

# CURRICULAM VITAE



## PERSONNEL DETAILS

<b>Name</b>	: <b>Prof. (Dr.) Madhav Tukaram Sarode</b>
<b>Date of Birth</b>	: 21 <sup>st</sup> November 1966
<b>Nationality</b>	: <b>Indian</b>
<b>Birth Place</b>	: At Post- Chandanapuri, Tal-Sangamner, \Dist- Ahmednager, Maharashtra, India
<b>Marital Status</b>	: <b>Married</b>
<b>Present position</b>	: Vice Principal, Professor & Head Dept. of Physics, Member of BOS, SPPU, Pune
<b>Address Residence</b>	: Flat 201, Shivprakash Housing soc., Sr.No. 16/4, Vishalnagar, Pimple Nilakh, Pune 410027, Maharashtra, India. Mobile: +91- 9029075387 E-mail: <a href="mailto:sarodemadhav@gmail.com">sarodemadhav@gmail.com</a>
<b>Address Office</b>	: Department of Physics, Mahatma Phule Mahavidyalaya, Pimpri, Pune- 410 017, Maharashtra, India. Phone : 022-27412007

<b>EDUCATIONAL QUALIFICATIONS</b>					
<b>Examinations</b>	<b>Name of the Board/University</b>	<b>Year of Passing</b>	<b>% of marks obtained</b>	<b>Class/Grade</b>	<b>Subject</b>
<b>S.S.C.</b>	Pune Board	1982	63.28	First	Marathi, Hindi, English, Mathematics, Science, Social Sciences
<b>H.S.C.</b>	Pune Board	1984	52.17	Second	Marathi, English, Mathematics and Statistics, Physics, Chemistry, Biology
<b>B.Sc.</b>	S. P. Pune University	1987	70.09	First class	Physics
<b>M. Sc.</b>	S. P. Pune University	1989	60.40	First	Physics (Material Science)
<b>Ph. D.</b>	Mumbai University	2013	-	-	Physics
<b>Other examination if any MScIT</b>	MKCL	2003	73.00	-	Basics in Computer
<b>PET</b>	S. P. Pune University- UGC	2005	Passed	-	Physics

<b>Research Degree</b>			
<b>Degrees</b>	<b>Title</b>	<b>Date of award</b>	<b>University</b>
<b>Ph.D.</b>	Synthesis and deposition of nano-crystalline TiO <sub>2</sub> films for Dye Sensitized Solar Cell.	19/08/2013	Savitribai Phule Pune University, pune

## Appointments held prior - joining this institution

Designation	Nature of appointment	Name of the College Rayat Shikshan Sanstha's	Date of		Salary with Grade	Reason of leaving
			Joining	Leaving		
Part time Lecturer	Probation	ASC College Pandavnagar, Pune	22/01/1990	30/07/1991	1100-2000	--
Part time Lecturer	Probation	Dada Patil Mahavidyalaya, Karjat, Ahmednagar	01/08/1991	30/06/1992	1100-2000	Transfer
Lecturer	Probation And Regular	Rayat Shikshan Sanstha's Mahatma Phule Mahavidyalaya Pimpri, Pune 17	01/07/1992	30/06/1998	2200 -75-2800-100-4000	Transfer
Assistant/Associate Professor	Regular	Mahatma Phule ASC College Panvel, Raigad	01/07/1998	10/06/2018	37400 - 67000 - GP-9000	Transfer
Associate Professor	Regular	Mahatma Phule Mahavidyalaya Pimpri, Pune 17	11/06/2018	31/12/2020	37400 - 67000 - GP-9000	Transfer
In charge Principal (Professor)	Regular	Radhabai Kale Mahila Mahavidyalaya, Ahmednagar	01/01/2021	12/01/2022	37400 - 67000 - GP-9000	Transfer
Professor	Regular	Mahatma Phule Mahavidyalaya Pimpri, Pune 17	13/01/2022	Till date	1,44,200-2,18,200/- GP-10000	Transfer

<b>RECORD OF ACADEMIC SERVICE IN THIS INSTITUTION</b>				
Designation	Department	Date of actual Joining		Salary with Grade
		From	To	
Part time Lecturer	Physics	22/01/1990	30/07/1991	1100-2000
Part time Lecturer	Physics	01/08/1991	30/06/1992	1100-2000
Lecturer	Physics	01/07/1992	31/12/1995	2200 -75- 2800-100-4000
Assistant professor	Physics	01/01/1996	26/07/1998	8000 - 275-13500
Assistant professor(Senior Grade)	Physics	27/07/1998	26/07/2003	10,000-15,200
Assistant professor (Selection Grade)	Physics	27/07/2003	26/07/2006	12000 - 420-18300
Associate Professor (AGP-9000)	Physics	27/07/2006	27/06/2021	37400 - 67000 - GP-9000
Professor (AGP-10000)	Physics	28/06/2021	Till date	1,44,200 -2,18,200 GP-10000

