

CURRICULUM VITAE

Professor (Dr.) Sagar D. Delekar

M.Sc., NET, SET, Ph.D., PDF-US

Director, Innovation Incubation and Linkages

Director, Internal Quality Assurance Cell

Department of Chemistry, Shivaji University, Kolhapur 416 004 (MS) India.

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Educational Credentials

Sr. No.	Fellowship/Degree/Competitive Examination	University	Year of Passing	%
1.	Visiting Professorship with Research Endeavors	Universiti Teknologi Malaysia	2025	---
2.	Raman Post-doctoral Research Fellowship Project Supervisors: Nobel Laureate Sir Harold Kroto and Prof. Naresh Dalal Project Title: <i>Sensitization of Nanoporous Oxide/ Carbon Nanohybrids by Quantum Dots for Solar Energy Harvesting</i>	Florida State University, Tallahassee, (Florida), USA	2015 - 2016	---
3.	Summer Research Fellowship Project Supervisor: Prof. S. Vasudevan Project Title: <i>Synthesis, Characterization and Catalytic Activity of Metal-doped Titania Nanoparticles</i>	Indian Institute of Science, Bangalore, India	2010	---
4.	Ph.D. (Solid State Chemistry) Thesis Supervisor: Prof. P.P. Hankare Thesis Title: <i>Synthesis, Characterization and Opto-electronic Studies of Mixed Cadmium Chalcogenide Thin Films</i>	Shivaji University, Kolhapur (MS) India	2006	---
5.	M.Sc. (Inorganic Chemistry)	- do -	2001	65.95
6.	NET (Chemical Sciences) [Twice]	CSIR, New Delhi	2001, 03	--
7.	SET (Chemical Sciences)	Pune University	2002	--
8.	B.Sc. (Chemistry) Bhogawati Mahavidyalaya, Kurukali, Kolhapur	Shivaji University, Kolhapur (MS) India	1999	71.25

Professional Experiences

Sr. No.	Positions Held with Organization / Institution	Period		Nature of Duties and Responsibilities
		From	To	
1.	Professor, Department of Chemistry, Shivaji University, Kolhapur.	April 2016	Till Date	Teaching, research and extension activities for post-graduate & M.Phil./Ph.D. degrees
2.	Associate Professor, Department of Chemistry, Shivaji University, Kolhapur.	April 2013	April 2016	Teaching, research and extension activities for post-graduate & M.Phil./Ph.D. degrees
3.	Assistant Professor, Department of Chemistry, Dr. Babasaheb Ambedkar M. University, Sub-campus Osmanabad.	June 2005	April 2013	Teaching, research and extension activities for post-graduate & M.Phil./Ph.D. degrees
4.	Lecturer, Department of Chemistry, Shivaji University, Kolhapur	August 2002	June 2005	Teaching, research and extension activities for post-graduate degrees

International Exposure and Collaborations

International HEIs visited	Florida State University TL (US), Florida University Tampa (US), Nanyang Technology of University (Singapore), National University of Singapore (Singapore), Curtin University (Singapore), Universiti Teknologi JB (Malaysia), University of Putra (Malaysia), University of Malaya (Malaysia)
Research Collaborations	Clemson University, South Carolina (US), University of Strathclyde (Scotland), Queensland University of Technology (Australia), Dongguk University (South Korea), National Dong-Hwa University (Taiwan)

Administrative Experiences

Sr. No.	Post with Institution	Period		Nature of Duties and Responsibilities
		From	To	
1	Director, Innovation, Incubation and Linkages, Shivaji University, Kolhapur	Feb 2024	Till date	Principal officer who lead University's Innovation, Incubation and Linkages
2	Director, Internal Quality Assurance Cell, Shivaji University, Kolhapur	March 2024	Till date	To plan, guide and monitor quality assurance and quality enhancement in all the academic activities
3	Chief Executive Officer, SUK Research and Development Foundation (Section-8 Company), Shivaji University, Kolhapur	July 2025	Till date	To create vibrant, dynamic startup ecosystem for promoting ideas to startups and also converting research into entrepreneurship
4	Coordinator, University Industry Interaction Center, Shivaji University, Kolhapur	April 2022	Till date	Strengthening partnership between academia and industrial domain for mutual benefits
5	Head (Founder), Department of Chemistry, Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajinagar Sub-campus Dharshiv (Aurangabad, Sub- Campus Osmanabad) (MS) India	Oct 2005	Nov 2011	General Administration, Admission and Examination Processes, Academic Development, Account and Audit, etc.

