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Date of Birth: 18-04-1980

VISION & OBJECTIVE

I would like to excel simultaneously in the fields of research and education as both are my passions.

EDUCATION

Ph. D. (Physics)

2007 - 2011

Centre for Materials for Electronics Technology (C-MET), Pune, India under University of Pune.

Title: Synthesis Plain and Hierarchical Nanostructures of (a) Metal using Thermal Plasma and (b) Metal Oxides and Sulfides using Microwave Assisted Semi-solvothermal Technique.

M.Sc. (Physics)

2002-2004

Department of Physics, University of Pune, India

GPA: 6.2 (First Class)

B.Sc. (Physics)

1999-2002

Nowrosjee Wadia College, Pune under University of Pune, India

Percentage: 71 % (First Class with distinction)

AREA OF SPECIALIZATION

Physics, materials, nanomaterials and thin films preparation, materials characterization and applications such as photoconductors, solar cells, photocatalysis, additive manufacturing etc.

COMPETENCE IN RESEARCH AND TEACHING

Research

- Various physical as well as chemical techniques of synthesis of nanomaterials like thermal plasma, ECR plasma, solid state reaction and microwave assisted solvo-thermal routes.
- Physico-chemical characterization techniques like X-ray diffraction (XRD), electron microscopy techniques (SEM, TEM), scanning probe microscopy (SPM), thermal analysis (TG-DTA, DSC), spectroscopy (UV-visible, FTIR) etc.
- Hands on experience on electron microscopy techniques (FESEM, FETEM).
- Knowledge of CFD tools like FLUENT

Academics

- Visiting Faculty at International Institute of Information Technology (I2IT), Pune, India during July 2008 to July 2010 for M. Tech. (Nanotechnology) course. Taught Subjects like Nanophysics, Nanomaterials Characterization, Nanosensors etc. More than 300 hrs of teaching experience.
- Ph. D. Student: **1** (Co-guide) Nov. 2014 – July 2018.
- No. of M. Tech / M. Sc. Students guided: **14** (8 M. Sc. And 6 M. Tech. Students)
- No. of B. Tech Students guided: **03**
- Regularly connected with Bharati Vidhyapeeth Deemed University, Pune, India for Question paper setting and as External Examiner for M. Tech (Nano) course since 2012.
- Developed the course syllabus for subjects like Nanophysics, Nanomaterials Characterization, Nano Sensors etc. for **M. Tech. course** at I2IT, Pune and Bharati Vidyapeeth Deemed University, Pune.

EMPLOYMENT HISTORY

Dec 2020 – Till date, Centre for Materials for Electronics Technology (C-MET), Pune, India as Scientist 'B'

Research Activities related to (i) synthesis of nanomaterials and thin films using physical and chemical techniques, (ii) their physico-chemical characterization, (iii) their subsequent applications in photocatalysis, sensors and solar cells and (iv) materials and technology for additive manufacturing.

Nov 2016 – Dec 2020, Centre for Materials for Electronics Technology (C-MET), Pune, India as Scientist 'A'

Research Activities related to (i) synthesis of nanomaterials and thin films using physical and chemical techniques, (ii) their physico-chemical characterization and (iii) their subsequent applications in photocatalysis, sensors and solar cells.

Oct 2010 – November 2016, Centre for Materials for Electronics Technology (C-MET), Pune, India as Senior Scientific Assistant

Research Activities related to (i) synthesis of nanomaterials using physical and chemical techniques, (ii) their physico-chemical characterization and (iii) their subsequent applications.

Oct 2004 – Oct 2010, Centre for Materials for Electronics Technology (C-MET), Pune, India as Project Staff

Synthesis and characterization of nanomaterials synthesized using thermal plasma technique.

COMPLETED/ONGOING PROJECTS

Projects Completed (As a part of educational curriculum):

- “Nitridation of Industrial Steel using ECR Plasma”, at M.Sc. level, under the guidance of Prof. S. K. Date, Pune University.
- “Applications of Physics in Agriculture”, at B. Sc. Level under the guidance of Dr. K. V. Desa, Nowrosjee Wadia College, Pune.

Ongoing/ Completed Projects (As a part of professional work)

- **Completed:** “Large scale generation of nanosized metals/metal oxides/nitrides by transferred arc thermal plasma reactor”, a DIT, Govt of India sponsored project since Oct. 2004 till March 2011. **(Funding Amount: Rs. 418 Lakh) as a Project Staff/Team member**
- **Completed:** “*In-house* Development of Photoconducting Paste (using Semiconductor Nanostructures) for Exploration in Photopatternable Thick Film Technology for Advanced Optoelectronic Applications”, a MeitY, Govt of India sponsored project since Feb. 2012 till Feb 2015. **(Funding Amount: Rs. 90 Lakh) as Principle Investigator-III.**
- **Completed:** “Proof of the concept Development of Photopatternable Thick film thermistor Composite Materials for Temperature sensor Application”, a DRDO, Govt of India sponsored project since Jan. 2016 till Jan. 2018. **(Funding Amount: Rs. 64 Lakh) as Co-Investigator.**
- **Completed:** “Development of nanostructured manganese ferrite ($MnFe_2O_4$)”, a Manganese Ore India Limited (MOIL), Govt. of India sponsored project since Feb. 2018 till Jan. 2020. **(Funding Amount: Rs. 24.76 Lakh) as Co-Investigator.**
- **Ongoing:** “Development of printable silver thick film ink for Radio Frequency Identification (RFID) Tags on environment friendly, flexible substrate for smart applications”, a MeitY, Govt. of India sponsored project since Nov. 2018 till Nov. 2021. **(Funding Amount: Rs. 108.84 Lakh) as Co-Investigator.**
- **Ongoing:** “Centre of Excellence in Rechargeable Battery Technology (Pre-Cell)”, a MeitY, Govt. of India sponsored project since Dec 2019 till Dec 2024. **(Funding Amount: Rs. 2087.67 Lakh) as Co-Investigator.**
- **Ongoing:** “Studies on annealing on magnetic performance of NiFe laminations for Pulsed magnets used in Accelerators”, a BRNS, Govt. of India sponsored project since Dec. 2019 till Dec. 2021. **(Funding Amount: Rs. 32.06 Lakh) as Co-Investigator.**
- **Ongoing:** “Creation of R&D culture in Electronic Materials among SC and ST students in Maharashtra”, a MeitY, Govt. of India sponsored project since March 2020 till March 2023. **(Funding Amount: ~Rs. 145 Lakh) as Co-Investigator.**
- **Ongoing:** “Center of Excellence on Additive Manufacturing (CoE AM)”, a MeitY, Govt. of India sponsored project since Sept 2020 till Sept 2023. **(Funding Amount: ~Rs. 1227.20 Lakh) as Co-Investigator.**

TECHNOLOGY TRANSFER

- **Development of Photopatternable Silver and Photoconductor (CdS) thick film pastes for Photo Sensors, Team members: Dr. S. B. Rane, Scientist 'D', Dr. Govind Umarji, Scientist 'A', and Dr. Manish Shinde, Scientist 'A' Cost: ~ 14.24 Lakhs (+ Taxes). Technology was transferred on 28th March 2018 to M/s. Ants Ceramics, Mumbai.**

RESEARCH OUTPUT

(Please see Annexure - I for details)

Publications

International/National Journals (Accepted and Published): **62**

National/ International Conferences: **52**

Intellectual Output and special achievements:

Patents: **04** (Indian)

