

# **Curriculum Vitae**

**Dr. Manik A. Chougule**

M.Sc., M.Phil., Ph.D.

**Department of Physics**

**Anandibai Raorane Arts, Commerce & Science College**

**Vaibhavwadi, Dist- Sindhudurg-416810**

**Maharashtra State, India**

# CURRICULUM-VITAE



## 1) Personal Information:

Name : Dr. Manik Ananda Chougule  
Designation : Assistant Professor in Physics  
Subject with Specialization : Physics (Applied Electronics)  
Date of Birth : 23/09/1978  
Gender : Male  
Present Address : Anandibai Raorane College, Vaibhavwadi,  
Dist – Sindhudurg-416810  
Permanent Address : At/Post- Jakhale, Taluka- Panhala, Dist: Kolhapur-416113.  
Email ID : machougule1@gmail.com  
Contact No. : 9423301382  
Date of Joining : 1<sup>st</sup> April 2014

## 2) Academic Profile:

### I. Academic Qualification

|    | Degree   | Year | Subject | University                         | % of marks |
|----|----------|------|---------|------------------------------------|------------|
| 1. | B. Sc.   | 1998 | Physics | Shivaji University, Kolhapur       | 52.28      |
| 2. | M. Sc.   | 2000 | Physics | Shivaji University, Kolhapur       | 56         |
| 3. | M. Phil. | 2008 | Physics | Madurai Kamraj University, Madurai | 60         |
| 4. | Ph. D.   | 2013 | Physics | Solapur University, Solapur        | Awarded    |

**Ph. D thesis title:** Polypyrrole-Zinc Oxide Nanocomposites: Synthesis, Characterization and Gas sensing properties

**Guide's Name:** Dr. V. B. Patil

**Year of Award:** 4<sup>th</sup> March 2013

## II. Computer Literacy

- Diploma in Computer Software, Aptech Computer Education, Warananagar, 1998 (1 year)

## III. Academic Staff College Orientation/Refresher course attended

| Name of the Course/<br>Summer Course | Place                                               | Duration                           | Sponsoring<br>Agency |
|--------------------------------------|-----------------------------------------------------|------------------------------------|----------------------|
| Orientation<br>Programme             | Moulana Azad National Urdu<br>University, Hyderabad | 6 April – 3 May 2016<br>(28 Days)  | UGC-HRDC             |
| Refresher Course                     | Sardar Patel University, Anand,<br>Gujrat           | 11 June – 1 July 2018<br>(21 Days) | UGC-HRDC             |

## IV. Teaching Experience: 20 Years

| Type               | Institution                                                           | Position<br>Held                     | Nature of<br>Appointment        | From       | To         |
|--------------------|-----------------------------------------------------------------------|--------------------------------------|---------------------------------|------------|------------|
| Under-<br>Graduate | Br. Balasaheb Khardekar<br>College, Vengurla.                         | Lecturer in<br>Physics               | Full Time<br>Temporary<br>basis | 10/07/2000 | 11/11/2010 |
| Under-<br>Graduate | Br. Balasaheb Khardekar<br>College, Vengurla.                         | Assistant<br>Professor in<br>Physics | Full Time<br>Temporary<br>basis | 10/06/2013 | 31/03/2014 |
| Under-<br>Graduate | Anandibai Raorane Arts,<br>Commerce & Science College,<br>Vaibhavwadi | Assistant<br>Professor in<br>Physics | Full Time<br>Permanent          | 10/06/2013 | Till date  |

### 3) Administrative Experience:

| Academic<br>Year | Worked as a Chairman & Member in various committees                                                                                                                                                                                                                                                             |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2014-2015        | 1) Competitive Examination & Placement Cell – Chairman<br>2) PF & DCPDS Record – Chairman<br>3) Grievance Redressal Cell – Member<br>4) Online Admission (FYBSc) – Member<br>5) Affiliation & CONCOL section – Member<br>6) Audio – Visual Aids Committee – Member<br>7) Class Teacher – SYBSc, TYBSc (Physics) |
| 2015-2016        | 1. Online Admission (FY) – Member<br>2. Grievance Redressal Cell – Member<br>3. Online Admission (FY) & Attendance – Member<br>4. Audio – Visual Aids Committee – Member<br>5. Class Teacher – TYBSc (Physics)                                                                                                  |
| 2016-2017        | 1. Examination Committee – Member<br>2. Time table Committee – Member<br>3. Grievance Redressal Cell – Member<br>4. Online Admission (FY) & Attendance – Member<br>5. Class Teacher – TYBSc (Physics)                                                                                                           |
| 2017-2018        | 1. Examination Committee – Member<br>2. Time table Committee – Member<br>3. Grievance Redressal Cell – Member<br>4. Online Admission (FY) & Attendance – Member<br>5. Class Teacher – TYBSc (Physics)                                                                                                           |

|                  |                                                                                                                                                                                                                                                                  |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>2018-2019</b> | 1. TY Examination Committee – IT Co-ordinator<br>2. UGC & RUSA Fund committee - Chairman<br>3. Grievance Redressal Cell & Anti Ragging – Member<br>4. Online Admission committee – Member<br>5. Attendance committee - Member<br>6. Science Association - Member |
| <b>2019-2020</b> | 1. TY Examination Committee – IT Co-ordinator<br>2. UGC & RUSA Fund committee – Chairman<br>3. Anti-Ragging Cell - Chairman<br>4. Time table Committee – Member<br>5. Online Admission committee – Member<br>6. Science Association – Member                     |

#### 4) Research Achievements:

##### I. Research Experience: 10 years

##### II. Professional Recognition/ Award/ Prize/ Certificate, Fellowship: 02

| Sr. No. | Name of Award                                              | Awarding Agency                                                   | Year         |
|---------|------------------------------------------------------------|-------------------------------------------------------------------|--------------|
| 1.      | Certificate of outstanding contribution in Reviewing award | Journal of Alloys and Compounds, Elsevier, Amsterdam, Netherlands | January 2018 |
| 2.      | Certificate of outstanding contribution in Reviewing award | Journal of Alloys and Compounds, Elsevier, Amsterdam, Netherlands | August 2017  |

##### III. International Travel Grant received: 02

| Sr. No. | Title                                                                                                 | Agency                                                                                                       | Period          | Grant/Amount Mobilized (Rs.) |
|---------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------|------------------------------|
| 1.      | International Travel Support (ITS) Scheme - 17th International Meeting on Chemical Sensors, Austria   | Science and Engineering Research Board, Department of Science and Technology, Government of India, New Delhi | 15-19 July 2018 | Rs. 60,594/-                 |
| 2.      | Travel Grant Scheme - Matrafured'2019 International Conference on Chemical Sensors, Visegrád, Hungary | University Grant Commission (UGC), New Delhi                                                                 | 16-21 June 2019 | Rs. 1,28,392/-               |

##### IV. Invited Talks: 01

| Sr. No. | College                                                                       | Subject                                                                                       | Year      |
|---------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------|
| 1       | National Symposium on Advances in Material Science at SPK College, Sawantwadi | Synthesis, Characterization & Gas sensing properties of Conducting Polymer-Metal Oxide sensor | Feb. 2020 |

