Dr. VISHWANATH R. PATIL

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PERSONAL INFORMATION

Date of Birth	:	26th January, 1976
Sex	:	Male
Marital Status	:	Married
Nationality	:	Indian

ACADEMIC RECORD

Ph.D.	University of Mumbai, India	June 2003
M.Sc.	North Maharashtra University, Jalgaon, India Major Subject: Inorganic Chemistry	1997-99
B.Sc.	North Maharashtra University, Jalgaon, India Major Subject: Chemistry	1994-97

AWARDS / HONORS

- Prof. B. C. Haldar Memorial Research Award 2001-2002
- *Best Researcher and Academician Award* 2017-2018
  Bionano Frontier Mumbai, India and University of Mauritius

AREA OF RESEARCH INTEREST

- Water soluble polymers
- Light emitting polymers
- Polymer-nano composites
- Synthesis of coordination compounds
- Nano Chemistry

RESEARCH EXPERIENCE & ITS HIGHLIGHTS

1. The Institute of Science *(September 1999-June 2003)*

- About four years research experience on the Synthesis, characterization and biological investigations of transition metal complexes of *Oximes* and their derivatives.
- The work was consisting of the synthesis of isonotroso oximes (*isonitroso-5-methyl-2-hexanone*) and its derivatives. The metal complexes of these oximes were prepared using transition metal salts.
- These compounds were characterized by elemental analysis, FTIR, ^{1}H NMR, UV-Visible, mass spectral data (GC-MS). Some of these compounds were unambiguously characterized by X-ray diffraction data.
- Thermal stability and biological activities of all the compounds against various microorganisms were also studied.

2. University of Mumbai *(March 2004-till date)*

- Presently, I am working as an Assistant Professor in the Department of Chemistry, University of Mumbai. Here I am conducting *Postgraduate Lectures* and *Practicals*. I am also supervising M. Sc. Project students. After two years of my joining in the department, I have started guiding **M.Sc. (By Research)** and **Ph.D.** students in the field of Coordination and Polymer Chemistry.
- The water soluble polymers containing polyethylene glycols and EDTA / DTPA were synthesized by poly addition reaction. These polymers were characterized by their melting points, conductivity, solubility, UV-Visible, G.P.C./GC-MS data, XRD, FTIR, NMR, spectral techniques. The thermal stability of these polyesters prepared was studied by the TG-DTA techniques. Surface morphology of these water-soluble polyesters was studied by AFM and SEM techniques.
- Our research group synthesized the blue luminescent polymers bearing fluorenone and diphenyl anthracene units in main polymer backbone. The polymers synthesized were characterized by their melting points, conductivity, solubility, UV-Visible, G.P.C., XRD data, FTIR, NMR spectral techniques. The thermal stability of these light emitting polymers was studied by the TG-DTA analysis. Their luminescent properties were determined to study their fluorescent properties and good film formation ability. Surface morphology of these blue light emitting polymers was studied by AFM and SEM techniques.
- I am well acquainted with the modern analytical techniques such as Fourier transform infra-red spectroscopy, UV-VIS, TG-DTA, NMR, GC-MS, G.P.C., AFM/SEM, etc.

RESEARCH PAPERS

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2. Recent Development of Crown Substituted Polyfluorenes for Blue Light Emitting Devices in Organic Electronics, Meenakshi M. Rananaware, Vaijayanti D. Ghase, Vishwanath R. Patil, Polymer Bulletin, (Impact factor-**1.43**), (**Revision made,** POBU-D-17-00596R1).

3. Microwave assisted novel synthetic route for polyfluorenes containing triphenylamine and solubilizing alkyl moiety for blue emitting diodes, Alok V. Mishra, Khushboo B. Chandorkar and Vishwanath R. Patil, Polymer International (**Impact factor: 2.07**), 67, (4), 405–413, 2018, DOI: 10.1002/pi.5521.

4. Discrete Anticancerous SeNPs-Macromolecule Binding Manipulated by Hydrophilic Interaction, Amol V. Pansare, Amol A. Shedge, Vishwanath R. Patil, *Int. J. Biol. Macromolec.* **(Impact factor: 3.8)** 2018, **107**, 1982-1987.

5. Novel methoxy spirobifluorene and alkyl substituted diphenylacene based organic blue light emitting polymers for application in organic electronics, **Rhushirajeshwari M. Chalke** and Vishwanath R. Patil, *Polymer***,** 123, 355-365, (2017). doi.org/10.1016/j.polymer.2017.07.034. (**Impact factor: 3.7**).

6. New approaches towards the synthesis and characterization of alkoxy substituted spirobifluorenes and spirosilabifluorenes for organic optoelectronics, **Rhushirajeshwari M. Chalke** and Vishwanath R. Patil , *Journal of Macromolecular Science, Part A-Pure and Applied Chemistry, (***Impact factor: 1.0***)* 54(9), 556-564, (2017). https://doi.org/10.1080/10601325.2017.1309249. I.P-1.0

7. New Strategy for Synthesis of Polyphenylene Substituted Dendronised Monomers Containing Fluorene Unit and Study Their Properties, Rupashri K. Kadu, Vishwanath R. Patil, **Polycyclic Aromatic Compounds**, **(Available Online)** http://dx.doi.org/10.1080/10406638.2015.1129974.

8. Fungal Strain *of Aspergillus Oryzae* Immobilized on Silica Gel for Au(Iii) Sorption, Dnyaneshwar K. Kulal, Amol V. Pansare, Amol A. Shedge and Vishwanath R. Patil, ***Eur. Chem. Bull., 5(6),* 225-231 (2016).**

9. hsDNA Minor Groove Binding, Photocatalytic Activity, in vitro Breast and Colon Cancer Cell reducing function of Greener SeNPs, Amol V. Pansare, Dnyaneshwar K. Kulal, Amol A. Shedge and Vishwanath R. Patil, ***Dalton Transactions*, (Impact factor: 4.2), 2016, 45, 12144–12155,, DOI: 10.1039/c6dt01457g, (2016).**

10. Green synthesis of Anticancerous Honeycomb PtNPs clusters: their Alteration Effect on BSA and hsDNA using Fluorescence Probe, Amol V. Pansare, Dnyaneshwar K. Kulal, Amol A. Shedge, Vishwanath R. Patil, **Journal of Photochemistry & Photobiology, B: Biology, (Impact factor: 3.2), 162,** 473–485 (2016) **Doi:10.1016/j.jphotobiol.2016.07.021** (**2016).**

11. Determination of Uranium (VI) using Penicillium Chrysogenum Immobilized on Silica gel and spectrophotometer, D. K. Kulal, A.V. Pansare, S. R. Tetgure, M. Karve and V.R. Patil **Journal of Radioanalytical and Nuclear Chemistry**, 50(16) 2496-2508, 2015, DOI 10.1007/s10967-015-4297-9.

12. Synthesis of polyethylene glycol analog: aliphatic water soluble polyesters and their metal complexes, Sambhaji Raut & Vishwanath Patil, proceeding of UGC sponsored one day National Conference on Environmental issues and benefits with special references to polymer industries, organized by Dnyanasadhana College, Thane, 24th January, 2015, ISBN: 81-89217-13-15, 38-48.