Other Services Provided to the Students and Home Institutions

Sr. No.	Position Held with Organization / Institution	Period		Nature of Duties and Responsibilities
		From	To	
1.	Co-ordinator, Institution's Innovation Cell (IIC), Shivaji University, Kolhapur.	June 2023	Till date	Fostering innovation, startups and entrepreneurship of the stakeholders
2.	Co-ordinator, Research Colloquium, Shivaji University, Kolhapur.	Oct 2016	May 2022	Conducting the lectures of the teachers for further development of university research.
3.	Chief Reactor/Rector, Boys Hostel, Shivaji University, Kolhapur	July 2016	Dec 2020	Administrative activities such as admission process, smooth running of hostel events.
4.	Chairman, M.Sc. Examination, Shivaji University, Kolhapur	July 2016	Feb 2024	Examination related activities such as paper setting, evaluation, etc
5.	Departmental Placement Officer Shivaji University, Kolhapur	July 2016	May 2022	On-campus/off-campus drive for the student's placements in the different sectors

Programmes/Courses Taught

Sr. No.	Course with Paper Titles	Major Topics/Chapters Taught	Mode of Teaching
Ph.D./M.Phil. Degree Programme (Course Work Syllabus)			
1.	Selected Topics in Inorganic Chemistry	Inorganic Nanomaterials and Their Applications, Co-Ordination/ Organometallic Chemistry	L+ ICT
2.	Recent Trends in Chemistry	X-ray diffraction, XPS, EDX and SEM/TEM	L+ ICT
M.Sc. Chemistry/Applied Chemistry Degree (Post-graduate Degree Programme)			
1.	Energy & Environ. Chemistry	Energy Conversion Devices (Solar devices, Fuel cells)	L+ ICT
2.	Chemistry of Inorganic Materials	Solid State Chemistry, Nanomaterials (Synthesis, characterization, properties, applications),	L+ ICT
3.	Instrumental Techniques	XRD, Mossbauer and ESR spectroscopy	L+ ICT
4.	Inorganic Chemical Spectro.	Molecular Symmetry & Group Theory, IR & Raman Spectroscopy	L+ ICT
5.	Coordination Chemistry-I	Electronic spectra of Transition Metal complexes	L+ ICT
6.	Inorganic Chemistry-II	Main Group Compounds, Non-Aqueous solvents	L+ ICT
7.	Inorganic Chemistry-I	Metal-ligand Equilibria, Coordination & Nuclear Chemistry	L+ ICT
8.	Practical courses	Nanomaterial's synthesis, Stability constant determination, Alloy-ore analysis, complexes preparation with their characterization, etc	Practicals

Research Thrust Areas

- Designing and device fabrication using supramolecular dyad systems, quantum-dots-dye hybrid systems, cadmium chalcogenides thin films, for photovoltaic devices.
- Fabrication of carbon nanostructures composites, metal oxide-based hydrides and metal organic frameworks for supercapacitor devices, water-splitting, Li-ion battery studies, etc.
- Development of functional magnetic metal oxides, mixed nanomaterials for magnetic hyperthermia applications.
- Photocatalytic studies of doped/bare metal oxide nanoparticles or supported metal nanoparticles for chemical transformations include oxidation, reduction, condensation, degradation reactions.
- Nanocomposites between carbon nanotubes (CNTs) or graphene precursors with metal oxides nanoparticles as well as doped oxides for antibacterial formulations and bio-sensing studies.

Ph.D. Scholars Guidance

i) Ph.D. degree awarded = 15+

ii) Ph.D. scholar working = 06+

Innovations and Entrepreneurship Development

- **Indian/German patents: 16+** (Granted)
- **Incubatee at SCIIL & SUK RDF**, for the innovation of “Antimicrobial Paint Formulations”.
- **Co-ordinator, Institution’s Innovation Cell (IIC), University-Industry Interaction Cell (UIIC), & Research Colloquium**, Shivaji University.
- Also recognized as **Central Govt., MoE’s IIC Innovation Ambassador**.
- **Research Advisor at Fortunecoat Industries Pvt. Ltd.**, Kagal MIDC, Kolhapur 416 236 (MS), India.
- Startup, “**Nano Solutions Pvt Ltd.**” (Reg.)
- **Consolation Prize** under Lokraja Startup & Innovation Competition-2022 for “Antimicrobial Paint”.
- **Collaborations** with premier institutes in countries like the **USA, UK, Taiwan, South Korea**, etc.

