

Serena Krejci-Papa

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EDUCATION

Erasmus Mundus Joint Masters (TCCM Consortium) | Toulouse, FR Sep 2025 – May 2027 (Expected)
M.Sc. in Theoretical Chemistry and Computational Modelling
Consortium of 8 universities across 5 European countries.

Case Western Reserve University, College of Arts and Sciences | Cleveland, OH Sep 2022 - May 2024
B.S. in Chemistry,
Minor in Physics
GPA 4.0/4.0

Eastern Nazarene College (transferred) Sep 2020 - May 2022

EXPERIENCE

Telora Fellowship | Miami, FL Apr 2026 - Jun 2026
Telora Fellow
Mentor: Eliam Medina

- Selected for a \$10K startup fellowship.
- Conducted ~50 customer-discovery interviews per week to identify problems and validate value propositions, applying the same principles to grow a personal Substack by 2K subscribers and increase paid subscriptions 3x.

UNESCO International Year of Quantum 2025 Fellowship | Remote Jun 2025 - Mar 2026
Science Communication Fellow
Mentor: Paul Cadden-Zimansky

- Led scientific storytelling on a 4-person team to advance IYQ's mission of making quantum science accessible to public audiences across the globe.
- Developed a comprehensive social media strategy across Instagram, Facebook, LinkedIn, Youtube, and X, producing 20+ educational posts and videos about quantum science.
- Authored, illustrated, or contributed to 5+ articles for the IYQ blog.

Case Western Reserve University | Cleveland, OH Sep 2023 - May 2024
Research Assistant
Advisor: Shane Parker

- Collaborated with a multidisciplinary team of five in organic, quantum, and computational chemistry to determine unknown stereocenters.
- Learned and utilized quantum chemistry software packages, including Turbomole, ORCA, CREST, and CENSO, to perform molecular modeling, conformational analysis, and electronic structure calculations.
- Designed and validated a computational pipeline (conformer generation via CREST, energetic ranking via CENSO) to assign unknown stereocenters from predicted NMR spectra, demonstrating the method's sensitivity to candidate stereochemistry on a test molecule and extending it through conformer ranking for trichothilone-B.
- Presented a poster at Case Western Intersections Symposium (May 2024) and completed written senior thesis.

Case Western Reserve University | Cleveland, OH Sep 2022 - Jun 2023
Research Assistant
Advisor: Clemens Burda

- Synthesized cesium lead bromide (CsPbBr_3) nanocrystals via hot-injection synthesis, comparing ligand coatings (Cs-oleate vs. DDAB) to optimize synthesis yield for particles suited to downstream water-soluble polymer encapsulation.

Eastern Nazarene College | Quincy, MA

May 2021 - Aug 2022

Research Assistant

Advisor: Tennyson Doane

- Led a sustainability-focused research project developing a fluorescent polymer material by incorporating perovskite nanoparticles into post-consumer polystyrene.
- Designed and optimized synthesis protocols for lead halide perovskite nanoparticles with aromatic ligands, ensuring stability and optical performance. Engaged general chemistry freshmen in advanced perovskite synthesis by adapting protocols and leading a hands-on teaching lab.
- Presented research findings at the ENC Academic Symposium (May 2022), highlighting the potential of perovskite-polymer composites for optical applications.

PRESENTATIONS

CWRU Intersections Symposium: “Computational Method for Determining Stereocenters of Trichothilone-B,”

May 2024

ENC Academic Symposium: “Lead Halide Perovskite Nanoparticle Incorporation into Post-Consumer Polystyrene,” *May 2022*

ENC Teaching Laboratory: Presented and led an advanced lab for freshman chemistry students using a simplified experimental protocol I developed to help student understand and engage with research, *March 2022*

SELECTED WRITING

- [How to Read Scientific Papers \(Or, Give Good Dating Advice\)](#) — The Quantum Notebook
- [What I Read to Make Me a Better \(Science\) Writer](#) — The Learning Lab
- [Top Five Takeaways from the Quantum Education Summit 2025](#) — International Year of Quantum
- [How Quantum Principles Are Transforming Chemistry](#) — International Year of Quantum

TEACHING

Education Guide/Learning Coach | Miami, FL

Jul 2026 - Aug 2026

Philosophy, Physics, Chemistry, Composition, Reading Comprehension, Political Science & Presentation

- Designed and taught a personalized two-week mini-syllabus for two students, tailored to each student’s individual strengths and weaknesses.
- Girls each published 3 pieces in a body of work online, and led a class on their respective ‘majors’.

Teaching Assistant | Quincy, MA

Jan 2022 - May 2023

Analytical Chemistry Laboratory Methods

- Guided students through laboratory procedures and assisted with completing experiments.

Supplemental Instructor | Quincy, MA

Sep 2021 - May 2022

General Chemistry I & II

- Led interactive review sessions, breaking down complex chemistry concepts and fostering collaborative learning to improve student comprehension and performance.

SCIENCE COMMUNICATION & OUTREACH

Science with Serena | Founder & Science Communicator

Feb 2025 - present

Remote

- Founded an [educational platform](#) specializing in scientific storytelling to make quantum, chemistry, and physics accessible and engaging for general audiences.
- Published 24 illustrated articles on [The Quantum Notebook](#) and [The Learning Lab](#), achieving 5k+ subscribers and 10.2K+ views.

Remote

- Qolour: website UX design and social media management for a quantum computing ed-tech startup.
- QUCAN: wrote and illustrated two articles for the education section.
- Modern Bio: website UX design.

HONORS AND FELLOWSHIPS

2025	International Year of Quantum Science and Technology Science Communication Fellow, UNESCO
2024	Departmental Honors in Chemistry, Case Western Reserve University
2023	Dean's High Honors List, Case Western Reserve University
2023	Dumitru and Gheorghe D. Mateescu Student Citizenship Award, Case Western Reserve University
2021	Outstanding Freshman in Chemistry, Eastern Nazarene College

MISCELLANEOUS

Communication: Technical and non-technical writing, scientific presentation, science journalism, fact-checking, data visualization, instruction & training, public speaking. German (Native or Bilingual), Spanish (Intermediate), ASL (Elementary).

Research: Wet lab: inorganic nanocrystal synthesis (hot-injection & room-temperature methods), inert-atmosphere, ligand-exchange and reaction-parameter optimization, purification (centrifugation), spectroscopy (UV-Vis, FTIR, NMR, LC-MS), experimental design and execution, literature review and protocol adaptation. Computational: Linux/HPC, DFT (Turbomole, ORCA, Gaussian), conformer generation & Boltzmann weighting (CREST, CENSO, GFNn-xTB), molecular modeling/visualization (ChemDraw, Avogadro), Python.

Relevant coursework: Chemical Statistical Mechanics, Dynamics of Chemical Reactions, Quantum Chemistry Methods & Applications, Excited States, Quantum Mechanics in Physics & Chemistry, Electronic Structure of Materials.