

Curriculum Vitae

Personal Details

Name: Dr. Pallavi Bhange

Associate Professor,
Head of the Chemistry Department
Director of School of Chemical and Physical Sciences
Sanjay Ghodawat University,
Atigre, Kolhapur
Mobile: +91-9096750058
E-mail: pallavi.ncl@gmail.com
pallavi.bhange@sanjayghodawatuniversity.ac.in



Qualification

Ph.D., Chemistry (2005-2008)

Catalysis Division at National Chemical Laboratory, Pune; Advisor: Dr. Veda Ramaswamy
Thesis entitled: Synthesis, characterization and catalytic activity of ordered Sn, Al-SBA-15 and immobilization of Ntn-hydrolase family enzymes on SBA-15 mesoporous molecular sieves.

M.Sc., Inorganic Chemistry, (1999-2001; 61%)

Dept. of Chemistry, University of Pune, MS, India

B. Sc., Chemistry, (1999-2001; 71%)

Dept. of Chemistry, S. P. College, University of Pune, MS, India

Research Experience

9th July 2012- 8th July 2015 **DST Woman Scientist**

Received grant of **Rs. 24 lakh from DST-SERB project under women scientist scheme** (for the duration 2012-2015). Successfully completed the project as a Principal Investigator at Shivaji University Kolhapur, on the project entitled “Development of visible light driven photocatalysts for water splitting and environmental remediation”.

1st Sept 2010 – 31st Aug 2011 **Post-doctoral Research Fellow**

Pohang University of Science and Technology (POSTECH), South Korea under the guidance of Prof. J. S. Lee on the project entitled, “Alkylation of Naphthalene using modified zeolite catalyst.”(QS world ranking 71 in the world).

1st May 2008 - 30th Nov 2008 **CSIR- Research Associate/Extended SRF**

National Chemical Laboratory, Pune, India under the guidance of Dr. N.M. Gupta on the project entitled “Nanostructured catalytic materials for hydrogen energy and direct oxidation of volatile compounds”.

Apr. 2005- Apr. 2008 **Ph. D. Chemistry (CSIR-Senior Research Fellow)**

Catalysis Division at National Chemical Laboratory, Pune under the guidance of Dr. (Mrs.) Veda Ramaswamy.
Thesis entitled “Synthesis, characterization and catalytic activity of ordered Sn, Al-SBA-15 and immobilization of Ntn-hydrolase family enzymes on SBA-15 mesoporous molecular sieves”.

Feb. 2002 –Dec. 2004 **Project Assistant**

National Chemical Laboratory, Pune sponsored by Lupin Research and DST-New Delhi.

Teaching Experience

24.7.2017- till date	Department of Chemistry, Sanjay Ghodawat University, Kolhapur, MS, India
2016-2017	Assistant Professor-Contributory (, M.Sc. Chemistry) Department of AGPM, Shivaji University, Kolhapur, MS, India

Awards

- Received **Young Associate award for Chemical Sciences** from the Maharashtra Academy of Science-2023.
- Received SGU Chairman's Award for Outstanding contribution towards Research
- Received Promising Young Teacher Award-2018 at .SGU
- Best poster award on National Conference on Frontiers in Chemical and Material Sciences, 2015 at Kolhapur.
- Received grant of **Rs. 24 lakh from DST-SERB project under women scientist scheme** (for the duration 2012-2015).
- Best poster award on National Conference on Current Research in Chemical Sciences (CRCS-2013).
- Catalysis society of India, Rev. Fr. L. M. Yeddanapalli award for the **Best Ph. D thesis in the area of catalysis (2008)**.
- **Received Travel grant from DST, New Delhi and NCL, Pune for International conference** Oral Presentation at *14th International Congress on Catalysis* during 13-18 July 2008, COEX, Seoul, Korea.
- Best poster award on National Science Day at NCL Pune, 2007.
- **Senior Research Fellowship** awarded by Council for Scientific and Industrial Research (CSIR), Govt. of India, New Delhi, India. (2005)
- Qualified **National eligibility Test for lectureship (NET)** in chemical sciences **twice** conducted jointly by CSIR-UGC, New Delhi. (**Held on July 22, 2003 and on December 28, 2004**).