Patents Granted/Filled

Sr. No.	Title of the IP (patent, design, trademark/copyright/GI)	Name of the inventor/inventors	Date of application	IPR application No.
1.	Nanocomposites based antibacterial additives in paint formulations and process for preparation thereof (Granted)	Sagar D. Delekar & Shamkumar P. Deshmukh	24/12/2018	201821048854 (Indian)
2.	A method for evaluation of serotonin (5-HT) using NCs based electrodes (Granted)	Sagar D. Delekar & Sajid B. Mullani	24/12/2018	201821048909 (Indian)
3.	Process for catalytic reclamation of silver present in photoprocessing waste (Granted)	Sagar D. Delekar & Vrushali Shevale	23/01/2019	201921002716 (Indian)
4.	Square-facets nanobars MOF-derived Co ₃ O ₄ @Co/N-CNT core-shell based nanocomposites for highly efficient supercapacitor performance (Granted)	Sagar D. Delekar & Swapnajit V. Mulik	24/03/2022	202221016775 (Indian)
5.	A process for fabricating metal organic frameworks-sensitized nanostructured metal oxide-based hybrids for photoelectrochemical water splitting (Granted)	Sagar D. Delekar & Pramod A. Koyale	23/03/2023	202321020219 (Indian)
6.	Microbicidal functional nanocomposites for conformal leather coatings (Granted)	Sagar D. Delekar & Vijay S. Ghodake	24/12/2022	202221073852 (Indian)
7.	A system for developing NiCo ₂ O ₄ /porous carbon (PC)/nickel foam (NF) as cathode for supercapacitor devices (Granted)	Sagar D. Delekar & Swapnajit V. Mulik	11/01/2024	202024100119.2. (German)
8.	A system for synthesizing MOFs-derived CeO ₂ nanobars modified g-C ₃ N ₄ -based nanocomposites for photoelectrochemical water splitting. (Granted)	Sagar D. Delekar & Pramod A. Koyale	01/02/2024	202024100974 [German Patent] --
9.	A formulation of chitosan-mediated lithium ferrite nanomaterials for magnetic hyperthermia study (Granted)	Sagar D. Delekar, Rajendra P. Patil, Swapnajit V. Mulik, & Amol B. Pandhare	06/02/2024	20 2024 100 973 (German) -
10.	Composition and system for synthesizing MnO ₂ -anchored Ag/rGO nanoparticles for enhanced dopamine sensing	Sagar D. Delekar, Ankita K. Dhukate, Pramod A. Koyale & Swapnajit V. Mulik	23/07/2024	202024104130.5 (German)

11.	A formulation for superparamagnetic iron oxide nanoparticles for magnetic hyperthermia treatment applications (Granted)	Sagar D. Delekar, Rajendra P. Patil, & Swapnajit V. Mulik & Amol B. Pandhare	01/03/2024	20 2024 101 011 (German)
12.	Formulation of novel magnetic nanocomposite CoFe ₂ O ₄ @Al ₂ O ₃ @TiO ₂ (CFAT) Catalyst for efficient knoevenagel condensation reaction (Granted)	Sagar D. Delekar, Rajendra P. Patil & Amol B. Pandhare	02/06/2024	20 2024 104 992 (German)
13.	Apparatus For Preparation Of Binder Free Thin Film Of Quantum Dots Solar Devices (Granted)	Dr. Krantiveer More, Dr. Sagar Delekar	20 June 2024	(UK Design Patent) Design number: 6373091
14.	System for Optimizing Ammonia Gas Detection with Ternary Nanostructures (Granted)	Dr. Satish Madhukar Patil, Dr. Prashant Pandurang Patil, Dr. Sagar Dadu Delekar	16 August 2024	Design number: 6384729 (UK Design Patent)
15.	Composition and system for preparing transition metal-doped TiO ₂ /rGO nanocomposites for photovoltaic properties. (Granted)	Pramod Koyale, Prakash Pawar & Sagar Delekar	10/07/2024	202024103831 [German Patent]
16.	System for synthesizing ZnO nanorods coated with TiO ₂ -rGO nanocomposites for antimicrobial applications. (Granted)	Pramod Koyale, Vijay Ghodake & Sagar Delekar	13/07/2024	202024103921 [German Patent]