13. Synthesis and Spectral Studies of 6,13- di (p-hydroxyphenyl) pentacene and 6,13-di (p-hydroxynapthyl) pentacene, Sambhaji Raut & Vishwanath Patil, **Polycyclic Aromatic Compounds**, 33,127–137(2013), DOI:10.1080/10406638.2012.756043.

14. Synthesis, antimicrobial activity and thermal properties of the derivatives obtained from reaction of acetyl salicylic acid and some amino acids, Guddi S. Gupta, Vishwanath R. Patil, **Journal of Pharmacy Research**, 5(12),5334-533, 2012.

15. Formation of Diazepam-Lanthanides (III) Complexes in 50% Ethanol-Water System and Study the Effect of Temperature on Complex Formation Constants, Gunaji S. Bayes, Sambhaji S. Raut, Vishwanath R. Patil and Rama S. Lokhande**, J. Solution Chem**., 41, 241–248, (2012), DOI 10.1007/s10953-012-9798-3.

16. Synthesis, characterization and biological activity of mixed ligand Co(II) complexes of schiff base 2-amino-4-nitrophenol-n-salicylidene with some amino acids, Ajay R. Patil, Kamini J. Donde, Sambhaji S. Raut, Vishwanath R. Patil and Rama S. Lokhande, **J. Chem.Pharm. Res**., 4(2), 1413-1425(2012).

17. Synthesis, spectral and antimicrobial studies on mixed ligand Cu(II) complexes of Schiff base 2-amino-4-nitrophenol-N-salicylidene and some amino acids, Ajay R. Patil, Kamini J. Donde, Sambhaji S. Raut, Vishwanath R. Patil, and R. S. Lokhande, **Journal of Pharmacy Research**, 4(7), 2256-2260 (2011).

18. Synthesis and Studies of Blue Light Emitting Polymers Containing Triphenylamine-Substituted Fluorene and Diphenylanthracene Moiety, K. A. Barve, S. S. Raut, A. V. Mishra and V. R. Patil, **Journal of Applied Polymer Science,** 122, 3483-3492 (2011) (DOI 10.1002/app).

19. Synthesis and Characterization of Water-Soluble Metal Binding Polyesters Containing Pendant Carboxylic Moiety, S. S. Raut, K. A. Barve, G. S. Bayes and V. R. Patil, **Polymer-Plastics Technology and Engineering**, 50, 1000-1010 (2011).

20. Automated Potentiometric Titration Method for Determination of pK Values: an Application to Benzodiazepines" Gunaji S. Bayes, Lakshmi Narasimham, Sambhaji S. Raut, Vishwanath R. Patil, Rama S. Lokhande, **Journal of Chemical & Engineering Data**, 56, 1787–1792 (2011).

21. Antimicrobial Activity of Transition Metal Complexes of Ligands Containing Oxime and Dioxime Group, K. J. Donde, V. R. Patil, **Journal of Pharmacy Research** 4(1), 206-209 (2011).

22. Stereochemistry and Antimicrobial Evaluation of Oxime Containing Compounds and their Indicator Property, Kamini J. Donde, Kanchan A. Barve, Sambhaji S. Raut, Vishwanath R. Patil, **Inter. J. Chem. Sci**. 8(3):1440-1446 (2010).

23. Analytical Method Development For Extractive Spectrophotometric Determination of Nickel Using Bis [3-Hydroxyimino-5-Methyl-Nmethyl]-2-Imine As A New Analytical Reagent, R. S. Lokhande, V. R. Patil, P. P. Shevde and S. M. Lele, **Int. J. Chem. Sci.**, 8(2), 769-776 (2010).

24. Synthesis of Water-Soluble Polyesters Containing Carboxy-Functional Groups in the Polymers Chain and Study of Their Metal Complexes, S. S. Raut, K. A. Barve, G. S. Bayes and V. R. Patil, **J. Inorg. Organomet. Polym. Mater.,** 20, 343–355 (2010). Spinger link, DOI: 10.1007/s10904-010-9339-8.

25. Imine Oximes: Synthesis, Characterization, Thermal And Biological Studies, R. S. Lokhande, V. R. Patil, P. P. Shevde And S. M. Lele, **Int.J. Chem. Sci**, 8(1), 88-96 (2010).

26. Synthesis, spectral and biological studies on some mixed ligand Ni(II) complexes, S. S. Patil, G. A. Thakur and V. R. Patil, **Acta Polan. Pharma. Drug Res**., 66(3), 271-277 (2009).

27. Magnetic and spectral studies of divalent metal complexes of isonitroso-5-methyl-2-hexanone and its derivative, K. J. Donde, V. R. Patil, and S. P. Malve, **Synth. React. Inorg. Met.-Org. Nano-Met. Chem.**, 35, 865-873 (2005).

28. The antimicrobial effect of Cu(II) complexes containing oxime ligands, K. J. Donde, V. R. Patil, and S. P. Malve, **Acta Polan. Pharma. Drug Res.**, 61(2), 123-125 (2004).

29. Antimicrobial studies of hydrazone complexes of Hg(II) and Fe(II) divalent metal ions, K. J. Donde, V. R. Patil, and S. P. Malve, **Acta Polan. Pharma. Drug Res.,** 60(3), 173-175 (2003).

30. Synthesis, structural characterization and antimicrobial studies of hydrazone derivatives of isonitroso-5-methyl-2-hexanone, K. J. Donde, V. R. Patil, S. S. Utekar and S. P. Malve, **Acta Polan. Pharma. Drug Res.,** 59(3), 291-293 (2002).

31. Synthesis and antimicrobial activity of 3-hydroxyimino-5-methyl-2-hexanone and its dioxime derivative, V. R. Patil, K. J. Donde, S. B. Jadhav and S. P. Malve, **Acta Polan. Pharma. Drug Res.**, 59(3), 223-225 (2002).

PAPERS PRESENTED IN VARIOUS CONFERENCES / SYMPOSIUM

1. Synthesis, characterisation and antimicrobial activity of some metal complexes of 5-methyl 2,3-hexanedionedioxime, Vishvahanath R. Patil, Kamini J. Donde and S. P. Malve, 37th Annual Convention of Chemists, Indian Chemical Society, Gurukula Kangri University, Hardwar, 15- 18 Nov.2000, ING (OP)- 80.

2. Synthesis, characterisation and antimicrobial activity of some transition metal complexes with some oxime and dioxime, Kamini J. Donde, Vishvahanath R. Patil and S. P. Malve, XIX Conference -2000, Indian Council of Chemist, Kuvempu University, Shimoga, Karnatak, 27-29 Nov. 2000, IO- 31.

3. Separation and extractive spectrophotometric determination of Copper (II) in various synthetic and real samples with isonitroso-5-methyl-2-hexanone, Suhas P. Tandel, Vishwanath Patil and Sheela P. Malve, XIX Conference –20 00, Indian Council of Chemist, Kuvempu University, Shimoga, Karnatak, 27-29 Nov. 2000, AO- 68.

4. Isonitroso-5-methyl-2-hexanone as a new analytical reagent for the separation and extractive spectrophotometric determination of cobalt in steel, pharmaceutical and biological samples, Sanjeev B. Jadhav, Vishvahanath R. Patil and Sheela P. Malve, Research Scholars Meet-2000, Institute of Science, Mumbai, 16th Dec. 2000, I-P-4.

