RESUME'

PERSONAL PROFILE

Name : Mane Amitkumar Tanajirao

Contact Number : 9527634958

Email id : amitmane100@gmail.com

Permanent Address : A/P- Khanapur, Tal- Khanapur,
Dist- Sangli 415307 (Maharashtra)

Present Address : C/o Dr. V.B. Patil
School of Physical Sciences,
Solapur University, Solapur.
Pin-413255.

Gender : Male **Date of Birth** : 16th June 1981

Height : 180 cm **Weight** : 65 kg

Marital Status : Married **Nationality** : Indian

EDUCATIONAL QUALIFICATION (M.Sc. B.Ed. Ph.D.*)

Ph.D (Submitted) in Physics from School of Physical Sciences, Solapur University, Solapur, Maharashtra, India. Month/ Year of Registration: January 2014.

Dissertation title: "PREPARATION OF POLYPYRROLE- TUNGSTEN OXIDE HYBRID NANOCOMPOSITE BASED GAS SENSORS"

Master of Science (Physics), First Class, Shivaji University, Kolhapur, April 2003.

Bachelor of Science (Physics), First Class with distinction, Shivaji University, Kolhapur, April 2001

Bachelor of Education (Maths/ Science), First Class, Shivaji University, Kolhapur, April 2004

H.S.C. (Science) Second Class, Mahatma Gandhi vidyalaya, Khanapur, February 1998.

S.S.C. Second Class, Mahatma Gandhi vidyalaya, Khanapur, February 1996.

TEACHING EXPERENCE (11 Years)

Assistant Professor in Applied Physics, **Maharshi Parshuram College of Engineering & Techchnology, Velneshwar (Guhagar)**
Duration: August 6, 2012 to December 31, 2014

Assistant Professor in Applied Physics, **G.M.Vedak institute of Engineering & Techchnology, Tala (Raigad)**
Duration: August 20, 2011 to August 05, 2012.

Lecturer in Applied Physics,
Duration: August 19, 2008 to 19 August 2011.

Lecturer in Applied Physics, **Rajaram Shinde College of Engineering & Techchnology, Chiplune**
Duration: May. 2006 to Aug. 2008.

Lecturer in Applied Physics, **D.P Bhosale college, Koregaon.**
Duration: June. 2004 to Apr. 2006.

INTERNATIONAL PAPER PUBLICATIONS (18)

- **NO_2 sensing properties of nanostructure tungsten oxide thin films**
  A.T. Mane, S.B. Kulkarni, **S.T. Navale** and V.B. Patil, **Ceramics International**, 4(2014)16495-16502. **(I.F. 2.110)**
- **Nitrogen dioxide (NO_2) sensing performance of p-polypyrrole/n-tungsten oxide hybrid nanocomposites at room temperature**
  A.T. Mane, S.T. Navale, Shashwati Sen, D.K. Aswal, S.K. Gupta, V.B. Patil, Organic Electronics 16 (2015) 195–204. **(I.F. 4.021)**
- **Microstructural, optical and electrical transport properties of WO_3 nanoparticles coated polypyrrole hybrid nanocomposites**
  A.T. Mane, S.T. Navale, R.C. Pawar, C.S. Lee, V.B. Patil, **Synthetic Metals**, 199 (2015) 187-195. **(I.F.= 2.256)**
- **Room temperature NO_2 gas sensing properties of DBSA doped PPy–WO_3 hybrid nanocomposite sensor**
  A.T. Mane, S.T. Navale, V.B. Patil, doi 10.1016%2Fj.orgel.2015.01.018 **(I.F. 4.021)**
- **Synthesis and structural, morphological, compositional, optical and electrical properties of DBSA-doped PPy–WO_3 nanocomposites**
  A.T. Mane, S.T. Navale, R.S. Mane, Mu. Naushad, V.B. Patil, **Progress in Organic Coatings**, 87 (2015) 88–94. **(I.F. 2.577)**
- **Synthesis, structural, compositional, morphological and optoelectronic properties of tungsten oxide thin films**
  S. B. Kulkarni, **A. T. Mane**, S. T. Navale, P. S. Kulkarni, R. N. Mulik, V. B. Patil, **J Mater Sci: Mater Electron**, DOI 10.1007/s10854-014-2508-8.

(**I.F. 1.966**)

- **Highly selective and sensitive CdS thin film sensors for detection of NO_2 gas**

  S.T. Navale, **A.T. Mane**, M.A. Chougule, N.M. Shinde, J.H. Kim, V.B. Patil, **RSC Advances**, 4(2014)44547-44554. (**I.F.= 3.078**)

- **Highly selective and sensitive room temperature NO_2 gas sensor based on polypyrrole thin films**.

