

# THEODORA NAH

Lawrence Berkeley National Laboratory, Chemical Sciences Division  
1 Cyclotron Rd. MS 6-2100 LBNL

510 332 1610

theodora.nah@berkeley.edu

---

## EDUCATION

- **Ph.D. candidate**, Physical Chemistry, University of California, Berkeley, 2009 to present
- **Hon B.Sc. with High Distinction**, Chemistry Specialist and Mathematics Major, University of Toronto, 2009

## HONORS AND AWARDS

- Ephraim Weiss Scholarship, University of California, Berkeley (2010)
- C.L. Burton Open Scholarship, University of Toronto (2009)
- Ivan Szak Scholarship in Chemistry, University of Toronto (2008, 2009)
- Canadian Society for Chemistry Silver Medal, Chemical Institute of Canada (2008)
- ACS-DAC Undergraduate Award in Analytical Chemistry, American Chemical Society Division of Analytical Chemistry (2008)

## RESEARCH EXPERIENCE

- **Graduate Researcher**, Department of Chemistry, University of California, Berkeley, Sept. 2009 to present (*Advisor: Prof. Stephen R. Leone and Dr. Kevin R. Wilson*)  
Currently studying the heterogeneous chemistry of organic aerosols through the use of aerosol mass spectrometry.
- **Research Assistant**, Department of Chemistry, University of Toronto, May 2009 to July 2009 (*Advisor: Prof. Jennifer G. Murphy*)  
Conducted field measurements on ammonia and nitrogen oxides fluxes in Haliburton forest, Ontario, Canada.
- **Undergraduate Researcher**, Department of Chemistry, University of Toronto, Sept. 2008 to May 2009 (*Advisor: Prof. R.J. Dwayne Miller*)  
Studied the physics of Impulsive Heat Deposition (IHD) laser ablation on solutions, and its application on mass spectrometry.  
*Undergraduate Thesis: Application of Impulsive Heat Deposition Laser Desorption on Mass Spectrometry*
- **Undergraduate Researcher**, Department of Chemistry, University of Toronto, June 2008 to May 2009 (*Advisor: Prof. Rebecca A. Jockusch*)  
Studied laser-induced fluorescence of host-guest complexation with organic dye molecules in the gaseous phase using quadrupole ion trap-mass spectrometry. Previously investigated the fragmentation kinetics of ions subjected to collision-induced dissociation in quadrupole ion trap-mass spectrometry.

# THEODORA NAH

Lawrence Berkeley National Laboratory, Chemical Sciences Division  
1 Cyclotron Rd. MS 6-2100 LBNL

510 332 1610

theodora.nah@berkeley.edu

---

## TEACHING EXPERIENCE

- **Graduate Student Instructor**, Department of Chemistry, University of California, Berkeley  
Chemistry 105, Instrumental Methods in Analytical Chemistry (Upper division), Spring 2012  
Chemistry 105, Instrumental Methods in Analytical Chemistry (Upper division), Spring 2011  
Chemistry 1A, General Chemistry (Lower division), Fall 2009

## PUBLICATIONS

1. Chan, MN; **Nah, T**; Wilson, KR; "Real time in situ chemical characterization of sub-micron organic aerosols using Direct Analysis in Real Time mass spectrometry (DART-MS): the effect of aerosol size and volatility" *Analyst*, 138, 3749-3757, **2013**
2. Ruehl, RC; **Nah, T**; Isaacman, G; Worton, DR; Chan, AWH; Kolesar, KR; Cappa, CD; Goldstein, AH; Wilson, KR; "The Influence of Molecular Structure and Aerosol Phase on the Heterogeneous Oxidation of Normal and Branched Alkanes by OH" *Journal Physical Chemistry A*, 117, 3990-4000, **2013**
3. **Nah, T**; Chan, MN; Leone, SR; Wilson, KR; "Real Time In Situ Chemical Characterization of Sub-micron Organic Particles Using Direct Analysis in Real Time Mass Spectrometry" *Analytical Chemistry*, 85, 2087-2095, **2013**
4. Lee, L; Wooldridge, P; **Nah, T**; Wilson, KR; Cohen, RC; "Observation of Rates and Products in the Reaction of NO<sub>3</sub> with Submicron Squalane and Squalene Aerosol" *Physical Chemistry Chemical Physics*, 15, 882-892, **2013**
5. Isaacman, G; Chan, AWH; **Nah, T**; Worton, DR; Ruehl, CR; Wilson, KR; Goldstein, AH; "Heterogeneous OH Oxidation of Motor Oil Particles Causes Selective Depletion of Branched and Less Cyclic Hydrocarbons" *Environmental Science & Technology*, 46, 10632-10640, **2012**
6. Kessler, SH; **Nah, T**; Daumit, KE; Smith, JD; Leone, SR; Kolb, CE; Worsnop, DR; Wilson, KR; Kroll, JH; "OH-initiated Heterogeneous Aging of Highly Oxidized Organic Aerosol" *Journal of Physical Chemistry A*, 116, 6358-6365, **2012**
7. Isaacman, G; Wilson, KR; Chan, AWH; Worton, DR; Kimmel, JR; **Nah, T**; Hohaus, T; Gonin, M; Kroll, JH; Worsnop, DR; Goldstein, AH; "Improved Resolution of Hydrocarbon Structures and Constitutional Isomers in Complex Mixtures Using Gas Chromatography-Vacuum Ultraviolet-Mass Spectrometry" *Analytical Chemistry*, 84, 2335-2342, **2012**
8. Kessler, SH; **Nah, T**; Carrasquillo, AJ; Jayne, JT; Worsnop, DR; Wilson, KR; Kroll, JH; "Formation of Secondary Organic Aerosol from the Direct Photolytic Generation of Organic Radicals" *Journal of Physical Chemistry Letters*, 2, 1295-1300, **2011**

## PRESENTATIONS

## THEODORA NAH

Lawrence Berkeley National Laboratory, Chemical Sciences Division  
1 Cyclotron Rd. MS 6-2100 LBNL

510 332 1610

theodora.nah@berkeley.edu

---

1. **Nah, T**; Chan, MN; Leone, SR; Wilson, KR; “Online Chemical Characterization of Sub-micron Organic Particles Using Direct Analysis in Real Time Mass Spectrometry” *American Association for Aerosol Research (AAAR) 31<sup>st</sup> Annual Conference, 8 Oct 2012* (Poster)
2. **Nah, T**; Kessler, SH; Daumit, KE; Kroll, JH; Leone, SR; Wilson, KR; “Heterogeneous Reaction of Sub-micron Unsaturated Fatty Acid Particles by OH Radicals: A Model System for Understanding Competing Oxidative and Non-oxidative Secondary Chain Chemistry” *2011 American Geophysical Union (AGU) Fall Meeting, 5 Dec 2011* (Poster)
3. **Nah, T**; Leone, SR; Wilson, KR; “Heterogeneous Oxidation of Unsaturated Organic Aerosol” *Chemical Science Division Seminar, Lawrence Berkeley National Lab, 20 July 2011* (Talk)