



Dr. Rahul Atmaram Wagh

(M.Sc., P.h.D. in Physics)

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Email : rahulawagh26@gmail.com

Date of Birth : 26th Jan 1987

Gender : Male

Marital Status : Married

Caste : Hindu –Kunbi

Category : OBC

Nationality : Indian

Languages Known : English, Hindi and Marathi

Educational Qualification

Exam	University / Board	Subjects	Year of Passing	Percentage/ Status
P.E.T	KBCNMU	Ph.D. in Physics	Jan-2013 (P.E.T)	Completed- March 2019
M.Sc	SPPU	Physics	July 2010	68.55
B.Sc.	SPPU	Physics	June 2008	76.35
H.S.C	Nasik Board	Eng, Hindi, Phy, Chem., Maths	February 2005	54.83
S.S.C	C.B.S.E.	Eng, Hindi, Maths, Science	March 2003	61.6

Projects

- **PhD** - Studies on Synthesis and Characterization of Nanocrystalline HgS and Ag₂S Thin Films Onto TiO₂ for PEC Solar Cell
- **M.Sc** - Microcontroller Based Solar Charger :-
 - In this project, a microcontroller based battery solar charger was constructed and studied using IC AT89C2051.
- **B.Sc** – Photo densitometer :-
 - With the help of this instrument I tried to measure the density of different liquids.

Computer Basics

- MS Office, Internet
- Certificate course in M.S.C.I.T

Research Work

Oral Presentation:

- Participated and presented the research work (**Poster**) in AVISHKAR-2015 at PSGVP's Mandal's ASC College, Shahada on 22nd November 2015.
- Participated and presented the research work (**Poster**) in UGC sponsored National conference at G.T.Patil Arts, Commerce and Science College, Nandurbar in February 2016 and **secured 3rd position**.
- Participated and presented the research work (**Oral presentation**) in UGC sponsored “National conference on Electronic Materials Thin films and Its Applications” (EMTFA-2016) at Nutan Maratha College, Jalgaon.
- Participated and presented research work (**Poster**) in International conference on “Nanotechnology addressing the convergence of material science, biotechnology and medical science, (IC-NACMBM-2017)” held at D.Y.Patil Deemed University, Kolhapur, Nov. 9-11.
- Participated and presented the research work (**Oral presentation**) in International conference on “Innovations in Nanomaterials and their Applications” (ICINA-2018), sponsored by Savitribai Phule Pune University, at Loknete Vyankatrao Hiray Arts, Science and Commerce College, Nashik, 18th to 20th Jan. 2018 .

- Participated and presented the research work (**Oral presentation**) in “International conference on Emerging trends in management, engineering, law, technology and science” (**ICEMELTS-2018**), sponsored by Sandip University, at Sandip University, Nashik, 3rd to 5th Dec. 2018.
- Participated and Presented research work (Oral Presentation) in “Fifth International Conference on Advances in Materials Science (Online)” (**ICAMS-2020**), organised by Post – Graduate Department of Physics and IQAC of Raje Ramrao Mahavidyalaya, Jath, Sangli, Maharashtra, 6th to 7th June 2020.

Paper Published:

- The paper titled “**Effect of uniform decoration of Ag₂S nanoparticles on physical properties of granular TiO₂ thin films synthesized by using spin coating technique**” , DOI: 10.21272/jnep.8(4(2)).04080, has been published in Journal of Nano-and Electronic Physics (**JNEP**) Ukraine.
- The paper Titled “**Synthesis and Characterisation of TiO₂ thin film prepared by Spin Coating Technique**” , DOI:10.15680/IJIRSET.2017.0601086, has been published in International Journal of Innovative Research in Science, Engineering and Technology (**IJIRSET**).
- Paper titled “**Fabrication of Titanium dioxide (TiO₂) and mercury sulphide (HgS) heterojunction for Photoelectrochemical study**”, has been published in Materials for Renewable and Sustainable Energy (**MRSE**), doi.org/10.1007/s40243-018-0119-7, **Springer publication**.

Rahul A. Wagh, Anil N. Kulkarni, Prashant Baviskar, Habib Pathan and Rajendra S. Patil.

- Paper titled “**Sensitization of TiO₂ by chemically deposited Cu₂S for solar cell: Effect of deposition time on photoelectrochemical performance**” has been published in Optik: International Journal for Light and Electron Optics, doi.org/10.1016/j.ijleo.2019.163890, Elsevier publications with **impact factor 2.443**.
Vijay Baviskar, Dipak Salunkhe, Hemant Tarkas, **Rahul Wagh**, Prashant Baviskar, Rajendra Patil.
- Paper titled “**Simple Chemical Route Synthesized TiO₂/Ag₂S heterostructure towards efficient semiconductor sensitized solar cells**” has been published in optical Materials, doi.org/10.1016/j.optmat.2022.112073, Elsevier publications with **impact factor 3.08**.

