

Jamner Taluka Education Society's  
**Gitabai Dattatraya Mahajan Arts, Shri Kesharimal Rajmal  
Navalkha Commerce and Manoharseth Dhariwal Science College,  
Jamner**

# Personal Profile

**Dr. Rajendra Sundarlal Khadayate**  
**Professor in Physics and**  
**Head, Department of Physics**

Jamner Taluka Education Society's  
**Gitabai Dattatraya Mahajan Arts, Shri Kesharimal Rajmal Navalkha Commerce**  
**and Manoharseeth Dhariwal Science College, Jamner**

# **Personal Profile**

of

**Dr. Rajendra Sundarlal Khadayate**  
M. Sc. Ph.D.

**Professor in Physics**

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## **[I] Personal Information:**



- 1)Name : **Dr. Rajendra Sundarlal Khadayate**
- 2) Present Designation : **Head of Department and  
Professor in Physics**
- 3) Department : Department of Physics
- 4) College Name and Address : G. D. M. Arts, K.R.N. Commerce & M. D. Science College,  
Jamner, Dist –Jalgaon, Maharashtra, India, Pin – 424206
- 5)Permanent Address : Rukmini Niwas, 118/C, Chaitraban Colony, Mahabal  
Parisar, Jalgaon 425001
- 6)Email : [rskhadayate@gmail.com](mailto:rskhadayate@gmail.com)
- 7)Telephone number : Office – 02580-230078
- 8)Mobile number : 9689526325 , 9423487680
- 9)Date of Birth : May 31<sup>st</sup>, 1968
- 10)Place of Birth : Amarawati
- 11)Marital Status : Married
- 12)Nationality : Indian
- 13)Caste : Hindu -Gujarati
- 14)Educational Qualifications : M.Sc. Ph. D.
- 15)Award of M.Sc. degree : 1990
- 16)Date of joining the College : August 14<sup>th</sup>, 1991
- 17) Teaching experience (U. G.) : 33 Years
- 18)Award of Doctoral degree : May 2008
- 19)Title of thesis of Doctoral degree : WO<sub>3</sub> and SnO<sub>2</sub> thick films: Preparation and gas sensing  
properties
- 20)AR Score for post of Dean : **466.49 > 120**
- 21)AR Score for post of Principal : **466.49 > 110**

- Details about educational Qualifications:**

Degree	Year of Passing	Name of the institute	Subject	% of marks	Class/Div.
B.Sc.	April-1988	M.J. College, Jalgaon	Electronics	73	First with distinction
<b>AWARDED AS BEST STUDENT IN 1987 in M. J. College, Jalgaon</b>					
M.Sc.	April-1990	M.J. College, Jalgaon	Physics	77	First with Distinction
Ph.D.	May-2008	North Maharashtra University, Jalgaon	Physics	---	---

- Subjects taught up till now:**

Sr No.	Class	Name of Subjects
1	T. Y. B. Sc.	Electronics, Technical Electronics, Practical course, Project Course, Basic Instrumentation Skills, Mathematical Physics, Solid State Physics and Material Science
2	S. Y. B. Sc.	Electronics, Waves, Oscillations and Acoustics, Optics and LASERs, Thermodynamics and Kinetic theory of Gases, Renewable energy and Energy Harvesting (Skill Course), Electrical Circuits and Network Skills (Skill Course), Modern Physics, Practical Course
3	F. Y. B. Sc.	Basic Mechanics, Electricity and Electrostatics, Theoretical Physics, Mechanics and Properties of Matter, Electricity and Magnetism, Heat and Thermodynamics

- E content developed for students up till now:**

Sr No.	Class	Title of topic for which of e- content is developed	Link if any
1	T. Y. B. Sc.	PHY504(A) Electronics UNIT1 Transistor Bias and Transistor Amplifier	
2	T. Y. B. Sc.	PHY504(A) Electronics Unit 2 Transistor Oscillator	
3	T. Y. B. Sc.	PHY504(A) Electronics UNIT 3 Semiconductor swtching devices	
4	T. Y. B. Sc.	PHY504(A) Electronics UNIT4 Digital Electronics	
5	T. Y. B. Sc.	Gas Sensors	
6	T. Y. B. Sc.	ECG	
7	T. Y. B. Sc.	PHY 606 A : Technical Electronics II Unit 1 Sound system	
8	T. Y. B. Sc.	PHY 606 A : Technical Electronics II Unit 2 PA system	
9	T. Y. B. Sc.	PHY 606 A : Technical Electronics II Unit 3 MEDical instruments	
10	S. Y. B. Sc.	PHY 301: Unit1. Basics of thermodynamics	

- Training programmes attended:**

Sr No.	Name of Programme	Place where attended	Duration
1	<b>Orientation Course</b>	Poona University, Pune	29-02-1996 to 27-03-1996
2	<b>Refresher Course I</b>	Pratap College, Amalner	18-12-1995 to 14-01-1996
3	<b>Refresher Course II</b>	North Maharashtra University, Jalgaon	22-11-2001 to 19-12-2001
4	<b>Refresher Course III</b>	Aligarh MuslimUniversity, Aligrah	19-11-2004 to 10-12-2004

• **Talk delivered :**

1. **Invited lecture on the topic** “Solar Energy and its Applications” at Faizpur in a **National level** Five Days Online Faculty Development Programme (**FDP**) On “Green Energy And Renewable Energy For Physics And Electronics Teachers” organized by Dhanaji Nana Mahavidyalaya, Faizpur and Faculty Development Centre, HRDC, Savitribai Phule Pune University, Pune on **08/06/2020**.
2. **Invited lecture on the topic** “Renewable Energy Storage Concepts and Materials” at Faizpur in a **National level** Five Days Online Faculty Development Programme (**FDP**) On “Green Energy And Renewable Energy For Physics And Electronics Teachers” organized by Dhanaji Nana Mahavidyalaya, Faizpur and Faculty Development Centre, HRDC, Savitribai Phule Pune University, Pune on **11/06/2020**.
3. Invited lecture on the topic “Solar Energy and its Applications”, at ACS College Shirpur in a State level Lecture Series organized by Department of Physics and IQAC of ACS College Shirpur on **5/5/2020**.
4. **As a member of “Vidnyan Prasara Samiti”** delivered a talk as a resource person on “Eco-friendly Ganesha” in front of Students of Junior College and High School Students in Oct 2014.
5. **As a member of “Vidnyan Prasara Samiti”** delivered a talk as a resource person on “**Gas sensors: basic aspects**” in front of students of New English School, Jamner in Nov 2010
6. **Delivered a talk as a resource person on “Gas sensors: basic aspects”** in a state level seminar on “**Recent Trends In Sensors and Advanced Materials**” organized by M.S.G. Arts, Science and Commerce College, Malegaon on January 27-28, 2010.
7. **Delivered a talk on Roof water harvesting in NSS camp.**

## [II] Research Activities

1. Area of research : Material Science
2. Research experience : 20 Years
3. Methods adopted for : Screen printing, Spray Pyrolysis, Spin coating film preparation
4. Synthesis method : Green Synthesis
5. Interest particularly in : Oxide gas sensor, Conducting polymer gas sensor, Photo sensor

### ➤ Teacher Fellowship

Teacher fellowship awarded by University Grant Commission, Pune under Faculty Improvement programme (FIP) of IX<sup>th</sup> plan during April 2004 to March 2006 to complete Ph. D. work.

### ➤ Minor project: Principal Investigator

- Funding Agency: UGC, Pune.
- Status of the Project: - **Completed**
- Reference :- Sanction letter No.47-235/2007(WRO) Dated 16/01/2008
- Amount sanctioned:- Rs. 1,95,000/-
- **Title of the project:-** “Conducting Polymer: Synthesis by chemical route and gas sensing studies”.

### ➤ Major Project: Co-investigator

- Funding Agency: UGC, New Delhi
- Status of the Project: **Completed**
- Reference : F.No.38-64/2009 (SR), Dated 19 Dec. 2009
- Amount claimed: Rs. 10,57,136/-
- **Title of the project:** “Synthesis, characterization and gas sensing studies of nanostructured metal oxides and their composite thin films”

### ➤ NMU approved Guide for Ph.D. and M. Phil And Recognition as a PG teacher

One student secured Ph.D.                      Six students working for Ph.D.



Sr. No.	Name of the student registered	Registered for PG/M .Phil./Ph. D.	Date of Registration	Year of award of Degree	Branch & Brief title of research
1	Mr. Dipak Motiram Marathe	Ph.D.	22-02-2011	22-01-2019	Synthesis of Thin films of CNT, PEDOT:PSS & P3HT:PCBM by Ultrasonic Spray Method & Study of their Optical & Electrical Properties for Solar Cell Fabrication
2	Mr. Amol Bhaskar Palve	Ph.D.	02-11-2020	working	Effect of Dopping on physical properties of ZnO nanostructured thin film by sol- gel method for sensor application
3	Miss Neha Nilesh Malpure	Ph.D.	23-05-2018	working	Synthesis and characterization of pure and doped zinc oxide nanostructured thin films by chemical route for sensing applications
4	Mr. Amol Prabhakar Zerwal	Ph.D.	02-11-2020	working	Chemical synthesis of pure and doped TiO <sub>2</sub> thin films and study of its physical properties for sensor applications
5	Mr. Prakshram Kishanlal Panchariya	Ph.D.	02-11-2020	working	Chemical Synthesis and Characterization of pure and doped ZnO thin films and its application to Spintronics
6	Mr. Masud Mushtaq Ahmad Deshmukh	Ph.D.	02-11-2020	working	Band Gap Engineering of CdS thin films via Doping for the Application of Optical Sensitive Resistance
7	Mr. Anil Devidas Mali	Ph.D.		working	TiO <sub>2</sub> and SnO <sub>2</sub> nanoparticles: Green Synthesis, Characterization and sensing Applications

➤ **Visited to foreign countries for two times to present research paper**

**in** International level conferences at **Thailand, Bangkok** (Travel grant to attend this conference was sanctioned by UGC, New Delhi.) **And Kathmandu, Nepal** (**Partial funding** was sanctioned by North Maharashtra University, Jalgaon.)

