

# Shane W. Flynn

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Department of Chemistry  
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## Education

<b>Ph.D Chemistry (Anticipated 2021)</b> Advisor: Vladimir Mandelshtam University of California, Irvine	2017-Present
<b>M.S. Chemistry</b> Advisor: William A. Goddard (III) California Institute of Technology, Pasadena	2015-2017
<b>B.S. Chemistry (Honors), B.S. Biology (Honors), Minor Mathematics</b> University Honors College Graduate University of Massachusetts, Boston	2010-2015

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## Publications

- Shane W. Flynn**, Vladimir A. Mandelshtam, "Sampling general distributions with quasi-regular grids: Application to the vibrational spectra calculations" *J. Chem. Phys. Comm.* **2019** 151(24) p.241105
- Jonathan Nichols, **Shane W. Flynn**, Jason R. Green, "Order and disorder in irreversible decay processes" *J. Chem. Phys.* **2015** 142(6) p. 064113
- Shane W. Flynn**, Helen C. Zhao, Jason R. Green, "Measuring Disorder in irreversible decay processes" *J. Chem. Phys.* **2014** 141(10) p. 104107.

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## Research Experience

<b>Graduate Researcher, Chemistry</b> University of California, Irvine Advisor: Vladimir Mandelshtam Research: Numerical Methods; Quantum Statistical Mechanics.	2017-Present
<b>Graduate Researcher, Chemistry</b> California Institute of Technology, Pasadena Advisor: William A. Goddard (III) Research: Soft Condensed Matter; Simulations and Method development for analyzing Polymer and Protein Dynamics.	2015-2017
<b>Undergraduate Researcher, Chemistry</b> University of Massachusetts, Boston Advisor: Jason R. Green Research: Complex Kinetics from the perspective of Non-Equilibrium Mechanics and Information Theory.	2013-2015

**Undergraduate Researcher, Biology**

2010-2015

University of Massachusetts, Boston

Advisor: Steve Ackerman

Research: Transcription Factors and Immune Response in Arabidopsis Thaliana.

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**Research Presentations (Select)**

**Shane W. Flynn**, Vladimir A. Mandelshtam, "Sampling general distributions with quasi-regular grids: Application to the vibrational spectra calculations", July **2020**, "Virtual Conference on Theoretical Chemistry", Stanford University.

**Shane W. Flynn**, William A. Goddard (III), "Thermodynamic Characterization of Polymer Electrolytes", May **2016**, "Caltech. Graduate Research Conference.", California Institute of Technology.

**Shane W. Flynn**, Jason R. Green, "Molecular Populations", April **2015**, "Northeast Student Chemistry Research Conference, sponsored by the Northeastern Section of the Younger Chemist Committee", Tufts University.

**Shane W. Flynn**, Helen C. Zhao, Jason R. Green, "Information in a rate coefficient: When are rate coefficients constant?", July **2014**, American Conference in Theoretical Chemistry, Telluride, CO.

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**Teaching Experience (Select)****Teaching Assistant**

2020

University of California, Irvine

Course: Mathematical Methods in Chemistry (Graduate Level, Ch.237)

**Teaching Assistant**

2018, 2019

University of California, Irvine

Course: Thermodynamics and Introduction to Statistical Mechanics (Graduate Level, Ch.232A)

**Teaching Assistant**

2016

California Institute of Technology, Pasadena

Course: Nature of the Chemical Bond (Graduate Level, Ch.120A)

**Teaching Assistant**

2016

California Institute of Technology, Pasadena

Course: General Chemistry (Undergraduate Level, Ch.1B)

**Teaching Assistant**

2015-2016

California Institute of Technology, Pasadena

Course: Experimental Methods in Solar Energy Conversion (Undergraduate Level Ch.3x)

**Undergraduate Teaching Assistant**

2014

University of Massachusetts, Boston

Course: Linear Algebra (Undergraduate Level, Ma.260)

**Undergraduate Teaching Assistant**

2012-2013

University of Massachusetts, Boston

Course: Molecular Biology (Undergraduate Level, Bio.370)

**Undergraduate Teaching Assistant**

2013-2015

Courses: Chemical Principles (Undergraduate Level, Ch.115,116)

**Awards and Honors (Select)****Outstanding Graduate Student Presentation**

Virtual Conference on Theoretical Chemistry  
Stanford University, Stanford

2020

**Annual Award in Theoretical Chemistry**

Hypercube Modeling Software  
University of Massachusetts, Boston

2015

**Annual Award in Physical Chemistry**

Department of Chemistry,  
University of Massachusetts, Boston

2014

**Annual Research Grant Competition for Undergraduate Students**

The Office of the Provost, Vice Chancellor for Academic Affairs, (\$933)  
University Honors Program, University of Massachusetts, Boston

2013-2014

**Annual Research Grant Competition for Undergraduate Students**

The Office of the Provost, Vice Chancellor for Academic Affairs, (\$500)  
University Honors Program, University of Massachusetts, Boston

2011-2012

**Chancellor's Scholarship for Excellence**

Full Tuition and Fees  
University Honors Program, University of Massachusetts, Boston

2010-2015