  S.T. Navale, **A.T. Mane**, M.A. Chougule, R.D. Sakhare, S.R. Nalage, V.B. Patil, **Synthetic Metals**, 189(2014) 94-99. (**I.F.= 2.256**)

- **Highly sensitive, reproducible, selective and stable CSA-polypyrrole NO_2 sensor.**

  S.T. Navale, M.A. Chougule, V.B. Patil, **A.T. Mane**, **Synthetic Metals**, 189(2014) 111-118. (**I.F.= 2.256**)

- **Camphor sulfonic acid (CSA) doped polypyrrole (PPy) films: Measurement of microstructural and optoelectronic properties.**

  S.T. Navale , **A.T. Mane** , A.A. Ghanwat , A.R. Mulik , V.B. Patil, **Measurement**, 50 (2014) 363-369. (**I.F.= 1.526**)

- **Room temperature NO_2 sensing properties of polythiophene films**

  S.T. Navale, **A.T. Mane**, G.D. Khuspe, M.A. Chougule, V.B. Patil, **Synthetic Metals**, 195 (2014) 228–233. (**I.F.= 2.256**)

- **Polypyrrole–NiO hybrid nanocomposite films: highly selective, sensitive, and reproducible NO_2 sensors**

  S. R. Nalage, **A. T. Mane**, R. C. Pawar, C. S. Lee, V. B. Patil, **Ionics**, DOI 10.1007/s11581-014-1122-3. (**I.F. 1.841**)

- **Ammonia sensing properties of polyaniline/a-Fe_2O_3 hybrid nanocomposites**

  D.K. Bandgar, S.T. Navale, **A.T. Mane**, S.K. Gupta, D.K. Aswal, V.B. Patil, **Synthetic Metals**, 204 (2015) 1–9. (**I.F.= 2.256**)

- **Growth, Characterization and Gas Sensing Properties Of Polyaniline Thin Films**

  S.G.Pawar, S.L.Patil, **A.T.Mane,** B.T.Raut, V.B.Patil**, Archives of Applied Science Research**, 2009, 1 (2) 109-114. (**I.F.= 1.524**)

- **Nanocrystaline ZnO Thin Films: Optoelectronic and Gas Sensing Properties.**

  S. L. Patil, S. G. Pawar, **A. T. Mane** , M. A. Chougule, V. B. Patil, **J. Mater Sci: Mater Electron**, 21(2010) 1332-1336. (**I.F.= 1.966**)

- **Synthesis and Characterization of Polyaniline:TiO_2 Nanocomposites**

S. G. Pawar, S. L. Patil, M. A. Chougule, **A. T. Mane**, D. M. Jundale, V. B. Patil, **International Journal of Polymer Materials**, 59(2010) 777-785. (**I.F.= 2.784**)

- **Dodecyl benzene sulfonic acid (DBSA) doped polypyrrole (PPy) films: synthesis, structural, morphological, gas sensing and impedance study**
  A.T. Mane, S.D. Sartale and V.B. Patil, **J. Mater Sci: Mater Electron**, 26 (11) (2015) 8497-8506. (**I.F.= 1.966**)
- **One step surfactant free preparation of h-WO_3 nanorods by hydrothermal method**
  A.T. Mane, Y.H. Navale, S.M. Ingole, S.T. Navale and V.B. Patil, **Material letters,** Communicating**.**

POSTER PRESENTATIONS/CONFERENCES/WORKSHOPE (14)

- One day workshop on **"Inter-collegiate Research Convention AVISHKAR-2016-17"** September 24,2016 Organized by Department of Students Welfare University of Mumbai at Maharshi Parshuram College of Engineering & Techchnology, Velneshwar (Guhagar).
- International conference on **"Functional Materials and Microwaves (ICFMM-2015)"** December 28-30, 2015 Organized by Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. (**Third Price in poster presentation).**
- National conference **" Latest Trends in Fundamental Research"**, February 21st 2015 , in association with RSC-West India section, organized by School of Chemical Sciences, Solapur University, Solapur.
- Seminar on **"Latest Developments in Material Characterization Techniques**", February 5-6, 2015, School of Physical Sciences, Solapur University, Solapur.
- **Room Temperature Operating Low Cost Gas Sensor System- Poster & demo presentation**
  (9th Maharashtra state inter university research convention AVISHKAR-2014, January 21-23, 2015, Maharashtra animal and fishery science university, Nagpur.)
- **Highly selective and sensitive Nitrogen dioxide (NO_2) sensing performance of p-polypyrrole/n-tungsten oxide hybrid nanocomposites at room temperature**
  (U.G.C. sponsored national seminar on "Recent Trends In Nanomaterial And Their Applications", (RTNM-2015), January 23-24, Sangola College, Sangola)
- **DBSA doped Polypyrrole-WO_3 hybrid nanocomposite sensor for detection of nitrogen dioxide (NO_2) gas- oral presentation**

