



CV-Shobha A.Waghmode

Shobha A.Waghmode, PhD.

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YouTube Channel-

https://www.youtube.com/channel/UC_UMghtkraOawJLe6hK46lg/videos

A. Professional Experience: Total = 27 years teaching experience.

- ✚ **July 2020- Professor & Head**, Department of Chemistry, MES Abasaheb Garware College, Pune-411004, India.
- ✚ **December 2008- Associate Professor**, Department of Chemistry, MES Abasaheb Garware College, Pune-411004, India.
- ✚ **July 1996-** Assistant Professor, Department of Chemistry, MES Abasaheb Garware College, Pune-411004, India.
- ✚ **January 1995-** Lecturer, Department of Chemistry, Sir Parshurambhau College, Pune 411030, India.
- ✚ **1st August 1994-** Lecturer, Department of Chemistry- PG section, Tuljaram Chaturchand College, Baramati, Dist. Pune, India.

B. Education

- ✚ **Ph. D.** (Chemistry), Department of Chemistry, Savitribai Phule Pune University, formerly University of Pune, India, 2000.
Title of the thesis: “Iron II,III sites in iron-proteins modelled in iron complexes of bio-significant hydroxy naphthoquinone oximes and its derivatives”, under the guidance of Prof. Sandhya Y.Rane.
- ✚ **M. Sc.** (Inorganic Chemistry), Department of Chemistry, Savitribai Phule Pune University, formerly University of Pune, India, 1994.
- ✚ **B. Sc.** (Chemistry), Department of Chemistry, Savitribai Phule Pune University, formerly University of Pune, India, 1992.
- ✚ **SET** (State Eligibility Examination- Chemistry), Savitribai Phule Pune University, formerly University of Pune, India, 1995.
- ✚ Certificate Course in Yoga- Omkar Yoga Centre, Pune, 2017.

C. Awards

- ✚ **Best Teacher Award, for the year 2019, Savitribai Phule Pune University, India.**

- ✚ **Best Teacher Award** from D.Y.Patil Ajinkya University and Lions club of Poona, Pune, India. 2016.
- ✚ Summer Research Fellowship from **Indian Academy of Sciences**, Bangalore, Guide- Prof C.P.Rao, IIT Powai, Topic- Interaction of fluorescent guanidynylated calix[4]arene with ct-DNA, 2015.
- ✚ Prof B.C. Haldar- Young Scientist Award for oral presentation, in Indian Council of Chemists symposium held at Jaipur, India.1995.
- ✚ Recognised PhD Guide – Savitribai Phule Pune University, Ref. No. BUTR/Science/48/107 dated 21/01/2013.
- ✚ Recognised Guide for M.Phil.- SPPU -2013.

D. Patents Publications: 10 [2 granted]

1. Shobha A.Waghmode; one pot synthesis of antimicrobial photo-active herbal core shell TiO₂ quantum dots, IP, 201721016132, (Publication date: May 26, 2017).
2. Shobha A. Waghmode; one pot synthesis of photo-active carbon based rod shaped TiO₂ quantum dots, IP, 201721016133, (Publication date: May 26, 2017).
3. Shobha A. Waghmode; B.Arora and V.Lokhande, one pot synthesis of photo-active bimetallic CuPd quantum dots with its antimicrobial activity, IP, 201721016134, (Publication date: May 26, 2017).
Patent granted , patent no.-369428 (20 years) 16th June 2021 letter.
4. Shobha A.Waghmode, one pot synthesis of antimicrobial photo-active herbal core shell silver quantum dots, IP, 201721016135, (Publication date: May 26, 2017).
5. Shobha A.Waghmode, S.P.Dagade, V.K.Kalyankar and H.K.Meroliya, synthesis of lipase mediated metal nanoparticles as selective Destaining detergents, IP, 201721019044, (Publication date: June 16, 2017).
Patent granted , patent no.- 376577 (20 years) 16th June 2021 letter.
6. Shobha A.Waghmode and S.S. Pingale IP, 201921005787, Publication date, 14th Feb 2019
7. Shobha A.Waghmode, S.P.Dagade, V.K.Kalyankar, H.K.Meroliya and Vaishali Patil, ‘Conversion of carbon dioxide into fuel molecules by visible light driven photocatalysis over MOF supported bimetallic nanoparticles.202121041199, publication date-14th September 2021.
8. Shobha A.Waghmode, Deepali P.Butala and Asha D.Desai, ‘Natural graphene foams for selective water purification, for air filter and as a supercapacitor’, 202121041200, publication date 14th September 2021.
9. Shobha A.Waghmode, Asha D.Desai ,Deepali P.Butala and Soni Jagdeve, ‘Versatility of Ionic liquids by using microwave assisted one pot synthesis’ 202121041202, publication date 14th September 2021.
10. Sharda R Gadale, R.S.Bendre, Shobha A.Waghmode and Ramejabi Sayyad, ‘Ortho Nitration of thymol using nano-crystalline La/Mo/SiO₂ mixed oxide’ 14th September 2021.
11. Shobha Waghmode, Ayushi Katdare, Ameya Pawar, Shaunak Joshi and Trupti Zaware, Nanomaterial-antibody conjugation for infection diagnosis using chewing gum. 21st February 2022, patent number202221008960.
12. IL-PANI organosoluble nanomaterial as an acid base indicator and pH sensor, July 2022
13. AgPANI as a carboxylate sensor, August 2022.

E. Membership

- ✚ Life member of Indian Society of Nanomedicine(2019).
- ✚ Life member of the Society for Polymer Science India(2019).
- ✚ Fellow membership of world research associations No.FM/2020/0006 dated 19th April 2020.
- ✚ Member of Einstein Research Academy(ERA Membership No.: ERAM2100156).
- ✚ Member of India's Carbon capture & utilization network (CO₂ India Network) 3rd July 2021.
- ✚ Member of Vasundhara Abhiyan Banner since June 2020.

F. Coordinator/Organiser

1. Coordinator for **MoU** with Chemicea Pharmaceutical Navi Mumbai.10th May 2022.
2. Organiser for field visit at Vasundhara Abhiyan and Sanjivani van Udyan on 5th and 6th June with T.Y.B.Sc students at Warje and Baner Pashan hill Pune on the occasion of world environment day celebration.
3. Organizer and initiator of workshop on Food Adulteration and Hygiene for Street food vendors at basement of PJB with MSc students on 28th Feb 2022 at 2.30pm.
4. Organizer and initiator for Human Periodic Table 20th December 2021 at 7am College Ground.
5. Initiator & Organizer of Yog Nidra Program for Chemistry Faculty teaching and Non-teaching 6th Jan 2022 at 3.30pm A.V.hall.
6. Initiator and Organizer for Science Day celebration on 28th Feb 2022 – Food adulteration and Hygiene awareness among street food vendors.
7. Organizer and Initiator for National webinar on Semiconductor on 29th Jan 2022 on the occasion Saturday Meet inauguration.
8. Coordinator of International Conference (IACS-2021) 21st to 23rd October 2021. Proceeding ISBN: 978-93-90863-60-0.
9. Coordinator of Certificate course on Scientific writing and science communication, started on 5th September 2021 (40 students admitted). Also, Nanotechnology (sin2021) started on 6th September 2021.
10. Coordinator for National Innovation Startup Policy (NISP) at MES AGC – 2021-22.
11. Coordinator for **National Workshop** on Basics of Design Thinking on 17th and 18th May 2021 through Industry Academia Relation committee.
12. Vice president of NISP

13. **Coordinator** of Nanotechnology courses for BSc and MSc, successfully conducted Summer Internship for Undergraduates during 15th May 2019 to 24th May 2019. Few Lecture sessions as well as Practical sessions conducted during this course.
14. Coordinator, 1st July to 10th July 2020 with 202 student participation.
15. Coordinator of 6th September 2021 to December 2021 SIN 2021 course.
16. **Coordinator** for one day workshop, Fabrication and assembly of solar panels from natural fruit juice/Dye to produce electricity, on 28th September 2019 for post graduates as well as undergraduates.
17. IQAC -Criterion III Incharge 2020-22.
18. Incharge -Industry Academia relationship committee 2019-2022.
19. **Coordinator** for one day workshop on Foldscope Microscopy -Nano-Micro Interaction on 21st May 2019, by Department of Chemistry, MES AGC, Pune.
20. **Coordinator** of Teacher's day program with prof Ramesh Gardas, IIT Madras, 5th Sept 2020.
21. **Coordinator** of Saturday meet (October) inaugural function organized on 26th sept.2020 with Shukla sir Kannauj UP.
22. **Coordinator** of Saturday meet 31st November 2020 with our Alumnus Dr. Dinesh Paymode, Post-doctoral Associate At Virginia USA.
23. **Organizer** as well as Resource person of **International E conference** on Foldscope on 20th and 21st June 2020.
24. **Coordinator** Sin 2020, 1st July to 10th July Summer Internship in Nanotechnology.
25. Coordinator to Implementation of Research Based pedagogical techniques (RBPT) to T.Y.B.Sc students with Interdisciplinary approach, May 2016-17.
26. Coordinator to implement Guru-Shishya-Setu program with corporation schools since 2016.
27. Organising committee member - one day workshop on writing research papers and proposals sponsored by BCUD, SPPU at Abasaheb Garware College, Pune, 2014.
28. Coordinator for vocational Industrial chemistry (UG courses), Abasaheb Garware College, Pune. 2008-2013.

