Dr. (Mrs.) ANJALI ANAND ATHAWALE

Associate Professor



- 1. Full Name Dr. (Mrs.) ANJALI ANAND ATHAWALE
- 2. Designation Associate Professor

3. Current Research Interests

Synthesis of conducting polymers and epoxy composites, Metal and ceramic nanoparticles and nanocluster composites. Applications as catalysts for organic reactions and as chemical vapour sensors

4. Research Publications : Total

73 in journals (70 - International, 3 - National)

70 in symposia/conference

Achievements in last 10 years

5.Awards and Recognition:

- British Commonwealth Academic Fellowship, Oct 2008- March 2009, worked at University of Aberdeen, Scotland, (UK), CSC Reference No :INCF - 2008 –
 69 dated 6th May 2008. Worked on 'heterogenous catalysis with water as solvent'.
- Invited as Chairman for the International Seminar ICMAT-2003 at Singapore.
- Prof. Deshpande award given by Institute of Engineering, Pune.

6.Contributed a Chapter entitled "Lanthanum-based perovskites as exhaust gas

sensors" in *Encyclopedia of Sensors* (Vol. 5 I-M, Pages 215, 2005) on invitation.

Editors, C. Grimes, E. C. Dickey and M. V. Pishko. Foreword by **Professor Rudolph A. Marcus**, Nobel Prize Laureate, American Scientific Publishers

7. Patents : 03

Patent: 1

| Title: | A method of production of electro – ceramic oxides |
|---------------|--|
| Inventor: | Malini Bapat and A. A. Athawale. |
| Patent number | : 375/MUM/2008 |

Patent: 2

| Title: | A process for Synthesis of Magnetite and/or Maghemite | | | |
|-----------|---|--|--|--|
| | nanotubes/nanorods | | | |
| Inventor: | Dr.Shrikant.V.Bhagwat, Mrs. Hema Singh, A. A. | | | |

Athawale.

Patent number: 857/MUM/2007

Patent: 3

Title: An improved modified process for synthesis of perovskite ceramics

Inventor: A. A. Athawale, Chandwadkar, A. J. Sahu, P. K.

Patent number: 803/DEL/2005

Publications

International and National Journals – 36

Papers presented in symposis/ Conferences/ workshops -55

LIST OF PUBLICATIONS OF DR. (MRS.) ANJALI A. ATHAWALE

- "Comparative studies of cobalt and nickel oxides synthesised using steadystate γ-radiolysis", K. Navinkiran and Anjali A. Athawale, Int. J. Nanotechnol, Article in press (2012)
- "Electrically conductive silicone rubber–steel fibre composites",
 Anjali A. Athawale, Aparna M. Joshi, ,Sage Publications, J. Elastomers and
 Plastics. 44 (1) (5January 2012).
- "Epoxy Polyester IPNs Modified with Aromatic Amines", Jyoti A. Pandit, Anjali
 A. Athawale, J. Applied Polymer science, 125,(2) (2011) pg.836-843
- 4. "Silver doped lanthanum chromite by microwave combustion method", Anjali A.
 Athawale, P.A.Desai, Ceramic International , .37(2011) pg.3037-3043.
- "Studies on Electrically Conductive Composites of Ethylene Propylene Diene Monomer Rubber and Steel Fibres", Anjali A. Athawale, Aparna M. Joshi, Journal of Applied Polymer Science, 120, (2011) pg.3036-3041.

