



## **Teacher Profile**

**Name: Dr. Vikas Kaondiram Gade**

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**Designation: Professor**

**Edu. Qualification: M.Sc. Ph.D.**

**Date of Joining: 16/08/1994**

**Date of Ph.D.: 19/01/2007**

### **List of International and National Journal/Proceeding's**

1. V.K. Gade, D.J. Shirale, P.D. Gaikwad, K.P. Kakde, P.A. Savale, H.J. Kharat and M.D. Shirsat, "Synthesis and characterization of Ppy-PVS, Ppy-pTS and Ppy-DBS composite films", International Journal of Polymeric Materials, 56 (2007),107-114.
2. V.K. Gade, D.J. Shirale, P.D. Gaikwad, K.P. Kakde, P.A. Savale, H.J. Kharat, B.H. Pawar and M.D. Shirsat, "Synthesis and characterization of Ppy-PVS, P(NMP)-PVS and their co-polymer Ppy-P(NMP)-PVS films by galvanostatic method" International Journal of Electrochemical Science, 2 (2007) 270-277.
3. V.K. Gade, D.J. Shirale, P.D. Gaikwad, P.A. Savale and M.D. Shirsat, "Influence of process parameters on the conductivity and surface morphology of polypyrrole films by galvanostatic method", International Journal of Polymeric Materials 56 (2007), 167-176
4. V.K. Gade, D.J. Shirale, P.D. Gaikwad, P.A. Savale, K.P. Kakde, H.J. Kharat and M.D.

- Shirsat, "Immobilization of GOD on Ppy-PVS composite film for determination of glucose: A comparative study of phosphate and acetate buffers" *International Journal of Polymeric Materials*, 56, (2007) 1051-1065.
5. V.K. Gade, D.J. Shirale, P.D. Gaikwad, P.A. Savale, K.P. Kakde, H.J. Kharat and M.D. Shirsat, "Immobilization of GOD on electrochemically synthesized Ppy-PVS composite film by cross-linking via glutaraldehyde for determination of glucose", *Reactive and Functional Polymers* 66 (2006) 1420-1426.
  6. V.K. Gade, D.J. Shirale, P D. Gaikwad, P. A. Savale, K.P. Kakde, H.J. Kharat and M.D. Shirsat, "Electrochemical synthesis of Polypyrrole/Glucose-Oxidase film for Glucose biosensor", *Transaction of SAEST* 40 (2008) 128-133.
  7. V.K. Gade, D.J. Shirale, P.D. Gaikwad, H.J. Kharat, K.P. Kakde, P.A. Savale, and M.D. Shirsat, "Influence of inorganic and organic supporting electrolytes on Optical Properties of Poly (O-anisidine) films for development of Biosensors", *Microwaves and Optoelectronics, UK* (2005) 459-462, 1-904798-43-8.
  8. D.J. Shirale, V.K. Gade, P.D. Gaikwad, H.J. Kharat, K.P. Kakde, P.A. Savale, S.S. Hussaini, N.R. Dhumane, M.D. Shirsat, "The influence of electrochemical process parameters on the conductivity of poly(N- methylpyrrole) films by galvanostatic method", *Materials Letters*, 60 (2006) 1407-1411.
  9. D. J. Shirale, V.K. Gade, P.D. Gaikwad, P.A. Savale and M.D. Shirsat, "Galvanostatic deposition of Poly (N-methylpyrrole) film with various dopants and co-dopants: A comparative study", *Materials Letters*, 61 (2007) 1372-1375.
  10. D.J. Shirale, V.K. Gade, P.D. Gaikwad, P.A. Savale, K.P. Kakde, H.J. Kharat and M.D. Shirsat, " Studies of immobilized glucose oxidase on galvanostatically synthesized poly(N-methylpyrrole) film with PVS-NaNO<sub>3</sub> composite dopant", *International Journal of Electrochemical Science*, 1 (2006) 62-70.
  11. D.J. Shirale, V.K. Gade, P.D. Gaikwad, P.A. Savale, K.P. Kakde, H.J. Kharat and M.D. Shirsat, "Glucose oxidase immobilized on galvanostatically synthesized Poly(N-methylpyrrole)/PolyVinyl Sulfonate film for determination of glucose", *International Journal of Polymer Analysis and Characterization*, 11 5 (2006) 369-382.

