



Rayat Shikshan Sanstha's
Yashwantrao Chavan Institute of Science, Satara (Autonomous)
Lead College of Karmaveer Bhaurao Patil University, Satara

Faculty Profile

❖ **General information**

Name : Dr. Sarfraj Hisamuddin Mujawar
Designation : Associate Professor
Department : Physics
Educational Qualification : M.Sc. Ph.D.
Date of Appointment : 14/09/2010
Teaching Experience : UG: 13 years
PG: 05 years
Research Experience : 20 years
Research Area : Materials Science



❖ **Educational Qualification Details (undergraduate onwards)**

Sr. No.	College/University	Degree	Subjects	Year	Class/Percentage
1	Kisan Veer Mahavidyalaya, Wai.	B.Sc.	Physics	2000	I st Class
2	Shivaji University Kolhapur.	M.Sc.	Physics	2002	I st Class
3	Shivaji University Kolhapur.	Ph.D.	Physics	2008	NA

❖ **Academic and Administrative Responsibilities**

Sr. No.	Position	Organization	Date/Duration
1	Director, Research and Development Cell	KBPU University, Satara.	From 2023
2	Dean, Research and Development.	YCIS, Satara.	From 2020
3	Head, Department of Physics	YCIS, Satara	From 2024
4	Coordinator, Nanoscience and Technology	YCIS, Satara.	From 2018
5	BOS Member	KBP College, Pandharpur	From 2021
6	BOS Member	R. More College Akurdi Pune	From 2023
7	BOS Member	G. Jogalekar College, Ratnagiri	From 2023
8	BOS Member	Devrukh College, Devrukh.	From 2023

❖ **Awards/Honors/Recognitions/Scholarship etc.:**

Sr. No.	Name of the award/honor/recognition	Awarding Organization	Date and Year
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1	Excellence in PhD research Award	Shivaji University, Kolhapur	Oct 2006
2	Senior Research Fellow (SRF)	CSIR New Delhi	April 2007
3	Selected As Project Scientist	IIT Kanpur	Dec 2008
4	Project Associate	NCL Pune	Feb 2008
5	University Postdoctoral Fellow	Chonbuk Nat. Univ., S. Korea	Aug 2009

❖ **Membership to Professional Organizations/Associations:**

Sr. No.	Membership type (Annual/Life/any other)	Organization/Association	Date and year
1	Member	Institute of Physics London	2008
2	Member	Indian Association of Physics Teachers	2020

❖ **Research Projects (Ongoing/Completed)**

Sr. No.	Title of Project	Duration	Amount Sanctioned (in Lakhs)	Agency	Status (Ongoing/Completed)
Major Research Project					
1	Synthesis and Characterization of Functional Nanomaterials for Solar Cells	2015-18 2 Years	14.50 Lakhs	UGC, New Delhi	Completed
Minor Research Project					
1	Electrochemical Approach Towards Fabrication of One Dimensional Architecture for Photo-electrochemical Solar Cells	2011-13 2 Years	3.00 Lakhs	BCUD Pune University	Completed
2	Nano Tube/Graphene Based Transparent and Conducting Thin Films By Spray Pyrolysis Technique	2017-19 2 Years	2.00 Lakhs	BCUD Pune University	Completed

❖ **Research Guidance:**

Number of students (Ph.D.) 1) Completed: 00 2) Registered: 06

❖ **Details of Research Publications**

A) Patent

Sr. No.	Title	Patent No.	Indian/US/Any other	Granting date
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1	High Efficient Dye-Sensitized Solar Cells Using TiO ₂ -Multiwalled Carbon Nano Tube (MWCNTs) Nanocomposite	US20120012177A1	US	19/01/2012
2	Automated Fingerprint Taking Kit	202221046042 (Certificate No: 504836)	Indian	21-11-2023
3	A method of preparation of lanthenum strontium manganite doped ammonium zinc phosphate based electrode for supercapacitor application	202221069654	Indian	27-01-2023
4	Metal oxide composite comprising Lanthanum Strontium Tungsten Nanoparticles by solution combustion synthesis method for NO ₂ gas sensing application	202221070834	Indian	27-01-2023
5	Metal Organic Framework Derived Cobalt Phosphate Synthesized by SILAR for Oxygen Evolution Reaction Application	202321090212	Indian	26-01-2024
6	Modified Mixer Vessel Lid for Efficient Grinding	401085-001	Indian	21-03-2024
7	A Method for Synthesis of Carbon Quantum Dot Decorated Nickel Cobalt Layered Double Hydroxide Electrocatalyst for Oxygen Evolution Reaction.	202421002826	Indian	23-02-2024
8	A METHOD FOR SYNTHESIS OF REDUCED GRAPHENE OXIDE- NICKEL OXIDE NANOFKAKES COMPOSITE ELECTRODE FOR ELECTROCHROMIC SUPERCAPACITOR APPLICATION	202421013237	Indian	22-03-2024
9	Automatic Dispenser	419436-001	Indian	26-08-2024
10	Forest Animals Panic Sound Detector	409602-001	Indian	06-03-2024