Awards for Oral/Poster Presentations: **07**

Oral Presentations/Invited Lectures: **23**

Technology Transfer: **01**

List of Technical Publications

[A] International/National Journals

1. ***Transformation of ZnS microspheres to ZnO, their computational (DFT) validation and dye-sensitized solar cells application***
Yogesh Waghadkar, **Manish Shinde**, Nilakantha Tripathi, Bhalchandra Pujari, Madhushree Bute, Ashif Tamboli, Norihiro Suzuki, Hassan Fouad, Chiaki Terashima, Hyosung Choi, Sunit Rane, Ratna Chauhan, Suresh Gosavi, Akira Fujishima
AIP Advances, 12 (7), 2022, 075001 (<https://doi.org/10.1063/5.0098766>) (ISSN No: 2158-3226) (IF: 1.548)
2. ***Emerging cold plasma treatment and machine learning prospects for seed priming: a step towards sustainable food production***
Amruta Shelar, Ajay Vikram Singh, Paul Dietrich, Romi Singh Maharjan, Andreas Thissen, Pravin N Didwal, **Manish Shinde**, Peter Laux, Andreas Luch, Vikas Mathe, Timotheus Jahnke, Manohar Chaskar, Rajendra Patil
RSC advances, 12 (17), 2022, 10467-10488. (DOI: [10.1039/d2ra00809b](https://doi.org/10.1039/d2ra00809b)) (ISSN No: 2046-2069) (IF: 4.036)
3. ***Bismuth-Based Gas Sensors: A Comprehensive Review***
Rahul S. Ghuge, **Manish D. Shinde*** & Sunit B. Rane*
Journal of Electronic Materials, 50, 2021, 6060–6072. (DOI: [10.1007/s11664-021-09174-2](https://doi.org/10.1007/s11664-021-09174-2)) (ISSN No: 0361-5235) (IF: 1.938)
4. ***Terrestrial snail-mucus mediated green synthesis of silver nanoparticles and in vitro investigations on their antimicrobial and anticancer activities***
Pramod C Mane, Shabnam AR Sayyed, Deepali D Kadam, **Manish D Shinde**, Amanullah Fatehmulla, Abdullah M Aldhafiri, Eman A Alghamdi, Dinesh P Amalnerkar, Ravindra D Chaudhari
Scientific Reports, 11, 2021, 13068. (DOI: [10.1038/s41598-021-92478-4](https://doi.org/10.1038/s41598-021-92478-4)) (ISSN No: 2045-2322) (IF: 4.996)
5. ***Facile synthesis of nanostructured Ni-Co/ZnO material: An efficient and inexpensive catalyst for Heck reactions under ligand-free conditions***
Digambar B Bankar, Kaluram G Kanade, Ranjit R Hawaldar, Sudhir S Arbuj, **Manish D Shinde**, Shrikant P Takle, Dinesh P Amalnerkar, Santosh T Shinde
Arabian Journal of Chemistry, 13 (12), 2020, 9005-9018. (DOI: <https://doi.org/10.1016/j.arabjc.2020.10.023>) (ISSN No: 1861-4728 (print); 1861-471X (web)) (IF: 4.568)
6. ***Highly sensitive label-free bio-interfacial colorimetric sensor based on silk fibroin-gold nanocomposite for facile detection of chlorpyrifos pesticide***
P. C. Mane, **M. D. Shinde**, S. Varma, B. P. Chaudhari, A. Fatehmulla, M. Shahabuddin, D. P. Amalnerkar, A. M. Aldhafiri, R. D. Chaudhari,
Scientific Reports, 10 (1), 2020, 1-14. (DOI: [10.1038/s41598-020-61130-y](https://doi.org/10.1038/s41598-020-61130-y)) (ISSN No: 2045-2322) (IF: 4.996)

7. **Facile template free approach for the large-scale solid phase synthesis of nanocrystalline XIn_2S_4 ($X= Cd/Zn$) and its photocatalytic performance for H_2 evolution**
 Sonali D Naik, Sanjay K Apte, Sunil N Garaje, Yogesh A Sethi, **Manish D Shinde**, Sudhir A Arbuj, Bharat B Kale, Ravindra S Sonawane
New Journal of Chemistry, 44 (2020) 9634-9646 (DOI: [10.1039/D0NJ01323D](https://doi.org/10.1039/D0NJ01323D))
 (ISSN NO.: 1144-0546 (print); 1369-9261 (web)) (IF: 3.591)
8. **Facile synthesis of hollow urchin-like Nb_2O_5 nanostructures and their performance in dye-sensitized solar cells**
 Neeta Mohite, **Manish Shinde**, Arun Kumar Gupta, Yogesh Waghadkar, Suresh W. Gosavi, K. C. Mohite, Ratna Chauhan & Sunit Rane
Journal of Solid State Electrochemistry, 24, 2020, 273-281 (DOI: [10.1007/s10008-019-04481-5](https://doi.org/10.1007/s10008-019-04481-5))
 (ISSN No.:-) (IF: -)
9. **Silver Nanoparticles-Silk Fibroin Nanocomposite Based Colorimetric Bio-Interfacial Sensor for On-Site Ultra-Trace Impurity Detection of Mercury Ions**
 P Mane, R Chaudhari, N Qureshi, **M Shinde**, T Kim, D Amalnerkar
Journal of Nanoscience and Nanotechnology 20 (4), 2020, 2122-2129
 (DOI: [10.1166/jnn.2020.17335](https://doi.org/10.1166/jnn.2020.17335)) (ISSN No.: 1533-4880) (IF: 1.354)
10. **Solvothermally Synthesized Nickel Doped Tin Dioxide based Thick Films for H_2 and NH_3 Gas Sensing**,
 Sapana S Rane, **Manish D. Shinde**, Sudhir S Arbuj, Neha Joshi, Sunit B Rane, Suresh W Gosavi
Materials Today: Proceedings 23 (2020) 154-164
 (DOI:<https://doi.org/10.1016/j.matpr.2020.02.013>) (ISSN: 22147853) (IF:1.46)
11. **$ZnCl_2$ loaded TiO_2 nanomaterial: an efficient green catalyst to one-pot solvent-free synthesis of propargylamines**
 Digambar B. Bankar, Ranjit R. Hawaldar, Sudhir S. Arbuj, Mansur H. Moulavi, Santosh T. Shinde, Shrikant P. Takle, **Manish D. Shinde**, Dinesh P. Amalnerkar and Kaluram G. Kanade
RSC Advances, 9 (56), 2019, 32735-32743
 (DOI: <https://doi.org/10.1039/C9RA06693D>) (ISSN No.: 2046-2069) (IF: 4.036)
12. **Effect of nanosecond and femtosecond pulse laser on the formation of WS_2 nanostructures and field emission characteristics**
 Pankaj Koinkar, Kohei Sasaki, Akihiro Furube, Kei-Ichiro Murai, Toshihiro Moriga, **Manish Shinde**, Sunit Rane, Somnath Bhopale and Mahendra A. More
Modern Physics Letters B, 33 (14-15), 2019, 1940014
 (DOI: <https://doi.org/10.1142/S0217984919400141>) (ISSN No.: 0217-9849 (print); 1793-6640 (web)) (IF: 1.668)
13. **Sol-Gel Assisted Isotropic Morphological Progression in Nanostructured MoO_3 and Allied Investigations on Photocatalytic Dye-Degradation**
 N Qureshi, **M Shinde**, S Arbuj, S Rane, A Bhalerao, HU Kim, T Kim, D Amalnerkar
Journal of Nanoscience and Nanotechnology, 19 (6), 2019, 3479-3486
 (DOI: [10.1166/jnn.2019.16139](https://doi.org/10.1166/jnn.2019.16139)) (ISSN No.: 1533-4880) (IF: 1.354)

14. **Hierarchical MoS₂-Based Onion-Flower-like Nanostructures with and without Seedpods via Hydrothermal Route Exhibiting Low Turn-on Field Emission**
N Qureshi, K Harpale, **M Shinde**, K Vutova, M More, T Kim, D Amalnerkar
[Journal of Electronic Materials](#), 48 (3), 2019, 1590-1598
(DOI: [10.1007/s11664-018-06908-7](#)) (ISSN No.: 0361-5235) (IF: 1.938)
15. **Highly efficient dye-sensitized solar cells by TiCl₄ surface modification of ZnO nano-flower thin film**
Yogesh Waghadkar, **Manish Shinde**, Sunit Rane, Suresh Gosavi, Chiaki Terashima, Akira Fujishima, Ratna Chauhan
[Journal of Solid State Electrochemistry](#), 22 (11), 2018, 3621-3620
(DOI: [10.1007/s10008-018-4069-x](#)) (ISSN No.:) (IF:-)
16. **Hydrothermally Synthesized Zinc Sulphide Microspheres for Solar Light-Driven Photocatalytic Properties**
Yogesh Waghadkar, Sudhir Arbuj, **Manish Shinde**, Reshma Ballal, Sunit B. Rane, Suresh Gosavi, H. Fouad and Ratna Chauhan
[Journal of Electronic Materials](#), 47, 2018, 2687-2693
(DOI: [10.1007/s11664-018-6070-7](#)) (ISSN No.: 0361-5235) (IF:- 1.938)
17. **Template-free hydrothermal synthesis of beaded nanochain bundles of ZnO and their application as photoanode in dye-sensitized solar cells**
Reshma Ballal, **Manish Shinde**, Yogesh Waghadkar, Sudhir Arbuj, Sunit Rane, Ratna Chauhan
[Applied Physics A](#), 124, 2018, 203
(DOI: [10.1007/s00339-018-1620-7](#)) (ISSN No:- 0947-8396 (print); 1432-0630 (web))
(IF:-2.584)
18. **Morphological Evolution of Nanorod to Submicron Brick-Like Cobalt Oxide Structures under Microwave Solvothermal Regime**
Manish Shinde, Nilam Qureshi, Sunit Rane, Chisung Ahn, Taesung Kim, and Dinesh Amalnerkar
[Science of Advanced Materials](#), 10, 2018, 144-148
(DOI: <https://doi.org/10.1166/sam.2018.2950>)
(ISSN No.: 1468-6996 (print); 1878-5514 (web)) (IF:- 7.821)
19. **Chemical spray pyrolysis synthesis of covellite copper sulphide (CuS) thin films for economical counter electrode for DSSCs**
Kiran Diwate, Sachin Rondia, Azam Mayabadi, Avinash Rokade, Ravindra Waykar, Haribhau Borate, Adinath Funde, **Manish Shinde**, M. B. Rajendra Prasad, Habib Pathan, Sandesh Jadkar
[Journal of Materials Science: Materials in Electronics](#), 29, 2018, 4940-4947
(DOI: [10.1007/s10854-017-8453-6](#)) (ISSN No:- 0957-4522 (print); 1573-482X (web))
(IF:- 2.478)
20. **Exploration of Nb₂O₅ Nanorods via Hydrothermal Routes for Dye Sensitized Solar Cells (DSSC) Applications**
Mohite, Neeta; Ballal, Reshma; **Shinde, Manish**; Rane, Sunit; Mohite, K. C.; Chauhan, Ratna,
[Energy and Environment Focus](#), 6, 2017, 179-183
(DOI: [10.1166/eef.2017.1247](#)) (ISSN No. -) (IF:-)

