

Travis J. Schuyler

Lexington, KY 40509

Cell Phone:

Email: travis.schuyler@uky.edu

Education:

University of Kentucky (UK), Lexington, KY

Fall 2016 – Present

Graduate School, Doctor of Philosophy

Major: Chemistry

Cumulative GPA: 3.82

Northern Kentucky University (NKU), Highland Heights, KY

Fall 2012 – Spring 2016

Major: Chemistry, ACS and Biochemistry tracks

Minor: Physics

Cumulative GPA: 3.54

Graduation date: May 2016

Experience:

Department of Chemistry, UK

Research Assistant, Dr. Marcelo Guzman's research group

January 2017 – Present

- Built trace gas sensor packages for deployment on small unmanned aerial systems (i.e. drones), including complete hardware assembly and programming
- Applied custom sensor packages to measure atmospheric trace gases

Teaching Assistant, General Chemistry

August – December 2016

- Prepared and delivered recitation lectures weekly
- Assisted students with questions regarding general chemistry coursework

Chemistry Tutor

August 2016 – Present

Department of Chemistry, NKU

Research Assistant, Dr. Isabelle Lagadic's research group

May 2015–May 2016

- Prepared, characterized, and analyzed polymer-organoclay composites
- Optimized reaction conditions for surface-initiated polymerization
- Developed microwave-assisted reaction techniques
- Synthesized and characterized mesoporous silicates as drug carriers
- Conducted drug loading experiments
- Proposed alternative drug loading procedures

May - July 2013

Teaching Assistant, Analytical Chemistry Lab

August – December 2015

- Assisted students in their lab experiments
- Graded lab reports
- Prepared and presented pre-lab explanation sessions

Department of Physics, NKU

Research Assistant, Dr. Nathan De Lee's research group

September 2015 – May 2016

- Assembled telescopes, equipped with Blue-Violet filters and CCD cameras
- Calibrated GPS systems and telescope tracking for demonstrations to the public
- Determined metallicity content of Cepheid variable stars

Physics Tutor, Athletics Department, Northern Kentucky University

May – July 2015

Institut Universitaire de Technologie (IUT) Lannion, France

May - July 2014

Research Assistant, Dr. Sébastien Gauthier's research group

- Synthesized and characterized dye molecules for Dye-Sensitized Solar Cell (DSSC) applications.
- Conducted multiple synthesis experiments under inert atmosphere
- Proposed alternative procedures for deprotection and acidification reactions

Undergraduate Admission Office, NKU

Student Worker, Recruitment

May 2013 - February 2014

- Created tour routes and conducted campus tours for up to 50 guests
- Assisted in organizing major campus recruiting events
- Assisted parents and students inquiring about NKU, either in person or by phone

Awards and Honors:

- **Max Steckler Fellowship (UK):** A DGS-awarded fellowship given to incoming or continuing doctoral students in academic good standing.
- **Most Outstanding Senior, Chemistry Department (NKU):** This award was given on behalf of the faculty to recognize the academic success of a student amongst the graduating class.
- **Faculty Senate Award (NKU):** A university-wide award given to a senior student who has demonstrated exceptional skills and productivity in an independent study project, resulting in publication and oral presentation of the results.
- **ACS Division of Inorganic Chemistry Travel Award (2015):** Award based on scientific merit for presentation at National ACS meetings
- **Albert and Louise Cooper Memorial Scholarship (NKU):** Awarded for excellence in undergraduate chemistry research and pioneering international research collaboration
- **Distinguished Scholarship (NKU):** scholarship awarded to entering students with an ACT composite score of 33 or higher, a 3.75 or higher high school GPA and having demonstrated leadership ability and concern for their community.
- **Presidential Ambassador (NKU):** Students are interviewed and hand selected by the president's office to facilitate events hosted by the university president.
- **NKU International Study Scholarship (NKU):** University scholarship for studying abroad, award based on essay entry and recommendation letter.
- **Beyond the Classroom Award (NKU):** Sociology scholarship for studying abroad, award based on essay entry.
- **Phi Beta Delta, International Honor Society (NKU):** An invitation only society honoring students that have conducted and presented international research.