(U.G.C. sponsored two day national conference on "Nanomaterials and Nanomaterial Based Devices", 2014, December 23-24, Dattajirao Kadam Arts, Science and Commerce Collage, Ichalkaranji)

- **Fabrication of Low Cost Gas Sensor System- Poster & demo presentation**
  (University level research Festival - AVISHKAR -2014, December 25-26, Fabtech Technical Campus and Research Center, Sangola, Solapur. **Second Price pure science group**)
- **CSA Doped PPy Thin Film Sensor For NO_2 Monitoring**
  (DAE-BRNS Conference on Organic Devices: The Future Ahead ODeFA–2014 March 3-6, 2014, Bhabha Atomic Research Centre, Anushakti Nagar, Mumbai, Maharashtra, INDIA.)
- **NO_2 Sensing Properties of Nanostructured WO_3Thin Films**
  (2^{nd} International Conference on Physics of Materials and Materials based Device Fabrication, (ICPM-MDF-2014) 13-15^{th} January, 2014 Department of Physics, Shivaji University, Kolhapur, INDIA.)
- **Room Temperature Gas Sensing Properties of Polyaniline Thin Films**
  (Homi Bhabha Centenary BRNS-GND University Workshop on MOLECULAR/ORGANIC ELECTRONIC DEVICES (MOED-2009) September 22-25, 2009, GND University, Amritsar)
- **One week STTP on "Methodology For Effective Teaching Learning Process"**
  July 4-9, 2011, Adarsh Institute of Technology, Vita.
- **One week STTP on "Advanced Materials in Engineering",** December13-17, 2010, SSPM'S College of Engineering, Kankavali.
- **Nanocrystalline ZnO Thin Films: Optoelectronic and Gas Sensing Properties**
  (Homi Bhabha Centenary BRNS-GND University Workshop on MOLECULAR/ORGANIC ELECTRONIC DEVICES (MOED-2009) September 22-25, 2009, GND University, Amritsar)

MEMBERSHIP

- Indian Society of Mechanical Engineers (ISME)
- Instrument Society of India (ISOI)
- International Society for Research and Development (ISRD)

RESEARCH INTEREST

- Design and development of organic, inorganic and organic/inorganic hybrid

nanomaterials for the application in gas sensors, supercapacitors and solar cells.

- Processing techniques include chemical oxidative polymerization, in-situ polymerization, sol-gel processing, hydrothermal growth and electrochemical deposition.
- The research emphasis is to achieve novel properties for various applications through control of nanostructure and atomic engineering of materials through processing and composition design.

INSTRUMENTS HANDELED

- Spin Coater (APEX Instruments, Model: SCU 2007)
- UV-Visible spectrophotometer
- KEITHLEY 6514/2400 System Electrometer
- Regaku table top X-ray diffractometer
- Impedance analyzer (WAYNE KERR, Model: 6500B)
- High temperature Furnaces
- Room and high temperature gas sensing measurement unit
- Hydrothermal unit
- Solar Simulator
- Potentiostat/Galvanostat (WPG 100e Won A Tech)

EXPERIMENTAL TECHNIQUES KNOWN

- Chemical polymerization
- Sol-gel synthesis
- Chemical bath deposition
- Hydrothermal synthesis
- Electrodeposition
- Solid state synthesis
- Dip coating
- SILAR

OTHER TECHNIQUES KNOWN

- Transmission electron microscopy (TEM)
- Field Emission Scanning Electron Microscopy (FESEM),
- Fourier Transform Infrared Spectroscopy (FTIR),
- X-ray photoelectron spectroscopy (XPS),
- Contact Angle Meter, etc.

COMPUTER PROFICIENCY

MS Office, Origin 6.1, Origin 8.1, Chemdraw Ultra 2002-1, Impedance software eissa-0.1b, etc.

ACADEMIC ACHIVEMENTS

- Paper Setter of Applied Physics of University of Mumbai.
- Moderator of Applied Physics of University of Mumbai.
- First Year Coordinator.
- Member of Anti-ragging committee
- Member of Grievance committee
- Chairperson of Unfair means committee

REFERENCES

Prof. V.B. Patil Functional Materials Research Laboratory School of Physical Sciences Solapur University, Solapur Maharashtra, India. Mob. No. +91 9422532521 Email id: drvbpatil@gmail.com	**Dr. Shaswati Sen** Scientist 'F' Crystal Technology Section Technical Physics Division BARC, Mumbai, India Mob. No. +91 9969441831 Email id: shashwatisen@gmail.com

Date: **Dr. Mane A. T.**