Research Projects Ongoing / Completed

Sr. No	Title of Project / Scheme	Funding Agency	Amount Rs.	Period
Research Major Projects				
1.	Development of Self-Assembled Layered Double Hydroxides for Supercapacitor and Water Splitting Application (PI)	DST, Asian-India S&T	26.00 Lakhs	2025 to 2027
2.	ANRF's Partnerships for Accelerated Innovation and Research (PAIR) Scheme (Co-PI)	ANRF New Delhi	5.90 Crore	2025 to 2030
3.	Designing of Metal Oxide Nanocomposites as an Antibacterial Additives and their use in Paints Formulations (with industry) (PI)	RGSTC, Mumbai	05.00 Lakhs	2019 to 2021
4.	Design and Photovoltaic Studies of Multi-junction Inorganic-Organic Hybrid Solar Devices for Energy Harvesting (PI)	SU, Kolhapur	02.75 Lakhs	2018 to 2020
5.	Sensitization of Nanoporous Oxide/Carbon Nanohybrids by Quantum Dots for Solar Energy Harvesting (PI)	UGC, New Delhi	22.87 Lakhs	2015 to 2016
6.	Heterojunction Nanocomposites of Functionalized Carbon Nanostructures with Doped, Undoped TiO ₂ Nanoparticles for Solar Energy Harvesting (PI)	DST, New Delhi	21.82 Lakhs	2012 to 2015
7.	Synthesis, characterization of nanocrystalline metal doped titanium dioxide nanoparticles in photochemical transformations (PI)	UGC, New Delhi	06.28 Lakhs	2011 to 2014
8.	Synthesis and testing..... nonadrides (Co-PI)	UGC, New Delhi	07.72 Lakhs	2011 to 2014
9.	Well-designed Nanosized Zirconia-Based Solid Acid Catalysts, Their Characterization and Applications for Organic Synthesis and Transformation Reactions (Co-PI)	UGC, New Delhi	03.11 Lakhs	2011 to 2014
10.	Solution Deposition of Cd _{1-x} Pb _x Se Thin Film for Photoelectrochem. Solar Cell Applications (PI)	UGC, New Delhi	00.95 Lakhs	2007 to 2009
11.	Physico-chemical Investigations of Drinking Water in Tuljapur City, Osmanabad District of Maharashtra (PI)	BAMU, Aurangabad	00.20 Lakhs	2006 to 2008
Institutional Projects				
12.	Pradhan Mantri Uchchar Shiksha Abhiyan (PM-USHA) Scheme, Component – II (PMC-Member)	PM-USHA, New Delhi	20.00 Crore	2024 to 2026

Professional Honors, Awards and Fellowships

Name of the Award	Awarding organization	Year	Purpose
International Level			
Visiting Professorship	University Teknologi Malaysia	2025	Helping in broaden interdisciplinary collaborations, enhancing global perspectives and introducing new methodologies in research
Honor in World's Top 2% Scientists	Stanford University and Elsevier, US	2025 & 2024	Recognizing sustained research productivity and influence across disciplines
Honor in AD Scientific Index Ranking	AD Scientific Index, US	2025, 2024, 2023, 2022	Ranking as scientists globally based on research metrics
Indian Scientists Rank (at 128 among top 500)	Elsevier SciVal	2021	Ranking as scientists globally based on research metrics in Photocatalysis & Solar Cells
Global Ambassador	Florida State University, Tallahassee, US	2015	Recognizing leadership in fostering Indian culture in global community
National level			
Raman Post-doctoral Fellowship Recipient	University Grants Commission, New Delhi	2015	Boosting research expertise and elevating networks for future academic
Fast Track Research Proposal/Grant for Young Scientists Recipient	SERB-Department of Science & Technology, New Delhi	2012	Enabling laboratory setup as well as engaging scholars in research, with quality research outputs
Summer Research Fellowship Recipient	Indian Academy of Sciences	2010	Short-term research exposure under established mentors in IISc, Bangalore by IAS, Bangalore
IIC Innovation Ambassador	Ministry of Education, Innovation Cell, New Delhi	2025	Promoting innovation, incubations and Startup Endeavors
State Level / Regional Level			
Fellow of Maharashtra Academy of Sciences	Maharashtra Academy of Sciences	2021	Recognition by the State Academy for outstanding contributions to science within Maharashtra
Editor, Journal of Shivaji University: Science & Technology	Shivaji University, Kolhapur	2023	Promoting quality research with enhancing the university's scholarly reputation for societal benefit