➤ **Total Research papers published: (Total 35)**

**Total: (31 International + 04 National Journal = 35 research paper)**

**List of Research papers published in peer reviewed or UGC listed Journals:**

Sr. No	Title of the paper with page Nos. And	Journal name with ISBN/ISSN No	Peer-Reviewed or UGC listed Journals	Impact Factor, if any	Number of total authors	First/Principal/Corresponding author
01	Optical properties of Pure ZnO thin films prepared by the sol gel method <b>P191-196</b>	TIJER- International Research journal, April 2023, Vol 10, issue 4, (ISSN 2349-9249)	International, Peer reviewed , Referred , Open access journal	8.57	03	yes
02	A brief study on fiber optic sensors and its few applications <b>P865-872</b>	TIJER- International Research journal, April 2023, Vol 10, issue 4, (ISSN 2349-9249)	International, Peer reviewed , Referred , Open access journal	8.57	03	yes
03	Al <sub>2</sub> O <sub>3</sub> thick films: Preparation and Characterization <b>P:131-135</b>	Research Journey, International e-journal, April 2022 e-ISSN:2348-7143	Peer reviewed referred journal	-	03	Yes
04	A Review : ZnO - from Synthesis to Applications, <b>p508-516</b>	International Journal of Innovative Research in Technology (IJIRT), December 2021, Volume 8, issue 7, (ISSN: 2349-6002).	(UJC approved Journal no 47859), An international, Open Access, Peer reviewed, Referred journal.	7.376	05	Yes
05	TiO <sub>2</sub> thin films: A Review <b>p563-569</b>	International Journal of Innovative Research in	(UJC approved Journal no 47859), An international,	7.376	06	Yes

		Technology (IJIRT), December 2021, Volume 8 , issue 7, (ISSN: 2349-6002).	Open Access, Peer reviewed, Referred journal.			
06	ZnO thin films by Sol gel method: A Review page e758-e763,	Journal of emerging technologies and Innovative Research (JETIR), Sept 2021, Vol 8, Issue 9, (ISSN 2349-5162),	(UGC approved journal No 63975) An International Scholarly Open Access, Peer – reviewed, refereed Journal,	7.95	03	yes
07	TiO <sub>2</sub> thick films: Preparation and Characterization, <b>p 490-492</b>	Journal of Engineering Sciences 5), May 2020 Vol. 11 (Issue 5) (ISSN -0377-9254),	UGC care Approved Group II Journal, Open access, interdisciplinary and peer reviewed international journal,	6.54	03	Yes
08	SnO <sub>2</sub> and SnO <sub>2</sub> -AgO thick films: Preparation and Characterization p498-502	Journal of Engineering Sciences Vol. 11(Issue 5), May 2020, (ISSN - 0377-9254),	UGC care Approved Group II Journal, Open access, interdisciplinary and peer reviewed international journal,	6.54	04	Yes
09	PANI, SNO <sub>2</sub> doped PANI AND WO <sub>3</sub> doped PANI: Synthesis and characterization <b>p650-660,</b>	International Journal of Current Engineering And Scientific Research Vol.6 (Issue 1), June 2019, (ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697),	Open access and peer reviewed, referred, international journal	6.263	02	Yes
10	SnO <sub>2</sub> thick films: Preparation and characterization	Journal of Emerging Technologies and	UGC Approved Journal: No.:63975, An	5.87	02	Yes

	<b>p 618-624,</b>	Innovative Research Vol.6 (Issue 3), March 2019, (ISSN -2349-5162),	International peer reviewed Open Access Journal, (www.jetir.org)			
11	PANI and SnO <sub>2</sub> doped PANI: Synthesis and characterization <b>p52-60</b>	Journal of Research and development, vol. 8 (Issue 02), Jan 2018, , (ISSN <b>2230-9578</b> ),	(UGC Approved journal, list no.64768) A Multidisciplinary International Level Referred Journal, peer reviewed journal	4.270	06	Yes
12	PANI and WO <sub>3</sub> doped PANI: Synthesis and characterization <b>P61-69</b>	Journal of Research and development, vol. 8 (Issue 02), Jan 2018, , (ISSN <b>2230-9578</b> ),	(UGC Approved journal, list no.64768) A Multidisciplinary International Level Referred Journal, peer reviewed journal	4.270	06	Yes
13	Synthesis of polyaniline and to study its conducting properties. <b>p145-149</b>	Journal of Research and development, vol. 8 (Issue 04), Jan 2018, , (ISSN <b>2230-9578</b> ),	(UGC Approved journal, list no.64768) A Multidisciplinary International Level Referred Journal, peer reviewed journal	4.270	05	yes
14	Synthesis of polyaniline and polyaniline-Zn powder and to study its conducting properties. <b>p110-117</b>	International Journal of pure and applied research in engineering and technology 2016, Vol.4 (9), ISSN: 2319-507X)	An international , Open Access Journal (with out impact factor)		02	yes
15	Preparation, Characterization and Humidity Sensing	Elixir Materials Science 93 (2016) (ISSN 2229:712X)	<b>(peer-reviewed Independent</b>	<b>6.865</b>	02	Yes

	Properties of nanocrystalline SnO <sub>2</sub> thin films prepared by Spray Pyrolysis technique <b>P39891-39894</b>		<b>multi-disciplinary International Journal )</b>			
16	Synthesis, characterization and ammonia sensing properties of Mn doped Zinc oxide nano composite <b>P 1640-1644</b>	International Journal of Science and Research (IJSR) 2016 vol 5 (5) (ISSN (Online): 2319-7064,	Peer reviewed, Open Access International Journal	<b>6.391</b>	03	no
17	Farmer friendly Solar Operated Spray Pump <b>P 969-972</b>	International Research Journal of Engineering and Technology <b>Vol 3.12, Feb 2016</b> <b>(e-ISSN: 2395 - 0056, p-ISSN: 2395-0072),</b>	UGC approved Peer reviewed Open Access, Multidisciplinary, International Journal	7.529	04	yes
18	Poly 3-Hexylthiophene: Single Wall Carbon Nanotube Active Layer by Dual Feed Ultrasonic Spray Method for Solar Cell Application <b>pp. 1–6,</b>	Journal of Nanoelectronics and Optoelectronics Vol. 10, <b>July 2015</b> , ISSN: 1555-130X (Print): EISSN: 1555-1318 (Online)	International and cross-disciplinary peer reviewed journal		06	no
19	Deposition and Characterization of Poly( <i>O</i> -Anisidine)/TiO <sub>2</sub> Nanocomposite for Gas Sensing Application <b>P 1-8</b>	International Journal of Polymer Science and Engineering, Vol. 1: Issue 2, 2015, ISSN 2455-8745	International Open Access , Peer reviewed Journal		02	yes
20	Synthesis of POA and study of its conducting and gas sensing properties <b>P 281-284</b>	International Journal for Research in Applied Science and Engineering Technology, Volume 3 Issue I,	International Peer –reviewed Multidisciplinary journal	7.538	03	yes

		January 2015 (ISSN: 2321-9653).				
21	Effect of Cr <sub>2</sub> O <sub>3</sub> by doping and dipping on gas sensing characteristics of ZnO thick films <b>P 1274-1281</b>	Journal of electron devices 15(2012) (ISSN I1682 - 3427)	International Peer –reviewed Journal (with out impact factor)		04	no
22	Preparation , Characterization and H <sub>2</sub> S sensing performance of sprayed Nanostructured SnO <sub>2</sub> thin films <b>p1-5</b>	International Scholarly Research Network ISRN Nanotechnology, Article ID 734325, (2012)	International peer reviewed		07	no
23	Tungsten oxide pellet Sensor to detect H <sub>2</sub> S gas <b>P 59-65</b>	Sensors and transducers 137, 2 (2012) (ISSN 1726-5479)	International peer reviewed Journal	0.705 (2013)	02	yes
24	I-V Characteristics of Screen-Printed WO <sub>3</sub> -Bi <sub>2</sub> O <sub>3</sub> Thick Films in LPG Ambient <b>pp. 194-199</b>	Invertis Journal of Science & Technology Vol. 3, No. 3, 2010 0973-8940 e-ISSN 2454-762X	Peer reviewed journal	6.434	02	yes
25	CO gas sensing properties of screen printed SnO <sub>2</sub> thick films <b>p 1338-1342.</b>	Journal of optoelectronics and advanced materials 12, 6 (2010) <b>ISSN: 1842-6573</b> 1454-4164	International peer reviewed Journal	0.479	02	yes
26	Sensing behavior of screen printed WO <sub>3</sub> thick films for four organic vapors <b>p185-189</b>	Invertis Journal of Science and technology 2, 3 (2009).	Peer reviewed journal	6.434	02	yes
27	Oxygen sensing properties of WO <sub>3</sub> thick films <b>p 86-91.</b>	Sensors and transducers 107, 8 (2009) ISSN 1726-5479	International peer reviewed Journal	Impact factor 0.705 (2013)	03	yes
28	Acetone Sensing Properties of Screen Printed WO <sub>3</sub> thick films <b>P1077-1081</b>	Talanta 72 , 3 (2007) ISSN: 0039-9140 (Science Direct, Elsevier)	International peer reviewed Journal	6.556	03	yes
29	Ethanol Vapor	Bulletin of	International	1.878	04	yes

