

## Dr. Arjun Shankar Kumbhar



Present Designation: **Professor in Chemistry**

Department of Chemistry  
Vivekanand College, Kolhapur  
(Empowered Autonomous)  
Maharashtra, India

**Contact Détail:** E-mail: [arjun2win@yahoo.co.in](mailto:arjun2win@yahoo.co.in)

Mobile: 9960543180

### Personal Details

<b>Date of birth:</b> 1 <sup>st</sup> June 1976	<b>Gender:</b> Male
<b>Category:</b> OBC (Hindu-Kumbhar)	<b>Nationality:</b> Indian
<b>Marital status:</b> Married	<b>Language Known:</b> Hindi, English, Marathi

### Academics

Sr. No.	Degree	University	Year	Subject	Percentage
1	B.Sc.	Shivaji University, Kolhapur	1997	Chemistry	66.66 %
2	M.Sc.	Shivaji University, Kolhapur	2002	Organic Chemistry	66.69 %
3	Ph. D.	Shivaji University, Kolhapur	2013	Chemistry-Catalysis Title of thesis: " <b>Synthetic Studies of Immobilized Palladium Catalysts</b> "	-

### Awards

- Awarded **Teacher Fellowship (UGC)** under the scheme of F. I. P. (11<sup>th</sup> Plan), by Govt. of India, New Delhi (**April 2010-March 2012**).
- Qualified for **State Eligibility Test for lectureship (SET)** in chemical sciences conducted by the University of Pune (**September-2003**).
- Qualified for **National Eligibility Test for lectureship (NET) (AIR 07)** in chemical sciences conducted by CSIR-UGC, Govt. of India, New Delhi, India (**June 2009**).

## Experience

- |                       |                     |
|-----------------------|---------------------|
| 1. Teaching:          | a) UG-19 Years      |
|                       | b) PG-15 Years      |
| 2. Research:          | 15 Years            |
| 3. Research Guidance: | a) Ph. D.: 6 Years  |
|                       | b) M. Sc.: 13 Years |
| 4. Industrial         | 02 Years            |

## Research Project Funding

Sr. No.	Title of the Project	Funding Agency	Duration of Project	Grant (Rs. Lakh)
1.	Design and Applications of Biopolymer-Supported Palladium Catalysts for Organic Synthesis	DST-SERB, New Delhi	2014-16	25.00
2.	Liquid Phase Organic Synthesis (LPOS) USING Supported Catalysts	UGC, New Delhi	2015-18	07.58
3.	Functionalized Transition Metal Catalysts for Cross-coupling Reactions	DST, WoS-A, New Delhi	2020-23	21.17 (PI: Ms Seema Patil)
<b>Total</b>				<b>53.63</b>

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

Sr. No.		Last 5 Years	Total
1.	Publications	17	56
2.	Citations	670	1033
3.	<i>h</i> -index	17	22
4.	<i>i</i> 10-index	25	30

<b>Ph. D. Guidance</b>				
<b>Sr. No.</b>	<b>Name of Student</b>	<b>Title</b>	<b>Date of Registration</b>	<b>Remarks</b>
1.	Ms. Seema P. Patil	Applications of Supported Transition Metal Catalysts for cross-coupling Reactions	2017	DST-WoS-A Fellow (Rs. 21.17 Lakhs) <b>Thesis Submitted</b>
2.	Mr. Deepak K. Mhaske	Development and Validation of Simple Analytical Methods for Some Pharmaceuticals	2018	<b>Awarded</b> <b>11<sup>th</sup> Sept 2023</b>
3.	Mr. Yuvraj S. Jadhav	Mixed ligand Transition Metal Complexes with Quinazoline Derivatives and Their Biological Applications	2018	<b>Thesis Submitted</b>
4.	Ms. Archana S. Rajmane	Studies and Development of Synthetic Methodology for Organic Transformations	2020	<b>BARTI-Fellow</b>
5.	Ms. Kiran S. Bagade	Nanostructured Pd and Cu Catalysts: Synthesis, Characterization, and Applications in Organic Transformations	2020	<b>BARTI-Fellow</b>
6.	Ms. Dipti Jadhav	Surface Active Compounds in Catalysis: A Strategy Towards Sustainable Organic Transformations	2022	-
7.	Mr. Tanaji Bhusnar	Task Specific Onium Salts: Synthesis, Characterization, and Applications in Organic Transformations	2023	-