Statutory Bodies Details

S.N.	Statutory forum / authority positions with Institutions	From	To
1	Member, Senate , Shivaji University Kolhapur	14/2/2024	Till date
2	Former Member, Senate , Shivaji University Kolhapur	01/9/2017	31/9/2022
3	Member, Academic Council , Shivaji University Kolhapur	14/2/2024	Till date
4	Member Secretary, Board of Deans , Shivaji University Kolhapur	14/2/2024	Till date
5	Member Secretary, Board of National & International Linkages , Shivaji University Kolhapur	14/2/2024	Till date
6	Member Secretary, Board of Innovation, Incubation and Enterprises , Shivaji University, Kolhapur	14/2/2024	Till date
7	Member Secretary, Board of Research , Shivaji University Kolhapur	14/2/2024	Till date
8	Member, Board of Sub-campuses , Shivaji University Kolhapur	14/2/2024	Till date
9	Member, Board of Governance , Rajarambapu Institute of Technology, Ishwarpur	01/06/2025	Till date
10	Member, Academic Council , DKTE's Textile and Engineering Institute, Ichalkarnji	01/06/2025	Till date
11	Member, Academic Council , Kamala College, Kolhapur	01/06/2024	Till date
12	Former Member, Standing Committee , Shivaji University Kolhapur	20/09/2019	31/9/2022
13	Former Member of BoS-Chem , Yashavantrao Chavan Institute of Science (Auto.), Satara (MS) India.	2018	2023
14	Former Member of Academic Council , Vivekanand College (Auto.), Kolhapur (MS) India	2018	2023
15	Former Member of Research Recognition Committee , MGM University, Chhatrapati Sambhajanagar (Aurangabad) (MS) India	2020	2023

Professional Activities Conducted

- **Convener**, PM-USHA Sponsored International Academia-Industry-Government Conclave 2.0 jointly organized by Shivaji University Center for Innovation, Incubation & Linkages, Shivaji University, Kolhapur (India) [20th-21st January 2026]
- **Secretary**, PM-USHA Sponsored International Workshop on “International workshop on Functional Materials for Energy Technologies and Research Opportunities at Australia, , organized by Department of Chemistry, Shivaji University, Kolhapur (India) [16th January 2026].
- **Convener**, Aacademia-Industry-Government Conclave 1.0 jointly organized by Shivaji University Center for Innovation, Incubation & Linkages and others, Shivaji University, Kolhapur (India) [13th-14th Februry 2025]
- **Co-ordinator**, Global Initiatives for Academic Network (GIAN) Workshop, organized by Department of Chemistry, Shivaji University, Kolhapur (India) [16th - 20th October 2023].
- **Co-ordinator**, UGC-Stride Online Lecture Series, organized by Department of Chemistry, Shivaji University, Kolhapur (India) [27th January - 1st February, 2021].
- **Secretary**, International Conference on Advances in Chemical Sciences (IC-ACS 2018), organized by Department of Chemistry, Shivaji University, Kolhapur (India) [1st - 3rd February, 2018].
- **Secretary**, National symposium on Current Trends in Chemical and Nanosciences (CTCNS-2014), organized by Department of Chemistry, Shivaji University, Kolhapur (India) [17th - 18th January 2014].
- **Secretary**, National Conference on Sustainable Chemistry: Challenges and Opportunities (NC-SCCO 2012), organized by Dept of Chemistry, Dr. Babasaheb Ambedkar Marathwada Univer., Sub-campus Osmanabad, India, [9th - 10th Jan., 2012].

Membership in Academic/Professional Associations

- **Fellow of Maharashtra Academy of Sciences**, Maharashtra, India [Dec. 2021].
- **Member of American Chemical Society**, USA (Member Number: 30135318) [2021-2022].
- **Annual Member of International Solar Energy Society**, Germany [2017-2018].