## V. Publications

|    |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                    |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| 1. | Number of papers published in the Journals                                                                                                                                                                                                                                                                                                                                                                | 90                                                 |
|    | Google Scholar Citations (Updated- 14/02/2020)                                                                                                                                                                                                                                                                                                                                                            | Citations : 2769<br>h-index : 34<br>i10-index : 59 |
|    | Scopus Citation Overview (Updated – 14-02-2020)                                                                                                                                                                                                                                                                                                                                                           | Citations : 2022<br>h-index : 30                   |
| 2. | No. of Books published                                                                                                                                                                                                                                                                                                                                                                                    | 01                                                 |
| 3. | No. of chapters in edited volumes-books published                                                                                                                                                                                                                                                                                                                                                         | 13                                                 |
| 4. | No. of book chapter in Proceedings                                                                                                                                                                                                                                                                                                                                                                        | 46                                                 |
|    | No. of National and International Conferences/ Symposia/ Workshops/ Seminars attended and paper presented                                                                                                                                                                                                                                                                                                 | International : 18<br>National : 08                |
| 5. | Technology Transfer/ New Developments                                                                                                                                                                                                                                                                                                                                                                     | 05                                                 |
|    | 1) Development of Room Temperature Gas Sensor Unit<br>2) Development of High Temperature ( upto 500°C) Gas Sensor Unit<br>3) Development of Thermoelectric Power Unit<br>4) Development of Resistivity Unit<br>5) Development of Freezing Mixture Unit for preparation of Polymers (-10°C)<br><i>*Above Sr. No 1 to 5 developments under technology transfer to M/s. Century Cooling Systems, Solapur</i> |                                                    |

### A. Book published

The book emphasizes on the development of gas sensors fabricated using thin films of PPy, ZnO nanoparticles, PPy-ZnO nanocomposite and PPy-ZnO-CSA for oxidizing and reducing toxic gases recognition. Gas response curves of materials were analyzed to find selectivity of films towards particular gas and for evaluation of other parameters mentioned above. The gas sensing performance at different concentrations of selective gas is carried out at room temperature and the performance of the sensors is evaluated in terms of their selectivity, sensitivity and response-recovery times. Lastly, Gas sensing mechanism and physical model for the same wherever possible is discussed.

PPy-ZnO nanohybrid gas sensor





**Vikas Patil**  
Dr. Vikas B. Patil working as Assistant professor & i/c Head, Department of Electronics, School of Physical Sciences, Solapur University, Solapur, Maharashtra, India. Dr. Patil and Dr. Manik A. Chougule working on conducting polymer-metal oxide nanohybrids for gas sensing applications.

Vikas Patil  
Manik Chougule

**Fabrication of Polypyrrole-Zinc Oxide Nanocomposite Sensors**



978-3-659-46524-6

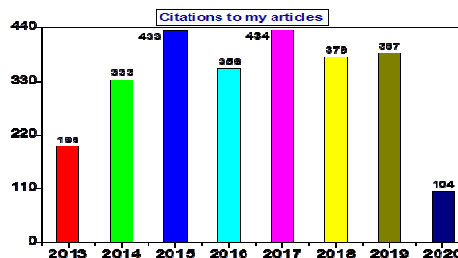
Patil, Chougule



## B. List of papers published in the Journals

### Citation indices

|                           | All  | Since 2015 |
|---------------------------|------|------------|
| <a href="#">Citations</a> | 2769 | 2093       |
| <a href="#">h-index</a>   | 34   | 29         |
| <a href="#">i10-index</a> | 59   | 56         |



| Sr. No. | Title                                                                                                                                                                                                                                           | Cited by | Year |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------|
| 1.      | Synthesis and characterization of polypyrrole (PPy) thin films<br><b>M Chougule</b> , S Sen, V Patil<br>Soft Nanoscience Letters 1 (1), 6-10, 2011                                                                                              | 266*     | 2011 |
| 2.      | Synthesis of Fe <sub>2</sub> O <sub>3</sub> nanoparticles for nitrogen dioxide gas sensing applications<br>ST Navale, DK Bandgar, SR Nalage, GD Khuspe, <b>MA Chougule</b> , ...<br>Ceramics International 39 (6), 6453-6460, 2013              | 104      | 2013 |
| 3.      | Fabrication of nanostructured ZnO thin film sensor for NO <sub>2</sub> monitoring<br><b>MA Chougule</b> , S Sen, VB Patil<br>Ceramics International 38 (4), 2685-2692, 2012                                                                     | 92       | 2012 |
| 4.      | Synthesis and Characterization of Co <sub>3</sub> O <sub>4</sub> Thin Film<br>V Patil, P Joshi, <b>M Chougule</b> , S Sen<br>Soft Nanoscience Letters 2, 1-7, 2012                                                                              | 87*      | 2012 |
| 5.      | Highly selective and sensitive room temperature NO <sub>2</sub> gas sensor based on polypyrrole thin films<br>ST Navale, AT Mane, <b>MA Chougule</b> , RD Sakhare, SR Nalage, VB Patil<br>Synthetic Metals 189, 94-99, 2014                     | 84       | 2014 |
| 6.      | Novel method for fabrication of room temperature polypyrrole-ZnO nanocomposite NO <sub>2</sub> sensor<br><b>MA Chougule</b> , DS Dalavi, S Mali, PS Patil, AV Moholkar, GL Agawane, ...<br>Measurement 45 (8), 1989-1996, 2012                  | 73       | 2012 |
| 7.      | Sol-gel synthesis of nickel oxide thin films and their characterization<br>SR Nalage, <b>MA Chougule</b> , S Sen, PB Joshi, VB Patil<br>Thin Solid Films 520 (15), 4835-4840, 2012                                                              | 73       | 2012 |
| 8.      | Room Temperature Ammonia Gas Sensor Based on Polyaniline-TiO <sub>2</sub> Nanocomposite<br>SG Pawar, <b>MA Chougule</b> , SL Patil, BT Raut, PR Godse, S Sen, VB Patil<br>IEEE Sensors Journal 11 (12), 3417-3423, 2011                         | 72       | 2011 |
| 9.      | Synthesis and characterization of polyaniline: TiO <sub>2</sub> nanocomposites<br>SG Pawar, SL Patil, <b>MA Chougule</b> , AT Mane, DM Jundale, VB Patil<br>International Journal of Polymeric Materials 59 (10), 777-785, 2010                 | 67       | 2010 |
| 10.     | SnO <sub>2</sub> -nanoparticles modified polyaniline films as highly selective, sensitive, reproducible, and stable ammonia sensors<br>GD Khuspe, ST Navale, <b>MA Chougule</b> , VB Patil<br>Electron Mater Lett 10 (1), 191-197, 2013         | 64       | 2013 |
| 11.     | Facile and efficient route for preparation of polypyrrole-ZnO nanocomposites: Microstructural, optical, and charge transport properties<br><b>MA Chougule</b> , S Sen, VB Patil<br>Journal of Applied Polymer Science 125 (S1), E541-E547, 2012 | 59       | 2012 |
| 12.     | Ammonia gas sensing properties of CSA doped PANi-SnO <sub>2</sub> nanohybrid thin films<br>GD Khuspe, ST Navale, <b>MA Chougule</b> , VB Patil<br>Synthetic Metals 185, 1-8, 2013                                                               | 58       | 2013 |
| 13.     | Structural, morphological, optical, and electrical properties of PANi-ZnO                                                                                                                                                                       | 57       | 2012 |