B) Books/Book Chapters

Sr. No	Title	Publisher	Year of Publication	ISBN No	Type (Reference/Text)
1	Electrochromism in Niobia thin films: A status Review for the Photo/Electrochemistry & Photobiology in the Environment Energy and Fuel	Research Signpost, T. C. 37/661 (2), Fort Post Office, Trivandrum 695023, Kerala, India	2007		Reference
2	Electrochromism in Pristine and Doped Niobium Oxide Thin Films.	LAP Lambert Academic Publishing (UK)	2016		Reference
3	Recent Trends in Materials for Advanced Technologies	Aavishkar Publications	2022	978-81-96470-7-0	Reference

D) Research papers:

Sr. No	Publication Details
1.	Heterostructured NiMo-sulfide micro-pillar arrays for advanced alkaline electrocatalytic clean hydrogen production via overall water splitting <i>Applied Surface Science 661 (2024): 160081</i> Sarfraj H Mujawar, Amol S Salunke, Ramesh J Deokate, Shrikrishna T Salunke, Nabeen K Shrestha, Hyunsik Im, Akbar I Inamdar
2.	Iron-hydroxide controlled by cobalt and aluminium as an advanced electrocatalysts for overall water splitting and its temperature dependence <i>Journal of Alloys and Compounds 989 (2024): 174334.</i> Amol S Salunke, Ramesh J Deokate, Shrikrishna T Salunke, Sarfraj H Mujawar, Nabeen K Shrestha, Hyunsik Im, Akbar I Inamdar
3.	Electrochemical and Impedance Analysis of Nickel Oxide Nanoflakes-based Electrodes for Efficient Chromo Supercapacitors <i>Electrochimica Acta (2024): 144614</i> Suhas H Sutar, Sushant B Patil, Love Bansal, Shivaji B Sadale, Rajesh Kumar, Sarfraj H Mujawar
4.	Carbon quantum dots decorated NiCo layered double hydroxide for electrochemical oxygen evolution reaction and supercapacitor application <i>Journal of Materials Science: Materials in Electronics 35, no. 15 (2024): 1037</i> DA Wadkar, KB Jadhav, SD Jituri, SH Mujawar

