

## Somaiya Vidyavihar University

<b>Name: Pushendra Rai</b>		<b>E-mail:pushendrarai@somaiya.edu</b>	
<b>Contact No: 9224840300</b>			
Department/Section: Science & Humanities			
College: K J Somaiya College of Engineering			
DOJ Somaiya: 21 July 2009	Career Experience: 17 Yrs	Industry Experience:2_Yrs	Teaching Experience:16Yrs
Present Academic Designation: Associate Professor		Present Administrative Designation: Faculty, Course Cordinator Engineering Chemistry	

<b>Area of research/specialization and Courses Delivered</b>
Research domain/interests/areas 1. Water treatment 2. Advance oxidation process 3. Nano technology 4. Adsorption and surface science 5. Polymers Courses Delivered 1. Engineering Chemistry 2. Instrumental methods of analysis 3. Chemistry for Engineers

Recognition as a teacher by any University	UG: Yes	PG: Yes	Ph.D : Yes
Details of Recognitions 1. SVU/DRO/PhDGL/22-23/059 2. KJSCE/372/2012			

<b>Education</b>					
Examination	Name of the Degree	University/Board	Institute/College	Year	CPI/SPI/ %Marks
Ph.D	Ph.D Science	Mumbai University	Institute of Chemical Technology	2008	-
PG	M.Sc Analytical Chemistry	Mumbai University	Department of Chemistry,Mumbai University	2001	66.4%
UG	B.Sc Chemistry	Mumbai University	R. J College	1999	70.00
Diploma					
NET/SET/Other					

<b>Notable Experience Details</b>					
Sr. No	Name of the organization	Designation	Date of Joining	Date of Leaving	Experience (Years)
1.	IIT Bombay	Post Doctorate Fellow	2008	2009	1 year

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<b>Research Accomplishments and Projects</b>		
No of students pursuing Ph.D as on date: 02	No of students completed Ph.D as on date: Nil	
No of students completed PG thesis / Project work as on date: Nil	No of students / groups completed UG projects as on date: Nil	
Publications Total: 07	Number of Peer review Journal papers: 07	Number of Conference papers: 05
<p><b>Details of Publications:</b></p> <p><b>International Journals</b></p> <ol style="list-style-type: none"> <li>1. Removal of Disperse Dyes from Aqueous Solution Using Sawdust and BDTDA-Sawdust, Journal of Dispersion Science &amp; Technology, Volume 28, 2007</li> <li>2. Mani, S., Rai, P., Khosla, S., &amp; Sarawade, P. (2021). The influence of polymer on optical and thermal properties of nematic liquid crystals. Journal of Physics: Conference Series, 2070(1). <a href="https://doi.org/10.1088/1742-6596/2070/1/01205">https://doi.org/10.1088/1742-6596/2070/1/01205</a></li> <li>3. Pushpendra Rai, santosh Mani, Sunil Yadav, (2024) Abatement of textile dyes using surfactant modified agricultural waste sawdust. International Research Journal on Advanced Engineering Materials, 02 (6), doi.org/10.47392/IRJAEM.2024.0280</li> </ol> <p><b>National Journals</b></p> <ol style="list-style-type: none"> <li>1. Nil</li> </ol> <p><b>Conferences</b></p> <ol style="list-style-type: none"> <li>1. The influence of polymer on optical and thermal properties of nematic liquid crystals, <i>J. Phys.: Conf. Ser.</i> <b>2070</b> 012055</li> <li>2. Blended Learning Approach using Virtual Laboratory Applications in Engineering Chemistry, 2019 <i>IEEE Tenth International Conference on Technology for Education (T4E)</i></li> <li>3. Optical and Electrical Characterization of Polymer Dispersed Nematic Liquid Crystals, <i>Key Engineering Materials</i> Volume 934, Pages 3 – 13 2022</li> <li>4. Active Learning and CO Attainment through Collaborative Learning in Engineering Chemistry, 2019 <i>IEEE Tenth International Conference on Technology for Education (T4E)</i></li> </ol> <p><b>Books/Book Chapters</b></p> <ol style="list-style-type: none"> <li>1. Optical and Electrical Characterization of Polymer Dispersed Nematic Liquid Crystals, <i>Key Engineering Materials</i> (Volume 934)</li> <li>2. Engineered Cementitious Composites (ECC) Through Nano-Composite Integration: Enhancing Construction, Balpreet Singh Madan, S. Logeswaran, M. Veerapathran, Pushpendra Rai, Sanjay Kumar Singh, Sampath B. (2024), Ch(008) 10.4018/978-1-6684-8182-0.ch 008</li> </ol>		
<p><b>Patents/Copy Rights</b></p> <ol style="list-style-type: none"> <li>1. Nil</li> </ol>		
No of Research / consultancy / projects completed: Rs: <u>02</u>	No of Research / consultancy / projects on-going: Rs: <u>02</u>	No of Research / consultancy / projects on applied as on date: Rs: <u>Somaiya Seed Grant: 4,90,00</u> <u>Industrial Consultancy: 1,50,000</u>
<p><b>Details of Research / consultancy / projects:</b></p> <p><b>Completed</b></p> <ol style="list-style-type: none"> <li>1. Use of magnetically separable Nano particles for degradation of azo dyes in waste water effluents under Mumbai University minor research project</li> <li>2. "Bio-catalyzed abatement of organic chlorophenols in effluent wastewater.</li> </ol> <p><b>On-going</b></p> <ol style="list-style-type: none"> <li>1. Removal of micro plastics from waste water.</li> <li>2. Consultancy for Famous Speciality Chemicals in the development and performance Analysis of various specialty chemicals</li> <li>3. Liquid based chemicals from Electroplating from Air India Electroplating Engineering Services LTD</li> </ol>		
<p><b>IPR/ Copyrights</b></p> <ol style="list-style-type: none"> <li>1. Certificate for Design Patent UK, for Organic LED for photo electric sensor</li> <li>2. Certificate for Design Patent UK, for Portable wireless Piezometer for groundwater pressure monitoring: Landslide risk management</li> </ol>		

