

Paul V Marshall

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University of Massachusetts Amherst
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EDUCATION

Ph.D. Inorganic/Material Chemistry **Anticipated 2024**
University of Massachusetts Amherst, Amherst, MA

B.S. Biochemistry and Chemical Biology **2019**
Wayne State University, Detroit, MI

A.A. General Studies **2015**
Oakland Community College, Royal Oak, MI

RESEARCH AND LABORATORY EXPERIENCE

UMass Department of Chemistry **2019-present**

Graduate Research Assistant — Assistant Professor James P.S. Walsh

- High-pressure synthesis of metastable compounds from in silico predictions
- Solid state synthesis using laser-heated diamond anvil cell and multi-anvil press
- Density functional theory for crystal structure prediction
- Nanofabrication for improved experimental design including photolithography, profilometry, and magnetron sputtering
- X-ray Diffraction and SEM/EDS for structural and topological analysis

WSU Department of Chemistry **2015-2019**

Undergraduate Research Assistant - Professor Christine Chow

- Binding kinetics of acrylamide to modified nucleotides Pseudouridine and Inosine

Undergraduate Research Assistant - Dr. Judy Westrick

- Pilot Micro GCs for continuous online monitoring for water plants on the Huron-Erie corridor

TEACHING AND MENTORING EXPERIENCE

Research mentor to undergraduate students **2019-present**

Directed course reform for post pandemic learning environment (Chem 112) **2023**

General Chemistry I and II Teaching Assistant (Chem 111 & 112) **2019-2021, 2023**

Peer Led Team Learning Teaching Assistant (Chem 296) **2021-2022**

Undergraduate Chemistry Peer Mentor (Chem 140) **2016-2017**

AWARDS

GSCCM Early Career National Nuclear Security Agency Travel Grant **2023**

ACS Northeast Regional Meeting Student Award **2023**

General Chemistry Teaching Assistant “Top Gun” **2019**

ASBMB Certification Exam **2018**

Hugh and Mary Ann Kelly Undergraduate Research Scholarship **2018**

Dean’s List, College of Liberal Arts and Sciences **2016-2017**

PRESENTATIONS

GSCCM Early Career and Student Symposium (Oral Presentation)	2023
ACS Northeast Regional Meeting (Oral Presentation)	2023
UMass Amherst Material Science and Engineering Symposium (Poster)	2022
UMass Amherst Department of Chemistry Recruitment Weekend (Poster)	2020-2023
UMass Amherst Department of Chemistry ResearchFest (Poster)	2021

SERVICE

Graduate Chemists Association — <i>General Member</i>	2019-present
Graduate Student Senate — <i>Senator</i>	2020-2023
American Chemical Society's WSU Student Association — <i>President</i>	2017

PUBLICATIONS

Marshall, P. V.; Alptekin, Z.; Thiel, S. D.; Smith, D.; Meng, Y.; Walsh, J. P. S. "High-pressure synthesis of bulk cobalt cementite, Co_3C ." *Chem. Mater.*, 2021, 33, 9601–9607.
