

NADEEPA JAYASUNDARA

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EDUCATION

DOCTOR OF PHILOSOPHY	Physics - Wesleyan University, Middletown, CT	Expected May 2020
MASTER OF SCIENCE	Electrical Engineering - New Mexico State University, Las Cruces, NM	August 2014
BACHELOR OF SCIENCE	Physics - University of Peradeniya, Peradeniya, Sri Lanka	June 2010

RESEARCH EXPERIENCE

Wesleyan University

September 2014 - present

EXPERIMENTAL AND PHYSICS

- Leading a project to measure the radiative lifetime of highly excited states of sodium molecules using a molecular beam and a TOF spectrometer
- Maintaining and troubleshooting all the components (molecular beam, high vacuum system, Nd:YAG lasers, and dye lasers) required to carry out molecular spectroscopy
- Developing LabVIEW programs to acquire data and control the variables and timing in the experiment
- Performing radiative lifetime calculations using LEVEL and BCONT programs
- Training/mentoring undergraduate researchers on spectroscopy and optical alignment
- Collaborating with other researchers to produce publications and conference presentations
- Authored and published a peer-reviewed article in The Journal of Chemical Physics

COMPUTATIONAL OPTICS

New Mexico State University

August 2011 - May 2014

- Performed COMSOL calculations on the resonance characteristics of the nano-metallic particles
- Simulated the detection of orbital angular momentum in the presence of sensor misalignment
- Contributed to a published peer-reviewed article in Applied Physics Letters

EXPERIMENTAL MATERIAL SCIENCE

University of Peradeniya

August 2010 - July 2011

- Synthesized nano-silica particles in the size range of 25 - 40 nm from rice husk ash and characterized them with atomic force microscope
- Created nanocomposite solid polymer electrolyte and performed complex impedance spectroscopy
- Contributed to a published peer-reviewed article in Journal of Solid State Electrochemistry

SKILLS

- Specializes in optical alignment, optomechanical constructions, and electro-optics
- Expertise in operating and troubleshooting Nd:YAG lasers and dye laser systems
- Skilled in developing data collection systems with LabVIEW
- Highly experienced to operate and troubleshoot electronic instrumentation and photonics devices
- Proficiency in TOF mass spectroscopy and molecular spectroscopy
- Experience in liquid nitrogen cryogenics and high vacuum chamber operations
- Expertise in collecting and analyzing the spectroscopic data
- Experience in programming with MATLAB, C++ and Python