Dr. Kailash B. Sapnar, Ph.D.

Present position

- **Assistant Professor**

Contact Details (Mention e-mail) – fergusson.edu or despune.org

020-67656064
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Work Experience

- **Teaching: 25 years**
- **Research/Industrial: 10 years**

Personal Profile

Working as an assistant professor at Fergusson College (Autonomous), Pune at the Department of Physics for more than 23 years.
Working as a Guide for Ph.D. students
Coordinator for anti-ragging committee
Coordinator for placement cell
T. Y. B. Sc. theory incharge (upto 2022)

Course(s) Taught (Only Titles)

1. Elements of Material Science
2. Digital Electronics
3. Oscillations, Waves and Sound
4. Electronics
5. Mechanics and Properties of Matter
6. Optics
7. Measurement techniques in Physics
8. Practical course in Physics (F. Y. B. Sc.)
9. Practical course in Physics (S. Y. B. Sc.)
10. Practical course in Physics (T. Y. B. Sc.)
11. Practical course in Physics (F. Y. M. Sc.)
12. Practical course in Physics (T. Y. B. Sc. Projects)
13. Practical course in Physics (M. Sc. Projects)

Field of Specialization/Areas of Interests

- Material Science
- Semiconductor Devices

- Nanomaterials and their applications

Education

- **Ph.D. – (subject name):** from 2007 to 2012
  Title of the Thesis:
  Name of University / Institution:SPPU
  Year of Award: 2012
- **Master of Science- (Physics)**: 1994
  Fergusson College, Pune, SPPU
- **Bachelor of Science- (subject name):** 1992
  SPPU, Pune

Fellowship/Awards/ Certifications/Achievements/Recognitions

1. **Best Paper Presentation 2nd Prize** Indo - Russian Workshop on nanotechnology and Laser Induced Plasma -2009 (IRNANO2009) held at University of Delhi, Delhi, India during November 24-26, 2009.
2. **Best Paper Presentation**, **1st Prize** in International Conference on Lasers and Advanced Materials (ICLAM-2010) "at Garware College Pune, March 6-8, 2010.
3. **Senior Scientist Award** for Outstanding Contribution of research Papers in the field of Material Science by the Board of Editors, Bionano Frontier, Journal of Science and Technology, Mumbai.

Member of College Committees/ Professional Bodies and Others

College Level	Professional Bodies	Others
● Worked as a coordinator for anti-ragging cell ● Placement coordinator	Indian Association of Physics Teachers (IAPT)	
● T. Y. B. Sc. Theory and Project Incharge	Indian Physics Association (IPA)	
● Activity for students conducted by DES, Fergusson College		

Employment History

1) Organization : Fergusson College, Pune
Role : Assistant Professor
Duration : 29th November, 1994 to 14th June, 1995

Responsibilities	● T. Y. B. Sc. Theory and Practical Incharge

2) Organization : H. V. Desai College, Pune
Role : Assistant Professor
Duration : 1st August, 1995 to 14th June, 1996

Responsibilities	● T. Y. B. Sc. Theory and Practical Incharge and Project Coordinator

3) Organization : Abeda Inamdar College, Pune
Role : Assistant Professor
Duration : 19th June, 1996 to 14th June, 1997

Responsibilities	• **T. Y. B. Sc. Theory and Practical Incharge**

4) Organization : Fergusson College, Pune
Role : Assistant Professor
Duration : 1st December 1997 till date

Responsibilities	• **T. Y. B. Sc. Theory and Practical Incharge**

Research Projects

Title of the Project	Name of Funding Agency	Amount (Rs)	Duration (Year) (From To)	Type (Minor / Major)	Outcome
Study on Titanium dioxide nanomaterials and their applications	BCUD, SPPU	1.5 Lakhs	2012-2013	Minor	Publications

Research Publications in National and International Journals

1. Hybrid Inorganic Complexes as Cancer Therapeutic Agents: In-vitro ValidationMurlidhar ABetallu[1]*, Shaileshkumar R Bhalara[2], Kailash B Sapnar[3], Vijay B Tadke[1], Keerti Meena[6], Ananya Srivastava[7], Gopal C Kundu[2,4], and Mahadeo Gorain[2]**Nanotheranostics* 2023; 7(3):270-280. doi:10.7150/ntno.81557
2. Synthesis, Characterisation And Microbial Activity of Mixed 'Transition Metal - Calcium Tartarate' Complexes Murlidhar A. Betallu1 , Vijay B. Tadke1 , Girish R. Pathade2 , Kailash B. Sapnar3 and Milind B. Ubale4 *ISSN: 2278-1862 Journal of Applicable Chemistry 2016, 5 (1): 165-178 (International Peer Reviewed Journal)
3. Synthesis, Characterization and invitro antimicrobial activity of mixed 'transition metal - barium tartarate' complexes Milind B. Ubale1 *, Murlidhar A. Betallu2 , Vijay B. Tadke2 , Shridhar M. Vhankate2 and Girish R. Pathade3 ISSN 2277– 7105Article Received on 09 April 2016,
4. Photocatalytic activity of 6.5 MeV electron irradiated ZnO-nanorods, K. B. Sapnar. L. A. Ghule, S. V. Bhoraskar, K. M. Garadkar, S. D. Dhole and V. N. Bhoraskar, *Radiation Effects and Defects in Solids,* 28-Nov-2010, GRAD-2010-0225.
5. Electron-irradiation induced changes in the phases and photocatalytic activity of TiO_2 K. B. Sapnar, S. D. Dhole and V. N. Bhoraskar, *Nuclear Instruments and Methods in Physics Research B* 276: 7-13 (2012).
6. Effects of 6 MeV electron irradiation on ZnO nanoparticles synthesized by microwave method, K. B. Sapnar, L. A. Ghule, K. M. Garadkar, V. N. Bhoraskar and S. D. Dhole, *Proceeding of (2166 — 2168) PAC-2011*. New York, USA.
7. Preparation of zinc oxide nanorods by microwave assisted technique using ethylene glycol as a stabilizing agent, L. A. Ghule, K. B. Sapnar, S. D. Dhole, P. P. Hankare, K. M. Garadkar, *J Mater Sci: Mater Electron DOI 10.1007/s10854-010-0270-0*
8. Photocatalytic degradation of methyl orange using ZnO nanorods, L. A. Ghule, K. B. Sapnar, S.