12. D.J. Shirale, V.K. Gade, P.D. Gaikwad, H.J. Kharat, K.P. Kakde, P.A. Savale, S.S. Hussaini, N.R. Dhumane and M.D. Shirsat, "Synthesis of P(NMP) film for glucose oxidase electrode", Transaction of SAEST 40 (2005) 128-133.
13. P.D. Gaikwad, D.J. Shirale, V.K. Gade, P.A. Savale, H.J. Kharat, K.P. Kakde, and M.D. Shirsat, "Immobilization of GOD on Electrochemically Synthesized PANI Film by Cross-linking via Glutaraldehyde for Determination of Glucose" International Journal of Electrochemical Science, 1 (2006) 425-434.
14. P.D. Gaikwad, D.J. Shirale, V.K. Gade, P.A. Savale, H.J. Kharat, K.P. Kakde, S.S. Hussaini, N.R. Dhumane and M.D. Shirsat, "Synthesis of H<sub>2</sub>SO<sub>4</sub> doped polyaniline film by potentiometric method", Bulletin of Material Science, 29 (2006) 169-172.
15. P.D. Gaikwad, D.J. Shirale, V.K. Gade, P.A. Savale, K.P. Kakde, H.J. Kharat and M.D. Shirsat, "Potentiometric study of polyaniline film synthesized with various dopant and composite-dopant: A comparative study", Bulletin of Material Science, 29 (2006) 417-420.
16. P. D. Gaikwad, D. J. Shirale, V. K. Gade, P. A. Savale, K. P. Kakde, H. J. Kharat and M. D. Shirsat, "Optimization of various electrochemical process parameter for synthesis of polyaniline doped with inorganic supporting electrolyte on platinum substrate", Transaction of The SAEST 41 (2006) 52-56.
17. H.J. Kharat, K.P. Kakde, D.J. Shirale, V.K. Gade, P.D. Gaikwad, P.A. Savale and M.D. Shirsat, "Designing of optical fiber sensing probe", Fiber and Integrated Optics, 25 (2006) 411-422.
18. K.P. Kakde, D.J. Shirale, H.J. Kharat, P.D. Gaikwad, P.A. Savale, V.K. Gade, S.S. Hussaini, N.R. Dhumane and M.D. Shirsat, "An analysis of modified cladding step index multimode fiber optic evanescent wave chemical sensor", Journal of Instrumentation Society of India 36 (2006) 220-226.
19. K.P. Kakde, D.J. Shirale, H.J. Kharat, P.D. Gaikwad, P.A. Savale, V K. Gade, S. S. Hussaini, N. R. Dhumane and M. D. Shirsat, "Fiber optic evanescent wave chemical sensor for the detection of the gas", Journal of Basic and Applied Sciences, 1 (2006) 44-49.

