

# Thomas D. Green

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## Education

**Ph.D., Chemistry** 2016  
Florida State University, Tallahassee, FL U.S.A.

- *Optical Properties and Electronic Relaxation Dynamics of Monolayer-Protected Metal Clusters Studied Using Ultrafast Pump-Probe and Magneto-Optical Spectroscopies.* Green, T.D. 2016

**B.S., Chemistry** 2010  
King's College, Wilkes-Barre, PA U.S.A.

- American Chemical Society Certification

## Teaching Experience

**Visiting Assistant Professor** 8/2023 – Present  
Whitman College, Walla Walla, WA U.S.A.

- Teaching Physical Chemistry I: Quantum Chemistry & Spectroscopy, General Chemistry w/ lab

**Visiting Assistant Professor** 8/2021 – 6/2023  
Bucknell University, Lewisburg, PA U.S.A.

- Taught Graduate seminar course (Applied Plasmonics), Inorganic Chemistry w/ lab, General Chemistry for Engineers w/ lab, principles of Chemistry w/ lab, and introductory chemistry w/ lab (non-science majors course)
- Participated in Bucknell *New Faculty Pedagogy Series*, a program to help new faculty explore research-based teaching strategies such as:
  - Universal design principles and inclusive/accessible course design
  - Strategies for strengthening intrinsic motivation in students
  - Helping struggling students

## Research Experience

### **Postdoctoral Research Scientist**

9/2019 – 7/2021

University of Amsterdam, Van't Hoff Institute for Molecular Sciences, Molecular Photonics Division and AMOLF joint appointment  
Amsterdam, The Netherlands

- Investigated influence of confinement on structure of super-cooled liquid water using temperature-dependent FTIR measurements

### **Postdoctoral Research Scientist**

3/2018 – 8/2019

Chalmers University of Technology, Department of Physics, Bionanophotonics Division  
Gothenburg, Sweden

- Studied optical properties of high-index dielectric nanostructures using single-particle Raman and darkfield microscopy/spectroscopy
- Built, maintained and utilized custom instrumentation to measure polarization-dependent scattering spectra of single nanostructures
- Integrated into a culturally diverse team of researchers

### **Postdoctoral Research Scientist**

7/2016 – 3/2018

Colorado State University, Department of Chemistry  
Fort Collins, Colorado U.S.A.

- Worked with graduate and undergraduate students to investigate molecular structure using linear and nonlinear infrared spectroscopy
- Built and maintained 2-D IR instrumentation to investigate structure in molecular aggregates

### **Graduate Research Assistant**

8/2010 – 4/2016

Florida State University, Department of Chemistry and Biochemistry  
Tallahassee, FL U.S.A.

- Utilized and maintained a regeneratively-amplified ultrafast laser system and time-resolved spectroscopy instrumentation
- worked in collaboration with the National High Magnetic Field Lab staff to conduct energy- and time-resolved photoluminescence and magnetic circular dichroism measurements to characterize the electronic structure of metal nanoclusters
- Extensive experience communicating research in conference presentations and posters

## **Selected Presentations**

*Spectroscopy of Nanoscale Systems: Tales from a Traveling Postdoc.* Oral Presentation  
Bucknell University Chemistry Dept. Seminar 10/2022

*Identifying Structural Domains of Super cooled Water Confined in Mesoporous Silica Gel via FTIR Spectroscopy.* Oral Presentation  
American Physical Society March Meeting, virtual conference 3/2021

*Temperature-Dependent Photoluminescence and Magnetic Field-Mediated Spectroscopy of Atomically-Precise Metal Nanoclusters.\** Oral Presentation  
8th Annual NanoFlorida Symposium, Tallahassee, FL 5/2015  
*\*Physical Chemistry Chemical Physics Oral Presentation Prize*

*Temperature- & Field-Dependent Photoluminescence of Gold Nanoclusters.* Poster  
17th Annual Southeast Ultrafast Conference, Baton Rouge, LA. 1/2014  
*\*Student Poster Award*

*Temperature and Magnetic Field-Dependent Photoluminescence from Metal Nanoclusters.* Oral Presentation  
79th Annual Meeting of the Southeastern Section of the American Physical Society, Tallahassee, FL. 11/2012

## **Selected Publications**

Foxley, J., Green, T.D., Tofanelli, M.A., Ackerson, C.J., Knappenberger Jr., K.L. "The Evolution from Superatom- to Plasmon-Mediated Magnetic Circular Dichroism in Colloidal Metal Nanoparticles Spanning the Nonmetallic to Metallic Limits" *J. Phys. Chem Lett.*, 2023, 14, 22, 5210-5215.

Green, T.D., Baranov, D.G., Munkhbat, B. Verre, R., Shegai, T. Käll, M. "Optical material anisotropy in high-index transition metal dichalcogenide Mie resonators" *Optica*, 2020, 7, 680-686.

Mattson, M.A., Green, T.D., McCullagh, M., Krummel, A.T. "Elucidating structural dynamics of Perylene Diimide Aggregates using vibrational spectroscopy and molecular dynamics simulations" *J. Phys. Chem. B*, 2018, 122, 4891-4900.

Green, T.D., Yi. C., Zeng, C., Jin, R., McGill, S, Knappenberger Jr., K.L., Temperature-dependent photoluminescence of structurally-precise quantum-confined metal nanoparticles" *J. Phys. Chem. A*, 2014, 118, 10611-10621.