Community Services

- Public/invited talks in colleges/universities/schools in different activities to boost the science, technology and innovations.
- Consultancy services in nanomaterials synthesis, thermal & morphological analysis of foundry or ceramic samples.
- Volunteer in Tree Plantation, Flood Camp & Covid-19 Quarantine Center at Shivaji University, Kolhapur (India).

Research Skills

1. Synthesis of nanomateroals like TiO₂, ZnO, Co₃O₄, CdS quantum dots, CdSe quantum dots, Silver/Copper Nanoparticles and their nanocomposites and their designing in the different biomedical fields (Bio-sensing, Hyperthermia studies) as well as energy storage and conversion devices (solar cells, supercapacitors, battery, water splitting, etc.)
2. Deposition of TiO₂, ZnO, Co₃O₄, etc. films by doctor blading, spin coating, spray pyrolysis and screen-printing method.
3. Electrochemistry, Cyclovoltammetry (CV) growth, potentiostats-growth, constant -current growth, differential pulse voltammogram (DPV) for determination of the redox properties of materials (Calculation of HOMO, LUMO and band gap energy of various monomers/ oligomers, different dyes). Spectroelectrochemistry.
4. Diffuse-Reflectance UV-Visible Spectrophotometry for band-gap evaluation of materials.
5. Determination of the quantity of dye loading on various semiconductor surfaces by UV-Vis Spectroscopy.
6. Fabrication and characterization of Multichromophoric dye-sensitized solar cells based on supramolecular dyads. Characterization of various supramolecular dyad/triad based dye sensitized solar cells,
7. Designing and characterization of hybrid devices using Quantum Dots and various dyes as an chromospheres molecule.
8. Fabrication and characterization of hybrid organic-inorganic materials for solar-to-electrical Energy Conversion.
9. Well expertise with interpretation of structural (XRD, Raman), Morphological (HRTEM, FESEM, etc) and Compositional/functional tools (FTIR, XPS, EDAX).
10. Handling of Solar Simulator for I-V and IPCE measurements and Electrochemical workstation measurements.

Research Capabilities

1. Fabrication and Characterization of Photovoltaic Cells and water splitting

Fabrication and Characterization various solar cells such as Solid-State Dye-Sensitized Solar Cells (DSSCs), Liquid-DSSCs, Supramolecular Self-assembled Multichromophoric solar cells, Dye-QDs Solar Cells, Water splitting for Green hydrogen generation, Thin-Film based Inorganic-Organic hybrid Perovskite solar cells. Measurement of Current-Voltage (I-V) curve of these photovoltaic devices by a solar simulator. IPCE (Incident Photon to Current Efficiency) measurement for sensitization effect of the materials within solar cells. Conductivity measurement, Electrochemical measurements, etc.

2. Fabrication and Characterization of Supercapacitor Devices

Fabrication and characterization of various solid/liquid state asymmetric supercapacitors devices using MOFs derived porous metal oxides as active cathode materials. Electrochemical behavior (CV, GCD, EIS, Cycle stability, etc.) measurements using potentiostat.

3. Electrochemical tools

Electrochemistry and Spectroelectrochemistry, Photo-electrochemistry, Cyclic voltammetry (CV for calculation of redox properties of materials), Chronoamperometry and potentiostats growth, differential pulse voltammogram (DPV), electrochemical polymerization and photo-electrochemical polymerization, Electrochemical Impedance spectroscopy (EIS).

4. Spectroscopy, Electron microscopic and Diffraction tools

UV-Vis-NIR & Diffuse Reflectance Spectroscopy, Fluorescence spectroscopy (steady state), Time –correlated single-photon-counting (TCSPC), time–resolved fluorescence spectroscopy, FT-IR and Raman spectroscopy, XRD, X-ray Photoelectron Spectroscopy (XPS), Electron Paramagnetic Resonance (EPR) techniques and NMR, HRTEM-TEM, FESEM-EDS, etc.

5. Other Techniques

Thermogravimetric Analysis (TGA), Thin liquid chromatography (TLC), Thickness measurement by surface-profilometer, Various coating such as chemical vapor deposition, metal evaporation, spin coating and spray pyrolysis, BET, etc.