5. Preparation, characterisation and antimicrobial activity of some divalent metal ion complexes with 5-methyl 2,3-hexanedionedioxime, Vishvahanath R. Patil and S. P. Malve, Research Scholars Meet-2000, Institute of Science, Mumbai, 16th Dec. 2000, I-P-5.

6. Isonitroso-5-methyl-2-hexanone as a new analytical reagent for the separation and extractive spectrophotometric determination of Copper in alloy, pharmaceutical and dye samples, S. P. Tandel, Vishvahanath R. Patil and Sheela P. Malve, Research Scholars Meet-2000,Institute of Science, Mumbai, 16th Dec. 2000, I-P-6.

7. Synthesis, Characterisation And Antimicrobial Activity of Metal Complexes of Chemotherpeutic Importance, Kamini J. Donde, Vishvahanath R. Patil and Sheela P. Malve 20th Annual Convention, Indian Council of Chemist, IP-8, 22nd -24th Dec. (2001) Mysore.

8. Synthesis and Pharmacological Screenings of Transition Metal Complexes of Oxime Derivatives, Vishvahanath R. Patil, Kamini J. Donde and Sheela P. Malve, 20th Annual Convention, Indian Council of Chemist, IO-57, 22nd -24th Dec. (2001) Mysore.

9. Synthesis, Characterisation And Biological Activity of Some Cobalt Complexes, Vishvahanath R. Patil, Kamini J. Donde and Sheela P. Malve, 38th Annual Convention of Chemists, Jai Narain Vyas University Jodhpur, ING (OP) 51, Dec. 2001.

10. Studies of Fe (II) Complexes with Oxime And Its Derivatives, Kamini J. Donde, Vishvahanath R. Patil and Sheela P. Malve, 38th Annual Convention of Chemists, Jai Narain Vyas University Jodhpur, ING (OP) 49, Dec. 2001.

11. Study of water-soluble polyesters containing poly (ethylene glycol) and diethylene triamine pentaacetic acid, Sambhaji S. Raut, Chaitrali J. Rane, and V. R. Patil, 44th Annual Convention of Chemists, Mahatma Gandhi Institute of Applied Sciences, Jaipur –303 905, PHY (OP) 50, Dec. 23-27, 2007.

12. Synthesis of water-soluble polymers based on ethylenediamine tetraacetic acid, Chaitrali J. Rane, Sambhaji S. Raut and V. R. Patil, 44th Annual Convention of Chemists, Mahatma Gandhi Institute of Applied Sciences, Jaipur –303 905, PHY (OP) 51, Dec. 23-27, 2007.

13. Synthesis of water-soluble polyesters containing ethylenediamine tetraacetic acid and their metal complexes, C. J. Rane, K. A. Barve, S. S. Raut and V.R. Patil, National Conference on Chemistry of Materials (NCCM-2009), University of Mumbai, Vidyanagari, Santacruz, 20-21 Feb. 2009, PHY(OP)-13.

14. Synthesis and complex study of water-soluble polyesters containing carboxy-functional group in the polymer chain, Sambhaji S. Raut, Chaitrali J. Rane, Kanchan A. Barve, and V. R. Patil, National Conference on Chemistry of Materials (NCCM-2009), Dept. of Chemistry, University of Mumbai, Vidyanagari, Santacruz, 20-21 Feb. 2009, PHY(OP)-14.

15. Synthesis and studies of mixed ligand complexes of Schiff base 2-Amino-4-Nitrophenol-N-Salicylidene and some amino acids, Ajay R. Patil, V. R. Patil, R. S. Lokhande, ICC, Hemchandracharya North Gujrat University, Patan 7-10th November 2009, IP-36.

16. Synthesis and Complex Study of Water-Soluble Polyester Containing Carboxy-Functional Group in the Polymer Chain, Sambhaji S. Raut, Kanchan A. Barve, Vishwanath R. Patil, UGC Sponsored State level Conference on Recent Advances in Chemistry , Dept. of Chemistry, Sonopant Dandekar College Palghar, 19th-20th February 2010, PP-013.

17. Synthesis and studies of mixed ligand complexes of Schiff base 2-Amino-4-Nitrophenol-N-Salicylidene and some amino acids, Ajay R. Patil, V. R. Patil, R. S. Lokhande, UGC Sponsored State level Conference on Recent Advances in Chemistry , Dept. of Chemistry, Sonopant Dandekar College Palghar, 19th-20th February 2010, PP-006

18. Synthesis, characterization and antimicrobial activity of the derivatives obtained from reaction of acetyl salicylic acid and some amino acids, G. S. Gupta, L. H. Pant, K. A. Barve, S. S. Raut and V. R. Patil, UGC Sponsored State level Conference on Recent Advances in Chemistry , Dept. of Chemistry, Sonopant Dandekar College Palghar, 19th-20th February 2010, PP-020.

19. Studies on Copper complexes formation in $CuBr_2$/PEG systems, L. H. Pant, G. S. Gupta, K. A. Barve, S. S. Raut and V. R. Patil, UGC Sponsored State level Conference on Recent Advances in Chemistry, Dept. of Chemistry, Sonopant Dandekar College Palghar, 19th-20th February 2010, PP-003.

20. Synthesis and studies of blue light emitting polymers containing triphenylamine-substituted fluorene and diphenylanthracene moiety , Kanchan A. Barve, Alok V. Mishra, Sambhaji S. Raut and Vishwanath R. Patil, NCSANM-2010, National Conference on Synthesis and Application of Novel Materials, Dept. of Chemistry, University of Mumbai, Vidyanagari, Santacruz , 4th & 5th March 2010, OP-18.

21. Synthesis and studies of conjugated light emitting polymers containing triphenylamine substituted fluorene and diphenylanthracene moiety , Kanchan A. Barve, Sambhaji S. Raut, Alok V. Mishra, and Vishwanath R. Patil, ICSN-2011, International Conference on Supramolecular Chemistry and Nanomaterials, Dept. of Chemistry, University of Mumbai, Vidyanagari, Santacruz, 14-16 February, 2011, PP-29.

22. Synthesis and Characterization of Luminescent Terphenyl Containing Polyfluorenes with Substituted Anthracene Units, Alok V. Mishra, and Vishwanath R. Patil, National Conference on Current Research in Chemical Sciences, Department of Chemistry, Shivaji University, Kolhapur, 22nd to 23rd January 2013, OP-41(***Awarded Third Prize for Oral Presentation***).

23. Synthesis and Spectral Studies of Acenes [6,13- di (p-hydroxyphenyl) Pentacene and 6,13-di (p-hydroxynapthyl) Pentacene], *Sambhaji S. Raut and Vishwanath R. Patil,* National Conference on Current Research in Chemical Sciences, Department of Chemistry, Shivaji University, Kolhapur, 22nd to 23rd January 2013, PP-08, (***Awarded Second Prize for Poster Presentation.***).

24. Study towards the synthesis and characterization of luminescent monomeric materials containing substituted fluorene unit, Rupashree Kadu, V. R. Patil, International Conference on Chemistry Cutting Edge: Nano, Green and beyond, St. Xavier's College, Mumbai, 6th & 7th January 2014, P-35.