- 6. "γ-ray synthesis of Cobalt oxide nanoparticles/fibres in alcoholic medium", Anjali A.
 Athawale, Megha Majumdar, Hema Singh and K. Navinkiran Defence Science
 Journal 60(5), 2010, pg. 1.
- "Aqueous phase hydrogenation of substituted phenyls over carbon nanofibre and activated carbon supported Pd", James A. Anderson, Anjali A. Athawale, Flora Imrie, Fiona M. Mc Kenna, Alan Mc Cue, Daniel Molyneux, Kevin Power, Mikaela Shand and Richard Wells, Journal of Catalysis, 270 (1) (2010) pg. 915.
- "Solvent mediated morphological control of aniline stabilized cobalt oxide nanoparticles", Anjali A. Athawale, Vidyanand Singh, B.R. Mehta and K. Navinkiran, Journal of Alloys and Compounds, 492 (1-2), (2010) pg. 331.
- "Elucidation of the role of Hexamine and other precursors in the formation of magnetite nanorods", Hema Singh, Shrikant Bhagwat, Samuel Jouen, Benoît Lefez, Anjali A. Athawale, Beatrice Hannoyer and Satishchandra Ogale, Phy. Chem. Chem Phys.. 12, (2010) pg. 3246
- "Non-Templated Hydrothermal Growth of Anisotropic Magnetite Nanostructures Using Hexamine as the Directing Agent", S. V. Bhagwat, S. Jouen, D. C. Kundaliya, H. Singh, T. Jagadale, Anjali A. Athawale, S. Lofland, B. Hannoyer and S. B. Ogale, J. Nanosci. Nanotechnol., 9, (2009) pg. 5823.
- "Exchanges of Uranium (VI) Species in Amidoxime-Functionalized Sorbents", Sadananda Das, Ashok K. Pandey, Anjali A. Athawale, Vijay K. Manchanda, Journal of Physical Chemistry B, 113(18), (2009) pg. 6328.
- "Hydroxide directed routes to synthesize nanosized cubic ceria (CeO₂)", Anjali A. Athawale, Malini S. Bapat, Purushottam A. Desai, Journal of Alloys and Compounds, 484(1-2), (2009) pg. 211.
- "Effect of mineralizer on the hydrothermal synthesis of nanocrystalline perovskite oxides", Anjali A. Athawale and Malini S. Bapat, Materials Research Innovations, Accepted (2009).

- "Epoxy resin-modified, urea-formaldehyde/silicon networks for high impact strength and thermal stability", Anjali A. Athawale and Alhousami Mohammed H. M., Journal of Reinforced Plastics and Composites, 28(18), (2009) pg. 2231.
- 15. "An efficient γ-PFe₂O₃ catalyst for liquid phase air oxidation of p-hydroxybenzyl alcohol under mild conditions", A.C. Garade, M. Bharadwaj, S.V. Bhagwat, Anjali A. Athawale and C. V. Rode, Catalysis Communications, 10(5), (2009) pg. 485.
- "Adsorptive Preconcentration of Uranium in Hydrogels from Seawater and Aqueous Solutions", Sadananda Das, Ashok K. Pandey, Anjali A. Athawale and Vijay K. Manchanda, Industrial Engineering and Chemistry Research, 48, (2009) pg. 6789.
- "Hydrothermal preparation of BaSnO₃ and Au- BaSnO₃ nanorods", Anjali A. Athawale, Malini S. Bapat and Purushottam A. Desai, Journal of Nanoscience and Nanotechnology, 8 (2008) pg. 4258.
- "Synthesis of polypyrrole nanofibres by ultrasonic waves", Anjali A. Athawale, Prachi P. Khatre and Ashok H. Dhamane, Journal of Applied Polymer Science, 108(5), (2008) pg. 2872.
- "Low temperature synthesis of magnetite and maghemite nanoparticles", Shrikant Bhagwat, Hema Singh, Anjali A. Athawale, Beatrice Hannoyer, Samuel Jouen, Benoit Lefez, Darshan Kundaliya, Renu Pasricha, Sailaja Kulkarni and Satishchandra Ogale, Journal of Nanoscience and Nanotechnology, 7, (2007) pg. 4294.
- "Novel epoxy resin networks with high impact strength and hardness", Anjali A.
 Athawale and Mohammed H.M.Alhousami, Journal of Reinforced Plastics and Composites, 27(6), (2007) pg. 605.
- "Influence of mode of synthesis on the sensing properties of Pd-polyaniline nanocomposite towards methanol vapours", Anjali A. Athawale, Prachi P. Katre and S.V. Bhagwat, Journal of Advances in Engineering Science A, 1, (2007) pg. 15.
- 22. "Au-Polyaniline nanocomposites synthesis using γ induced Au nanoparticles", Prachi
 P. Khatre and Anjali A. Athawale, Synthesis and reactivity in Inorganic, MetalOrganic and Noble metal Chemistry 37(5), (2007) pg. 363.

