

Dr. Ananta G. Dhodamani

M.Sc., Ph.D., SET (Chemistry)



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Residential Address

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OBJECTIVES

To develop a challenging and progressive skills in the academic as well as research with sufficient opportunities to apply my skills for the attainment of the institutions goal. I would like maintain myself as one of the responsible person by contributing my efforts to the development of the institution.

PROFESSIONAL APPOINTMENTS

22 nd Feb, 2020	Assistant Professor in Physical Chemistry Rajarshi Chhatrapati Shahu College, Kolhapur, 416 405, MS, India
19 th August, 2022	Assistant Professor in Physical Chemistry, Sadguru Gadage Maharaj College, Karad, 415 124, MS, India
20 th August, 2022	Coordinator (B.Sc. Medicinal Chemistry) Sadguru Gadage Maharaj College, Karad, 415 124, MS, India

ACADEMIC QUALIFICATIONS

Dec, 2020	MS-SET in Chemical Sciences Savitribai Phule Pune University, Pune
Jun, 2019	Ph. D. in Chemistry Department of Chemistry, Shivaji University, Kolhapur, MS, India
June, 2013	M.Sc. in Physical Chemistry Department of Chemistry, Shivaji University, Kolhapur, MS, India
June, 2010	B. Sc. in Chemistry Department of Chemistry, Raje Ramrao Mahavidyalaya, Jath, Sangli, MS, India

ACHIEVEMENTS/HONOURS/REWARDS

2021-Till date	Enlisted in the top 50 Scientist from Shivaji University, Kolhapur by AD Scientific Index.
2018	“Avishkar 2018-2019” Research Project Competition at University level (Central) held in Shivaji University, Kolhapur, (MS) India
2016-2019	Rajiv Gandhi National Senior Research Fellowship Award
2015	Best Oral Presentation award in Department of Chemistry, SGBAU, Amravati, (MS) India
2014-2016	Rajiv Gandhi National Junior Research Fellowship Award

RESEARCH EXPERIENCE

2013-2019	Research Scholar (RGNRF) Department of Chemistry, Shivaji University, Kolhapur, 416 003, MS, India
Thesis Title:	Heterojunction Nanocomposites of Doped TiO ₂ with Functionalized Carbon Nanostructures for Solar Energy Harvesting
Mentor	Prof. Dr. Sagar D. Delekar

RESEARCH EXPERTISE

- ✓ Designing of the hybrid Nanomaterials for potential applications viz. Photovoltaics, Supercapacitors, Electro-chemical Sensors, Gas Sensor, Photocatalysis and Antibacterial Studies.
- ✓ Electrostatic connectivity of the materials for charge transportation and ROS generation.
- ✓ Novel designing of the carbon-based nanostructures for making metal oxides-based hybrids.
- ✓ Handling of the sophisticated analytical tools viz. UV-Visible, Fluorescence, FT-IR, ATR, Potentiostat, Time resolved photoluminescence, Thermogravimetric analysis and Keithly Electrometer.

RESEARCH CREDENTIALS

Total Publications	: 25
Total Citations	: 707
h-index	: 15
i-10 index	: 17
Google scholar link	: https://scholar.google.com/citations?user=OOyyX6EAAAAJ

PATENT FILLED

1. S. D. Delekar, A. G. Dhodamani, K. V. More, Binder Free Thin Film Deposition of Composites and its Electrostatic Connectivity with Sensitizers for Photovoltaic Studies, *Indian Patent File No.:* 201821049028

RESEARCH PUBLICATIONS

1. Yadav, A. A., Hunge, Y. M., **Dhodamani, A. G.**, Kang, S-W., Hydrothermally Synthesized Ag@MoS₂ Composite for Enhanced Photocatalytic Hydrogen Production, *Catalysts*, 2023, 13 (4), 716-727.
2. More, K. V., **Dhodamani A. G.**, Dongale, T. D., Panda D. K., Delekar S. D., Compositional-Dependent Enhanced Physicochemical and Photovoltaic Studies of