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|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------|
|     | nanocomposites<br>SL Patil, SG Pawar, <b>MA Chougule</b> , BT Raut, PR Godse, S Sen, VB Patil<br>International Journal of Polymeric Materials 61 (11), 809-820, 2012                                                                                                                                |    |      |
| 14. | Nanostructured SnO <sub>2</sub> thin films for NO <sub>2</sub> gas sensing applications<br>GD Khuspe, RD Sakhare, ST Navale, <b>MA Chougule</b> , YD Kolekar, ...<br>Ceramics International 39 (8), 8673-8679, 2013                                                                                 | 56 | 2013 |
| 15. | Measurements on room temperature gas sensing properties of CSA doped polyaniline–ZnO nanocomposites<br>SL Patil, <b>MA Chougule</b> , S Sen, VB Patil<br>Measurement 45 (3), 243-249, 2012                                                                                                          | 54 | 2012 |
| 16. | Effect of annealing on structural, morphological, electrical and optical studies of nickel oxide thin films<br>P Godse, R Sakhare, S Pawar, <b>M Chougule</b> , S Sen, P Joshi, VB Patil<br>Journal of Surface Engineered Materials and Advanced Technology 1 (2), 35-41, 2011                      | 54 | 2011 |
| 17. | Highly selective and sensitive CdS thin film sensors for detection of NO <sub>2</sub> gas<br>ST Navale, AT Mane, <b>MA Chougule</b> , NM Shinde, JH Kim, VB Patil<br>RSC Advances 4 (84), 44547-44554, 2014                                                                                         | 52 | 2014 |
| 18. | Novel method for fabrication of polyaniline–CdS sensor for H <sub>2</sub> S gas detection<br>BT Raut, PR Godse, SG Pawar, <b>MA Chougule</b> , DK Bandgar, VB Patil<br>Measurement 45 (1), 94-100, 2012                                                                                             | 50 | 2012 |
| 19. | CSA doped polyaniline/CdS organic–inorganic nanohybrid: physical and gas sensing properties<br>BT Raut, <b>MA Chougule</b> , SR Nalage, DS Dalavi, S Mali, PS Patil, VB Patil<br>Ceramics International 38 (7), 5501-5506, 2012                                                                     | 49 | 2012 |
| 20. | Nanocrystalline CuO thin films for H <sub>2</sub> S monitoring: microstructural and optoelectronic characterization<br>P Vikas, J Datta, P Shailesh, <b>C Manik</b> , G Prasad, P Sanjay, R Bharat, ...<br>Journal of Sensor Technology 1, 36-46, 2011                                              | 48 | 2011 |
| 21. | Polypyrrole–ZnO hybrid sensor: effect of camphor sulfonic acid doping on physical and gas sensing properties<br><b>MA Chougule</b> , S Sen, VB Patil<br>Synthetic metals 162 (17-18), 1598-1603, 2012                                                                                               | 47 | 2012 |
| 22. | Polypyrrole thin film: room temperature ammonia gas sensor<br><b>MA Chougule</b> , SG Pawar, SL Patil, BT Raut, PR Godse, S Sen, VB Patil<br>IEEE Sensors Journal 11 (9), 2137-2141, 2011                                                                                                           | 47 | 2011 |
| 23. | Effect of Camphor Sulfonic Acid Doping on Structural, Morphological, Optical and Electrical Transport Properties on Polyaniline–ZnO Nanocomposites<br>SL Patil, <b>MA Chougule</b> , SG Pawar, S Sen, VB Patil<br>Soft Nanoscience Letters 2 (3), 46-53, 2012                                       | 46 | 2012 |
| 24. | Room temperature NO <sub>2</sub> sensing properties of polythiophene films<br>ST Navale, AT Mane, GD Khuspe, <b>MA Chougule</b> , VB Patil<br>Synthetic Metals 195, 228-233, 2014                                                                                                                   | 44 | 2014 |
| 25. | Polyaniline: TiO <sub>2</sub> nanocomposites: Synthesis and characterization<br>SG Pawar, SL Patil, <b>MA Chougule</b> , BT Raut, DM Jundale, VB Patil<br>Archives of Applied Science Research 2 (2), 194-201, 2010                                                                                 | 43 | 2010 |
| 26. | Polypyrrole, $\alpha$ -Fe <sub>2</sub> O <sub>3</sub> and their hybrid nanocomposite sensor: An impedance spectroscopy study<br>ST Navale, GD Khuspe, <b>MA Chougule</b> , VB Patil<br>Organic Electronics 15 (10), 2159-2167, 2014                                                                 | 42 | 2014 |
| 27. | Polyaniline–CdS nanocomposites: effect of camphor sulfonic acid doping on structural, microstructural, optical and electrical properties<br>BT Raut, <b>MA Chougule</b> , AA Ghanwat, RC Pawar, CS Lee, VB Patil<br>Journal of Materials Science: Materials in Electronics 23 (12), 2104-2109, 2012 | 42 | 2012 |
| 28. | New Method for Fabrication of CSA Doped PANi–TiO <sub>2</sub> Thin-Film Ammonia Sensor<br>SG Pawar, SL Patil, <b>MA Chougule</b> , BT Raut, PR Godase, RN Mulik, S Sen, ...<br>Sensors Journal, IEEE 11 (11), 2980-2985, 2011                                                                       | 42 | 2011 |