- "Chemical aspects of uranium recovery from seawater by amidoximate electrobeam

 grafted polypropylene membrane", Sadananda Das, A. K. Pandey, Anjali A.
 Athawale, Virendra Kumar, Y. K. Bharadwaj, S. Sabharwal and V. K. Manchanda
 Desalination, 223 (2008) pg. 243.
- 24. "Synthesis of nanocrystalline PZT by hydrothermal method", Anjali A. Athawale and Malini S. Bapat, Defence Sci. J., 57, (2007) pg. 35.
- "Radiation assisted synthesis of nanosized barium zirconate", Anjali A. Athawale, Asha J. Chandwadkar, Prashant Karandikar, Renu Pasricha, and Malini S. Bapat, Radiation Phys. Chem., 75, (2006) 755.
- 26. "Nanocomposite of Pd-polyaniline as a selective methanol sensor", Anjali A.Athawale, S. V. Bhagwat and Prachi P. Katre, Sens. Actuat. B., 114, (2006) pg. 263.
- 27. "Nonaqueous phase synthesis of copper nanoparticles", Anjali A. Athawale, PrachiP. Katre and Megha B. Majumdar, J. Nanosc. and Nanotech., 5, (2005) pg. 991.
- "A rapid hydrothermal synthesis route for nanocrystalline SrZrO₃ using reactive precursors", Anjali A. Athawale and M. Bapat, Materials Science and Engineering B., 119(1), (2005) pg. 87.
- "Synthesis of CTAB-IPA reduced copper nanoparticles", Anjali A. Athawale, Prachi P. Katre, Manmohan Kumar and Megha B. Majumdar, Mater. Chem. Phys., 91(2-3), (2005) pg. 507.
- "A Soft solution process to synthesize nanocrystalline barium zirconate via reactive solid state precursors", Anjali A. Athawale and M. Bapat, J. Metastable, Nanocryst. Mater., 23, (2005) pg. 1.
- 31. "Ag-Polyaniline nanocomposite as a selective sensor for ammonia", Anjali A.
 Athawale and P.P. Katre, J. Metastable Nanocryst. Mater., 23, (2005) pg. 323.
- 32. "Synthesis of silver nanowires inside mesoporous MCM-41 host", P.V. Adhyapak,
 P.Karandikar, K.Vijayamohanan, Anjali A. Athawale and A. J. Chandwadkar, Mater.
 Lett., 58, (2005) pg. 1168.

- "Synthesis and characterization of novel Copper / Polyaniline nanocomposite and application as a catalyst in the Wacker oxidation reaction", Anjali A. Athawale and S.V. Bhagwat, J. Appl. Polymer Sci., 89, (2003) pg. 2412.
- 34. "Aniline as a stabilizer for metal nanoparticles", Anjali A. Athawale, S.V. Bhagwat and P.P.Katre, Mater. Lett., 57, (2003) pg. 3889.
- 35. "Chloroform vapour sensor based on Copper / Polyaniline nanocomposite", Anjali A. Athawale, Satish Sharma, Chetan Nirkhe and Sushma Pethkar, Sensors and Actuators B, 85, (2002) pg. 131.
- "Studies on chemically synthesized soluble acrylic acid doped polyaniline", Anjali A.
 Athawale, Millind V. Kulkarni and Vasant V. Chabuskwar, Materials Chemistry and
 Physics, 73(1), (2002) pg. 106

LIST OF PAPERS PRESENTED AT SYMPOSIUM/CONFERENCE

- Preparation and Characterization of Filled Electrically Conductive Silicone Rubber composites, Aparna M Joshi, Anjali.A.Athawale, International Conference on Rubber Compounding 5-6 March 2012, BITEC, Bangkok, Thailand at Bangkok International Trade & Exhibition Center (BITEC).
- Comparative Study of Lanthanum based Perovskites Synthesized by different methods D.Dharmadhikari, Anjali. A. Athawale, 08 - 10, December 2011, Department of Physics and Center for Nanotechnology Indian Institute of