## List of Publications

Sr No.	Title of Paper	Name of Journal	Year	Impact Factor	Citations
1.	Zingiber zerumbet: A green and ecofriendly natural surfactant for the synthesis of Bis(indolyl)methane, tris-indoline and spirooxindole derivatives	Sustainable Chemistry and Pharmacy 35, 101228	2023	6.0	-
2.	Recyclable Pd nanoparticles immobilized on amine functionalized LDH for the Suzuki–Miyaura cross-coupling reaction	Chemical Papers, 1-15	2023	2.2	-
3.	The first RP-UHPLC method for simultaneous quantification of abiraterone acetate, its four degradants, and six specified process impurities and correct identification of all analytes based on molecular weight	J. Pharm. Biomed. Anal. 234, 20, 115568	2023	3.4	-
4.	Simultaneous quantification of (E) and (Z) isomers of rilpivirine and four degradation products in bulk and tablets by reversed-phase ultra-high-performance liquid chromatography and confirmation of all by molecular weight	J Sep Sci 2023;2201067	2023	3.68	-
5.	<i>O</i> -Benzoylhydroxylamines: A Versatile Electrophilic Aminating Reagent for Transition Metal-Catalyzed C–N Bond-Forming reactions	Topics In Current Chemistry	2023	9.06	2
6.	Bio-waste originated, heterogeneous catalysts based on pomegranate peel for Knoevenagel condensation: a green approach	Reaction Kinetics, Mechanisms and Catalysis	2023	1.8	-
7.	Polydentate P, N-based ligands for palladium-catalyzed cross-coupling reactions	Molecular Catalysis	2022	5.08	1
8.	An aqueous hydrotropic solution as environmentally benign reaction medium for organic transformations: a short review	Research On Chemical Intermediates	2022	2.91	1

9.	Development and Validation of Rapid, Timesaving, and Cost-effective UHPLC Method for Simultaneous Quantification of Cinnarizine, its Five Specified Impurities, Two Degradation Products and Two Antioxidants	Analytical Chemistry Letters	2022	2.32	1
10.	Development and Validation of a New Stereoselective RP-HPLC Method for Simultaneous Quantification of Tadalafil, its One Enantiomer, and Two Diastereomers in API and Tablet Form	Analytical Chemistry Letters	2022	2.32	1
11.	The New RP-HPLC Method for Simultaneous Quantification of Cinnarizine, its Five Specified Impurities, Two Degradation Products with Two Antioxidants and Confirmation of all by HPLC-ESI-MS in Different Pharmaceutical Drug Formulations	Analytical Chemistry Letters	2022	2.32	1
12.	N, O-polydentate ligands for palladium-catalyzed cross-coupling reactions (Part III)	Journal Of Organometallic Chemistry	2022	2.34	2
13.	Brønsted acid hydrotrope combined catalysis in water: a green approach for the synthesis of indoloquinoxalines and bis-tetronic acids	Research On Chemical Intermediates	2021	2.91	4
14.	Bio-surfactant: a green and environmentally benign reaction medium for ligand-free Pd-catalyzed Mizoroki-Heck cross-coupling reaction in water	Transition Metal Chemistry	2020	2.31	3
15.	Sulfonic acid@pericarp-pomegranate: A natural supported catalyst for synthesis of bis(indolyl)alkanes	Reaction Kinetics, Mechanisms and Catalysis	2020	2.08	1
16.	Facile Access to 2-Substituted Benzoxazoles Using Sawdust Supported N-Heterocyclic Carbene-Ni Complex <i>via</i> C-H Activation	Letters in Organic Chemistry	2020	0.86	-
17.	Mizoroki-Heck cross-coupling reactions using palladium immobilized on DABCO-functionalized silica	Transition Metal Chemistry	2019	2.31	4
18.	Green protocol for the synthesis of 1,8-dioxo-decahydroacridines by Hantzsch	Current Science	2019	1.16	6

