

ANNA FRANCISCA OLIVERI

Southern Oregon University
Department of Chemistry
1250 Siskiyou Blvd
Ashland, OR 97520
Phone: 717.329.6546
oliveria@sou.edu

EDUCATION HISTORY

<i>University of Oregon (2009-2014)</i>	<i>Eugene, OR</i>
Doctor of Philosophy: Chemistry	2014
Masters of Science: Chemistry	2010
<i>Juniata College (2005-2009): Cum Laude</i>	<i>Huntingdon, PA</i>
Bachelor of Science: Chemistry	2009
Secondary Emphasis (Minor): Education	2009

PROFESSIONAL EXPERIENCES

Department of Chemistry, Southern Oregon University	<i>Ashland, OR</i>
<i>Associate Professor of Chemistry</i>	2021-Present
<i>Assistant Professor of Chemistry</i>	2016-2021
♦ CH 411 and CH 414: Inorganic Chemistry and Lab	
♦ CH 497, CH 498, and CH 499: Senior Capstone Research	
♦ CH 221 and CH 227: General Chemistry I and Lab	
♦ CH 222 and CH 228: General Chemistry II and Lab	
♦ CH 229: General Chemistry III Lab	
♦ CH 104 and CH 104L: Survey of Chemistry and Lab	
♦ CH 190, CH 195, and CH 196: Problem Solving	
<i>ChemREx Summer Fellowship Advisor (2 undergraduate researchers)</i>	Summer 2021
<i>Chemistry Club Faculty Advisor</i>	2016-Present
<i>Curricular Committee (Chair)</i>	2017-Present
<i>STEM Division Faculty Senate Representative (Elected Senator)</i>	2020-Present
<i>Senate Advisory Council</i>	2020-Present
<i>STEM Division Faculty Senate Representative (Substitute Senator)</i>	2018-2020
<i>FPAR Task Force</i>	2019-2021
Department of Chemistry and NEAT ORU, University of California, Davis	<i>Davis, CA</i>
<i>Post-Doctoral Fellowship</i>	2015-2016
♦ Heteronuclear solution NMR analysis of nanoscale clusters (U, Al, Ga)	
♦ Mentor chemistry and geology graduate and undergraduate students	
♦ Design research projects and write grants	
Willagillespie Community Elementary School	<i>Eugene, OR</i>
<i>Scientist-in-Residence</i>	2015
♦ Developed and taught Common Core State Standard geared, hands-on science lessons to K-5 th grade students	

Department of Chemistry and Biochemistry, University of Oregon

Eugene, OR

Graduate Student Researcher

2009-2014

- ◆ Proved that Ga_{13} clusters are stable in solution via ^1H -NMR, SAXS, and DOSY
- ◆ Assigned signals in the ^1H -NMR spectra to specific protons in Ga/In clusters

NSF CSMC Outreach Fellowship (Hermiston High School)

2012-2014

NSF GK-12 Fellowship (Heppner Elementary School)

2011- 2012

General Chemistry Tutor

2010-2011

Graduate Teaching Fellow

2009-2010

Department of Chemistry, Juniata College

Huntingdon, PA

Undergraduate Researcher

2008-2009

- ◆ Used SEM/EDX to determine if iron based paint was used to decorate Neolithic skull fragments

Organic Chemistry Lab Teaching Assistant

2009

Organic Chemistry Study Group Leader

2008

Science in Motion

Huntingdon, PA

Laboratory Assistant

2005-2009

- ◆ Prepared solutions and organized lab kits sent to local high schools
- ◆ Presented at Pennsylvania Science Teacher Association in 2006
- ◆ Workshop leader at the Pennsylvania Governor's Institute of the Life Sciences

Field Experience Course

2007

- ◆ Assisted/taught high school labs one day a week with a SIM Mobile Educator
- ◆ Visited ~12 schools with 2-4 classes per visit

University Palackého

Olomouc, Czech Republic

Research Intern

2008

- ◆ Synthesized copper complexes with benzylaminopurine derivate ligands
- ◆ Edited papers to help the Czech scientists with English and grammar

Pacific Northwest National Laboratory

Richland, WA

Research Intern

2007

PUBLICATIONS

- ◆ Brunson, K. G.; Colla, C. A.; Oliveri, A. F.; Pan, L.; Casey, W. H. "A conspicuous ^{27}Al -NMR signal at 72 ppm during isomerization of Keggin Al_{13} ions" *Inorganica Chim. Acta* **2021**, 514, 120014.
- ◆ Oliveri, A. F.; Colla, C. A.; Callahan, J. R.; Bogard, G.; Qiu, J.; Dembowski, M.; Burns, P. C.; Casey, W. H. "Cation-Directed Isomerization of the U_{28} Uranyl-Peroxide Cluster" *Eur. J. Inorg. Chem.* **2017**, 5429-5433. **FRONT COVER**
- ◆ Perkins, C. K.; Eitrheim, E. S.; Fulton, B. L.; Fullmer, L. B.; Colla, C. A.; Park, D.-H.; Oliveri, A. F.; Hutchison, J. E.; Nyman, M.; Casey, W. H.; Forbes, T. Z.; Johnson, D. W.; Keszler, D. A. "Synthesis of an Aluminum Hydroxide Octamer through a Simple Dissolution Method" *Angew. Chem. Int. Ed.* **2017**, 56, 10161-10164.

