


Faculty Profile

Title	Dr.	Akash Ashok Deshmukh		Photograph
Designation	Assistant professor			
School / Dept. Name	Physics department, VMV Commerce JMT Arts & JJP Science College			
Address:	Physics department, VMV Commerce JMT Arts & JJP Science College, Central Ave, near Nagpur, Wardhaman Nagar Colony, Nagpur, Maharashtra 440008.			
Phone No.	Office			
	Residence			
	Mobile			
Email	akdeshmukh9@gmail.com			
Web Page (if any)				
Subject Taught	Physics			
Areas Of Interest/ Specialization	Advanced Computational Methods, Condensed Matter Physics, Solid State Physics, X-ray Spectroscopy, Experimental Techniques in Physics			
Experience (in years)	Total			
	Teaching	3+ years		
	Research	10+ years		
	Administration			
Educational Qualifications	UG	B.Sc (Physics, Maths, Computer Science)		
	PG	M.Sc Physics		
	Doctorate	Ph.d. (2014-2019): RTM Nagpur University, Nagpur		
	Any other	Post-doc (15 th April 2023 to 14 th April 2024): Silesian University of Technology, Gliwice, Poland. Research Associate (1 st June 2021 to 31 st March 2023): IIT Gandhinagar, India.		

<p>Research Publications in Journals (last five years)</p>	<ol style="list-style-type: none"> 1. Recent advances in modelling structure-property correlations in high-entropy alloys, <u>Akash A Deshmukh</u>, Raghavan Ranganathan, Journal of Materials Science & Technology 204 (2024) 127. https://doi.org/10.1016/j.jmst.2024.03.027 2. Structure and Corrosion Behavior of Multiphase Intermetallic ZrCu-Based Alloys. Rafał Babilas, Katarzyna Młynarek-Żak, Aneta Kania, <u>Akash A Deshmukh</u>, Tymon Warski, Łukasz Hawełek, Materials 17 (2024) 4182. https://doi.org/10.3390/ma17174182 3. Thermodynamic and Kinetic Studies of Glass-Forming Compositions in Ca–Mg–Cu Ternary Metallic Glasses, <u>Akash A Deshmukh</u>, Anuj A Khond, Jatin G Bhatt, Umesh A Palikundwar, Glass Physics and Chemistry 49 (2023) 604. https://doi.org/10.1134/S1087659622600211 4. Local structure order around Ni in Hf–Cu–Ni glassy ribbons: XANES and EXAFS study at Ni K–edge, <u>Akash A Deshmukh</u>, Anuj A Khond, Jatin G Bhatt, Umesh A Palikundwar, Physica B: Condensed Matter. 630 (2022) 413687. https://doi.org/10.1016/j.physb.2022.413687 5. Investigation of structural evolution in the Cu–Zr metallic glass at cryogenic temperatures by using molecular dynamics simulations, <u>Akash A Deshmukh</u>, Jatin G Bhatt, Prashant M Gade, Snehanshu Pal, Journal of Molecular Modeling 27 (2021) 286. https://doi.org/10.1007/s00894-021-04886-y 6. Local structure investigation of Co–Fe–Si–B ribbons by extended X-ray absorption fine-structure spectroscopy, <u>Akash A Deshmukh</u>, A. P. Srivastava, J. P. Singh, Manish Kumar, K. H. Chae, K. Asokan, U. A. Palikundwar, Journal of Synchrotron Radiation 28 (2021) 240. https://doi.org/10.1107/S1600577520015131 7. Dynamic probing of structural evolution for Co₅₀Ni₅₀ metallic glass during pressurized cooling using atomistic simulation, Akash A
--	---

	<p>Deshmukh, Snehanshu Pal, Journal of Molecular Modeling 26 (2020) 208. https://doi.org/10.1007/s00894-020-04468-4</p> <p>8. Understanding the role of Er on glass-forming ability parameters and critical cooling rate in Fe-based multicomponent bulk metallic glasses, <u>Akash A Deshmukh</u>, Anuj A Khond, Jatin G Bhatt, Umesh A Palikundwar, Journal of Alloys and Compounds 819 (2020) 152938. https://doi.org/10.1016/j.jallcom.2019.152938</p> <p>9. Investigation of glass forming ability parameters in Hf–Cu–Ni glassy alloy, <u>Akash A Deshmukh</u>, AA Khond, AP Srivastava, JG Bhatt, UA Palikundwar, 2 (2020) 015047. https://doi.org/10.1088/2631-8695/ab7ee6</p>
Papers Published in Conference Proceedings (last five years)	<p>1. Understanding the effect of compositions on electronegativity, atomic radius and thermal stability of Mg-Ni-Y amorphous alloy, <u>Akash A Deshmukh</u>, SA Kuthe, UA Palikundwar, AIP Conf. Proc. 1953 (2018) 090016. https://doi.org/10.1063/1.5032863</p> <p>2. Influence of compositions on thermal stability and thermodynamic parameter in Ca-Mg-Cu bulk metallic glasses, AIP Conf. Proc. 1953 (2018) 090071. https://doi.org/10.1063/1.5032918</p>
Web Link of Research Papers / Projects	https://scholar.google.com/citations?user=qSsNY5gAAAAJ&hl=en
Books Authored / Edited	<p>Book Title: Space Science for B.Sc. first year students according to the New Education Policy (NEP)-2020 of Govt. of India. Authors: Madhura M. Sahare, Akash A. Deshmukh Publication House: Sai Jyoti Publications, ISBN No.: 978-93-48367-90-7.</p>

No of Conferences		Attended	Organised	
	National	5		
	International	5		
Research Guidance				
		PG	M.Phil.	Doctorate
	Awarded	Awarded		Awarded
	Undergoing			
Awards & Distinctions	<p>1. Basic Science Research Fellowship by University Grants Commission (UGC): Junior Research Fellow: 2nd November 2015–1st November 2017 Senior Research Fellow: 2nd November 2017–30th June 2019</p> <p>2. Travel Support from Department of Science and Technology, Govt. of India to perform experiments at DESY synchrotron facility in Germany under INDIA@ DESY program.</p>			
Administrative Assignments Handled				
Association with Professional Bodies	<p>1. Indian Society for Particle Accelerator (ISPA): Life Membership (LM689) 2. Material Research Society of India (MRSI): Life Membership (LMB3010) 3. Neutron Scattering Society of India (NSSI): Life Membership (LMB235)</p>			