

## School of Physical Sciences

### Publication List

**Prof. P. P. Patil**

[\(Number of Citations : 1249, h index : 19, i10- index : 44\)](#)

1. High performance H<sub>2</sub> sensor based on ZnSnO<sub>3</sub> cubic crystallites synthesized by a hydrothermal method PARMESHWAR WADKAR, DIPAK BAUSKAR AND PRADIP PATIL, TALANTA 105 (2013) 327.
2. A study on the electrochemical polymerization, characterization, and corrosion protection of o-toluidine on steel J. SOLID STATE ELECTROCHEM. 17 (2013) 29.
3. Investigation on role of monomer(s) during electrochemical polymerization of aniline and its derivatives on low carbon steel by XPS VANDANA P. SHINDE, PRADIP P. PATIL ELECTROCHIM. ACTA 78 (2012) 483.
4. Synthesis and humidity sensing properties of ZnSnO<sub>3</sub> cubic crystallites DIPAK BAUSKAR, B. B. KALE AND PRADIP PATIL SENSORS AND ACTUATORS B: CHEMICAL 161 (2012) 396.
5. LPG sensing behavior of poly (o-anisidine)-tin oxide nanocomposite DEWYANI PATIL, KISHOR KOLHE AND PRADIP PATIL J. APPL. PHYS., 110 (2011) 124501.
6. Synthesis of nanostructured Cu xS thin films by chemical route at room temperature and investigation of their size dependent physical properties A.U. UBALEA, D.M. CHOUDHARIA, J.S. KANTALEA, V.N. MITKARIA, M.S. NIKAMA, W.J. GAWANDEA, P.P. PATIL JOURNAL OF ALLOYS AND COMPOUNDS 509 (2011) 9249
7. A rapid response humidity sensor based on poly (2, 5-dimethoxyaniline)-tin oxide nanocomposite DEWYANI PATIL AND PRADIP PATIL SENSOR LETTERS 9 (2011) 1298.
8. Inhibition of nickel coated mild steel corrosion by electrosynthesized Polyaniline coatings SUDESHANA CHAUDHARI AND P. P. PATIL ELECTROCHIMICA ACTA 56 (2011) 3049.
9. Highly sensitive and selective LPG sensor based on  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> nanorods DEWYANI PATIL, VIRENDRA PATIL AND PRADIP PATIL SENSORS AND ACTUATORS B: CHEMICAL 152 (2011) 299.
10. Nanostructured spinel ZnCo<sub>2</sub>O<sub>4</sub> for the detection of LPG, DEWYANI PATIL, VIJAYANAND SUBRAMANIAN, PATTAYIL A. JOY, HARI S. POTDAR, PRADIP PATIL SENSORS AND ACTUATORS B : CHEMICAL 152 (2011) 121.
11. Electrodeposition of poly (o-toluidine) coatings on brass from aqueous salicylate solution and its corrosion protection performance DEWYANI PATIL AND P. P. PATIL JOURNAL OF APPLIED POLYMER SCIENCE 118 (2010) 2084.
12. Inhibition of steel corrosion by electrosynthesized poly (o-anisidine) dodecylbenzenesulfonate coating SUDESHANA CHAUDHARI AND P. P. PATIL ELECTROCHIMICA ACTA 55 (2010) 6715.
13. Poly(o-anisidine)-tin oxide nanocomposite : Synthesis, characterization and application to humidity sensing DEWYANI PATIL, YOU-KYONG SEO, YOUNG KYU HWANG AND PRADIP PATIL SENSORS AND ACTUATORS B : CHEMICAL 148 (2010) 41.
14. Highly sensitive and fast responding CO sensor based on Co<sub>3</sub>O<sub>4</sub> nanorods DEWYANI PATIL, VIJAYANAND SUBRAMANIAN, PATTAYIL A. JOY, HARI S. POTDAR, PRADIP PATIL TALANTA 81 (2010) 37.
15. Synthesis and corrosion protection aspects of poly(o-toluidine)/CdO nanoparticle composite coatings on mild steel SUDESHANA CHAUDHARI, A. B. GAIKWAD AND P. P. PATIL JOURNAL OF COATINGS TECHNOLOGY AND RESEARCH 7 (2010) 119.
16. Evaluation of corrosion protection performance of poly (o-ethylaniline) coated copper by electrochemical impedance spectroscopy VANDANA SHINDE AND PRADIP. P. PATIL MATER. SCI. AND ENGG. 168 (2010) 142.
17. CO gas sensing properties of screen printed SnO<sub>2</sub> thick films R. S. KHADAYATE and P. P. PATIL J. OPTOELECTRONICS AND ADVANCED MATERIALS, 12 (2010) 1338.
18. Poly (o-anisidine) coatings on brass: Synthesis, characterization and corrosion protection SUDESHANA CHAUDHARI, A. B. GAIKWAD AND P. P. PATIL CURRENT APPLIED PHYSICS 9 (2009) 206.
19. Synthesis aspects and humidity sensing characteristics of polyaniline/BaTiO<sub>3</sub> composites PRADIP PATIL, YOU-KYONG SEO, YOUNG KYU HWANG AND JONG-SAN CHANG, J. NANOSCIENCE AND NANOTECHNOLOGY, 9(2009)318.