21. ***Perforated ZnO Nanoflakes via Hydrothermal Routes for Dye Sensitized Solar Cells (DSSC) Applications***,
Mohite, Neeta; **Shinde, Manish**; Ballal, Reshma; Rane, Sunit; Mohite, K. C.; Chauhan, Ratna
Energy and Environment Focus, 6, 2017, 132-138
(DOI: <https://doi.org/10.1166/eef.2017.1248>) (ISSN No.: -) (IF: -)
22. ***Designing ecofriendly bionanocomposite assembly with improved antimicrobial and potent on-site Zika virus vector larvicidal activities with its mode of action***
Prmod C. Mane, Ravindra D. Chaudhari, **Manish D. Shinde**, Deepali D. Kadam, Chung Kil Song, Dinesh P. Amalnerkar, Haiwon Lee
Scientific Reports, 7, 2017, 15531
(DOI: [10.1038/s41598-017-15537-9](https://doi.org/10.1038/s41598-017-15537-9)) (ISSN No.:2045-2322) (IF: 4.996)
23. ***Swift tuning from spherical molybdenum microspheres to hierarchical molybdenum disulfide nanostructures by switching from solvothermal to hydrothermal synthesis route***
Nilam Qureshi, Sudhir Arbuj, **Manish Shinde**, Sunit Rane, Milind Kulkarni, Dinesh Amalnerkar and Haiwon Lee **Nano Convergence** 4, 2017, 25
(DOI: [10.1186/s40580-017-0119-9](https://doi.org/10.1186/s40580-017-0119-9)) (ISSN No.:-) (IF:-)
24. ***Growth study of hierarchical Ag₃PO₄/LaCO₃OH heterostructures and their efficient photocatalytic activity for RhB degradation***
Virendrakumar G Deonikar, Santosh S Patil, Mohaseen S Tamboli, Jalindar D Ambekar, Milind V Kulkarni, Rajendra Popat Panmand, Govind G Umarji, **Manish D Shinde**, SB Rane, Nagegownivari Ramachandra Munirathnam, Deepak R Patil, Bharat B Kale
Physical Chemistry Chemical Physics, 19, 2017, 20541-20550
(DOI:[10.1039/C7CP02328F](https://doi.org/10.1039/C7CP02328F)) (ISSN No: 1463-9076 (print); 1463-9084 (web))
(IF: 3.676)
25. ***0-D to 1-D engendering in PbCrO₄ nanostructures and their visible light enabled photocatalytic H₂S splitting***
Nilam M Qureshi, **Manish D Shinde**, Jin-Ook Baeg, Bharat B Kale
New Journal of Chemistry, 41, 2017, 4000-4005 (DOI:[10.1039/C6NJ04012H](https://doi.org/10.1039/C6NJ04012H))
(ISSN No.: 1144-0546 (print); 1369-9261 (web)) (IF: 3.591)
26. ***Instantaneous Synthesis of Faceted Iron Oxide Nanostructures Using Microwave Solvothermal Assisted Combustion Technique***
Shinde Manish; Qureshi Nilam; Rane Sunit; KimJang Ah; Kim Taesung; Amalnerkar Dinesh
Journal of Nanoscience and Nanotechnology, 17 (7), 2017, 5024-5030
(DOI: 10.1166/jnn.2017.13453) (ISSN No.: 1533-4880) (IF:1.354)
27. ***Time varied synthesis of hierarchical ZnO microspheres and their application in dye-sensitized solar cells***
Yogesh Waghadkar, **Manish Shinde**, Reshman Ballal, Sunit Rane, Suresh Gosavi and Ratna Chauhan
Journal of Solid State Electrochemistry, 21(7), 2017, 1797-1804
(DOI:[10.1007/s10008-017-3554-y](https://doi.org/10.1007/s10008-017-3554-y)) (ISSN No.:-) (IF: -)
28. ***Concurrent Synthesis of SnO/SnO₂ Nanocomposites and Their Enhanced Photocatalytic Activity***
Animesh Roy, Sudhir Arbuj, Yogesh Waghadkar, **Manish Shinde**, Govind Umarji, Sunit Rane, Kashinath Patil, Suresh Gosavi and Ratna Chauhan
Journal of Solid State Electrochemistry, 21 (1), 2017 (9-17)
(DOI: [10.1007/s10008-016-3328-y](https://doi.org/10.1007/s10008-016-3328-y)) (ISSN No.:-) (IF: -)

29. **Synthesis and characterization of chemical spray pyrolysed CZTS thin films for solar cell applications**
Kiran Diwate, Kakasaheb Mohite, **Manish Shinde**, Sachin Rondiya, Amit Pawbake, Habib Pathan, Abhijit Date, Sandesh Jadkar
(1st International Conference on Energy and Power, ICEP2016, 14-16 December 2016, RMIT University, Melbourne, Australia)
Energy Procedia, 110 (2017) 180 – 187
(DOI: <https://doi.org/10.1016/j.egypro.2017.03.125>) (ISSN No.:-) (IF: -)
30. **Substrate temperature dependent studies on properties of chemical spray pyrolysis deposited CdS thin films for solar cell applications**
Kiran Diwate, Amit Pawbake, Sachin Rondiya, Rupali Kulkarni, Ravi Waykar, Ashok Jadhavar, Avinash Rokade, Adinath Funde, Kakasaheb Mohite, **Manish Shinde**, Habib Pathan, Rupesh Devan, Sandesh Jadkar
Journal of Semiconductors, 38 (2017) 023001
(DOI: [10.1088/1674-4926/38/2/023001](https://doi.org/10.1088/1674-4926/38/2/023001)) (ISSN No.:) (IF: -)
31. **Comparative Physico-chemical Investigations on Processed Moth Caterpillar Silks from Northern Western Ghats**
Pramod C. Mane, Nilam Qureshi, **Manish Shinde**, Uttam Mulik, Dinesh Amalnerkar, Ravindra D. Chaudhari
Current Science, 113(5), 2017, 919 (DOI: -) (ISSN No.: 0011-3891) (IF: 1.102)
32. **Bipyramidal and rod like ZnO nanoarchitectures synthesized by precipitation route at different pH for dye sensitized solar cells**
Navya V. Tellabati, Yogesh B. Waghadkar, **Manish D. Shinde**, Sunit B. Rane, Suresh W. Gosavi and Ratna Chauhan
Journal of Nanoengineering and Nanomanufacturing, 6(2), 2016, 114-120
(DOI: [10.1166/jnan.2016.1276](https://doi.org/10.1166/jnan.2016.1276)) (ISSN No.:-) (IF: -)
33. **Nanoscale Mo-MoO₃ Entrapped in Engineering Thermoplastic: Inorganic Pathway to Bactericidal and Fungicidal Action**
Nilam Qureshi, Ravindra Chaudhari, Pramod Mane, **Manish Shinde**, Sandesh Jadkar, Sunit Rane, Bharat Kale, Anand Bhalerao, Dinesh Amalnerkar
IEEE Transactions on NanoBioscience, 15(3), 2016, 258-264
(DOI: [10.1109/TNB.2016.2535285](https://doi.org/10.1109/TNB.2016.2535285)) (ISSN No.:-) (IF: -)
34. **Sub-Micron/Nano-Scale Polymorphs of Molybdenum Oxide with Tuned Structural and Morphological Features Embedded in Engineering Thermoplastic**
Nilam Qureshi, **Manish Shinde**, Sandesh Jadkar, Anand Bhalerao, Bharat Kale, and Dinesh P. Amalnerkar
Materials Focus, 5, 2016, 17-23
(DOI: <https://doi.org/10.1166/mat.2016.1294>) (ISSN No.:-) (IF: -)
35. **Hierarchical Zinc Oxide Pomegranate and Hollow Sphere Structures as Efficient Photoanodes for Dye-Sensitized Solar Cells**
Ratna Chauhan, **Manish Shinde**, Abhinav Kumar, Suresh Gosavi, Dinesh Amalnerkar
Microporous and Mesoporous Materials, 226, 2016, 201-208
(DOI: [10.1016/j.micromeso.2015.11.054](https://doi.org/10.1016/j.micromeso.2015.11.054)) (ISSN No.:-) (IF: -)
36. **Hierarchical ZnO nanoflower: A potential energy material synthesized by precipitation route**
Navya V. Tellabati, **Manish D. Shinde**, Ratna Chauhan, Sunit Rane, Uttam P. Mulik and Dinesh P. Amalnerkar
Journal of Nanoengineering and Nanomanufacturing, 5(4), 2015, 281-287
(DOI: <https://doi.org/10.1166/jnan.2015.1253>) (ISSN No.:-) (IF: -)