Technology Guwahati International Conference on Advanced Nanomaterials and Nanotechnology(ICANN-2011),

- 3. Bimetallic Nanoperovskites for Solvent Free Aqueous Phase Oxidation of Ethylbenzene ,P.A.Desai, **Anjali.A.Athawale**, 08 - 10, December 2011,Department of Physics and Center for Nanotechnology Indian Institute of Technology Guwahati International Conference on Advanced Nanomaterials and Nanotechnology(ICANN-2011),
- 4. Material Synthesis, Nanomaterials & Conducting Polymer for Sensor and Catalytic applications, **Anjali.A.Athawale** Chemical research Society of India (CRSI) is organising its first zonal meet at National Chemical laboratory (CSIR-NCL), Pune during May 13-14, 2011.
- "Preconcentration and quantification of uranium using stir adsorptive membrane", Sadananda Das, A.K. Pandey, V.K. Manchanda, Anjali A. Athawale, Proc. of DAE-BRNS Biennial symposium on Emerging Trends in Separation Science and Technology (SESTEC 2010), IGCAR, Kalpakkam, India, 1st - 4th March, 2010.
- "Studies on Lanthanum Chromite synthesized by microwave combustion method",
 P.A. Desai and Anjali A. Athawale, International conference on Emerging trends in chemistry, University of Pune, Pune India 5 7th Jan., 2010.

- 7. "Determination of Uranium from Geological Rock Sample", Uttam Patil and Anjali
 A. Athawale, International conference on Emerging trends in chemistry, University of Pune, Pune India 5-7th Jan., 2010.
- "Electricity conducting companies using various rubber elastomers and conductive chemicals", Anjali A. Athawale and Aparna M. Joshi, International conference on Emerging trends in Chemistry, University of Pune, Pune India 5-7th Jan., 2010.
- "Studies on Electrically Conductive Composites of EPDM Rubber and Steel Fibres",
 Anjali A. Athawale and Aparna M. Joshi, MATCON 2010, Cochin University of Science and Technology, Cochin, India 11 -13th Jan. 2010.
- 10. "Uranium preconcentration from seawater using adsorptive membranes", Sadananda Das, A.K. Pandey, V.K. Manchanda and Anjali A. Athawale, International Conference on Peaceful uses of Atomic Energy (*PUAE-2009*), New Delhi, India, 29th Sept.-1st Oct. 2009, R-10, Page no. 100.
- 11. "Architecting Functional Group and Spacer in Polymer Chain for Enhancing Selectivity towards Uranium", Sadananda Das, A.K. Pandey, V. K. Manchanda and Anjali A. Athawale, International Conference on Peaceful uses of Atomic Energy (*PUAE-2009*), New Delhi, India, 29th Sept.- 1st Oct. 2009, RM-26, Page no. 412.
- "Synthesis of cobalt oxide nanoparticles / fibres", K. Navinkiran and Anjali A. Athawale, Raman Memorial Conference, Department of Physics, University of Pune, India, 26-2^{7th} Feb. 2009.

- 13. "Nanocrystalline lanthanum manganite by microwave combustion synthesis", P.A. Desai and **Anjali A. Athawale**, National Symposium on Nanomaterials and its Applications (SNMA) 4-6 March 2009.
- 14. "Radiolysis assisted synthesis of Cobalt oxide nanoparticles", K. Navinkiran, and
 Anjali A. Athawale, Recent Trends in Chemistry, Department of Chemistry,
 University of Pune, India, 1^{3th} March, 2009.
- 15. "Comparative studies of Cobalt and Nickel oxides synthesised using steady state γ radiolysis" K. Navinkiran and Anjali A. Athawale, Indo-French workshop on nanoparticles, Ansal Institute of Technology, Gurgaon, India, 12-16th Oct., 2009.
- 16. "Microwave Combustion synthesis of lanthanum chromite" P.A. Desai and Anjali
 A. Athawale, 7th International High Energy Materials Conference and Exibit

(HEMSI-2009), High Energy Materials Research Laboratory (HEMRL), Pune, India,

8-10th Dec. 2009.