D. Dhole, K. M. Garadkar, *Toxicological & Environmental Chemistry, Vol. 93, No.4, April 2011, 623-634*

9. Ti silicite formation by interfacial mixing using swift heavy ion irradiation, Veenu Sisodia, K.B. Sapnar and S.D. Dhole, *Archives of Physics Research, Vol 2, No. 1, April 2011, 54-67*
10. Ti silicide formation by interfacial mixing using swift heavy ion irradiation, K.B.Sapnar, Veenu Sisodia and $.D. Dhole, *Archives of Physics Research,2 (1): 54-67 (2011)*
11. Antimicrobial activity of 6.5 MeV energy electron irradiated ZnO nanaoparticles synthesized by microwave method, K.B.Sapnar, V.N. Bhoraskar and S.D. Dhole, *Journal of Colloid and Interface Science*
12. Antimicrobial Activity of 6.5 MeV electron- irradiated ZnO Nanoparticles synthesized by microwave-assisted method, K.B.Sapnar, K.M. Garadkar, S.D. Dhole and V.N. Bhoraskar, *International Journal of Green Nanotechnology, 4: 477-483 (2012)*
13. Synthesis, Characterization and In-vitro Anticancer Activity of Mixed 'Transition Metal - Magnesium Tartarate' Complexes, Betallu, Murlidhar ; Bhalara, Shaileshkumar; Gorain, Mahadeo; Sapnar Kailash; Tadke, Vijay; Kundu, Gopal; B Ubale, M., *Journal of Medicinal Chemistry Manuscript ID: jm-2017-01140b*
14. Synthesis, Characterization and In-vitro Anticancer Activity of Mixed 'Transition Metal-Magnesium Tartarate' Complexes, Betallu, Murlidhar, Bhalara, Shaileshkumar, Gorain Mahadeo, Sapnar Kailash, Tadke Vijay, Kundu, Gopal, Ubale, Milind, *Dalton Transactions Manuscript ID is: DT-ART-10-2017-004025*

Participation in Conferences/Seminars/Symposia/Workshop:

Presented:

1. International Workshop on Nanotechnology and Advanced Functional Materials) (NTAFM-09) at National Chemical Laboratory, Pune, July 09-11, 2009
   Title: Effects of 6 Mev electron irradiation on Titanium Oxide nanoparticles formed by Sol-gel method
2. Indo-Russian Workshop on Nanotechnology and Laser Induced Plasma-2009 (IRNANO-2009) at University of Delhi, November 24-26,2009.
   Title: Effects of 6 Mev electron irradiation on Zinc Oxide nanoparticles formed by Microwave assisted method.
3. International symposium on "Renewable Energy for Rural Development" at S. N. Arts, D. J. Malpani Commerce & B.N. Sarda Science College, Sangamner Dist. Ahmednagar. 25 to 27 of February 2010.
   Title Effects of 6 Mev electron irradiation on Titanium Oxide nanoparticles formed by Sol-gel method
4. International Conference on Lasers and Advanced Materials (ICLAM-2010) at Garware College Pune,6-8 March 2010.
   Title: Effects of 6 Mev electron irradiation on Zinc Oxide nanoparticles formed by Microwave assisted method.

Workshop/Conference Attended:

1. National Conference on NanoBiotechnology: Applications and Prospects at A.I.College Pune, 8-10 October 2009.
2. International Workshop on "Frontiers in Electronic structure calculations: Techniques and Applications" at the Department of Physics, University of Pune 15-17,February 2010.
3. Academic Seminar on Experiential Education - An approach for enhancing engineering and science

education at Pune, Hotel Pride, 19 February 2010.

4. Raman Memorial Conference -2010 at the Department of Physics.University of Pune, 24-25 Feb 2010.
5. International Conference on Biology Beyond Borders at University of Pune,4-5 March 2010.

Events Organized/Coordinated:

Sr. No	Name of the Event	Name of organizing Institute/ College/ University	Nature of contribution	Dates
1.	National Conference on Advanced Materials and Applications (NCAMA-2016)	Department of Physics, Fergusson College with the support from BCUD, Savitribai Phule Pune University and Department of Biotechnology (DBT), Govt. of India	Member, Local Organizing Committee	4th & 5th March 2016

Course Content Developed (e-content)

Materials Science
Digital Electronics