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|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 29. | New process for synthesis of nickel oxide thin films and their characterization<br>BT Raut, SG Pawar, <b>MA Chougule</b> , S Sen, VB Patil<br>Journal of alloys and compounds 509 (37), 9065-9070, 2011                                                                                     | 41  | 2011 |
| 30. | Camphor sulfonic acid doped PPy/ $\alpha$ -Fe <sub>2</sub> O <sub>3</sub> hybrid nanocomposites as NO <sub>2</sub> sensors<br>ST Navale, GD Khuspe, <b>MA Chougule</b> , VB Patil<br>RSC Advances 4 (53), 27998-28004, 2014                                                                 | 40  | 2014 |
| 31. | Room temperature NO <sub>2</sub> gas sensor based on PPy/ $\alpha$ -Fe <sub>2</sub> O <sub>3</sub> hybrid nanocomposites<br>ST Navale, GD Khuspe, <b>MA Chougule</b> , VB Patil<br>Ceramics International 40 (6), 8013-8020, 2014                                                           | 37  | 2014 |
| 32. | Nanocrystalline TiO <sub>2</sub> thin films for NH <sub>3</sub> monitoring: microstructural and physical characterization<br>SG Pawar, SL Patil, <b>MA Chougule</b> , BT Raut, SA Pawar, RN Mulik, VB Patil<br>Journal of Materials Science: Materials in Electronics 23 (1), 273-279, 2012 | 36  | 2012 |
| 33. | New process for synthesis of ZnO thin films: Microstructural, optical and electrical characterization<br>SL Patil, <b>MA Chougule</b> , SG Pawar, BT Raut, S Sen, VB Patil<br>Journal of alloys and compounds 509 (41), 10055-10061, 2011                                                   | 36  | 2011 |
| 34. | Novel method for fabrication of NiO sensor for NO <sub>2</sub> monitoring<br>SR Nalage, <b>MA Chougule</b> , S Sen, VB Patil<br>Journal of Materials Science: Materials in Electronics 24 (1), 368-375, 2013                                                                                | 34  | 2013 |
| 35. | Nanocrystalline ZnO thin films: optoelectronic and gas sensing properties<br>SL Patil, SG Pawar, AT Mane, <b>MA Chougule</b> , VB Patil<br>Journal of Materials Science: Materials in Electronics 21 (12), 1332-1336, 2010                                                                  | 34  | 2010 |
| 36. | Synthesis and characterization of hybrid nanocomposites of polypyrrole filled with iron oxide nanoparticles<br>ST Navale, GD Khuspe, <b>MA Chougule</b> , VB Patil<br>Journal of Physics and Chemistry of Solids 75 (2), 236-243, 2014                                                      | 33  | 2014 |
| 37. | Facile method of synthesis of polyaniline-SnO <sub>2</sub> hybrid nanocomposites: Microstructural, optical and electrical transport properties<br>GD Khuspe, ST Navale, <b>MA Chougule</b> , S Sen, GL Agawane, JH Kim, ...<br>Synthetic metals 178, 1-9, 2013                              | 33  | 2013 |
| 38. | Nanocrystalline SnO <sub>2</sub> thin films: Structural, morphological, electrical transport and optical studies<br>RD Sakhare, GD Khuspe, ST Navale, RN Mulik, <b>MA Chougule</b> , RC Pawar, ...<br>Journal of Alloys and Compounds 563, 300-306, 2013                                    | 33  | 2013 |
| 39. | Novel method of fabrication of polyaniline-CdS nanocomposites: structural, morphological and optoelectronic properties<br>BT Raut, <b>MA Chougule</b> , S Sen, RC Pawar, CS Lee, VB Patil<br>Ceramics International 38 (5), 3999-4007, 2012                                                 | 33  | 2012 |
| 40. | Fabrication of Nanocrystalline TiO <sub>2</sub> Thin Film Ammonia Vapor Sensor<br>S Pawar, <b>M Chougule</b> , S Patil, B Raut<br>Journal of Sensor Technology 1 (1), 2011                                                                                                                  | 33* | 2011 |
| 41. | Microstructural and optoelectronic studies on polyaniline: TiO <sub>2</sub> nanocomposites<br>SG Pawar, SL Patil, <b>MA Chougule</b> , SN Achary, VB Patil<br>International Journal of Polymeric Materials 60 (3), 244-254, 2010                                                            | 33  | 2010 |
| 42. | Synthesis and characterization of nanocrystalline TiO <sub>2</sub> thin films<br>SG Pawar, SL Patil, <b>MA Chougule</b> , DM Jundale, VB Patil<br>Journal of Materials Science: Materials in Electronics 22 (3), 260-264, 2011                                                              | 32  | 2011 |
| 43. | Camphor sulfonic acid doped polyaniline-tin oxide hybrid nanocomposites: synthesis, structural, morphological, optical and electrical transport properties<br>GD Khuspe, <b>MA Chougule</b> , ST Navale, SA Pawar, VB Patil<br>Ceramics International 40 (3), 4267-4276, 2013               | 31  | 2013 |
| 44. | Development of nanostructured CdS sensor for H <sub>2</sub> S recognition: structural and physical characterisations<br>BT Raut, PR Godse, SG Pawar, <b>MA Chougule</b> , DK Bandgar, VB Patil                                                                                              | 31  | 2012 |



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|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------|
|     | Journal of Experimental Nanoscience 8 (7), 876-889, 2012                                                                                                                                                                                                                                          |    |      |
| 45. | Highly sensitive, reproducible, selective and stable CSA-polypyrrole NO <sub>2</sub> sensor<br>ST Navale, <b>MA Chougule</b> , VB Patil, AT Mane<br>Synthetic Metals 189, 111-118, 2014                                                                                                           | 29 | 2014 |
| 46. | New process for fabrication of polyaniline-CdS nanocomposites: Structural, morphological and optoelectronic investigations<br>BT Raut, PR Godse, SG Pawar, <b>MA Chougule</b> , DK Bandgar, S Sen, ...<br>Journal of Physics and Chemistry of Solids 74 (2), 236-244, 2012                        | 27 | 2012 |
| 47. | Polypyrrole-ZnO nanohybrids: effect of CSA doping on structure, morphology and optoelectronic properties<br><b>MA Chougule</b> , GD Khuspe, S Sen, VB Patil<br>Applied Nanoscience 3 (5), 423-429, 2012                                                                                           | 27 | 2012 |
| 48. | Sol-gel derived Co <sub>3</sub> O <sub>4</sub> thin films: effect of annealing on structural, morphological and optoelectronic properties<br><b>MA Chougule</b> , SG Pawar, PR Godse, RD Sakhare, S Sen, VB Patil<br>Journal of Materials Science: Materials in Electronics 23 (3), 772-778, 2012 | 26 | 2012 |
| 49. | Camphor sulfonic acid doped polyaniline-titanium dioxide nanocomposite: synthesis, structural, morphological, and electrical properties<br>SG Pawar, SL Patil, <b>MA Chougule</b> , BT Raut, S Sen, VB Patil<br>International Journal of Polymeric Materials 60 (12), 979-987, 2011               | 26 | 2011 |
| 50. | Facile method of preparation of PbS films for NO <sub>2</sub> detection<br>ST Navale, DK Bandgar, <b>MA Chougule</b> , VB Patil<br>RSC Advances 5 (9), 6518-6527, 2014                                                                                                                            | 24 | 2014 |
| 51. | Novel process for synthesis of $\alpha$ -Fe <sub>2</sub> O <sub>3</sub> : microstructural and optoelectronic investigations<br>ST Navale, DK Bandgar, SR Nalge, RN Mulik, SA Pawar, <b>MA Chougule</b> , ...<br>Journal of Materials Science: Materials in Electronics 24 (5), 1422-1430, 2013    | 23 | 2013 |
| 52. | Fabrication of polyaniline-ZnO nanocomposite gas sensor<br>SL Patil, <b>MA Chougule</b> , SG Pawar, S Sen, AV Moholkar, JH Kim, VB Patil<br>Sensors & Transducers 134 (11), 120-131, 2011                                                                                                         | 18 | 2011 |
| 53. | Bipolar resistive switching and memristive properties of hydrothermally synthesized TiO <sub>2</sub> nanorod array: Effect of growth temperature<br>AC Khot, ND Desai, KV Khot, MM Salunkhe, <b>MA Chougule</b> , TM Bhawe, ...<br>Materials & Design 151, 37-47, 2018                            | 17 | 2018 |
| 54. | Electrochemical synthesis and potential electrochemical energy storage performance of nodule-type polyaniline<br>YH Navale, ST Navale, MA Chougule, SM Ingole, FJ Stadler, RS Mane, ...<br>Journal of colloid and interface science 487, 458-464, 2017                                            | 17 | 2017 |
| 55. | Microstructural, optical and electrical studies on sol-gel derived TiO <sub>2</sub> thin films<br>SG Pawar, SL Patil, <b>MA Chougule</b> , DM Jundhale, VB Patil<br>Archives of Physics Research 1 (1), 57-66, 2010                                                                               | 16 | 2010 |
| 56. | New Method for Fabrication of Co <sub>3</sub> O <sub>4</sub> Thin Film Sensors: Structural, Morphological and Optoelectronic Properties<br>V Patil, S Pawar, <b>M Chougule</b> , B Raut, R Mulik, S Sen<br>Sensors & Transducers 128 (5), 100-114, 2011                                           | 15 | 2011 |
| 57. | Fabrication of Polyaniline/TiO <sub>2</sub> Nanocomposite Ammonia Vapor Sensor<br>SG Pawar, SL Patil, <b>MA Chougule</b> , BT Raut, SA Pawar, VB Patil<br>Sensors & Transducers 125 (2), 107, 2011                                                                                                | 13 | 2011 |
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| 60. | Development of Nanostructured Polypyrrole (PPy) Thin Film Sensor for NO <sub>2</sub>                                                                                                                                                                                                              | 7  | 2012 |