	Sensing Properties of Screen Printed WO <sub>3</sub> thick films P129-133	Material Science 30 , 2 ( 2007) 0250-4707	peer reviewed Journal			
30	Influence of Liquid Petroleum Gas on the electrical parameters of the WO <sub>3</sub> thick film. pp 1001-1007	Sensors and transducers 76, 2 (2007) ISSN 1726-5479	International peer reviewed Journal	0.987	03	yes
31	Preparation and characterization of WO <sub>3</sub> based liquid petroleum gas sensor. <b>p-1-4</b>	Materials and Manufacturing Processes 22 (2007) (Taylor and Francis)	International peer reviewed Journal	4.616	04	yes
32	Eucalyptus and Mustard oil sensing properties of screen printed WO <sub>3</sub> thick films, <b>p73-76</b>	SPEED Journal of Research in Electronics Dec 2016, (ISSN 2349-8226).	National journal		01	yes
33	Preparation of Oxide thick films by using screen printing technique and their gas sensing studies.	Link 9, 34 (2007) 12.	International Registered & Referred Monthly Journal International Journal		01	yes
34	Nano materials: Synthesis and Applications	<b>Research Link</b> 10, 35 (2007) 12.	International Registered & Referred Monthly Journal International Journal		02	yes
35	Global Warming: Planet Changes, Future Impact and Skeptics	<b>Research Link</b> 70, 11 (2010) 9.	International Registered & Referred Monthly Journal International Journal		3	yes

➤ **Paper presented at International / National / State level conferences / Seminars**

- 1  $\text{Al}_2\text{O}_3$  Thick films: Preparation and Characterization  
R. S. Khadayate et al  
Presented in One day **International** Multidisciplinary conference on “ Recent Trends in Humanities, Commerce and Management and Science and Technology” jointly organized by Nutan Maratha college, Jalgaon and KBC North Maharashtra University, Jalgaon on 9<sup>th</sup> April 2022
- 2  $\text{SnO}_2$  and  $\text{SnO}_2$ -AgO thick films: Preparation and Characterization  
R.S.Khadayate et al  
Presented in National level conference entitled ‘Nanostructured and Amorphous Materials: Synthesis, Characterization and Application (NAM-RAMAN 2020)’, held at M. J. College, Jalgaon, on 28-29 Feb 2020.
- 3 PANI,  $\text{SnO}_2$  doped PANI and  $\text{WO}_3$  doped PANI  
R. S. Khadayate and Varsha Manvatakar  
Presented in **International** level conference on **Multifunctional Advanced materials ICMAM-2018**, organized by Kamaln Nehru Mahavidyalaya, Nagpur and Dharmapeth M.P. Deo Memorial Science college, Nagpur on 5-7 Oct 2018.
- 4 PANI and doped PANI: Synthesis, Characterization and study of its conducting behavior  
**R. S. Khadayate**  
**Presented in state level conference on New trends in recent materials**, organized by Nutan Maratha College, Jalgaon on 30<sup>th</sup> Jan 2018 (poster).
- 5 PANI and  $\text{WO}_3$  doped PANI: Synthesis and characterization  
**R. S. Khadayate and et.all.**  
**Presented in national level conference on Recent trend trends in material science and its Applications**, organized by DNCVP’S Shirish Madhukarrao Chaudhari College, Jalgaon on 13<sup>th</sup> Jan 2018 (poster).
- 6 PANI and  $\text{SnO}_2$  doped PANI: Synthesis and characterization  
**R. S. Khadayate and et.all.**  
**Presented in national level conference on Recent trend trends in material science and its Applications**, organized by DNCVP’S Shirish Madhukarrao Chaudhari College, Jalgaon on 13<sup>th</sup> Jan 2018 (poster).
- 7 Synthesis of conducting polyaniline at room temperature and study of its conducting properties  
**R. S. Khadayate**  
**Presented in national level conference on Nonconventional energy sources for rural development of INDIA**, organized by Uttamrao patil Arts and Science college, Dahivel on 6<sup>th</sup> Jan 2018 (poster).
- 8 Eucalyptus and Mustard oil sensing properties of screen printed  $\text{WO}_3$  thick films



**R. S. Khadayate**

**Presented in National conference on Electronic materials Thin films and its Applications** organized by Nutan Maratha college, Jalgaon, on 09-10 December 2016 (Poster) *\*This paper was published in a special issue of SPEED Journal of Research in Electronics p73-76, Dec 2016, (ISSN 2349-8226).*

- 9 Preparation, characterization and humidity sensing properties of Nanocrystalline SnO<sub>2</sub> thin films prepared by Spray pyrolysis technique

**R. S. Khadayate**

**Presented in National conference on Recent Trends in Applied Sciences** organized by M. J. College, Jalgaon, on 30-31 January 2015 (Oral)

- 10 Effect of Bi<sub>2</sub>O<sub>3</sub> addition on LPG sensing properties of WO<sub>3</sub> thick films

**R. S. Khadayate** and P. P. Patil

**Presented in International Conference on Frontiers in Materials Science for Energy and Environment (ICFMS 2012)** organized by Loyola institute of Frontier energy (LIFE), Loyola collage, Channai 600 034 during January 11-13, 2013 (Oral)

- 11 Preparation and characterization of WO<sub>3</sub> and WO<sub>3</sub>-CuO thick films and their H<sub>2</sub>S gas sensing properties

**R. S. Khadayate** and P. P. Patil

**Presented in the International conference entitled 'POLYCHAR 19 -World Forum on Advanced Materials'** during 20<sup>th</sup> to 24<sup>th</sup> March 2011 held at **Kathmandu, Nepal**. It was organized by Nepal Polymer Institute (NPI), Kathmandu, NEPAL.

*The KBC North Maharashtra University, Jalgaon sanctioned partial funding to participate this conference (Poster).*

- 12 Oxygen sensing properties of ZrO<sub>2</sub> Pellets

**R. S. Khadayate**

**Presented in national conference on Recent advances in material synthesis and characterization - 2011** organized by, Dada sahib Devidas Namdeo Bhole College, Bhusawal during 22<sup>nd</sup> to 23<sup>rd</sup> January 2011. (Poster).

- 13 Influence of different oxide dopants on LPG sensing properties of WO<sub>3</sub> thick film

**R. S. Khadayate** and P. P. Patil,

**Presented in national conference on Nano materials and nano technology** organized by, Visvesvaraya National Institute of Technology Nagpur during 18<sup>th</sup> to 22<sup>nd</sup> January 2010. (Oral).

- 14 H<sub>2</sub>S gas sensing properties of screen printed WO<sub>3</sub> thick films

**R. S. Khadayate** and P. P. Patil,

**Presented in the International conference on sensors "Asiasense 2009"** during 29<sup>th</sup> to 31<sup>st</sup> July 2009 held at **Thailand, Bangkok**. It was organized by National Science

and Technology development agency, Thailand. *Travel grant to attend this conference was sanctioned by UGC, New Delhi (Poster).*

- 15 Sensing behavior of screen printed  $\text{WO}_3$  thick films for four organic vapors  
**R. S. Khadayate** and P. P. Patil  
**State Level Seminar** on Recent Advances in Nanocrystalline Materials And Application, organized by Art. Commerce and Science college, Shahada during 6-7 February 2009, **(Oral)**.
- 16  $\text{H}_2\text{S}$  gas detection by thin and thick films of tin oxide at room temperature  
**R. S. Khadayate** and P. P. Patil  
**International Conference on Recent Trends in Sensor-Development for the Assessment and Management of the Environment** organized by Loyola institute of Frontier energy (LIFE), Loyola collage, Channai 600 034 during January 8-10, 2009 (Poster)
- 17 I-V characteristics of screen printed  $\text{WO}_3$  – $\text{Bi}_2\text{O}_3$  thick film in LPG ambient.  
**R. S. Khadayate** and P. P. Patil  
**International Conference on Advanced Materials and Applications (ICAMA-2007)** organized by Department of Physics, Shivaji University, Kolhapur during Nov 15-17 2007. (Poster)
- 19 Room temperature detection of  $\text{H}_2\text{S}$  gas using  $\text{SnO}_2$  thick films  
**R. S. Khadayate** and P. P. Patil  
**National Conference on Advances in Materials Science (AMS-2007)** organized by Department of Physics, Gulberga University, Gulberga during Jan 27-28 2007. (Oral)
- 20 Tungsten Oxide ( $\text{WO}_3$ ) thick film gas sensor for detection of acetone vapors.  
**R. S. Khadayate** and P. P. Patil  
**National Seminar on Recent trends in Materials Science (RTMS-2006)** organized by Department of Physics, North Maharashtra University Jalgaon during Mar 24-25 2006 (Oral)  
It is very happy to write that this paper was accepted for the **Best Paper presentation award in RTMS-2006**
- 21 Preparation and characterization of  $\text{WO}_3$  based liquid petroleum gas sensor.  
**R. S. Khadayate**, J. V. Sali, and P. P. Patil  
Presented in **National Conference on Recent trends in Materials Science and Technology (RTMST-2005)** organized by Vellore Institute of Technology, Vellore, Tamil Nadu, India during Aug 10-12, 2005.(Oral)