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26. Synthesis and characterization of luminescent *meso* substituted Porphyrins, Khushboo B. Chandorkar and Vishwanath R. Patil, National Conference on Advances in Synthetic and Materials Chemistry (NCASMC-2014), Dept. of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 10th & 11th March 2014, PP-57.

27. Synthesis and Properties of Photoluminescent Conjugated Polyacenes Containing Aromatic Amine Substituted Fluorene Moiety, Sambhaji S. Raut, M. M. Rananaware, and Vishwanath R. Patil, National Conference on Advances in Synthetic and Materials Chemistry (NCASMC-2014), Dept. of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 10th & 11th March 2014, PP-58.

28. Microwave assisted synthesis of dendronised polyfluorene by Ni-catalyzed polymerization, Rupashri K. Kadu, Vishwanath R. Patil, UGC sponsored National Seminar on Nanoscience – A Science of tewenty first century, organized by Mahatma Phule College, Panvel, on 29th November 2014, PP-24.

29. Synthesis and Studies of Luminescent Alkyl Substituted Acene Moiety, Rhushirajeshwari M. Chalke and Vishwanath R. Patil, UGC-SAP Sponsored National Conference on, Advances and Innovations in Chemical Sciences (NCAICS-2015),, Dept. of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 12 & 13th February 2015, PP-21.

30. Efficient Microwave Assisted Synthesis and Studies of Luminescent Porphyrin Containing Substituted Polyfluorene, Khushboo B. Chandorkar and Vishwanath R. Patil, UGC-SAP Sponsored National Conference on, Advances and Innovations in Chemical Sciences (NCAICS-2015),, Dept. of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 12 & 13th February 2015, PP-22.

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32. Fungal Strain Mediated for Synthesis of Manganese Nanoparticles, Chandrabhan R. Pal, Dnyaneshwar K.Kulal, Amol V. Pansare, Vishwanath R. Patil, Two Days National Conference on Chemistry-Sustainability and Environment, Organised by Department of Chemistry, Ramnarain Ruia College, Matunga (E), Mumbai – 400 019, 20-21 February, 2015, P-43.

33. Novel Green Method for Synthesis of Manganese Nanoparticles (MnNPs) Using *Ravenala Madagascariensis* Leaves Extract, Lavanya V. Dussa, Amol V. Pansare, Dnyaneshwar K. Kulal, Vishwanath R. Patil, Two Day National Conference on Chemistry-Sustainability and Environment, Organised by Department of Chemistry, Ramnarain Ruia College, Matunga (E), Mumbai – 400 019, 20- 21 February, 2015, P-39.

34. Synthesis and Characterization of Cobalt Nanoparticles by Reduction Process Using Fungal Strain of *Aspergillus Oryzae*, Pratiksha. P. Deshmukh, Dnyaneshwar K.Kulal, Amol V. Pansare, Vishwanath R. Patil, Two Day National Conference on Chemistry-Sustainability and Environment, Organised by Department of Chemistry, Ramnarain Ruia College, Matunga (E), Mumbai – 400 019, 20- 21 February, 2015, P-38.

35. Systematic Characterization of Zinc Nanoparticles Synthesized from Novel Green Method by *Colocasia Esculenta* Leaves Extract, Sapna T. Pawar, Amol V. Pansare, Dnyaneshwar K.Kulal, Vishwanath R. Patil, Two Day National Conference on Chemistry-Sustainability and Environment, Organised by Department of Chemistry, Ramnarain Ruia College, Matunga (E), Mumbai – 400 019, 20- 21 February, 2015, P-44.

36. Biosynthesis and Characterization of Aluminum Nanoparticles Using *Ficus Arnottiana* Leaves Extract, Satyavan P. Varande, Amol V. Pansare, Dnyaneshwar K. Kulal, Vishwanath R. Patil, Two Day National Conference on Chemistry-Sustainability and Environment, Organised by Department of Chemistry, Ramnarain Ruia College, Matunga (E), Mumbai – 400 019, 20- 21 February, 2015, P-48.

37. Development of new radionalytical method for the trace determination of 8-hydroxy quinoline, Milind M. Thigle, V. R. Patil, R. S. Lokhande, 10th Mid Year CRSI Symposium in Chemistry, Organised by National Institute of Technology and Bharthidasan University, Tiruchirappalli, Trichy, 23-25 July, 2015, PP-280.

38. Synthesis and spectral studies of blue light emitting co-polymers from aryl substituted silafluorene and diphenylacenes, Jayasree Gopalakrishnan, V. R. Patil, UGC–SAP Sponsored International Conference on new Horizons in Synthetic and Materials Chemistry (ICSMC-2015), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 26-28 November, 2015, PP-212.

39. Synthesis and Studies of Luminescent substituted Acene Moiety, Rhushirajeshwari M. Chalke and Vishwanath R.Patil, UGC – SAP Sponsored International Conference on new Horizons in Synthetic and Materials Chemistry (ICSMC-2015), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 26-28 November, 2015, PP-122.

40. Synthesis and Studies of Light Emitting Polyfluorenes Containing Phenylene Dendron Moiety, Rupashri K. Kadu, Vishwanath R. Patil, UGC – SAP Sponsored International Conference on new Horizons in Synthetic and Materials Chemistry (ICSMC-2015), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 26-28 November, 2015, PP-123.

41. Synthesis and characterization of electroluminescent polyfluorenes containing meso- substituted porphyrin, Khushboo B. Chandorkar and Vishwanath R. Patil , UGC – SAP Sponsored International Conference on new Horizons in Synthetic and Materials Chemistry (ICSMC-2015), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 26-28 November, 2015, PP-135.

42. Synthesis and Characterization of Alkyl Substituted Different Derivatives of Fluorenes for Light Emitting Diodes, Vaijayanti D. Ghase and Vishwanath R. Patil, UGC – SAP Sponsored International Conference on new Horizons in Synthetic and Materials Chemistry (ICSMC-2015), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 26-28 November, 2015, PP-136.

43. Blue light emitting co-polymers with substituted Fluorene and acene moiety, Alok V. Mishra, Vishwanath R. Patil, UGC – SAP Sponsored International Conference on new Horizons in Synthetic and Materials Chemistry (ICSMC-2015), Department of Chemistry, Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 26-28 November, 2015, PP-137.

44. Development of new radionalytical methods for the trace determination of 5,7-dihalo derivatives of 8-hydroxy quinoline, Milind M. Thigle, V. R. Patil, R. S. Lokhande, Two days Symposium in Frountiers on Advances in Chemistry and Technology, organized by Royal Society of Chemistry and School of Chemical Sciences, North Maharashtra University, Jalgaon, 11-12th December, 2015, PG-18.

45. Green synthesis of SeNPs using *Trigonella foenum-graecum* extract and there in vitro anticancer activity, alteration with hsDNA and bovine serum albumin environment, Amol V. Pansare, Dnyaneshwar K. Kulal and Vishwanath R. Patil, National Conference on Nanotechnology in Drug Delivery Research: Innovations, Challenges and Opportunities (NCNDDR2015), SPPSPTM, SVKM'S NMIMS, Mumbai, 16-17th October 2015. A-47.