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|     | Detection<br><b>MA Chougule</b> , S Sen, VB Patil<br>Sensors & Transducers Journal 139 (4), 122-132, 2012                                                                                                                                                                                                |    |      |
| 61. | Effect of Annealing on Structure, Morphology, Electrical and Optical Properties of Nanocrystalline TiO <sub>2</sub> Thin Films<br>SG Pawar, <b>MA Chougule</b> , PR Godse, DM Jundale, SA Pawar, BT Raut, ...<br>Sumy State University Publishing, 2011                                                  | 7  | 2011 |
| 62. | Transparent and conductive ZnO: Al thin films prepared by sol-gel process<br><b>M Chougule</b> , S Patil, S Pawar, V Patil<br>Archives of Physics Research 1 (1), 100-107, 2010                                                                                                                          | 6  | 2010 |
| 63. | PPy/ $\alpha$ -Fe <sub>2</sub> O <sub>3</sub> hybrid nanocomposites: effect of CSA doping on structural, morphological, optical and electrical transport properties<br>ST Navale, GD Khuspe, <b>MA Chougule</b> , VB Patil<br>Journal of Materials Science: Materials in Electronics 25 (1), 65-75, 2014 | 4  | 2014 |
| 64. | PANi-ZnO Nanocomposites: Synthesis and Characterization<br>SL Patil, SG Pawar, <b>MA Chougule</b> , BT Raut, VS Karande, RN Mulik, ...<br>AIP Conference Proceedings 1391 (1), 621-623, 2011                                                                                                             | 4  | 2011 |
| 65. | Nanocrystalline ZnO thin films: Effect of annealing on microstructural and optoelectronic properties<br>SL Patil, SG Pawar, <b>MA Chougule</b> , S Sen, VB Patil<br>J Alloys Compd 509, 10055-10061, 2011                                                                                                | 4  | 2011 |
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| 67. | Processing temperature dependent chemiresistive performance of spin-coated cerium oxide films<br><b>MA Chougule</b> , ST Navale, YH Navale, NS Ramgir, FJ Stadler, GD Khuspe, ...<br>Materials Chemistry and Physics 224, 85-92, 2019                                                                    | 2  | 2019 |
| 68. | Fabrication of NiO thin film electrode for supercapacitor applications<br>VV Mali, ST Navale, <b>MA Chougule</b> , GD Khuspe, PR Godse, SA Pawar, ...<br>AIP Conference Proceedings 1591 (1), 631-632, 2014                                                                                              | 2  | 2014 |
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| 71. | An Approach to Harness Energy by SnO <sub>2</sub> Thin Film Electrode by Thermal Evaporation<br>SM Ingole, YH Navale, DK Bandgar, IA Dhole, <b>MA Chougule</b> , PS Kulkarni, ...<br>Techno-Societal 2016, International Conference on Advanced Technologies for ..., 2016                               | 1  | 2016 |
| 72. | NH <sub>3</sub> sensor based on CSA doped PANi-SnO <sub>2</sub> nanohybrid<br>GD Khuspe, ST Navale, <b>MA Chougule</b> , RN Mulik, PR Godse, VB Patil, ...<br>AIP Conference Proceedings 1591 (1), 2014                                                                                                  | 1  | 2014 |
| 73. | Development of Fe <sub>2</sub> O <sub>3</sub> sensor for NO <sub>2</sub> detection<br>SR Nalage, ST Navale, <b>MA Chougule</b> , SG Pawar, S Sen, VB Patil<br>AIP Conference Proceedings 1512, 504, 2013                                                                                                 | 1  | 2013 |
| 74. | Effect of annealing on structure, morphology and optoelectronic properties of nanocrystalline CuO thin films<br>DM Jundale, SG Pawar, SL Patil, <b>MA Chougule</b> , PR Godse, VB Patil<br>AIP Conference Proceedings 1391 (1), 573-575, 2011                                                            | 1  | 2011 |
| 75. | A Note on Convergence of a Sequence and its Applications to Geometry of Banach Spaces                                                                                                                                                                                                                    | 1  | 2011 |