5.	Enhanced Photodegradation of Methylene Blue Using Reusable Cobalt Ferrite Nanocomposites <i>Science of Advanced Materials. 2024 May 1;16(5):589-95.</i> Rupali Chavan, Sarfraj Mujawar, Vishal Dawkar, Vishalkumar More, Nilesh Pawar, Rahul Patil, Jyoti Jadhav, Jawed Mustafa, Basrat Jameel, Hasan MH Muhaisen, Ayeda YA Mohammed, Ashok Chougale
6.	Robust and durable Li-ion batteries fabricated by using lead-free crystalline M ₂ NiMnO ₆ (where M= Eu, Gd, Tb) double perovskites <i>CrystEngComm (2024).</i> Kiran Shinde, Harish S Chavan, Sarfraj H Mujawar, Amol Shrikrishna Salunke, Abu Talha Aqueel Ahmed, Nabeen K Shrestha, Joon Sik Park, Hyunsik Im, A Inamdar
7.	Electrodeposited Tungsten Trioxide (WO ₃) Thin Films for Electrochromic Applications <i>Chemsci advances (2024)</i> P. S. Chavan, P.S. Shedge, S.S. Deshmukh, R. R. Bhandalkar, S.H. Sutar, S. H. Mujawar
8.	Feasibility of nickel oxide as a smart electrochromic supercapacitor device: A review <i>Journal of Energy Storage 73, 109035 (2023).</i> S.H. Sutar, B.M. Babar, K.B. Pisal, A.I. Inamdar, S.H. Mujawar.
9.	V ₂ O ₅ -rGO based chemiresistive gas sensor for NO ₂ detection. <i>Materials Science and Engineering: B 298, 116827 (2023).</i> B.M. Babar, S.H. Sutar, S.H. Mujawar, S.S. Patil, U.D. Babar, U.T. Pawar, P.M.Kadam, P.S. Patil, L.D. Kadam
10.	Chemically synthesized ZnFe ₂ O ₄ electrodes for electrochemical oxygen evolution reaction and supercapacitor applications. <i>Journal of Materials Science: Materials in Electronics 34 (27), 1842 (2023).</i> S.D. Jituri, R.P. Nikam, V. J. Mane, S.B. Shaikh, C.D. Lokhande, S.H. Mujawar
11.	Gel entrapped ZnO nanorods: An efficient and sustainable catalyst for the Claisen-Schmidt condensation reaction in aqueous hydrotropic media. <i>Molecular Catalysis 542, 113120(2023).</i> S.R. Attar, A.C. Sapkal, C.S. Bagade, S. H. Mujawar, S. B. Kamble
12.	Supercapacitor performance of vanadium-doped nickel hydroxide microflowers synthesized using the chemical route. <i>Applied Physics A 129 (2), 158(2023).</i> D.B. Mane, O.C. Pore, D.S. Sawant, D.V. Rupnavar, R.V. Shejwal, S.H. Mujawar, L.D. Kadam, R.V. Dhekale, G.M. Lohar
13.	MoS ₂ nanosheets as bifunctional electrode for oxygen evolution reaction and electrochemical supercapacitor. <i>International Journal of Energy Research 46 (13), 18312-18327(2022).</i> Komal B Pisal, Bapuso M Babar, Sarfraj H Mujawar, Sawanta S Mali, Chang KookHong, Shrikrishna D Sartale, Laxman D Kadam.

14.	<p>Photoelectrochemical properties of nanoflake like cadmium sulfide sensitized Zn₂SnO₄ thin film electrodes prepared by chemical methods.</p> <p><i>International Journal of Energy Research</i> 46 (12), 17706-17713 (2022).</p> <p>M.A. Patil, H.P. Deshmukh, P.S. Patil, S.H. Mujawar, H. Im, A.I. Inamdar</p>
15.	<p>Structural, morphological and optical attributes of ZnO thin films deposited via spray pyrolysis process: Impact of molarity variation.</p> <p><i>IOP Conference Series: Materials Science and Engineering</i> 1258 (1), 012012 (2022).</p> <p>S.V. Nikam, B.T. Jadhav, S.M. Chivate, S.M. Nikam, S.H. Mujawar, A.P. Torane</p>
16.	<p>Effect of Pd sensitization on gas-sensing performance of vanadium pentoxide-reduced graphene oxide composite.</p> <p><i>Journal of Materials Science: Materials in Electronics</i> 33 (25), 19884-19900 (2022).</p> <p>BM Babar, SH Mujawar, PV Mane, PM Kadam, PS Patil, L. D. Kadam.</p>
17.	<p>Effect of time and temperature on adsorption of persulphate ions for developing 2D nanosheets to 3D microflowers for development of γ nickel hydroxide and its supercapacitor Applications.</p> <p><i>Applied Physics A</i> 128 (7), 611 (2022).</p> <p>D.B. Mane, O.C. Pore, R.K. Kamble, D.V. Rupnavar, S.H. Mujawar, L.D. Kadam, R.V. Dhekale, G.M. Lohar</p>
18.	<p>High stability Mn₂O₃/MnCO₃ microcubes synthesized by hydrothermal method for supercapacitor application.</p> <p><i>Materials Science in Semiconductor Processing</i> 143, 10655 (2022).</p> <p>O.C. Pore, A.V. Fulari, S.H. Mujawar, R.V. Shejwal, V.J. Fulari, G.M. Lohar</p>
19.	<p>Electrodeposited bimetallic microporous MnCu oxide electrode as a highly stable electrocatalyst for oxygen evolution reaction.</p> <p><i>International Journal of Energy Research</i> 46 (4), 5269-5279 (2022).</p> <p>Ramesh J. Deokate, Harish S. Chavan, Suraj C. Bulakhe, Sachin B. Tanwade, Sarfraj H. Mujawar, Sawanta S. Mali, Chang Kook Hong, Hyunsik Im, Akbar I. Inamdar.</p>
20.	<p>Hydrothermally Prepared Vanadium Oxide Nanostructures for Photocatalytic Application.</p> <p><i>ES Energy & Environment</i> 15, 82-91, (2022).</p> <p>Prakash M. Kadam and Pramod S. Patil Bapuso M. Babar, Komal B. Pisal, Suhas. H. Sutar, Sarfraj H. Mujawar, Laxman D. Kadam, Habib M. Pathan, Udayraj T. Pawar.</p>
21.	<p>Concentration modulated vanadium oxide nanostructures for NO₂ gas sensing.</p> <p><i>Sensors and Actuators B: Chemical</i> 351, 130947 (2022).</p> <p>B.M. Babar, K.B. Pisal, S.H. Mujawar, V.L. Patil, L.D. Kadam, U.T. Pawar, P.M. Kadam, P.S. Patil.</p>