46. Strain of *Aspergillus Oryzae* Used for the Preparation of Iron Nanoparticles and Its Compatibility with Bovine Serum Albumin, Dnyaneshwar K. Kulal, Amol V. Pansare and Vishwanath R. Patil, National Conference on Nanotechnology in Drug Delivery Research: Innovations, Challenges and Opportunities (NCNDDR2015), SPPSPTM, SVKM'S NMIMS, Mumbai, 16-17th October 2015. A-49.

47. Gold as Nanomedicine for In Vitro Study of Breast Cancer Cell Line, hsDNA and BSA. Amol V. Pansare, Dnyaneshwar K. Kulal and Vishwanath R. Patil, National Seminar on Nanotechnology: Environmental, Economic, Social and Health Perspectives (NEESHP2016), organized by, Annasaheb Waghire College, Otur, Pune, ISBN:978-93-5158-581-7**,** 22-23 January 2016 at P-219.

48. Solid Phase Extraction of Ag(II) using *aspergillus oryzae* Immobilized on Silica gel. Dnyaneshwar K.Kulal, Amol V. Pansare, Vishwanath R. Patil, National Seminar on Nanotechnology: Environmental, Economic, Social and Health Perspectives (NEESHP2016), organized by, Annasaheb Waghire College, Otur, Pune, ISBN:978-93-5158-581-7**,** P-227.

49. Quenching Mechanism of Human Serum Albumin Fluorescence by Lanthanum-Capecitabine Nanoparticles for In-vitro Anticancer activity. Amol A. Shedge, Amol V. Pansare, Dnyaneshwar K. Kulal, Shubham V. Pansare and Vishwanath R. Patil, National Seminar on Nanotechnology: Environmental, Economic, Social and Health Perspectives (NEESHP2016), organized by, Annasaheb Waghire College, Otur, Pune, ISBN:978-93-5158-581-7**,** P-221.

50. Preeminent Synthesis of Cerium Nanoparticles by Reduction Process Using Extract of *Ficcus Arnottiana* under the Influence of Solar Energy. Amol V. Pansare, Pritam S.Walanj, Dnyaneshwar K.Kulal, Vishwanath R. Patil, National Seminar on Nanotechnology: Environmental, Economic, Social and Health Perspectives (NEESHP2016), organized by, Annasaheb Waghire College, Otur, Pune, ISBN:978-93-5158-581-7**,** A-228.

51. Solar Radiation as a Probe of Ytterbium Nanoparticles for Greener Way. Amol V. Pansare, Priyanka P.Bhalerao, Dnyaneshwar K. Kulal, Vishwanath R. Patil, National Seminar on Nanotechnology: Environmental, Economic, Social and Health Perspectives (NEESHP2016), organized by, Annasaheb Waghire College, Otur, Pune, ISBN:978-93-5158-581-7**,** A-230.

52. Solar Green Synthesis of Zirconium Nanoparticles Using *Ravenala Madagascariensis.* Amol V. Pansare, Daniel L. Coutinho, Dnyaeshwar K. Kulal, Vishwananth R. Patil, National Seminar on Nanotechnology: Environmental, Economic, Social and Health Perspectives (NEESHP2016), organized by, Annasaheb Waghire College, Otur, Pune, ISBN:978-93-5158-581-7**,** A-229.

53. Anticancer activity of green Synthesized TiNPs with its complex of Capecitabine, Amol A. Shedge, Amol V. Pansare, Dnyaneshwar K. Kulal and Vishwanath R. Patil, Interdisciplinary National Conference on Green technology and Sustainable Development: Indigenous Practices, organized by Ameity University Mumbai, 26-27th February, 2016.

54. Solid Phase Extraction of Pb(II) using *Biomass* Immobilized on Silica gel, Dnyaeshwar K. Kulal, Amol V. Pansare, Amol A. Shedge and Vishwananth R. Patil, Interdisciplinary National Conference on Green technology and Sustainable Development: Indigenous Practices, organized by Ameity University Mumbai, 26-27th February, 2016.

55. Greener Approach of Quercetin and its Gold Nanocomposite to Carcinomas Activity, Dnyaeshwar K. Kulal, Amol V. Pansare, Amol A. Shedge and Vishwananth R. Patil, Interdisciplinary National Conference on Green technology and Sustainable Development: Indigenous Practices, organized by Ameity University Mumbai, 26-27th February, 2016.

56. Synthesis and characterization of Neodymium Nanoparticles by Green Method, Ajay A. Kadam, Amol V. Pansare, Amol A. Sedge and V. R. Patil, National Conference on Green Technologies in day to day life (NCGT-2017), Organized by Guru Nanak College in association with Green ChemisTree Foundation on18th February, 2017, Page, 30

57. Unique and Advanced Properties of Green Synthesized ErNPs, Tejal Parab, Amol V. Pansare, Amol A. Sedge and V. R. Patil, National Conference on Green Technologies in day to day life (NCGT-2017), Organised by Guru Nanak College in association with Green ChemisTree Foundation on18th February, 2017, Page, 31.

58. Microwave synthesized blue electroluminescent polyfluorenes containing triphenylamine and alkyl derivatives, A. V. Mishra, V. R. Patil, National Conference on Innovative Research in Chemical Sciences (IRCS–2017), Sponsored by University Grant Commission, New Delhi and Organized by, Department of Chemistry, Shivaji University, Kolhapur, February 1-2, 2017, OP-20 (***Awarded Second Prize for Oral Presentation***).

59. Synthesis and characterization of luminescent crown ethers containing fluorene moiety, M. M. Rananaware, V. R. Patil, National Conference on Innovative Research in Chemical Sciences (IRCS–2017), Sponsored by University Grant Commission, New Delhi and Organized by, Department of Chemistry, Shivaji University, Kolhapur, February 1-2, 2017, OP-21.

60. Design and synthesis of blue light emitting alkyl substituted derivatives of diphenylanthracene, Deepika C. Hasija and Vishwanath R. Patil, National Conference on Innovative Research in Chemical Sciences (IRCS–2017), Sponsored by University Grant Commission, New Delhi and Organized by, Department of Chemistry, Shivaji University, Kolhapur, February 1-2, 2017, PP-03.

61. Exploring synthesis and characterization of alkoxy substituted spirobifluorenes and spirosilabifluorenes for organic optoelectronic applications, R. M. Chalke, V. R. Patil, National Conference on Innovative Research in Chemical Sciences (IRCS–2017), Sponsored by University Grant Commission, New Delhi and Organized by, Department of Chemistry, Shivaji University, Kolhapur, February 1-2, 2017, PP-05.

62. New Series of Alkyl and Acetyl Substituted Different Derivatives of Fluorene Based compounds for Light Emitting Diodes, V. D. Ghase, V. R. Patil, National Conference on Innovative Research in Chemical Sciences (IRCS–2017), Sponsored by University Grant Commission, New Delhi and Organized by, Department of Chemistry, Shivaji University, Kolhapur, February 1-2, 2017, PP-06.

63. Discrete Anticancerous SeNPs-Macromolecule Binding Manipulated by Hydrophilic Interaction, Amol V. Pansare, Amol A. Shedge and Vishwanath R. Patil, Multidisciplinary Global International Conference on Emerging Trends and Challenges in Science, Technology and Society, ETCST-2017, Organized By : Bionano Frontier and University of Mauritius, May 12-16, 2017 (Oral Presentation No.44).