<b>TEACHING AND RESEARCH EXPERIENCE</b>				
<b>Period of teaching experience:</b>	<b>P.G. Classes (in years)</b>	15 years	<b>U.G. Classes (in years)</b>	30 Years and 04 Months
Research Experience excluding years spent in M.Phil/Ph. D. (in years)	Ten Years			
Fields of specialization under the Subject/Discipline (a) Material Science, (b) Energy studies and (c) Thin Film Deposition				

## ORIENTATION/REFRESHER COURSES ATTENDED

Name of course/summer course	Place	Duration	Sponsoring Agency
Refresher Course	Department of Physics, Savitribai Phule Pune University, Pune	06/09/1994 to 3/10/1994	UGC-ASC, University of Pune
Refresher Course	IUCAA, Pune	08/05/1995 to 26/05/1995	IUCAA, Pune
Orientation Course	Savitribai Phule Pune University, Pune	29/03/1997 to 25/04/1997	UGC-ASC, University of Pune
Refresher Course	Fergusson College, Pune	22/06/1998 to 18/07/1998	UGC-ASC, University of Pune

## AWARDS AND HONORS

2010-2012	: Award of Teacher Fellowship under Faculty Development Programme by University Grants Commission, India.
2014	: <b>Best Paper Award</b> by AMDP-2014, Korea Maritime and Ocean University Busan, Korea
2013-2014	: <b>Best Performer of the academic year 2013-14</b> by Mahatma Phule A. S. C. College, Panvel.
2014-2015	: <b>Best Performer of the academic year 2014-15</b> by Mahatma Phule A. S. C. College, Panvel.
2015-2016	: <b>Best Performer of the academic year 2015-16</b> by Mahatma Phule A. S. C. College, Panvel.
2016-17 & 2017-18	: <b>Best Performer of the academic year 2016-17 &amp; 2017-18</b> by Mahatma Phule A. S. C. College, Panvel.

## CONTRIBUTION TO RAYAT SHIKSHAN SANSTHA

1.	Donation of 1% salary as “Krutadynata Nidhi” to Rayat Shikshan Sanstha, Satara. Maharashtra, India.
2.	Donation of one day salary to Rayat Shikshan Sanstha, Satara on the occasion of Karmaveer Bhaurao Patil Jayanti (22 <sup>nd</sup> September every year).
3.	Adopted one downtrodden student from Mokhada area, Dist –Thane, Maharashtra, for his education purpose by donating Rs 5000/-
4.	Help to needy students yearly.

## UNIVERSITY LEVEL ACTIVITIES

1	Member of Board of Studies in Physics on Savitribai Phule Pune University
2.	Academic Research coordinator SPPU, Pune (2018-19 & 2019-2020)
3.	Examiner for Avishkar Research Convention, SPPU,Pune
4.	Paper setter and Moderator SPPU,Pune

## COLLEGE LEVEL ACTIVITIES

1.	Vice Principal from 19/08/2022
2.	Professor and Head, Department of Physics, Mahatma Phule Mahavidyalaya Pimpri, Pune- 411017,India
3.	Chairman of criteria –III -NAAC reaccreditation process 2018-19 & 2019-2020 (4 <sup>th</sup> cycle)
4.	Member of College Development Committee (CDC)
5.	Nodal Officer and Coordinator of B>Voc (Mass Communication) (2018-19 & 2019-2020)
6	Chairman of DST-FIST Project scheme (2018-19 & 2019-2020)

## RESEARCH PROJECTS COMPLETED

Sr. No.	Title	Funding agency	Amount	Period
1	Enhancement of Nanopours MgO coated TiO <sub>2</sub> Nanoparticles to the Electrode of Dye Sensitized Solar cells	Board of College and University Development (BCUD), University of Mumbai	300000	1/8/2016 To 31/7/2017
2	Synthesis of Nanocrystalline Titanium Dioxide films for Dye Sensitized Solar Cell.	Board of College and University Development (BCUD), University of Mumbai	20000	1/8/2013 To 31/7/2014