G. Career Activities & Highlights/ Invited speaker/Resource person

1. Invited participant in DST sponsored workshop at BIT MESRA Ranchi Jharkhand 22July to 28th July 2022 on Nanofabrication and device making.

2. Invited speaker at Pune Knowledge Cluster – woman role models in STEM, on 30th June 2022 at 4pm on topic My Journey in Chemistry
3. Invitation as a resource person at Pune Citizens' Climate Manifesto Friday 14th May 2022, MIT campus, Pune.
4. Invited speaker at NSS camp of MES AGC at Koyali near Alandhi on the topic environment and biodiversity on 20th Feb 2022.
5. Resource person for Research Methodology on science communication for PhD students at CMET Pune on 7th May 2022 at 3pm.
6. Invited subject expert at PCCOE Pimpri for annual appraisal interaction committee. 12th May 2022 at 10am.
7. Invited speaker at Science day celebration program 28th Feb 2022 BJS college, Wagholi, Pune.
8. Invited Speaker at Wadia College on topic ‘ Soaps & Detergents’ 2nd March 2022.
9. Invited speaker in National online workshop on “ Intellectual Property Rights” organised by PG department of Chemistry & IQAC , SSGM College Kopargaon, title of the talk, “ Intellectual Property Rights Beyond Research” on 1st July 2021 at 11am.
10. Resource person at CeMET Pune, on the occasion of Woman’s day celebration on 11th March 2020 , 2pm to 3pm title of the talk, ‘Women Entrepreneurship’.
11. Resource person at FDP organised by Sinhgad Academy of Engineering, on 9th November 2020 at 11am , title of the talk – Core shell nanomaterials synthesis and applications.
12. Invited speaker at Refresher Course in Modern College, Shivajinagar, Pune on coreshell Nanomaterials, 4th Oct 2018.
13. Resource Person - one day workshop on orientation of scientists and teachers of school, college and university on Foldscope microscopy at SKUAT- Jammu, on 4th Dec 2018. Topic of the talk- Nanomaterials synthesis and characterization.
14. Resource Person - two days’ workshop under student exchange program at ADP College Nagoan College, Assam on 27th Nov.2018, Topic of the talk- correlation between Nanotechnology and herbal chemistry.
15. Reviewer of 5+ peer-reviewed journals.
16. Chairperson at National Conference at V.P.College Baramati, RTPCB Dec-2016.
17. Board of Studies member for vocational courses in University of Pune. 2014.
18. Jury member in ABHIKALP 2018 at Department of Chemistry SPPU, Pune-through DIC-SPPU.
19. Judge at WE-GYAN 2018 Inter-collegiate Science Exhibition cum competition on 18th Dec 2018 Organized by MMCC Pune.
20. Judge at R.J.Gandhi Lecture competition organized by T.C.College, Baramati, 16th Feb 2019.
21. In charge of student’s health scheme program with SPPU, 2018.

H- Research projects completed

Sr. No.	Title	Funding Agency	Period	Grant / Amount (Rs. Lakh)	Completed /Ongoing
1.	Bio-mimicking of Cu-Zn superoxide dismutase Enzyme,	UGC	2010 to 2012	1,05,000/-	Completed

2.	Splitting of carbon dioxide into oxygen and carbon moiety using Biomimetics of biological catalysts involved in Photosynthesis	ISRO-UoP-STC	2013 to 2015	9,13,000/-	Completed
3.	Preparation and Functionalization of Graphene for its biosensor applications.	BCUD-SPPU	2013 to 2015	2,30,000/-	Completed
4.	Selective capture and conversion of CO ₂ to methanol from direct air using MOFs supported polyamines.	ISRO-UoP-STC	2017 to 2020	15,00,000/-	Completed
5	Synthesis of core-shell nanoparticles using green approach as an antimicrobial agent	DBT-Foldscope	2018	8,00,000/-	Completed

I- Participation in Hands on training workshops: since 2012.

1. Participation in hands on workshop on nanofabrication and devices, 22nd July to 28th July at BITS Ranchi.
2. Participation in three-day workshop on ‘Cultivation of aromatic crops and its processing and marketing organized by FFDC Kannauj U.P. during 23rd to 25th June 2020.
3. Participation in three-day workshop by FFDC, Kannauj UP, on Essential oil, perfumery and aromatherapy, on 14th July to 16th July 2020.
4. Invited Participant at CeNSE DBT ‘Nano-biotechnology Alliance (C-DNA)’ Inaugural workshop held at CeNSE IISc, Bangalore -4th and 5th November 2019.
5. Participation in workshop on hands on, ‘Soap making’ by APG learning centre Pune on 28th November 2019.
6. Participated in the three days’ workshop on ‘Design and Developing MOOCs’ on 20th to 22nd August 2019 organized by TLC SPPU.
7. Participated in ‘Hydroponic Training Techniques’ Workshop on 22nd September 2019 by Simplee Grow, Pune.
8. Participation in **Foldscope Orientation Workshop**- Hands on training, ICGEB, New Delhi, organized by Department of Biotechnology, Ministry of Science and Technology, Government of India. 16th-17th April 2018.
9. Participation in a one-day hands -on-workshop - **Organic Electronics** organized and conducted by Indo-German-Teachers-Program – Tata Institute of Fundamental Research, Mumbai and University of Cologne, Institute of Chemistry Education,

- Germany. Fabrication of low-cost organic LEDs and solar cells for educational purpose; 2nd Dec. 2017.
10. Participated in the **IP commercialization awareness workshop** in CIF_SPPU, Pune, 14 Feb 2018.
 11. Participated in workshop on **professional skill** organized by CoESME IISER Pune. It was conducted by educationists, Prof. Micheal Zigmond and Dr. Beth Fisher from University of Pittsburg, USA, 26th Feb 2018.
 12. Participated in the one-day Workshop on ‘**Transdisciplinary Research and Capacity Building**’ organized by SPPU- Interdisciplinary school of Health Sciences and Centre for Complementary and Integrative Health (CCIH) Ayush Centre of Excellence (CoE); 17th March 2018.
 13. Participated in workshop organized by Design Innovation Centre at SPPU on topic- Design Thinking Workshop, 19th Jan 2019.
 14. Participated in the STEM Teacher Training workshop on Research –Based Pedagogical Tools (Level1) held at Indian Institute of Science Education and Research (IISER) Pune, jointly sponsored by DBT Gov. of India, British Council, and HRD Ministry, conducted by Experts from Centre of Science Education, Sheffield Hallam University, UK, from 26th Feb to 1st March, 2017.
 15. Participated in Micro scale workshop on Micro scale techniques in physical chemistry, Abasaheb Garware College, Pune, Feb 2012.
 16. Participated in PG syllabus revision for credit system, for SPPU at Abasaheb Garware College, Pune, Feb 2013.
 17. Participated in UG syllabus – F.Y.B.Sc revision at Garware College, for Pune University, Oct 2013.
 18. Participated in workshop organized by Design Innovation Centre at SPPU on 19th Jan 2019 on topic- Design Thinking Workshop.

J- Selected research/academic news in the social media

May 2020- YouTube Channel-

https://www.youtube.com/channel/UC_UMghtkraOawJLe6hK46lg/videos

10th Nov 2013: <http://archive.indianexpress.com/news/garware-college-team-undertakes-ISRO-sponsored-research/1193043/>
<https://indianexpress.com/?s=shobha+waghmode+2015>

Jan 2015: Pune Mirror has published winners of intercollegiate **Avishkar** competition conducted by SPPU, Pune

Feb 2019: https://epaper.esakal.com/FlashClient/Client_Panel.aspx#currPage=1, Best teacher award – SPPU 2019.