	condensation using citric acid as organocatalyst				
19.	Synthesis and characterization of new quaternary ammonium surfactant [C18-Dabco][Br] and its catalytic application in the synthesis of spirocarbocycles under ultrasonic condition	Research on Chemical Intermediates	2019	2.91	16
20.	Functionalized nitrogen ligands (Csingle bondN) for palladium catalyzed cross-coupling reactions (part II)	Journal of Organometallic Chemistry	2019	2.34	19
21.	Trifluoroethanol and liquid-assisted grinding method: a green catalytic access for multicomponent synthesis	Research on Chemical Intermediates	2018	2.91	4
22.	Palladium supported ionic liquid phase catalyst (Pd@SILP-PS) for room temperature Suzuki-Miyaura cross-coupling reaction	Molecular Catalysis	2017	5.08	27
23.	Transition metal-free Suzuki type cross-coupling reaction for the synthesis of dissymmetric ketones	Tetrahedron Letters	2017	2.03	2
24.	Facile Suzuki-Miyaura cross coupling using ferrocene tethered N-heterocyclic carbene-Pd complex anchored on cellulose	Reactive and Functional Polymers	2017	3.97	36
25.	Cellulose-supported N-heterocyclic carbene silver complex with pendant ferrocenyl group for diaryl ether synthesis	Applied Organometallic Chemistry	2017	4.10	7
26.	Palladium Catalyst Supported on Zeolite for Cross-coupling Reactions: An Overview of Recent Advances	Topics in Current Chemistry	1717	9.06	36
27.	Functionalized nitrogen ligands for palladium catalyzed cross-coupling reactions (part I)	Journal of Organometallic Chemistry	2017	4.10	39
28.	DABCO functionalized dicationic ionic liquid (DDIL): A novel green benchmark in multicomponent synthesis of heterocyclic scaffolds under sustainable reaction conditions	Journal of Molecular Liquids	2016	6.63	52
29.	Synthesis of quinoxalines and pyrido[2,3-b]pyrazines by Suzuki-Miyaura cross-coupling reaction	Research on Chemical Intermediates	2016	2.91	3
30.	Bis-amino methylation for the synthesis of spiro-fused piperidines using iron(III)	Research on Chemical Intermediates	2016	2.91	16

