

Chey Marcel Jones

CURRICULUM VITAE

350 Sharon Park Dr, Menlo Park, CA 94025

chey@stanford.edu | (570) 449-7329

EDUCATION

Stanford University

Doctor of Philosophy, Chemistry

Research Advisor: Todd Martínez

Stanford, CA

Expected 2022

Temple University

Bachelor of Science with Honors, Chemistry

Summa Cum Laude, Distinction in Major

Research Advisor: Spiridoula Matsika

Cumulative GPA: 3.94/4.00

Philadelphia, PA

Aug. 2013 – May 2017

AWARDS AND HONORS

2017-2022, National Science Foundation Graduate Research Fellowship

National Science Foundation

2017-2022, Stanford Graduate Fellowship in Science and Engineering

Stanford University – Department of Chemistry

2017-2022, Enhancing Diversity in Graduate Education (EDGE) Doctoral Fellowship

Stanford University

2017, ACS Scholastic Achievement Award in Chemistry

American Chemical Society, Philadelphia Section

2017, Stanford Summer Fellowship

Stanford University

2016, ACS 252nd National Meeting Outstanding Undergraduate Poster Award

American Chemical Society, Division of Physical Chemistry

2016, Leadership Alliance Summer Research-Early Identification Program (SR-EIP) Scholar

Stanford University

2016-2017, Albert B. Brown Chemistry Award

Temple University – Main Campus

2015-2016, Albert B. Brown Chemistry Award

Temple University – Main Campus

2015-2017, Maximizing Access to Research Careers – Undergraduate Student Training in

Academic Research (MARC U-STAR) Award

National Institutes of Health, Temple University – Main Campus

2013-2017, Honors Provost Scholarship Award

Temple University – Main Campus

RESEARCH EXPERIENCE

Undergraduate Research

Advisor: Spiridoula Matsika

Sep. 2014 - May 2017

Temple University – Main Campus

- Electronic structure and behavior of a molecular photochromic switch were investigated for applications in nanotechnology and optical data storage. Photo-physical pathways were modeled, using multi-reference methods, to elucidate reaction pathways through conical intersections, based on ground-state and excited-state character.
- Benchmark study to analyze the ability of ADC(2) to describe charge-transfer states, in comparison to CCSD, using an ethylene-tetrafluoroethylene dimer system

Leadership Alliance Summer Research Early Identification Program (SR-EIP)

Advisor: Todd Martínez

June 2016 – Aug. 2016

Stanford University, SLAC National Accelerator Laboratory

- QM/MM and MD simulations were utilized to analyze the chromophore dynamics associated with the photo-switching process of the GYC chromophore in the Dronpa-2 reversible photo-switchable fluorescent protein.

Undergraduate Research

Advisor: Eric Borguet

Feb. 2014 – Aug. 2014

Temple University – Main Campus

- Exposure to spectroscopic techniques, software, instrumentation, and procedures with the purpose of studying the fluorescence of silicon nanoparticles

INVITED TALKS

Jones, C.M. Theoretical Investigation of the Chromophore Photoswitching Dynamics within the Dronpa-2 Reversible Photoswitchable Fluorescent Protein, Professor W.E. Moerner Research Group, Stanford University, Stanford, CA, *August 2016*.

SELECTED ORAL PRESENTATIONS AT CONFERENCES AND UNIVERSITIES

Jones, C.M. Computational Analysis of the Photoisomerization Process in the Dronpa-2 Reversible Photoswitchable Fluorescent Protein, Leadership Alliance National Symposium, Stamford, CT, *July 2016*.

SELECTED POSTER PRESENTATIONS AT CONFERENCES AND UNIVERSITIES

Jones, C.M. Excited-State Investigation of the Ultrafast Electrocyclization Reaction for a Molecular Photochromic Switch, 253rd American Chemical Society National Meeting, San Francisco, CA, *April 2017*.

Jones, C.M. Excited-State Investigation of the Ultrafast Electrocyclization Reaction for a Molecular Photochromic Switch, 252nd American Chemical Society National Meeting, Philadelphia, PA, *August 2016*.

Jones, C.M. Theoretical Investigation of the Chromophore Photoswitching Dynamics within the Dronpa-2 Reversible Photoswitchable Fluorescent Protein, Stanford University Research Fair, Stanford, CA, *August 2016*.

Jones, C.M. Excited-State Investigation of the Ultrafast Electrocyclization Reaction for a Molecular Photochromic Switch, Thomas Jefferson University, Philadelphia, PA, *April 2016*.

Jones, C.M. Excited-State Investigation of the Ultrafast Electrocyclization Reaction for a Molecular Photochromic Switch, 251st American Chemical Society National Meeting, San Diego, CA, *March 2016*.

Jones, C.M. Study of the Structural Rearrangement and Electrocyclization Pathway of a Diarylethene Derivative, Temple University – College of Science and Technology, Philadelphia, PA, *August 2015*.

TECHNOLOGY AND ANALYTICAL EXPERIENCE

Computational Packages/Software: AMBER, TeraChem, Gaussian 03/09, GAMESS, Molden, Q-CHEM, Spartan, VMD

Programming: Java, C, Python, UNIX tcsh Shell, HTML

Mathematics: Linear Algebra, Differential Equations, Single and Multivariable Calculus, Statistics