20. Humidity sensitive poly(2,5-dimethoxyaniline)/WO 3 composites DEWYANI PATIL, YOU-KYONG SEO, YOUNG KYU HWANG, JONG-SAN CHANG AND PRADIP PATIL, SENSORS AND ACTUATORS B : CHEMICAL, 132 (2008) 116.
21. Corrosion protective bi-layered composites of polyaniline and poly (o-anisidine) on low carbon steel SUDESHANA CHAUDHARI AND P. P. PATIL J. APPL. POLYM. SCI. 109 (2008) 2546.
22. Synthesis and corrosion protection study of poly (o-ethylaniline) coatings on copper VANDANA SHINDE, A. B. GAIKWAD AND P. P. PATIL SURFACE AND COATINGS TECHNOLOGY 202 (2008) 2591.
23. Poly (2, 5-dimethoxyaniline) films on mild steel for application to glucose biosensor DEWYANI PATIL AND PRADIP PATIL J. APPL. POLYM. SCI. 107(2008) 2304.
24. Humidity sensing properties of poly (o-anisidine)/WO 3 composites DEWYANI PATIL, YOU-KYONG SEO, YOUNG KYU HWANG, JONG-SAN CHANG AND PRADIP PATIL, SENSORS AND ACTUATORS B: CHEMICAL, 128(2) (2008) 374.
25. Corrosion protective poly (o-ethoxyaniline) coatings on copper SUDESHANA CHAUDHARI AND P. P. PATIL ELECTROCHIM. ACTA 53(2007) 927.
26. Corrosion protection aspects of electrochemically synthesized poly (o-anisidine-co - toluidine) coatings on copper PRITEE PAWAR, A.B. GAIKWAD AND P. P. PATIL ELECTROCHIM. ACTA 52 (2007) 5958.
27. Corrosion protection aspects of electrochemically synthesized poly (o-anisidine) coatings on mild steel: Electrochemical impedance spectroscopy study SUDESHANA CHAUDHARI AND P. P. PATIL J. APPL. POLYM. SCI., 106 (2007) 400.
28. Use of poly(o-toluidine)/ZrO 2 nanocomposite coatings for corrosion protection of mild steel SUDESHANA CHAUDHARI, S.R. SAINKAR, A. B. MANDALE, K. R. PATIL AND P. P. PATIL, J. APPL. POLYM. SCI., 106 (2007) 220.
29. Cr 2O3 activated ZnO thick film resistors for ammonia gas sensing operable at room temperature D.R. PATIL, L.A. PATIL AND P.P. PATIL SENSORS AND ACTUATORS B : CHEMICAL, 126 (2007) 368.
30. Acetone vapour sensing characteristics of cobalt-doped SnO 2 thin films SHRIRAM B. PATIL, P.P. PATIL AND MAHENDRA A. MORE SENSORS AND ACTUATORS B : CHEMICAL, 125 (2007) 126.
31. Poly (o-anisidine) films on mild steel: Electrochemical synthesis and biosensor application DEWYANI PATIL, A.B.GAIKWAD AND PRADIP PATIL J. PHYS. D: APPL.PHYS. 40 (2007) 2555.
32. Anticorrosive properties of electrosynthesized poly (o-anisidine) coatings on copper from aqueous salicylate medium SUDESHANA CHAUDHARI, S.R.SAINKAR AND P.P. PATIL J. APPL. D: APPL. PHYS., 40 (2007) 520.
33. Synthesis of poly (aniline-co-o-toluidine) coatings and their corrosion protection performance on low carbon steel PRITEE PAWAR, S.R.SAINKAR AND P.P. PATIL J. APPL. POLYM. SCI. 103(3) (2007) 1868.
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36. Preparation and characterization of WO 3 based liquid petroleum gas sensor R. S. KHADAYATE, J. V. SALI, S. B. RANE and P.P.PATIL MATERIALS AND MANUFACTURING PROCESSES, 22 (2007) 277.
37. Synthesis and LPG sensing properties of nano-sized cadmium oxide R. B. WAGHULADE, RENU PASRICHA AND P. P. PATIL TALANTA, 72 (2007) 594.
38. Acetone vapor sensing properties of screen printed WO 3 thick films R. S. KHADAYATE, J.V.SALI AND P. P. PATIL TALANTA, 72 (2007) 1077.
39. Ethanol vapour sensing properties of screen printed WO 3 thick films R. S. KHADAYATE, R. B. WAGHULDE, M. G. WANKHEDE, J. V. SALI and P. P. PATIL, BULL. MATER. SCI., 30(2), (2007) 129.
40. Studies on gas sensing performance of pure and modified barium strontium titanate thick film resistors G H JAIN, L A PATIL, P P PATIL, U P MULIK and K R PATIL BULL. MATER. SCI., 30 (1) (2007) 9.
41. Studies on Chemically Deposited Nonstoichiometric Thin Films of CuInSe 2 -a Highly Promising Material for Photosensors R. H. BARI, L. A. PATIL AND P. P. PATIL SENSORS AND TRANSDUCERS JOURNAL, 69(7) (2007) 629.
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87. Ion beam mixing at Fe:Al 2O<sub>3</sub> interface : A conversion electron Mossbauer spectroscopic study S.B.OGALE, D.M.PHASE, P.P.PATIL , S.M.KANETKAR, S.V.GHAISAS, V.G.BHIDE and S.K.DATE