## BOOKS/ CHAPTERS PUBLISHED

Sr. No.	Title of Book/Chapter	Year	Publication Agency	ISBN No
1	<b>Nanostructured Titanium Dioxide Dye-Sensitized Solar Cells (Reference Book)</b>	<b>2016</b>	Success Publications 535,Radha Krishna Apt.Shaniwar Peth,Appa Balwant Chowk, Opp. Prabhat Talkies, Pune-411030	<b>978-93-5158-285-4</b>
2	<b>Heat and Thermodynamics Class: FYBSc Sem-II</b>	<b>January,2020</b>	Prashant Publications 3, Pratap Nagar Shri Sant Dnyaneshwar Mandir road near Nutan Maratha College, Jalgaon.	<b>978-93-89501-11-6</b>
3	<b>Electricity and Magnetism Class: FYBSc Sem-II</b>	<b>January,2020</b>	Prashant Publications 3, Pratap Nagar Shri Sant Dnyaneshwar Mandir road near Nutan Maratha College, Jalgaon.	<b>978-93-89501-14-8</b>
4	<b>Mathematical Methods in Physics-I Class: SYBSc Sem-III</b>	<b>August,2020</b>	Prashant Publications 3, Pratap Nagar Shri Sant Dnyaneshwar Mandir road near Nutan Maratha College, Jalgaon.	<b>978-93-89493-19-1</b>
5	<b>Electronics Class: SYBSc Sem-III</b>	<b>August,2020</b>	Prashant Publications 3, Pratap Nagar Shri Sant Dnyaneshwar Mandir road near Nutan Maratha College, Jalgaon.	<b>978-93-89493-20-7</b>
6	<b>Physics Practical Class: SYBSc Sem-III &amp; IV</b>	<b>August,2020</b>	Prashant Publications 3, Pratap Nagar Shri Sant Dnyaneshwar Mandir road near Nutan Maratha College, Jalgaon	<b>978-93-89493-21-1</b>
7	<b>Waves and Oscillation Class: SYBSc Sem- IV</b>	<b>2021</b>	Prashant Publications 3, Pratap Nagar Shri Sant Dnyaneshwar Mandir road near Nutan Maratha College, Jalgaon	
8	<b>Optics Class: SYBSc Sem- IV</b>	<b>2021</b>	Prashant Publications 3, Pratap Nagar Shri Sant Dnyaneshwar Mandir road near Nutan Maratha College, Jalgaon	

9	<b>Mathematical Methods in Physics-II</b> <b>Class: TYBSc</b> <b>Sem-V</b>		Prashant Publications 3, Pratap Nagar Shri Sant Dnyaneshwar Mandir road near Nutan Maratha College, Jalgaon	<b>978-93-91391-99-1</b>
10	<b>Electrodynamics</b> <b>Class: TYBSc</b> <b>Sem- V</b>	<b>September, 2021</b>	Prashant Publications 3, Pratap Nagar Shri Sant Dnyaneshwar Mandir road near Nutan Maratha College, Jalgaon	<b>978-93-91391-12-6</b>
11	<b>Classical Mechanics</b> <b>Class: TYBSc</b> <b>Sem- V</b>	<b>September, 2021</b>	Prashant Publications 3, Pratap Nagar Shri Sant Dnyaneshwar Mandir road near Nutan Maratha College, Jalgaon	<b>978-93-91391-20-1</b>
12	<b>Atomic and Molecular Physics</b> <b>Class: TYBSc</b> <b>Sem- V</b>	<b>September, 2021</b>	Prashant Publications 3, Pratap Nagar Shri Sant Dnyaneshwar Mandir road near Nutan Maratha College, Jalgaon	<b>978-93-91391-28-7</b>
13	<b>Elements of Material Science</b> <b>Class: TYBSc</b> <b>Sem- V</b>	<b>September, 2021</b>	Prashant Publications 3, Pratap Nagar Shri Sant Dnyaneshwar Mandir road near Nutan Maratha College, Jalgaon	<b>978-93-91391-44-7</b>
14	<b>Computational Physics</b> <b>Class: TYBSc</b> <b>Sem- V</b>	<b>September, 2021</b>	Prashant Publications 3, Pratap Nagar Shri Sant Dnyaneshwar Mandir road near Nutan Maratha College, Jalgaon	<b>978-93-91391-36-2</b>



## Creation of ICT mediated Teaching Learning pedagogy and content and development of new and innovative courses and curricula