Program organized/participated

- Attend GIAN Workshop on "Advanced Functional Materials and Green Energy Strategies" on 16-20th October, 2023 at Shivaji University, Kolhapur
- Organized National Seminar on "Emerging Nano Materials for renewable Energy" at SGU on 26th December 2022.
- Successfully completely two days 4th National level workshop on NIRF ranking 2023" organized by IAE, Hyderabad from 21st and 22nd Dec 2022.
- Organized workshops on how to write a research proposal, conduct research and publish papers by Dr. N. M. Gupta on 8th Oct., 2022.

- e) Organized a workshop on Artificial Intelligence in health care in association with IIT Kharagpur on 23rd Aug., 2022
- f) Successfully completed Foundation level training of Innovation Ambassador Program organized by AICTE-MoE-Govt. of India from 30th June-30th July 2021.
- g) **Successfully completely Two Weeks FDP** on "Managing Online Classes and Co-Creating MOOCs" to be held from 20th April to 06th May, 2020 sponsored by MHRD Pandit Madan Mohan Malviya National Mission on Teachers and Teaching.
- h) Successfully completely **Online Refresher Course** (12 week) **in Chemistry for Higher Education Faculty- 2019** (Annual Refresher Programme in Teaching). by ARPIT, MHRD
- i) Successfully completed National Programme on Technology Enhanced Learning (NPTEL) FDP course on "**Industrial Inorganic Chemistry**" (12 week) with "Elite"
- j) Organized **Science Academies' Lecture Workshop** on "**Recent Advances in Catalysis Sciences**" supported by Indian academy of Science, Bangalore at Sanjay Ghodawat University on 23-24th Feb 2018. (Sanctioned grant of Rs. 1,65,000/-).
- k) Attend Orientation Programme for research scholars in catalysis conducted at Dept. of applied chemistry at Kochi, Kerala sponsored by DST

Research Guide and Supervisor

- i. Recognition of Ph.D. Guide: Sanjay Ghodawat University, Kolhapur.
- ii. Number of Ph. D. working : 04
- iii. Number of M.Sc. Projects completed : 40

Publications

1. Solution combustion synthesis of metal tungstates for chromium reduction and dye degradation for environmental remediation
P. Vhangutte, A. Kamble, **P. Bhange**, R. Madhale, M. Gavhane, A. Gurav, A. Yelpale, V. Patil, S. Vanalakar, D.S. Bhange
Inorganic Chemistry Communications 158, 111676, 2023.
2. Enhanced photocatalytic dye degradation for water remediation over titanium doped Bi₂WO₆
P. Vhangutte, A. Kamble, D. Shinde, Pallavi Bhange, R. Madhale, Vithoba Patil
Inorganic Chemistry Communications 156, 111145, 2023.
3. A post-spinel n-fesno₄ as novel narrow band gap photocatalyst for visible light assisted decomposition of crystal violet dye
A. Kamble, P. Vhangutte, D. Shinde, R. Madhale, Pallavi Bhange, Shivaji Tayade, Shivajirao Patil and D.S. Bhange
Chemistry Select, 8, e202302829, 2023.
4. Sunlight assisted photocatalytic activity of heterojunction BiOCl/SnO₂ nanocomposites
Ruth Madhale, Deepali Shinde, D. S. Bhange, S. Tayade, K.K. Sharma and **P. D. Bhange**
Journal of Materials Science: Materials in Electronics 34(12) 1049, 2023

