CURRICULUM VITAE

(Last Updated-October 2024)

Dr. Bhaskar R. Sathe (Fulbright Fellow, F-MASc)
Professor, Department of Chemistry,
Director- Centre for International Relations (CIR),
Head-Department of Nanoscience and Technology and
Coordinator-Department of Forensic Science
Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhajinagar 431 004, INDIA
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Objective:

To pursue scientific contributions that would further enrich my experience and creativity in the area of Nanomaterial synthesis and their potential applications

Research Interests:

Nanoscience and nanotechnology, Inorganic materials, Nanomaterials (metal, metal oxide, C_{60}, carbon nanotubes, graphene and their heterostructures), Fuel cell based electrocatalytic reactions, Sensors, Electrochemical water splitting and Bio-mass conversion reactions, Organic and Environmental electrochemistry and other related interfacial studies.

Education:

Post-doctoral (September 2012- September 2013)	:Fulbright-Nehru Postdoctoral Research Fellow at Rutgers, The State University of New Jersey 08854, USA Research supervisor: Prof. Teddy (Tewodros) Asefa Department of Chemistry and Chemical Biology Rutgers, The State University of New Jersey 08854, USA Project Title: ***"Carbon Based Metal Nanostructured Hybrid Electrocatalysts for Water Splitting Reactions"***
Ph.D. (January 2006- August 2011)	: Chemistry; CSIR-National Chemical Laboratory through University of Pune, India Research supervisor: Professor Vijayamohanan K. Pillai, Physical and Materials Chemistry Division, National Chemical Laboratory Pune, India. (Ex-Director, CSIR- National Chemical Laboratory Pune, India and CSIR-Central Electrochemical Research Institute (CECRI), Karaikudi 630006 Tamil Nadu (India). Thesis entitled- **"*Synthesis and Characterization of High Aspect Ratio Rhodium Nanostructures*"**
Research Assistant (June 2004- January 2006)	: Polymer and Advanced Materials & Physical and Materials Chemistry Division, National Chemical Laboratory Pune, India. Research supervisors: Prof. U. Natarajan, Prof. Vijayamohanan K. Pillai and Prof. I. S. Mulla
M.Sc. (June 2001- April 2003)	: Physical Chemistry (First Rank), Dr. BA Marathwada University Chhatrapati Sambhajinagar, India.
B.Sc. **(**June 1998- April 2001)	: Chemistry (Physics and Mathematics as subsidiaries), First Division, Dr. BA Marathwada University Chhatrapati Sambhajinagar, India.

Employment and Professional Experience:

May 2022 onwards	: Head, Department of Nanotechnology (June 2022 onwards)
January 2021	: Coordinator, Department of Forensic Science (June 2021 onwards)
February 2022- date	: Associate Professor, Department of Chemistry, Dr. BA Marathwada University Chhatrapati Sambhajinagar, India.
October 2008-date	: Assistant Professor, Department of Chemistry, Dr. BA Marathwada University Chhatrapati Sambhajinagar, India.
March 2010- date	: Manager of "Indian Research Scholar's Association for Promoting Science (IRSAPS)", India established in 2010.

Panel Reviews/Judge/ Professional Activities:

Ad Hoc Manuscript Reviewer for: :ACS Sustainable Chemistry and Engineering, Journal of Physical Chemistry, Catalysis Today, New Journal of Chemistry, ACS Omega, ACS Applied Energy Materials, ACS Applied Nano Materials, International Journal of Hydrogen Energy, Chemical Communication, RSC Advances, Scientific Report, Electrochemical Communications, Physical Chemistry and Chemical Physics, Journal of Materials Chemistry A, B & C, Nanoscale, Electrochemical Acta, Chem. Cat Chem, Applied Surface Science, Journal of Materials Science: Materials in Electronics, Current Analytical Chemistry, Chem Phys Chem, Ionics, Electroanalytical Chemistry, Applied Energy and others++++

External examiner for PhD thesis:
CSIR-National Chemical Laboratory, Pune (India)
Delhi University Delhi (India)
Rashtrasant Tukadoji Maharaj Nagpur University (India)
Savitribai Phule Pune University, Pune (India)
Shivaji University Kolhapur (India)
Punyashlok Ahilyadevi Holkar Solapur University, Solapur (India)
Institute of Chemical Technology (ICT) Mumbai
Centre for Materials for Electronics Technology (C-MET) Pune (India)

Editorial Board Member : Journal of Nanoscience and Nanotechnology (National) (January 2012).

Advisory Board Member : International Journal of Chemical Research (International) (March 2012).

Research Guide : a) Department of Chemistry & b) Department of Nanoscience and Technology/Multidisciplinary Guideship, Dr. BA. Marathwada University, Chhatrapati Sambhajinagar: **10 research students registered** for their Ph.D. degree and **08 are awarded.**

Ad Hoc BOS Member: Department of Forensic Science (Dr. BA Marathwada University Chhatrapati Sambhajinagar), Department of Nanoscience and Technology (Dr. BA Marathwada University Chhatrapati Sambhajinagar),
Department of Chemistry (Rajarshi Shahu College, Latur)
Department of Chemistry (MGM University Chhatrapati Sambhajinagar)

Awards, Recognitions and Fellowships:

- **World top 2% scientific rank** updated by Stanford University USA based on Scopus-Elsevier data for a year 2024.
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- **World top 2% scientific rank** updated by Stanford University USA based on Scopus-Elsevier data for a year 2022.
- **AD Scientific ranking for scientists** from university (03), country (5417), world (250562) based on Google Scholar data for a year of 2023.
- **World top 2% scientific rank** updated by Stanford University USA based on Scopus-Elsevier data for a year 2021.
- **AD Scientific ranking for scientists** from university (04), country (6615), world (276873) based on Google Scholar data for a year of 2021 and 2022.
- Elected as a **Fellow of Maharashtra Academy of Sciences (MASc)** for your significant contributions to **Chemical Sciences 2021.**
- Elected as a **Young Associate of Maharashtra Academy of Sciences (MASc)** for your significant contributions to **Chemical Sciences 2017.**
- **Department of Atomic Energy, Young Scientist Research Award** (17 Lakh), awarded start up grant from Board of Research in Nuclear Sciences (BRNS) Mumbai, Government of India (January 2015).
- **Visiting Faculty at Rutgers**, The State University of New Jersey, (USA) (2012-13).
- Awarded **Fulbright-Nehru** Postdoctoral Research Fellowships at Rutgers, The State University of New Jersey (USA) through United States-India Educational Foundation (USIEF) scheme 2012-2013.
- Awarded University **"Shikshak Pratibha"** Purskar (2013) given by Department of Mass communication and Journalism, Dr. BA Marathwada University, Chhatrapati Sambhajinagar.
- Fast Track scheme for **Young Scientist**, 23 Lakh awarded startup grant from science and engineering research board (SERB), from department of science and technology (DST), Government of India. (August 2012).
- **Senior Research Fellowship** (SRF) awarded by Council of Scientific and Industrial Research (CSIR) Govt. of India. (January 2007).
- Awarded for **Junior Research Fellowship** (JRF) through the CSIR-UGC-JRF/LS examination conducted jointly by Council of Scientific and Industrial Research (CSIR) and University Grants Commission (UGC), Govt. of India. (June 2005), one among the top 20% of the students qualified in (CSIR-JRF).
- **First rank** in M.Sc. Physical Chemistry at Department of Chemistry, Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India (June 2003).
- Maharashtra State (India) **"Eklavya Merit Scholarship"** award at Department of Chemistry, Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India (June 2001-June 2003).

- Reviewer of **Fulbright-Junior Advanced Research Award-2017-18** of Polish-US Fulbright Commission, Poland (EU); Reviewer for **Research Grant Proposals of Foundation of Polish Science Poland (EU)**; Reviewer for **Extra Mural Research Grant Funding of DST-SERB** from Chemical and Physical Sciences, Gov. of India.

Professional Membership:

1. Life active member of **Indian Society for Electroanalytical Chemistry (ISEAC) of India (LM 206) and Executive Committee Member.**
2. Life active member of **Materials Research Society of India (MRSI) (LMB 2510)**.
3. Life active member of **Electron Microscope Society of India (LM-1182).**
4. Life active member of **Electrochemical Society of India (LM-314).**
5. Life Membership of **American Chemical Society (ACS) (30888179).**
6. Life active member **of Society of Materials Chemistry (SMC).**

Editorial Roles:

1. **Associate Editor:** For Electrochemistry Frontiers of Chemistry since 2022.
2. **Review Editor:** For Electrochemistry Frontiers of Chemistry since 2015.
3. **Guest Associate Editor:** For Smart Materials Frontiers of Materials on topic, "Smart Materials for Energy Conversion and Sensor Based Technologies" (2019-2020).
4. **Guest Associate Editor:** For Smart Materials Frontiers of Materials on topic, "Smart Materials for Energy Conversion and Sensor Based Technologies" (2019-2020).
5. **Guest Associate Editor:** Frontiers of Chemistry on topic, "Carbon Nanostructure Based Electrocatalysis for Energy and Environmental Remediation" (2021-2022).

Projects handled:

1. Worked in the Prof. U. Natarajan's group at Polymer Science and Engineering Department, National Chemical Laboratory, Pune on industrial sponsored project focusing on synthesis of nanocomposites fillers for paints (2004-2005).
2. A. Worked in Prof. Vijayamohanan K. Pillai's group at Physical and Materials Chemistry Division, National Chemical Laboratory, Pune entitled "Preparation of Electrochemical Sensors for CO and SO_2 Detection", funded by Department of Science and Technology (DST) New Delhi, in collaboration with United Phosphorus Limited, Vapi, Gujrat, India.

   B. Also worked in the same group on, "Synthesis and Characterization of Metal and Metal Oxide Nanowires and their Composites" funded by Honeywell, USA (2005-2006).

Research Project Findings from National Agencies:

Ongoing Research Projects (1.3 Cr):

Sr. No.	Title	Funding Agency/Duration	Amount in INR (Lakh)	PI/CO-PI
1.	Chemically sustainable metal nanoparticles functionalized CZTS (Cu_2ZnSnS_4) based nanostructures for efficient photoelectrocatalytic water splitting	Council of scientific & industrial research human resource development group (CSIR-HRDG) New Delhi **(2021-2024)**	**54.300**	Principal Investigator
2.	Socio-scientific Approach to	Ministry of Science and Technology,	**81.0102**	Group Project

	Conservation of Bidri Art, With special reference to Soil Analysis	Government of India, Department of Science and Technology, New Delhi, Program: **Science and Heritage Research Initiative (SHRI) (08-2019 to 07-2022)**		(Inter department)

Research Projects (Completed 2008-2022):