➤ **Total Books published: Total 91**

**List of Published text books:**

Sr. No	Title of the Book and Name of the Publisher with Year and Month of Publishing and ISBN	International/National/ Chapter in edited book/ of Book by International Publisher/ Editor of Book by National Publisher
01	Preparation and gas sensing properties of WO <sub>3</sub> and SnO <sub>2</sub> thick films ( page no 170) (Book Cost :68.0 Euro), <b>Published on (5-3-2012) (Solo Author)</b> , ISBN 978-3-8484-0310-3, Lambert Academic Publishing GmbH 7 Co.KG. Henrich-Bocking-Str.6-8 66121 Saabruken, <b>Germany</b>	International Level
02	A text book of F.Y.B.Sc. SEM I Paper I:PHY 101:Basic Mechanics Prashant Publications, Jalgaon, Sept 2022 ISBN <b>978-93-95227-00-1</b>	University Level
03	A text book of F.Y.B.Sc. SEM I: Paper II: PHY 102: Dynamics and Properties of Matter Prashant Publications, Jalgaon, Sept 2022 , ISBN <b>978-93-95227-01-8</b>	University Level
04	A text book of F. Y. B.Sc. SEM I: Paper I: ELE 101: Circuit Components and Network Analysis Prashant Publications, Jalgaon, Sept 2022 , ISBN <b>978-93-95227-02-5</b>	University Level
05	A text book of F. Y. B.Sc. SEM I: Paper II: ELE 102: Basics of Digital Electronics, Prashant Publications, Jalgaon, Sept 2022, ISBN <b>978-93-95227-03-2</b>	University Level
06	A text book of T. Y. B. Sc : SEM VI: PHY606(A):Technical Electronics II Prashant Publications, Jalgaon , <b>April 2022, ISBN 978-93-90862-96-2</b>	University Level
07	A text book of T.Y.B.Sc : SEM VI: PHY605: Basic Instrumentation Skills Prashant Publications, Jalgaon, May 2021, ISBN <b>978-93-90862-95-5</b>	University Level
08	A text book of T.Y.B.Sc: SEM VI: PHY604: Modern and Applied Physics Prashant Publications, Jalgaon, MAY 2021, ISBN <b>978-93-90862-90-0</b>	University Level
09	A text book of T. Y. B. Sc : SEM VI:PHY602:Material Science Prashant Publications, Jalgaon, MAY 2021, ISBN <b>978-93-90862-88-7</b>	University Level
10	A text book of T. Y. B. Sc : SEM V : PHY506(A): Technical Electronics I Prashant Publications, Jalgaon, Jan. 2021, ISBN <b>978-93-90483-20-4</b>	University Level
11	A text book of T.Y.B.Sc. :SEM V: PHY 505: Solar Energy and Applications, Prashant Publications, Jalgaon , OCT. 2020, ISBN <b>978-93-90483-19-8</b>	University Level
12	A text book of T. Y. B.Sc. :SEM V:PHY 504(A): Electronics-II Prashant Publications, Jalgaon, Sept. 2020, ISBN <b>978-93-89493-43-6</b>	University Level
13	A text book of T. Y. B.Sc. : SEM V: PHY 501: Mathematical Physics Prashant Publications, Jalgaon., Oct. 2020,ISBN <b>978-93-90483-14-3</b>	University Level
14	A text book of S.Y.B.Sc.: SEM IV: PHY404: ELE 304:Electrical Circuits and Network Skills, Prashant Publications, Jalgaon, March. 2020, ISBN <b>978-93-89501-40-7</b>	University Level

15	A text book of S.Y.B.Sc.: SEM IV: ELE 401:Digital Communication Prashant Publications, Jalgaon, Jan 2020, ISBN <b>978-93-89492-93-4</b>	University Level
16	A text book of S.Y.B.Sc.: SEM IV: PHY403: Practical physics Prashant Publications, Jalgaon, Jan. 2020, ISBN <b>978-93-89501-19-3</b>	University Level
17	A text book of S.Y.B.Sc. :SEM IV: PHY402:Optics and LASERs Prashant Publications, Jalgaon., Dec. 2019, ISBN <b>978-93-89492-65-1</b>	University Level
18	A text book of S.Y.B.Sc. :SEM IV:PHY401: Waves, Oscillations and Acoustics, Prashant Publications, Jalgaon., Nov. 2019, ISBN <b>978-93-89492-64-4</b>	University Level
19	A text book of S.Y.B.Sc.: SEM III:PHY304:Renewable energy and energy harvesting , Prashant Publications, Jalgaon. , Sept. 2019, ISBN <b>978-93-85664-98-4</b>	University Level
20	A text book of S.Y.B.Sc.: SEM III: PHY303:Practical physics Prashant Publications, Jalgaon., Sept. 2019, ISBN <b>978-93-89492-22-4</b>	University Level
21	A text book of S.Y.B.Sc.: SEM III: PHY302(B): Instrumentation Prashant Publications, Jalgaon., July 2019, ISBN <b>978-93-88769-30-3</b>	University Level
22	A text book of S.Y.B.Sc.: SEM III: PHY302(A):Electronics I Prashant Publications, Jalgaon. , July 2019 ,ISBN <b>978-93-88769-28-0</b>	University Level
23	A text book of S.Y.B.Sc.: SEM III: PHY301: Thermodynamics and kinetic theory of Gases. Prashant Publications, Jalgaon. July 2019, ISBN <b>978-93-88769-29-7</b>	University Level
24	A text book of S.Y.B.Sc: SEM III: ELE301:Analog Communication Prashant Publications, Jalgaon., August 2019, ISBN <b>978-93-88769-35-8</b>	University Level
25	A text book of F.Y.B.Sc.(CBCS) SEM II: Paper I: ELE 202: Linear Integrated circuits Prashant Publications, Jalgaon, Jan 2019, ISBN <b>978-93-88113-85-4</b>	University Level
26	A text book of F.Y.B.Sc. SEM II: Paper I: PHY203: Practical Physics Prashant Publications, Jalgaon, December 2018, ISBN <b>978-93-88113-83-0</b>	University Level
27	A text book of F.Y.B.Sc. SEM II: Paper I: PHY 202: Dielectrics , magnetism and Electromagnetism Prashant Publications, Jalgaon, December 2018, ISBN <b>978-93-88113-82-3</b>	University Level
28	A text book of F.Y.B.Sc. SEM II: Paper I:PHY 201: Electricity and Electrostatics Prashant Publications, Jalgaon, December 2018, ISBN <b>978-93-88113-81-6</b>	University Level
29	A text book of F.Y.B.Sc. SEM I: ELE 102: Digital Integrated circuits Prashant Publications, Jalgaon, August 2018, ISBN <b>978-93-88113-46-5</b>	University Level
30	A text book of F.Y.B.Sc. SEM I:PHY 103: Practical Physics Prashant Publications, Jalgaon, August 2018, ISBN <b>978-93-88113-52-6</b>	University Level
31	A text book of F.Y.B.Sc. SEM I: PHY 102:Dyanamics and Elasticity Prashant Publications, Jalgaon, August 2018, ISBN <b>978-93-88113-37-3</b>	University Level
32	A text book of F.Y.B.Sc. SEM I:Paper I:PHY 101:Basic Mechanics Prashant Publications, Jalgaon, August 2018, ISBN <b>978-93-88113-36-6</b>	University Level
33	A text book of F.Y.B.Sc. SEM I: PHY 102:Dyanamics and Elasticity Kumund Publicationsand Vrunda Pub. (A joint venture) Jalgaon June 2018, ISBN <b>978-93-85027-86-4</b>	University Level <b>Editor</b>
34	A text book of F.Y.B.Sc. SEM I: Paper I:PHY 101:Basic Mechanics	University