37. ***Coupled Semiconductor Nanosystem Based on SnO/SnO₂ Nanocomposites for Photocatalytic Applications***
A. Roy, Y. Waghadkar, S. Arbuj, G. Umarji, **M. Shinde**, R. Chauhan, S. Gosavi, S. Rane
Journal of Nanoengineering and Nanomanufacturing, 5, 2015, 210-215
(DOI: [10.1166/jnan.2015.1248](https://doi.org/10.1166/jnan.2015.1248)) (ISSN No.:-) (IF: -)
38. ***Optical and photovoltaic properties of temperature dependent synthesis of ZnO nanobelts, nanoplates and nanorods***
Navya. V. Tellabati, Yogesh B. Waghadkar, **Manish D. Shinde**, Suresh W. Gosavi, Dinesh P. Amalnerkar and Ratna Chauhan
Journal of Solid State Electrochemistry, 19 (8), 2015, 2413-2420
(DOI: [10.1007/s10008-015-2890-z](https://doi.org/10.1007/s10008-015-2890-z)) (ISSN No.:-) (IF: -)
39. ***Synthesis of Cobalt Oxide Nanostructures by Microwave Assisted Solvothermal Technique Using Binary Solvent System***
Manish Shinde, Nilam Qureshi, Sunit Rane, Uttam Mulik, Dinesh Amalnerkar
Physical Chemistry Communications, 2(1), 2015, 1-9
(DOI:-) (ISSN No.:-) (IF: -)
40. ***Superior Dielectric Performance Of Engineering Thermoplastic By In-Situ Embedding Of Nanoscale Mixed Phase Molybdenum Oxide***
Nilam Qureshi, **Manish Shinde**, Anand Bhalerao, Bharat Kale, Uttam Mulik, Dinesh Amalnerkar
Journal of Electronic Materials, 44(7), 2015, 2269-2275
(DOI:[10.1007/s11664-015-3686-8](https://doi.org/10.1007/s11664-015-3686-8)) (ISSN No.: 0361-5235) (IF: 1.938)
41. ***Tuning Magnetic Behavior of Nanoscale Cobalt Sulphide and its Nanocomposite with Engineering Thermoplastic***
Narendra Rumale, Sudhir Arbuj, Govind Umarji, **Manish Shinde**, Uttam Mulik, Pattayil Joy, and Dinesh Amalnerkar
Journal of Electronic Materials, 44(7), 2015, 2308-2311
(DOI:[10.1007/s11664-015-3753-1](https://doi.org/10.1007/s11664-015-3753-1)) (ISSN No.: 0361-5235) (IF: 1.938)
42. ***Solvothermal Syntheses of Cadmium Sulfide Nanoparticles with Varying Concentration of Ammonia and Reaction Time and Their Effect on Optical Properties***
Animesh Roy, Snehal Dige, Govind G. Umarji, **Manish D. Shinde**, Sunit B. Rane, Uttam P. Mulik, Dinesh P. Amalnerkar, and Ratna Chauhan
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(DOI: 10.1166/mat.2015.1230) (ISSN No.:) (IF:)
43. ***Innovative biofilm inhibition and anti-microbial behavior of molybdenum sulfide nanostructures generated by microwave-assisted solvothermal route***
Nilam Qureshi, Rajendra Patil, **Manish Shinde**, Govind Umarji, Valerio Causin, Wasudev Gade, Uttam Mulik, Anand Bhalerao, Dinesh Amalnerkar
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(DOI: [10.1007/s13204-014-0322-5](https://doi.org/10.1007/s13204-014-0322-5)) (ISSN No.: 2190-5517) (IF: 3.674)
44. ***Synthesis of Hybrid Hierarchical Nanostructures for Photo-Sensor Applications***
V. Lekhya Subhashini, Govind G. Umarji, **Manish D. Shinde**, Sunit B. Rane, Uttam P. Mulik, Dinesh P. Amalnerkar
Journal of Basic and Applied Engineering Research, 1 (5), 2014, 97-102.
(DOI:-) (ISSN No.:) (IF:)
45. ***Simplistic approach for in situ generation of ZnS quantum dots in polyphenylene sulphide matrix via chalcogen enriched solid-solid reaction technique***
N Rumale, S Arbuj, G Umarji, **M Shinde**, U Mulik, A Pokle, D Amalnerkar
physica status solidi (a), 210 (2), 2013, 345-348
(DOI:<https://doi.org/10.1002/pssa.201228398>) (ISSN No.:) (IF:)