22.	Overview of molybdenum disulfide based electrodes for supercapacitors: A shortreview. <i>Journal of Energy Storage</i> 43 , 103297 (2021).KB Pisal, BM Babar, SH Mujawar, LD Kadam
23.	Effect of Annealing Temperature on Morphologies of Metal Organic FrameworkDerived NiFe ₂ O ₄ For Supercapacitor Application. <i>Journal of Energy Storage</i> , 40 , 102821, 2021. P.D. Patil, S.R. Shingte, V.C. Karade, J.H. Kim, T.D. Dongale, S.H. Mujawar , A.M. Patil, P.B. Patil.
24.	Synthesis and Characterization of Hydrothermally Prepared MolybdenumDisulfide for Supercapacitor Application. <i>Materials Today: Proceedings</i> , 43 , 2707-2710, 2021. K.B. Pisal, A.S. Thorat, S.S. Jagtap, P.K. Pagare, S.H. Mujawar, L.D. Kadam.
25.	Fast Response and Highly Selective Nitrogen Dioxide Gas Sensor Based onZincStannate Thin Films. <i>Materials Science for Energy Technologies</i> , 3 , 36-42, 2020. Sarfraj H. Mujawar , Mahendra A. Patil and Harish P. Deshmukh.
26.	Chalcogenide Nanocomposite Electrodes Grown by Chemical Etching of NiOFoam as Electrocatalyst for Efficient Oxygen Evolution Reaction. <i>International Journal of Energy Research</i> , 44 (2), 1233-1243, 2020. Ramesh J. Deokate, Sarfraj H. Mujawar , Harish S. Chavan, Sawanta S. Mali,Chang Kook Hong, Hyunsik Im, Akbar I. Inamdar.
27.	Pulse Laser Deposited COFeO ₄ Thin films as supercapacitor electrode. <i>RSC Advances</i> 10 (33), 19353-19359, 2020. S.M. Nikam, A.Sharma, M. Rahaman, A.M. Teli, S.H. Mujawar , D.R.T. Zahn, P.S. Patil, S.C. Sahoo, G. Salvan, P.B. Patil.
28.	Electrochromic Properties of Layered Nb ₂ O ₅ -WO ₃ Thin Films. <i>Materials Today: Proceedings</i> , 23 , 430-436, 2020. S. H. Mujawar, B. B. Dhale, P. S. Patil.
29.	Hydrothermal Synthesis of β-Ni(OH) ₂ and its Supercapacitor Properties <i>AIP ConferenceProceedings</i> 1942 (1), 140059, 2018. Suraj S. Waghmare, Prashant B. Patil, Shiva K. Baruva, Madhuri S. Rajput,Ramesh J. Deokate, Sarfraj H. Mujawar .
30.	Enhanced NO ₂ Response of Hydrothermally Grown Ti doped WO ₃ Nanostructures <i>Journal of Materials Science:Materials in Electronics</i> , 28 (2), 1612-1619, 2017. V. B. Patil, N. L. Tarwal, S. H. Mujawar , I. S. Mulla, P. S . Walke, S. S.Suryavanshi.