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|     | HK Pathak<br>Advances in Pure Mathematics 1 (03), 33, 2011                                                                                                                                                                                                                   |  |      |
| 76. | Hydrothermal Synthesis of Tungsten Oxide for the Detection of NO <sub>2</sub> Gas<br>RN Mulik, <b>MA Chougule</b> , GD Khuspe, VB Patil<br>Techno-Societal 2018, 957-961, 2020                                                                                               |  | 2020 |
| 77. | Electrodeposition Synthesised PANi-MnO <sub>2</sub> Hybrid Electrode for Energy Storage Applications<br>GD Khuspe, YH Navale, <b>MA Chougule</b> , RN Dhanawade, VB Patil<br>Techno-Societal 2018, 645-652, 2020                                                             |  | 2020 |
| 78. | Synthesis of polyaniline-Tungsten oxide hybrid nanocomposites and its ammonia sensing performance<br>SB Kulkarni, YH Navale, SM Ingole, <b>MA Chougule</b> , RD Sakhare, AT Mane, ...<br>AIP Conference Proceedings 1989 (1), 020020, 2018                                   |  | 2018 |
| 79. | Prominent NO <sub>2</sub> Gas Sensing Performance of CuO Nanoparticles by Thermal Evaporation Technique<br>VBP Y.H. Navale, I.A. Dhole, A.T. Mane, S.M.Ingole, S.G. Pawar, <b>M.A.Chougule</b><br>17th International Conference on Thin Films (ICTF 17), 2017                |  | 2017 |
| 80. | Hydrothermally synthesized 1D ZnO and their NO <sub>2</sub> gas sensing performance<br>VBP P.R. Godse, R.D. Sakhare, D.K. Bandgar, A.T. Mane, <b>M.A. Chougule</b> , S.B ...<br>17th International Conference on Thin Films (ICTF 17), 2017                                  |  | 2017 |
| 81. | Efficient NO <sub>2</sub> Gas Sensing Characteristics of CeO <sub>2</sub> Nanoparticles by Spin Coating Technique<br>VBP <b>M.A.Chougule</b> , Y.H.Navale, S.L.Patil, S.B.Kulkarni, S.A.Pawar<br>17th International Conference on Thin Films (ICTF 17), 2017                 |  | 2017 |
| 82. | An Approach to Harness Energy by by SnO Thermal 2 Thin Evaporation Film Electrode<br>SM Ingole, YH Navale, DK Bandgar, IA Dhole, <b>MA Chougule</b> , PS Kulkarni, ...<br>Techno-Societal 2016: Proceedings of the International Conference on ..., 2017                     |  | 2017 |
| 83. | Development of nanostructured CdS sensor for H <sub>2</sub> S recognition: structural and physical characterisations (vol 8, pg 876, 2013)<br>BT Raut, PR Godse, SG Pawar, <b>MA Chougule</b> , VB Patil<br>JOURNAL OF EXPERIMENTAL NANOSCIENCE 10 (17), 1357-1357, 2015     |  | 2015 |
| 84. | Development of Flexible Polyaniline/Iron Oxide Composite Sensor for NH <sub>3</sub> Detection: A New Technique Towards Fabrication of Flexible Sensor<br>DK Bandgar, ST Navale, AT Mane, <b>MA Chougule</b> , PR Godse, RN Mulik, ...<br>BIONANO FRONTIER 8 (3), 17-18, 2015 |  | 2015 |
| 85. | NH {sub 3} sensor based on CSA doped PANi-SnO {sub 2} nanohybrid<br>GD Khuspe, ST Navale, <b>MA Chougule</b> , RN Mulik, PR Godse, VB Patil, ...<br>AIP Conference Proceedings 1591 (1), 2014                                                                                |  | 2014 |
| 86. | Facile method of preparation of PbS films for NO <sub>2</sub> detection<br>ST Navale, DK Bandgar, MA Chougule, VB Patil                                                                                                                                                      |  | 2014 |
| 87. | Highly selective and sensitive CdS thin film sensors for detection of NO <sub>2</sub> gas<br>ST Navale, AT Mane, <b>MA Chougule</b> , NM Shinde, JH Kim, VB Patil                                                                                                            |  | 2014 |
| 88. | Camphor sulfonic acid doped PPy/ $\alpha$ -Fe <sub>2</sub> O <sub>3</sub> hybrid nanocomposites as NO <sub>2</sub> sensors<br>ST Navale, GD Khuspe, <b>MA Chougule</b> , VB Patil                                                                                            |  | 2014 |
| 89. | CSA doped polypyrrole-zinc oxide thin film sensor<br>MA Chougule, DM Jundale, BT Raut, S Sen, VB Patil<br>AIP Conference Proceedings 1512 (1), 500-501, 2013                                                                                                                 |  | 2013 |
| 90. | Nanocrystalline Thin Films: Microstructural, Optical and Gas Sensing Properties<br>SG Pawar, SL Patil, <b>MA Chougule</b> , PD More, PR Godse, SA Pawar, ...<br>AIP Conference Proceedings 1391 (1), 443-446, 2011                                                           |  | 2011 |

### C. List of Chapters edited in volumes-books published

| Sr. No. | Name of the Books/Chapter                                                                                                                                                             | Author's Name                                                                                       | Publisher                                                                                                     | Year of Publication |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------|
| 1       | Fabrication of Polypyrrole-Zinc Oxide Nanocomposite Sensors                                                                                                                           | Vikas Patil, Manik Chougule                                                                         | LAMBERT Academic Publishing                                                                                   | 2013                |
| 2       | An Approach to Harness Energy by SnO Thermal 2 Thin Evaporation Film Electrode<br>ISBN No. 978-3-319-53555-5                                                                          | SM Ingole, YH Navale, DK Bandgar, IA Dhole, <b>MA Chougule</b> , PS Kulkarni                        | Techno-Societal 2016, Springer International Publishing AG 2018                                               | 2018                |
| 3       | Efficient NO <sub>2</sub> Gas Sensing Characteristics of CeO <sub>2</sub> Nanoparticles by Spin Coating Technique (P264-L8)<br>ISBN No. 0042-207X                                     | <b>M.A.Chougule</b> , Y.H.Navale, S.L.Patil, S.B.Kulkarni, S.A.Pawar,V.B. Patil                     | ICTF-17: Conference proceedings, P264-L8                                                                      | 2018                |
| 4       | Prominent NO <sub>2</sub> Gas Sensing Performance of CuO Nanoparticles by Thermal Evaporation Technique,<br>ISBN No. 0042-207X                                                        | Y.H. Navale, I.A. Dhole, A.T. Mane, S.M. Ingole, S.G. Pawar, <b>M.A. Chougule</b> , V.B. Patil      | ICTF-17: Conference proceedings, P259-L13                                                                     | 2018                |
| 5       | Hydrothermally synthesized 1D ZnO and their NO <sub>2</sub> gas sensing performance,<br>ISBN No. 0042-207X                                                                            | P.R. Godse, R.D. Sakhare, D.K. Bandgar, A.T. Mane, <b>M.A. Chougule</b> , S.B. Kulkarni, V.B. Patil | ICTF-17: Conference proceedings, P260-L4                                                                      | 2018                |
| 6       | Polyaniline - Tungsten Oxide Hybrid Nanocomposite Flexible Ammonia Sensor,<br>ISBN No. 78-81-935353-2-5                                                                               | S. B. Kulkarni, Y.H. Navale, D.K. Bandgar, <b>M.A. Chougule</b> , S.T. Navale, V. B. Patil          | NENSM-2018 Conference proceedings, 28                                                                         | 2018                |
| 7       | Development of flexible polyaniline/iron oxide composite sensor for NH <sub>3</sub> detection: A new technique towards fabrication of flexible sensor<br>ISBN No. 0974-0678 2320-9593 | DK Bandgar, ST Navale, AT Mane, <b>MA Chougule</b> , PR Godse, RN Mulik                             | BIONANO FRONTIER, 8(3) 17-18                                                                                  | 2015                |
| 8       | NH <sub>3</sub> sensor based on CSA doped PANi-SnO <sub>2</sub> nanohybrid<br>ISBN No. 1551-7616                                                                                      | GD Khuspe, ST Navale, <b>MA Chougule</b> , RN Mulik, PR Godse, VB Patil                             | AIP Conference Proceedings 1591 (1) 631-632                                                                   | 2014                |
| 9       | Fabrication of NiO thin film electrode for supercapacitor applications<br>ISBN No. 1551-7616                                                                                          | VV Mali, ST Navale, <b>MA Chougule</b> , GD Khuspe, PR Godse, SA Pawar                              | AIP Conference Proceedings 1591 (1) 631-632                                                                   | 2014                |
| 10      | DBSA doped Polypyrrole WO <sub>3</sub> hybrid nanocomposite sensor for detection of nitrogen dioxide (NO <sub>2</sub> ) gas<br>ISBN No. 978-81-926341-2-8                             | AT Mane, ST Navale, RN Mulik, <b>MA Chougule</b> , VB Patil                                         | Proceeding of UGC Sponsored Two day National Conference on Nano Materials and Nano Material Based Device, 118 | 2014                |
| 11      | CSA doped polypyrrole-zinc oxide thin film sensor<br>ISBN No. 1551-7616                                                                                                               | <b>MA Chougule</b> , DM Jundale, BT Raut, S Sen, VB Patil                                           | AIP Conference Proceedings 1512 (1) 500-501                                                                   | 2013                |

