

## Dinesh Mishra

**Email:** dmishra@chem.fsu.edu

Graduate Student  
Department of Chemistry and Biochemistry  
Florida State University  
Tallahassee, FL 32306-4390, USA



### Education

- 08/2012-present Graduate Student  
Department of Chemistry and Biochemistry  
Florida State University
- 2007-2010 M.Sc. (Physical Chemistry)  
Department of chemistry  
Tribhuvan University  
Kirtipur, Kathmandu, Nepal.
- 2004-2007 B.Sc. (General Chemistry)  
Tri-Chandra College  
Tribhuvan University, Nepal.

### Research Experience

- 2012-present - Research on the synthesis, functionalization and characterization of fluorescent noble metal (gold and silver) nanoclusters. We are primarily interested in the design of simple, efficient schemes for the one phase growth of fluorescent metallic clusters of noble metals (particularly gold and silver). We use optical spectroscopy and other analytical techniques such as NMR spectroscopy and mass spectrometry to characterize these materials and understand their properties. We are also interested in the functionalization of these materials for applications in biological sensing and imaging.
- 2010 – Study of metal-metal oxide electrodes as pH sensors: My study involved the fabrication of cheap pH sensing electrodes of antimony-antimony oxide, and studying their nernstian response in buffer media. The oxides were deposited potentiostatically and galvanostatically in acidic and basic conditions and their response and durability were also studied. Cyclic voltammetry was used to understand the behavior of the deposited oxide in buffer medium.

### Publications and Presentations:

- Dinesh Mishra, Fadi Aldeek, Eric Lochner, Goutam Palui, Birong Zeng, Sebastian Mackowski, and Hedi Mattoussi. *Aqueous Growth of Gold Clusters with Tunable Fluorescence Using Photochemically-Modified Lipoic Acid-Based Ligands*. DOI: 10.1021/acs.langmuir.6b00950

- Dinesh Mishra, Fadi Aldeek, Serge Michael, Gautam Palui, Hedi Mattoussi. *Growth of fluorescence tunable gold clusters using photo-chemically activated ligands* (Proceedings Article, *Proc. SPIE* 9722, Colloidal Nanoparticles for Biomedical Applications XI, 972207 (March 7, 2016). **doi:**10.1117/12.2212025
- *Aqueous Growth of Fluorescence Tunable Gold Clusters Capped with Lipoic Acid-Polyethylene Glycol (LA-PEG) Ligands* (Oral Presentation, NanoFlorida, International conference on advanced materials, 2015. Florida State University)
- Electrochemical oxidation of antimony electrodes for the fabrication of pH sensing electrodes (Oral presentation, International conference on Nanotechnology for sustainable development, 2011, Kathmandu, Nepal.
- National workshop on scientific writing, 2010, Kathmandu, Nepal.