- 17. "Comparative studies of Cobalt and Nickel oxides synthesised using steady state radiolysis", K. Navinkiran and **Anjali A. Athawale**, 7th International High Energy Materials Conference and Exibit (HEMSI-2009), High Energy Materials Research Laboratory (HEMRL), Pune, India, 8-10th Dec. 2009.
- 18. "A new functionalized polymer membrane for uranium recovery from seawater",
 Sadananda Das, A.K. Pandey, Anjali A. Athawale and V. K. Manchanda, Proc.
 of DAE-BRNS Biennial symposium on Emerging Trends in Separation Science and

Technology (*SESTEC 2008*), Univ. of Delhi, Delhi, India, 12-14th March, 2008. Paper No. E-7, Page No. 313. (Best Paper Award)

- 19. "*In situ* synthesis of silver nano-particles in poly(ethylene glycol methacrylate phosphate) *via* photo-polymerization process and its application to uranium ion adsorption", Sadananda Das, A.K. Pandey, V.K. Manchanda, **Anjali A. Athawale** and P.K. Khanna, Proc. of 2nd DAE-BRNS International Symposium on Material Chemistry (*ISMC-08*), 2nd -6th Dec. 2008, BARC, Mumbai, India, Paper No. F-31, Page No. 199. (3rd Best Paper Award)
- 20. "Synthesis of cobalt oxide nanoparticles for catalysis applications ", K.
 Navinkiran and Anjali A. Athawale, Recent Advances in Chemistry, Department of Chemistry, University of Pune, India, 2^{3rd} March 2008.
- 21. "In situ synthesis of silver nano-particles in poly(ethylene glycol methacrylate phosphate) via photo-polymerization process and its application to uranium ion adsorption", Sadananda Das, A.K. Pandey, V.K. Manchanda, Anjali A. Athawale and P.K. Khanna, 2nd International Symposium on Advanced Materials and Polymers for Aerospace and Defence Applications (SAMPADA-2008), 8-12th Dec. 2008, Pune, India, Paper No. S25-PO-34, Page No. 125. (1st Best Paper Award)
- 22. "Influence of Mineralizers on the Properties of Fe2O3 Synthesized at Low Temperature", Monika Bharadwaj and Anjali A. Athawale, *ICAM 2008*, Kottayam, India, 18th 21st Feb. 2008.

23. "γ-ray initiated formation of nano – sized polyaniline", Megha B. Majumdar and
 Anjali A. Athawale, Trombay Symposium on Radiation and Photochemistry (*TSRP* 2008) Pune, India, 7-11th Jan. 2008.

24. "U(VI) Sorption Kinetics in Polymeric Sorbents Containing Amidoxime Functional Groups Prepared by Different Routes", Sadananda Das, A.K. Pandey, Anjali A. Athawale, and V.K. Manchanda, Proc. of Nucl. and Radiochem. Symposium (*NUCAR-2007*), The Maharaja Sayajirao University of Baroda, Vadodara, India, 14-17th Feb. 2007, Paper No. CA-24, 231-232.

- 25. "Kinematical aspect of Uranium recovery from seawater" Sadananda Das,
 A.K. Pandey, Anjali A. Athawale, V.K. Manchanda, School of Trace Analysis (*Trace-*07), Saha Institute of Nuclear Physics, Kolkata, India, 3rd-13th Oct. 2007.
- 26. "Epoxy resin-modified, Urea-formaldehyde/Silicon networks for high impact strength and thermal stability", Mohammed H. M. Alhousami and Anjali A. Athawale, International and *INCCOM-6* conference on future trends in composite materials and processing, Kanpur, India, 12-14th Dec. 2007.
- 27. "Low temperature synthesis of iron oxide", Monika Bharadwaj, Hema Singh and
 Anjali A. Athawale, *Innovation 2007*, University of Pune, Pune, 20th -21st Nov.
 2007.
- 28. "Magnetic nanoparticles: synthesis and mechanistic study by pulse radiolysis", Monika Bharadwaj and Anjali A. Athawale, Indo – Brazil workshop on Molecular material including nanomaterials, 4-6th Oct., 2007.