	Kumund Publications and Vrinda Pub. (A joint venture) Jalgaon June 2018, ISBN <b>978-93-85027-85-7</b>	Level <b>Editor</b>
<b>35</b>	A text book of S. Y. B. Sc. SEM II: Paper I: ELE 241- Linear Integrated Circuits and Applications, Vrinda Pub. Jalgaon, Dec 2016, ISBN <b>978-93-85028-96-0</b>	University Level
36	A text book of S.Y. B. Sc. SEM II: Paper II: PHY 242- Optics Vrinda Pub. Jalgaon, Dec 2016, ISBN <b>978-93-85028-93-8</b>	University Level
37	A text book of S.Y. B. Sc. SEM II: Paper I: PHY 241- Modern Physics, Vrinda Pub. Jalgaon (Dec 2016), ISBN <b>978-93-85028-92-2</b>	University Level
38	A text book of S. Y. B. Sc. SEM I: Paper II: ELE 232- Instrumentation Vrinda Pub. Jalgaon (June 2016), ISBN <b>978-93-85028-79-3</b>	University Level
39	A text book of S. Y. B. Sc. SEM I: Paper I: ELE 231- Analog Circuits and Applications, Vrinda Pub. Jalgaon (June 2016), ISBN <b>978-93-85028-78-6</b>	University Level
40	A text book of S. Y. B. Sc. SEM I: Paper II: PHY 232(B): Instrumentation–I Vrinda Pub. Jalgaon (June 2016), ISBN <b>978-93-85028-74-8</b>	University Level
41	A text book of S. Y. B. Sc. SEM I: Paper II: PHY 232(A): Electronics–I Vrinda Pub. Jalgaon (June 2016), ISBN <b>978-93-85028-73-1</b>	University Level
<b>42</b>	A text book of S. Y. B. Sc. SEM I: Paper I: PHY 231- Waves and Oscillations, Vrinda Pub. Jalgaon (June 2016), ISBN <b>978-93-85028-71-7</b>	University Level
<b>43</b>	A text book of F.Y.B.Sc. Sem II : Paper II :ELE 122: Digital Electronics II Vrinda Pub. Jalgaon, (Dec 2015), ISBN <b>978-93-85028-49-6</b>	University Level
44	A text book of F.Y.B.Sc. Sem II : Paper II :ELE 121: Analog Electronics II Vrinda Pub. Jalgaon, (Dec 2015), ISBN <b>978-93-85028-48-9</b>	University Level
45	A text book of F.Y.B.Sc. Sem II : Paper II :PHY 122: Theoretical Physics Vrinda Pub. Jalgaon (Dec 2015), ISBN <b>978-93-85028-58-8</b>	University Level
46	A text book of F.Y.B.Sc. Sem I : Paper I :PHY 112: Heat and Thermodynamics, Vrinda Pub. Jalgaon, ( July 2015), ISBN <b>978-93-85028-57-1</b>	University Level
47	A text book of F.Y.B.Sc. Sem II : Paper II :ELE 112: Digital Electronics I Vrinda Pub. Jalgaon (July 2015), ISBN <b>978-93-85028-40-3</b>	University Level
48	A text book of F.Y.B.Sc. Sem II : Paper II :ELE 111: Analog Electronics I Vrinda Pub. Jalgaon (July 2015), ISBN <b>978-93-85028-39-7</b>	University Level
49	A text book of F.Y.B.Sc. Sem I : Paper I :PHY 112: Electricity and Magnetism Vrinda Pub. Jalgaon, ( July 2015), ISBN <b>978-93-85028-30-4</b>	University Level
<b>50</b>	A text book of F.Y.B.Sc. Sem I : Paper I :PHY 111: Mechanics and Properties of matter, Vrinda Pub. Jalgaon, ( July 2015), ISBN <b>978-93-85028-31-1</b>	University Level
<b>51</b>	A text book of F.Y.B.Sc. Sem II : Paper II :PHY 122: Theoretical Physics Vrinda Pub. Jalgaon (Second edition) October 2014), ISBN 81-7815-056-5	University Level
52	A text book of S.Y.B.Sc. Sem II : Paper I :PHY 242 : Optics Vrinda Pub. Jalgaon (Second edition : December 2014), <b>ISBN 978-93-85028-09-0</b>	University Level
53	A text book of S.Y.B.Sc. Sem II : Paper I :PHY 241 : Modern Physics Vrinda Pub. Jalgaon (Second edition: December 2014) ISBN 978-93-85028-08-03	University Level
54	A text book of S.Y.B.Sc. Sem I : Paper I :PHY 232 (A): Electronics I Vrinda Pub. Jalgaon (Revised copy: July 2014), <b>ISBN 81-7815-048-4</b>	University Level
<b>55</b>	A text of S.Y.B.Sc. Sem I: Paper II: PHY 232(B): Instrumentation I, Vrinda Pub., Jalgaon. ( <b>June 2014</b> )	University Level
<b>56</b>	A text book of F.Y.B.Sc. Sem II: Paper II: ELE 122: Digital Electronics II	University

	Published by Kumud Pub and marketed by <b>Vrinda Pub., Jalgaon. , ( Nov 2013) , ISBN 978-81-926449-2-9</b>	Level
57	A text book of F.Y.B.Sc. Sem II: Paper I: ELE 121: Analog Electronics II Published by Kumud Pub and marketed by <b>Vrinda Pub., Jalgaon., ( Nov 2013) , ISBN 978-81-926449-2-9</b>	University Level
58	A text book of F.Y.B.Sc. Sem II: Paper I: PHY 121: Heat and Thermodynamics, Published by Kumud Pub and marketed by <b>Vrinda Pub., Jalgaon., ( Nov 2013), ISBN 978-81-926449-1-2</b>	University Level
59	A text book of S.Y.B.Sc. Sem II: Paper I: ELE 241:Linear Integrated circuits and applications Published by Kumud Pub and marketed by <b>Vrinda Pub., Jalgaon. , ( Nov 2013), ISBN 978-81-926449-4-3</b>	University Level
60	A text book of S.Y.B.Sc. Sem II: Paper II: PHY 242: Optics, Published by Kumud Pub and marketed by <b>Vrinda Pub. Jalgaon., ( Nov 2013) , ISBN 978-81-926449-6-7</b>	University Level
61	A text book of S.Y.B.Sc. Sem II: Paper I: PHY 241: Modern Physics Published by Kumud Pub and marketed by <b>Vrinda Pub., Jalgaon., ( Nov 2013), ISBN 978-81-926449-5-0</b>	University Level
62	A text book of S.Y.B.Sc.: Sem I: Paper II; ELE 232: Instrumentation Vrinda Pub., Jalgaon., ( <b>June 2013</b> ), <b>ISBN 81-7815-066-2</b>	University Level
63	A text book of S.Y.B.Sc.: Sem I : Paper I: ELE 231: Analog Circuits and Applications, Vrinda Pub., Jalgaon., ( <b>June 2013</b> ), <b>ISBN 81-7815-067-0</b>	University Level
64	A text book of S.Y.B.Sc. Sem I: Paper II: PHY232(A): Electronics I Vrinda Pub., Jalgaon, ( <b>June 2013</b> ) , <b>ISBN 81-7815-048-4</b>	University Level
65	A text book of S.Y.B.Sc. Sem I: Paper I: PHY 231: Waves and Oscillations, Vrinda Pub., Jalgaon, ( <b>June 2013</b> ), <b>ISBN 81-7815-064-6</b>	University Level
66	A Text Book of F. Y. B.Sc. : Sem II : Paper II: PHY 122: Theoretical Physics, Vrinda Pub., Jalgaon. ( <b>Nov 2012</b> ), <b>ISBN 81-7815-056-5</b>	University Level
67	A text Book of T.Y.B.Sc.: Sem I: Paper IV Physics 314(A):Electronics, Vrinda Pub., Jalgaon. ( <b>July 2012</b> ) <b>ISBN 81-7815-025-5</b>	University Level
68	A Text Book of F.Y.B.Sc.: Physics Practical: Paper III: PHY 103: Practical course,Vrinda Pub., Jalgaon., ( <b>July 2012</b> ) , <b>ISBN 81-7815-092-1</b>	University Level
69	A text book of F.Y.B.Sc.: Sem I: Paper II; ELE 112: Digital Electronics Vrinda Pub., Jalgaon. , ( <b>July 2012</b> ) , <b>ISBN 81-7815-015-8</b>	University Level
70	A text book of F.Y.B.Sc.: Sem I : Paper I: ELE 111: Analog Electronics I Vrinda Pub., Jalgaon. ( <b>July 2012</b> ) <b>ISBN 81-7815-014-X</b>	University Level
71	A text book of F.Y.B.Sc. Sem I: Paper II: PHY112: Electricity and Magnetism, Vrinda Pub., Jalgaon. ( <b>July 2012</b> ) <b>ISBN 81-7815-013-1</b>	University Level
72	A text book of F.Y.B.Sc. Sem I: Paper I: PHY 111: Mechanics and Properties of Matter, Vrinda Pub., Jalgaon. ( <b>July 2012</b> ) <b>ISBN 81-7815-012-3</b>	University Level
73	A text book of S.Y.B.Sc. Sem II :Paper II:ELE 222: Instrumentation Vrinda Pub. Jalgaon ( <b>Nov 2011</b> ) <b>ISBN 81-7815-07-7</b>	University Level
74	A text book of S.Y.B.Sc. Sem II :Paper I :ELE 221: Linear Integrated Circuits and Applications, Vrinda Pub. Jalgaon ( <b>Nov 2011</b> ) <b>ISBN 81-7815-06-9</b>	University Level
75	A text book of S.Y.B.Sc. Sem II :Paper II: PHY 222: Applied Physics I ,Vrinda Pub. Jalgaon ( <b>Nov 2011</b> ) , <b>ISBN 81-7815-001-8</b>	University Level
76	A text book of S.Y.B.Sc. Sem II : Paper II :PHY 221: Oscillations and Matter waves , Vrinda Pub. Jalgaon ( <b>Nov 2011</b> ) <b>ISBN 81-7815-000-X</b>	University Level
77	A text book of S.Y.B.Sc. Sem I :Paper II:ELE 212: Digital Electronics and Applications , Vrinda Pub. Jalgaon ( <b>July 2011</b> ) <b>ISBN 81-7815-027-1</b>	University Level
78	A text book of S.Y.B.Sc. Sem I :Paper I:ELE 211 : Analog circuits and and	University