R.A.Wagh, A. N. Kulkarni, S. P. Roy, D. B. Salunkhe, V. S. Baviskar, M. S. Shinde, S. R. Navale, P. K. Baviskar, R. S. Patil

- Paper titled “**Innovative Successive Ionic Layer Adsorption and Reaction Based Synthesis of $\text{TiO}_2/\text{AgBi}_2\text{S}_3$ Thin Films with Enhanced Optical Properties**” has been published in **optical materials**, <http://dx.doi.org/10.2139/ssrn.4583060>, Elsevier publications with **impact factor 3.08**
Padwal, Sachin and **Wagh, Rahul** and Thakare, Jivan and Patil, Rajendra S.
- Paper titled “**Studies on Synthesis and Characterization of a Chemically Deposited Nanostructured Thin Film of Ternary Compound Silver Bismuth Sulfide (AgBi_2S_3) onto n-Type Wide Band Gap Semiconducting Titanium Dioxide (TiO_2)**” has been published in JOM: the journal of the Minerals, Metals & Materials Society DOI:10.1007/s11837-023-05887-3, **Springer publication with impact factor 2.5.**
Sachin Padwal, **Rahul Wagh**, Jivan Thakare and Rajendra Patil
- Paper titled “**Integrated synthesis and comprehensive characterization of $\text{TiO}_2/\text{AgBi}_2\text{S}_3$ ternary thin films via SILAR method**” has been published in Heliyon, <https://doi.org/10.1016/j.heliyon.2023.e23106>, **Elsevier publications with impact factor 3.4**
Sachin Padwal, **Rahul Wagh**, Jivan Thakare and Rajendra Patil.
- Paper titled “**Chemical bath deposition of mercury bismuth sulfide (HgBi_2S_3) sensitized titanium dioxide (TiO_2) thin films: An In-depth analysis and characterization study**” has been published in **Applied Physics- A**, a Springer publications with **impact factor 2.6.**
Sachin Padwal, **Rahul Wagh**, Jivan Thakare and Rajendra Patil
- Paper titled “**Triadic metal chalcogen HgBi_2S_3 nanoparticles as sensitizers for TiO_2 thin film: SILAR synthesis and characterization**” has been published in Bulletin of material science, a **springer publication with impact factor 1.9.**
Sachin Padwal, **Rahul Wagh**, Jivan Thakare and Rajendra Patil

Experience

- Worked as lecturer in physics in Late Annasaheb Patil Polytechnic College, Nasik from Aug 2010 to Sep 2011.
- Worked as lecturer in physics at Shree Mahavir education society's institute of technology, Polytechnic, Nasik from Sep-2011 to Aug-2014

- Worked as Assistant Professor in physics at Sanghavi College of engineering from Aug 2014 till to 29th June 2017.
- Worked as Assistant Professor in department of physics at Sandip University from July 2017 to January 2019.
- **Completed Ph.D. from Kavayitri Bahinabai Chaudhari North Maharashtra University (KBCNMU) in March 2019.**
- Worked as Assistant professor on Clock Hour basis (CHB-Granted Post) in the Department of Physics, M.J.M. Arts, commerce and Science College, Karanjali, Nashik, from 14th Oct 2021 to March 2023.
- Working as center Head in HHF academy and Research Institute, Nashik
- Total teaching experience of Fourteen years with seven years research experience

Extra Curriculum

- Certificate in Adventure Camp organized by Directorate of Mountaineering & Allied Sports, Government of Himachal Pradesh.
- Silver medal in Under-16 category of regional cricket competition.
- Certificate in Mumbai Regional Level Athletic meet.
- Participated in Zonal Inter-University Research Project Competition (Avishkar).
- Certificate in Soft-Skill Development Program.
- 7 Days Workshop on Science Communication through Digital Media, conducted by Vidyadeep Foundation sponsored by National Council For Science And Technology Communication, DST, Govt. of India, New Delhi.
- Attended two days state level conference on “Nanotechnology: Overview & application in multifunctional devices “.
- Attended six days workshop on “research methodology” organized by North Maharashtra University.
- Attended orientation workshop for subject physics at K.K.Wagh polytechnic.
- With a great sense of social responsibility **initiated tree plantation** drive on large scale which includes more than **1500** saplings, gardening, lawn mowing and other green initiatives.
- Worked as question paper setter in Sandip University for the end semester examination for graduation and post-graduation.

- Worked as coordinator of Central Purchase Committee (CPC) department in Sandip University.
- Participated in “Two- Day Indo-Us workshop on Hazardous Materials Managers (ACHMM)-India Chapter, held at Sandip University, Nashik, 14th and 15th Nov, 2018.
- Participated in online short term course “Physics in Daily Life”, organized by Bhartiya Shikshan Prasarak Sanstha, Swa. Sawarkar Mahavidyalaya, Beed, 25th April 2020 to 1st May 2020
- Participated in online Webinar on “Supercapacitor, Solar Cell Devices and Thermal Technology”, organized by department of physics and solar energy research center (SERC), RCOEM, Nagpur from 11th May 2020 to 14th May 2020.
- Participated in online Faculty Development Program on renewable Energy Sources: A way ahead, organized by Department of mechanical engineering in associated with ASM International (**American Society of Materials**) Pune chapter and The Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE) Nagpur Chapter during 15th May 2020 to 21st May 2020.
- Participated in Webinar series on “Study of Emerging Field in Physics” organized by Department of Physics, R.C. Patel Arts Commerce and Science College, Shirpur, 26th May 2020 to 1st June 2020.’
- Awarded with **Certificate of Reviewing** of research manuscript of Elsevier journal “Next Energy”

Hobbies

- Cricket.
- Gardening.
- Trekking

Place: Nasik

(Dr. Rahul A Wagh)