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| 12 | Development of Fe <sub>2</sub> O <sub>3</sub> sensor for NO <sub>2</sub> detection<br>ISBN No. 1551-7616                           | SR Nalage, ST Navale, <b>MA Chougule</b> , SG Pawar, S Sen, VB Patil    | AIP Conference Proceedings 1512 504         | 2013 |
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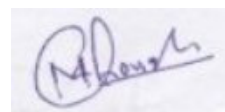
**D. Papers presented in International / National Conferences, Seminars, Workshops, Symposia (Poster/Oral Presentation):**

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| 1. | Room Temperature NO <sub>2</sub> Gas Sensing Properties of Polypyrrole/WO <sub>3</sub> Hybrid Nanocomposites, <b>Manik A. Chougule</b> , Vikas B. Patil<br>Matrafured'2019 International Conference on Chemical Sensors, Visegrád, Hungary, 16-21 June 2019                                                                                                                                                                          |
| 2. | Efficient NO <sub>2</sub> Gas Sensing Characteristics of CeO <sub>2</sub> Nanoparticles by Spin Coating Technique, <b>M.A.Chougule</b> , Y.H.Navale, S.L.Patil, S.B.Kulkarni, S.A.Pawar, V.B. Patil<br>17 <sup>th</sup> International Conference On Thin Films (ICTF17), CSIR- National Physical Laboratory New Delhi, India, 13-17 Nov. 2017.                                                                                       |
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| 4. | Prominent NO <sub>2</sub> Gas Sensing Performance of CuO Nanoparticles by Thermal Evaporation Technique, Y.H. Navale, I.A. Dhole, A.T. Mane, S.M.Ingole, S.G. Pawar, <b>M.A.Chougule</b> , V.B. Patil<br>17 <sup>th</sup> International Conference On Thin Films (ICTF17), CSIR- National Physical Laboratory New Delhi, India, 13-17 Nov. 2017.                                                                                     |
| 5. | Facile Way to Efficient PANi Electrode For Supercapacitor Application, Y.H.Navale, I.A.Dhole, Y.M.Jadhav, <b>M.A.Chougule</b> , P.S.Kulkarni, V.B.Patil<br>International Conference On Advanced Rechargeable batteries & Allied Materials (ICARBM2017), Centre For Materials for Electronics Technology (C-MET), Pune, 8-10 March 2017.                                                                                              |
| 6. | Development of novel polyaniline flexible sensor for Ammonia detection<br>International Conference on Materials Science and Ionizing Radiation Safety & Awareness, (ICMSIRSA-2016), Shivaji University, Kolhapur, January 28-30, 2016.                                                                                                                                                                                               |
| 7. | Fabrication of Polyaniline (PANi) Electrode for Electrochemical Supercapacitor Application, International Conference on Materials Science and Ionizing Radiation Safety & Awareness, (ICMSIRSA-2016), Shivaji University, Kolhapur, January 28-30, 2016.                                                                                                                                                                             |
| 8. | Development of flexible polyaniline/iron oxide composite sensor for NH <sub>3</sub> detection: A new technique towards fabrication of flexible sensor<br>D.K.Bandgar, S.T.Navale, A.T. Mane, <b>M.A.Chougule</b> , P.R.Godse, R.N.Mulik and V.B. Patil<br>International Conference on Functional Materials and Microwaves, ICFMM, Dec. 28-30, 2015, Department of Physics, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. |
| 9. | DBSA doped PPy-WO <sub>3</sub> hybrid nanocomposite: A room temperature NO <sub>2</sub> gas sensor<br>A.T. Mane, D.K.Bandgar, <b>M.A.Chougule</b> , P.R.Godse, B.T.Raut, R.N.Mulik and V.B. Patil<br>International Conference on Functional Materials and Microwaves, ICFMM, Dec. 28-30, 2015,                                                                                                                                       |

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| 11. | CSA Doped PPy Thin Film Sensor For NO <sub>2</sub> Monitoring<br><b>M. A. Chougule</b> , S.T. Navale, G.D. Khuspe, A. T. Mane, A. A. Ghanwat, V. B. Patil<br>DAE-BRNS Conference on Organic Devices: The Future Ahead (ODeFA – 2014) March 3-6, 2014, Bhabha Atomic Research Centre, Anushakti Nagar, Mumbai, Maharashtra, INDIA .                                                                           |
| 12. | NO <sub>2</sub> Sensor Based on PPy/ $\alpha$ -Fe <sub>2</sub> O <sub>3</sub> Hybrid Nanocomposites<br>S. T. Navale, <b>M. A. Chougule</b> , G. D. Khuspe, Shashwati Sen, V. B. Patil<br>DAE-BRNS Conference on Organic Devices: The Future Ahead (ODeFA – 2014) March 3-6, 2014, Bhabha Atomic Research Centre, Anushakti Nagar, Mumbai, Maharashtra, INDIA .                                               |
| 13. | Fabrication of NiO Thin film Electrode for Supercapacitor Application<br>V.V. Mali, S.T. Navale, <b>M.A. Chougule</b> , G.D. Khuspe, P.R. Godse, S.A. Pawar, V.B. Patil<br>58 <sup>th</sup> DAE Solid State Physics Symposium, December 17-21, 2013, Thapar University, Patiala, Panjab.                                                                                                                     |
| 14. | NH <sub>3</sub> Sensor based on CSA doped PANi-SnO <sub>2</sub> Nanohybrid<br>G.D. Khuspe, S.T. Navale, <b>M.A. Chougule</b> , R.N. Mulik, P.R. Godse, S. Sen, V.B. Patil<br>58 <sup>th</sup> DAE Solid State Physics Symposium, December 17-21, 2013, Thapar University, Patiala, Panjab.                                                                                                                   |
| 15. | Fabrication of Polypyrrole-ZnO Hybrid NO <sub>2</sub> Sensor<br><b>M. A. Chougule</b> , S.T. Navale, Shashwati Sen, V. B. Patil<br>Synergy in Physics and Industry (SPI-2013), 21-22 January 2013, BARC, Mumbai.                                                                                                                                                                                             |
| 16. | Development of Room Temperature Cadmium Sulphide Thin Film H <sub>2</sub> S Gas Sensor<br>S.T. Navale, <b>M.A. Chougule</b> , V. B. Patil<br>Synergy in Physics and Industry (SPI-2013), 21-22 January 2013, BARC, Mumbai.                                                                                                                                                                                   |
| 17. | Nanostructured ZnO thin film: A Correlation between Physical and Gas Sensing Properties<br><b>M.A. Chougule</b> , Shashwati Sen, V.B. Patil<br>National Conference on Physics of Nanomaterials & Applications (NCPNA-2012), 14-15 December 2012, Department of Physics, DBF Dayanand College of Arts & Sciences, Solapur.                                                                                    |
| 18. | Fabrication of Nanostructured SnO <sub>2</sub> Thin Film sensor for NO <sub>2</sub> Monitoring<br>G.D. Khuspe, R.D. Sakhare, <b>M.A. Chougule</b> , R.N. Mulik, V.B. Patil<br>National Conference on Physics of Nanomaterials & Applications (NCPNA-2012), 14-15 December 2012, Department of Physics, DBF Dayanand College of Arts & Sciences, Solapur.                                                     |
| 19. | Novel Method of Fabrication of Polythiophene (PTh) Gas Sensor<br>S.T. Navale, D.K. Bandgar, V.S. Karande, <b>M.A. Chougule</b> , V.B. Patil<br>National Conference on Physics of Nanomaterials & Applications (NCPNA-2012), 14-15 December 2012, Department of Physics, DBF Dayanand College of Arts & Sciences, Solapur.                                                                                    |
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| 21. | CSA doped polypyrrole-zinc oxide thin film sensor<br><b>M.A. Chougule</b> , Shashwati Sen, V. B. Patil<br>57 <sup>th</sup> DAE-Solid State Physics symposium (SSPS-2012), 3-7 December 2012, IIT, Bombay, Mumbai.                                                                                                                                                                                            |
| 22. | Development of Fe <sub>2</sub> O <sub>3</sub> sensor for NO <sub>2</sub> Detection<br>S.R. Nalage, S.T. Navale, <b>M. A. Chougule</b> , Shashwati Sen, V.B. Patil<br>57 <sup>th</sup> DAE-Solid State Physics symposium (SSPS-2012), 3-7 December 2012, IIT, Bombay, Mumbai.                                                                                                                                 |