- "Gamma Radiolytically Synthesized Cobalt Nanoparticles for catalytic Applications",
 K. Navinkiran and Anjali A. Athawale, National Seminar on Modern Trends in Supramolecular Nanotechnology & Nanomedicine, Ahmedabad. Nirma Institute, Ahmedabad, India, 15-16th March, 2007.
- 30. "Scalable chemical synthesis of magnetite and maghemite below 100°C", Monika Bharadwaj and **Anjali A. Athawale**, International Research Symposium on Recent Developments in Chemistry, University of Pune, Pune, India, 14-15th Feb. 2007.
- 31. "Novel Epoxy Resin Networks with High Impact Strength and Hardness", Mohammed H. M. Alhousami and **Anjali A. Athawale**, International Research Symposium on Recent Developments in Chemistry, University of Pune, Pune, India, 14-15th Feb. 2007.
- 32. "Low temperature synthesis of pure phase maghemite nanoparticles", Monika Bharadwaj and Anjali A. Athawale, AGM-MRSI 2007, NPL, New Delhi, India, 12-14th Feb. 2007.
- 33. "CTAB assisted synthesis of Au nanoparticles", Megha Majumdar and Anjali A. Athawale, *AGM-MRSI 2007*, NPL, New Delhi, India, 12-14th Feb. 2007.
- 34. "Pd nanoparticles catalyzed Heck reaction: A comparative account", Megha Majumdar, Shrikant V. Bhagwat and **Anjali A. Athawale**, International conference on nanomaterials and its Applications (*ICNA 2007*), Trichy, India, 4-6th Feb. 2007.
- 35. "Pure phase maghemite synthesized at low temperature", Monika Bharadwaj Shrikant V. Bhagwat and Anjali A. Athawale, International conference on nanomaterials and its Applications (*ICNA 2007*), Trichy, India, 4-6th Feb. 2007.

- 36. "BaSnO₃ & Au-BaSnO₃ nanorods: Application as a co gas sensor", P. A.
 Desai, M. S. Bapat and Anjali A. Athawale, AdvanceD nanomaterials, Indian institute of Technology (IIT), Mumbai, Janaury 8-10th Jan. 2007,.
- 37. " Hydroxide directed routes to synthesize nanosized cubic ceria (CeO₂)", P. A. Desai, M.S. Bapat, **Anjali A. Athawale**, International Conference on Nanomaterials and it's applications, National Institute of Technology (NIT), Tirchy, India, Feb. 4-6, 2007.
- 38. "Chemical aspects of uranium recovery from seawater by amidoximated electronbeam-grafted polyproylene membrane", Sadananda Das, A. K. Pandey, Anjali A. Athawale, Virendra Kumar, Y.K. Bhardwaj, S. Sabharwal, V. K. Manchanda, DAE-BRNS biennial symposium on Emerging Trends in Separation Science and Technology (*SESTEC 2006*), BARC, Mumbai, India, 29th Sept.-1st Oct. 2006, Paper No. E-10, Page No. 204.
- 39. "Conducting polyanilines for sensing applications", Anjali A. Athawale, MACRO 2006, National Chemical Laboratory, Pune, India, 17 -19th Dec., 2006.
- 40. "Pd nanoparticles catalyzed Heck reaction of iodobenzene with acrylate", Megha B. Majumdar and **Anjali A. Athawale**, International Conference on Nanomaterials for Electronics (*ICNE 2006*), Pune, Nov 27-29th Nov. 2006.
- 41. "Au-polyaniline nanocomposite synthesized using γ-ray induced Au Nanoparticles",
 International Conference on Nanomaterials for Electronics (*ICNE 2006*), Prachi
 Khatre and Anjali A. Athawale, Pune 27-29th Nov. 2006.