Outreach:

- **Chemistry Graduate School Recruitment (UK):** Assisted recruitment weekend by providing transportation to students, providing tours, and facilitating faculty-incoming student interactions.
- **Solar Eclipse (UK):** An event sponsored by NASA Kentucky to engage the general public in science related activities during the total solar eclipse. Flew demonstrations with drones and collected research data featured by Popular Science magazine.
- **Alpha Tau Omega Fraternity (NKU):** Conducted numerous philanthropy events that raised in excess of \$30,000 towards breast cancer research annually.
- **Peace Club (NKU):** Co-founder, aims to promote a better community through education, service, and clean-up projects.

Publications & Presentations:

1. "Unmanned Aerial Systems for Monitoring Trace Tropospheric Gases". Schuyler, T. and **Guzman*, M. I.** Schuyler, T.J.; Guzman, M.I. *Atmosphere* **2017**, *8*, 206.
2. "Using Unmanned Aerial Systems for the Detection of Trace Gases in the Atmosphere". Schuyler, T.; Bailey, S; Jacob, J.; and **Guzman*, M. I.**
Oral Presentation accepted at the Use of Unmanned Aerial Systems in Atmospheric Science symposium. *American Geophysical Union Fall Meeting*, December 11st-14th, 2017 – New Orleans, LA
3. "Using Unmanned Aerial Systems for the Detection of Trace Gases in the Atmosphere". Schuyler, T.; Bailey, S; Jacob, J.; and **Guzman*, M. I.**
Gordon Research Conference in Atmospheric Chemistry. August 2nd-3rd, 2017 – Newry, ME. (Poster)
4. "Polymer-organoclay nanocomposites prepared by microwave-assisted surface-initiated polymerization from thiol-functionalized organoclays". Schuyler, T.; Coeurdray, M.; Mbow, K. and **Lagadic*, I.**
Clay/Polymer composites: Nanoclays & Other Natural Nanoparticles symposium of the PMSE program. *251th ACS National Meeting*, March 13th-17th, 2016 – San Diego, CA (Oral)
5. "Internationalizing Undergraduate Chemistry Research at Northern Kentucky University" Schuyler, T.; Emery, S.; Gauthier, S.; Robin-Le Guen, F.; Mot, A.; Silaghi-Dumitrescu, R. and **Lagadic*, I.**
Posters-at-the-Capitol Research Celebration, February 19th, 2016. Frankfort, KY. (Poster)
6. "Optimization of the reaction conditions in the preparation of polystyrene-organoclay composites by microwave-assisted surface-initiated polymerization". Schuyler, T.; Maël Coeurdray, and **Lagadic*, I.**
Kentucky Academy of Science Annual Meeting. November 14th, 2015 - Northern Kentucky University, Highland Heights, KY (Oral)
7. "Optimization of the reaction conditions in the preparation of polystyrene-organoclay composites by microwave-assisted surface-initiated polymerization". Schuyler, T.; Maël Coeurdray, and **Lagadic*, I.**
CINSAM 15th Anniversary Celebration. October 9th, 2015 - Northern Kentucky University, Highland Heights, KY (Poster)
8. "Optimization of the reaction conditions in the preparation of polystyrene-organoclay composites by microwave-assisted surface-initiated polymerization". Schuyler, T.; Maël Coeurdray, and **Lagadic*, I.**
Heather Bullen Interdisciplinary Summer Research Celebration, August 26th, 2015 – Northern Kentucky University, Highland Heights, KY (Poster)
9. "Synthesis and photovoltaic performances of di-acetylide platinum complexes in Dye-Sensitized Solar Cells". Schuyler, T.; Robin-Le Guen, F. and **Gauthier*, S.**
249th ACS National Meeting, March 22nd -26th, 2015 - Denver, CO (Poster)
10. "Synthesis and photovoltaic performances of di-acetylide platinum complexes in Dye-Sensitized Solar Cells". Schuyler, T.; Robin-Le Guen, F. and **Gauthier*, S.**
Interdisciplinary Summer Research Celebration, August 27th, 2014 – Northern Kentucky University, Highland Heights, KY (Poster)