NIBEDITA NAYAK

About Me

Dr. Nibedita Nayak is working as an Assistant Professor in the Department of Physics, School of Applied Sciences, Bhubaneswar Campus of Centurion University of Technology and Management, Odisha. She completed her Ph.D from Berhampur University in 2018. She is working on computational tools and new material development. She has over six years of teaching experience at +2 level and twenty years of teaching experience at Graduate and Post graduate level. Dr. Nayak is associated with the "Center for New Materials," a research center at CUTM, and currently supervises one Ph.D. student under her guidance.

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ACADEMIC QUALIFICATION

2018	Ph.D (Physics) *Berhampur University, Odisha*
2002	Master of Science (Physics) *Berhampur University, Odisha*
2000	Bachelor of Science (Physics. Hons) *SKCG college, Parlakhemundi, Berhampur University, Odisha*
1998	+2 Science *SKCG college, Parlakhemundi, CHSE, Odisha*
1993	Matriculation *MRGH School, Parlakhemundi, BSE, Odisha*

TEACHING EXPERIENCE (21+ years)

May 2009 - current	Designation: Assistant Professor (Physics) Institution: Centurion University of Technology and Management, Bubaneswar, Odisha.
Aug 2007 – Apr 2009	Designation: Lecturer (Physics) Institution: Jagannath Institute of Technology and Management (BPUT), Paralakhemundi, Odisha.
Oct 2005 – Jul 2007	Designation: Lecturer (Physics) Institution: Institute of Advanced Computer and Research (BPUT), Rayagada, Odisha.
May 2002 – Sep 2005	Designation: Lecturer (Physics) Institution: Meenaketan College (+2 Sc.), Gurandi, Gajapati, Odisha.

PERSONAL INFO

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Odisha

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DOB
15 June 1978

Gender
Female

Marital status
Married

SKILL

- Class room teaching.
- Conducting practical session
- Guiding students for project work
- Computational research

COMPUTER / SOFTWARE

- MS Office (Word, Excel and Power Point)

LANGUAGE

	S	R	W
English	✓	✓	✓
Hindi	✓	✓	✓
Odiya	✓	✓	✓
Telugu	✓	X	X

SUBJECTS TAUGHT AT DIFFERENT LEVEL

B. Tech. level	B. Sc. level	M. Sc. level
✓ Mechanics for Engineers ✓ Optics and Optical fibers ✓ Physics-I and Physics-II ✓ Materials Science & Engineering ✓ Physics of Semiconductor Devices ✓ Basic mechanics and properties of matter	✓ Mathematical Physics ✓ Waves and Oscillations ✓ Electricity and Magnetism ✓ Classical Mechanics	✓ Nuclear and Particle Physics ✓ Computational Material Science ✓ Electrodynamics ✓ Atomic and Molecular Physics

ACADEMIC AND ADMINISTRATIVE RESPONSIBILITIES UNDERTAKEN

- ✓ NAAC Coordinator.
- ✓ Lab in-charge of Computational Lab.
- ✓ Mentor of B.Sc Students.
- ✓ Guided M.Sc students for Project work.
- ✓ Examination Coordinator.
- ✓ Structuring and content developing of Physics syllabus for B.Sc and M.Sc courses.
- ✓ Coordinator for the National seminar on Advanced Materials and Technology on 17 April 2018.
- ✓ Co-coordinator of Science Club Illuminati
- ✓ Member of new material research centre