K- PhD supervision

Sr. No	Name of the Student	Topic of Research	Current/Awarded

1	Dr. Vidya K. Kalyankar	Studies on superoxide dismutase enzyme from seeds of <i>Papaver somniferous</i> L. and SOD mimics”	Degree Awarded 4 th September (2017)
2	Dr. Omkar B. Pawar	Synthesis and characterization of transition metal complexes of 2,3-substituted-1,4-naphthoquinones	24 th Dec 2019 Degree awarded
3	Ms Vaishali Patil	Visible Light Photochemical Organic Transformations Using Bimetallic Nanoparticles: A Green Approach.	Current
4	Mrs. Asha Desai	Polyionic liquids as a green solvents	Current
5.	Mrs. Deepali Bhutala	Graphene Foam and its applications	Current
6	Mr. Amol Warungale	Coreshell nanomaterials for organic transformation	Current
7	Pradnya Giri	Plastic pyrolysis	current
7	Tanmay Jagtap	MOF chemistry	current
8	Pallavi Vedpathak	Graphene derivatives	Current
9	Priyanka Chapkanade	Microplastic	
10			

**L-Collaborations with International / National Institutions:
(Research Collaborations of Dr. Waghmode Shobha)**

Sr.No.	Name of the collaborator	Collaborating Institution	Period of collaboration	Nature of the Activity
1.	Dr. Mousmi Saikia	Dept. of Herbal Science and Technology, ADP College, Nagaon, Assam	2018-	Foldscope project for herbal analysis
2.	Dr. Renu Gupta	Dept. of Soil Science, Sher-E-Kashmir university, Jammu	2018-	Soil study from Jammu and Kashmir state
3.	Dr. Ramachandran	Dept. of Life Sciences, Central University of Kerala	2018-	Soil research during Tsunami
4.	Dr. Gaikwad A.P.	Agriculture College, Pune, Mycology Department. Mycologist , AICRP-Mushroom, Pune Centre , College of Agriculture , Pune.	2019-	Mushroom -Nano interaction study
5	Dr. Dagade S.P.	Y.M. College, Bharati Vidyapeeth	2010-	Organic transformation analysis and instrumentation

6	Dr.S.S.Pingale	Dept. Of Chemistry, SPPU	2017-	Computational chemistry research
7	Dr.Suresh Iyer	Organic Chemistry Division, NCL Pune.	2015-	Catalysis reactions using nanomaterials
8	Dr.Sameer Patwardhan	PC Technologies LLC , US based Edu tech company.	2019-	Solar panel assembling and energy generation through natural extracts
9	Dr. Manisha Khaladkar	Applied science department COEP , Pune	2015-	Metal complex study of many coordination molecules
10	Dr.Narendra Kumar Kumawat	Maharshi Arvind College of Pharmacy,Ambabari , Jaipur, Rajasthan 302039.	2019-	Pharmacy study of many Nano particles
11	Dr.Shankarlal Garg	World Researchers Associations, Vijay Nagar-452010, Indore, INDIA	2020-	Covid 19 and Indian scenario discussions through virtual meetings
12	Dr. Alwar Ramani	Herriot Watt University, United Kingdom	2020-	VLPC book writing discussions and chapter publication
13	Dr.Prashant Alegaonkar	Department of Physics, School of basic and applied sciences, Central University of Punjab, Bathinda, India.	2011-	Carbon based materials research
14	Dr. Dhiman Sarkar	Combi chem lab, NCL Pune	2013-	Interaction of nanomaterials with actual cell line work
15	Dr. Vidya Gupta	Department of Biochemistry, NCL Pune	1997-	Metal complex -DNA interaction study
16	Dr.M.K.Dongare	NCL Innovation park, NCL Pune.	2000-	Catalysis reaction study
17	Dr. Atul Kulkarni	Symbiosis centre for nanoscience and nanotechnology, Pune.	2013-	Graphene FRET sensor designing
18	Dr. Pooja More	Skill development SPPU	2014-	Nano-Cellulose conductivity study.
19	Dr. Benny George and Dr. K. Abhilash	VSSC Trivandrum (ISRO Headquarter)	2013	CO ₂ utilization into fuel.

20	Dr.R.S.Bendre	NMU	2021	Patent on Thymol nitration
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M- Publications: **Total 55**

1. Kalyankar VK, Honmore VS, Waghmode SA, Dagade SP. Green Synthesis and in vitro Anti-Tubercular Activity of Monometallic and Bimetallic Oxide Nanoparticles. Asian Journal of Chemistry. 2022(4):923-30.scopus
2. Shital Shewate, Shobha Waghmode & Niranjana Patil, Synthesis and Evaluation of Quorum Quenching activity of Ag, TiO₂, and ZnO metal nanoparticles against wild type and mutant strains of *Photobacterium violaceum*", Research Journal of Chemistry and Environment, 2022, ID:WRA-RJBT-2021-0772.Scopus
3. Ramejani Sayyad, Shobha Waghmode and Sharada Gadale, Investigation of structural and catalytic performance of nano crystalline Yttria doped Zirconia, Asian J of Chemistry, AJC 20711, 14th Feb 2022. doi.org/10.14233/ajchem.2022.23511.scop
4. Komal Janardhan Vanjare & Shobha Waghmode, Lipase enzyme based green chemistry detergents for cleaning industry, Research & Reviews in Biotechnology & Biosciences Volume: 8, Issue: 2, Year: 2021 PP 75-80 DOI: <https://doi.org/10.5281/zenodo.5775429>
5. S. B. Kapure, Heena Meroliya, Sharda Gadale & Shobha. A. Waghmode, CO₂ capture by metal organic frameworks Research & Reviews in Biotechnology & Biosciences, Volume: 8, Issue: 2, Year: 2021PP81-100, DOI: <https://doi.org/10.5281/zenodo.5775433>
6. Mane Viren Vijay, Deepali Butala & Shobha Waghmode, Carbon quantum dots, Research & Reviews in Biotechnology & Biosciences Volume: 8, Issue: 2, Year: 2021pp-101-107, DOI: <https://doi.org/10.5281/zenodo.5775437>
7. Shobha Waghmode, Vaishnavi Taple and Shilpa Shingade, Applications of Nanotechnology in Food Industry, Research & Reviews in Biotechnology & Biosciences. Volume:8,2,2021,PP:60-70DOI: <https://doi.org/10.5281/zenodo.5775425>.
8. Shweta Rajesh Kamble & Shobha Waghmode, Graphene as A Catalyst for Organic Transformation Reactions, Research & Reviews in Biotechnology & Biosciences, Volume: 8, Issue: 2, 2021, PP: 20.26, DOI: <https://doi.org/10.5281/zenodo.5775414>.

9. Jadhav Ajay Mohan ,Deepali P Butala & Shobha Waghmode, Metal Quantum Dots Research & Reviews in Biotechnology & Biosciences Volume: 8, Issue: 2, Year: 2021, PP:7174,
10. A.Muftahi, Shobha A.Waghmode and Sharada Gadale, Synthesis of Zirconia Doped Molybdenum Oxide as Efficient Catalysts for Ultrasound Assisted Synthesis of Substituted Pyrazoles, Asian Journal of Chemistry; Vol. 33, No. 9 (2021), 2007-2014, <https://doi.org/10.14233/ajchem.2021.23260>. **SCOPUS**
11. Kashmiri Lad, Madhura Mulye, Agrawal Apoorv and Shobha Waghmode,' Antimicrobial Activities of Single Nano particle (SNPs) & Coreshell Nanomaterials (CSNMs) with Special Reference to Binding mechanisms. <http://doi.org/10.5281/zenodo.5118458>, Research & Reviews in Biotechnology & Biosciences Volume-8, Issue No: 1, Year: 2021 (January-June) PP: 5-21. **UGC**
12. Aaqifa Shaikh, Heena Meroliya, Sharda Gadale & Shobha Waghmode, Applications of Nanotechnology in Precision Agriculture: A review, Volume-8, Issue No: 1, Year: 2021 (January-June) PP: 105-117 <http://doi.org/10.5281/zenodo.5118402>, **UGC**
13. Shweta Kadam, Vaishali Patil, Sharda Gadale & Shobha Waghmode, 'Use of Nano pesticide in Agriculture and its Toxicity – A Review,' Research & Reviews in Biotechnology & Biosciences, Volume-8, Issue No: 1, Year: 2021 (January-June) PP: 118-129, <http://doi.org/10.5281/zenodo.5118408> **UGC**
14. Gayatri Divekar, Sharda Gadale, Asha Desai and Shobha Waghmode, 'Nano fertilizer is boon for Soil Health' Research & Reviews in Biotechnology & Biosciences ISSN No: 2321-8681, Volume-8, Issue No: 1, Year: 2021 (January-June) PP: 130-139, <http://doi.org/10.5281/zenodo.5118413>. **UGC**
15. Thote Vaishnavi, Sharda Dagade-Gadale, Vidya Kalyankar and Shobha Waghmode, 'Interaction between Nanoparticles and Soil Microflora', Research & Reviews in Biotechnology & Biosciences ISSN No: 2321-8681, Volume-8, Issue No: 1, Year: 2021 (January-June) PP: 140-147, <http://doi.org/10.5281/zenodo.5118424>. **UGC**
16. Ameya Pawar and Shobha Waghmode, 'Ayurveda and nanotechnology: an integrative approach', Research & Reviews in Biotechnology & Biosciences ISSN No: 2321-8681, Volume-8, Issue No: 1, Year: 2021 (January-June) PP: 148-156, <http://doi.org/10.5281/zenodo.5118434>. **UGC**
17. Swaroopa Chandorkar, Sharda Gadale and Shobha Waghmode, 'Nanotechnology in Ayurveda perspective' Research & Reviews in Biotechnology & Biosciences ISSN No:

- 2321-8681, Volume-8, Issue No: 1, Year: 2021 (January-June) PP: 157-162, <http://doi.org/10.5281/zenodo.5118438>. **UGC**
18. Mohammed Valikarimwala, Sharda Gadale and Shobha Waghmode, ‘Applications of Nanotechnology in Ayurveda: A review’; Research & Reviews in Biotechnology & Biosciences ISSN No: 2321-8681, Volume-8, Issue No: 1, Year: 2021 (January-June) PP: 163-169, <http://doi.org/10.5281/zenodo.5118448>. **UGC**
 19. Bacterial Empire journal of SciCell Publishing, "Greener methods of control for microbial diseases of pomegranate using Copper oxide nanoparticles and betel leaf extract".2021. Kalyankar , V. K. .; Meroliya , H. K. .; Shete , S. S. .; Gandhi , N. .; Kamble , R. R. .; Khater, M. S. .; Arora , B. .; Waghmode , S. A.. *BE* **2021**, *4*, e306. <https://doi.org/10.36547/be.306>
 20. Graphene: Century’s Magic Material of the Carbonage, Shobha Waghmode, Alwar Ramani & Suresh Iyer, **Chemical weekly June 2021 issue. Scopus**
 21. Synthesis , characterization of Nd doped silica nanocomposites and its photocatalytic activity, Vanita Rokade, Shobha Waghmode & Sharada Gadale; J of Adv.Sci.Res, 2020, 11(4)supply 9 , 72-77.**Peer Reviewed**
 22. Pronnoy G. Bangar , Pradip D. Nahide , Heena K. Meroliya , Shobha A. Waghmode & Suresh Iyer (2020): Oxime ligands for Pd catalysis of the Mizoroki–Heck reaction, Suzuki–Miyaura coupling & annulation reactions, **Synthetic Communications**, DOI: 10.1080/00397911.2020.1826969 .**SCOPUS**
 23. Covid 19: Indian Scenario with New Non-Natural Risk?? Shobha Waghmode, Apoorva Agarwal, Sharada Dagade-Gadale and Shankar Garg , 2020, Research J of Chem and Environment. Vol.24(5) May 2020, 152-157. **UGC SCOPUS**
 24. Nano materials as the good nutrient source for Precision Agriculture, Waghmode Shobha, Shete Siddhiprada, Maniwal Priyanka, Patole Vaishnavi and Mulay Shivani, International Journal of Agricultural Sciences and Veterinary Medicine Vol. 8 (3), August (2020),1-7.Peer Reviewed
 25. Graphene Foam: Next Generation Graphene Analogue, Butala Deepali and Waghmode Shobha, Research Journal of Chemistry and Environment Vol. 24 (8) August (2020), 1-11. **Scopus**
 26. Kashid, A.A., Patil, D.J., Mali, R.D. Suresh Iyer and Shobha A.Waghmode *et al.* Bimetallic Ni–Pd Synergism—Mixed Metal Catalysis of the Mizoroki-Heck Reaction and the Suzuki–Miyaura Coupling of Aryl Bromides. *Catal Lett* (2020). <https://doi.org/10.1007/s10562-020-03330-9>. **SCOPUS**

27. Antineoplastic Activity of Alkyl aminolapachol Analogues and their Copper Complexes against MDA-MB-231 Human Breast Cancer Cell Lines, Omkar Pawar, Shobha Waghmode and Manisha Khaladkar et al. Asian Journal of Chemistry 32(4):887-895 · March 2020. DOI: [10.14233/ajchem.2020.22496](https://doi.org/10.14233/ajchem.2020.22496).
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28. Amal A. Muftah, Shobha Waghmode, Sharda Gadale (Dagade), 'Green synthesis and antimicrobial activity of silver nanoparticles using ROSMARINUS OFFICINALIS leaves extract', Bio - Mat. Tech. 1/1 (2019) 48 – 54. Peer Reviewed
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N- Book Chapters.

1. Foldscope and Its Applications, published by National press associates New Delhi. **ISBN No:978-93-85835-68-1**, Worked as an Editor for the same book. Chapter title, “Green synthetic approach core shell nanomaterials: as an antimicrobial agents”.2019
2. Visible light photo catalysis of aldehyde and carbonyl functionalities, an innovative domain , Alwar Ramani^{*b}, Shobha Waghmode^c, Suresh Iyer^{*a}, IntechOpen Publication, 01.04.2020, London

O- Participation and publication in conference/seminar/proceedings 80

1. PhD Students Ms. Vaishali Patil and Ms. Heena Meroliya, Presented Research Paper on "Comparative antimicrobial activity of bimetallic nanoparticles and mono metallic nanoparticles" in Sixth International Conference on Advances in Materials Science (Online) (ICAMS- 2021) during 23 – 24 April 2021 organized by Post-Graduate Department of Physics, Rajee Ramrao Mahavidyalaya, Jath. And received **Best Oral Presentation award**.
2. Cu-Zn & Cu-Mn oxide nanozymes of Superoxide Dismutase as potential Glucose sensor, Presented by Vidya Kalyankar in International Conference on Multifunctional Electronic Materials and Processing (MEMP-2021) conducted by C-MET Pune on digital platform during 8-10th March 2021.
3. Dr.Shobha Waghmode, Oral presentation In **National symposium on, New horizons on Women Studies in Twenty first Century**, organized by AGC, on 30th-31st Jan 2020, **entitled**, “Women entrepreneurship in Indian Perspective”.

4. Dr.Shobha Waghmode, Poster presentation in **International Conference on Emerging Trends in Delivery of Phytoconstituents and Ethnopharmacology- Validation of Traditional Medicine-II**, 29th-30th November 2019, organized by Poona College of Pharmacy, Bharati Vidyapeeth, Pune with AICTE, Govt of India and Society for Ethnopharmacology India-Pune chapter. **Title of the Poster**, 'Study of Biological applications of Coreshell Nanoparticles.
5. Shreya Bhonge, Aishwarya Tekale,Pallavi Raut,Vaishali Patil,Heena Meroliya,Vidya Kalyankar,Sharada Dagade,Suresh Iyer And Shobha Waghmode, Bimetallic Nanoparticle Assisted Suzuki And Heck C-C Coupling Reactions, Participated in **International Conference** for poster presentation in - Advance Catalysis For Energy And Environment(CACEE-2018),Tata Institute Of Fundamental Research(TIFR) Mumbai, 10-12 Jan -2018.
6. Heena Meroliya, Vaishali Patil,Nilesh Jadhav, Vikram Deshmukh, Vidya Kalyankar,Sharda dagade and Shobha Waghmode, Lipase mediated nanoparticles as a robust catalysts for VLPC assisted trans-esterification reaction, Participated in **National Conference** for poster presentation in - Chemical Science :An Interdisciplinary Approach(CSIA-2018)Modern College of Ganeshkhind, Pune-16,January 18-20, 2018.
7. Heena Meroliya,Vidya Kalyankar, and Shobha Waghmode, Synthesis of novel metal complexes of lawsone derivative and their applications in CO₂ utilization. Participated in **National Conference** for oral presentation in - Chemical Science: An Interdisciplinary Approach(CSIA-2018)Modern College of Ganeshkhind, Pune-16 ,January 18-20, 2018
8. Heena Meroliya, Vidya Kalyankar, Shweta Shete, Vaishali Patil Sharada Dagade and Shobha Waghmode. Comparative study of microbial Inhibition activity between bimetallic nanoparticles and standard antibiotics. Participated in **International Conference** for oral presentation in - Nanotechnology for Human Welfare 2018 (ICNHW), Haribhai V. Desai College, Pune, MS, India,1-3 Feb 2018.
9. Vaishnavi Taple, Diksha Dhanawale, Heena Meroliya and Shobha Waghmode*,Synthesis of nanomaterial embedded Bio-plastic, Participated in **International Conference** for poster presentation in - Microbial Technology

For Better Tomorrow(**ICMTBT-2018**),D.Y.Patil College Pune, February 17-19 2018.