a. Innovative Pedagogy c. MOOCs		b. Design of new curricula and courses d. E-content	
Sr. No.	a/b/c/d	Details	
1.	b.	Participation New Syllabi in Physics for F.Y.Bsc. Organized by The Department of Physics, Nowrosjee Wadia College, Pune Held on 20 <sup>th</sup> April 1995. (2 semester. 4 papers).	
2.	b.	Framing the syllabus for T.Y.Bsc. Physics Organized by BOS and H.V. Desai College, Pune. On 8 <sup>th</sup> October 1997. (2 Semester. 8 papers).	
3.	b	Designing Information Technology in Physics Curriculum Organized by the Dnyansadhana College, Thane on behalf of The Board of Studies in Physics University of Mumbai on 29 <sup>th</sup> and 30 <sup>th</sup> January 2001. (2 Semester. 2 papers).	
4.	b	Framing of F.Y.Bsc. Revised Syllabus conducted by Physics Department Jahind College, On behalf of the Board of Studies Physics University of Mumbai Held on 29 <sup>th</sup> January 2002. . (2 Semester. 4 papers).	
5.	b	Two Day Workshop For T.Y.B.Sc. Revised Syllabus (Theory & Practical) Organized by Department of Physics, G.N. Khalsa College, Mumbai-19 on Behalf of Board of Studies, Mumbai University on 18 <sup>th</sup> & 19 <sup>th</sup> August 2004. (2 Semester 4 papers)	
6.	b	Designing the Syllabus of Electronic Instrumentation Applied Component T.Y.Bsc. Physics Organized by Department of Physics R.K. Talreja College, Ulhasnagar On behalf of the Board of Studies Physics University of Mumbai Held on 5 <sup>th</sup> March 2005. (2 Semester. 2 Papers)	
7.	b.	Framing Revised Syllabus of Physics for F.Y.Bsc. Held at D.G. Ruparel College. On behalf of the Board of Studies Physics University of Mumbai Held on 5 <sup>th</sup> July 2016. (2 Semester, 4 Papers)	
8.	b	S.Y.Bsc (Physics) Syllabus Framing of Choice-Based Credit System (CBCS) Held on 29 <sup>th</sup> January 2020 at Annasaheb Magar Mahavidyalaya Hadapsar, Pune. (2 Semester, 4 Papers)	
9.	d	T.Y.Bsc. Curve Linear Co-ordinate <a href="https://youtu.be/5j_CsuSiXIY">https://youtu.be/5j_CsuSiXIY</a>	
10.	d	S.Y.Bsc. Complex Number Part I <a href="https://youtu.be/LBS6K2eTq1s">https://youtu.be/LBS6K2eTq1s</a>	
11.	d	S.Y.Bsc. Complex Number Part II <a href="https://youtu.be/4LwOowlM4jg">https://youtu.be/4LwOowlM4jg</a>	
12.	d	F.Y.Bsc. Lasers Part I <a href="https://youtu.be/Aim8JZNDUg">https://youtu.be/Aim8JZNDUg</a>	
13.	d	F.Y.Bsc. Lasers Part II <a href="https://youtu.be/4UItWdsz56c">https://youtu.be/4UItWdsz56c</a>	
14.	d	F.Y.Bsc. Lasers Part III <a href="https://youtu.be/KqzygqGjDkY">https://youtu.be/KqzygqGjDkY</a>	

<b>SUPERVISION OF RESEARCH STUDENTS</b>	
B. Sc. (Projects)	14
Ph.D. Students (ongoing)	05

<b>LIST OF PATENT FILED</b>	
1.	<b>A SMART DIGITAL STAPLER</b> Application No- 201821002806 Date of filing: 24/01/2018 Publication date: 09/02/2018

<b>LIST OF PAPER PUBLICATION</b>				
Sr. No	Title of the Paper	Name of the Journal, ISSN No.	Status Peer reviewed or UGC listed /Author Status	Impact Factor Claim JCR
1	Effect Of Annealing Temperature On Optical Properties Of Titanium Dioxide Thin Films Prepared By Sol-Gel Method	International Journal of Modern Physics B. Vol.25,no.31 (2011), pp 4163-4166 ISSN: 0217-9792	Peer reviewed First author	Scopus Indexed Impact Factor 0.863
2	Optical Properties Of Electrochemically Deposited 1-D Interlinked Nanowired Co <sub>3</sub> O <sub>4</sub> Thin Films	International Journal of Modern Physics B. Vol.25,no.31 (2011), pp 4163-4166 ISSN: 0217-9792	Peer reviewed Co- author	Scopus Indexed Impact Factor 0.863
3	Synthesis and Optical Properties of Cobalt Oxide (Co <sub>3</sub> O <sub>4</sub> ) Nanoclustered Films Produced by Pulsed DC Electrochemical Deposition Process	AIP Conf. proc. 1391, 609-611 (2011) American Institute of Physics. ISBN:978-0-7354-0960	Peer reviewed Co- author	
4	Sol-gel deposition of nanocrystalline TiO <sub>2</sub> thin films useful for hydrogen gas sensing application	Proceedings of the 2012 1st International Symposium on Physics and Technology of Sensors, 8-10th March, 2012, Pune, India ISBN:978-1-4673-1043-7/12/\$31.00 ©2012 IEEE	Peer reviewed First -author	
5	Synthesis, characterization and optical properties of selective Co <sub>3</sub> O <sub>4</sub> films 1-D interlinked nanowires prepared by spray pyrolysis technique	Fuel 112 (2013) 542–549 ISSN: 0016-2361	Peer reviewed Co-author	Thomson Reuter's Impact Factor 5.578
6	Effect of Thickness and Dye on Optical and Photovoltaic Properties of Nanocrystalline TiO <sub>2</sub> Thin film for Dye Sensitized Solar cell	Asian Journal of Chemistry vol. 25, issue 2013 pp-s405-s408 ISSN:0970-7077	Peer reviewed First author	Thomson Reuter's Impact Factor