64. Synthesis and optolectronic properties of Tryphenylamine configured polyfluorene containing acene moiety with improved hole injection, Deepika C. Hasija and Vishwanath R. Patil, National Conference on Modern Research Tools in Science, Organized by G. M. Vedak College of Science, Tala, Raigad, 19th August, 2017, AB-23.

65. A Multifunctional Interpenetrating TFC Reverse Osmosis membrane (CRSAM) for desalination, Chlorine Tolerances and organic pollutant rejection, Shyam. R. Khairkar, Amol V. Pansare, Amol A. Shedge, A. K. Suresh , Vishwanath R. Patil, UGC – SAP Sponsored National Conference on Recent Developments in Chemical Sciences (RDCS-2018), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 8-9 March, 2018, OP-24.

66. Nano-Gold composites of Paclitaxel- Design, Synthesis, In-vitro Anticancer activity and Biological evaluation, Amol A. Shedge, Amol V. Pansare, Shyam Khairkar, Jitendra M. Jawale

and Vishwanath R. Patil, UGC – SAP Sponsored National Conference on Recent Developments in Chemical Sciences (RDCS-2018), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 8-9 March, 2018, PP-5.

67. Synthesis of silver nanoparticles by different plant extracts and its antimicrobial activity, Ashlesha A. Patil, Deepika C.Hasija and Vishwanath R.Patil, UGC – SAP Sponsored National Conference on Recent Developments in Chemical Sciences (RDCS-2018), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 8-9 March, 2018, PP-15.

68. Low-bandgap conjugated polymers based on diphenyl hydrazine substituted fluorene and acene as blue light emitting materials, Deepika C. Hasija and Vishwanath R. Patil, UGC – SAP Sponsored National Conference on Recent Developments in Chemical Sciences (RDCS-2018), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 8-9 March, 2018, PP-21.

69. Antioxidant activity of various extracts of *Neolamarckiacadamba*, Jennifer George*, G. A. Meshram, Vishwanath R. Patil, UGC – SAP Sponsored National Conference on Recent Developments in Chemical Sciences (RDCS-2018), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 8-9 March, 2018, PP-28.

70. Optoelectronic study of triphenyl substituted polyfluorene with improved charge injection for light emitting diodes, Manali P. Mungi, Deepika C. Hasija and Vishwanath R. Patil, UGC – SAP Sponsored National Conference on Recent Developments in Chemical Sciences (RDCS-2018), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 8-9 March, 2018, PP-41.

71. Exploring synthesis and characterization of crown substituted polyfluorenes with diphenylacene moieties for potential applications in light emitting device technology, Meenakshi Rananaware and Vishwanath R.Patil, UGC – SAP Sponsored National Conference on Recent Developments in Chemical Sciences (RDCS-2018), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 8-9 March, 2018, PP-47.

72. Exploring novel organic blue light emitting polymersbased on methoxyspirobifluorene and substituted diphenylacenes for application in organic electronics, Rhushirajeshwari. M. Chalke and Vishwanath R. Patil, UGC – SAP Sponsored National Conference on Recent Developments in Chemical Sciences (RDCS-2018), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 8-9 March, 2018, PP-74.

73. Green synthesis of Gold nanoparticles using leaf, flower and plant extract of *Couroupita Guianensis,* Shraddha S. Talgulkar, Deepika C. Hasija and Vishwanath R. Patil, UGC – SAP Sponsored National Conference on Recent Developments in Chemical Sciences (RDCS-2018), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 8-9 March, 2018, PP-87.

74. UV induced photocatalytic degradation of methyl orange by biosynthesized ZnO nanoparticles, Sunita B. Dalvi, Deepika C. Hasija and Vishwanath R. Patil, UGC – SAP Sponsored National Conference on Recent Developments in Chemical Sciences (RDCS-2018), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 8-9 March, 2018, PP-92 (***Awarded with best Poster Presentation***).

75. Synthesis and spectral studies of light emitting polymer containing Allyl Dibenzofluorene and diphenyl anthracene units, Vaijayanti D. Ghase and Vishwanath R. Patil, UGC – SAP Sponsored

National Conference on Recent Developments in Chemical Sciences (RDCS-2018), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 8-9 March, 2018, PP-99.

76. Synthesis and optoelectronic properties of benzeneamine configured Polyfluorene for light emitting diodes, Manish R. Shingole, Deepika C. Hasija and Vishwanath R. Patil, UGC – SAP Sponsored National Conference on Recent Developments in Chemical Sciences (RDCS-2018), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 8-9 March, 2018, PP-104.

77. Synthesis of triphenyl substituted polyfluorene with improved charge injection for light emitting diodes, Shivam S. Shitole, Deepika C. Hasija and Vishwanath R. Patil, UGC – SAP Sponsored National Conference on Recent Developments in Chemical Sciences (RDCS-2018), Organised by Department of Chemistry, University of Mumbai, Vidyanagari, Santacruz (E), 8-9 March, 2018, PP-105.

CONFERENCES / WORKSHOPS / SYMPOSIA ATTENDED

1. Eighteenth Annual Convention of Chemists, Indian Council of Chemists 1999, Chemistry Department, North Maharastra University, Jalgaon, 27th -29th Dec 1999.
2. International Conference in Emerging Trends in Chemical Sciences, Department of Chemistry, University of Mumbai, India, 23rd-25th Jan, 2007.
3. National Seminar on Nanomaterials, Department of Chemistry, University of Mumbai, India, 28-29 March 2008.
4. **2nd Science Conclave**: ***A Congregation of Nobel Laureates***, The Indian Institute of Information Technology, Allahabad (IIIT-A) (Supported By MHRD, DST and Government of India), Allahabad, India, December 8-15, 2009.
5. A one day lecture series "INSPIRE" as a part of Science Week Celebration (INSPIRE-2011), Department of Physics, University of Mumbai, India, 22nd February, 2011.
6. One day workshop on Book publishing, organized by Department of Civics and politics, Department of Biotechnology and Jawaharlal Nehru Library, University of Mumbai, in collaboration with Elsevier, USA, 25th February, 2015.

RESEARCH PROJECTS

No.	Title of the project	Funding Agency	Grant Received (Rs.)	Project duration
1.	Synthesis and Studies of Water-Soluble Polyesters Containing Ethylenediaminetetraacetic acid and Their Metal Complexes	UGC, Delhi	1.1 Lakhs	2010-12
2.	Stable Blue Light Emitting Polyfluorene Containing Diphenylanthracene and Terphenyl-based Light Emitting Diodes	DST	20 Lakhs	2013-16
3.	Bioremediation of Hydrocarbon from Mithi River and understanding its mechanism through Omics approaches	Ramniklal S. Gosalia & Co.	25 Lakhs	2017-19

TEACHERS TRAINING COURSES COMPLETED

No.	Course	Course Title	Duration	Place
1.	Orientation	Orientation Course (General)	2nd February to 3rd March 2007	UGC, Academic Staff College, University of Mumbai, Mumbai
2.	Refresher	Refresher Course in Chemistry	2-22nd December 2010	UGC, Academic Staff College, Kumau University, Nainital
3.	Short term course	Mentoring the students	16th -21st February 2015	UGC, Academic Staff College, University of Mumbai, Mumbai

GROUP MEMBERS

Ph.D.