10. Vaishnavi Ghume, Pratiksha Jadhav, Shilpa Shingade, Heena Meroliya, Niranjana Patil and Shobha Waghmode , Dye industry water effluent analysis / treatment by using microbial and chemical method. Participated in **International Conference** for poster presentation in - Microbial Technology For Better Tomorrow(**ICMTBT-2018**). D.Y.Patil College Pune, February 17-19 2018.
11. Rupali Kamble,Heena Meroliya,Vidya Kalyankar, Sharada Dagade, Amit Chaudhari ,Dhiman Sarkar and Shobha Waghmode*¹, Effect of Photosensitizers In Photodynamic Therapy., Participated in **International Conference** for poster presentation in - Microbial Technology for Better Tomorrow(**ICMTBT-2018**). D.Y.Patil College Pune. February 17-19 2018.
12. Participation and poster presentation on topic 'Utilization of CO₂ by using Ionic Liquid functionalized metal oxide Nanomaterials in Carbon capture **International** conference at NCL – Pune on 14th and 15th Dec 2018.
13. Participation and poster presentation on topic, Nano composites of bio polymeric chitosan as a peroxidase nanozymes, in **International** conference SPSI-MACRO 2018 at IISER Pune SPSI -MACRO on 19-22nd Dec 2018.
14. Natural cellulosic fiber as a Humidity Sensor, Vidya Kalyankar ,Mahesh Salunkhe, Prashant More , Heena Meroliya, Sharada Dagade, Shobha A.Waghmode*., Proceeding of **International conference** on Advances in Materials Science ISBN 978-93-5254-490-5 409.ICAMS- (ICAMS – 2016) on 7th – 8th December 2016,Raje Ramrao Mahavidyalaya, Jath, Sangli, India. **Best poster presentation** in International conference at Jath Sangli Maharashtra, 2016.
15. Formylation of N-H bonds with CO₂ as an alternative to Photo and Electrochemical methods,Vaishnavi Kulkarni, Vidya Kalyankar, Sharada Dagade and Shobha Waghmode*,**National conference** on Innovative Research in Chemical Sciences,(IRCS-2017),1-2 Feb-2017, Shivaji University, Kolhapur, India.
16. Nanoconjugates of metal nanoparticles with Chitosan and Graphene oxide as a peroxidase mimics,Vidya Kalyankar, Mrunali Dudhane, Abhaya Zirpe, Sharada Dagade* and Shobha A. Waghmode*, **National conference** on Innovative

Research in Chemical Sciences,(IRCS-2017),1-2 Feb-2017, Shivaji University, Kolhapur, India.

17. Synthesis & characterization of MOFs for gas adsorption studies,Digamber Nemade, Sunil Kapure, Vidya Kalyankar, Sharada Dagade* and Shobha A. Waghmode*, **National conference** on Innovative Research in Chemical Sciences,(IRCS-2017),1-2 Feb-2017, Shivaji University, Kolhapur, India.
18. Reduction of graphene oxide to graphene by using green approach, Parshuram Aswale, Vidya Kalyankar, Sonali Naik, Sharada Dagade, Chetan Bhongale , and Shobha Waghmode*. **National Conference** on Recent Trends in Physical, Chemical and Biosciences [RTPCB-2016], 16th & 17th December, 2016, Department of Chemistry Vidya Pratishthan's Arts, Science & Commerce College Baramati, Pune.
19. Cu-Ni bimetallic Nano particle catalysed Heck coupling, Prashant More, Mahesh Salunkhe, Vidya Kalyankar, Sharada Dagade, Suresh Iyer and Shobha Waghmode*. **National Conference** on Recent Trends in Physical, Chemical and Biosciences [RTPCB-2016], 16th & 17th December, 2016, Department of Chemistry Vidya Pratishthan's Arts, Science & Commerce College Baramati, Pune.
20. Visible light photo catalysed trans esterification using enzyme nano conjugates,Sarita Rajmane, Smita Javare, Vidya Kalyankar, Sharada Dagade* and Shobha Waghmode* **National Conference** on Recent Trends in Physical, Chemical and Biosciences [RTPCB-2016], 16th & 17th December, 2016, Department of Chemistry Vidya Pratishthan's Arts, Science & Commerce College Baramati, Pune.
21. "Synthesis of metal nano powder using biodiesel waste: Glycerol", Heena Meroliya, Sunil Kadam, Kalyani Chaitanya **Vidya Kalyankar**, Sharada Dagade, **Shobha Waghmode*** **Third prize** for poster presentation in National Seminar on New horizons in chemical environmental science,Vashi,Navi Mumbai on 30th January 2016.
22. "Biosynthesis of stable Cu nanoparticles: Green Approach",Hitesh Salunkhe, Chanchal Kasat, Prasad Rasane, Rohit Chavhan Heena Meroliya¹, **Vidya Kalyankar¹** Sharada Dagade² and **Shobha Waghmode^{1*}** presented poster in National Seminar on New horizons in chemical environmental science ,Vashi,Navi Mumbai on 30th January 2016.

23. “Artificial photosynthesis using superoxide dismutase model”, **Vidya Kalyankar**, Gauri Bhide, Sunil Joshi, Sharda Dagade, and **Shobha Waghmode^{1*1}** presented poster in International conference, HSDS-2016, PUNE held at Abeda Inamdar College, Pune on 7- 9 January 2016
24. “Utilization of Glycerol, waste of biodiesel for the synthesis of Nano particles: A green approach” , Sunil Kadam, Heena Meroliya, **Vidya Kalyankar**, Sonali Naik, **Shobha Waghmode *** presented poster in International conference, HSDS-2016,PUNE held at Abeda Inamdar College, Pune on 7- 9 January 2016
25. “Tagging of 2 amino- 1, 4 naphthoquinone with silver nanoparticles using green approach and its biological assay”, Devyani Kamble, Abhilasha Adulkar, Heena Meroliya, **Vidya Kalyankar**, Sharada Dagade²and **Shobha Waghmode* 3rd Consolation prize** for poster presentation in National Seminar on Interface between Colleges and Industry with reference to Synthetic Organic Chemistry and Spectroscopy(ICISOCS-2016)in Shirampur Dist.Ahmednagar on 16th January 2016.
26. “Metal nanoparticles as an alcohol sensitizer”, Yugandhara Girme,Yogita Jogdand, Rohit Chavhan, Heena Meroliya, Vidya Kalyankar, **Shobha Waghmode* · Best poster award** in National Seminar on Interface between Colleges and Industry with reference to Synthetic Organic Chemistry and Spectroscopy(ICISOCS-2016)in Shirampur Dist.Ahmednagar on 16th January 2016.
27. “Synthesis and spectral analysis of lawsone derivatives: A novel dye”, **Vidya K. Kalyankar**, Sharada Dagade and **Shobha A. Waghmode*** received,**First prize in oral** presentation at National Seminar on Interface between Colleges and Industry with reference to Synthetic Organic Chemistry and Spectroscopy(ICISOCS-2016) in Shirampur, Dist.Ahmednagar on 16th January 2016
28. Dr.Shobha Waghmode -Selected as Mentor at inter university level competition at **Avishkar**, organised by SPPU Dec 2014.Agnp synthesis from enzyme.
29. Synthesis of Fe-Zn bimetallic complex and its application in electrochemical biosensing of parathion, Omkar Pawar¹, Gauri Bhide¹, Shobha Waghmode¹, Dhiman Sarkar², Preeti Nigam Joshi², **International conference on structural Inorganic chemistry**, Dec 4-5 2014, NCL Pune.

