

# PATRYK KOZLOWSKI

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(949)-394-9220 • patryk\_kozlowski@g.harvard.edu

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## EDUCATION

**Harvard University**, Cambridge, MA — *PhD Candidate, Chemistry & Chemical Biology*  
**Expected:** June 2029

**California Institute of Technology (Caltech)**, Pasadena, CA — *BS in Chemistry*  
GPA: 3.74/4.0 • June 2024

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## QUANTUM CHEMISTRY EXPERIENCE

**Research Fellow** — *Harvard University* (Advisor: Prof. Joonho Lee)

**July 2024 – Present**

- Developing Green's function methods for periodic quantum chemistry.
- Exploring **open quantum system** ideas to enable accurate and efficient simulations of correlated materials.

**Research Fellow (Senior Thesis)** — *Caltech* (Advisor: Prof. Garnet Chan)

**Oct 2023 – June 2024**

- Implemented GW, a Green's function method, for molecules.
- **Publications & Presentations:**
  - Deposited thesis
  - Presented at Caltech Senior Thesis & Goldwater Symposiums

**Research Fellow** — *Caltech* (Advisor: Prof. Garnet Chan)

**Nov 2022 – Aug 2023**

- Implemented and optimized the **Full Configuration Interaction (FCI)** method for a chain of 6 hydrogen atoms.

**John Stauffer SURF Fellow** — *Caltech* (Advisor: Prof. Garnet Chan)

**June 2020 – Sept 2020**

- Computed platinum surface energies using coupled-cluster theory.
- **Publications & Presentations:**
  - Oral presentation, Caltech SURF Seminar Day
  - Article in *Caltech Undergraduate Research Journal*

**John Stauffer SURF Fellow** — *Caltech* (Advisor: Prof. Ryan Hadt)

**June 2019 – Sept 2019**

- Developed computational model for **spin-phonon coupling** in Co(III) complexes.
  - **Publications:**
    - Presentation at Caltech SURF Seminar Day
    - Co-author on *Journal of Chemical Physics* publication
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**BROAD SCIENCE EXPERIENCE****Member — Harvard Energy Journal Club****Sept 2024 – Present**

- Participate in a weekly decarbonization-focused journal club discussions, primarily composed of GSAS affiliates.
- Presented on “**Decarbonizing AI**” (Nov 2024), **The Carbon Tax** (Apr 2025), and **Tipping Points** (Nov 2025).

**Teaching Fellow — Physical Sciences 11 — Harvard University****Jan 2025 – May 2025**

- Supported instruction in *Physical Sciences 11*, an introductory physical sciences course for Harvard undergraduates.
- Led weekly discussion sections and office hours.

**Associate Editor — Caltech Undergraduate Research Journal****Dec 2023 – May 2024**

- Prepared an article on the nonlinear spectroscopy of cuprates for publication.

**Teaching Assistant — Intro Quantum Mechanics (Chemistry) — Caltech****Oct 2020 – Dec 2020**

- Held virtual recitations and office hours during COVID-19.

**Committee Member — Caltech Student-Faculty Conference****Oct 2020 – Jan 2021**

- Designed and analyzed a student survey on the chemistry curriculum.
- Collaborated with faculty on proposed revisions.

**Social Director — Caltech Chemistry Club****Oct 2019 – Dec 2020**

- Organized professional, outreach, and social events.
- Recruited a distinguished guest speaker for an annual symposium.

## Volunteer — Caltech RISE Program

June 2019 – July 2020

- Tutored underserved high-school students in SAT prep.
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## SCHOLARSHIPS & AWARDS

- **Paul & Daisy Soros Fellowship for New Americans** (2025)
  - **NSF Graduate Research Fellowship** (2025)
  - **Goldwater Scholar in Mathematics, Science, and Engineering** (2021)
  - ACS Undergraduate Award in Physical Chemistry — Caltech (2024)
  - Perpall Speaking Competition Semifinalist — Caltech (2020)
  - NCAA ITA Scholar-Athlete — Caltech (2019, 2020)
  - Polish National Alliance Scholarship (2020, 2021, 2023)
  - John Kopczynski Scholarship (2019, 2020, 2023)
  - Richard Gorecki Scholarship (2020, 2023)
  - National Merit Scholar (2018–2020, 2023)
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## OTHER EXPERIENCE

### Community Member — Talon Voice

Nov 2022 – Present

- Active participant in the hands-free coding community.
- Contributed to software enabling:
  - **Voice-coding LaTeX**
  - **Dictation-LLM integration**

### Student-Athlete — NCAA Tennis, Caltech

Aug 2018 – Dec 2020

- Member of Top-25 nationally ranked team.
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## LANGUAGES

### Polish — Fluent