Sr. No.	Title	Funding Agency/Duration	Amount in INR (Lakh)	PI/CO-PI
3.	Electrochemically sustainable metal nanoparticles functionalized carbon nanoelectrodes for electrocatalytic CO_2 hydrogenation reactions	Science and engineering research board (SERB), Department of Science and Technology (DST) New Delhi (2017-2020)	**42.196**	Principal Investigator
4.	Earth abundant nanostructured metal-carbon heterostructures for electrocatalytic H_2 generation reactions	Board of research In nuclear sciences (BRNS), Govt of India, Department of atomic energy (DAE), BARC, Mumbai (2015-2018)	**17.000**	Principal Investigator
5.	Fabrication of carbon based metal nanostructural hybrid materials for electrochemical gas sensor application	Science and engineering research board (SERB), Department of Science and Technology (DST) New Delhi (2013-2016)	**22.880**	Principal Investigator
6.	Surface Modification of Carbon Nanotube based Electrocatalysts for Nitrate Reduction	Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhajinagar (2019-2021)	**3.000**	Principal Investigator
7.	Organic synthesis and nanomaterials for catalysis, under the scheme "UGC-SAP DRS-I phase"	University Grant Commission, New Delhi (2010-2015)	**45.000**	Group Project (Intra Department) Infrastructural Funding
8.	Synthesis of bioactive molecules for drug design and nanomaterials for catalysis, under the scheme, " UGC-SAP DRS-II phase" (Group Project)	University Grant Commission, New Delhi (2015-2020)	**140.000**	Group Project (Intra Department) Infrastructural Funding
9.	Organic synthesis and nanomaterials, under the DST-FIST (First Level) (Group Project)	Department of Science and Technology (DST), New Delhi (2015-2020)	**100.000**	Group Project (Intra Department) Infrastructural Funding

***Research Work, Patents and Publications in Referred Journals*:**

Patents:

Sr. No.	Title of Invention	Application Number
1.	**Bhaskar R. Sathe,** Abhijeet Shelke, Priya Rolla, A Formulation To Create Commensurate Patina On Bidriware Handicraft Alloy	202221056586 Dated 02 Oct 2022
2.	**Bhaskar R. Sathe,** Abhijeet Shelke, Priya Rolla, Formulation To Create Patina At Tropical Ambient Temperature, On Zn-Cu Alloy In E+N Phase Field.	202321025626 dated 03 April 2023

Average Impact Factor of Best 05 publication~20.075; 10 Publications~13.14 and 06 publications are single author), Average per Paper Impact Factor is 5.275

Google Scholar : https://scholar.google.co.in/citations?user=tBq4eOkAAAAJ&hl=en

Loop Link: https://loop.frontiersin.org/people/566411/network

Orchid iD: https://orcid.org/0000-0001-8989-0967

List of Publications (2007 to Till Now) (Listed in Scopus Profile)

Sr. No.	Title of the Publication	Name of Journal	Impact Factor
1.	Dighole R.P., Munde A.V., Mulik B.B., Dhawale S.C., Sathe B.R.; Facile synthesis of nitrogen-containing multiwalled carbon nanotubes as a worth metal-free electrocatalyst for hydrogen evolution reaction and semicarbazide oxidation	International Journal of Hydrogen Energy, 2024, 91, 285-293	8.1
2.	Bhoj P. K.; Chavan R. A.; Mane S. M.; Desta M Ulisso D. M.; Jaeyeong Heo J.; Chen IWP; Yadav J. B.; Dongale T. D.; Sathe B. R.; Ghule A. V.; Binder-free synthesis of nickel-iron-cobalt-oxide electrode for large-scale and durable oxygen evolution reaction	International Journal of Hydrogen Energy , 2024, 88, 604-616	8.1
3.	Munde A. V., Bankar B. D., Mulik B. B., Zade S. S., Biradar A., Sathe B. R.; Electrochemical and catalytic conversion of CO_2 into formic acid on Cu-InO_2 nano-alloy decorated on reduced graphene oxide (Cu-InO2@rGO)	Applied Catalysis A: General, 2024, 681, 119760	4.7
4.	Dighole R.P., Munde A.V., Mulik B.B., Dhawale S.C., Sathe B.R.; Multiwalled carbon nanotubes decorated with molybdenum sulphide (MoS2@MWCNTs) for highly selective electrochemical picric acid (PA) determination	Applied Surface Science, 2024, 659, 159856	6.3
5.	Bhoj P.K., Kamble G.P., Yadav J.B., Dongale T.D., Sathe B.R., Ghule A.V.; Economic and binder-free synthesis of NiCo2O4 nanosheets on a Flexible stainless steel mesh as a bifunctional electrode for water splitting	Applied Surface Science, 2024, 648, 159083	6.3
6.	Dhawale S.C., Digraskar R.V., Ghule A.V., Sathe B.R.; Noble metal-free CZTS electrocatalysis: synergetic characteristics and emerging applications towards water splitting reactions	Frontiers in Chemistry, 2024, 12, 1394191	5.5
7.	Sawate A., Paul N., Sathe B., Katayama T., Furube A., Koinkar P.; Fabrication of MoO3/rGO/Au composite for increased photocatalytic degradation of methylene blue	International Journal of Modern Physics B, 2024, 38, 13, 2440010	2.6
8.	Tanwade P.D., Mulik B.B., Sathe B.R., Musmade B.B., Shinde V., Furube A., Koinkar P.; Enhanced electrocatalytic hydrazine oxidation on MoS2-GO nanosheets	International Journal of Modern Physics B; 2024, 38, 13, 2440018	2.6
9.	Tonpe D.A., Gattu K.P., Kutwade V.V., Han S.-H., Sathe B.R., Sharma R.; ZnO-PANI nanocomposite: Enhanced electrochemical performance towards energy storage	Journal of Energy Storage, 2024, 81, 110434	9.4
10.	Kale R.A., Dhawale S.C., Mulik B.B., Adhikari A., Sathe B.R.; Polyaniline based highly selective electrochemical sensor for ascorbic acid determination: Performance studies towards real sample analysis	Journal of Industrial and Engineering Chemistry, 2024, 136, 167-176	5.9