20. D.J. Shirale, A.S. Bhalerao, H.J. Kharat, P.D. Gaikwad, K.P. Kakde, P. A. Savale, V. K. Gade and M.D. Shirsat, "Influence of pH on Optical properties of conducting Polyaniline Film for Biosensor Applications", *Microwaves and Optoelectronics*, UK (2005), 455-458, 1-904798-43-8.
21. P.A. Savale, D.J. Shirale, P.D. Gaikwad, H.J. Kharat, K.P. Kakde, V.K. Gade and M.D. Shirsat, "Optical Characterization of Polyaniline, poly (O-Toluidine) and their Composites Films for Biomedical applications", *Microwaves and Optoelectronics*, UK (2005) 409-414, 1-904798-43-8.
22. P.D. Gaikwad, P.A. Savale, D.J. Shirale, H.J. Kharat, K.P. Kakde, V.K. Gade and M.D. Shirsat, "Effect of Electrolyte on Optical properties of Potentiostatic Electro-deposited conducting polymer films for Biosensor Applications", *Microwaves and Optoelectronics*, UK (2005), 450-454, 1-904798-43-8.
23. H.J. Kharat, D.J. Shirale, P.D. Gaikwad, K.P. Kakde, P.A. Savale, V.K. Gade and M.D. Shirsat, "Evanescent wave Biosensor using combination Tapered Optical Fiber Probe for Enhanced Signal Acquisition", *Microwaves and Optoelectronics*, UK (2005), 403-408, 1-904798-43-8.
24. K.P. Kakde, D.J. Shirale, H.J. Kharat, P.D. Gaikwad, P.A. Savale, V.K. Gade and M.D. Shirsat, "Optimization of Gold Films Thickness for Optical fiber chemical Sensor based on Surface Plasmon Resonance", *Microwaves and Optoelectronics*, UK (2005), 445-449, 1-904798-43-8.
25. K.P. Kakde, D.J. Shirale, H.J. Kharat, P.D. Gaikwad, P.A. Savale, V.K. Gade, and M.D. Shirsat, " Optimization of process parameters of chemically synthesized Polyaniline films for Ammonia Gas Sensing", *Proc. of National Seminar on Physics and Technology of Sensors ( 2006 )*, C-17.
26. D.J. Shirale, V.K. Gade, P.D. Gaikwad, K.P. Kakde, P.A. Savale, H.J. Kharat and M.D. Shirsat, "Galvanostatic deposition of poly(N-methylpyrrole) film on platinum electrode", *Proc. of Recent Trends in Materials Science (RTMS-2006)*, M-9.

27. V.K. Gade, D.J. Shirale, P.D. Gaikwad, K.P. Kakde, P.A. Savale, H.J. Kharat and M.D. Shirsat, "Synthesis and characterization of polypyrrole films by galvanostatic method", Proc. of Recent Trends in Materials Science (RTMS-2006), M-25.
28. S.R. Sarada, H.J. Kharat, K.P. Kakde, D.J. Shirale, P.D. Gaikwad, V.K. Gade, and M.D. Shirsat, "Optimization of fiber parameters for the development of fiber optics biosensors", Proc. of fourth DAE-BRNS National Laser Symposium (NLS-4) ( 2005), 797-799.
29. H.J. Kharat, D.J. Shirale, P.D. Gaikwad, V.K. Gade, P.A. Savale, K.P. Kakde and M.D. Shirsat, "Optimization of parameters for the designing of evanescent wave biosensor," Proc. of fourth DAE-BRNS National Laser Symposium (NLS-4) ( 2005), 756-758.
30. S.R. Sarada, D.J. Shirale, P.D. Gaikwad, V.K. Gade, and M.D. Shirsat, "Optimization of evanescent field for the development of fiber optic biosensor", Proc. of XXX Optical Society of India (OSI) Symposium on Optics and Opto-Electronics (SOOP – 2005), 71-72.
31. K.P. Kakde, D.J. Shirale, H.J. Kharat, P.D. Gaikwad, P.A. Savale, V.K. Gade, S.S. Hussaini, N.R. Dhumane and M.D. Shirsat, "Optimization of the parameters for the fiber optic chemical evanescent sensor for the detection of the vapours", Proc. of International Conference on Optics and Optoelectronics (2005) , FIO-81.
32. P.A. Savale, D J Shirale, P D Gaikwad, V K Gade, H J Kharat, K P Kakde, and M D Shirsat, "Characterization of Poly (O-toluidine) films by using Four-Probe Technique for the development of biosensor", Proc. Of National Workshop on Thin Film Preparation and Characterization Techniques for Energy Conversion (TFPCT – 2004), 7.
33. V.K. Gade, D J Shirale, P D Gaikwad, P A Savale, H J Kharat, K P Kakde, V K Mourya and M D Shirsat, "Synthesis and Characterization PPy and POA Composite films for Development of Biosensors", Proc. Of National Workshop on Thin Film Preparation and Characterization Techniques for Energy Conversion (TFPCT– 2004), 7.
34. P.D. Gaikwad, D J Shirale, V K Gade, P A Savale, H J Kharat, K P Kakde, S S Hussaini and M D Shirsat, "Semiconductor behavior of Polyaniline film for the development of biosensors", Proc. Of National Workshop on Thin Film Preparation and Characterization Techniques for Energy Conversion (TFPCT – 2004), 8.

