

Blaise J. Thompson

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EDUCATION

University of Wisconsin-Madison

PhD, Analytical Chemistry

2011 - Present

Madison WI

- Researcher in John C. Wright group.
- Focus on ultrafast materials spectroscopy.
- Relevant coursework: Instrumental Analysis, Quantum Chemistry, Experimental Spectroscopy, Applied Optics, Electrochemistry, Instrumental Design and Control.

Bates College

BS, Chemistry; Minor, Philosophy

2007 - 2011

Lewiston ME

- Senior thesis completed in lab of Matthew J. Cote: *Investigations of Plasmon Polaritons with Total Internal Reflection & Atomic Force Microscopy*.
- Concentration in Applying Mathematical Methods.
- Relevant coursework: Advanced Inorganic Chemistry, Quantum Chemistry, Macromolecules, Materials Chemistry, Separation Science, Organic Chemistry I and II, Descriptive Inorganic Chemistry, Statistical Thermodynamics, Classical Physics, Modern Physics, Electricity Magnetism & Waves, Synthesis and Reactivity, Biological Chemistry I and II.

City High School

High School Diploma

2002 - 2007

Iowa City IA

- Including two courses at University of Iowa.

RESEARCH EXPERIENCE

John C. Wright Group - ultrafast materials spectroscopy

Graduate Assistant

2011 - Present

Madison WI

- Designed and constructed software tools to collect and process multidimensional spectra.
- Developed novel tools to streamline OPA tuning procedures.
- Worked in collaboration with Physical and Materials chemists to address challenges in solar energy generation.

Matthew J. Cote Group - microscopy and plasmonics

Undergraduate Researcher

2009 - 2011

Lewiston ME

- Contiguous work for two academic years and intervening summer.
- Designed and constructed a combined total internal reflection / atomic force microscope.
- Worked independently and in groups leading other students.
- Coordinated work with my advisor and other staff and faculty.
- Wrote a comprehensive thesis on my work.

Michael Dailey Group - neuroscience

Undergraduate Researcher

2008

Iowa City IA

- Dissected and prepared mouse brain samples for in-vivo microglial imaging studies.
- Trained to utilize confocal microscopy setup.

- Designed and created plasmid, teaching myself from reference materials.
- Inserted plasmid into yeast.

PUBLICATIONS

1. Kohler, D. D., **Thompson, B. J.**, & Wright, J. C. (2017). Frequency-domain coherent multidimensional spectroscopy when dephasing rivals pulsewidth: Disentangling material and instrument response. *The Journal of Chemical Physics*, 147(8), 84202. doi:[10.1063/1.4986069](https://doi.org/10.1063/1.4986069)
2. Czech, K. J., **Thompson, B. J.**, Kain, S., Ding, Q., Shearer, M. J., Hamers, R. J., Jin, S., & Wright, J. C. (2015). Measurement of Ultrafast Excitonic Dynamics of Few-Layer MoS₂ Using State-Selective Coherent Multidimensional Spectroscopy. *ACS Nano*, 9(12), 12146–12157. doi:[10.1021/acs.nano.5b05198](https://doi.org/10.1021/acs.nano.5b05198)
3. Fu, Y., Meng, F., Rowley, M. B., **Thompson, B. J.**, Shearer, M. J., Ma, D., Hamers, R. J., Wright J., & Jin, S. (2015). Solution Growth of Single Crystal Methylammonium Lead Halide Perovskite Nanostructures for Optoelectronic and Photovoltaic Applications. *Journal of the American Chemical Society*, 137(17), 5810–5818. doi:[10.1021/jacs.5b02651](https://doi.org/10.1021/jacs.5b02651)
4. Cabán-Acevedo, M., Kaiser, N. S., English, C. R., Liang, D., **Thompson, B. J.**, Chen, H.-E., Czech, K. C., Wright, J. C., Hamers, R. J., & Jin, S. (2014). Ionization of High-Density Deep Donor Defect States Explains the Low Photovoltage of Iron Pyrite Single Crystals. *Journal of the American Chemical Society*, 136(49), 17163–17179. doi:[10.1021/ja509142w](https://doi.org/10.1021/ja509142w)