- Nanocrystalline $Ti_{1-x}Fe_xO_{2-\delta}$ Photoelectrodes Co-sensitized with Cds QDs-N719 dye, journal of solid state electrochemistry, 2022, 26 (4), 1075-1084
3. Kumbhar, D.; Delekar S. D.; Kumbhar, S.; **Dhodamani, A. G.**; Harale, N.; Nalawade,R.; Nalawade, A. Effect Of Mn^{2+} Substitution into the Host Lattice of ZnO via Sol-Gel Route for Boosting Dye Sensitized Solar Cells Performance, Chemical papers, **2021**, 1-17.
 4. Deshmukh,S. P.;Koli,V. B.; **Dhodamani, A. G.**;Patil, S. M.;Ghodake, V. S.;Delekar, S. D.Ultrasonochemically Modified Ag@TiO₂ Nanocomposites as Potent Antibacterial Agent in the Paint Formulation for Surface Disinfection, ChemistrySelect,**2021**, 6 (1), 113-122.
 5. Kumbhar, D.; Kumbhar, S.; **Dhodamani, A.**; Delekar, S.; Harale, N.; Nalawade,R.; Nalawade, A. Enhanced photoelectrochemical cell performance of Co doped ZnO nanoparticles sensitized by affordable mixed dyes as sensitizer, Inorganic and Nano-Metal Chemistry, **2020**,1-14.
 6. Mullani, S.B.; **Dhodamani, A. G.**; Shellikeri, A.; Mullani, N. B.; Tawade, A. K.; Tayade, S. N.; Biscay, J.; Dennany, L.; Delekar, S. D.; Structural refinement and electrochemical properties of one dimensional $(ZnO\ NRs)_{1-x}(CNs)_x$ functional hybrids for serotonin sensing studies, Scientific reports, **2020**, 10 (1), 1-18.
 7. Koli, V. B.; Ke, S.; **Dhodamani, A. G.**;Deshmukh, S. P.; Kim, J.;Boron-Doped TiO₂-CNT Nanocomposites with Improved Photocatalytic Efficiency toward Photodegradation of Toluene Gas and Photo-Inactivation of Escherichia coli, Catalysts, **2020**, 10 (6), 632.
 8. **Dhodamani, A.G.**; More, K.V.; Patil, S.M.; Shelake, A. R.; Shinde, S.K.; Kim, D-Y.; and Delekar, S.D. Synergistics of Cr(III) Doping in TiO₂/MWCNTs Nanocomposites: Their Enhanced Physicochemical Properties in Relation to Photovoltaic Studies, Solar Energy, **2020**, 201, 398-408.
 9. Hunge, Y. M.; Yadav, A. A.; **Dhodamani, A. G.**; Suzuki, N. C.; Fujishima, T. A.; Mathe, V. L. Enhanced photocatalytic performance of ultrasound treated GO/TiO₂ composite for photocatalytic degradation of salicylic acid under sunlight illumination, Ultrasonics Sonochemistry, **2020**, 61, 104849.
 10. **Dhodamani, A.G.**; More, K.V.; Mullani, S.B.; Deshmukh, S.P.; Koli, V.B.; Panda, D.K.; and Delekar, S.D. Structural Refinement and Optoelectronic Properties of $(Mo_xTi_{1-2x}O_{2-d})_{1-y}(RGO)_y$ Nanocomposites and Their Photovoltaic Studies with Natural Pigments as Sensitizers, ChemistrySelect, **2020**, 5 (1), 218-230.
 11. Shevale, V.B.; **Dhodamani, A.G.** and Delekar, S.D. Catalytic Reclamation of Silver Present in the Photographic Waste using Magnetically Separable TiO₂@CuFe₂O₄ Nanocomposites and thereof its use in Antibacterial Activity, ACS Omega, **2020**, 5 (2), 1098-1108.