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<b>FDPs/Seminars/Workshops/Training Programs Attended/ Organized/ Delivered</b>	
	<p><b>Attended</b></p> <ol style="list-style-type: none"> <li>1. National level Faculty Development program on Excellence in Higher Education: perspective of NEP organized by Bhartiya Vidya Bhavan Sardar Patel college of Engineering in collaboration with SAE</li> <li>2. Research Funding, Projects &amp; IPR organized by R &amp; D Cell &amp; IQAC, K C College of Engineering</li> <li>3. Strengthening Academic &amp; Research Pursuit in the 21st Century, National Faculty Development Program jointly organized by School of Basic Sciences and Research, Sharda University</li> <li>4. Nuclear Radiations for Societal Applications organized by Applied Science Department at NITTTR Chandigarh</li> <li>5. Presented research paper entitled “Effect of quantum dots dispersion on the structural, optical, and thermal properties of liquid crystal system” in First International Conference on Modern Materials for Engineering and Research (ICMMER 2022)</li> <li>6. Presented research paper entitled “Morphological and thermal behavior of monomer dispersed liquid crystal in Fourth international conference on inventive materials science and applications (ICIMA2021)</li> <li>7. Attended webinar series on “ Scientific writing: Publication ethics, effective peer review and increasing research impact” joint organized by Taylor &amp; Francis and National Knowledge resource consortium</li> <li>8. Attended FDP program on “ Recent Concreteria for the structure” Joint organized by Ultra Tech Cement and Rizvi College of Engineering</li> <li>9. Attended FDP program on “Innovative Teaching Learning and Research in perspective with NEP 2020” organized by PVPIT, Pune</li> </ol>
	<p><b>Organized</b></p> <ol style="list-style-type: none"> <li>1. Challenges, innovations and adaptations of covid-19: science &amp; society perspectives" (CIACSSP), jointly organized by K J Somaiya College of Engineering and S K Somaiya College, constituent colleges of Somaiya Vidyavihar University</li> <li>2. “Future of Education-Innovative Pedagogy, OBE and AI” jointly organized by Mechanical Engineering Department and Science &amp; Humanities Department in association with TLC and IQAC</li> <li>3. Project mentors for We-Chemie program (a unique programme exclusively for women students of Chemistry and Chemical Sciences.)</li> <li>4. IGCW- STEPS Workshop on ‘Green and Sustainable Chemistry’ organized by Somaiya Vidyavihar University</li> <li>5. International Conference on Technologies for Energy, Agricultural and Healthcare, organized by K J Somaiya College of Engineering</li> </ol>
	<p><b>Delivered</b></p> <ol style="list-style-type: none"> <li>1. Nil</li> </ol>

<b>Notable Key Scholastic Achievements</b>	
1.	Nil

<b>Notable Positions and Responsibility</b>	
1.	<ol style="list-style-type: none"> <li>1. Member of Board of Studies, Chemistry, Somaiya Vidyavihar University</li> <li>2. Member of syllabus framing committee for Master of Chemistry under school of Basic and Applied science</li> </ol>

**Signature of Faculty Member**