30. Synthesis of Photoluminescence Silver Nanoparticles and Their Use as Ethanol Sensor, Vidya Kalyankar^a, Priyanka Dagade^a, Dada Marale^a, Pooja More^{*b}, Vipul Dhongade^b, R. C. Aiyer^b and Shobha Waghmode^{*a}, **National conference on advances in chemical sciences** , NCACS-2014 , 19-20 Dec 2014 , F.C College, Pune.
31. Synthesis of silver nano particles from superoxide dismutase enzyme using *Papver somniferum L.*; **International workshop on Nanotechnology and Advanced functional materials (NTAFM-2013)**,at NCL, Pune, Proc.Abst.No. PS-117, Page no.141, July 24-25, (2013); Vidya Kalyankar^a, Sharada Dagade^b and **Shobha Waghmode^{a*}**.
32. Biogenic synthesis of silver nanoparticles using Rumex vesicarius plant extract; **International workshop on Nanotechnology and Advanced functional materials (NTAFM-2013)**,at NCL, Pune, Proc.Abst.No. PS-134, Page no.158, July 24-25, (2013); Vidya Kalyankar^a, Sharada Dagade^b and **Shobha Waghmode^{a*}**.
33. Peroxide activity of silver nanoparticles with a greener approach.; published in Bionano frontier journal, Vol.6, issue -4, ISSN 0974-0678, Oct. 2013 page no. 194-197. Poster presentation in **National conference on emerging trends in laser and advanced materials (NCETLAM 2013)** , Oct 28-29 (2013), Dept. of Physics, Vidya Kalyankar^a, Sharada Dagade^b and **Shobha Waghmode^{a*}**.
34. Folic acid functionalized graphene quantum dots for cancer cell imaging, **16th CRSI National symposium in Chemistry, Feb 7-9 , 2014 ; IIT Bombay ; P-465 , Shobha Waghmode^{*}**, Preeti Nigam-Joshi, and Dhiman Sarkar.
35. Antimicrobial and antitumor activity of tagged 2-amino 1,4 naphthoquinone with silver nanoparticles., **2nd Internatinal conference on Herbal and Synthetic drugs studies, (HSDS-2014) 10-12 Feb 2014, organised by Interdisciplinary science and technology research academy (ISTRA) Azam campus, Pune.** P-105 , Page No. 78, Vidya Kalyankar^a, Pallavi Vedpathak^a , Omkar Pawar^a, Priyanka Dagade^a, Anurag Pujari^b, Sharwari Dixit^b, Alpana Moghe^c, Neelima Deshpande^{b*} and **Shobha Waghmode^{a*}**, **Best Poster consolation award for this work as Mentor.**
36. Green synthesized silver nanoparticles used as ethanol sensor, Accepted for oral presentation in **18th National seminar on Physics and Technology of sensors, (NSPTS-2014), 6-8 March 2014, T.C. College, Baramati, Shobha**

Waghmode^{*a}, Pooja More^{*b}, Pooja Chavan^a, Dada Marale^a, Atul Sanas^a Vipul Dhongade^b, R. C. Aiyer^b.

37. Structural Characterization of Nanosized Fe₂O₃-CeO₂ Catalysts by XRD, EDX and TEM Techniques., S. P. Dagade, V. B. Mane, **S. A. Waghmode^{*}** and L. H. Mahind, oral presentation for **Nanocon012, 2nd International conference of nanotechnology**, 18-19 Oct.2012 BVUCOE ,Pune, India.
 38. Characterizations On Tetrakis (Dimethyl Amino) Ethylene–Treated–Graphene , A. P.Alegaonkar^{1,3}, Arvind Kumar², P. S. Alegaonkar², **S. A. Waghmode^{3,*}**, S. K. Pardeshi paper published in proceedings of ,**International Symposium on macro and supramolecular architectures and materials MAM12** 21st-25th Nov 2012, at Coimbatore.
 39. **Shobha A. Waghmode^{*a}**, Darbha Srinivas^b, Kirti D. Badave^c & Sandhya Y. Rane; **International conference on Emerging trends in chemistry**, Dept.of Chemistry, University of Pune, 5-7 Jan 2010.
 40. Investigations on valence tautomeric coordinations in model compounds of non-heme proteins : Mossbauer, EPR, Magnetic and Cyclic voltametric studies.Sunita D.Gawali, Khursheed Ahmed, Francois Varret, Jorge Linares, JeromeMarrot, **Shobha P.Dagade-Waghmode**, Sadgopal K.Date and Sandhya Y.Rane. **Sixth Workshop on Mossbauer Spectroscopy, at Seeheim, GERMANY, June 7-11 (2006).**
 41. Evidence of topoisomerase type function at metal constellation in spPAP radical enzyme.**International symposium on advances in Bioinorganic Chemistry (ISABC-2000),at TIFR, Mumbai, Proc.Abst.No. p 11 pp.61, November 20-24 (2000) S.P.Dagade,S.Y.Rane, D.Sriniwas, V.S.Gupta and Khursheed Ahmed.**
 42. Antimicrobial and Biological Activity of bimetalic Cu-Zn Complex, Gouri Bhide^a , Vidya Kalyankar^a , Sharada Dagade^b and Shobha Waghmode^a, poster presentation in national conference, current trends in chemistry organised by Y.M. college, Bharati Vidyapeet, Pune 12-13 Jan 2013.
 43. Correlation of plant purple acid phosphatase with its bimetallic model complex, Rushant Nandkhile^a , Vidya Kalyankar^a , Sharada Dagade^b and Shobha
-

- Waghmode^a, poster presentation in national conference, current trends in chemistry organised by Y.M. college, Bharati Vidyapeet, Pune 12-13 Jan 2013.
44. Correlation of superoxide dismutase enzyme from *Vetiveria Zizanoides* with its bimetallic (Cu-Zn) model complex, Vikas Jadhav^a , Vidya Kalyankar^a , Sharada Dagade^b and Shobha Waghmode, poster presentation in national conference, current trends in chemistry organised by Y.M. college, Bharati Vidyapeet, Pune 12-13 Jan 2013.
45. Synthesis of silver nanoparticles using *Triticum aestivum* and *Rumex vesicarius* : An investigation on the effect of plant variety in reduction mechanism and particle size, Pooja Chavan^a, Sonal Wankhede^a , Vidya Kalyankar^a, Varsha Honmore^a, Sharada Dagade^b and Shobha Waghmode^a , **Best poster award** poster presentation in national conference, current trends in chemistry organised by Y.M. college, Bharati Vidyapeet, Pune 12-13 Jan 2013.
46. Antifungal effect of medicinal plant extract against fungus causing Wilt Disease of *Punica granatum* , Nayana Gandhi^a, Kamlesh Jangid^b, Bharti Bhadbhade^c, Bindu Arora^a and Shobha Waghmode^d , **Consolation prize**, poster presentation in national conference, current trends in chemistry organised by Y.M. college, Bharati Vidyapeet, Pune 12-13 Jan 2013.
47. Effect of TiO₂ nanoparticles on clinical isolates of multi-drug resistant *Pseudomonas aeruginosa*. Madhura Murar^a, Shankar Laware^b, Bharti Bhadbhade^c, Bindu Arora^a and Shobha Waghmode^d, poster presentation in national conference, current trends in chemistry organised by Y.M. college, Bharati Vidyapeet, Pune 12-13 Jan 2013.
48. Efficient oxidation catalyst by model complex of superoxide dismutase, , Vidya Kalyankar^a, Sudhir Phadtare^a, Priyanka dagade, Sharada Dagade^b and Shobha Waghmode^a , poster presentation in national conference on Chalcogenides, organised by DIAT , Pune 14-15 Jan 2013.
49. A Nano solution for antibiotic resistance of multi-drug resistant (MDR) *Pseudomonas aeruginosa*, Madhura Murar^a, Bindu Arora^a, Bharati Bhadbhade^b and Shobha Waghmode, poster presentation competition in National symposium IIT Bombay, 16 Feb 2013.
50. Vapour phase nitration of benzene using solid acid catalysts, S P Dagade¹, Vinod B. Mane², Mahind Lalaso², **Shobha A. Waghmode^{*2}**, Shubhangi