11.	Tanwade P.D., Adhikari A., Sathe B.R; New Insight into N,S-Doped Carbon Nanosheets Embedded with Ni/NiO Nanocluster Electrocatalysts Derived from Conjugated Polymers for the Oxidation of 2-Propanol to Acetone	Journal of Physical Chemistry C, 2024, 128, 10, 4152- 4160	3.3
12.	Dhawale S.C., Munde A.V., Mulik B.B., Dighole R.P., Zade S.S., Sathe B.R.; CTAB-Assisted Synthesis of FeNi Alloy Nanoparticles: Effective and Stable Electrocatalysts for Urea Oxidation Reactions	Langmuir, 2024, 40, 5, 2672-2685	3.7
13.	Shinde V., Tanwade P., Katayama T., Furube A., Sathe B., Koinkar P.; Ternary composite WS2/GO/Au synthesized from laser ablation and hydrothermal method for photo- and electro-chemical degradation of methylene blue dye	Surfaces and Interfaces, 2024, 46, 104067	6.2
14.	Sapner V.S., Tanwade P.D., Munde A.V., Sathe B.R.; Cobalt/Cobalt Oxide Nanorods-Decorated Reduced Graphene Oxide (Co/Co3O4-rGO) for Enhanced Electrooxidation of Glycerol	ACS Applied Nano Materials, 2023, 6, 18, 16414-16423	5.3
15.	Mali S.M., Narwade S.S., Mulik B.B., Digraskar R.V., Harale R.R., Sathe B.R.; Enhanced Electrochemical Ethanol Sensitivity on Ni/NiO-rGO Hybrids Nanostructures at Room Temperature	ChemistrySelect, 2023, 8, 12, e202204328	2.1
16.	Kallawar G.A., Bhanvase B.A., Sathe B.R.; Sonochemically prepared bismuth doped titanium oxide-reduced graphene oxide (Bi@TiO2-rGO) nanocomposites for effective visible light photocatalytic degradation of malachite green	Diamond and Related Materials, 2023, 139, 110423	4.3
17.	Mali S.M., Narwade S.S., Mulik B.B., Sapner V.S., Annadate S.J., Sathe B.R.; Nanostructured Ce/CeO2-rGO: Highly Sensitive and Selective Electrochemical Hydrogen Sulfide (H2S) Sensor	Electrocatalysis, 2023, 14, 6, 857-868	2.7
18.	Tanwade P.D., Munde A.V., Mulik B.B., Adhikari A., Patel R., Sathe B.R.; NiO-Nanoparticle-Embedded Polyaniline for Enhanced Ammonia and Water Oxidation Reactions	Energy and Fuels, 2023, 37, 24, 19959-19970	5.2
19.	Sanke D.M., Munde A.V., Bezboruah J., Bhattad P.T., Sathe B.R., Zade S.S.; Highly Dispersed Core-Shell Ni@NiO Nanoparticles Embedded on Carbon-Nitrogen Nanotubes as Efficient Electrocatalysts for Enhancing Urea Oxidation Reaction	Energy and Fuels, 2023, 37, 6, 4616-4623	5.2
20.	Mulik B.B., Sapner V.S., Khan A., Priya Rolla K., Shelke A., Sathe B.R.; Impact of variable pH on the stability and aggregate kinetics of Bidri handicraft surface patina	Inorganic Chemistry Communications, 2023, 148, 110314	4.4
21.	Rolla K.P., Shelke A., Sathe B., Khan A., Sapner V., Mulik B.; Surface patina and clay characterization: multi-analytical investigations into bidri handicraft	International Journal of Conservation Science, 2023, 14, 4, 1433-1442	0.6
22.	Kim A., Oh S.H., Adhikari A., Sathe B.R., Kumar S., Patel R.; Recent advances in modified commercial separators for lithium-sulfur batteries	Journal of Materials Chemistry A, 2023, 11, 15, 7833-7866 ***(Most Popular Article)***	10.7