	Applications , Vrinda Pub. Jalgaon <b>(July 2011) ISBN 81-7815-026-3</b>	Level
79	A text book of S.Y.B.Sc. Sem I: Paper II: PHY 212 (A): Electronics I: Vrinda Pub. Jalgaon <b>(July 2011) ISBN 81-7815-062-X</b>	University Level
80	A text book of S.Y.B.Sc. Sem I :Paper I:PHY 211 : Mathematical Methods for Physics, Vrinda Pub. Jalgaon <b>(July 2011) ISBN 81-7815-072-7</b>	University Level
81	A Text book of F.Y.B.Sc. Sem II: Paper I and Paper II: ELE 121: Electronics Active Components & ELE 122: Basic Digital Electronics II , Vrinda Pub., Jalgaon. <b>(Jan 2011) ISBN 81-7815-084-0</b>	University Level
82	A Text Book of F. Y. B.Sc. : Sem II : Paper II: PHY 122: Applied Physics , Vrinda Pub., Jalgaon. <b>(Jan 2011) ISBN 81-7815-090-5</b>	University Level
83	A Text Book of F.Y.B.Sc. : Sem II : Paper I: PHY 121: Heat and Thermodynamics, Vrinda Pub., Jalgaon. <b>(Jan 2011) ISBN 81-7815-092-1</b>	University Level
84	A text book of F.Y.B.Sc.: Sem I: Paper I; ELE 111: Electronic Components and Network Theorems, Vrinda Pub., Jalgaon. <b>(June 2010)</b>	University Level
85	A text book of F.Y.B.Sc.: Sem I : Paper II: ELE 112: Basic Digital Electronics I , Vrinda Pub., Jalgaon. <b>(June 2010)</b>	University Level
86	A text book of F.Y.B.Sc. Sem I: Paper II: PHY112: Electricity and Magnetism , Vrinda Pub., Jalgaon. <b>(June 2010) ISBN 81-7815-095-6</b>	University Level
87	A text book of F.Y.B.Sc.Sem I: Paper I: PHY 111: Mechanics and Properties of Matter, Vrinda Pub., Jalgaon. <b>(June 2010) ISBN 81-7815-094-8</b>	University Level

### **[III] Academic Activities**

#### **(A) College Level**

1. Working as a Chairman of **Research and Extension committee from 2013-14.**
2. Working as a member of IQAC (Quality Assurance Committee) from last 08 years.
3. Worked as a member of **Water conservation and management cell.**
4. Working as a **member of QAC (Quality Assurance Committee) from last five years.**
  - a) Coordinating Research, UGC and Extension committee and Campus development committee
  - b) worked for MOU (Memorandum of understanding) with different colleges
  - c) Conducted computer awareness program for staff members
  - d) Encouraged staff members to submit minor and major projects
  - e) Working for updating of College WEBSITE
  - f) Actively participated in all meetings and work of QAC and IQAC and given very valuable suggestions for the developments of college
  - g) Working for solarification of College Campus
  - h) Working for RO system water facility in college campus
5. Worked as a **Avishkar Co-ordinator (Four times)**
6. **Guided to students (20 students) to prepare research based models/poster to participate in Avishkar – research level competition organized by North Maharashtra University, Jalgaon**

**The model names are-**

- 1. Solar car model (2013-14) :(four students)**
- 2. ETM (Energy-time –Money) Saver device, (2013-14); (It was selected from District level to University level) :(four students)**
- 1. Solar Cooler (2014-15); (It was selected from District level to University level ) :(two students)**
- 2. Farmers friendly Solar spray pump (2015-16) :(two students)**
- 3. Synthesis of Conducting Polymer: Polyaniline and to study its conducting properties (2015-16) :(two students)**
- 4. Reverse multiple choice method: A new mathematical method to improve physics learning (2016-17) :(two students)**
- 7. Guided (02) students to present their research paper in State Level Research Paper Presentation competition organized on 7<sup>th</sup> January 2015 by Shivchhatrapati College, Aurangabad.**
- 8. Working as a member of Science Association.**
- 9. Working as a member of Student's Welfare committee.**
- 10. Worked as a Chairman of Science association (Two times)**
- 11. Working for MOU (Memorandum of Understanding) with different colleges.**
- 12. Worked as a member of Vidnyan prasar samiti and working actively for "Eco-friendly Ganesh Festival"**
- 13. Worked as a Tour Incharge for educational tours of students**
- 14. Worked as a member of Research and Extension committee.**
- 15. Worked as a N.S.S. Programme Officer.**
- 16. Worked as a Chairman and member of Internal Examination Committee for 5years.**
- 17. Worked as member of Teaching - Learning evaluation Committee.**
- 18. Worked as member of discipline committee.**
- 19. Worked as a member of Research and Extension committee.**
- 20. Worked as a N.S.S. Programme Officer.**
- 21. Worked as a Chairman and member of Internal Examination Committee for 5 years.**
- 22. Worked as a member of Teaching - Learning evaluation Committee.**
- 23. Worked as a member of Student's Welfare committee.**
- 24. Worked as a member of Sports committee. (Guided to students for Chess and Table Tennis)**
- 25. Worked as a member of Library committee.**
- 26. Worked as a member of Cultural Committee.**
- 27. Worked as a Junior Supervisor and member of internal flying squad in our college for North Maharashtra University examinations and internal exams every year.**
- 28. Worked as Internal Examiner and Expert for Practical Examinations in Colleges.**
- 23. Important Academic Activities:**
  - 1. Water conservation and management cell**



**[Inter departmental collaboration between Department of Physics and Chemistry of our college]**

**.... Submitted proposal to Principal of college to built four systems for Rain water harvesting and to built an system for recycling of water**

**.....one system for rain water harvesting is constructed and other suggested systems are under consideration**

**2. Solarification of College Campus**

**..... Suggested to purchase solar power generator**

**..... as a result a solar power generator system is purchased by our college**

### **(B) University Level**

1. Worked as a **member of Academic audit committee** ordered by KBC North Maharashtra University, Jalgaon.
2. Worked as a **member of selection committee for interview of Principal** of various colleges.
3. Worked as a **chairman and member of various Ph.D. and pre Ph.D. Viva-voce** in the KBC NM university, Jalgaon.
4. Worked as **Project Officer in Central assessment programme of papers** at KBC North Maharashtra University, Jalgaon **(Two times)**
5. Worked as **Chairman and member of paper setting committee** ordered by KBC North Maharashtra University, Jalgaon. **(Many times).**
6. Worked as a **member of Local Inquiry committee** ordered by KBC North Maharashtra University, Jalgaon. **(Many times).**
7. Worked **as a member of Flying Squad for examinations** conducted by KBC North Maharashtra University, Jalgaon **(Seven Times).**
8. Worked **as a Examiner for AVISHKAR competition** conducted by KBC North Maharashtra University, Jalgaon **(One Time).**
9. Worked as an **external senior supervisor** at various examinations centers of KBC North Maharashtra University, Jalgaon. **(Many times).**
10. Worked as an **external examiner** for Practical examinations centers of KBC North Maharashtra University, Jalgaon. **(Many times).**
11. Worked as a **Chairman and member of Syllabus framing committee** in various papers of the curriculum. **(Many times).**

12. Worked as an **examiner for various subjects in Central Assessment Programme organized by North Maharashtra University, Jalgaon.** (Many times).

### **(C) Training Programmes, Conferences and Seminars**

#### **a) Attended National, Inter-National Conferences ,Workshops , Seminars and Symposium**

1. Attended one day national workshop on “Materials Characterization Techniques” organized by School of Physical Sciences ,North Maharashtra university,Jalgaon held on 8<sup>th</sup> January 2016.
2. Attended workshop on T.Y.B. Sc. Physics Practicals organized by NYNC ACS college, Chalisgaon on 27<sup>th</sup> January 2015.
3. Attended two day workshop on “ Unleashing Potential for Personal Effectiveness” organized by IQAC of ACS college Jamner on 17<sup>th</sup>-18<sup>th</sup> January 2015.
4. Attended one day university seminar on “Academic performance indicators for appraising teachers’ yearly performance –A key to maintain and sustain standards un Higher education” organized by Pratap College, Amalner on 24<sup>th</sup> April 2011.
5. Attended one day workshop on ‘Innovative Experiments and Technological Advances at Under Graduate Course in Physics’ organized by Department of Physics, M. J. College, Jalgaon on 29<sup>th</sup> January 2010.
6. Attended and actively participated in the University level workshop for the restructuring of the syllabi for Physics at T. Y. B. Sc held during 15<sup>th</sup> -16<sup>th</sup> March 2009 organized by Department of Physics, A. C. S. College, Raver.
7. Attended one day workshop on” New Trends in Higher Education” organized by Jamner College on 1<sup>st</sup> March 2009.
8. Attended one day workshop on” New Trends in Higher Education” organized by Jamner College on 1<sup>st</sup> March 2009.