35. D.J. Shirale, V K Gade, P D Gaikwad, P A Savale, H J Kharat, K P Kakde, S S Hussaini, V K Mourya and M D Shirsat, "Electrochemical Deposition of poly (O-anisidine) Thin Film under Galvanostatic condition at various pH for Biomedical Applications", Proc. Of National Workshop on Thin Film Preparation and Characterization Techniques for Energy Conversion (TFPCT – 2004), 8.
36. D.J. Shirale, P D Gaikwad, H J Kharat, P A Savale, K P Kakde, V K Gade and M D Shirsat, "Optimization Of Sensor Parameters for the Designing of Optical Fiber Based Biosensor for Fetal Heart Rate Monitoring", Proc. of International Conference on Optoelectronics Technology ( 2004), 324-328.
37. H.J. Kharat, D J Shirale, P D Gaikwad, K P Kakde, P A Savale, V K Gade and M D Shirsat, "Optimization of parameters for better Signal acquisition for an Evanescent wave Biosensor", Proc. of National Conference on Optoelectronics and MEMS Technology (2004), 74.
38. H.J. Kharat, D J Shirale, P D Gaikwad, K P Kakde, P A Savale, V K Gade, P B Undre, B G Lone, P W Khirade and M D Shirsat "Optimization of Sensor parameters for Evanescent Wave Biosensors for Remote Sensing using Step-Etched Optical fiber Probe", Proc. Of National Conference on Lasers and Their Applications (2004), 54-55.
39. V.K. Gade, Presented National Conference on "Recent Trends in Thin Film Technology" at Jijamata Mahavidyalaya, Bhende, Tal. Newasa, Dist Ahmednagar, on 23-24 January 2010.
40. V.K. Gade, "Development of PPY- NaNO<sub>3</sub>-GOD Biosensor for determination of Glucose", Proc. of Regional Research Conference on BCUD, University of Pune, Projects (Innovation-2009).
41. V.K. Gade, presented a paper on "Development of Conducting Polymer Based Biosensors", in Regional Research Conference on BCUD, University of Pune, Projects Innovation-2008.
42. V.K. Gade, Synthesis and characterization of polyaniline based nanocomposite graphite paste electrode for detection of diethyl 4-nitrophenyl phosphate (Paraoxon) (Under review in Elsevier journal Measurement. Manuscript no MEAS-D-17-00244 ).