PUBLICATIONS

1. Tailoring the optical and electrical behavior of Cu2O/ZnO heterojunction by varying the Zn2+ ion concentration for solar-cell applications, J.Arunodaya, **Nibedita Nayak** & Trilochan Sahoo *Micro and Nanostructures, February 2023.*
2. Copper iodide induced ambient-air-stable formamidinium lead triiodide thin film, J.Arunodaya, **Nibedita Nayak** & Trilochan Sahoo, *Journal of Materials Science: Materials in electronics, January 2022.*
3. A novel WC–W2C composite synthesis by arc plasma melt cast technique: microstructural and mechanical studies, **N. Nayak,** T. Dash, D. Debasish, B. B. Palei, T. K. Rout, S. Bajpai, B. B. Nayak, *SN Applied Sciences, February 2021.*
4. Structural Analysis of Tungsten Carbide/Tungsten Composite, **Nibedita Nayak**, Tapan Dash, *Shodh Sanchar Bulletin, December 2020.*
5. Computational approach for understanding the electronic properties of strontium doped silicon carbide, **Nibedita Nayak** , *Shodh Sarita, October 2020.*
6. In silico Analysis of12 d-Glucose and Dichloro-Ethylene Compatibility in a Blend, Bhabatosh Swain and **Nibedita Nayak ,** *Indian Journal of Natural Sciences, June 2020.*
7. In silico Analysis of Polyvinyl Alcohol and Polyacrylonitrile Compatibility in a Blend, Truptimayee Behera, S. Nayak and **Nibedita Nayak,** *Indian Journal of Natural Sciences, June 2020.*
8. In silico Analysis of Gas Permeability Properties of Polyvinyl Alcohol and Polyacrylonitrile Composite, Truptimayee Behera, S. Nayak and **Nibedita Nayak,** *Indian Journal of Natural Sciences, June 2020.*
9. In silico Analysis of Mechanical Properties of Polyvinyl Alcohol and Polyacrylonitrile Composite, T Jaganatha Patro, S.Nayak and **Nibedita Nayak,** *Indian Journal of Natural Sciences, June 2020.*
10. In silico Analysis of Thermal and Dielectric Properties of Polyvinyl Alcohol and Polyacrylonitrile Composite, T Jaganatha Patro, S.Nayak and **Nibedita Nayak,** *Indian Journal of Natural Sciences, June 2020.*
11. In silico Analysis of Poly13a D-Galactose and Polyvinyl Chloride Compatibility in a Blend, Biswaranjan Swain and

Nibedita Nayak, *Indian Journal of Natural Sciences, June 2020.*

12. In silico Analysis of Gas Permeability Properties of Polyacrylic Acid and Poly12a D Glucose Composite, A.Saraf and **Nibedita Nayak,** *Indian Journal of Natural Sciences, June 2020.*
13. In silico Analysis of Thermal and Dielectric Properties of Polyvinyl Alcohol and Polyoxymethylene Composite, Prativa Satpath and **Nibedita Nayak**,
14. In silico Analysis of Mechanical Properties of Polyacrylic Acid and Polymethyl Acrylate Composite, A.Saraf and **Nibedita Nayak.** *Indian Journal of Natural Sciences, June 2020.*
15. In silico Analysis of Gas Permeability Properties of Polyacrylic Acid and Polyacrylonitrile Composite, Sujata Acharya, A.Saraf, **N.Nayak.** *Indian Journal of Natural Sciences, June 2020.*
16. Arc Plasma Treatment of Boron Carbide: Preparing Porous Free High Hardness Material, **N. Nayak**, T. Dash, D. Dibidutta, S.K. Biswal, B.B. Palei and B. B. Nayak. *Indian Journal of Natural Sciences, June 2020.*
17. VLSI Architecture for 1-D Lifting Discrete Wavelet Transform, S.S.Nayak, **N.Nayak**, *International Journal of Electronics and Computer Science Engineering, Vol-1, No-3,1355-1361.*
18. Two's Complement Fast Serial - Parallel Multipliers Based On Zero - Msb - Of - Multiplier Scheme, S S Nayak , **Nibedita Nayak** , Anjali Sahu , *International Journal of Science and EngineeringVol-1, No-1, PP-24-28.*

Book Chapters

1. Improvement in the flow behavior of coal-water slurry using surfactant mixture, A.Routray, P.Kar, **N.Nayak**, RKMohapatra, M.Mustakim, D.Das, '**chemical modification of solid surfaces by the use of additive',** *Bentham Science Publishers, July 2021.*
2. Semiconductor Technologies for Quantum Computing Hardware, Dipan Kumar Das, Padmaja Patnaik, Sudip Kumar Das, Mandakini Baral, **Nibedita Nayak, "Integration of AI, Quantum Computing, and Semiconductor Technology"** *IGI Global, October 2024.*
3. *Edible Energy Harvesting: Powering the Future of, Smart Food Technology,* Dipan Kumar Das, Padmaja Patnaik, Sudip Kumar Das, Mandakini Barala, **Nibedita Nayak, "Edible Electronics for smart technology solutions"** *IGI Global, October 2024.*

Paper Presented

1. A paper "*Elastic Properties of Zigzag, Chiral and Armchair SiC SWNT in the Presence of Universal Force Field*" presented in the International Conference on Advances in Physical Sciences and Materials on 29th August 2024.
2. Presented a poster on "Exploring the Electronic and Optical Properties of Armchair SiC (8,8) SWNTs Using First-Principles Calculations**"** at the DAE SSPS held at Mumbai on 18-22 December-2024.

DECLARATION

I hereby declare that all the particulars provided above are true to the best of my knowledge and belief.

Nibedita Nayak
15 January, 2025