- 42. "Sonochemical synthesis of Au-SnO₂ composite nanoparticles", Hema Singh and **Anjali A. Athawale**, International Conference on Nanomaterials for Electronics (*ICNE 2006*), Pune, 27-29th Nov. 2006.
- 43. "Scalable chemical synthesis of Iron oxides below 100°C", S.V. Bhagwat, Hema Singh, Anjali A. Athawale, B. Hannoyer, S. Jouen, B. Lefez, Darshan C. Kundaliya, B. Varughese, Renu R. Pasricha, S. D. Kulkarni and S. B. Ogale, 8th International Conference on Nanostructured Materials (*NANO 2006*), IISc, Bangalore, 20-25th Aug. 2006.
- 44. "Nanostructured titanate powders by hydrothermal route", Malini S. Bapat and Anjali A. Athawale, 8th International Conference on Nanostructured Materials (*NANO 2006*), IISc, Bangalore, 20-25th Aug. 2006.
- 45. "Low temperature synthesis of iron oxide nanoparticles by a novel chemical method", **Anjali A. Athawale**, S. V. Bhagwat and Fatima. A 8th International Conference on Nanostructured Materials (*NANO 2006*), IISc, Bangalore, 20-25th Aug. 2006.
- 46. "A designed hydrothermal synthesis of nanocrystalline lead titanate by means of reactive precursors", **Anjali A. Athawale**, M. S. Bapat, International Conference on Nano Science and Nano Technology (*ICONSAT-2006*), New Delhi, 16-18th March 2006.
- 47. "Hexane sulphonic acid doped polypyrrole sensitive to ammonia vapours", Anjali A.
 Athawale and Ashok H. Dhamane, National conference of Polymer 2006 Jadhavpur
 University, Kolkatta, India, 10 12th Feb. 2006.

- 48. "Comparative study of Poly N-methyl Aniline and Poly N-ethyl Aniline as ammonia sensor" (Second prize) **Anjali A. Athawale**, P.P. Katre, 10th National seminar on Physics and Technology of sensors, Pune, India, 4-6th March 2004.
- 49. "Au-Polyaniline nanocomposite synthesized using γ-ray induced Au Nanoparticles",
 Anjali A. Athawale and P.P. Katre. International seminar on Advances in Polymer
 Technology (APT' 04), Kochi, India, 16-17th Jan. 2004.
- 50. "A Soft solution process to synthesize nanocrystalline Barium zirconate via reactive solid state precursors", **Anjali A. Athawale** and M. Bapat, 2nd International Conference on materials for advanced Technologies, Suntec City, Singapore, 7-12th Dec. 2003.
- 51. 47. "Ag-Polyaniline Dispersed Conducting Polyaniline Nanocomposite as a Selective Sensor for Ammonia", **Anjali A. Athawale** and P. P. Katre, 2nd International Conference on materials for advanced Technologies, Suntec city, Singapore 7-12th Dec. 2003.
- 52. 48. "Copper / Polyaniline nanocomposite as a Catalyst for the Wacker Oxidation Reaction". **Anjali A. Athawale**, S. V. Bhagwat and Asha J. Chandwadkar, Indo-German Symposium on Catalysis, Hyderabad, India, 6-9th Feb. 2003.
- 53. "DBSA doped polypyrrole sensitive to ammonia vapours", Ashok. H Dhamane and **Anjali A. Athawale,** 2nd International Conference on materials for advanced Technologies, Suntec city, Singapore, 7-12th Dec. 2003.

- 54. 50. "Au/Polyaniline nanocomposite sensitive to Methanol Vapours", Anjali A.
 Athawale, Shrikant V. Bhagwat and Prachi P. Katre,14th AGM-MRSI Symposium,
 'Novel Polymeric Materials', BARC, Mumbai, 11-13th Feb. 2003.
- 55. 51. "Synthesis and Characterization of CuO/Polyaniline nanocomposite", **Anjali A. Athawale** and Hema Singh, 14th AGM-MRSI Symposium, 'Novel Polymeric Materials', BARC, Mumbai, 11-13th Feb. 2003.

