

Elliot Taffet

EDUCATION

Princeton University

Princeton, NJ

PhD in Chemistry

July 2019

- Belgian American Educational Foundation fellowship
- Teaching Transcript Certification
- Mercer–Princeton Teaching Fellowship
- ReMatch Mentorship Program
- Sokol Fellowship in Chemistry
- Lefkowitz Fellowship in Chemistry
- Hugh Stott Taylor Merit Prize

Columbia University

New York, NY

BA in Chemistry

May 2014

- *Cum Laude*
- Chandler Undergraduate Chemistry Society Award

EXPERIENCE

Martinez Group, Department of Chemistry

Stanford, CA

Postdoctoral Scholar

09/2019 – Present

- Finalist for Syracuse University's tenure-track faculty position in computational chemistry
- Submitted manuscript (currently under review) to *The Journal of Physical Chemistry Letters*
- Drafted manuscripts for submission to *Nat. Commun.* and *J. Phys. Chem. A*
- Lightning-talk/poster presenter at *VCTC* (2020) and *BATChem* (2021) virtual conferences
- Mentored two graduate students and contributed as coauthor to three drafted publications
- Developed an ab initio exciton model for biological/spintronic supersystems with electrostatic embedding, open-shell fragments and spin-orbit coupling to triplet states
- Led subgroup sessions and lectured within the focus area of excited-state dynamics
- Participated in development projects involving *TeraChem* (C++) and *FMS90* (Fortran)
- Developed Python scripts for geometric and electronic-structure analysis
- Awarded top assignment for mandatory group summer school, postdoctoral category (2021)

Beljonne Group, Department of Chemistry

Mons, BE

Belgian American Educational Foundation (BAEF) Scholar

07/2019 – 09/2019

- Finalized projects in endothermic singlet fission and solid-state delayed fluorescence

Scholes Group, Department of Chemistry

Princeton, NJ

PhD Candidate, Graduate Student Mentor

07/2015 – 07/2019

- Published author in *J. Am. Chem. Soc.*, *Chem. Mat.*, *J. Royal. Soc. Interface*, *Chem. Phys.*, *J. Phys. Chem. B*, as well as *J. Phys. Chem. Lett.* and among a dozen candidates to be selected Belgian American Educational Foundation fellows (Beljonne Group, Mons, BE)
- Mentored a first-year undergraduate student in quantum chemistry and machine learning

- Fostered collaborations with senior researchers in the National Renewable Energy Lab (NREL), Los Alamos National Lab (LANL) and the University of Mons
- Engaged in projects at the intersection of quantum chemistry and nonadiabatic dynamics (LANL), as well as thin-film fabrication and photothermal deflection spectroscopy (NREL)
- Seven total first-author publications and four public research presentations

Guest Lecturer, Department of Chemistry

Princeton, NJ

CHM 305: The Quantum World

10/2017 – 10/2018

- Selected to give three lectures over two years in which the course was taught
- Prepared lecture material and helped craft midterm examinations

Fellow, Mercer-Princeton Teaching Partnership Program

Mercer, NJ

Chemistry Adjunct Faculty

02/2018 – 12/2018

- Course instructor of fifty students for general chemistry in Fall 2018 following mentorship by Mercer County Community College chemistry faculty in Spring 2018
- Responsible for giving invited lectures and preparing course syllabus, exams, homework and study material, in addition to community outreach for National Chemistry Week
- Participated in a series of professional development seminars and gave a *Zoom* lecture

Teaching Assistant, Department of Chemistry

Princeton, NJ

CHM 305: The Quantum World and CHM 215: Advanced Gen. Chem.

09/2016 – 05/2017

- Awarded the Sokol fellowship for exceptional graduate teaching
- Worked as the sole TA for both courses and received no outside assistance or mentorship
- Earned excellent student evaluation scores and comments (available upon request)
- Taught student discussion sections (precepts), designed review material, met students regularly during office hours, held review sessions, graded problem sets/exams, and answered course questions via email and *Piazza*

ReMatch Research Mentorship Program

Princeton, NJ

Graduate Student Mentor

10/2017 – 12/2018

- Forged a connection with an undergraduate student and designed a research proposal and introductory research project
- Mentored this student during the Spring 2018 and Fall 2018 semesters

McGraw Center Teaching Transcript Certification

Princeton, NJ

Graduate Student Participant

01/2017 – 07/2019

- Underwent a videotaped class session with a McGraw Center fellow (available upon request)
- Attended multiple workshop sessions on pedagogical techniques and teaching strategies

Belgian American Educational Foundation Fellowship

Mons, BE

American PhD Student Studying in Belgium

01/2019 – 07/2019

- Invited speaker on behalf of the Beljonne Group at the Cavendish Laboratory in Cambridge
- Presented a poster during the IPOE 2019 Conference in Cergy-Pontoise, France

Pre-Graduate Research

Researcher in Campos and Cacciuto Groups

New York, NY
03/2013 – 07/2015

- Coauthored manuscript published in *J. Am. Chem. Soc.*

LEADERSHIP

Graduate Student Organization, Department of Chemistry

Princeton, NJ

Treasurer/Secretary

05/2016 – 12/2018

- Wrote up a comprehensive guide for incoming graduate students to facilitate their transition to Princeton University and successfully recruited two visiting students to the department as their host
- Organized departmental national chemistry week and departmental visiting weekend events
- Documented all organizational budget expenses and meeting minutes

Chandler Chemistry Society, Columbia University

New York, NY

President

05/2013 – 05/2014

- Invited the director of the Lawrence Berkeley National Laboratory to speak at the annual society-sponsored chemistry lecture
- Organized weekly meetings and sponsored outreach events such as Girls Science Day and National Chemistry Week, in addition to demonstrations at the New York Hall of Science and a local high school
- Managed budget and initiated bi-annual funding drives

PUBLICATIONS AND CITATIONS

1. POSTDOCTORAL PAPERS

- Taffet, E.J., Johnson, K.G., Walker, A.R., List, N.H., Li, X. & Martinez, T.J. Singlet-exciton fission caused by two-carotenoid correlated nuclear reorganization and photoprotection in peridinin-chlorophyll-protein. *J. Phys. Chem. Lett.* Submitted.
- Taffet, E.J., Beljonne, D. & Scholes, G.D. Overlap-driven splitting of triplet pairs in singlet fission. *J. Am. Chem. Soc.* **142**, 20040–20047 (2020).
- Taffet, E.J., Fassioli, F., Toa, Z.S.D., Beljonne, D. & Scholes, G.D. Uncovering dark multichromophoric states in peridinin-chlorophyll-protein. *J. Royal Soc. Interface* **17**, 20190736 (2020).
- Feng, J., Taffet, E.J., Reponen, A.-P.M., Romanov, A.S., Olivier, Y., Lemaur, V., Yang, L., Linnolahti, M., Bochmann, M., Beljonne, D. & Credgington, D. Carbene-metal-amide polycrystalline materials feature blue shifted energy yet unchanged kinetics of emission. *Chem. Mater.* **32**, 4743–4753 (2020).

2. GOOGLE SCHOLAR PAGE

- <https://scholar.google.com/citations?user=uNULkiAAAAAJ&hl=en&oi=ao>