5. Influence of synthesis methods on physical and photocatalytic properties of Bi₂WO₆ for decomposition of organic dyes and Cr(VI) reduction
P. Vhangutte, A. Kamble, D. Shinde, **P. Bhange**, R. Madhale, V. Patil, D.S. Bhange
Bull. Mater. Sci. 46, 56 (2023).
6. Production and characterization of wax and grease from waste plastic
P R Kumbar, V S Patil, S R Kumbar, R B Kumbar and **P.D. Bhange**
IOP Conf. Ser.: Mater. Sci. Eng. **1126**, 012037 (2021)
7. NaFeTiO₄: A novel visible light active photocatalyst for water splitting and environmental remediation
D.S. Shinde, **Pallavi D. Bhange**, Sudhir Arbuji, Ji-Young Kim, Jee-Hwan Bae, Kyung-Wan Nam, Shivaji Tayade, D.S. Bhange,
International Journal of Hydrogen Energy. **45**, 8605-8617 (2020).
8. TiO₂ nanoparticles decorated on BiOCl flakes with enhanced visible light photocatalytic activity
D.S. Shinde, **P. D. Bhange**, R.K. Jha, D. S. Bhange,
Chemistry Select **5**, 2618-2626, (2020).
9. Mesoporous Sn-SBA-15 as an efficient catalyst for the synthesis of Nopol by prins condensation
Pallavi Bhange
International Journal for Research in Engineering Application & Management (IJREAM), 08 June, 2018: 98-106 (2018).
10. Solution combustion synthesis of heterostructure bismuthtitanate nanocomposites: structural phases and its correlation with photocatalytic activity
P.D. Bhange, D.S. Shinde, D.S. Bhange, G.S. Gokavi
International Journal of Hydrogen Energy, **43**, 708-720 (2017).
11. A modular approach for multicomponent synthesis of amidines using modified Scolecite
Megha Jagadale, **Pallavi Bhange**, R.Salunkhe, D.S. Bhange, M. Rajmane, G.Rashinkar
Appl. Catal. A: General **511**, 95-105 (2016).
12. Photocatalytic degradation of methylene blue on Sn-doped titania nanoparticles synthesized by solution combustion route
Pallavi Bhange, S.V.Awate, R.S.Gholap, G. S. Gokavi, D. S. Bhange
Materials Research Bulletin, **76**, 264–272 (2016).
13. Visible light active superoxide modified nanocrystalline anatase titania
Pallavi Bhange, D. S. Bhange, G.S. Gokavi
J. Nanoeng. Nanomanuf. **5(3)**, 216-220 (2015).
14. H₂O₂ assisted mesoporous Ti-SBA-15 as photocatalyst for methylene blue degradation under visible light
Pallavi Bhange, D. S. Bhange, G. S. Gokavi
Adv. Porous Mater. **2**, 261-266 (2014).
15. Immobilization of bile salt hydrolase enzyme on mesoporous SBA-15 for co-precipitation of cholesterol
Pallavi Bhange, N. Sridevi, Asmita Prabhune and Veda Ramaswamy
International Journal of Biological Macromolecules **63**, 218– 224 (2014).

16. Direct synthesis of well-ordered mesoporous Al-SBA-15 and its correlation with the catalytic activity
Pallavi Bhange, Deu S. Bhange, Sivaram Pradhan and Veda Ramaswamy
Appl. Catal. A: General **400**, 176-184 (2011).
17. Doping-induced micro-structural, textural and optical properties of $\text{In}_2\text{Ti}_{1-x}\text{V}_x\text{O}_{5+\delta}$ semiconductors and their role in the photocatalytic splitting of water
Pallavi Shah, Deu S. Bhange, Aparna S. Deshpande and Narendra M. Gupta
Materials Chemistry and Physics **117**, 399-407 (2009).
18. Interfacial and physic-chemical properties of polymer supported CdS.ZnS nanocomposites and their role in the visible-light mediated photocatalytic splitting of water
Aparna Deshpande, **Pallavi Shah**, Ramakrishna S. Gholap and Narendra M. Gupta
J. Colloid and Interfacial Science- **333**, 263-268 (2009).
19. Synthesis, characterization and catalytic activity of Sn-SBA-15 mesoporous molecular Sieves
Veda Ramaswamy, **Pallavi Shah**, Karoly Lazar and A. V. Ramaswamy
Catal. Surv. Asia, **12**, 283-309 (2008).
20. Structural features of Penicillin acylase adsorption on APTES functionalized SBA-15
Pallavi Shah, N. Sridevi, Asmita Prabhune and Veda Ramaswamy
Microporous and Mesoporous Materials **116**, 157-165 (2008).
Selected among Top 25 article of the Journal.
21. Immobilization of Penicillin G acylase on amino functionalized silica
N. Sridevi, **Pallavi Shah** and Asmita Prabhune
Res. Journal of Biotech **3(4)** (2008).
22. Thermal stability of mesoporous SBA-15 and Sn-SBA-15 molecular sieves: An in situ HTXRD study
Pallavi Shah and Veda Ramaswamy
Microporous and Mesoporous Materials **114**, 270-280 (2008).
23. Immobilization of Ntn Hydrolases on APTES functionalized SBA-15
Pallavi Shah, N. Sridevi, Asmita Prabhune and Veda Ramaswamy
Studies in Surface Science and Catalysis, **170**, 1891-1898 (2008).
24. Direct hydrothermal synthesis of mesoporous Sn-SBA-15 materials under weak acidic condition
Pallavi Shah, A.V. Ramaswamy, Karoly Lazar and Veda Ramaswamy
Microporous and Mesoporous Materials **100**, 210-226 (2007).
Selected among Top 25 article of the Journal.
25. Direct hydrothermal synthesis of highly ordered Sn-SBA-15 mesoporous materials
Pallavi Shah, A.V. Ramaswamy and Veda Ramaswamy
Chem. Letters **35**, 860-861 (2006).
26. Influence of Sn- and Al- metal sources on post-synthesis modification of mesoporous SBA-15 molecular sieves
Pallavi Shah, A. V. Ramaswamy and Veda Ramaswamy
Studies in Surface Science and Catalysis, **158**, 565-572 (2005).
27. Incorporation of tin into mesoporous silics SBA-15 molecular sieves
Pallavi Shah, A.V. Ramaswamy, R. Pasricha and Veda Ramaswamy
Studies in Surface Science and Catalysis, **154**, 870-877 (2005).