## Prof. D. K. Gautam

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### **Dr. J. P. Bange**

**(No. of Citations:110, h-index:5, i10index:4)**

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**Dr. V. P. Shinde**  
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**National Conferences attended and presented:**

1. Poly(o-toluidine) coatings on stainless steel : Synthesis and corrosion protection study  
Vandana Shinde and P.P.Patil.  
Presented orally in Fourteenth National Congress on Corrosion Control, Hydrabad; organized by NATIONAL CORROSION COUNCIL OF INDIA, (NCCI) Karaikud 630006. In collaboration with CENTRAL ELECTROCHEMICAL RESEARCH INSTITUTE, (Council of Scientific & Industrial Research) Karaikudi and INDIAN INSTITUTE OF CHEMICAL TECHNOLOGY, (Council of Scientific & Industrial Research), Hyderabad held at Green Park, Begumpet, Hyderabad, 18 – 20 September 2008.
2. Corrosion protection of low carbon steel by poly (o- toluidine) electrosynthesized from tartrate solution  
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**International Conferences attended and presented:**

1. Evaluation of corrosion protection performance of poly(o-ethyl aniline) coated copper by electrochemical impedance spectroscopy  
VandanaShinde and P.P.Patil  
Poster presented in SAMPADA 2008 - 2nd *International Symposium* on Advanced Materials And Polymers For Aerospace, Pune; organized by University of Pune, INDIA; Advanced Polymer Research & Technologies, PA, USA; National Chemical Laboratory (NCL), Pune, INDIA; Air Force Research Laboratory (AFRL/ML), Wright-Patterson AFB, OH, USA; Office of Naval Research Global (ONRG), US Department of Navy, USA; Held at YASHADA - MDC Auditorium, Raj Bhavan Complex, Pune-411007, (Maharashtra) INDIA ; 8 – 12 , December 2008.
2. Poly(o-toluidine) as a conducting polymer coating on metal substrates : Synthesis, characterization and corrosion study  
VandanaShinde and P.P.Patil  
Orally presented in International Conference MEMS and Optoelectronics Technologies (ICMOT-2010 ) held at Swarnadhara college of engineering, Narasapur (Andhra Pradesh) , organized by Swarnadhara college of engineering, Narasapur (Andhra Pradesh) with collaboration International Accreditation Council of Quality Education (IACQER) during 22-23 Jan. 2010.

**University level Seminars attended and presented:**

1. Corrosion protection of low carbon steel by poly (o- methylaniline).  
Vandana Shinde and P.P.Patil.  
presented orally in C.V.RAMAN SEMINOR organized by North Maharashtra University , Jalgaon and University Grant Commission , New Delhi held at Senate Hall of North Maharashtra University (Jalgaon); at 28, February 2004.
2. Poly (o- toluidine) coatings on metal substrates: Synthesis and Corrosion protection performance.  
Vandana Shinde and P.P.Patil.  
presented orally in C.V.RAMAN SEMINOR organized by North Maharashtra University , Jalgaon and University Grant Commission , New Delhi held at Senate Hall of North Maharashtra University (Jalgaon); at 28, February 2005.
3. Poly(o-toluidine) coatings on copper : Electrochemical synthesis from aqueous media  
Vandana Shinde and P.P.Patil.  
presented orally in C.V.RAMAN SEMINOR organized by North Maharashtra University , Jalgaon and University Grant Commission , New Delhi held at Senate Hall of North Maharashtra University (Jalgaon); at 28, February 2006
4. Poly(o-toluidine) coatings on stainless steel: synthesis and corrosion protection study  
Vandana Shinde and P.P.Patil.  
presented orally in C.V.RAMAN SEMINOR organized by North Maharashtra University , Jalgaon and University Grant Commission , New Delhi held at Senate Hall of North Maharashtra University (NMU) (Jalgaon); at 28, February 2007.