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| 23. | Sol-Gel derived Nanocrystalline SnO <sub>2</sub> Thin Films: Synthesis and Characterization<br>R.D. Sakhare, S.R. Nalage, <b>M.A. Chougule</b> , S.G. Pawar, P.R. Godse, V.B. Patil<br>1st International Conference on Functional Materials for Defence (ICFMD-2012), 18-20 May 2012, Defence Institute of Advanced Technology, Pune.                                                    |
| 24. | Development of Polypyrrole (PPy) Thin Film Sensors for NO <sub>2</sub> Monitoring<br><b>M.A. Chougule</b> , Shashwati Sen, V.B. Patil<br>1st International Symposium on Physics and Technology of Sensors, 8-10 March 2012, C-MET, Pune.                                                                                                                                                 |
| 25. | Novel method for Fabrication of NiO Sensor: Microstructural and Physical Characterization<br>S.R. Nalage, <b>M.A. Chougule</b> , P.R. Godse, D.M. Jundale, V.B. Patil<br>1 <sup>st</sup> International Symposium on Physics and Technology of Sensors, 8-10 March 2012, C-MET, Pune.                                                                                                     |
| 26. | Fabrication of Nanostructured ZnO Sensor for NO <sub>2</sub> Monitoring<br><b>M.A. Chougule</b> , S.L. Patil, Shashwati Sen, V.B. Patil<br>Ist International Conference on Physics of Materials and Materials Based Device Fabrication (ICPM-MDF-2012), 17-19 January 2012, Department of Physics, Shivaji University, Kolhapur.                                                         |
| 27. | Polyaniline-CdS Nanocomposites: Structural, Morphological and Optoelectronic Properties<br>B.T. Raut, P.R. Godse, S.G. Pawar, <b>M.A. Chougule</b> , D.K. Bandgar, V. B. Patil<br>Ist International Conference on Physics of Materials and Materials Based Device Fabrication (ICPM-MDF-2012), 17-19 January 2012, Department of Physics, Shivaji University, Kolhapur.                  |
| 28. | Effect of CSA doping on Polyaniline-ZnO Nanocomposites: Microstructural and Optoelectronic Properties<br>S.L. Patil, <b>M.A. Chougule</b> , S.G. Pawar, D.M. Jundale, R.D. Sakhare, V. B. Patil<br>Ist International Conference on Physics of Materials and Materials Based Device Fabrication (ICPM-MDF-2012), 17-19 January 2012, Department of Physics, Shivaji University, Kolhapur. |
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| 30. | PANi-ZnO Nanocomposite: Detection of NH <sub>3</sub> Gas at Room Temperature<br>S.L. Patil, S.G. Pawar, <b>M.A. Chougule</b> , P.R. Godse, D.M. Jundale, V.B. Patil<br>XVI International Workshop on the Physics of Semiconductor Devices (IWPSD-2011), 19-22 December 2011. IIT, Kanpur, Uttar Pradesh.                                                                                 |
| 31. | Nanocrystalline CuO Thin Films: Synthesis, Characterization and Gas Sensing Properties<br>D.M. Jundale, S.G. Pawar, <b>M.A. Chougule</b> , B.T. Raut, Shashwati Sen, V.B. Patil<br>XVI International Workshop on the Physics of Semiconductor Devices (IWPSD-2011), 19-22 December 2011. IIT, Kanpur, Uttar Pradesh.                                                                     |
| 32. | Effect of annealing on structure, morphology and optoelectronic properties of nanocrystalline CuO thin films<br>D.M. Jundale, S.G. Pawar, S.L. Patil, <b>M.A. Chougule</b> , P.R. Godse, V.B. Patil<br>International Conference on light (Optics 2011), 23-25 May 2011, Department of Physics, National Institute of Technology, Calicut, Kerala.                                        |
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| 35. | Sol gel Derived Nanosized Co <sub>3</sub> O <sub>4</sub> Thin Films: Effect of Annealing<br>R.V. Kavade, S.G. Chavan, S.R. Kore, S.G. Pawar, <b>M.A. Chougule</b> , D.K. Bandgar, V.B. Patil<br>National Seminar on Physics of Materials and Materials Based Device Fabrication (NSPM-MDF 2011), 17-18 Feb. 2011, Department of Physics, Shivaji University, Kolhapur.                   |

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| 37. | Fabrication of CSA doped PANi- TiO <sub>2</sub> Nanocomposite Thin Film Ammonia Sensor<br>S.G. Pawar, S.L. Patil, <b>M.A. Chougule</b> , B.T. Raut, D.M. Jundale, P.R. Godse, V.B. Patil<br>National Seminar on Physics of Materials and Materials Based Device Fabrication (NSPM-MDF 2011), 17-18 Feb. 2011, Department of Physics, Shivaji University, Kolhapur.                                                |
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