28. Synthesis and characterization of tin oxide-modified mesoporous SBA-15 molecular sieves and catalytic activity in transesterification reaction
Pallavi Shah, A.V. Ramaswamy, Renu Pasricha, Karoly Lazar and Veda Ramaswamy
Appl. Catal. A: General, 273, 239-248 (2004).
Selected among Top 25 article of the Journal
29. Photocatalytic decomposition of methylene blue using nanocrystalline anatase titania prepared by ultrasonic technique
Preeti Awati, Shobana Awate, **Pallavi Shah** and Veda Ramaswamy
Catal. Communication, 4 (8), 393-400 (2003).
30. Synthesis of nanocrystalline SnO₂ powder by amorphous citrate route
Mahesh Bhagwat, **Pallavi Shah** and Veda Ramaswamy
Materials letters, 57, 1604-1611 (2002).

Papers published in Conference Proceedings

1. Thermal stability of mesoporous Sn-SBA-15 mesoporous molecular sieves: An in situ HTXRD study
Pallavi Shah and Veda Ramaswamy
Proceedings of International Symposium on Materials Chemistry (ISMC-06)
2006, p.89-91, Chemistry division, BARC, Eds: S.R. Bharadwaj et al. Ebenezer Publishing house
2. Encapsulation of Mn (III) *salen* complexes into aluminium pillared clay: application in heterogeneous catalysis
Nisha Pandya, **Pallavi shah** and Veda Ramaswamy
Proceedings of International Symposium on Materials Chemistry (ISMC-06)
2006, p.598-600, BARC, Eds: S.R. Bharadwaj et al., Ebenezer Publishing house
3. Production of biodiesel using C₃N₄-CaO Produced from waste Eggshell as a Catalyst.
Prathamesh Jadhav, Ruth Madhale, T.B. Shinde and **P. D. Bhange**
Journal of Emerging Technologies & Innovative Research (JETIR).9(8), 218-222, (2022)
4. Thermal expansion behavior of the AlPO₄-5 molecular sieve-High temperature XRD studies.
Ann Chem Sci Res, pg No. 000552.