	<b>Application</b>			<b>0.31</b>
7	Thickness dependent optical and eosin-Y sensitized solar cells characteristics of nc-a TiO <sub>2</sub> films	Solar Energy 106 (2014) 48–55 ISSN: 0038-092X	<b>Peer reviewed</b> <b>First author</b>	Thomson Reuter's <b>Impact Factor</b> 4.608
8	Solar Cell Properties of CdS/CdTe Heterojunctions Prepared by using Spray Pyrolysis Technique	IJCPS Vol. 3 Special Issue – NCETNN Dec-2014. Pp102-108 ISSN:2319-6602	<b>Peer reviewed</b> Co-author	Thomson Reuter's <b>Impact Factor</b> 3.42
9	Optical Properties of DC Electrochemically Deposited Nanowired Co <sub>3</sub> O <sub>4</sub> films	IJCPS, Vol. 3 Special Issue – NCETNN Dec-2014. pp 57-64 ISSN:2319-6602	<b>Peer reviewed</b> Co-author	Thomson Reuter's <b>Impact Factor</b> 3.42
10	Structural and Optical Properties of nc-a TiO <sub>2</sub> films for Dye Sensitized Solar Cell	IJCPS Vol. 3 Special Issue – NCETNN Dec-2014. Pp 44-49 ISSN:2319-6602	<b>Peer reviewed</b> First author	Thomson Reuter's <b>Impact Factor</b> 3.42
11	Effect of Temperature on Optical and Photovoltaic Properties of nc-TiO <sub>2</sub> Thin Films for Dye Sensitized Solar Cell	Advanced Materials Research Vol 1110 (2015) pp 207-210 eISSN:1662-8958	<b>Peer reviewed</b> <b>First author</b>	ISSN WEB 1662-8985 Google Scholar
12	Enhancement of Photovoltaic Properties of Dye Sensitized Solar Cell using Nanocrystalline TiO <sub>2</sub> Films	IJCPS Vol. 4 Special Issue ETP – 2015,pp 69-77 eISSN:2319-6602	<b>Peer reviewed</b> First author	Thomson Reuter's <b>Impact Factor</b> 3.42
13	Soil Character Analysis via Wide Band Optical Wave Guide Sensor	IJCPS , Vol. 4 Special Issue ETP – 2015 pp 110-114 eISSN:2319-6602	<b>Peer reviewed</b> Co-author	Thomson Reuter's <b>Impact Factor</b> 3.42
14	Structural and Optical studies of Sol-Gel Dip Coated Nanocrystalline TiO <sub>2</sub> films	Advance Science Letters. Vol.22, no.4 April 2016,pp 1089-1092 ISSN: 1936-6612	<b>Peer reviewed</b> <b>First author</b>	Ingenta Connect DOI available 0.126
15	Optical Properties of DC Electrochemically Deposited Co <sub>3</sub> O <sub>4</sub> Thin Films	Advance Science Letters. Vol.22, no.4 April 2016,pp 1080-1084 ISSN: 1936-6612	<b>Peer reviewed</b> <b>Co- author</b>	Ingenta Connect DOI available <b>Impact Factor</b> 0.126
16	Characterization of Spray Pyrolysis Deposited Hexagonal Cds Films	Advance Science Letters. Vol.22, no.4 April 2016,pp 945-949 ISSN: 1936-6612	<b>Peer reviewed</b> <b>Co- author</b>	Ingenta Connect DOI available <b>s Impact Factor</b> 0.126
17	Synthesis, Characterization and Optical Properties of Co <sub>3</sub> O <sub>4</sub> Films Grown By CBD Technique	International Journal of Chemical and Physical Sciences, (IJCPS) Vol. 5 Special Issue - 7	<b>Peer reviewed</b> Co-author	3.42