9. Attended state level seminar on “Information Technology and Bio-technology new challenges in education”, held during 22- 23 October 2001 by A. C. S. College Chopda
10. Attended and actively participated in one day workshop on “Communication skills”. Organised by A. C. S. College Jamner on 17<sup>th</sup> September 2005.
11. Participated in the one day workshop on Human Resources Development for the teachers on 3<sup>rd</sup> February 2003 organised by A. C. S. College Jamner.
12. Attended Research Symposium on “Recent Trends in Electronics and Information technology” at North Maharashtra University, Jalgaon.

### **b) Training Programmes**

1. Completed Orientation Programme organized by U. G. C. Academic Staff College , Pune in 1996.
2. Completed Refresher Course (First) at Pratap College, Amalner, Organized by NMU in 1995-96.
3. Completed Refresher Course (Second) organized by North Maharashtra University, Jalgaon in 2001.
4. Completed Refresher course (Third) organized by U. G. C. Academic Staff College Aligarh Muslim University, Aligarh in 2004. ( 19<sup>th</sup> November to 10<sup>th</sup> December 2004)

### **[IV] Co-Curricular Activities**

1. Arranged guest lectures for the students.
2. Organized seminars for all students.
3. Conducted monthly oral tests in the classes.
4. Organized study tours for the students.
5. Conducted test examinations for the students for practice and evaluated.
6. Conducted Science Quiz competition for B.Sc. students.
7. Worked as a member of organizing committee for university level student’s seminar since 2002.
8. Guided T.Y.B.Sc. Students for projects.

### **[V] Extra-Curricular Activities**

1. Worked as Assistant Programme Officer of N.S.S.

2. Worked as an Examiner for “DUMB SHOW” in Cultural Programme organized by the college.
3. Worked as a member of various Committees in Cultural Programme organized by the college.
4. Worked as a Rector of Boys Hostel for one year.
5. Worked as member of Teaching Learning evaluation Committee.
6. Member of Arts, Commerce and Science College employees co-operative credit society Limited, Jamner since 1991.
7. Worked as a treasurer of NMUCTO local unit , Jamner.
8. Working as Secretary of N-MUCTO local unit, Jamner.
9. Member, Suresh Jain Co-Op. Credit Society Ltd. Jamner.
10. Awarded a prize to Topper student in Physics.
11. Inaugurated Science Association of New English School, Jamner and delivered a lecture.

### **[VI] Counseling and Consultancy**

1. Guided the students for opting the stream and courses.
2. Promoted the students for competitive examinations.

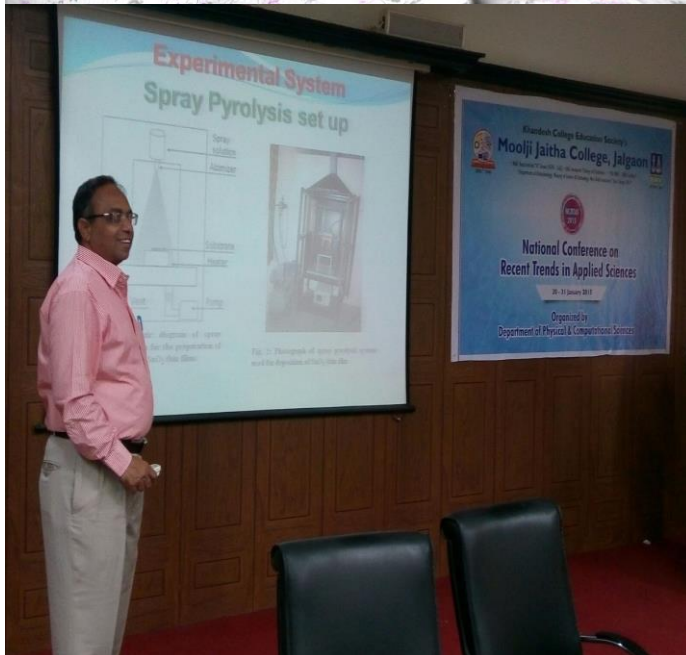
## University level Inter college students' seminar (OCT 2023)



## Welcome to Hon. VC Dr. V. L. Maheshawari sir and his team (Nov 2023)



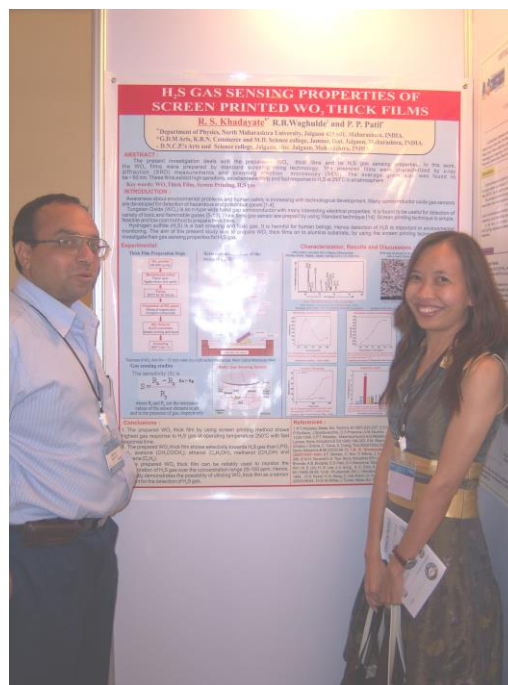
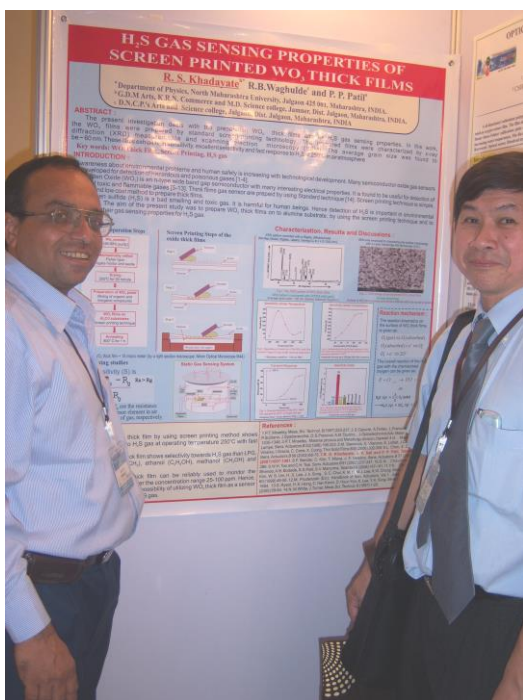




## Photographs of Thailand, Bangkok. Paper presentation in International conference

**H<sub>2</sub>S gas sensing properties of screen printed WO<sub>3</sub> thick films**  
**R. S. Khadayat and P. P. Patil**

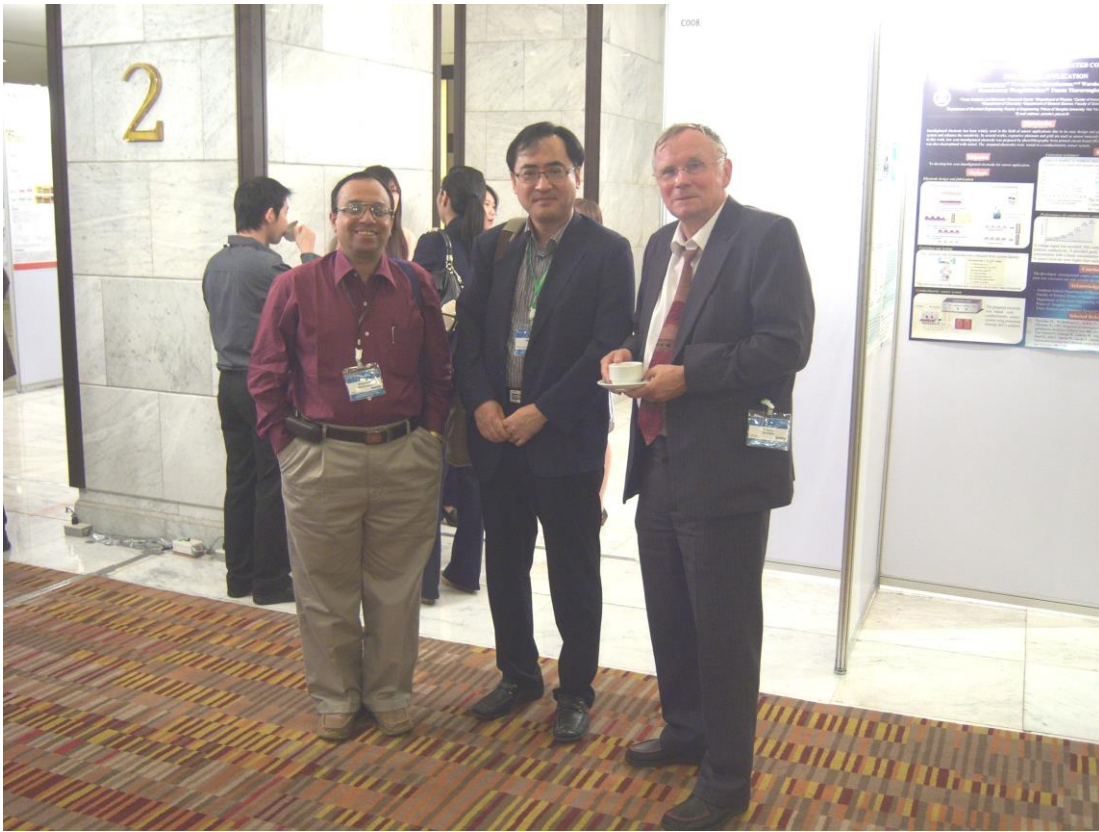
**Presented in the International conference on sensors “Asiasense 2009” during 29<sup>th</sup> to 31<sup>st</sup> July 2009 held at Thailand, Bangkok. It was organized by National Science and Technology development agency, Thailand. Travel grant to attend this conference was sanctioned by UGC, New Delhi.**