23.	Gunaseelan H., Munde A.V., Patel R., Sathe B.R.; Metal-organic framework derived carbon-based electrocatalysis for hydrogen evolution reactions: A review	Materials Today Sustainability, 2023, 22, 100371	7.8
24.	Chavan P.P., Tanwade P.D., Sapner V.S., Sathe B.R.; Spherical Ni/NiO nanoparticles decorated on nanoporous carbon (NNC) as an active electrode material for urea and water oxidation reactions	RSC Advances, 2023, 13, 38, 26940-26947	3.9
25.	Munde A., Sharma P., Dhawale S., Kadam R.G., Kumar S., Kale H.B., Filip J., Zboril R., Sathe B.R., Gawande M.B.; Interface Engineering of SRu-mC3N4 Heterostructures for Enhanced Electrochemical Hydrazine Oxidation Reactions	Catalysts, 2022, 12, 12, 1560	6.5
26.	Chavan R., Kamble G., Kashale A., Kolekar S., Sathe B., Ghule A.; Facile, Cost Effective and Eco-friendly Approach to Synthesize Bio-MnO2 Nanosphered Thin Filmfor all Solid-State Flexible Asymmetric Supercapacitor	ChemistrySelect, 2022, 7, 33, e202202166	2.1
27.	Chavan P.P., Sapner V.S., Sathe B.R.; Enhanced Hydrazine Oxidation on Histidine-Functionalized Graphene-Based Electrocatalysts	Energy and Fuels, 2022, 36, 9, 4799-4806	5.2
28.	Jung H., Sapner V.S., Adhikari A., Sathe B.R., Patel R.; Recent Progress on Carbon Quantum Dots Based Photocatalysis	Frontiers in Chemistry, 2022, 10, 881495	5.5
29.	Khullar S., Sathe B.R., Janak, Sakshi, Saini H., Sapner V.S., Markad D.; Design and Synthesis of Lead(II)-Based Electrocatalysts for Oxygen Evolution Reaction	Inorganic Chemistry, 2022, 61,19, 7579-7589	4.3
30.	Mane S.A., Kashale A.A., Kamble G.P., Kolekar S.S., Dhas S.D., Patil M.D., Moholkar A.V., Sathe B.R., Ghule A.V.; Facile synthesis of flower-like Bi2O3 as an efficient electrode for high performance asymmetric supercapacitor	Journal of Alloys and Compounds, 2022, 926, 166722	5.8
31.	Munde A.V., Mulik B.B., Dighole R.P., Sathe B.R.; Stable and highly efficient Co–Bi nanoalloy decorated on reduced graphene oxide (Co–Bi@rGO) anode for formaldehyde and urea oxidation reactions	Materials Chemistry and Physics, 2022, 292, 126843	4.3
32.	Dighole R.P., Munde A.V., Mulik B.B., Zade S.S., Sathe B.R.; Melamine functionalised multiwalled carbon nanotubes (M-MWCNTs) as a metal-free electrocatalyst for simultaneous determination of 4-nitrophenol and nitrofurantoin	New Journal of Chemistry, 2022, 46, 36, 17272-17281	2.7
33.	Narwade S.S., Mali S.M., Tanwade P.D., Chavan P.P., Munde A.V., Sathe B.R.; Highly efficient metal-free ethylenediamine-functionalized fullerene (EDA@C60) electrocatalytic system for enhanced hydrogen generation from hydrazine hydrate	New Journal of Chemistry, 2022, 46, 29, 14004-14009	2.7
34.	Mulik B.B., Bankar B.D., Munde A.V., Biradar A.V., Asefa T., Sathe B.R.; Facile synthesis and characterization of γ-Al2O3 loaded on reduced graphene oxide for electrochemical reduction of CO2	Sustainable Energy and Fuels, 2022, 10, 1	5.2

35.	Munde A.V., Mulik B.B., Dighole R.P., Sathe B.R.; Urea Electro-Oxidation Catalyzed by an Efficient and Highly Stable Ni-Bi Bimetallic Nanoparticles	ACS Applied Energy Materials, 2021, 4 11, 13172-13182	5.4
36.	Mulik B.B., Bankar B.D., Munde A.V., Chavan P.P., Biradar A.V., Sathe B.R.; Electrocatalytic and catalytic CO2 hydrogenation on ZnO/g-C3N4 hybrid nanoelectrodes	Applied Surface Science, 2021, 538, 148120	6.3
37.	Mulik B.B., Munde A.V., Bankar B.D., Biradar A.V., Sathe B.R.; Highly efficient Manganese oxide decorated graphitic carbon nitrite electrocatalyst for reduction of CO2 to formate	Catalysis Today, 2021, 370, 104-113	5.2
38.	Chavan P.P., Sapner V.S., Munde A.V., Mali S.M., Sathe B.R.; Synthesis of Metal-Free Nanoporous Carbon with Few-Layer Graphene Electrocatalyst for Electrochemical NO2− Oxidation	Chemistry Select, 2021, 6, 37, 9847-9852	2.1
39.	Chavan P.P., Sapner V.S., Sathe B.R.; Enhanced Electrochemical NO2−Oxidation Reactions on Biomolecule Functionalized Graphene Oxide	Chemistry Select, 2021, 6, 24,6050-6055	2.1
40.	Munde A.V., Mulik B.B., Dighole R.P., Dhawale S.C., Sable L.S., Avhale A.T., Sathe B.R.; Bi2O3@Bi nanoparticles for ultrasensitive electrochemical determination of thiourea: monitoring towards environmental pollutants	Electrochimica Acta, 2021, 394, 139111	5.5
41.	Sapner V.S., Chavan P.P., Munde A.V., Sayyad U.S., Sathe B.R.; Heteroatom (N, O, and S)-Based Biomolecule-Functionalized Graphene Oxide: A Bifunctional Electrocatalyst for Enhancing Hydrazine Oxidation and Oxygen Reduction Reactions	Energy and Fuels, 2021, 35, 8, 6823-6834	5.2
42.	Shirsat M.D., Sathe B.R., Koinkar P.M.; Editorial: Smart Materials for Energy Conversion and Sensor Based Technologies	Frontiers in Materials, 2021, 8, 626397	3.2
43.	Digraskar R.V., Sapner V.S., Ghule A.V., Sathe B.R.; CZTS/MoS2-rGO Heterostructures: An efficient and highly stable electrocatalyst for enhanced hydrogen generation reactions	Journal of Electroanalytical Chemistry, 2021, 882, 114983	4.1
44.	Mulik B.B., Munde A.V., Dighole R.P., Sathe B.R.; Electrochemical determination of semicarbazide on cobalt oxide nanoparticles: Implication towards environmental monitoring	Journal of Industrial and Engineering Chemistry, 2021, 93, 259- 266	5.9
45.	Kamble G.P., Kashale A.A., Kolekar S.S., Chen I.-W.P., Sathe B.R., Ghule A.V.; Reflux temperature-dependent zinc cobaltite nanostructures for asymmetric supercapacitors	Journal of Materials Science: Materials in Electronics, 2021, 32, 5, 5859- 5869	2.8
46.	Munde A.V., Mulik B.B., Chavan P.P., Sapner V.S., Narwade S.S., Mali S.M., Sathe B.R.; Electrocatalytic Ethanol Oxidation on Cobalt-Bismuth Nanoparticle-Decorated Reduced Graphene Oxide (Co-Bi@rGO): Reaction Pathway Investigation toward Direct Ethanol Fuel Cells	Journal of Physical Chemistry C, 2021, 125, 4, 2345- 2356	3.3