43. V.K. Gade, Amperometric detection of cholesterol by nanocomposite graphite paste electrode. (published in Research journal in physical sciences ISSN:2320-4796 (UGC approved))
44. V.K. Gade, Synthesis of Polyaniline Based Nanocomposite Graphite Paste Electrode Modified with and Without Rice Husk for Sensor Application: A Comparative Study. (Published in Asian journal of chemistry, Scopus source UGC approved ISSN 0970-7077).
45. V.K. Gade, Creatinine biosensor based on graphite paste electrode modified with dibenzo-30-crown-10 and rice husk. (Published in Asian journal of chemistry, Scopus source UGC approved ISSN 0970-7077).
46. V.K. Gade, Polyaniline based potentiometric creatinine biosensor based on nanocomposite graphite paste and rice husk., Journal of Science Management Research, ISSN 2319-2429, Vol.V, Issue-2 March 2017
47. K. Paithankar, S. More, P. Paithankar, U. Shelake, V.K. Gade\*, Electrochemical synthesis of poly 2-amino pyridine as conducting polymer by galvanostatic method, Proc. 9 th International Conference, Pune, India, 2014, ISBN: 978-93-84209-20-9.
48. K. S. Paithankar, V.B. Deshmukh, U.N. Shelake, S.B. Iyyer, V.K. Gade\*, "Development of Creatinine biosensor based on graphite paste electrode modified with dibenzo-30-crown-10 and rice husk" Asian Journal of Chemistry vol.29. no6. 1401-1404, (2017).
49. K. S. Paithankar, V.B. Deshmukh, U.N. Shelake, S.B. Iyyer, V.K. Gade\*, Synthesis of Polyaniline based nano composite graphite paste Electrode modified with and without Rice Husk : comparative study" Asian Journal of Chemistry Vol.29 no.11 2545-2548(2017)
50. K. S. Paithankar, V.B. Deshmukh, U.N. Shelake, S.B. Iyyer, V.K. Gade\*, Synthesis of PANI based nanocomposite graphite paste electrode modified with and without AG nano Particles for sensor application a comparative study "International Journal of Chemical and Physical Science (IJCPS JOURNAL) ISSN;2319-6602ISRA Impact Factor 1.815accepted (2017)

51. A.B. Pawase ,K. S. Paithankar, V.K. Gade\*, "Amperometric detection of urea by Polyaniline and polypyrrole based nanocomposite graphite paste electrode : A comparative study IJRASET vol.5 issue 9, 376-382(2017)
52. K. S. Paithankar, V.B. Deshmukh, U.N. Shelake, S.B. Iyyer, V.K. Gade\*," Amperometric detection of cholesterol by nanocomposite graphite paste electrode." Res. J. of Physical Sci.Vol.5(6), 5-9(2017)
53. K. S. Paithankar, V.B. Deshmukh, U.N. Shelake, S.B. Iyyer, V.K. Gade\*,"Polyaniline based potentiometric creatinine biosensor based on nanocomposite graphite paste and rice husk." Journal science Management research ISSN 2319-2429,Vol,V issue -2(2017)
54. Suresh More ,Kiran Paithankar, Vikas Gade, Sunil Mirgane "Application of conducting Polymers as Polypyrrol based Biosensors , International Research Journal of Innovatons in Chemistry(IRJIC)Vol.01 issue 01,05-08 (June-2014)
55. Suresh More , Kiran Paithankar, Vikas Gade, Sunil Mirgane "Galvanostatic Study of Polypyrrole/ZnO film Synthesized various dopants: A Comparative Study, International Research Journal of Innovatons in Chemistry(IRJIC)Vol.02 issue 01,04(Nove-2014)
56. Suresh More ,Kiran Paithankar, Vikas Gade, Sunil Mirgane "RamanSpectroscopy for analysis and Monitoring of particles from Sugar cane and Wheat Farm," , International Research Journal of Innovatons in Chemistry(IRJIC) Vol.02 issue 01, 01-04(Nove-2014)
57. Suresh More ,Kiran Paithankar, Vikas Gade, Sunil Mirgane, Immobilization of Glucose oxidase of PANI-2Amino Pyridine composite film by cross-linking via glutaraldehyde for determination of glucose", Journal of Applied Chemistry (IOSR-JAC) Vol.08 Issue 12,55-62(Dec.2015)
58. Suresh More ,Kiran Paithankar, Vikas Gade, Sunil Mirgane,"The development of A urea biosensor based on BSAembedded surface modified PANI/2AP composite film ," International journal of advance research and innovative ideas in education (IJARIIE) Vol.02 Issue 5,147-154 (2016).
59. Presented and published paper titled :Raman Spectroscopy for analysis and monitoring pracgticles in National conference proceeding JCON 2013 with ISBN number 978-162590- 40-9-6 organized by Jaihind college of Engineering Kuran.