		FESEM – 2016 pp75-84 ISSN:2319-6602		
18	Sol-Gel Deposition of Nanocrystalline TiO <sub>2</sub> Films and Natural dye for Dye Sensitized Solar cell	Aarhat Multidisciplinary International Education Research Journal (AMIERJ) pp 357-362 ISSN:2278-5655	Peer reviewed Single author	5.18
19	Economical Fruit Dye Sensitized Nanocrystalline TiO <sub>2</sub> Photoanode for Solar Cell Fabrication	Journal of Emerging Technologies and Innovative Research (JETIR), Volume 6, Issue 5, May 2019, PP 12-17 ISSN-2349-5162	Peer reviewed First author	5.87
20	Comparative NH <sub>3</sub> gas sensing characteristics of DC electrochemically deposited Co <sub>3</sub> O <sub>4</sub> films by using different Co-based precursors	JETIR, Volume 6, Issue 5, May 2019, PP 27-31 ISSN-2349-5162	Peer reviewed Co-author	5.87
21	Eosin-Y sensitized nanocrystalline TiO <sub>2</sub> Photoanode for Dye Sensitized Solar Cell application	JETIR, Volume 6, Issue 5, May 2019, PP 176-180 ISSN-2349-5162	Peer reviewed First -author	5.87
22	Synthesis of TiO <sub>2</sub> nanocrystalline powder by basic route and its application for dye sensitized solar cell (DSSC)	JETIR, Volume 6, Issue 5, May 2019, PP 23-29 ISSN-2349-5162	Peer reviewed Co-author	5.87
23	Current Scenario of Electric Mobility in India and its Challenges	International Journal of Engineering Research & Technology (IJERT) Vol. 9 Issue 08, August-2020 pp 510-515 ISSN: 2278-0181	Peer reviewed Co-author	3.956
24	Enhanced photovoltaic properties of eosin-Y sensitized solar cells using nanocrystalline N-doped TiO <sub>2</sub> photoanode films	Materials Science and Engineering B volume 286 (2022) pp-116050	Peer reviewed First author	4.706
25	Ion beam irradiation: Novel approach for preparation of Ag coated N doped nanocrystalline anatase TiO <sub>2</sub> films	Materials Science and Engineering B Volume 288, February 2023, pp116212	Peer reviewed Co-author	4.706

## PAPER PRESENTED IN CONFERENCES/SEMINAR

Sr. No	Details of Conference Paper Presented in Conference/Seminar/	Date And Venue	International/ National/ State/University Level	Presented Paper/Poster
1	Synthesis and characterization of titanium dioxide sol-gel thin films prepared by dip coating method. National seminar on Nanostructured Materials for Advanced Technology (NS_NMAT2011)	KarmaveerBhauraoPatilMahavidyalayaPandharpur.M.S. India 3-4 Oct.2011	National	Poster presented
2	Synthesis of TiO <sub>2</sub> Thin films and Structural properties of TiO <sub>2</sub> for solar Cell Application. State level seminar on Nanotechnology ; Fabrication Methods and It's Applications	Abasaheb Marathe Arts & Commerce, Science College Rajapur. Ratanagiri India 2 to 3 <sup>rd</sup> Dec.2011	State	Poster Presented
3	<i>Sol-Gel Deposition of Nanocrystalline TiO<sub>2</sub> Thin Films Useful for Dye Sensitized Solar Cell Application.</i> International conference on Nanomaterials and Nanotechnology	Conference center at University of Delhi, India 18-21 Dec. 2011	International	Poster Presented
4	Synthesis and Characterization of Nanocrystalline TiO <sub>2</sub> Thin Film by Sol-Gel Method. National conference on Functional Nanomaterials :Synthesis, Characterization and application	Department of Physics, University of Pune, India 31st Jan. to 2nd February 2013	National	Poster presented
5	Optical and Photovoltaic of Nanocrystalline TiO <sub>2</sub> thin Film for Dye Sensitized Solar Cell Application. International conference on Nanoscience and Nanotechnology (ICONN-2013)	Department of Physics and Nanotechnology SRM University, Kattankulathur 18-20 March 2013	International	Paper Presented
6	Photovoltaic Properties of Dye Sensitized Solar Cell using Rose Bengal dye. National Conference on Sustainable energy Development and Environment systems.(NCSEDES 2014)	Haribhavi V. Desai College, Pune, India 10-11 January 2014	National	Poster presented
7	Economical Dye Sensitized Solar Cell using Different Fruits Dye with TiO <sub>2</sub> as Photo-electrode. National Seminar on Recent Advances in material Science	Mahatma Phule A.S.C. College, Panvel, Navi Mumbai 18th January 2014	National	Poster presented
8	<i>Effect of temperature on optical and photovoltaic properties of nc-TiO<sub>2</sub> thin films for Dye sensitized solar cell</i> 7 <sup>th</sup> International Conference on Advanced Materials Development and Performance (AMDP-2014)	Korea Maritime and Ocean University, <b>Busan Korea.</b> July 17-20, 2014.	International (Abroad)	Paper Presented