No.	*Degree awarded*	
1.	Dr. Sunil N. Peshane ***(Degree awarded)***	Synthesis and study of structure property relationships in water borne polyutherane dispersion
2.	Dr. Sambhaji Sahebrao Raut ***(Degree awarded)***	Synthesis and studies of light emitting polyacenes containing fluorenyl units
3.	Dr. Kanchan Arun Barve ***(Degree awarded)***	Synthesis and properties of light emitting polyfluorenes containing cyanine dye moiety
4.	Dr. Rupashree Kisor Kadu ***(Degree awarded)***	Synthesis and studies of light emitting polyfluorenes containing phenylene Dendron moiety
5.	Dr. Khushboo Bhalchandra Chandorkar ***(Degree awarded)***	Synthesis and studies of light emitting polyfluorenes containing substituted porphyrin unit in polymer backbone
6.	Dr. Jayashree Gopalkrisnan ***(Degree awarded)***	Synthesis and studies of conjugated light emitting polymers based on substituted fluorine unit
7.	Dr. Dnyaneshwar kisan Kulal ***(Degree awarded)***	Biosorbents for separation and determination of certain contaminants from the environment
8.	Dr. M. C. Sonawale ***(Degree awarded)***	Kinetics and mechanism of oxidation of some amino acids containing aliphatic hydroxyl, sulfur and aromatic side chains
9.	Dr. Amol Vasantrao Pansare ***(Degree awarded)***	Development of novel methods for analysis of certain herbal samples
10.	Dr. Rhushirajeshwari Mahadeo	Synthesis and studies of conjugated light

	Chalke ***(Degree awarded)***	emitting poly(spirobifluorenes) containing acene moiety
Synopsis / Thesis Submitted		
1.	Mr. Alok Vinod Mishra **(Thesis Submitted)**	Synthesis and studies of alkyl and aryl substituted electroluminescent polyfluorene copolymers
2.	Mrs. Meenakshi Madhavrao Rananaware **(Thesis submitted)**	Design of fluorine based light emitting polymers with pendent crown ether and acene moiety
3.	Vaijayanti Dattaram Ghase **(Synopsis Submitted)**	Colour tuning properties of light emitting co-polymers of dibenzofluorene and substituted units
	Presently working	
1.	Ms. Deepika Chander Hasija **(Presently working)**	Design and Studies of light emitting Polyacene Based Nanocomposites
2.	Amol Adhikrao Shedge **(Presently working)**	Synthesis and studies of anticancer drug – metal nanocomposites and their activity against carcinomas cell and binding behavior with certain proteins.
3.	Ms. Alappatt Jennifer George **(Presently working)**	Isolation, characterization and biological evaluation of some phytochemicals from Neolamarckia cadamba
4.	Dr. Shyam Khairkar	**Postdoctoral Fellow**

M.Phil / M.Sc. by Research

No.	**Name of the Student**	**Title of the thesis**
1.	Miss Chaitrali Janardan Rane ***M.Sc. (by Research)*** ***(Degree awarded)***	Study of water soluble polyesters based on ethylenediamine tertaacetic acid and their metal complexes
2.	Mr. Sambhaji Sahebrao Raut ***M.Sc. (by Research)*** ***(Degree awarded)***	Synthesis of diethylenetriamine pentaacetic acid based water soluble polyesters and their metal complexes
3.	Miss. Kanchan Arun Barve ***M.Sc. (by Research)*** ***(Degree awarded)***	Synthesis and studies of light emitting polymers based on fluorenone and diphenylanthracene
4.	Mr. Alok Vinod Mishra ***M.Sc. (by Research)*** ***(Degree awarded)***	Synthesis and studies of light emitting polyfluorenes containing terphenyl and diphenylanthracene units
5.	Mr. Sunil Sudam Patil ***M. Phil*** ***(Degree awarded)***	Synthesis, spectral and biological studies on mixed ligand Co(II), and Ni(II) complexes of some amino acids (Madhurai Kamraj University)

INVITED LECTURES DELEVIRED AT VARIOUS UNIVERSITIES AND INSTITUTES

Sr. No.	Title and details of the program where lecture is delivered
1.	Light Emitting polymers UGC refresher course organized by Department of Chemistry, University of Mumbai under the aegis of Academic Staff College, University of Mumbai (2013).
2.	Polymer studies First Pre Ph.D. Workshop, organized by Jaipur National University Jaipur (February 1, 2012).
3.	Polymer characterization UGC refresher course organized by Department of Chemistry, University of Mumbai under the aegis of Academic Staff College, University of Mumbai (2011)
4.	Polymer synthesis & characterization UGC refresher course organized by Department of Chemistry, University of Mumbai under the aegis of Academic Staff College, University of Mumbai (2010)
5.	Light emitting polymers UGC refresher course organized by Department of Chemistry, University of Mumbai under the aegis of Academic Staff College, University of Mumbai (2009)
6.	Light emitting polymers UGC refresher course organized by Department of Chemistry, University of Mumbai under the aegis of Academic Staff College, University of Mumbai (2008)
7.	Practicals based on Thermal methods UGC refresher course organized by Department of Chemistry, University of Mumbai under the aegis of Academic Staff College, University of Mumbai (2007)
8.	Practicals based on Thermal methods UGC refresher course organized by Department of Chemistry, University of Mumbai under the aegis of Academic Staff College, University of Mumbai (2006)
9.	Light emitting polymers First Pre Ph.D. Workshop, organized by Jaipur National University Jaipur (August 27, 2014).
10.	Light emitting polymers UGC refresher course in Advances in Chemical science organized by Department of Chemistry, University of Mumbai under the aegis of Academic Staff College, University of Mumbai (13th October 2016)
11.	Practicals based on Thermal methods UGC refresher course in Advances in Chemical science organized by Department of Chemistry, University of Mumbai under the aegis of Academic Staff College, University of Mumbai (17th, 18th and 19th October 2016)

LIST OF PATENTS FILED

1. Isolation of (4, 4, 6a, 6b, 8a, 11, 12, 14b-octamethyl-2, 3, 4a, 5, 6, 7, 8, 9, 10, 11, 12,12a, 14, 14a-tetradecahydro-1h-picen-3-yl) acetate from *Ficus arnottiana* leaves using ultrasonication method at ambient temperature, A. V. Pansare, D. K. Kulal, J. M. Jawale, P. K. Kalambate, V. R. Patil, , **(2016), IN 2014MU01580 A 20151127.**

2. Isolation of (4,4,6a,6b,8a,11,12,14b-Octamethyl-2, 3, 4a, 5, 6, 7, 8, 9, 10, 11, 12, 12a, 14, 14a tetradecahydro -1H –picen -3-yl) acetate from *Ficus arnottiana* leaves using circularly spread

silica gel and ultrasonication at ambient temperature, A. V. Pansare, D. K. Kulal, M. M. Jawale, J. M. Jawale, V. R. Patil, **(2016), IN 2014MU02086 A 20160101.**

3. Green synthesis of platinum nanoparticles using *Ravenala madagascariensis* leaves extract and their in-vitro anticancer activity (Human Breast Cancer Cell Line MDA-MB-468), alteration of bovine serum albumin environment, A. V. Pansare, D. K. Kulal, M. K. Malave, M. M. Jawale, R. K. Jagatap, J. M. Jawale, V. R. Patil, **(2016), IN 2014MU03806 A 20160603.**