	trifluoroacetate in aqueous micellar medium				
31.	Nanoporous p-terphenyl-polystyrene films containing perylene; fabrication, characterization and remarkable fluorescence resonance energy transfer based blue emitting properties	Journal of Materials Science: Materials in Electronics	2016	2.47	4
32.	Application of novel multi-cationic ionic liquids in microwave assisted 2-amino-4H-chromene synthesis	RSC Advances	2016	4.03	19
33.	Palladium nanoparticles supported on a titanium dioxide cellulose composite (PdNPs@TiO <sub>2</sub> -Cell) for ligand-free carbon-carbon cross coupling reaction	RSC Advances	2016	4.03	24
34.	Ligand-free Pd catalyzed cross-coupling reactions in an aqueous hydrotropic medium	Green Chemistry	2016	11.03	72
35.	Recent Advances in Biopolymer Supported Palladium in Organic Synthesis	Current Organic Chemistry	2015	2.22	31
36.	Palladium supported on silica-chitosan hybrid material (Pd-CS@SiO <sub>2</sub> ) for Suzuki-Miyaura and Mizoroki-Heck cross-coupling reactions	Applied Organometallic Chemistry	2015	4.10	51
37.	Micellar dispersion assisted green synthesis of $\alpha$ -enaminones	Organic Chemistry: An Indian Journal	2015	-	-
38.	Aza-Michael Reaction in Glycerol as a Sustainable Hydrotropic Medium	Materials Today: Proceedings	2015	-	11
39.	A Merrifield resin supported Pd-NHC complex with a spacer (Pd-NHC@SP-PS) for the Sonogashira coupling reaction under copper- and solvent-free conditions	New Journal of Chemistry	2015	3.92	43
40.	Microwave Assisted Attractive and Rapid Process for Synthesis of Octahydroquinazolinone in Aqueous Hydrotropic Solutions	Procedia materials science	2014	1.79	15
41.	Gel-entrapped bases: A smart window for the ligand-free Suzuki-Miyaura cross-coupling reaction	Comptes Rendus Chimie	2013	2.55	15
42.	Modified zeolite immobilized palladium for ligand-free Suzuki-Miyaura cross-coupling reaction	Journal of Organometallic Chemistry	2013	4.10	37

43.	Hydrotrope: green and rapid approach for the catalyst-free synthesis of pyrazole derivatives	Monatshefte für Chemie-Chemical Monthly	2013	1.45	20
44.	Pd@Al <sub>2</sub> O <sub>3</sub> -Cellulose for Suzuki–Miyaura Cross-Couplings	Synfacts	2013	3.15	
45.	<b>Palladium-supported</b> hybrid cellulose–aluminum oxide composite for Suzuki–Miyaura <b>cross-coupling</b> reaction	Tetrahedron Letters	2013	2.03	64
46.	Silica Tethered Pd–DABCO Complex: An Efficient and Reusable Catalyst for Suzuki–Miyaura Reaction	Catalysis letters	2012	3.18	24
47.	Ultrasound promoted efficient and green synthesis of $\beta$ -amino carbonyl compounds in aqueous hydrotropic medium	Ultrasonics Sonochemistry	2012	9.33	40
48.	Brønsted acid hydrotrope combined catalyst for environmentally benign synthesis of quinoxalines and pyrido[2,3-b]pyrazines in aqueous medium	Tetrahedron Letters	2012	2.03	55
49.	Hydrotrope-induced synthesis of 1,8-dioxo-octahydroxanthenes in aqueous medium	Green Chemistry Letters and Reviews	2012	6.01	19
50.	Hydrotrope Induced Catalysis in Water: A Clean and Green Approach for the Synthesis of Medicinally Relevant Bis(indolyl)methanes and 2-Aryl Benzimidazoles	Synthetic Communications	2012	2.00	22
51.	Facile Knoevenagel and Domino Knoevenagel/Michael Reactions Using Gel-Entrapped Base Catalysts	Helvetica Chimica Acta	2011	2.20	20
52.	An expeditious synthesis of homoallylic alcohols using Brønsted acidic supported ionic liquid phase catalyst with pendant ferrocenyl group	Catalysis Communications	2011	3.51	31
53.	Facile synthesis of ferrocenylamines in aqueous hydrotropic solution using microwaves	Transition Metal Chemistry	2010	1.58	25
54.	Acacia concinna pods: as a green catalyst for highly efficient synthesis of acylation of amines	Archives of Applied Science Research	2010	-	23
55.	The Task Specific Ionic Liquid promoted reaction: An expeditious synthesis of privileged 1,8 – Dioxo octahydroxanthene	Archives of Applied Science Research	2010	-	9



<b>56.</b> Green chemistry approach for synthesis of 5-arylidine barbituric acid derivatives by hydrotrope induced Knoevenagel condensation in aqueous medium	Archives of Applied Science Research	2010	-	<b>26</b>
---	--------------------------------------	------	---	-----------

---

**Place: Kolhapur**