8. Academic and Corporative Activities:

Reviewer for International Journals:

- Defence Science Journal
- Sensors & Actuators B
- Synthetic Metals
- Journal of Applied Polymer Science
- Materials Chemistry and Physics
- Journal of American Ceramic Society
- Journal of Solid State Chemistry
- Langmuir

9. Research Schemes Handled:

| Sr. No. | Title of the Project | Funding Agency | Investigator | Year And Amount | Status |
|------------|---|-------------------|---------------------------|---------------------------|-----------|
| 1. | Soft solution processing: A new route to synthesize | ISRO-DRDO | Principal Investigator | 2002- 2003 Rs. 1.36 | Completed |

| | patterned ceramics. | | | lakhs | |
|----|--|---|---------------------------|------------------------------------|-----------|
| 2. | Polymer nanocomposites for applications as sensors/catalyst. | BRNS | Principal Investigator | 2002- 2007 Rs. 5.05 lakhs | Completed |
| 3. | Soft solution processing: A new method to synthesize metal oxides and ceramics. | CSIR | Principal Investigator | 2003- 2006 Rs. 7.1 lakhs | Completed |
| 4. | New chemical routes to synthesize nanopiezoelectrics. | ISRO-DRDO | Principal Investigator | 2003- 2005 Rs. 8 lakhs | Completed |
| 5. | Perovskite nanoparticles as sensors for pollutant gases. | ISRO-DRDO | Principal Investigator | 2005 – 2006 Rs. 2.2 Iakhs | Completed |
| 6. | Novel synthesis routes for noble metal doped nanocrystalline lanthanum based perovskite catalysts for oxidation of gases and organic volatiles. | DST (Department of Science & Technology) | Principal Investigator | 2006- 2009 Rs.19 lakhs | Completed |
| 7. | Chemical aspects of uranium sorption in amidoxime grafted sorbents. | BRNS | Principal Investigator | 2005- 2010 Rs. 5.05 lakhs | Completed |
| 8. | Gas sensors composed of maghemite and | ISRO-DRDO | Principal Investigator | 2006- 2009 Rs. 8.8 | Completed |

| | magnetite nanoparticles. | | | lakhs | |
|-----|--|-------------|---------------------------|-------------------------------------|-----------|
| 12. | Synthesis and electrochemical characterization of composites of semiconductor Q dots and conducting polymers for device applications | UGC | Principal Investigator | 2007- 2009 Rs. 2 lakhs | Completed |
| 13. | Heterogeneous catalysis by nano sized mixed oxides for applications in reactions involved in organic synthesis and pollution control. | BRNS | Principal Investigator | 2008- 2013 Rs. 5.05 lakhs | Ongoing |
| 14. | Studies on naturally occurring uranium in sedimentary rock for possible extraction as nuclear fuel. | UoP - ONGC | Principal Investigator | 2008 – 2011 Rs. 33.4 Iakhs | Ongoing |
| 15. | Catalytic Applications of Noble Metal Doped Perovskites for organic synthesis. | UoP BCUD | Principal Investigator | 2011- 2013 Rs.2lakhs | Ongoing |

10. Number of students awarded Ph. D. degree:

| Guide | 09 |
|-------------------------------------|----|
| Number of Ph.D students working: | 06 |
| Number of M.Phil. students working: | 02 |
| Number of M.Sc. students working: | 01 |

11. Membership of Professional:

- Life member of IANCAS and MRSI.
- Council member for MRSI Committee Pune Chapter.
- Life member of IWSA

12. Work done towards developing new courses or laboratories:

- Teaching Methods: Introduced new course for M.Sc. under credit system.
- Laboratory experiments: Introduced many new experiments for M.Sc. Students.

13. Continuing education programmes conducted:

- Deliver guest lectures on invitation in various academic institutes.
- Teaching in training programs and workshops organized in the Department and other institutes.
- Organizing refresher courses and working as resource person.
- Referee for M.Phil and Ph.D. thesis for other universities.