Delivered talk/Invited Lecture/ appreciation received

1. Invited as Resource Person on a Workshop on “Promotion of Research” on 30th Jan., 2024 at Sadguru Gadge Maharaj College, Rayat Shikshan Sanstha, Karad.
2. Delivered **two invited lectures** in Hands on Training workshop titled "Advanced Characterization Techniques in Science and Technology" at SAIF-DST-CFC Shivaji University, Kolhapur by Department of Science and Technology, Ministry of Science and Technology, New Delhi. India on and 10th Dec 2022 and 5th Feb. 2023.
3. Delivered **expert speech on “Women in Science”** on National Science Day at RIT, Sangli.
4. Delivered **expert talk in Value added Course on “Integrated Pest Management”** at **AGPM department, Shivaji University.**
5. Invited for Guest Lecture on topic **“Career Opportunities in Chemistry”** at D. K.A.S.C College Ichalkaranji on 17th Jan., 2019.

6. Invited to chair a session for Oral presentation at ETCMS-2020 organized by department of chemistry, SUK on 8th March, 2020.
7. Resource Person/ Speaker at Six Days Workshop on NAAC Accreditation Process for University on 26th April-1st May 2021 at SGU, Kolhapur.
8. Resource Person at Mini Conclave on 12-25th May 2021 at SGU, Kolhapur
9. Evaluate Ph.D thesis from NIU, New Delhi and External referee for Ph.D thesis defense viva exam at NIU, New Delhi.
10. Judge for oral presentation at virtual National Conference entitled" role of women chemists and technologists for a sustainable future" held on 8th March 2022.
11. Judge for National Seminar on "recent advances in pharmaceutical and chemical sciences" at SGU on 2nd Dec., 2022.

Papers and Oral presentation at symposia and conferences

1. NiFe₂O₄@g-C₃N₄ as an efficient heterogeneous catalyst for the Synthesis of 2,4,5-trisubstituted imidazole derivatives
Shrilekha Bachche, Sachin Khade and **Pallavi Bhange***
International conference on Advanced Materials, synthesis, characterization and applications, 18-20th Oct, 2022.
2. Biodiesel production using C₃N₄/CaO from waste egg shell as a catalyst
Prathamesh Jadhav, Ruth Madhale, T.B. Shinde, **Pallavi Bhange***
International conference on innovation in science, technology and management, 8-9th July, 2022.
3. Sunlight assisted photocatalytic degradation of organic pollutants using BiOCl/SnO₂ Nanocomposites
R. Madhale, D. S. Shinde, D.S. Bhange, S. Tayade, Kiran Sharma and **P. D. Bhange***
International conference on Advanced Materials, synthesis, characterization and applications, 18-20th Oct, 2022.
4. Bismuth Chromate: A Promising Semiconductor Photocatalyst under Natural Solar Radiation.
Ruth Madhale and **Pallavi Bhange***
National conference on Recent Trends in Pure and Applied Sciences" on 21-22nd Jan., 2022 at Bharati Vidyapeeth, Sangli.
5. Bismuth Chromate : A Promising Semiconductor Photocatalyst under Natural Solar Radiation.
Nilesh Patil, Swapnil Dhole and **Pallavi Bhange***
National conference on Recent Trends in Pure and Applied Sciences" on 21-22nd Jan., 2022 at Bhrati Vidapeeth, Sangli.
6. Production and characterization of wax and grease from waste plastic
P R Kumbar, V S Patil, S R Kumbar, R B Kumbar and **P.D. Bhange**
3rd International conference on Trends in Material Sciences and Inventive Materials" (ETCMS- 2020) on 6-7th March., 2020
7. NiFe₂O₄@LDH as an efficient heterogeneous catalyst for the Synthesis of 3,4-disubstituted isoxazol-5(4H)-ones.
Sunny Dubal, Trushant Lohar and **Pallavi Bhange***
National conference on Emerging Trends in Chemical and Material Sciences" (ETCMS- 2020) on 6-7th March., 2020 at Shivaji University, Kolhapur.