9	Structural and Optical studies of nc-TiO <sub>2</sub> films for Dye sensitized Solar Cell. International conference on Recent Trends and Challenges in Science and Technology	P.V.P. College of A.S.C, Pravaranagar, Loni, M.S. India 20-22 August 2014	International	Paper Presented
10	Structural and Optical Properties of nc-a TiO <sub>2</sub> Films for Dye Sensitized Solar Cell. National conference on Emerging trends in Nanoscience & Nanotechnology	A.S. C. College, Ozar (MIG) Nashik 23-24 December 2014	National	Paper presented
11	Photovoltaic Characteristic of nc-TiO <sub>2</sub> for DSSC. National Seminar on Innovations in Physics	Department of Physics, K.B. Patil College, Vashi, Navi Mumbai 21st February 2015	National	Paper presented
12	Fabrication of Dye Sensitized Solar Cell using Nanocrystalline TiO <sub>2</sub> .Films International conference on Functional Materials @ Nanoscale: Concerns and Challenges	Dept of Physics K.B.P. Mahavidyalya, Pandharpur M.S. India 9-11 March 2015	International	Paper Presented
13	Eosin –Y and Rose Bengal Sensitized Solar Cell Characteristic of N-doped nc-TiO <sub>2</sub> Films International Photovoltaic Solar Energy Conference (IPSEC), Solar Asia-2015	Department of Physics, SavitribaiPhule Pune University, India 30th July – 1st August 2015	International	Poster Presented
14	Fabrication of Dye Sensitized Solar Cell using Natural Dye and nc-TiO <sub>2</sub> Films. International conference on Environmental systems and Sustainable Development	C.T. Bora College, Shirur, Pune, India 15-16 January 2016	International	Paper Presented
15	Preparation of TiO <sub>2</sub> films by using sol-gel dip coating method for Dye Sensitized Solar Cell. State level seminar on Nanobasics and It's Applications	Dept. of Physics, RBNB college Shirampur, Ahmednagar 18 to 19 <sup>th</sup> Jan.2016	State	Paper Presented
16	Eosin -Y and Rose Bengal sensitized solar cell characteristics of N-doped nanocrystalline TiO <sub>2</sub> films . International Conference on Automatic Control and Dynamic Optimization Techniques (ICACDOT)	International Institute of Information Technology (I <sup>2</sup> IT), Pune 9 to 10 <sup>th</sup> Sept.2016	International	Paper Presented
17	Temperature Dependent Optical and Photovoltaic Properties of nc-TiO <sub>2</sub> for Dye Sensitized Solar Cell. International conference on Go Green	C. T. Bora College, Shirur, Pune, India 12-13 January 2017	International	Peper presented
18	Rose Bengal Sensitized Solar Cell Characteristic of N-doped nc-TiO <sub>2</sub> Films 8 <sup>th</sup> International conference on AdvancednRechargeble Battries and Allied Materials (ICARBM- 2017)	Center For Materials for Electronics Technology (C-MET) Pashan Road, Pune, India 8-10 March 2017	International	Poster presented

19	Eosin-Y Sensitized Nanocrystalline TiO <sub>2</sub> Photoanode for Dye Sensitized Solar Cell Application 8 <sup>th</sup> International Conference on Advanced Materials Development and Performance (AMDP-2017)	Dept. of Physics, Savitribai Phule Pune University Pune, India 11 to 15 July, 2017	International	Poster Presented
20	Enhance Structural and Optical properties of Nitrogen Doped TiO <sub>2</sub> For Dye sensitized Solar Cells International Conference on Nanotechnology for Human Welfare (ICNHW-2018)	Haribhavi V. Desai College, Pune, India 1 <sup>st</sup> -3 <sup>rd</sup> Feb. 2018	International	Poster Presented
21	Optical and Photovoltaic Properties of nc-TiO <sub>2</sub> for DSSC. National Seminar on Recent Trends in science and Technology for Sustainable Developments-2018	The Institute of Science, Mumbai during 22 to 23 <sup>rd</sup> March, 2018	National	Poster Presented