- 46. Single Step Solid-Solid Reaction Scheme for the Synthesis of Cobalt Sulphide-Oxide Nanoparticles in Polymer Matrix**
N Rumale, S Arbuj, G Umarji, **M Shinde**, U Mulik, A Pokle, D Amalnerkar
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- 47. Innate approach for fabrication of nickel oxide nanocomposite in pellet form and their electric properties**
N Qureshi, G Umarji, **M Shinde**, V Rane, L Borde, U Mulik, D Amalnerkar
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- 48. Thermoplastic Polymer Domain for Synthesis of Manganese Sulphide Nanoparticles by Simple Solid Solid Reaction**
Narendra Rumale, Sudhir Arbuj, Govind Umarji, **Manish Shinde**, Uttam Mulik, Anuj Pokle, Ranjit Hawaldar, Dinesh Amalnerkar
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- 49. Effect of precursors on the solid-state synthesis of hierarchical semiconducting PbS nanostructures**
Sujata Waghmare, **Manish Shinde**, Parag Adhyapak, Uttam Mulik, Dinesh Amalnerkar
Carbon Science and Technology 5/1 (2013) 244 – 252
(DOI:) (ISSN No.:) (IF:)
- 50. In-situ fabrication of cobalt oxide/sulphide mixed phase nanoparticles in Polyphenylenesulphide matrix**
Narendra Rumale, Sudhir Arbuj, Govind Umarji, **Manish Shinde**, Uttamrao Mulik, Anuj Pokle, Shital Shinde, Dinesh Amalnerkar
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(DOI:) (ISSN No.:) (IF:)
- 51. Field emission and photo-catalytic investigations on hierarchical nanostructures of copper doped CdS synthesized by microwave assisted solvothermal technique**
M D Shinde, P G Chavan, S S Arbuj, S B Rane, M A More, D S Joag, and D P Amalnerkar
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- 52. Tuning the Morphological Features of Ag₂S Nanostructures via Mono/Binary Solvent System and Precursors in Microwave Assisted 'Green' Semi-Solvothermal Synthesis**
M Shinde, S Rane, D Amalnerkar
Journal of Nanoengineering and Nanomanufacturing, 2 (3), 2012, 309-314
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- 53. Antimicrobial properties of uncapped silver nanoparticles synthesized by DC arc thermal plasma technique**
Manish Shinde, Rajendra Patil, Soumen Karmakar, Sudha Bhoraskar, Sunit Rane, Wasudev Gade, Dinesh Amalnerkar
Journal of Nanoscience and Nanotechnology, 12 (2), 2012, 887-893
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- 54. One-pot synthesis of semiconducting PbS nanorods within poly(phenylene sulphide) matrix**
Sujata Waghmare, Parag Adhyapak, **Manish Shinde**, Ramkrishna Gholap, Uttam Mulik, and Dinesh Amalnerkar
Journal of Nanoscience and Nanotechnology, 11(6), 2011, 5098-5101
(DOI: <https://doi.org/10.1166/jnn.2011.4199>) (ISSN No.: 1533-4880) (IF: 1.354)
- 55. Rapid generation of hierarchical nanoarchitectures of CdS via facile microwave assisted hydrothermal/semi-solvothermal route**
Manish Shinde, Amol Pawar, V Sreeja, Sunit Rane, H S Potdar, Dinesh Amalnerkar
International Journal of Nanotechnology, 7 (2010), 1120-1130
(DOI:10.1504/IJNT.2010.034716) (ISSN No.: 14757435) (IF: 1.02)
- 56. Synthesis of uncapped silver nanoparticles using DC arc plasma technique: Effect of change in plasma gas on morphological properties**
Manish Shinde, Amol Pawar, Soumen Karmakar, Tanay Seth, Varsha Raut, Sunit Rane, A K Das, Sudha Bhoraskar, Dinesh Amalnerkar
International Journal of Nanotechnology, 7 (2010), 1110-1119
(DOI:10.1504/IJNT.2010.034715) (ISSN No.: 14757435) (IF: 1.02)
- 57. Large scale synthesis of nanopowders by transferred arc thermal plasma**
Varsha B. Raut, Tanay Seth, Amol U. Pawar, **Manish D. Shinde**, and Dinesh P. Amalnerkar
International Journal of Nanotechnology, 7 (2010), 1098-1109
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- 58. Uncapped silver nanoparticles synthesized by DC arc thermal plasma technique for conductor paste formulation**
Manish Shinde, Amol Pawar, Soumen Karmakar, Tanay Seth, Varsha Raut, Sunit Rane, Ramakrishna Gholap, Sudha Bhoraskar, Dinesh Amalnerkar
Journal of Nanoparticle Research, 11 (2009) 2043-2047
(DOI:10.1007/s11051-008-9569-7) (ISSN No.: 1388-0764 (print); 1572-896X (web)) (IF: 2.253)
- 59. Concurrent in situ formation of Ag / Ag₂S nanoparticles in polymer matrix by facile polymer-inorganic solid state reaction**
Sujata Waghmare, **Manish Shinde**, Ramkrishna Gholap, N. Koteswara Rao, Ranjit Hawaldar, Uttam Mulik, Dinesh Amalnerkar
Journal of Nano Research, 5 (2009), 143-152
(DOI:10.4028/www.scientific.net/JNanoR.5.143) (ISSN No.: 1998-0124 (print); 1998-0000 (web)) (IF: 8.897)
- 60. Facile single step technique for simultaneous in-situ synthesis of Ag/Ag₂S-Polymer nanocomposites via PPS cyclization route**
Sujata Waghmare, **Manish Shinde**, Ramkrishna Gholap, N. Koteswara Rao, Tanay Seth, Dinesh Amalnerkar
Chemistry Letters, 37(2), (2008), 194-195
(DOI: <https://doi.org/10.1246/cl.2008.194>) (ISSN No.: 0366-7022) (IF: 1.55)
- 61. A new approach towards improving the quality and yield of arc-generated carbon nanotubes**
Soumen Karmakar, Naveen V. Kulkarni, V. G. Sathe, A. K. Shrivastava, **M. D. Shinde**, S. V. Bhoraskar and A. K. Das

[B] Presentations in Conferences/Symposia

1. **Synthesis of Titanium Oxide loaded Graphene Oxide hybrid nanostructures for Gas & UV-visible Sensing Applications** (Poster Presentation)
Nileshkumar Pardeshi, Yogesh Waghadkar, Shamal Bhalekar, Govind Umraji, Sudhir Arbuj, Sunit Rane, **Manish Shinde** and R. D. Kale
International Conference on Multifunctional Electronic Materials & Processing (MEMP-2021), organized by C-MET, Pune 8-10th March, 2021.
2. **Synthesis and characterization of Fe₃O₄ nanopowders using co-precipitation method** (Poster Presentation)
I. S. Ghalme, **M.D. Shinde**, S. S. Jagtap, G. R. Pansare, K. D. Diwate
International Conference on Sustainable Materials for Advanced Research in Technology, 5-6th February 2019
3. **Synthesis and characterization of Mn doped CdS nanoparticles using chemical co-precipitation method** (Poster Presentation)
M. R. Verma, **M. D. Shinde**, S. S. Jagtap, G. R. Pansare, K. D. Diwate
International Conference on Sustainable Materials for Advanced Research in Technology, 5-6th February 2019
4. **Study of ZnO thin films prepared by chemical bath deposition at varying temperatures** (Poster Presentation)
D. R. Mahamne, **M.D. Shinde**, S. S. Jagtap, G. R. Pansare, K. D. Diwate
International Conference on Sustainable Materials for Advanced Research in Technology, 5-6th February 2019
5. **Synthesis and characterization of Cu doped cds nanaoparticles by using co-precipitation method** (Poster Presentation)
H. I. Shaikh, **M. D. Shinde**, S. S. Jagtap, G. R. Pansare, K. D. Diwate
International Conference on Sustainable Materials for Advanced Research in Technology, 5- 6th February 2019
6. **Deposition and characterization of seed layer-assisted CuO thin film by using chemical bath deposition technique** (Poster Presentation)
R. S. Pokharkar, **M. D. Shinde**, D. R. Shinde, S. S. Jagtap, G. R. Pansare, K. D. Diwate
International Conference on Sustainable Materials for Advanced Research in Technology, 5- 6th February 2019
7. **Synthesis and characterization of manganese ferrite nanoparticles by hydrothermal method for energy storage application** (Poster Presentation)
Rahul Ghuge, Kranti Patole, Sudhir Arbuj, Manish Shinde, P.V. V. Patnaik, B. B. Kale, Sunit Rane, **International Conference on Supercapacitors, Energy Storage and Applications (ICSEA-2019)**, on March 08-10, 2019 organized by C-MET Thrissur at Thrissur, India.
8. **Preparation of ZnO thin films using sol-gel assisted spin coating technique for optoelectronic and sensing applications** (Poster Presentation),

- Sachin Chopade, Manish Shinde, and Sunit Rane, [International Conference on Nanotechnology for Human Welfare \(ICNHW-2018\)](#), February 02-04, 2018, H.V. Desai College, Pune.
9. ***Low temperature preparation of $\text{Cu}_2\text{ZnSnS}_4$ thin films via Na treatment*** (Poster Presentation),
Kadambari P. Kasar, Manish D. Shinde, Sunita M. Bhagwat, Sudhir S. Arbuj, Suresh W. Gosavi, and Sunit B. Rane, [International Conference on Nanotechnology for Human Welfare \(ICNHW-2018\)](#), February 02-04, 2018, H.V. Desai College, Pune.
 10. ***Low Temperature Preparation of $\text{Cu}_2\text{ZnSnS}_4$ Thin films for Optoelectronic Applications*** (Poster Presentation),
Kadambari P. Kasar, Manish D. Shinde, Sunita M. Bhagwat, Sudhir S. Arbuj, Suresh W. Gosavi, and Sunit B. Rane, [Raman Memorial Conference 2018](#), February 23-24, 2018 Department of Physics, Savitribai Phule Pune University, Pune.
 11. ***Synthesis and Characterization of Ytria based composite ($\text{Y}_2\text{O}_3\text{-YCr}_{0.5}\text{Mn}_{0.5}\text{O}_3$) for high temperature sensor application*** (Poster Presented - PP-24 3rd March 2017),
Anamika Pund, Rohit Agarkar, Manish Shinde, Govind Umarji, Sudhir Arbuj, Ramadoss Marimuthu and Sunit Rane, [Raman Memorial Conference 2017](#), March 3-5, 2017 department of Physics, Savitribai Phule Pune University, Pune.
 12. ***A Novel SnO/SnO_2 Coupled Semiconductor Nanosystem for Photocatalytic Applications***
Animesh Roy, Yogesh Waghadkar, Sudhir Arbuj, Govind Umarji, Manish Shinde, Ratna Chauhan, Sunit Rane
[National Conference on Materials for Energy Conversion and Storage \(NCMECS-2016\)](#), Department of Chemistry and Department of Physics, Mahatma Phule College, Pimpri, Pune, India, 12 -13th February 2016
 13. ***Temperature dependent progression on physico-chemical properties of CuS thin films***
K. D. Diwate, S. R. Jadkar, **M. D. Shinde**, S. D. Gunjal, A. S. Pawbake, S. R. Rondiya, K. C. Mohite
[International Conference on "Environmental Systems and Sustainable Development"](#) Department of Physics, C.T.Bora College, Shirur, Dist - Pune, Pin - 412210, **15th and 16th January, 2016**. Published in CTBC's international journal, "Proceedings of International Conference on Environmental Systems and Sustainable Development", **ISSN-2350-0905**
 14. ***Hierarchical ZnO nanostructures synthesized by precipitation route at different pH for dye sensitized solar cells***
Ratna Chauhan, Yogesh B. Waghadkar, Navya V. Tellabati, **Manish D. Shinde**, U. P. Mulik and S. W. Gosavi
[International Photovoltaic Solar Energy Conference \(Solar Asia - 2015\)](#) held at Department of Physics, Savitribai Phule Pune University, on 30th July - 1st August 2015.
 15. ***Plain and Hierarchical Nanostructures: Synthesis, Photosensor and Field Emission Applications (Invited Talk)***
Manish Shinde
[Indo Japan Workshop on Nanotechnology: Synthesis and Sensing Applications](#), at C-MET, Pune on 16th October, 2014
 16. ***Hierarchical ZnO nanostructures synthesized by hydrothermal route at different pH for dye sensitized solar cells***
T. Navya Vani, Y.B. Waghadkar, Ch. Srinivas, **Manish D. Shinde**, Ratna Chauhan, Uttam P. Mulik and Dinesh P. Amalnerkar
[NANOCON - 2014](#), organized by Bharathi Vidyapeeth, Pune during 14-15th Oct. 2014
 17. ***Synthesis of Hybrid Hierarchical Nanostructures for Photo-Sensor Application***