12. Deshmukh, S.P.; **Dhodamani, A.G.**; Patil, S.M.; Mullani, S.B.; More, K.V.; and Delekar, S.D. Interfacially interactive ternary silver supported polyaniline/multiwalled carbon nanotube nanocomposites for catalytic and antibacterial activity, *ACS Omega*, **2019**, 5 (1), 219-227.
13. Delekar, S. D.; More, K. V.; **Dhodamani, A. G.**; Panda, D. K.; Maity, K.; Acquah, S. F. A.; Dalal, N. S. Noncovalent Interactions based Self-assembled Bichromophoric Sensitizer for Dye-Sensitized Solar Cells, *Journal of Solid State Electrochemistry*, **2019**, 23, 1099-1107.
14. Patil, S.M.; Deshmukh, S.P.; More, K.V.; Shevale, V.B.; Mullani, S.B.; Dhodamani, A.G. and Delekar, S.D., Sulfated TiO₂/WO₃ nanocomposite: An efficient photocatalyst for degradation of Congo red and methyl red dyes under visible light irradiation, *Materials Chemistry and Physics*, **2019**, 225, 247-255.
15. **Dhodamani, A.G.**; More, K.V.; Koli, V.B.; Shelake, A. R.; Deshpande, N.G.,; Panda,D.K. and Delekar, S.D. Compositional Dependent Physicochemical and Photovoltaic Properties of the (TiO₂)_{1-x}(RGO)_x Nanocomposites for Sensitized Solar Cells Using Ru(II) Dyes, *ChemistrySelect*, **2019**, 4, 1055-1068.
16. Patil, S. M.; Vanalkar, S. A.; **Dhodamani, A. G.**;Deshmukh, S. P.; Patil, V. L.; Patil, P. S. and Delekar, S. D., NH₃ Gas Sensing performance of ternary TiO₂/SnO₂/WO₃ Hybrid Nanostructures prepared by ultrasonic-assisted sol–gel method, *Journal of Materials Science: Materials in Electronics*, **2018**, 29 (14), 11830-11839.
17. Delekar, S. D.; More, K. V.; **Dhodamani, A. G.**, Panda, D. K., Acquah, S. F. A., Dalal, N., Saha, S. Molecular Self-assembled Designing of TiO₂-Nps-CdS-Qds-Dye Composites for Sandwich Solar Devices, *Materials Characterization*, **2018**, 139, 337-346.
18. Patil, S. M., **Dhodamani, A. G.**,Vanalkar, S. A., Deshmukh, S. P., Delekar, S. D., Multi-applicative Tetragonal TiO₂/SnO₂ Nanocomposites for Photocatalysis and Gas Sensing, *Journal of Physics and Chemistry of Solids*, **2018**, 115, 127-136.
19. Delekar, S. D., **Dhodamani, A. G.**, More, K. V., Dongale, T. D., Kamat, R. K., Acquah, S. F. A., Panda, D. K. Structural, Optical Properties of Nanocrystalline TiO₂ with MWCNTs and its Photovoltaic studies using Ru(II)-Sensitizers, *ACS Omega*, **2018**, 3, 2743–2756.
20. Koli, V. B., **Dhodamani, A. G.**, More, K. V., Acquah, S. F.A., Panda, D. K.,Pawar, S. H., Delekar, S. D. A Simple Strategy for the Anchoring of Anatase Titania on Multi-Walled Carbon Nanotubes for Solar Energy Harvesting, *Solar Energy*, **2017**, 149 188–194.
21. Shevale, V. B., **Dhodamani, A. G.**, Koli, V. B., Barkul, R. P. Jadhav, J. P., Delekar, S. D. Efficient degradation of Azorubin S Colourant in the Commercial Jam-jelly Food Samples

Using TiO₂-CoFe₂O₄ Nanocomposites in Visible Light, *Materials Research Bulletin*, **2017**, 89, 79–88.

22. Patil, S. M., Deshmukh, S. P., **Dhodamani, A. G.**, More, K. V., Delekar, S. D. Different strategies for Modification of Titanium Dioxide as Heterogeneous Catalyst in Chemical Transformations, *Current Organic Chemistry*, **2017**, 20, 999.
23. Koli, V. B., **Dhodamani, A. G.**, Delekar, S. D., Pawar, S. H. In Situ Sol-gel Synthesis of Anatase TiO₂-MWCNTs Nanocomposites and their Photocatalytic Applications, *Journal of Photochemistry and Photobiology A: Chemistry*, **2017**, 333, 40-48.
24. Koli, V. B., **Dhodamani, A. G.**, Raut, A. V., Thorat, N. D., Pawar, S. H., Delekar S. D. Visible Light Photo-induced Anti-bacterial Activity of TiO₂-MWCNTs Nanocomposites with Varying the Contents of MWCNTs, *Journal of Photochemistry and Photobiology A: Chemistry*, **2016**, 328, 50-58.

BOOK/BOOK CHAPTER PUBLICATION

1. Pawar, P. S., Koyale P. A., Dhodamani A. G., Delekar S. D., *Nanocrystalline Metal Oxide based Hybrids for Third Generation Solar Cell Techniques*, Elsevier Book: *Advances in Metal Oxides and Their Composites for Emerging Applications*, 2022, 263-286.