PRESENTATIONS

1. Presentation, Chaos and Complexity Seminar: 'Nonlinear Multidimensional Spectroscopy' 2017. Madison, WI USA [PDF](#)
2. Poster, Coherent Multidimensional Spectroscopy: 'A Robust, Fully Automated Algorithm to Collect High Quality OPA Tuning Curves' 2016. Groningen, the Netherlands [PDF](#)
3. Poster, Midwest Universities Analytical Chemistry Conference: 'Utilizing Coherent Multidimensional Spectroscopy to Investigate Nanomaterials for Solar Energy Generation.' 2012. Madison, WI USA
4. Poster, Mount David Summit: 'Spectroscopic Investigation of Plasmonic Nanoparticles.' 2011. Bates College; Lewiston, ME USA

SOFTWARE

Founder: [WrightTools](#)

- hello world

Founder: [yaq](#)

- hello world

Founder: [WrightSim](#)

- hello world

Contributor: [osfclient](#)

- hello world

TEACHING EXPERIENCE

Chemical Instrumentation: Design & Control (Electronics)

2017

Teaching Assistant

- Led laboratory section of course.
- Assisted students during extended independent instrument design and construction.

Instrumental Analysis

2012, 2015

Teaching Assistant, 2 semesters

- Led laboratory section of course.
- Prepared homeworks and led homework review sessions.
- Lectured in professors absence.
- Received competitive departmental Teaching Assistant award.

Undergraduate Mentorship

2012 - 2013

- Designed appropriate experiments that were complementary to my own research.

General Chemistry II

2011, 2012

Teaching Assistant, 2 semesters

- Coordinated two sections—total of ≈ 50 students in each semester.
- Led labs.
- Designed and led discussion sections.

General Chemistry

2010, 2011
Bates College

Peer Science Leader, 2 semesters

- Designed and led class-wide review sessions for General Chemistry.
- Assisted in first trials of new peer leadership program at Bates College.
- Attended regular meetings to share teaching strategies with other peer leaders.

SKILLS & SPECIALTIES - INSTRUMENTATION AND SPECTROSCOPY

Analytical Techniques

- Spectroscopy: Raman / IR / UV-VIS / NMR
- Ultrafast Spectroscopy: Pump Probe / CMDS

SKILLS & SPECIALTIES - SCIENTIFIC SOFTWARE DEVELOPMENT

Computer Programs & Programming Languages

- Python (SciPy, PyQt4)
- LabView
- See my work on GitHub: github.com/untzag
- PyPI, conda-forge

AWARDS & HONORS

Roger Carlson Award

2017

- Awarded by the University of Wisconsin Chemistry department for excellence in research.

Taylor Teaching Award

2015

- Selected by University of Wisconsin Chemistry students and Faculty as one of the most outstanding Teaching Assistants of the 2015-2016 School Year.

Rodney F. Johonnot Graduate Award

2011

- Selected by Bates Faculty as most deserving of aid in furthering his or her studies in professional or postgraduate work.

Bates College Key

2011

- Awarded by Bates Faculty and staff to 20 students in each graduating class based on academic standing, character, campus and community service, leadership, and future promise.

SERVICE ACTIVITIES & COMMUNITY INVOLVEMENT

Volunteer—PEOPLE

2017

- PEOPLE: Pre-college Enrichment Opportunity Program for Learning Excellence
- Taught disadvantaged high school students about electronics, science and what it is like to be an analytical chemist

Scientific Judge—Wisconsin Middle School Science Bowl

2017

- Judged middle school students in statewide science-knowledge competition.
- Winning team proceeded to national competition.

McElvain Committee Member

2013 - 2014

- Graduate student committee to choose seminar speakers.

Freewill Folk Society*Bates College*

2008 - 2011

Lewiston ME

- President of student club.
- Reorganized club structure, recruited other students to new club positions.
- Organized monthly folk dances, bringing in bands and callers.