<b>Invited lectures / Resource person</b>			
<b>Sr. No.</b>	<b>Invited lectures / Resource Person</b>	<b>Title of Conference /Seminar and Organizer</b>	<b>Level- International (Abroad/within country) /National / State / Univer.</b>
1.	<b>Resource Person</b>	“Computer Literacy Programme” at Information Technology Centre Held at Mahatma Phule Arts, Science, & Commerce College, Panvel Dist: Raigad During 16 <sup>th</sup> – 23 <sup>rd</sup> July 2008	<b>State Level</b>
2.	<b>Resource Person</b>	“Role of ICT In Teaching Learning Process” Organized by Mahatma Phule Mahavidyalaya, Pimpri, Pune-411017 on 31 <sup>st</sup> January & 1 <sup>st</sup> February 2012	<b>State Level</b>
3.	<b>Resource Person</b>	“Recent Advances in Materials Sciences (RAMS-2012)” Sponsored by BCUD, University of Pune and Organized by Department of Physics, Arts, Science, Commerce College, Pirangut, Tal. Mulshi, Dist. Pune on Friday 3 <sup>rd</sup> February 2012	<b>State Level</b>
4.	<b>Resource Person</b>	Rayat Vidnyan Parishad Organized by “Rayat Vidnyan Parishad, Raigad Region Kamothe, Panvel” on 29 <sup>th</sup> January 2015	<b>State level</b>
5.	<b>Resource Person</b>	National Seminar On Recent Trends in Physics Organized by Dept. of Physics Karmaveer Bhaurao Patil College, Vashi, Navi Mumbai on 3 <sup>rd</sup> February 2016	<b>National</b>
6.	<b>Invited Talk and Session Chair</b>	International Conference on Automatic Control and Dynamic Optimization Techniques (ICACDOT2016) Held at International Institute of Information Technology (I <sup>2</sup> IT), Pune on 9 to 10 <sup>th</sup> Sept. 2016	<b>International</b>
7.	<b>Invited Talk</b>	National Conference on “Innovative Research in Physical, Chemical and Life Sciences” (NCIRS-2018) Organized by M.H. Shinde, Mahavidyalaya, Tisangi at Dr. V.S. Khandekar Bhasha Bhavan, Shivaji University, Kolhapur, Maharashtra, India. Held on 24 <sup>th</sup> February, 2018	<b>National</b>
8.	<b>Invited Talk</b>	National seminar on Communicating Recent Developments in Science 2019 Organized by Dept. of Physics, Institute of Science, Fort Mumbai India On 27 to 28 <sup>th</sup> Feb. 2019	<b>National</b>

## ORGANIZATION OF CONFERENCES/SEMINARS/WORKSHOPS

Worked as **Organizing Secretary** in **National seminar** on “**Recent Advances in Material Sciences**” (**RAMS-2014**) Jointly organized by Dept. of Physics & Chemistry on 18<sup>th</sup> Jan. 2014 at M.P.A.S.C. College, Panvel, Raigad.

Worked as **Convener** in **state level seminar** on “**Role of Solar Cell Application in Renewable Energy**” organized by Dept. of Physics on 29<sup>th</sup> November 2014 at M.P.A.S.C. College, Panvel, Raigad.

Worked as **Organizing Secretary** in college level workshop on “**Recent Scenario in Physics and IT**” organized by Department of Physics and IT on 21<sup>st</sup> Jan, 2016 at the M.P.A.S.C. College, Panvel, Raigad

Worked as **Organizing Secretary** in college level workshop on “**Joy of learning Physics and IT through experimental demonstration**” organized by Department of Physics and IT on 17<sup>th</sup> Jan. 2017 at the M.P.A.S.C. College, Panvel, Raigad

## Work as Chairperson in Conferences:

1.	“International Conference on Advanced Materials Development and Performance (AMDP2014)”, 20 <sup>th</sup> July 2014.
2.	International conference on “automatic control and dynamic optimization technique” at institute of Information Technology (IIT), Hinjwadi, Pune, during 9th and 10th September 2016.



## FUTURE PLANS

I	Teaching	Use of ICT able teaching includes online videos on You Tube, power point presentation, models, brain storming, group discussion, field visits, projects, and also incorporate computer, internet, to understand the concepts of subject to the students.
II	Research	My research is mainly focused on synthesis, characterization and application of nanomaterial for energy storage and solar cell applications. Five students were registered with me for Ph. D. academic year 2019-20 and 2020-21. I will try to involve the more students in research for Ph. D. also helping undergraduate/PG students in “Avishkar Research Convention” conducted by SPPU Pune University
III	Mentoring of students	I have been recognized as a teacher of the SSPP University for the Ph. D. in Physics with effect from 20 <sup>th</sup> June 2019. Five Ph. D. students are pursuing Ph.D. in Physics under my supervision. 14 Research projects from graduate students were completed during the academic year 2021-2022.
IV	Social Responsibility	I am trying to make more awareness of science for society by organizing Science exhibition in Schools and College through Rayat Vidnyan Prakalp and Avishkar.

**LINKS:**

**GOOGLE SCHOLAR:**

[https://scholar.google.com/citations?hl=en&user=NJt4a4QAAAAJ&view\\_op=](https://scholar.google.com/citations?hl=en&user=NJt4a4QAAAAJ&view_op=)

**YOU TUBE:**

<https://www.sciencedirect.com/science/article/abs/pii/S0921510722006006>