31.	Electrochromic Properties of Copper Oxide (I) Thin Films <i>Energy and Environment Focus 5 (3), 195-199, 2016.</i> B.B. Dhale, S.H. Mujawar, H.P. Deshmukh, P.S. Patil.
32.	Synthesis and Characterization of ZincStannate Thin Films by Spray Pyrolysis Technique. <i>Journal of Materials Science: Materials inElectronics, SpecialIssue, 1-6, 2016.</i> Mahendra A. Patil, Sarfraj H. Mujawar , Vinayak V. Ganbavle, Kesu Y.Rajpure,Harish P. Deshmukh.
33.	The Preparation of Zinc Oxide Thin Films and Their Electrical and Optical Properties <i>Int. Journal of Emerging Research in Management &Technology, 4,207-212, 2015.</i> B. B. Dhale, S. H. Mujawar , H. P. Deshmukh, P.S. Patil.
34.	Photoluminescence andPhoto-electrochemical Properties of The Spray DepositedCopper Doped Zinc Oxide Thin Films. <i>Ceramics International, 40, 7669-7677, 2014.</i> N.L. Tarwal, K.V. Gurav, S.H. Mujawar , S.B. Sadale, K.W. Nam, W.R. Bae, A.V. Moholkar, J.H. Kim, P.S. Patil, J.H. Jang.
35.	Graphene Based Composites as a Counter Electrode for Dye-Sensitized SolarCells <i>Current Applied Physics, 12,49- 53, 2012.</i> T. Battumur, Sarfraj H. Mujawar , Swapnil B. Ambade, Wonjee Lee, Sung-Hwan Han, Soo-Hyoung Lee.
36.	The Influences of Complexing Agents on Growth of Zinc Oxide Thin Films fromZincAcetate Bath and Associated Kinetic Parameters. <i>International Journal of Electrochemical Science, 2, 797, 2007.</i> A.I. Inamdar, S.H. Mujawar , P.S. Patil.
37.	Electropolymerization of Polyaniline on Titanium Oxide Nanotubes for Supercapacitor Application. <i>Electrochimica Acta 56, 4462-4466, 2011.</i> Sarfraj H. Mujawar , Swapnil B. Ambade, T Battumur, Rohan B. Ambade, Soo-Hyoung Lee.
38.	High Efficiency Polymer Solar Cells via Sequential Inkjet-Printing of PEDOT:PSS and P3HT:PCBM Inks with Additives. <i>Organic Electronics, 11, 1516, 2010.</i> Seung Hun Eom, Hanok Park, S.H. Mujawar , Sung Cheol Yoon, Seok-Soon Kim, Seok-In Na, Seok-Ju Kang, Dongyoon Khim, Dong-Yu Kim, Soo-HyoungLee.
39.	Electrochromism in Composite WO ₃ -Nb ₂ O ₅ Thin Films Synthesized by SprayPyrolysis Technique. <i>Journal of Applied Electrochemistry 41 (4), 397-403.</i> S.H. Mujawar, A.I. Inamdar, C.A.Betty, R.C. Korošec, P.S. Patil.

40.	Strong Photo-response in a Flip-Chip Nanowire p-Cu ₂ O/n-ZnO Junction <i>Nanoscale 3 (11), 4706-4712</i> M. Deo, S. Mujawar, O. Game, A. Yengantiwar, A. Banpurkar, S. Kulkarni.
41.	Spray Deposited Titanium Oxide Thin Films as Passive Counter Electrodes. <i>Electrochimica Acta, 52, 3114, 2007.</i> P.S. Shinde, H.P. Deshmukh, S.H. Mujawar , A. I. Inamdar, P. S. Patil.
42.	Effect of Post Annealing Treatment on Electrochromic Properties of Spray Deposited Niobium Oxide Thin Films. <i>Electrochimica Acta 52, 4899, 2007.</i> S. H. Mujawar , A. I. Inamdar, C. A . Betty, V Ganesan, P. S. Patil.
43.	Electrodeposited Zinc Oxide Thin Films: Nucleation and Growth Mechanism <i>Solar Energy Materials and Solar Cells, 91, 864, 2007.</i> A. I. Inamdar, S. H. Mujawar , S. B. Sadale, A. C. Sonavane, M. B. Shelar, P. S. Shinde, P. S. Patil.
44.	Electrochemical Investigations on Spray Deposited Tin Oxide Thin Films. <i>Solar Energy Materials and Solar Cells, 91, 256, 2007.</i> P. S. Patil, P.S. Chigare, S.B. Sadale, S.H. Mujawar , P.S. Shinde.
45.	Synthesis of Electrochromic Tin Oxide Thin Films With Faster Response by SprayPyrolysis. <i>Applied Surface Science, 253, 129, 2007.</i> P.S. Patil, S.B. Sadale, S.H. Mujawar , PS Shinde, PS Chigare.
46.	Structural, Optical and Electrochromic Properties of Nickel Oxide Thin FilmsGrown from Electrodeposited Nickel Sulphide. <i>Applied Surface Science, 253, 9365, 2007.</i> M.M. Uplane, S. H. Mujawar , A. I. Inamdar, P. S. Shinde, A. C. Sonavane, P. S. Patil.
47.	Effect of Film Thickness on Electrochromic Activity of Spray Deposited IridiumOxide Thin Films. <i>Materials Chemistry and Physics, 99, 101, 2006.</i> P.S. Patil, S.H. Mujawar , S.B. Sadale, H.P Deshmukh, A.I Inamdar.
48.	Enhanced Conversion Efficiency in Dye-Sensitized Solar Cells Based on Hydrothermally Synthesized TiO ₂ - MWCNT Nanocomposites. <i>ACS Applied Materials and Interfaces, 1, 2030, 2009.</i> Subas Muduli, Wonjoo Lee, Vivek Dhas, Sarfraj Mujawar , Megha Dubey, Vijayamohanan, Sung-Hwa Han, Satishchandra Ogale.