47.	Narwade S.S., Mali S.M., Tapre A.K., Sathe B.R.; Enhanced electrocatalytic H2S splitting on a multiwalled carbon nanotubes-graphene oxide nanocomposite	New Journal of Chemistry, 2021, 45, 43, 20266-20271	2.7
48.	Sapner V.S., Sathe B.R.; Metal-free graphene-based nanoelectrodes for the electrochemical determination of ascorbic acid (AA) andp-nitrophenol (p-NP): implication towards biosensing and environmental monitoring	New Journal of Chemistry, 2021, 45, 10, 4666-4674	2.7
49.	Narwade S.S., Mali S.M., Sathe B.R.; Amine-functionalized multi-walled carbon nanotubes (EDA-MWCNTs) for electrochemical water splitting reactions	New Journal of Chemistry, 2021, 45, 8, 3932-3939	2.7
50.	Gupta S.P., Kakade B.A., Sathe B.R., Qiao Q., Late D.J., Walke P.S.; Thermally driven high-rate intercalated pseudocapacitance of flower-like architecture of ultrathin few layered δ-MnO2 nanosheets on carbon nano-onions	ACS Applied Energy Materials, 2020, 3, 11, 11398- 11409	5.4
51.	Narwade S.S., Mali S.M., Sapner V.S., Sathe B.R.; Graphene Oxide Decorated with Rh Nanospheres for Electrocatalytic Water Splitting	ACS Applied Nano Materials, 2020, 3, 12, 12288-12296	5.3
52.	Sapner V.S., Chavan P.P., Sathe B.R.; L -Lysine-Functionalized Reduced Graphene Oxide as a Highly Efficient Electrocatalyst for Enhanced Oxygen Evolution Reaction	ACS Sustainable Chemistry and Engineering, 2020, 8, 14, 5524 -5533	7.1
53.	Mulik B.B., Bankar B.D., Munde A.V., Biradar A.V., Sathe B.R.; Bismuth-Oxide-Decorated Graphene Oxide Hybrids for Catalytic and Electrocatalytic Reduction of CO2	Chemistry - A European Journal, 2020, 26, 40, 8801- 8809	3.9
54.	Munde A.V., Mulik B.B., Chavan P.P., Sathe B.R.; Enhanced electrocatalytic activity towards urea oxidation on Ni nanoparticle decorated graphene oxide nanocomposite	Electrochimica Acta, 2020, 349, 136386	5.5
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60.	Narwade S.S., Mali S.M., Digraskar R.V., Sapner V.S., Sathe B.R.; Ni/NiO@rGO as an efficient bifunctional electrocatalyst for enhanced overall water splitting reactions	International Journal of Hydrogen Energy, 2019, 44, 49, 27001- 27009	8.1
61.	Digraskar R.V., Mali S.M., Tayade S.B., Ghule A.V., Sathe B.R.; Overall noble metal free Ni and Fe doped Cu2ZnSnS4 (CZTS) bifunctional electrocatalytic systems for enhanced water splitting reactions	International Journal of Hydrogen Energy, 2019, 44, 16, 8144- 8155	8.1
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65.	Mali S., Narwade S.S., Navale Y.H., Patil V.B., Sathe B.R.; Facile synthesis of highly porous CuO nanoplates (NPs) for ultrasensitive and highly selective nitrogen dioxide/nitrite sensing	RSC Advances, 2019, 9, 10, 5742 -5747	3.9
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69.	Sapner V.S., Chavan P.P., Digraskar R.V., Narwade S.S., Mulik B.B., Mali S.M., Sathe B.R.; Tyramine Functionalized Graphene: Metal-Free Electrochemical Non-Enzymatic Biosensing of Hydrogen Peroxide	ChemElectroChem, 2018, 5, 21, 3191 -3197	4
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73.	Digraskar R.V., Mulik B.B., Walke P.S., Ghule A.V., Sathe B.R.; Enhanced Hydrogen Evolution Reactions on Nanostructured Cu 2 ZnSnS 4 (CZTS) Electrocatalyst	Applied Surface Science, 2017, 412, 475-481	6.3
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81.	Synthetic strategies for 1, 2, 3-triazole based bioactive compounds Authors, MH Shaikh, DD Subhedar, AB Danne, RA Mane, MS Shingare, BR Sathe, BB Shingate	Journal Organic Chem. Curr. Res, 2015, 4, 140-141	3.81
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92.	Sathe B.R., Balan B.K., Pillai V.K.; Enhanced electrocatalytic performance of interconnected Rh nano-chains towards formic acid oxidation	Energy and Environmental Science, 2011, 4, 3, 1029 -1036	32.4
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107.	Subhramannia M., Balan B.K., Sathe B.R., Mulla I.S., Pillai V.K.; Template-assisted synthesis of ruthenium oxide nanoneedles: Electrical and electrochemical properties	Journal of Physical Chemistry C, 2007, 111, 44, 16593-16600	3.3

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109.	Sathe B.R., Risbud M.S., Patil S., Ajayakumar K.S., Naik R.C., Mulla I.S., Pillai V.K.; Highly sensitive nanostructured platinum electrocatalysts for CO oxidation: Implications for CO sensing and fuel cell performance	Sensors and Actuators, A: Physical, 2007, 138, 2, 376- 383	4.1

Book and Book Chapters:

Sr. No.	Title and Details	Author Name	Publisher	Year of Publication
Book				
1.	CZTS Nanocrystals: New Scientific Strategies and Electrocatalytic Water Splitting Reactions	R. V. Digraskar, A. V. Ghule and **Bhaskar R. Sathe**	Eliva Press Europe	**2022**
Book Chapters				
1.	Flexible and Wearable Electrochemical Biosensors based on 2D Materials	Balaji Mulik, Pravin S. Walke and **Bhaskar R. Sathe**	Elsevier	**2022**
2.	Complex Metal Oxide Compounds and Composites Designed for High-Temperature Solid Electrolyte based Oxygen, Hydrogen Gas Sensors, on book topic "Complex and composite metal oxides for gas, VOCs and humidity sensors"	Vijay S. Sapner, Pravin S. Walke and **Bhaskar R. Sathe**	Elsevier	**2022**
3.	Supercapacitors based on two-dimensional metal oxides, hydroxides, and its graphene-based hybrids, in Book-Fundamentals and Supercapacitor Applications of 2D Materials, (ISBN 978-0-12-821993-5), DOI: 10.1016/B978-0-12-821993-5.00008-X	Shivsharan M. Mali, Dattatray J. Late, **Bhaskar R. Sathe**	Elsevier	**2021**
4.	Engineering two-dimensional materials for high-performance supercapacitor devices, in Book - Fundamentals and Supercapacitor Applications of 2D Materials, ISBN 978-0-12-821993-5, DOI: 10.1016/B978-0-12-821993-5.00008-X	Pravin S. Walke, Shobhnath P. Gupta, Harishchandra Nishad**, Bhaskar R. Sathe** and Dattatray J. Late	Elsevier	**2021**
5.	Bioactive Ceramic Composite Material Stability, Characterization and Binding to Bone, in Book-Fundamental Biomaterials: Ceramics Edited by Sabu Thomas, Preetha Balakrishnan and M. S. Sreekala, (ISBN-978-0-08-102203-0).	V. H. Ingole, **Bhaskar R. Sathe** and A. V. Ghule	Elsevier	**2019**
6.	Flexible and Wearable Electrochemical Biosensors based on 2D Materials, in book 2D Materials-Based Electrochemical Sensors (ISBN 978-0-443-15293-1)	H. S. Nishad, V. Sapner, B. M. Patil, B.R. Sathe, P. S. Walke	Elsevier	**2023**
7.	Photocatalysts for Hydrogen Evolution, In book Photocatalysts for Energy and Environmental Sustainability	SC Dhawale, BR Sathe	IOP Publishing Ltd	**2024**

8.	Nanocomposites and their applications in photocatalytic degradation processes in book of Photocatalysts for Energy and Environmental Sustainability	S. Bonde, G. Kallawar, B. A. Bhanvase, B. R. Sathe	IOP Publishing Ltd	**2024**

Research Guidance (Working/Synopsis Submission/Awarded):

Sr. No.	Title of the Thesis	Name of Candidate	Ph.D./ Project Fellow	Sponsoring Agency
Working				
1.	Carbon nanotube and its polymer composite materials for biosensor studies	Mr. Surendra J. Kokane	Ph.D. Fellow	Department of Chemistry
2.	Green nanotechnology approach for synthesis of metal and metal oxide nanoparticles, their characterization and engineering for technological applications.	Mrs. Kalyani A. Ghule	Ph.D. Fellow	Department of Nanotechnology
3.	Functionalization of Carbon Nanostructures for Energy and Environmental Applications	Mrs. Pratisksha Tanwade	Ph.D. Fellow (CSIR/UGC-NET)	CSIR, New Delhi
4.	Chemically Sustainable Metal Nanoparticles Functionalized CZTS (Cu_2ZnSnS_4) based Nanostructures for Efficient Photoelectrocatalytic Water Splitting	Mr. Somnath Dhawale	Project Fellow (CSIR-Project JRF-NET-LS)	CSIR, New Delhi
5.	Design and Fabrication of Non-Metal Doped Functional Nanomaterials for Electrochemical Water Splitting	Mrs. Rohini Kale	Ph.D Fellow	Department of Chemistry
6.	Electrochemical Ammonia and Urea Formation on Functionalized Carbon Nanostructures	Mrs. Gauri S. Mishra	Ph.D Fellow	Department of Chemistry
7.	Design and Development of Hybrid Nanoelectrode for electrocatalytic Hydrogenation and Dehydrogenation Reactions	Mrs. Insha Waseemullah Mohammad	Ph.D Fellow	Department of Chemistry
Ph.D. Awarded				
	Title of the Thesis	**Name**	**Subject**	**Date of Awarded**
1.	Surface functionalization of Cu_2ZnSnS_4 (CZTS) for hydrogen generation	Dr. Renuka V. Digraskar	Nanotechnology	**August 2019**
2.	Graphene and its hybrid nanostructures for electrochemical gas sensor studies	Dr. Shivsharan M. Mali	Chemistry	**March 2020**
3.	Earth abundant metal functionalized graphene based hybrid electrocatalysts for CO_2 reduction	Dr. Balaji B. Mulik	Chemistry	**October 2020**
4.	Multifunctional heterostructures comprised of carbon nanostructures and biomolecules synthesis, characterization and electrochemical applications	Dr. Vijay S. Sapner	Chemistry	**April 2021**
5.	Synthesis, Characterization of Metal Free Nanoelectrodes For Hydrogen Evolution Reactions	Dr. Shankar S. Narwade	Chemistry	**June 2021**

6.	Synthesis of carbon nanostructures for electrocatalytic CO_2 Reduction	Dr. Ajay Munde	Chemistry	**January 2022**
7.	Fabrication, characterization of multifunctional nano-materials for nitrogen cycle electrocatalysis	Mr. Parag P. Chavan	Chemistry	**November 2022**
8.	Carbon nanotube based electrocatalysts for nitrate reduction reactions	Mr. Raviraj P. Dighole	Chemistry	**July 2024**

Since 2008, around **10 students/year** guiding for their **Master Research Project** from specializations of Physical at Department of Chemistry, Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajinagar. **Resource persons/Chairperson/ Judge in the International/National conference/Seminar/workshop/Refresher courses.** Delivered more than **70 invited talks, 40 oral/poster** presentations in international/national conferences.

