


Faculty Profile

Name of Faculty	S.Chandrasekhar	
Department	Physics	
Qualification	B.Sc.Ed., M.Sc., M.Tech., (Ph.D.)	
Designation	Assistant Professor	
Area of specialization	Solid State Physics, Computational Physics, Molecular Spectroscopy, Nanoscience	
Date of Joining BNMIT	23.07.2012	
Nature of Association (Regular/Contractual/Adjunct)	Regular	
e-mail	chanduhcu@gmail.com	
No. of years of Experience	Teaching: 9 years	

Academic Qualifications

- **(Ph.D.)** Visvesvaraya Technological University, Belgaum, India.
- **M.Tech.**,(2009) University of Hyderabad, Hyderabad, India (I Class with distinction).
- **M.Sc.** in Physics, (2006) University of Hyderabad, Hyderabad, India (I Class).
- **B.Sc.Ed.**, (2003) Regional Institute of Education, Mysore University (I Class).

Working Experience Details

- Working as Assistant Professor in the Department of Physics at BNMIT, Bangalore from July 2012 to Till date.
- Worked as a Lecturer in the Department of Physics at Shiridi Sai Engineering College, Bangalore from August 2010 to April 2012.

Research Experience Details:

M.Tech:

Project Title : Simulation of Dynamics of the Laser Cooling with Interactions of Atoms

Supervisor : Dr. Ashoka S Vudayagiri

Abstract :“We simulate the dynamics of atoms with in a MOT, which works on laser cooling and trapping by developing a matlab code. It is a complex process, so we simplify the process by involving

few potentials and forces in the process. In this process we involve light force which depends on velocity and position of atoms in the trap. Light forces involved in this process causes to reduce the momentum of atoms so that the temperature of atoms in MOT.

We observe ballistic expansion of spatial and velocity distribution of atoms in the trap and variation of different parameters in this process. We repeat the simulation by including Lennard-Jones potential and a repulsion force. We observe the role of different interaction forces by turn them on and off in this process and variation of different of the distribution of atoms in the trap.

The results show that the effect of the Lennard Jones potential reduces the efficiency of the cooling process. The final temperature reached is more than what would be in the absence of the L-J forces. Since the L-J indicates the interaction between the atoms, the effect of interactions and collisions on the laser cooling process can be computed from the model developed here.”

Ph.D:

Photophysical properties of 4-(5-Amino-[1,3,4]thiadiazol-2-ylsulfanylmethyl)-7-methyl-chromen-2-one (C1), 4-(5-Amino-[1,3,4]thiadiazol-2-ylsulfanylmethyl)-7-methoxy-chromen-2-one (C4), 1-(5-Amino-[1,3,4]thiadiazol-2-ylsulfanylmethyl)-benzo[f]chromen-3-one (C6), 4-(5-Amino-[1,3,4]thiadiazol-2-ylsulfanylmethyl)-benzo[h]chromen-2-one (C7) are investigating. The UV absorption spectroscopy, Fluorescence spectroscopy are used to study photophysical properties.

Experimental/ Computational/ Any other Skills:

A. Material Synthesis

- Synthesis of silver nanoparticles of different sizes by chemical reduction method.

B. Characterization Techniques

- Optical Absorption studies using Absorption UV-VIS Spectrophotometer Model 150-20.
- Fluorescence emission studies using Spectrofluorometer Model F-2000.

Instruments Handled/Software's handled:

- UV-VIS Spectrophotometer
- Spectrofluorimeter

Workshops /Seminars Organized:

1. Member of Organizing Committee for Five Day Faculty Development Program on ‘Modern Materials and their Applications’ at Department of Physics, B N M Institute of Technology, Bangalore from 16th – 20th January 2018.

Papers/Posters presented in Conferences

1. Poster entitled **Photophysical characteristics, FT- IR and DFT studies of biologically active coumarin 4-(5-Amino-[1,3,4]thiadiazol-2-ylsulfanylmethyl)-7-methoxy-chromen-2-one (C4)** presented in National Conference on Science, Engineering and Management (NCSEM – 2K18) organized by The Oxford College of Engineering, Bangalore from 24th – 25th May 2018.

Participation in Training courses/Seminars/Workshops

1. Two day National Conference on Science, Engineering and Management (NCSEM – 2K18) organized by The Oxford College of Engineering, Bangalore from 24th – 25th May 2018.
2. Five Day Faculty Development Program on ‘Modern Materials and their Applications’ at Department of Physics, B N M Institute of Technology, Bangalore from 16th – 20th January 2018.
3. One Week Faculty Development Program on “Recent Trends in Photonic Techniques” organized by the Department of Physics, Ramaiah Institute of Technology, Bangalore from 31st July – 5th August 2017.
4. One Day seminar on “Teachers as Catalysts for Change” at B N M I T, Bangalore on 21st January 2017.
5. One week Faculty Development Program on “New Horizon in Soft Condensed Matter Physics for Interdisciplinary Research” Under TEQIP Phase-II from 9th to 14th January, 2017, organized by Departemtn of Physics, MSRIT, Bangalore.
6. Three Days Faculty Development Program on “Advanced Matereial Characterization Technology” Under TEQIP (Phase-II) held during 27th to 29th July, 2016, organized by Departemtn of Physics, MSRIT, Bangalore.
7. Two –Week ISTE Short Term Training Programme (STTP) on Engineering Physics conducted by IIT, Bombay at BMS College of Engineering, Bangalore during 8th December to 18th December 2015.
8. One day Symposium on “Recent Trends in Advanced Materials and Nanotechnology” organized by the Department of Physics, CMRIT held during January 2015.
9. Two day workshop on “Nonlinear and applied Optics” organized by the Department of Physics, MSRIT held during August 2013.

10. Faculty development program on “Innovative Teaching & Effective Communication” organized by BNMIT held during July 2012.
11. One-day workshop on “Advanced materials and their applications” in March 2011, organized by Department of Physics, Chemistry, BMSIT & Luminescence Society of India, Karnataka Chapter (LSIKC).
12. Workshop on “Simulations in Biology and Soft Matter” in November 2007, conducted by Center for Development of Advanced Computing (Pune) & University of Hyderabad, Hyderabad.
13. HPC workshop on “Tools for Scientific Computing” in October 2008, conducted by Center for Development of Advanced Computing (Pune) & University of Hyderabad, Hyderabad.
14. Population & Education Week organized by Regional Institute of Education, Mysore.

Personal Details:

- *Date of Birth* : 12/01/1982
- *Gender* : Male
- *Languages known* : Telugu, Kannada, Hindi and English
- *Permanent Address* : D.No.:21/6/178, Postal Colony
S.Sadlapalli, Hindupur
Ananthapur (Dt.), Andhra Pradesh
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20th April 2019

S.Chandrasekhar