8. Bismuth Chromate (Bi_2CrO_6): A Promising Semiconductor Photocatalyst under Natural Solar Radiation.
Nilesh Patil, Swapnil Dhole and **Pallavi Bhangé***
National conference on Emerging Trends in Chemical and Material Sciences” (ETCMS-2020) on 6-7th March., 2020 at Shivaji University, Kolhapur.
9. A green and one-pot synthesis of benzo[g]chromene derivatives through a multi-component reaction catalyzed by an efficient heterogeneous LDH catalyst.
A. Chandekar, V. Jadhav, Audumber Patil and **Pallavi Bhangé***
National conference on Emerging Trends in Chemical and Material Sciences” (ETCMS-2020) on 6-7th March., 2020 at Shivaji University, Kolhapur.
10. Oxidative coupling of alkynes and aryl boronic acids using $\text{NiFe}_2\text{O}_4@\text{C}_3\text{N}_4$ as an efficient heterogeneous catalyst
Amit Nadgonda, Altaf Naikawadi, Megha Jagadale, **Pallavi Bhangé*** and G.S. Rashinkar*
National conference on Recent Trends in Chemistry and Materials Science (RTCMS-2019) during 9th Feb., 2019 at Shivaji University, Kolhapur.
11. BiOCl/SnO₂ heterojunction based nanocomposites for photocatalytic application
P. D. Bhangé, D. S. Shinde, D.S. Bhangé and G. S. Gokavi
National Conference on Recent Trends in Chemistry and Materials Science (RTCMS-2019) during 9 Feb. 2019 at Shivaji University, Kolhapur
12. Bimetallic CuNi Nanoparticles loaded on porous carbon as an efficient catalyst for homocoupling of arylboronic acids
Pooja Patil, Uttakarsha Jadhav, Megha Jagadale, Altaf Naikawadi, **Pallavi Bhangé*** and G.S. Rashinkar*
National conference on Recent Trends in Chemistry and Materials Science (RTCMS-2019) during 9th Feb., 2019 at Shivaji University, Kolhapur.
13. Mesoporous Sn-SBA-15 as an efficient catalyst for the synthesis of Nopol by prins condensation
Pallavi Bhangé
International Journal for Research in Engineering Application & Management (IJREAM), 08 June, 2018: 98-106
14. Heterostructure bismuth titanate nanocomposites: structural phases and its correlation with photocatalytic activity
Pallavi Bhangé
International Conference on Advances in Chemical Sciences (IC-ACS 2018) during Feb., 1-3, 2018 at Shivaji University, Kolhapur.
15. Nanostructured bismuth titanate composites for hydrogen generation and environmental remediation
Pallavi Bhangé and G.S. Gokavi
International Conference on Materials and Environmental Science [ICMES-2018] during 11-12 Dec., 2018 at Shivaji University, Kolhapur
16. Visible light active superoxide modified nano crystalline anatase titania
Pallavi Bhangé and G.S. Gokavi
National seminar on application of chemical and material science for sustainable development during 20 Feb, 2016 at Kolhapur
17. Synthesis and physico-chemical characterizations of tin doped TiO₂ by solution combustion route.
Pallavi Bhangé and G.S. Gokavi
National Conference on Frontiers in Chemical and Material Sciences during 16-17 Jan, 2015 at Kolhapur