Organizing Member:

1. Nominated as a member of departmental committee of RUSA-center for Advanced Sensor Technology for the period of two years **(2019-2017 and 2020-2021).**

2. Nominated as a member of departmental committee of Central Facility Center for Advanced Research for a period of the period of two years **(2017-2018 and 2018-19).**

3. Member of Five Year Prospective Plan (2018-19 to 2023-24), Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India **(July 2018).**

4. Nomination as a member secretory of Academic and Administrative Audits **(AAA-2018),** Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India **(May 2018).**

5. Member, **Avishkar Cell 2017**, Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India **(December 2017).**

6. National Seminar on "Frontiers in Chemical Sciences and Drug Development" (NCFCSDD-2017) Department of Chemistry, Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India **(March 2017).**

7. University Level National Science Day Celebration -2017, Organizing Member, Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India **(February 2017).**

8. Member, Avishkar Cell-2016, Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India **(December 2016).**

9. Organizing member and Chhatrapati Sambhajinagar District coordinator for University Level Avishkar-2016 (ULA-2016), Organized by Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India **(December 2016).**

10. University Level National Science Day Celebration-2016, Organizing Member, Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India **(February 2016).**

11. University Level Avishkar-2014 (**ULA-2015**), Organized by Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India **(November 2015).**

12. Organizing Committee member for National Conference on Recent Challenges in Advanced Material and Green Chemistry by Department of Chemistry, Dr. Babasaheb Ambedkar Marathwada University, Sub-Campus, Osmanabad, India **(December 2015).**

13. Advisory committee member for National Seminar on Emerging Trends and Challenges in Chemical Sciences by Arts, Commerce and Science College, Kille Dharur, Beed, India **(January 2015).**

14. Science Academies Lecture Workshop on "Advances in Chemical Sciences" Department of Chemistry, Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India, and Indian Academy of Sciences Bangalore, India **(April 2014).**

15. University Level Avishkar-2014 (**ULA-2014**), Organized by Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India **(November 2014).**
16. Pre-Science Congress**-2014** Conference on, "Science and Technology for Human Development", Organized by ISCA Chhatrapati Sambhajinagar Chapter Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India **(December 2014).**

17. National workshop on Nanotechnology and Intellectual Property Rights and Patents in Science and Technology From Nanotechnology Perspectives, organized by department of Nanotechnology, Dr. BA Marathwada University Chhatrapati Sambhajinagar, India **(February 2012).**

18. National Seminar on "Advances in Materials Chemistry" (AIMS-2011) Department of Chemistry, Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India **(March 2011).**

19. DST-INSPIRE Entership Camp-**2011**, Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India **(August 2011).**

20. Science Academies Lecture Workshop on "Probing Electronic States in Molecules and Molecular Materials" Department of Chemistry, Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India and Indian Academy of Sciences Bangalore, India **(October 2010).**

21. National Seminar on "Biocatalysis and Biomimetic Catalysis in Organic Synthesis (NSBBOS-2009)" Department of Chemistry, Dr. BA Marathwada University, Chhatrapati Sambhajinagar, India **(March 2009).**

Co-Curricular Activities

1. Committee member for Yuvak Mahotsav**-2018**; Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajinagar.
2. Member Secretory: On the spot Inspection to assess status of implementation of development of sports infrastructure and equipment in colleges -XI and XII plan of UGC: **July 2018.**
3. Contingent Incharge in 10th Maharashtra State Inter-University Research Convention "**Avishkar 2015**" organized by Savitribai Phule Pune University, Pune; **January 2016.**
4. Director of University PG CAS (Science) **Oct/Nov 2013-2014** held at Rajashri Shahu Maharaj Pariksha Bhavan, Dr. BA Marathwada University Chhatrapati Sambhajinagar.

5. Served as Joint Chief Superintendent in PhD Entrance Test **(PET-2014),** Dr. BA Marathwada University Chhatrapati Sambhajinagar.
6. Director of University PG-CAS (Science) April/May **2013-2014** held at Rajashri Shahu Maharaj Pariksha Bhavan, Dr. BA Marathwada University Chhatrapati Sambhajinagar.
7. Serving as examiner for General Chemistry, Physical Chemistry, Analytical Chemistry and Nanoscience of Dr. BA Marathwada University Chhatrapati Sambhajinagar and other university since **2008.**
8. Serving as subject expert in the field of Material Science, Nanoscience and Chemistry for Ph.D. thesis evaluation for state and national universities since **2008.**
9. Serving as Resource Person to encourage academic activities in various affiliated colleges of university since **2008.**
10. Designed syllabus for the Department of Chemistry and Analytical Chemistry, Dr. BA Marathwada University Chhatrapati Sambhajinagar.
11. Committee Member for Maharashtra State Inter University Krida Mahotsav-**2014** organized by Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajinagar.
12. Organizing Member for University-Industry Interaction Summit-**2015**: Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajinagar.
13. Committee member for Yuvak Mahotsav-**2013**; Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajinagar

References:

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