V. Lekhya subhashini, Govind Umarji, **Manish D. Shinde**, Sunit B. Rane, Uttam Mulik, Dinesh Amalnerkar

5TH International Conference on Innovative Trends in Mechanical, Material, Manufacturing, Automobile, Aeronautical Engineering and Applied Physics (ITMAEAP-2014), Jawaharlal Nehru Technical University (JNTU), New Delhi, August 23-24, 2014.

18. *Synthesis of Cu doped CdS Nanostructures via Co-precipitation Route for Photosensor Application*

Shlesha Gupta, Snehal Dige, Animesh Roy, Pradnya Pujari, Tuhina Paul, **Manish Shinde**, Govind Umarji, Sunit Rane, Uttam Mulik, Dinesh Amalnerkar

National Conference on Energy and Environment (NC2E-2014), School of Energy Studies and Department of Environmental Sciences, University of Pune, February 20-22, 2014.

19. *Spanking antimicrobial applications of nanostructures of molybdenum sulfide synthesized via expedient route*

Nilam Qureshi, Rajendra Patil, Govind Umarji, **Manish Shinde**, Wasudev Gade, Valerio Causin, Uttam Mulik, Dinesh Amalnerkar

Bangalore India Nano during 5-6th December 2013

20. *Photopatternable Thick Films: An Adroit Technology for Fabrication of Next Generation Miniaturized Thermistor*

Snehal B. Dige, Animesh B. Roy, Pradnya D. Pujari, Govind G. Umarji, **Manish D. Shinde**, Sunit B. Rane, Uttam P. Mulik and Dinesh P. Amalnerkar

IUSWNM-2013, 08-11th March 2013 at Thrissur

21. *Synthesis of Zinc Sulphide quantum dots by green solid-solid technique* Narendra Rumale, Sudhir Arbuj, Govind Umarji, **Manish Shinde**, Uttamrao Mulik, Anuj Pokle, Dinesh Amalnerkar

IUSWNM-2013, 08-11th March 2013 at Thrissur

22. *Photopatterned Photoconductor from Cu doped CdS Nanoparticles synthesized using Co-Precipitation method*

Staphina Edwin, Vivin D'souza, Ketki Patil, Govind Umarji, **Manish Shinde**, Tanushree Bhattacharjee, Sunit Rane, Uttam Malik, Dinesh Amalnerkar

IUSWNM-2013, 08-11th March 2013 at Thrissur

23. *In-situ fabrication of cobalt oxide / sulphide mixed phase nanoparticles in Polyphenylene Sulphide matrix*

Narendra Rumale, Sudhir Arbuj, Govind Umarji, **Manish Shinde**, Uttamrao Mulik, Anuj Pokle, Shital Shinde, Dinesh Amalnerkar

NANOCON - 2012, organized by Bharathi Vidyapeeth, Pune during 18-19th Oct. 2012

24. *Innate Approach for Fabrication of Nickel Oxide Nanocomposite in Pellet Form and Their Magneto-electric Properties*

Nialm Qureshi, Govind Umarji, **Manish Shinde**, Vivek Rane, Lalit Borde, Uttam Mulik, Dinesh Amalnerkar

NANOCON - 2012, organized by Bharathi Vidyapeeth, Pune during 18-19th Oct. 2012

25. *Effect of reactants on the solid-state synthesis of semiconducting PbS nanostructures*

Sujata Waghmare, **Manish Shinde**, Parag Adhyapak, Sopan Rathod, Uttam Mulik, Dinesh Amalnerkar

NANOCON - 2012, organized by Bharathi Vidyapeeth, Pune during 18-19th Oct. 2012

26. **Synthesis of multi-utility NiCo₂O₄ nanocomposite for sensor applications**
Swapna Sadekar, **Manish Shinde**, Nilam Qureshi, Govind Umarji, Sunit Rane, Lalita Rane, Uttam Mulik
[Raman Memorial Conference \(2012\)](#), Pune University, 3-5 March 2012
27. **Generation of nanoparticles of Mo/MoO₃ Confined within PPS Matrix Using Solid State Reaction Approach**
Madhuri Ombale, Nilam Qureshi, **Manish Shinde**, Govind Umarji, Jalinder Ambekar, Sunit Rane, Popat Tamade, Uttam Mulik
[Raman Memorial Conference \(2012\)](#), Pune University, 3-5 March 2012
28. **Microwave assisted 'green' synthesis of ZnS:Cu nanoparticles for exploring photo-conductor application**
Sonali Sabale, Govind Umarji, **Manish Shinde**, Nilam Qureshi, Rajendra Panmad, Sunit Rane, Lalita Rane, Uttam Mulik
[Raman Memorial Conference \(2012\)](#), Pune University, 3-5 March 2012
29. **Synthesis of cobalt oxide nanostructures by microwave assisted solvothermal route**
Manish Shinde, Nilam Qureshi, Sunit Rane, Suresh Gosavi, Dinesh Amalnerkar
[NanoSciTech 2012](#), Punjab University, 15-18 February 2012
30. **Nanocomposite of Nickel Oxide: In situ synthesis and characterization**
Nilam Qureshi, Govind Umarji, **Manish Shinde**, Lalit Borde, Uttam Mulik, Dinesh Amalnerkar
[NanoSciTech 2012](#), Punjab University, 16-18 February 2012
31. **Spanking Antimicrobial Applications of Nano-structures of Molybdenum sulfide synthesized via expedient route**
Nilam Qureshi, Rajendra Patil, **Manish Shinde**, Govind Umarji, Wasudev Gade, Valerio Causin, Uttamrao Mulik and Dinesh Amalnerkar
[Bangalore India Bio 2012](#), Bangalore, 5-8 February 2012,
32. **In-situ Formation of Metallic Nickel and Nickel Sulphide nanoparticles Via solid-solid route in polymer matrix**
Sujata Kasabe, **Manish Shinde**, Parag Adhyapak, Uttam Mulik, Dinesh Amalnerkar
[National Workshop on Nanomaterials](#) at MIT College, Pune Jaunary 2012
33. **Facile Recipe for Synthesis of Molybdenum Sulfide Based Nano-composite**
Nilam Qureshi, Govind Umarji, **Manish Shinde**, Uttam Mulik, Dinesh Amalnerkar
[ICANN-2011 Conference](#) held in December at IIT, Guwahati.
34. **Vivid Studies Pertaining to Synthesis of Nanostructure of Molybdenum Sulfide**
Nilam Qureshi, **Manish Shinde**, Govind Umarji, Uttam Mulik, Dinesh Amalnerkar
[NMD-ATM Conference 2011](#), November 15-17 at Hyderabad.
35. **'Green' Synthesis of Stable Silver and Gold nanoparticles using soluble Glucose**
Digvijay More, Praksh.V, **Manish Shinde**, Rabinder Henry
[Proceedings of International Conference on Nanoscience, Engineering & Advanced Computing \(ICNEAC-2011\)](#); 07/2011
36. **Synthesis of Gold and Silver Nanoparticles from soluble glucose**
V.Prakash, Dig Vijay more, Rabinder henry, **Manish Shinde**
[International Conference on Nanosciences ngineering and Advanced Computing \(ICNEAC 2011\)](#), SCET Narsapur, 07/2011
37. **In-situ Synthesis and Characterization of Nanoscale Nickel Oxide Based Composite via Novel Polymer Inorganic Solid State Reaction**

