

Ziyue Li

Graduate Student Researcher

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EDUCATION

University of California, Davis

Ph.D. Candidate in Atmospheric Science. GPA: 3.95/4.0

Peking University

B.S. in Geochemistry. GPA: 3.4/4.0

California, U.S.A

Sep. 2013 - present

Beijing, P.R. China

Sep. 2009 - Jul. 2013

RESEARCH EXPERIENCE

Graduate

Advisor: Chris D. Cappa

Funding: National

Science Foundation

(ATM-115106)

◆ Study of thermodynamic and kinetic properties of secondary organic aerosol (SOA) from thermal desorption experiments using clustering analysis and model simulation

Oct. 2018 - present

◆ Development of clustering algorithm for thermal desorption data analysis

Mar. 2018 - present

◆ BC5 2018 campaign: optical properties of black carbon and the effect of different mixing state with organic aerosol

May 2018

◆ Influence of relative humidity (RH) on the heterogeneous oxidation of SOA:

Jun. 2016 - May 2018

- Laboratory studies at Advanced Light Source (ALS), Lawrence Berkeley National Lab (LBNL), twice a year

- Modeling using self-developed multiphase reaction model

◆ Influence of precursor concentrations and mass loadings on the yield and elemental composition of SOA: laboratory studies

Mar. 2016

◆ Thermal behaviors of various SOA from anthropogenic and biogenic precursors: laboratory studies at ALS, LBNL

Sep. 2014 - Jan. 2016

◆ SOAFEE 2015 campaign: chamber studies of SOA formation from different gaseous biogenic precursors and their properties at Pacific Northwest National Lab; thermal denuder and FIGAERO

Jun. 2015 - Jul. 2015

◆ Influence of RH on the volatility of SOA; thermal denuder

Jan. 2015 - Jun. 2015

◆ Condensation of SOA onto existing particles: effect of seeds

Apr. 2014 - Nov. 2014

Undergraduate

Advisor: Ruixia Hao

◆ XRD and ICP-MS analysis of heavy metals in soil samples from mine region and laboratory study of the adsorption of lead

Oct. 2012 - Jul. 2013

Advisor: Zhongming Chen

◆ Field measurements of atmospheric aqueous-phase hydroperoxides, summertime Beijing

Mar. 2011 - Jul. 2013

PUBLICATIONS

7. **Z. Li**, E.L. D'Ambro, S. Schobesberger, T.M. Helgestad, J.A. Thornton, C.D. Cappa. New insights into the thermal behaviors of secondary organic aerosol using clustering analysis. Environ. Sci. Technol., in preparation, 2018

6. **Z. Li**, E.L. D'Ambro, S. Schobesberger, T.M. Helgestad, J.A. Thornton, C.D. Cappa. A novel clustering algorithm applied to thermal desorption data of secondary organic aerosol. Atmos. Meas. Tech., in preparation, 2018

5. **Z. Li**, C.D. Cappa. Influence of relative humidity on the volatility of secondary organic aerosol, from the process of formation to evaporation. Atmos. Environ., in preparation, 2018

4. **Z. Li**, K.A. Smith, C.D. Cappa. Influence of relative humidity on the heterogeneous oxidation of secondary organic aerosol. *Atmos. Chem. Phys.*, 18: 14585-14608, 2018
3. K.R. Kolesar, **Z. Li**, K.R. Wilson, C.D. Cappa. Heating-induced evaporation of nine different secondary organic aerosol types. *Environ. Sci. Technol.*, 49: 12242-12252, 2015
2. **Z. Li**, F. Wu, and R.X. Hao. A study of basic features and heavy metals adsorption performance of soil in the Dexing copper mine. *ACTA PETROLOGICA ET MINERALOGICA*, 32(6): 1013-1021, Nov. 2013. (Chinese with English abstract)
1. H. Liang, Z.M. Chen, D. Huang, Y. Zhao, and **Z.Y. Li**. Impacts of aerosols on the chemistry of atmospheric trace gases: a case study of peroxides and HO₂ radicals. *Atmos. Chem. Phys.*, 13: 11259-11276, 2013

PRESENTATIONS

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| 7. 2018 AGU Fall Meeting
Poster 'Probing the thermal behaviors of SOA using clustering analysis'
Z. Li (presenter), E. D'Ambro, S. Schobesberger, T. Helgestad, J.A. Thornton, C.D. Cappa | Washington, 2018 |
| 6. 15th Science Conference of IGAC
Oral 'Influence of RH on the heterogeneous oxidation of SOA'
C.D. Cappa (presenter), Z. Li (primary contributor), K.A. Smith | Japan, 2018 |
| 5. 2018 Berkeley Atmospheric Science Center Symposium
Poster 'Influence of RH on the heterogeneous oxidation of SOA'
Z. Li (presenter), K.A. Smith, C.D. Cappa | Berkeley, 2018 |
| 4. 2017 AGU Fall Meeting
Poster 'Influence of RH on the heterogeneous oxidation of SOA'
Z. Li (presenter), K.A. Smith, C.D. Cappa | New Orleans, 2017 |
| 3. Atmospheric Chemistry Gordon Research Conference 2017
Poster 'Influence of RH on the heterogeneous oxidation of SOA'
Z. Li (primary contributor), K.A. Smith, C.D. Cappa (presenter) | Newry, 2017 |
| 2. Atmospheric Chemistry Gordon Research Conference 2015
Poster 'Understanding secondary organic aerosol through evaporation experiments'
C.D. Cappa (presenter), K.R. Kolesar, Z. Li , C. Chen, D. Johnson, K.R. Wilson | Waterville Valley, 2015 |
| 1. 3rd Sino-French Joint Workshop on Atmospheric Environment
Oral 'H ₂ O ₂ and organic peroxides in Beijing summer rainwater'
Z. Li (primary contributor), Z. Chen (presenter) | Qingdao, 2012 |
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INSTRUMENT EXPERIENCE

<i>Skilled</i>	Scanning Mobility Particle Sizer (SMPS), Thermal denuder (TD), Vacuum Ultra-violet Aerosol Mass Spectrometer (VUV-AMS), Gas Chromatography (GC)
<i>Basic</i>	Aerosol Mass Spectrometer (AMS), Filter Inlet for Gas and Aerosols Chemical Ionization Mass Spectrometer (FIGAERO-CIMS), Cavity Ring Down Photoacoustic Spectroscopy (CRD-PAS), High Performance Liquid Chromatography (HPLC)

SKILLS

Languages: English TOEFL 108/120, Japanese Level 1 (the highest) Passed
Computer: Microsoft Office, Fortran, Igor, Matlab, R (basic), C (basic)
Other: Badminton, Swimming, Piano, Painting