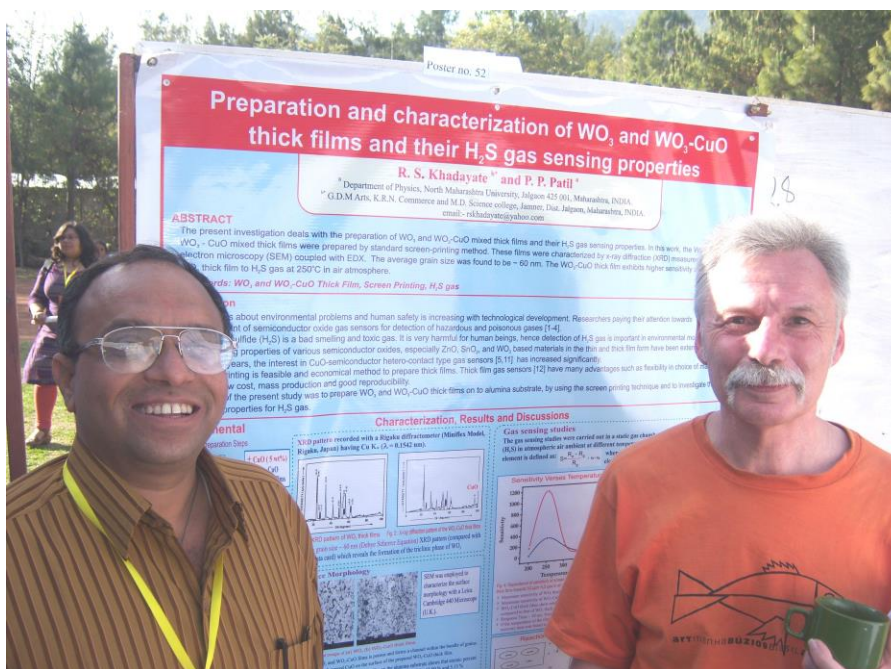
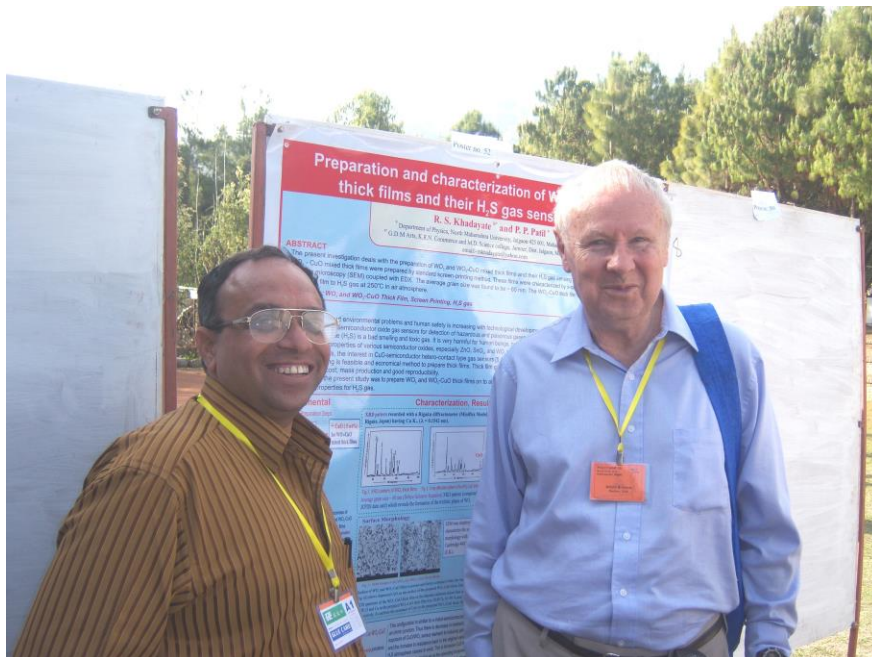


**Photographs of Kathmandu, Nepal.**  
**Paper presentation in International conference**

**Preparation and characterization of  $\text{WO}_3$  and  $\text{WO}_3\text{-CuO}$  thick films and their  $\text{H}_2\text{S}$  gas sensing properties**

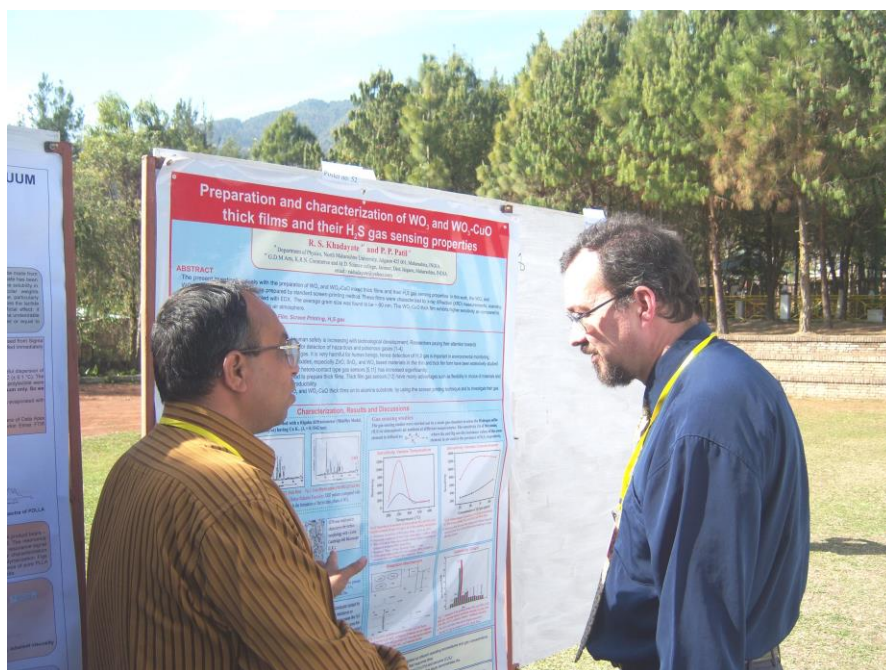
**R. S. Khadayate and P. P. Patil**

**Presented in the International conference entitled ‘POLYCHAR 19 -World Forum on Advanced Materials during 20<sup>th</sup> to 24<sup>th</sup> March 2011 held at Kathmandu, Nepal. It was organized by Nepal Polymer Institute (NPI), Kathmandu, NEPAL. This conference was partly funded by North Maharashtra University, Jalgaon (Poster).**











**Innovative practice: Jamner Vidnyan Prasar Samiti, Jamner**

Different Lectures related to modern science are given to school and Junior college students

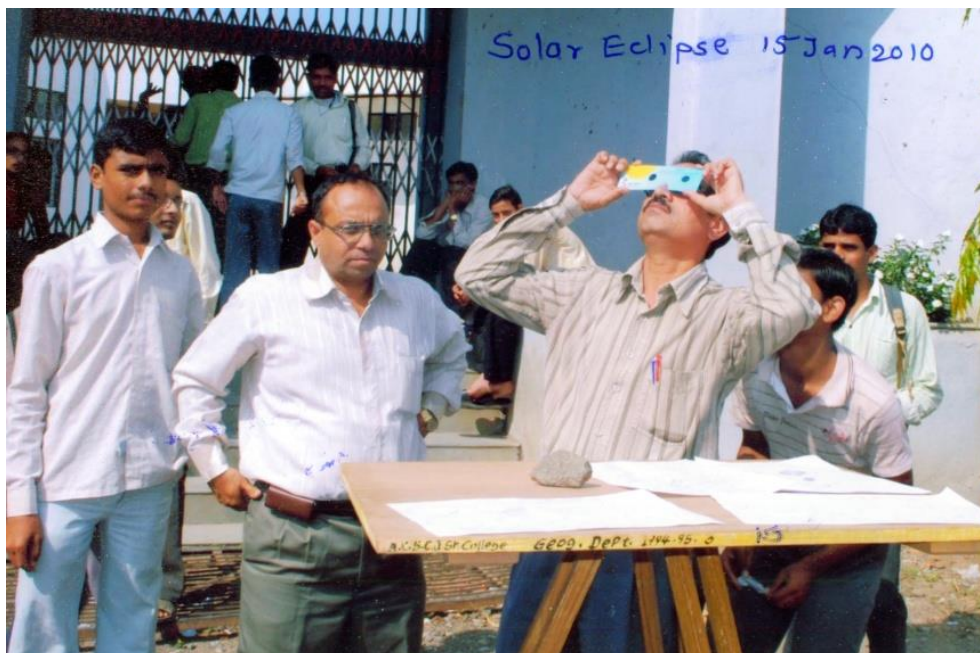


**Innovative practice: Jamner Vidnyan Prasara Samiti, Jamner**

Different Lectures related to modern science are given to school and Junior college students







**Innovative practice:** Solar eclipse shown to students and staff  
Activity done with Chemistry and Geography Department



**Worked as NSS Programme Officer in 2009-10**