5. Poly(o-toluidine) coatings on 304 stainless steel  
Vandana Shinde and P.P.Patil.  
presented orally in National Seminar 'Resent trends in electronic devices' organized by North Maharashtra University, Jalgaon and University Grant Commission, New Delhi held at Department of Physics, North Maharashtra University (NMU) (Jalgaon); at, 26 March, 2007

**National Conferences/ Research Festivals/ Workshops/ Programme attended:**

1. National seminar 'Resent Trends in Material Science (RTMS)' organized by Department of Physics, North Maharashtra University, Jalgaon and University Grant Commission, New Delhi held at Department of Physics, during 24-25 March, 2006.
2. University level research festival, AVISHKAR – 2006; organized by North Maharashtra University (NMU) (Jalgaon); 15-16 December, 2006.
3. One day Workshop on Acquaintance Programme of IUAC, organized by Department of Physics, North Maharashtra University (NMU) (Jalgaon); and Inter University Accelerator Centre (IUAC) New Delhi, at NMU on 30 April 2008.
4. A special programme on "Health and Education for Woman" on the occasion of International Woman Day, organized by Vigyan Prasar (VP), government of India, New Delhi through the EduSat Satellite Interactive terminal (SIT) at Rajiv Gandhi Science and Technology Commission (RGS & TC), Department of Physics, North Maharashtra University (NMU) (Jalgaon), on 10 March 2010.
5. UGC-SAP Sponsored National conference on Materials and Devices for Future Technology held at School of Physical Sciences, North Maharashtra University (NMU) (Jalgaon); on 7 March 2011.

**Dr. R. D. Ladhe**

**(No. of Citations:6, h-index:2, i10index:0)**

1. LPG sensor based on complete inorganic n-Bi<sub>2</sub>S<sub>3</sub>-p-CuSCN heterojunction synthesized by a simple chemical route., **R. D. Ladhe**, P. K. Baviskar, W. W. Tan, J. B. Zhang, C. D. Lokhande and B. R. Sankapal, J. Phys. D: Appl. Phys 43 (2010) 245302(6 pp) **Impact Factor** 2.54
2. p-PEDOT: PSS as a heterojunction partner with n-ZnO for detection of LPG at room temperature., **R. D. Ladhe**, S. M. Pawar, K. V. Gurav, J. H. Kim and B. R. Sankapal, Journal of Alloys and Compounds, 515 (2011) 80–85 **Impact Factor** 2.39
3. Room temperature chemical synthesis of highly oriented PbSe nanotubes based on negative free energy of formation., **R. D. Ladhe**, D. B. Salunkhe, P. K. Baviskar, V. Gupta, S. Chand, B. R Sankapal, Journal of Alloys and Compounds 509 (2011) 10066-10069 **Impact Factor** 2.39
4. Ion Exchange Processed CdS Nanorods in Powder Form Using Cadmium Hydroxide Nanowires by Wet Chemical Route., S. L. Patil, R. S. Chaudhari, **R. D. Ladhe**, P. K. Baviskar and B. R. Sankapal, Journal of Scientific Review, 2(2010) 91-95 Open access,
5. Nanocrystalline n-Bi<sub>2</sub>S<sub>3</sub>-p-PbS heterojunction towards room temperature liquefied petroleum gas (LPG) sensor., **R. D. Ladhe**, S. m. Pawar, J. H. Kim and B. R. Sankapal, Sensor and Actuators B: Chem. (Submitted) **Impact Factor** 3.4.
6. Room Temperature Liquefied Petroleum Gas Sensor Based On n-Bi<sub>2</sub>S<sub>3</sub> / p-PEDOT: PSS Heterojunction. **R. D. Ladhe**, H. M. Pathan and, B. R. Sankapal, Sensor and Actuators B: Chem. (Submitted) **Impact Factor** 3.4
7. Chemical synthesis of highly dispersed CdS quantum dots on TiO<sub>2</sub> substrate at room temperature. D. B. Salunkhe, **R. D. Ladhe**, D.P. Dubal, W. B. Kim, B. R. Sankapal, J. Power Sources, (Submitted) **Impact Factor** 4.6