18. Enzyme immobilization on organic-inorganic hybrid mesoporous silica materials for Co-precipitation of cholesterol
Pallavi Bhange, D.S.Bhange, Asmita Prabhune, Veda Ramaswamy and G.S. Gokavi
National Conference on Current Trends in Chemicals and NanoSciences (CTCNS-2014) during 17-18 Jan, 2014 at Kolhapur
19. Direct synthesis of well-ordered mesoporous Al-SBA-15 for esterification of acetic acid
Pallavi Bhange, D.S. Bhange, J. Berge, S. Shevale, V. Ramaswamy and G.S. Gokavi
International Conference on Advanced and Applied Material Science during 15-16 Jan, 2014 at Kolhapur
20. Direct synthesis of well-ordered mesoporous Al-SBA-15 and its correlation with the catalytic activity'.
Pallavi Bhange and G.S. Gokavi
National Conference on Current Research in Chemical Sciences (CRCS-2013) during 22-23 Jan, 2013 at Kolhapur
21. Structure-activity relationship in the UV-mediated photocatalytic splitting of water over vanadium – doped indium titanates $\text{In}_2\text{Ti}_{1-x}\text{V}_x\text{O}_{5+\delta}$
Pallavi Shah, D. S. Bhange, A. S. Deshpande and Narendra M.Gupta
19th National Symposium on Catalysis during 18-21 January **2009** at NCL, Pune.
22. Structural features of encapsulated Bile salt hydrolase enzyme in the channels of APTES functionalized mesoporous SBA-15
Pallavi Shah and Veda Ramaswamy
14th International Congress on Catalysis during 13-18 July **2008**, COEX, Seoul, Korea
23. Esterification of acetic acid with n-butanol over Al-SBA-15 mesoporous molecular sieves prepared by direct hydrothermal synthesis
Pallavi Shah and Veda Ramaswamy
14th International Congress on Catalysis during 13-18 July **2008**, COEX, Seoul, Korea
24. Direct hydrothermal Synthesis of mesoporous Sn-SBA-15 and its catalytic application for the synthesis of nopol by prins condensation
Pallavi Shah and Veda Ramaswamy
CATWORKSHOP-2008 during 18-20 Feb **2008** at IMMT, Bhubaneswar, Orissa.
25. Structural features of encapsulated Bile salt hydrolase enzyme in the channels of APTES functionalized mesoporous SBA-15
Pallavi Shah and Veda Ramaswamy
CATWORKSHOP-2008 during 18-20 Feb **2008** at IMMT, Bhubaneswar, Orissa.
26. Direct hydrothermal synthesis and catalytic application of mesoporous Sn-SBA-15
Pallavi Shah and Veda Ramaswamy
National Symposium on Catalysis during 16-19 Apr **2007** at Deharadun
27. Direct hydrothermal synthesis and catalytic application of mesoporous Sn-SBA-15
Pallavi Shah and Veda Ramaswamy
Symposium on National Science Day during 28 Feb **2007** at NCL, Pune
28. Thermal stability of mesoporous Sn-SBA-15 mesoporous molecular sieves: An in situ HTXRD study
Pallavi Shah and Veda Ramaswamy
International Symposium on recent advances in inorganic materials (ISMC-06) during 4-8 Dec 2006 at BARC, Mumbai

29. Synthesis and structural characterization of nanocrystalline α - alumina by room temperature and high temperature powder X-ray diffraction
Pallavi Shah, Mahesh Bhagwat, K. Selvaraj and Veda Ramaswamy
XXXIII National Seminar on crystallography, 8-10 Jan **2004** at NCL, Pune.

Book Published: Mesoporous materials: A new generation in material Science, Research Monograph, LAP, Lambert Academic Publication, ISBN 978-3-659-24388-2

Book chapters in books by international publishers

1. Immobilization of Ntn Hydrolases on APTES functionalized SBA-15
Pallavi Shah, N. Sridevi, Asmita Prabhune and Veda Ramaswamy
Studies in Surface Science and Catalysis, **170**, 1891-1898 (**2008**).
Scopus
2. Influence of Sn- and Al- metal sources on post-synthesis modification of mesoporous SBA-15 molecular sieves
Pallavi Shah, A. V. Ramaswamy and Veda Ramaswamy
Studies in Surface Science and Catalysis, **158**, 565-572 (**2005**).
3. Incorporation of tin into mesoporous silics SBA-15 molecular sieves
Pallavi Shah, A.V. Ramaswamy, R. Pasricha and Veda Ramaswamy
Studies in Surface Science and Catalysis, **154**, 870-877 (**2005**).

Patent

Title of the patent: Intranasal Drug Delivery Device

Patent Number: 354384-001 granted

Mrs Ruth M. Kamble, **Dr. Pallavi Bhange**, Dr. Abhinandan Patil

International Publication-30

Citation-1219; H index-14; i10 index-17

References

1. Dr. Veda Ramaswamy
Retired Deputy Director and Head
Catalysis Division
National Chemical Laboratory,
Dr. Homi Bhabha Road
Pune 411008, India
Email: bkvedanayaki@yahoo.co.in
2. Dr. N. M. Gupta
Retired Head of BARC,
Emeritus Scientist, NCL, Pune
Catalysis Division
National Chemical Laboratory,
Pune-411008.
Email: nm.gupta@ncl.res.in
3. Prof. G. S. Gokavi
Head, Department of Chemistry,
Shivaji University,
Kolhapur-416004,
Maharashtra, India.
Email: gsgokavi@hotmail.com