Book Editing/Publications

1. **Delekar, S.D.** Editor for a book, “*Advances in Metal Oxides and their Composites for Emerging Applications*”, by Series Editor: Prof. G. Korotcenkov under Metal Oxides Series, *Elsevier Publications* 2022 (ISBN978-0-323-85705-5).
2. Acquah, S.F.A., **Delekar, S. D.**, A. Al-HaririL., Nanotechnology and Nanomaterials, “*Carbon nanotubes - Current Progress of their Polymer Composites*”, book edited by Mohamed Reda Berber and Inas Hazzaa Hafez, INTECH Open Access Publications **2016**, Chap. 8: *Carbon nanotubes and graphene as additives in 3D printing* (ISBN 978-953-51-2470-2).
3. **Delekar, S.D.**; *et al.* Chapter in book entitled “*Photocatalytic materials & surfaces for environmental cleanup III*”, Edited by Tayade, R.J. *Material Science Forum* **2013**, 76, 293–306, Trans Tech Publications, Switzerland, **2013** (ISSN: 0255-5476).
4. **Delekar, S.D.** *Solid Solutions of Cadmium Chalcogenide Thin Films*, Lamberts Academic Publishing, 2012 (ISBN: 978-3-659-23065-3).

Research Publications

(*Advanced Science, Materials Horizons, ACS Appl. Nano Mat., ACS Appl. Ele. Mat., J. Mat. Chem. C, Int, J, Hydrogen Ene., Langmuir, New J. Chem., Nanoscale, ACS Omega, RSC Advances, Energy Advances, ChemistrySelect, etc.*)

1. Swapnajit V. Mulik, Sonali S. Sadavar, Mrunal Patil, **Sagar D. Delekar**, Dillip Kumar Panda, Metal Organic Framework Based Supercapacitors: A Comprehensive Review, *Advanced Science*, 2198-3844, 2026 (In-press).
2. Amol B. Pandhare, Swapnajit V. Mulik, Prashant N. Nikam, Satish S. Phalake, Vishwajeet M. Khot, Manikandan Ayyar, Senthilkumar Ramasamy, **Sagar D Delekar**, Rajendra P. Patil, P. Prabhu, Abdullah M.S. Alhuthali, Magda H. Abdellattif, M. Khalid Hossain. Titano-magnetite Nanoparticles for Supercapacitors and Magnetic Hyperthermia Performance. *Scientific Reports*, **2025**, 15(1) 23505.
3. Pramod A. Koyale, Mrunal M. Patil, Sonali P. Sadavar, Anjali R. Shelake, Tukaram D. Dongale, Ananta G. Dhodaman, Santosh S. Sutar, **Sagar D. Delekar**. Facile Design of MOF-Derived Porous CeO₂/MWCNTs Nanocomposites for Hydrogen Evolution Reaction and Machine Learning-Assisted Stability Forecasting. *Nanoscale*, 17, 20519-20529, 2025. <https://doi.org/10.1039/D5NR01965F>
4. Samrudhi S. Gawade, Sneha V. Koparde, Sonali S. Sadavar, Onkar S. Nille, Samadhan P. Pawar, Govind B. Kolekar, **Sagar D. Delekar**, Pramod A. Koyale. Designing Ce-BTC MOF-derived 1D Nanostructured CeO₂ for Fluorescence Sensing of Hexavalent Chromium. *New Journal of Chemistry*, 2025. [Communicated]
5. Sonali P. Sadavar, Swapnajit V. Mulik, Pramod A. Koyale, **Sagar D. Delekar**. Advances in Anion-Intercalated Layered Double Hydroxides for Supercapacitors: Study of Chemical Modifications and Classifications. *Materials Horizons*, 12, 5031-5052, 2025. <https://doi.org/10.1039/D4MH01860E>
6. Pramod A. Koyale, Tukaram D. Dongale, **Sagar D. Delekar**. Tantalum-Based Nitrides for Energy Conversion: Recent Advances and Future Prospects in Water Splitting Studies. *Nanoscale*, 2025 [Communicated]
7. Ankita K. Dhukate, Pramod A. Koyale, Sajid B. Mullani, Swapnajit V. Mulik, Navaj B. Mullani, Tukaram D. Dongale, **Sagar D. Delekar**. Synergistic Ternary MnO₂/(rGO@Ag) Nanocomposites for Sensitive Electrochemical Dopamine Detection. *Analytical Methods*, 17, 6584-6597, 2025. <https://doi.org/10.1039/D5AY00876J>
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