- Nilam Qureshi, Govind Umarji, **Manish Shinde**, Jalinder Ambekar, Suresh Gosavi, Uttam Mulik, Dinesh Amalnerkar
Nanocon-010, Organized by Bharati Vidyapeeth, Pune
38. ***One-pot synthesis of semiconducting PbS nanorods within poly-phenylene sulphide matrix***
 Sujata Kasabe, Parag Adhyapak, **Manish Shinde**, Uttam Mulik, Dinesh Amalnerkar
Nanocon-010, Organized by Bharati Vidyapeeth, Pune
39. ***Microwave assisted semi-solvothermal synthesis of Ag₂S nanostructures***
Manish Shinde, Sunit Rane, Dinesh Amalnerkar
NCNN-2010, held at VNIT, Nagpur in Jan. 2010
40. ***Vapour phase synthesis of nanopowders by thermal plasma***
 V. B. Raut, Tanay Seth, Amol Pawar, **M. D. Shinde** and D. P. Amalnerkar
SAMPADA-2008, held at Pune in Dec. 2008
41. ***Microwave assisted semi-solvothermal synthesis route for the synthesis of hierarchical nanostructures of CdS***
 Amol Pawar, **Manish Shinde**, V. Sreeja, Tanay Seth, Varsha Raut, H S Poddar, Dinesh Amalnerkar
ICBENT-2008, held at Dr. D. Y. Patil University, Kolhapur in Oct. 2008
42. ***Synthesis of Nanoparticles and Nanowires of AlN using Transferred Arc Thermal Plasma Technique***
Manish Shinde, Naveen Kulkarni, Amol Pawar, Tanay Seth, Varsha Raut, Sudha Bhoraskar, Dinesh Amalnerkar
Indo-Brazil Workshop held at NCL, Pune during 4-6 Oct 2007
43. ***Silver nanopowders for Electronics Applications: Synthesis by Transferred Arc Thermal Plasma Technique***
Manish Shinde, Varsha Raut, Tanay Seth, U. P. Mulik, D. P. Amalnerkar, Naveen Kulkarni, S.V. Bhoraskar
ICNME-2006 held at C-MET, Pune in Nov 2006
44. ***Silver nanopowders Synthesized by Transferred Arc Thermal Plasma Reactor: A potential way for large-scale generation of Silver nanopowders for Antimicrobial applications***
Manish Shinde, Naveen Kulkarni, Indrani Banerjee, Soumen Karmokar, Varsha Raut, Tanay Seth, A. K. Das, S. V. Bhoraskar
PBAMS National Conference held at BARC, Mumbai in Oct. 2006
45. ***Synthesis of zinc nanowires by sputtering inside an Electron Cyclotron Resonance Plasma***
 Vishwas Purohit, **Manish Shinde**, Shirshendu Dey, Soumen Karmarkar, Renu Pasricha, K. R. Patil, C. V. Dharmadhikari, Tanay Seth, D. P. Amalnerkar and S. V. Bhoraskar
International Nano-2006 Conference held at IISc Bangalore in Aug. 2006

[C] Special Achievements

46. ***Preparation of Ion Selective Membrane for Fabrication of Solid State Electrochemical Nitrate Sensor***
 Chandrashekhar M. Ghorpade, Govind G. Umarji, Sudhir S. Arbuj, **Manish D. Shinde**, Sunit B. Rane
International Conference on Multifunctional Electronic Materials & Processing (MEMP-2021), organized by C-MET, Pune 8-10th March, 2021.

- (The Best Poster Presentation Award (1st position))**
47. *Pomegranate and Hollow Sphere Structured Nanoarchitectures of Hierarchical Zinc Oxide as Efficient Photoanodes in Dye-Sensitized Solar Cells*, Ratna Chauhan, **Manish Shinde**, Suresh Gosavi and Sunit Rane
International Conference on Functional Ecofriendly Smart Emerging Materials [ICFESEM-2016], organized by PDEA'S Baburaoji Gholap College, Pune, 10-12 March 2016
- (The Best Poster Presentation Award (1st position))**
48. *Fabrication of NiO Nanoparticles-Polyphenylene Sulfide (PPS) Composite Pellets and Their Electric Properties*
Nilam Qureshi, Govind Umarji, **Manish Shinde**, Vivek Rane, Lalit Borde, Uttam Mulik, Dinesh Amalnerkar
NCRIGE-2013, held at Brijlal Biyani Science College, Amravati, 8-9 Feb. 2013.
- (Young Scientist Award for the Best Oral Presentation (1st position))**
49. *Vivid Studies Pertaining to Synthesis of Nanostructures of Molybdenum Oxide*
Nilam Qureshi, Govind Umarji, **Manish Shinde**, Uttam Mulik, Dinesh Amalnerkar
23rd AGM, MRSI, held at Thapar University, Patiala in 13-15 Feb. 2012.
- (The Best Poster Presentation Award (1st position))**
50. *Facile Recipe for Synthesis of Molybdenum Sulfide Based Nano-composite*
Nilam Qureshi, Govind Umarji, **Manish Shinde**, Uttam Mulik, Dinesh Amalnerkar
INDO-JAPAN Conference on Frontier Nano-Materials for Energy (FNE-2012), held at Sharada University, Noida in 7-9 Jan. 2012.
- (The Best Poster Presentation Award (3rd position))**
51. *Synthesis of uncapped silver nanoparticles using DC arc plasma technique: Study of effect of plasma change of plasma gas on morphological properties*
Manish Shinde, Amol Pawar, Soumen Karmakar, Ramkrishna Gholap, Tanay Seth, Varsha Raut, Sudha Bharaskar, Dinesh Amalnerkar
ICBENT-2008, held at Dr. D. Y. Patil University, Kolhapur in Oct. 2008.
- (The Best Oral Paper Presentation Award (1st position))**
52. *Study of AlN nanoparticles synthesized by transferred arc thermal plasma reactor*
Manish Shinde, Abhimanyu Singh Rana, Tanay Seth, Varsha Raut, Dinesh Amalnerkar, Indrani Banerjee, Navin Kulkarni, Soumen Karmakar, Sudha Bhoraskar, Ajay Kumar Das
Nano-2005 at AMITY Institute of Nanotechnology, New Delhi, held during the 27-28 May 2005. **(The Best Oral Paper Presentation Award (2nd position))**

[D] Invited/Guest Lectures/Oral Presentation

1. **Online Invited Lecture: Nanomaterials for Sensor Applications** at “National Webinar on Industrial Nanotechnology” organized by Department of Nanoscience and Technology, Yashavantrao Chavan Institute of Science (YCIS), Satara on 20th March 2021.
2. **Online Invited Lecture: Nanomaterial Synthesis & Characterization Techniques** at AICTE-ISTE Sponsored Refresher Program “Recent Development in Advanced Materials” organized by G H Raison College of Engineering & Management, Pune on 6th March 2021.
3. **Online Invited Lecture: Structural and Morphological Characterization Nanomaterials** at “Basics of Nanoscience Course” organized by Modern College of Arts, Science and Commerce, Pune on 13th February 2021.