60. Presented and Published paper title "Electrochemical synthesis of poly(2-amino pyridine) film in National conference proceeding JCON 2014 with ISBN number 978-163102-772-7 organized by Jaihind College of Engineering, Kuran.
61. Presented a paper entitled "Electrochemical synthesis of Poly(2-amino pyridine) as conducting polymer by galvanostatic method" in ICITSET in Pune (Paper ID-ICITESTPUNE-18054-252)
62. Presented a poster entitled "Electrochemical synthesis of composite film of PPY and 4-amino pyridine for application as a biosensor in RTMSAP 2016, H.R.M College Rajgurunagar.
63. Presented poster entitled "Immobilization of glucose oxidase on PPY/ZnO film by cross-linking via glutaraldehyde for determination of glucose in 3<sup>rd</sup> international conference on HSDS -2016 held at Azam campus Pune.
64. K.S. Paithankar, V.B. Deshmukh, U.N. Shelke, S.B. Iyyer, V.K. Gade, Amperometric Detection of Urea by PANI and Ppy based on Nanocomposite Graphite Paste Electrode Modified with AgNO<sub>3</sub>NPs, International Journal of Current Trends in Science and Technology, Online ISSN: 0976-9730, Print ISSN: 0976- 9498 Section: Physics, Vol. 8, Issue. 02, Page no: TC 1-9, Received 2017-12-28; Accepted 2018-01-10
65. U.N. Shelke, K.S. Paithankar, V.B. Deshmukh, S.B. Iyyer, S.T. More, V.K. Gade, Synthesis of Polyaniline Based Nanocomposite Graphite Paste Electrode Modified With and Without Silver Nanoparticles for Sensor Application: A Comparative Study, International Journal of Chemical and Physical Sciences, IJCPS Vol. 7, Special Issue ISSN:2319-6602, ICAFM (Part-II) - March 2018
66. U.N. Shelke, K.S. Paithankar, V.B. Deshmukh, V.K. Gade, The Fabrication of Composite Graphite-PANI- AgNO<sub>3</sub> particle based Urea Bio-Sensor, International Journal of Current Trends in Science and Technology, Online ISSN: 0976-9730, Print ISSN: 0976- 9498 Section: Physics, Vol. 8, Issue. 01, Page no: PH 20181-20188
67. V.B. Deshmukh, K.S. Paithankar, U.N. Shelke, V.K. Gade, Analytical detection of paraxon using acetylcholinesterase as an enzyme on polyaniline/FeCl<sub>3</sub> composite film by potentiostatic method, Journal of Scientific Research Institute of Science, Vol. 65, Issue. 5, 2021.

### Recognition/Guide:

Sr. No.	Recognition	University	Subject	Period
1.	M.Phill	SPPU, Pune	Physics	23/02/2018 - 22/02/2026
2.	P. G.	SPPU, Pune	Physics	23/02/2018 - 22/02/2026
3.	Ph.D.	SPPU, Pune	Physics	23/02/2018 - 22/02/2026

### Ph, D. Student:

Sr. No.	Name of Student	Topic Of Ph.D	Date of Registration	Degree Awarded
1.	Paithankar K. S.	Synthesis and Characterization of Polyaniline based Graphite Nanocomposite for Development of Biosensor	24/10/2015	Awarded
2.	Shelke U. N.	Synthesis of poly o-anisidine based biosensor for detection of toxic compound	12/04/2016	Awarded
3.	Deshmukh V. B.	Electrochemical synthesis of Conducting Polymer based pesticide biosensor for agricultural Application	12/04/2016	Ongoing

### Awards:

Sr. No.	Name of Authority	Topic of Ph.D	Date of Award
1.	Rashtriya Ekatmata Parishad, Mumbai	Ratriya Ekatmata Fellowship	2007
2.	Rashtriya Ekatmata Parishad, Mumbai	Gunijan Rashtriya Award	2008