49.	Structural, Morphological, Optical and Electrochromic Properties of Ti-Doped MoO ₃ Thin Films. <i>Solar Energy Materials and Solar Cells</i> , 93 , 183, 2009. S. S. Mahajan, S. H. Mujawar , P.S. Shinde, A.I. Inamdar, P.S. Patil.
50.	Concentration Dependent Structural, Optical and Electrochromic Properties of MoO ₃ Thin Films. <i>International Journal of electrochemical science</i> . 3 , 512, 2008. S.S. Mahajan, S.H. Mujawar , P.S. Shinde, A.I. Inamdar, P.S. Patil.
51.	The Effect of Bath Temperature on the Electrodeposition of Zinc Oxide Thin Films via an Acetate Medium. <i>Semiconductor Science and Technology</i> , 23 , 245, 2008. A.I. Inamdar, S.H. Mujawar , S.R. Barman, P.N. Bhosale, P.S. Patil.
52.	Structural, Optical and Electrochromic Properties of Nb-Doped MoO ₃ Thin Films. <i>Applied Surface Science</i> , 254 , 5895, 2008. S.S. Mahajan, S.H. Mujawar , P.S. Shinde, A.I. Inamdar, P.S. Patil.
53.	Surfactant Mediated Growth of Nanostructured Zinc Oxide Thin Films Via Electrodeposition and Their Photoelectrochemical Performance. <i>Nanotechnology</i> , 19 , 845, 2008. A.I. Inamdar, S.H. Mujawar , V Ganesan, P.S. Patil.
54.	Electrochromic Properties of Spray-Deposited Niobium Oxide Thin Films. <i>Solid State Ionics</i> , 177 , 3333, 2006. S. H. Mujawar , A.I. Inamdar, S.B. Patil, P.S. Patil.
55.	Properties of Spray Deposited Niobium Oxide Thin Films. <i>Journal of Materials Science Materials in Electronics</i> . 16 , 35, 2005. P.S. Patil, A.R. Patil, S.H. Mujawar , S.B. Sadale.
56.	Electrochromic Properties of Spray Deposited TiO ₂ - Doped WO ₃ Thin Films. <i>Applied Surface Science</i> , 250 , 117, 2005. P.S. Patil, S.H. Mujawar , A. I. Inamdar, S. B. Sadale.
57.	Structural, Electrical and Optical Properties of TiO ₂ Doped WO ₃ Thin Films. <i>Applied Surface Science</i> 252 , 1643, 2005. P. S. Patil, S.H. Mujawar , A. I. Inamdar, P. S. Shinde, H. P. Deshmukh, S. B. Sadale.

F) Citation Index

	Google Scholar	Scopus	Web of Science
Citations	2077	1673	
h-index	23	23	
i10-index	33	-	

❖ Participation in Orientation/Refresher/FDP/Short Term/Training Programs:

Sr. No.	Name of the programme	Organizing institute	Date
1			
2			
3			
4			
5			

Signature of Faculty