Ambient Temperature	Under review in Research on Chemical Intermediates	2024	3.4	-
2.	Brønsted Acid Saponin Combined Catalyst (BASapC) for the Synthesis of Diverse 1,1-Dihomoarylmethane Scaffolds in Aqueous Solution	Submitted to Chemistry Select	2024	2.2	-
3.	Nano palladium stabilized by bio- extract of Zingiber zerumbet: A green and eco-friendly surfactant for the Suzuki-Miyaura cross-coupling reactions	Under review in Chemical Papers	2024	2.2	-
4.	DABCO Dicationic Ionic Liquid Supported Polymer (DDIL@PS) Mediated Synthesis of Diverse 2- Amino-4H-Chromene Derivatives: A Cascade Knoevenagel-Michael Approach	Tetrahedron letter (Minor revision)	2024	1.8	-
5.	In Situ generated PdNPs immobilized on Polystyrene Supported DABCO Dicationic Ionic Liquid: An Efficient and Reusable Catalyst for Suzuki and Heck Coupling Reactions	Molecular Catalysis	2024	5.0	-
6.	C <sub>18</sub> -DABCO-AA: novel Brønsted acidic gemini surfactant for the enviormental begin Synthesis of 2,3-Dihydroquinazolin-4(1H)-ones	Submitted to Journal of Molecular Liquids	2024	6.0	-
7.	Nano-Biocomposites: A Versatile Combination of Nanocomposites and Biopolymers for the Synthesis of Heterocycles <i>via</i> Multicomponent Reactions.	Current Organic Chemistry	2024	2.6	-

CV of Dr. Archana Rajmane

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8.	Applications of N-S ligands for Palladium-catalysed Cross-Coupling Reactions.	Journal of Organometallic Chemistry	2024	2.345	-
9.	[DABCO-C <sub>18</sub> ]Br: A novel basic surfactant for the synthesis ofdihydropyrano[3,2c]chromenes and 2-aminobenzochromenes under ambient conditions.	Journal of Molecular Liquids, 391 (2023) 123247	2023	6.0	2
10.	Alginic acid in water at room temperature: a natural combination for the environmental benign synthesis of 2,3-dihydroquinazolin-4(1H)-ones.	Research on Chemical Intermediates, 49, 5237–5253.	2023	3.3	1
11.	Pd(OAc) <sub>2</sub> /[C <sub>18</sub> -DABCO-C <sub>18</sub> ]2Br: a nano palladium catalytic approach for Mizoroki-Heck and Suzuki-Miyaura coupling reactions in water.	New Journal of Chemistry, 47, 20171-20181.	2023	3.3	-
12.	Cyanomethyl pyridinium and isoquinolinium salts: a versatile chemical reagent for the synthesis of annulated heterocycles.	Chemical Papers. 78, 35-69.	2023	2.14	1
13.	Recyclable Pd nanoparticles immobilized on amine functionalized LDH for the Suzuki-Miyaura cross-coupling reaction.	Chemical Papers, 77, 5555–5569.	2023	2.14	1
14.	CuNPs@Al <sub>2</sub> O <sub>3</sub> -cellulose composite for the ligand-free Suzuki cross-coupling reactions in batch and continuous flow process.	Journal of Organometallic Chemistry, 1004, 122954.	2023	2.345	-
15.	ZrO <sub>2</sub> Supported Cu Nanoparticles for Sonogashira and Ullmann Coupling Reactions Under Palladium-Free Conditions.	Catalysis Letters	2023	2.936	-
16.	Polydentate P, N-based ligands for palladium-catalyzed cross-coupling reactions	Molecular Catalysis	2022	5.08	5
17.	N, O-polydentate ligands for palladium-catalyzed cross-coupling reactions (Part III)	Journal Of Organometallic Chemistry	2022	2.34	10

# List of Conferences/Symposia/Seminars Attended

Sr. No	Name of Conference	National/ International	Date	Organizer
1	International E-conference sustainable development in chemistry and scientific applications.	International	16-17 December 2021	Sadguru Gadage Maharaj college, Tagaon
2	Two days Online International Conference Smart Materials: Application to Devices-20 Organized by K. N. M. Nagpur.	International	17-18 May 2021	Kamla Nehru Mahavidyalaya, Nagpur.
3	Virtual International Conference on INTERDISCIPLINARY APPROACHES IN CHEMICAL SCIENCES (IACS- 2021)	International	21 <sup>st</sup> -23 <sup>rd</sup> October 2021	M.E.S's Abasaheb Garware College, Pune
4	Internationl E- Conference on Recent advances in Chemical, Physical and Biological Sciences	International	21 <sup>st</sup> -23 <sup>rd</sup> October 2021	M.E.S's Abasaheb Garware College, Pune
5	'Virtual International Conference on Mutlifunctional advanced materials (vicmam-2021)'	International	9 <sup>th</sup> and 10 <sup>th</sup> August, 2021	jnan vikas mandal's degree college,navi mumbai
6	Online National E- Conference on Intellectual Property rights Basics and Process	National	04 <sup>th</sup> Sept. 2021	Yashwantrao Chavan College of Science, Karad

# **Training Workshop Attended**

Sr. No.	Name of Workshop	Date	Organizer
1	One day Online Workshop on "Managing your references through Mendeley"	22 May, 2021	Sushant University, Gurugram.
2	One day Online Workshop on "Learning fundamentals of publishing in quality journals"	26 May, 2021	Sushant University, Gurugram.
3	Four Day National Level Workshop on Preparation of NET/SET Examination in Chemical Sciences	4-7 October 2021	Shivchhatrapati College, Aurangabad
4	One Day National Level Workshop on "How To Write Review Article?"	1st July, 2021.	Balwant College, Vita

# **Faculty Development Programme**

Sr. No	Name of FDP	Date	Organizer
1	National Level One Week Faculty Development Programme on Research Methodology.	26 <sup>th</sup> April to 1 <sup>st</sup> May 2021	Kamla Nehru Mahavidyalaya, Nagpur.
2	Two days National FDP on " Aspects of Research Paper Writing"	25-26 June, 2021	Khandelwal Vaish Girls Institute of Technology, Jaipur
3	Three Days National Online FDP , On ICT Tools for Effective Teaching Learning.	8-10 <sup>th</sup> June, 2021	Kamla Nehru Mahavidyalaya, Nagpur.

Place: Kolhapur

Date: 02-08-2024

Rajmane

Signature

Dr. Archana Rajmane