- Umbarkar³, Mohan K. Dongare³, **poster presentation at Indian Science Congress – 2012** Materials Science, Bhivaneshware, 3-7Jan 2012.
51. Attended GIST 2010 symposium on water organized by MES'Abasaheb Garware College Pune 26-27 Dec.2010.
 52. *Asparagus racemosus*: A nutraceutical and a neuro tonic.**Shobha Waghmode-Dagade**, Ujawala Bapat, Shobha Bhide and Sandhya Rane.; **National conference on New frontiers in herbal and synthetic drug studies,(HSDS-2010)** Dept. of Chemistry, Abeda Inamdar college, Pune, 14-16 Jan 2010.
 53. Bio- and physiological activities in spPAP enzyme : Kinetics and immune response, **S.P.Dagade-Waghmode**, S.Y.Rane, Khursheed Ahmed and S.Ranade.Proceedings of **Current Trends in Inorganic Chemistry (CTIC-2004)** at Department of Chemical technology, Cochin University, Cochin March 15-17, (2004).
 54. A functional physiological activity model for the mixed –valent iron active site of PAPr enzyme,S.Y.Rane, S.D.Gawali, **S.P.Dagade** , Khursheed Ahmed , V.S.Gupta, J.Linares and F.Varret.Proceedings of 10th Symposium on Modern Trends in Inorganic Chemistry (MTIC-2003) at IIT Mumbai, pp.7, Dec 15-17 (2003) .
 55. Tyrosine radical function at active Fe III Mn II site performing spPAP as redox enzyme : EPR spectral and pUC 19 DNA cleavage evidences. Proceedings of Modern Trends in Inorganic Chemistry (MTIC-2000) p-59, IISC Bangalore 2000.S.Y.Rane, **S.P.Dagade** V.S.Gupta and D.Sriniwas.
 56. Triggering DNA cleavage activity in native PAP with Fe II,III model compounds.Proceedings of 10th Symposium on Modern Trends in Inorganic Chemistry (MTIC-1997)p-66 at Kanpur 1997.S.Y.Rane, **S.P.Dagade** and V.S.Gupta
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79. Deepali Bhutala Oral PPtn, Proceedings of International conference on Interdisciplinary Approaches in Chemical Sciences, IACS -2021, pp 126, 21-23 October 2021, ISBN: 978-93-90863-60-
80. Vaishali poster, Proceedings of International conference on Interdisciplinary Approaches in Chemical Sciences, IACS -2021, pp 126, 21-23 October 2021, ISBN: 978-93-90863-60-




N- Participated in online webinar 2020-21

1. For attending the online learning workshop for faculty., 1st to 3rd April 2020 by QASPIR, CPD Member.
2. Participated in Virtual conference on materials for energy harvesting and catalysis by TIFR and IISER Kolkata on 1st to 3rd May 2020, zoom.
3. Attended, ' Strategies for Extension as a Social Responsibility: Perspectives of Higher Education by DLLE, SPPU National webinar on 13th May 2020.
4. Participation in Reinventing Research: IPR for revenue generation webinar on 9th June 2020, SKN Sinhgad College of Engineering, Pandharpur, Maharashtra.
5. Participated in National level one-week short term course on 'Green Audit' by Environmental Science Department of Osmania University, Hyderabad, 9th to 14th August 2020.
6. International Conference organised by CeMET in March 2021., poster presentation
7. Prof. Shobha Waghmode has actively participated in GUJCOST & ICSII Sponsored One Week Online STTP "Design **Thinking as Strategic Tool for Innovation and Creating Start-up**" (Key Learnings: Observation, Empathy, Insights, TRIZ tool,

Ideation, Concept Development, Prototype & Test, Entrepreneur-ship & Start-up, Value Proposition Canvas (VPC) & Creating USP, Business Model Canvas (BMC), Financial Analysis, IPR & Company Structure for Start-ups) From 19th April 2021 to 23rd April 2021 (5 – Days) Organized by the “Mechanical Engineering Department” IITE, Indus University, Ahmedabad.

- a. Participating in "Design Thinking Bootcamp on Strategic Approach to Innovation & Start-up Creation" held on 28th & 29th April, 2021 through virtual platform Google Meet, Organised by GUIITAR Council, GSFC University, Vigyan Bhavan, P. O Fertilizernagar, Vadodara-391750, Gujarat, and Students Startup and Innovation Policy.
8. Participation In National Level Webinar on Investor Awareness Program conducted by Innodesk Designovation Services in association with Ambition Learning Solutions held on 6th May, 2021.
9. Attended the Part-VI of E-Talk Series on the topic “Towards Environmental Applications from 2D Materials" presented by Dr. Damien Voiry from European Institute of Membranes, France on May 26, 2021. Smart Materials : Research : Commercialization Maharaja Agrasen University HP India.
10. Participation and successful completion on AICTE sponsored two weeks FDP phase II program on Innovation, Startup and Entrepreneurship Development in Pharmaceutical sciences. Organised by Konkan Gyanpeeth Rahul Dharkar College of Pharmacy Karjat, Raigad 20th to 29th May 2021.
11. Participation in three-day workshop on ‘Cultivation of aromatic crops and its processing and marketing organized by FFDC Kannouj U.P. during 23rd to 25th June 2020.
12. Participation in three-day workshop by FFDC, Kannouj UP, on Essential oil, perfumery and aromatherapy, on 14th July to 16th July 2020.

O- Courses taught at AGC

-  CHI-130/ 230 – Molecular Symmetry, Group Theory and Spectroscopy, Coordination & Bioinorganic Chemistry
-  CHI-190/290- Modern Separation Methods, Organometallic Chemistry, Safety in Chemical Laboratory and Good Laboratory Practices.
-  T.Y.BSC / SYBSc/ FYBSc- Inorganic chemistry, Organic and Physical chemistry syllabus, Environmental chemistry for TYBSc.

+ Guest faculty at BV Deemed University- Green Chemistry and Analytical chemistry for PG.

+ Guest faculty- at V.P. College, Baramati – Coordination Chemistry for PG.

P- Entrepreneurship/Industry interactions/consultancy from AGC - March 2019

1. Ideation of new Start-ups at our department- **ChemLab@home**
2. Consultant and mentor for **NANOsion healthcare solutions**(AGC-Chem-Students), Pune.
3. Catalyst designer, example 5% Pd on carbon.
4. Consultant – for all healthcare products, beauty products, herbal decoctions, and mentoring for product development in Aroma Industry- **Shobha's Soapery**- Herbal to Chemical, all kind of beauty products- lipstick to skin whitening kumkumadi oils.
5. Autonomous course developer in chemistry e.g. Nanotechnology certificate course, Flavours & fragrances, Scientific writing and Science Communication etc.
6. Process development for natural product isolation e.g, Curcumin extraction.
7. Paint and pigment industry consultancy for product development- water colors on paper for school children.
8. Drug analysis using hyphenated techniques, e.g. content of methyl cobalamin, Iodine quantitation from Urine samples.
9. Agriculture testing and consulting Hub- water / soil/ tissue / mineral nutritional counseling and guidance for different parts of plants e.g. petiole content testing.
10. Sustainable Product development from raw materials consultancy.
11. Nanomaterial development and testing e.g Nanocurcumin like molecules.

Q- Guidance / Mentoring of MSc II Project Students from curriculum-SPPU syllabus, since 2007 by Dr.Shobha Waghmode

	Year 2021-22	
	Year 2020-21	

	Year 2019-20	
Sr.No.	Name	Title of the project
1	Snehal Vispute	Synthesis and application of multifunctional nanomaterials in Biotechnology
2	Anisha Shinde	DNA- Nanomaterial Interactions
3	Priyanka Satkar Patil	Bimetallic nanomaterials for Suzuki-cross coupling reactions
4	Stella D'souza	Synthesis and applications of Ionic liquids.
5	Pranjal Zarkad	Isolation of anticancer drug from Moringa Olifera leaves and synthesis of nanoparticles from leaf extract.
6	Ganesh Gore	Synthesis of transition metal complexes and its application in organic transformation.
	Year 2018-19	
7	Shweta R Bane	Synthesis of ionic liquids as a green solvents for organic transformations
8	Vaishnavi U.Jadhav	C-dot Nanomaterials and their applications
9	Supriya Wadkar	Synthesis and characterization of triazole derivatives.
	Year 2017-18	
Sr.No.	Name	Title
10	Rupali Kamble	Synthesis of nanoparticles and its effect on microbial and biological systems
11	Nilesh Jadhav	Photocatalyzed NH formylation of amines using monometallic and bimetallic nanoparticles.
12	Vikram Deshmukh	Esterification reaction by using nanoparticles immobilized enzyme.
	Year 2016-17	
Sr.No.	Name	Title
13	Mahesh Salunkhe	Synthesis and characterization of Nanomaterials.
14	Prashant More	Model compounds of purple acid phosphatase
15	Mrunali	Biopolymer functionalization, Chitosan.

