


Faculty Profile

Title	Dr.	Pranay R. Kautkar		Photograph
Designation	Assistant Professor (PG-Approved)			
School / Dept. Name	Department of Physics (PG)			
Address :	Department of Physics, VMV Commerce JMT Arts & JJP Science College, Central Ave, near Nagpur, Wardhaman Nagar Colony, Nagpur, Maharashtra-440008.			
Phone No.	Office	-		
	Residence	-		
	Mobile	7030442660		
Email	pranay.kautkar@gmail.com			
Subject Taught	UG (All Semesters); PG (X-rays, Nano Science, Experimental Techniques in Physics, Statistical Physics)			
Areas of Interest / Specialization	1. Material Science 2. Solid oxide fuel cell 3. Luminescence			
Experience (in years)	Total	11		
	Teaching	07		
	Research	04		
	Administration	-		
Educational Qualifications	UG	B.Sc. (PCM)		
	PG	M.Sc. (Physics)		
	Doctorate	Ph.D. (Physics)		
	Any other	MSCIT		

Research Publications in Journals (last five years)	<ol style="list-style-type: none"> 1. "Solar Cell Performance Enhancement using Nanostructures", Priya V. Tumram, Renuka Nafdey, Pranay R. Kautkar, S.V. Agnihotri, Rohini A. Khaparde S. P. Wankhede, S. V. Moharil, <i>Materials Science and Engineering B</i> 307, 117504 (2024). 2. "Theoretical Approaches to Electrolyte Modeling in Solid Oxide Fuel Cells", Pranay R. Kautkar, Sonal P. Ghawade, Sureshkumar R. Choubey, <i>URBAN INDIA, Vol 44 No. 1 (II), January-June 2024 UGC Care Group 1 Journal / Peer-Reviewed Journal, ISSN-0970-9045 (2024)</i>. 3. "State-of-the-art Electrolyte Materials for Intermediate Temperature Solid Oxide Fuel Cells: A Review", Pranay R. Kautkar, Sonal P. Ghawade, Sureshkumar R. Choubey, <i>URBAN INDIA, Vol 43 No. 2 (II), July-December 2023 UGC Care Group 1 Journal / Peer-Reviewed Journal, ISSN-0970-9045 (2024)</i>. 4. "Boosting Solar Cell Performance with Luminescent Spectral Converters", Sonal P. Ghawade, Pranay R. Kautkar, Sureshkumar R. Choubey, <i>URBAN INDIA, Vol 43 No. 2 (III), July-December 2023 UGC Care Group 1 Journal / Peer-Reviewed Journal, ISSN-0970-9045 (2024)</i>. 5. "Combustion Synthesis of Some Cr³⁺-Activated Aluminate Phosphors", P. V. Tumram, P. R. Kautkar, S. P. Wankhede, P. D. Belsare and S. V. Moharil, <i>ISSN 1063-7834, Physics of the Solid State, 2 Vol. 63, No. 7, pp. 1104-1112 (2021)</i>. 6. "Complex Perovskite system Dy_{0.5-x}Ba_xSr_{0.5}Co_{0.80}Fe_{0.20}O_{3-δ}: As a cathode for IT- SOFCs", P. R.Kautkar, P. Ojha, S. A. Acharya, <i>International Journal of Applied Ceramic Technology, 16, 273-286 (2019)</i>. 7. "NIR emitting Bi₂MoO₆:Nd³⁺/Yb³⁺ phosphor as a spectral converter for solar cells", P. V. Tumram, P. R. Kautkar, S. P. Wankhede, S. V. Moharil, <i>Journal of Luminescence, 206, 39-45 (2019)</i>. 8. "NIR emission and energy transfer phenomena in Bi₂(MoO₄)₃ doped with Nd³⁺ and/or Yb³⁺", Priya V. Tumram, Pranay R. Kautkar, S. P. Wankhede, P. D. Belsare, and S. V. Moharil, <i>AIP Advances 9, 105113 (2019)</i>.
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Papers Published in Conference Proceedings (last five years)	<ol style="list-style-type: none"> 1. “Wet chemical synthesis of KCaI :Eu phosphor”, P. V. Tumram, P. R. Kautkar, S. V. Moharil, <i>AIP Conference Proceedings</i>, 2100 (1), 020058 (2019). 2. “Study on structural refinement and electrochemical behaviour of Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3-δ} as cathode materials for intermediate temperature solid oxide fuel cell”, Pranay R. Kautkar, Shradhha C. Shirbhate, Smita A. Acharya, <i>AIP Conference Proceedings</i>, 1953 (1), 090057 (2018.) 3. “Study on Dy_{0.05}Ba_{0.5}Sr_{0.45}Co_{0.8}Fe_{0.2}O_{3-δ}-Ce_{0.85}Gd_{0.15}O_{1.95} composite cathode material for intermediate temperature solid oxide fuel cell”, Pranay R. Kautkar, Smita A. Acharya, <i>AIP Conference Proceedings</i>, 1953 (1), 090038 (2018).
Web Link of Research Papers / Projects e.g. Research Gate, Google Scholar, Academia	<p>Google Scholar: https://scholar.google.com/citations?hl=en&user=fDAwSxkAAAAJ&view_op=list_works&sortby=pubdate</p> <p>Research Gate: https://www.researchgate.net/profile/Pranay-Kautkar</p>

No of Conferences		Attended	Organized	
	National	08	NIL	
	International	03	NIL	
Research Guidance				
		PG	M.Phil.	Doctorate
	Awarded	06	-	-
	Undergoing	03	-	-
Awards & Distinctions	<ul style="list-style-type: none"> ➤ Project Fellow (JRF & SRF) under Major Research Project sanctioned by UGC, New Delhi, India from May, 2013 to March 2015. ➤ Awarded Rashtrasant Tukadoji Maharaj Memorial Fellowship Year:2017-2018 			
Administrative Assignments Handled	-			
Association with Professional Bodies	<ul style="list-style-type: none"> ➤ Neutron Scattering Society of India (NSSI): Life Membership (LMB236) 			