PAPERS PRESENTED/PARTICIPATED IN CONFERENCES/WORKSHOPS

1. One Day Lead College Workshop on “Role of Quality Control and Quality Assurance in Pharmaceutical and Chemical Industry” Organized by Department of Chemistry, R. C. Shahu College, Kolhapur on 15th January, 2022
2. National Webinar on “Soil Sampling” Organized by Department of Chemistry, Y. C. College, Halkarni on 27th August, 2021.
3. One day Workshop on Changing Syllabus of B. Sc III Chemistry organized by Y. C. College of Science, Karad on 11th February, 2021.
4. Two Day International Conference on “Advances in Green Chemistry and Sustainable Technology” organized by Department of Chemistry, Dayanprassarak Mandal’s College and Research Centre, Goa, on 29th and 30th September, 2021.
5. Six Day’s Online Lecture Series Program under UGC Stride Component-I organized by Department of Chemistry, Shivaji University, Kolhapur on 27th January to 1st February, 2021.
6. One Day Workshop on Change in Syllabus of M. Sc. II (Sem. III) Physical Chemistry Course Organized by Department of Chemistry, R. C. Shahu College, Kolhapur on 21st January, 2021.

7. One Day Training Workshop on” New Changed Syllabus of B. Sc. III, Chemistry Organized by Dr. Patangrao Kadam Mahavidyalaya, Sangali on 16th February, 2021.
8. One Day State Level workshop on “Intellectual Property Rights” Organized by Department of English in Collaboration with IQAC Prof. Dr. N. D. Patil Mahavidyalaya, Malkapur on 19th July, 2021.
9. One Day Workshop on Awareness about Sharing R & D Through I-STEM Portal Organized by SAIF-DST Centre, Shivaji University, Kolhapur on 5th August, 2022.
10. International E-Conference on “Strategies and Challenges in Higher Education During Covid-19 Lockdown Period in India with Reference to the World Organized by Government Vidarbha Institute of Science & Humanities, Amravati, India on 15th – 17th May, 2020.
11. One Day National Conference on “Recent Trends in Pharmaceutical Chemistry and Drug Delivery organized by Department of Chemistry, Rajaram College, Kolhapur on 25th June, 2020.
12. One Day IP awareness/Training Program under NIPAM organized by Intellectual Property Office, India on 5th April, 2022
13. One Day IP awareness/Training Program under NIPAM organized by Intellectual Property Office, India on 2nd , February, 2023

ONGOING RESEARCH PROJECT

Sr. No	Title of Research Project	Funding Agencies	Amount approved	Project Sanctioned
1.	Hybrids of Doped/undoped MxOyEnergy conversion and Storage Devices.	S.G.M. College, Karad under RUSA, Govt. of Maharashtra	1,10,000/-	January, 2022

MEMBERSHIP AND OTHER CHARGES

1. Member of American Chemical Society
2. Member of Board of Studies in B.Voc Chemical Technology, Mahaveer College, Kolhapur.
3. Co-coordinator, Syllabus changing workshop of M. Sc II Physical Chemistry
4. Organizing Secretary of two days International Conference on Advances in Science and Technology (ICAST-2022)

5. Programme coordinator of National Webinar on Intellectual Property Rights organized by NIPAM
6. Placement, UGC, and RUSA Coordinator R. C. Shahu College, Kolhapur
7. Coordinator B. Sc. (Entire) Medicinal Chemistry
8. Coordinator of two days National Conference of Innovative approaches in Chemical Sciences (IACS-2023)

ORIENTATION/REFRESHER COURSES

1. Completed two-week online workshop on "Comprehensive e-Learning to e-Training guide for Administrative Work" from May 25 - June 05, 2020 organized by, TLC, Ramanujan College, University of Delhi.
2. Completed four-week online Induction/Orientation Programme for "Faculty in Universities/Colleges/Institutes of Higher Education" from June 26- July 24, 2020, organized by, TLC, Ramanujan College, University of Delhi.
3. Completed one week online short term FDP on Nanomaterials Characterization Techniques and Result Analysis Methodology: Ideas, Innovations and Initiatives (Chemistry) from 27th July to 31st July, 2020 organized by Shikshan Prasarak Sanstha's S. N. Arts, D. J. Malpani Commerce and B. N. Sarda Science College, Sangamner.
4. Completed two-week online refresher course in Chemistry from 29th November to 13th Dec. 2022, organized by, TLC, Ramanujan College, University of Delhi.
5. Completed one-week MSFDA'S refresher course on Techno-Pedagogy and Techno-Andragogy for Effective Teaching Learning" organized by Symbiosis International University, Pune.

I hereby declared that all the information given above is correct to the best of my knowledge.



Date: 10/08/2023

(Dr. Ananta G. Dhodamani)