16	Abhaya Zirpe	Graphene functionlization and its applications.
17	Smita Javare	Coumarin derivatives
18	Vaishnavi	CO2 utilization by using transition metal catalysts.
19	Vishal Lokhande	Microbial reduction of bimetallic Nanomaterials.
20	Apurva	Silver nanoparticle synthesis and its applications
21	Shweta Shete	Nanomaterials in healthcare and agriculture.
Year 2015-16		
Sr.No.	Name	Title
22	Yugandhara Grime	Synthesis of organic molecules as ligands
23	Abhilasha Adulkar	Graphene synthesis and functionalization
24	Yogita Jogdand	Natural product isolation.
25	Devyani Kamble	Synthesis of different coumarin derivatives.
26	Rohit Chavan	Organic catalytic reactions using enzyme
27	Kalyani Chaitanya	Catalytic reactions using carbon composites.
28	Chanchal Kasat	Synthesis of nanoparticles using different plant extract.
29	Prasad S.Rasane	Isolation of enzyme from novel source.
30	Hitesh Salunkhe	Isolation and charcacterization of SOD enzyme.
Year 2014-2015		
Sr.No.	Name	Title
31	Sayali Thakre	Synthesis and Tagging of pyrazolines: Ethanol Sensor & antimicrobial activity
32	Mahesh Kadam	Preliminary photochemical analysis & preparation & characterisation of silver nanoparticles by 'Pogostemon Paniculatus Benth'
33	Aparna Dattu Bhong	Graphene oxide & graphene : Present Material
34	Rubiya Dhone	From dead flowers to carbon material
35	Pillay Jeevitha Mayavan	Utilization of biomass :As a humidity sensor & energy Material
36	Manisha Redekar	Synthesis & application of naphthoquinone derivative & their metal complex

37	Prashant Pillay	Photocatalytic degradation of carcinogenic methylene blue using Zr/Cd doped polyaniline.
38	Sudnya Wanjale	Phytochemical screening of bioactive compounds And Synthesis of Copper nanoparticles by green approach from <i>Catharanthus roseus</i> Root extract and its antibacterial activity
39	Kunal Kulkarni	An efficient synthesis of Zn-Cd nanoparticles and their dye degradation studies.
40	Anuja Sable	Synthesis and microbiological activity of naphthoquinone derivatives.
41	Pranita Joshi	Synthesis, characterization and kinetic study of naphthoquinone derivatives.
Year 2013-2014		
42	Heena Meroliya	Green synthesis of silver nanoparticles using isolated SOD enzyme from 'pennisetum'
43	Sanjay Isure	Synthesis of silver/silver oxide nanoparticles using PAP enzyme & its antimicrobial activity
44	Sonia Jadhav	Synthesis & characterisation of silver nanoparticles from Isolated Plant Purple Acid phosphatase
45	Soham Dhagude	Synthesis & Characterisation of Bio mimic Plants purple acid phosphatase
46	Gandhali Kulkarni	Green Synthesis of silver nanoparticles using isolated SOD enzyme from 'sesamumindicum L.'
47	Atul Sanas	Serum induced biosynthesis of silver nanoparticles & their sensitivity towards ethanol
48	Pooja Gaikwad	Synthesis & characterisation of Thiophene based Schiff bases & its antimicrobial activity
49	Pallavi Vedpathak	Surface modification, functionalisation of colloidal silver nanoparticles using 2-Amino-4-naphthoquinone
50	Shreya Shende	Nanoparticles synthesis using microbes
51	Sidhi Pradda	Synthesis of silver nanoparticles using rose flower extract

52	Ketaki Bhagwat	Synthesis of silver nanoparticles using plant extract
53	Hitesh	Synthesis and application of carbon composites from natural source.
Year 2012-2013		
54	Rushant Nandkhile	Isolation and characterisation of plant purple acid phosphatase from Arvi: Biological activity correlation with its model complex
55	Pooja Chavan	Synthesis of silver nanoparticles using triticum Aespivum
56	Gauri Bhide	Correlation of SOD enzyme from Elusine Corocana L. With its bimetallic model complex
57	Sonal Wankhede	Isolation & Characterization of Natural Products from the <i>Cynodon dactylon</i> .
58	Nayana Gandhi	Isolation and identification of fungal plant pathogens infecting Pomegranate and its activity against certain plant extract
59	Vikas Jadhav	Isolation & characterisation of plant SOD enzyme from Papaverum Somniferum : Biological activity correlation with its model complex
Year 2011-2012		
60	Priyanka Dagade	“Structural And Spectroscopic Properties of Iron Dimeric Complex showing Excellent phosphodiester Cleavage Activity”
61	Sudhir Phadtare	“Efficient Oxidation of Hydroquinone Catalysed by Cu Monomeric and Bimetallic Cu-Zn Complex”
62	Yuvraj Kate	“Antibacterial and Biological Activity of Bi-metalic Cu-Zn Complex”

63	Ankita Pawar	“Asymmetric Dinuclear Iron Complexes As A Models For Active Sites In Purple Acid Phosphatase
64	Rajendra Gadhave	“Synthesis and Characterisation of Novel Bimetallic Cu-Zn Complex As A SOD Model
Year 2009-2010		
65	Prajakta Kelaskar	
Year 2008-2009		
66	Pawan more	Correlation of biological activity of diiron active site core: purple acid phosphatase with diiron complex.
Year 2007-2008		
67	Urmila Pansare	Vanadyl phosphate as molecular catalyst.
68	Mahesh Jadhav	Anomalous behaviour of spin transition in iron complexes.
Year 2007-2008		
69	Nilesh Tangle	Synthesis and characterization of transition metal complexes.
70	Pranav Joshirao	Study of thermal properties in transition metal complexes.
71	Amal	Silver nanoparticles synthesis using <i>Rosemerry</i> extract.

R- Implementation of Research Based Pedagogical techniques (RBPT) with TYBSc students: Context: Industrial water effluent analysis and treatment: Mentoring was done by, Dr.Mrs.Shobha A.Waghmode 2017-18

1. Ashish Shingade, Sana Manyar and Tejashri Tambe- Isolation and identification of microorganisms from water sample and its treatment by using transition metal nanoparticles.
2. Abhinay Chillal, Tejashri Chavan, Suman Mane – Interaction of silver nanoparticles with different phenol derivatives- polyols.
3. Onkar Waghmare- Industrial water effluent treatment using transition metal nanoparticles with reference to dye industry.
4. Vaishnavi Ghume, Pratiksha Jadhav, Shilpa Shingade - Dye industry water effluent analysis / treatment by using microbial and chemical method.
5. Vaishnavi Taple, Diksha Dhanawale- Synthesis of nanomaterial embedded Bio-plastic.

6. Payal Pachore and Dristi Jaiswal- Heavy metal analysis and treatment for automobile industry water effluent samples.
 7. Shilpa Shingade and Sayali Bagate- Quantitization of BOD level by different methods for different effluent water samples.
 8. Prajka Jade and Nidhi Sharma- Microbial treatment for phenol toxicity.
 9. Shubham Patil and Aishwarya Patil- Quantitaion of P from industrial water effluent samples and treatment by microbial method.
 10. Pooja More and Yogita Hulsulkar- Quantitation of chemical oxygen demand from different water effluent samples.
 11. Pawan Yadav, Ganesh Vedpathak and Shubham Doke- Quantitation of chemical oxygen demand from different water effluent samples.
 12. Pooja Deshpande and Shweta Kalekar-Contact angle quantitation of different water samples and synthesis of transition metal nanoparticles for sensor application.
 13. Aditi Kaledhonkar, Gayatri Divekar, Shweta Pande and Bhagyashree Mitragotri- Industrial water effluent treatment using bimetallic nanoparticles.
 14. Apurva Agarwal and Visha Badiyali-COD analysis for different industrial water effluent samples.
 15. Jyoti Gavadgave, Vrutali Patil and Anita Prajapati- Quantitation of Physical and chemical parameters treatment using graphene oxide.
 16. Chaitanya Gosavi and Pranaya Shewale- Isolation and identification of heavy metals.
 17. Avani Mahadik, Mugdha Fulambrikar and Gauri Gund- Microbial isolation and identification from different water samples.
 18. Tanvi Jadhav, Swaroopa Chandorkar and Kashmira Lad- synthesis and characterization of lanthanide nanoparticles.
 19. Prachi Deshpande, Akansha Mokashi and Pragati Thorat- Detection of BOD from different industrial water effluents.
 20. Shreya Bhonge and Aishwarya Tekale - Bimetallic Nanoparticle Assisted Suzuli And Heck C-C Coupling Reactions.
 21. Aishwarya Tekale- Natural product isolation and identification using IR and NMR techniques.
 22. Kiran Takale and Prasad Walimbe- Natural product isolation and identification by IR and NMR techniques.
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