4. Green synthesis of gold nanoparticles using *Colocasia esculenta* leaves extract and their in-vitro anticancer activity (Human Breast Cancer Cell Line MDA-MB-468), alteration of bovine serum albumin environment, A. V. Pansare, D. K. Kulal, M. K. Malve, M. M. Jawale, R. K. Jagtap, J. M. Jawale, V. R. Patil, **(2016), IN 2014MU04249 A 20160701.**

5. Green synthesis of vanadium nanoparticles using mixtures of three *herbal* plants leaves extract and their in-vitro anticancer activity (Human Breast Cancer Cell Line MDA-MB-468), alteration of bovine serum albumin environment, A. V. Pansare, D. K. Kulal, K. J. Donde, M. K. Malve, V. R. Patil, **(2016), IN 2014MU03996 A 20160617.**

6. Green synthesis of combined copper-nickel nanoparticles using mixtures of two *herbal* plants leaves extract and their in-vitro anticancer activity (Human Breast Cancer Cell Line MDA-MB-468), alteration of bovine serum albumin environment, A. V. Pansare, D. K. Kulal, K. J. Donde, M. K. Malve, V. R. Patil, **(2016), IN 2014MU03995 A 20160617.**

7. Green synthesis of silver nanoparticles using *Carica papaya* leaves extract and there in-vitro anticancer activity (Human Breast Cancer Cell Line MCF-7) as well as alteration of bovine serum albumin environment, A. V. Pansare, D. K. Kulal, M. M. Jawale, J. M. Jawale, V. R. Patil, **(2016), IN 2014MU04095 A 20160624.**

8. Green synthesis of palladium nanoparticles using *Carica papaya* leaves extract and there in-vitro anticancer activity (Human Breast Cancer Cell Line MCF-7) as well as alteration of bovine serum albumin environment, A. V. Pansare, D. K. Kulal, K. J. Donde, M. M. Jawale, J. M. Jawale, V. R. Patil, **(2016), IN 2014MU04247 A 20160701.**

9. Green synthesis of selenium nanoparticles using *Trigonella foenum graecum* extract and there in-vitro anticancer activity (Human Breast Cancer Cell Line MDA MB-435) as well as alteration of bovine serum albumin environment, A. V. Pansare, D. K. Kulal, K. J. Donde, M. M. Jawale, J. M. Jawale, V. R. Patil, **(2016), IN 2015MU00164 A 20160722.**

10. Biosynthesis of palladium nanoparticles by a process of reduction using a fungal strain of *Aspergillus oryzae* and their in-vitro anticancer activity (Human Breast Cancer Cell Line MCF-7) as well as alteration of bovine serum albumin environment, A. V. Pansare, D. K. Kulal, K. J. Donde, M. M. Jawale, J. M. Jawale, V. R. Patil, **(2016), IN 2014MU04248 A 20160701.**

11. Biosynthesis of platinum nanoparticles by a process of reduction using a fungal strain of *Aspergillus oryzae* and their in-vitro anticancer activity (Human Breast Cancer Cell Line MDA-MB-468), alteration of bovine serum albumin environment, D. K. Kulal, A. V. Pansare**,** K. J. Donde, M. K. Malve, M. M. Jawale, V. R. Patil, **(2016), IN 2014MU03994 A 20160617.**

12. Green synthesis of chromium nanoparticles using mixtures of three *herbal* plants leaves extract and there in-vitro anticancer activity (Human Breast Cancer Cell Line MDA-MB-435) as well as alteration of bovine serum albumin environment, A. V. Pansare, D. K. Kulal, K. J. Donde, J. M. Pansare, V. R. Patil, (2015) **3633/MUM/2015.**

13. Green synthesis of combined platinum-palladium nanoparticles using mixtures of two *herbal* plants leaves extract and there in-vitro anticancer activity (Human Breast Cancer Cell Line MDA MB-435) as well as alteration of bovine serum albumin environment, A. V. Pansare, D. K. Kulal, K. R. Bhotkar, J. M. Jawale, V. R. Patil, , Indian Pat. Appl. (2015) **3632/MUM/2015.**

14. Biosynthesis of selenium nanoparticles by a process of reduction using a fungal strain of *Aspergillus oryzae* and their in-vitro anticancer activity (Human Breast Cancer Cell Line MDA MB-435) as well as alteration of bovine serum albumin environment, D. K. Kulal, A. V. Pansare, K. J. Donde, M. M. Jawale, J. M. Jawale, V. R. Patil, Indian Pat. Appl. (2015) **3822/MUM/2015.**

15. Biosynthesis of chromium nanoparticles by a process of reduction using a fungal strain of *Aspergillus oryzae* and their in-vitro anticancer activity (Human Breast Cancer Cell Line MDA MB-435) as well as alteration of bovine serum albumin environment, D. K. Kulal, A. V. Pansare, S. V. Ghumatkar, J. M. Jawale, V. R. Patil, Indian Pat. Appl. (2015) **3823/MUM/2015.**

16. Process of Preparing Fluorene Based Co-Polymers Containing Polyphenylene Substituted Dendronised Moiety, Rupashri K. Kadu, Pramod Thakur, Vishwanath R. Patil, 2016, **201621016768**

17. Process for The Synthesis of Polyphenylene Substituted Dendronised Framework Containing Fluorene Unit, Rupashri K. Kadu, Pramod Thakur, Vishwanath R. Patil, 2016, **201621016769**.

18. Preparation of Curcumin-Fe nanocomposites using simple ultrasonication method and its binding behavior studies with BSA and In-vitro anticancer activity on Human Breast Cancer Cell Line MCF-7, ,Amol A. Shedge, A. V. Pansare, J. M. Jawale, V. R. Patil, 2017, **201721003516**.

19. In-Vitro Anticancer Activity on Human Breast Cancer Cell Line MCF-7 by Ultrasonically Synthesized Curcumin-Vanadium Nanocomposites and its Binding Behavior with BSA, A. V. Pansare, Amol A. Shedge, J. M. Jawale, V. R. Patil, 2017, **201721003506.**

20. Synthesis of Curcumin-Cu Nanocomposites by Simple Ultrasonication Method and its Evaluation of In-Vitro Anticancer, Binding With BSA, A. V. Pansare, Amol A. Shedge, J. M. Jawale, V. R. Patil, 2017, **201721003517.**

21. Ultrasonic Synthesis of Curcumin-Co Nanocomposites for In-Vitro Anticancer Activity and Their Interaction with BSA, A. V. Pansare, Amol A. Shedge, J. M. Jawale, V. R. Patil, 2017, **201721003505.**

22. Ultrasonically synthesized Curcumin-La nanocomposites and its application for In-vitro anticancer activity on Human Breast Cancer Cell Line MCF-7 and its binding interaction with BSA, A. V. Pansare, Amol A. Shedge, J. M. Jawale, V. R. Patil, 2017, **201721003515.**

23. In-Vitro Anticancer Activity and Probing the Interaction Between BSA With Ultrasonically Synthesized Curcumin-Zr Nanocomposites, A. V. Pansare, Amol A. Shedge, J. M. Jawale, V. R. Patil, 2017, **201721003507.**

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