4. **Online Invited Lecture: Applications of Nanomaterials at One-Day National Level Webinar on Hybrid Nanomaterials for Energy Applications**, Organized by G. M. Vedak College of Science, Tala, Raigad on 20th March 2021.
5. **Invited Lecture: Introduction to Nanomaterials (Invited Lecture)**
Prof Ramkrushna More Arts, Commerce and Science College, Akurdi, Pune organized under **DBT Star College Scheme** on February 13, 2020.
6. **Invited Lecture: An overview of Nanomaterials Characterization Techniques with special emphasis on by Electron Microscopies at faculty Development Programme at IIT Pune from November 7- 11, 2019**
7. **Invited Lecture: Present Status and Future Scope of Renewable Energy at H. V. Desai College, Pune organized under Skill Development Course I on September 09, 2019.**
8. **Invited Lecture: Present Status and Future Scope of Renewable Energy at H. V. Desai College, Pune organized under Skill Development Course I on March 09, 2019.**
9. **Invited Lecture: Introduction to Renewable Energy at H. V. Desai College, Pune organized under Skill Development Course I on September 29, 2018.**
10. **Invited Lecture: Instrumental Analysis, Data Analysis and Interpretation of Spectra at Prof Ramkrushna More Arts, Commerce and Science College, Akurdi, Pune organized under Lecture Series for MSc-II students on August 18, 2018.**
11. **Invited Lecture: Renewable Energy at H. V. Desai College, Pune organized under Skill Development Course II on March 24, 2018.**
12. **Invited Lecture: Use of ICT in Materials analysis National level seminar on "Use of ICT in Science" at BJC Arts, Science and Commerce College, Pune on February 06, 2018.**
13. **Invited Lecture: Introduction to Nanomaterials**
Prof Ramkrushna More Arts, Commerce and Science College, Akurdi, Pune organized under **DBT Star College Scheme** on August 12, 2017.
14. **Invited Talk: Introduction to Electron Microscopies**
Manish Shinde
One Day Workshop on "Characterization of Materials by Various Techniques" on 10th October 2015 at Yashwantrao Chavan Institute of Science, Satara, India.
15. **Invited Talk: Plain and Hierarchical Nanostructures: Synthesis, Photosensor and Field Emission Applications**
Manish Shinde
Indo Japan Workshop on Nanotechnology: Synthesis and Sensing Applications, at C-MET, Pune on 16th October, 2014
16. **Invited Talk: Synthesis of Undoped and Doped CdS Nanostructures via Chemical Route & Their Photocatalytic, Field Emission and Photosensor Applications**
Manish Shinde
CSIR Sponsored National Conference on Current Developments in Nanoscience: Challenges and Opportunities (NCCDN - 2013) held at Nagpur on 14th September 2013
17. **Oral Presentation: Synthesis of cobalt oxide nanostructures by microwave assisted solvothermal technique using binary solvent system**
Manish Shinde, Nialm Qureshi, Sunit Rane, Uttamrao Mulik, Dinesh Amalnerkar
NANOCON - 2012, organized by Bharathi Vidyapeeth, Pune during 18-19th Oct. 2012
18. **Short Invited Talk: Hierarchical Nanostructures of Copper doped Cadmium Sulfide Nanostructures Synthesized by Microwave Assisted Solvothermal Route**
Manish D. Shinde, P. G. Chavan, S. S. Arbuj, S. B. Rane, M. A. More, D. S. Joag, and D. P. Amalnerkar
ISME-2011, 25th - 28th March - 2011, Organized by IISER, C-MET and DIAT, Pune
19. **Oral Presentation: Microwave assisted hydrothermal synthesis of Ag₂S nanostructures**
Manish Shinde, Sunit Rane, Dinesh Amalnerkar

- NCAMT-2009**, held at Shivaji Science College, Nagpur in Dec. 2009
20. **Oral Presentation: Synthesis of uncapped silver nanoparticles using DC arc plasma technique: Study of effect of plasma change of plasma gas on morphological properties**
Manish Shinde, Amol Pawar, Soumen Karmakar, Ramkrishna Gholap, Tanay Seth, Varsha Raut, Sudha Bharaskar, Dinesh Amalnerkar
ICBENT-2008, held at Dr. D. Y. Patil University, Kolhapur in Oct. 2008.
21. **Oral Presentation: Study of AlN nanoparticles synthesized by transferred arc thermal plasma reactor**
Manish Shinde, Abhimanyu Singh Rana, Tanay Seth, Varsha Raut, Dinesh Amalnerkar, Indrani Banerjee, Navin Kulkarni, Soumen Karmakar, Sudha Bhoraskar, Ajay Kumar Das
Nano-2005 at AMITY Institute of Nanotechnology, New Delhi, held during the 27-28 May 2005.

[E] Patents

1. **A METAL OXIDE-AGAR BASED SENSOR FOR REAL TIME MOISTURE DETECTION OF A PACKAGED PRODUCT**
Jayant Pawar, Sudha Mattigitti, **Manish Shinde**, Amit Patwardhan, Rabinder Henry, Abhijit Ghadge, Rushikesh Deshmukh, E. A. Singh
Indian Patent No. 394759, Date: 09/03/2020
2. **MOISTURE SENSITIVE RESISTANCE BASED NANOCOMPOSITE (SEMICONDUCTOR NPS/AGAR) CHEMICAL NANOSENSOR AND A METHOD FOR FABRICATION THEREOF**
Jayant Rajaram Pawar, **Manish Shinde**, Amit Patwardhan, Sudha Mattigitti, Rabinder Henry,
Indian Patent Application No. 202021010152 A, Date: 20/03/2020
3. **SYNTHESIS OF NANOSTRUCTURES OF METAL DOPED CADMIUM SULFIDE**
Shinde Manish; Rane Sunit; Amalnerkar Dinesh; Chavan Padmakar; More Mahendra; Joag Dilip
Patent No. 297804, **Indian Patent, Application No. 3235/MUM/2010**, Date: 26 November 2010
4. **EXPEDIENT SYNTHESIS OF MOLYBDENUM SULFIDE NANO-PARTICLES**
Qureshi Nilam; Umarji Govind; **Shinde Manish**; Mulik Uttamrao; and Amalnerkar Dinesh
Patent No. 344455, **Indian Patent, Application No. 1785/MUM/2011**
5. **FORMULATIONS COMPRISING MOLYBDENUM SULFIDE NANOPARTICLES**
Qureshi Nilam; **Shinde Manish**; Umarji Govind; Patil Rajendra; Gade Wasudev; Mulik Uttamrao; Amalnerkar Dinesh
Indian Patent, Application No. 2583/MUM/2011.

[F] Reports and Popular Articles/Lectures

1. Marvels of Nanoscience and Nanotechnology in the Modern Era,
Manish Shinde, Sunit Rane
SPEED e-Newsletter, Volume 3, Issue 2, May 2015, pp 1-2.
2. Skills Development Lecture at H. V. Desai College, Pune for M. Tech (Physics, with specialization in Energy Studies) students on 24th March, 2018.

[G] Participation in Scientific Events/Training

- International Host Lab Experiments on Synthesis of Nanomaterials by Thermal Plasma during 17 Nov. to 1st Dec. 2004 at Department of Physics, University of Pune.

- Indo-Brazil Workshop on Molecular Materials Including Nanomaterials during 4th – 6th Oct. 2007 at National Chemical Laboratory, Pune.
- Training Course Module in Computational Fluid Dynamics using Fluent and Gambit during 3rd Jan. to 22nd Feb. 2008 at F1 Systems, Pune.
- National Seminar on Nanomaterials for Devices: Characterization and Applications during 24th to 26th June 2010 at Department of Physics, University of Pune.
- Indo-Austrian Symposium 2010: Advanced Materials Engineering during 8th to 9th Dec. 2010 at NFTDC, Hyderabad.
- Attended the INUP Hands-on Training workshop on “Nanofabrication Technologies” held at IIT Bombay during 19-03-2018 to 23-03-2018.

[H] Certificate of Merit

- Awarded Dr. H. V. Modak Prize for standing first in B. Sc. Physics Pune University Final Exam at Wadia College (2003)
- Awarded Prof. K. R. Kanitkar Prize for standing first in B. Sc. Physics Pune University Final Exam at Wadia College (2003)
- Awarded Rajeshwari Vinayak Tuljapurkar Prize for highest number of marks in B. Sc. Physics Pune University Final Exam at Wadia Collge (2003)
- Awarded Rajeshwari Subramaniam Prize for standing first in B. Sc. Physics Pune University Final Exam at Wadia College (2003)
- Secured 9th Rank in the Merit List of Amravati Divisional Board of Maharashtra Board in the Secondary School Certificate (Std. X) exam in 1987.

[I] Technology Transfer

Development of Photopatternable Silver and Photoconductor (CdS) thick film pastes for Photo Sensors, Team members: Dr. S. B. Rane, Scientist ‘D’, Dr. Govind Umarji, Scientist ‘A’, and Dr. Manish Shinde, Scientist ‘A’ Cost: ~ 14.24 Lakhs (+ Taxes). Technology was transferred on 28th March 2018 to M/s. Ants Ceramics, Mumbai.

[J] Membership of Scientific Societies

- Elected as Young Associate of Maharashtra Academy of Sciences (MASc) in the subject ‘Physics’ on 31st December, 2018 during their Annual General Meeting (AGM)
- Life Member of Electron Microscopy Society of India (EMSI, Life membership (LM) number is LM-1832)

References:

1. Dr. Dinesh P. Amalnerkar

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Emeritus Professor,
Dept of Physics, Savitribai Phule Pune University
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2. Dr. Bharat B. Kale

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Panchwati, Off Pashan Road, Pune – 411008, India
Email: bbkale@cmet.gov.in

3. Dr. S. B. Rane

Scientist 'E'
Centre for Materials for Electronics Technology (C-MET),
Panchwati, Off Pashan Road, Pune – 411008, India
Email: sunit@cmet.gov.in

4. Prof. S. V. Bhosraskar

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Dept of Physics, Savitribai Phule Pune University
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