

# Nicholas Manganaro

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## TEACHING EXPERIENCE

### **First-Year Seminar in Game Design (University of Massachusetts Amherst, 2023)**

- The first-year seminar program allows graduate students to apply to design and teach their own 1 credit course.
- My course taught the process behind game design decisions while also highlighting tools for success at UMass.
- I taught 3 classes of 17-19 students.
- I attended teaching training the summer before the course to gain experience in slide design and planning out a college course.
- I prepared and taught 11 lectures and worked with students to put together presentations for final presentations.

### **Student Peer Mentor (University of Massachusetts Amherst, 2022)**

- Created worksheets to help students struggling with chemistry.
- Helped first-year students learn how to study and be successful in college.

### **General Chemistry Lab Teaching Assistant (University of Massachusetts Amherst, 2019-2023)**

- Taught 4 sections of general chemistry labs.
- I was responsible for the safety and handling of chemicals.
- For my exceptional work I was awarded as a distinguished TA. This award is presented to only 1 TA in the chemistry department every year.
- Graded ~30 reports a week.

### **Inorganic Chemistry Teaching Assistant (University of Massachusetts Amherst, 2020)**

- Created first drafts of quizzes and exams that were given to a new instructor.
- I worked closely with the instructor to ensure any students falling behind got extra help.
- Graded various homework, quizzes, and exams.

## RESEARCH

### **Walsh Lab (University of Massachusetts Amherst, 2019-Current)**

*PHD Candidate*

- Research various delafossite system under extreme pressure conditions
- Attended research beamtime at the Advanced Photon Source and the National Synchrotron Light Source to collect XRD, Raman, and IR data at high pressures.
- Started a new subgroup and mentored a graduate student.
- Mentored 5 different undergraduate students including an REU student.
- <https://high-pressure.chem.umass.edu/>

### **The Boston Police Crime Lab Research Internship (Boston MA, 2018)**

- Did a research project examining equation for blood spatter for objects in motion.

### **Massachusetts State Crime Lab Research Internship (Maynard MA, 2017)**

- Worked with gas-chromatography and mass spectrometer to find the detection limits of various instruments.
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## Education

**University of Massachusetts Amherst**      GPA: 3.9  
*PhD*, Materials Science

**University of New Haven**      GPA: 3.9  
**Bachelor of Science**, Forensic Science

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## Awards and Honors

George Richason, Jr. Scholarship Fund in Chemistry - Distinguished Graduate TA    **2021**

## Publications

### **High-pressure polymorphism in silver ferrite delafossite, AgFeO<sub>2</sub>**

Nicholas S. Manganaro, Scott D. Ambos, Matthew DeCapua, Scott D. Thiel, Wyatt E. Mitchell, Dongzhou Zhang, Phuong Nguyen, Barbara Lavina, Esen Ercan Alp, Zhenxian Liu, Jun Yan, James P. S. Walsh  
*Submitted, 2023.*

### **Designing magnetic properties in CrSBr through hydrostatic pressure and ligand substitution**

Evan J. Telford, Daniel G. Chica, Michael E. Ziebel, Kaichen Xie, Nicholas S. Manganaro, Chunying Huang, Jordan Cox, Avalon H. Dismukes, Xiaoyang Zhu, James P. S. Walsh, Ting Cao, Cory R. Dean, Xavier Roy  
*Advanced Physics Research, 2023.*