- ◆ Dembowski, M.; Colla, C. A.; Hickam, S.; Oliveri, A. F.; Szymanowski, J. E. S.; Oliver, A. G.; Casey, W. H.; Burns, P. C. "Hierarchy of Pyrophosphate-Fuctionalized Uranyl Peroxide Nanocluster Synthesis" *Inorg. Chem.*, **2017**, 56, 5478-5487.
- ◆ Oliveri, A. F.; Colla, C. A.; Perkins, C. K.; Akhavantabib, A. N.; Callahan, J. R.; Pilgrim, C. D.; Smart, S. E.; Cheong, P. H.-Y.; Pan, L.; Casey, W. H. "Isomerization of Keggin Al_{13} Ions Followed by Diffusion Rates" *Chem. Eur. J.* **2016**, 22, 18682-18685. **FRONT COVER**
- ◆ Oliveri, A. F.; Fields, C. R.; Colla, C. A.; Johnson, D. W.; Casey, W. H. "Proton Exchange Rates on Hydroxide Bridges of the Mineral-Like $\text{Ga}_{13}(\mu_3\text{-OH})_6(\mu_2\text{-OH})_{18}(\text{H}_2\text{O})_{24}(\text{NO}_3)_{15}$ Cluster" *ChemistrySelect* **2016**, 1, 1118-1122. **FRONT COVER.**
- ◆ Oliveri, A. F.; Pilgrim, C. D.; Qiu, J.; Colla, C. A., Burns, P. C., Casey, W. H. "Dynamic Phosphonic Bridges in Aqueous Uranyl Clusters" *Eur. J. Inorg. Chem.* **2016**, 6, 797-801.
- ◆ Oliveri, A. F. *Stoichiometry, Encyclopedia of Geochemistry*. In Press.
- ◆ Oliveri, A. F.; Wills, L. A.; Hazlett, C. R.; Carnes, M. E.; Cheong, P. H.-Y.; Johnson, D. W., "Solution-Phase Structural Characterization of an Array of Nanoscale Aqueous Inorganic $\text{Ga}_{13-x}\text{In}_x$ ($0 \leq x \leq 6$) Clusters by ^1H -NMR and QM Computations" *Chem. Sci.* **2015**, 6, 4071-4085.
- ◆ Carnes, M. E.; Knutson, C. C.; Nadarajah, A.; Jackson Jr., M. N.; Oliveri, A. F.; Norelli, K. M.; Crockett, B. M.; Bauers, S. B.; Moreno-Luna, H. A.; Taber, B. N.; Pacheco, D. J.; Olson, J. Z.; Brevick, K. R.; Sheehan, C. E.; Johnson, D. W.; Boettcher, S. W. "Electrochemical Synthesis of Flat- $[\text{Ga}_{13-x}\text{In}_x(\mu_3\text{-OH})_6(\mu_2\text{-OH})_{18}(\text{H}_2\text{O})_{24}(\text{NO}_3)_{15}]$ Clusters as Aqueous Precursors for Solution-Processed Semiconductors" *J. Mat. Chem.* **2014**, 2, 8492-8496.
- ◆ Oliveri, A. F.; Elliott, E. W.; Carnes, M. E.; Hutchison, J. E.; Johnson, D. W., "Elucidating Inorganic Nanoscale Species in Solution: Complementary and Corroborative Approaches" *ChemPhysChem* **2013**, 14, 2655–2661. **Requested Manuscript and FRONT COVER.**
- ◆ Oliveri, A. F.; Carnes, M. E.; Baseman, M. M.; Richman, E. K.; Hutchison J. E.; Johnson, D. W., "Single Nanoscale Cluster Species Revealed by ^1H -NMR Diffusion-Ordered Spectroscopy and Small-Angle X-ray Scattering" *Angew. Chem. Int. Ed.* **2012**, 51, 10992-10996. **FRONTISPIECE.**
- ◆ Kouzes, R. T.; Ely, J.H.; Seifert, A.; Siciliano, E. R.; Weirer, D. R.; Windsor, L. K.; Woodring, M. L.; Borgardt, G.; Buckley, E.; Flumerfelt, E.; Oliveri, A. F.; Salvitti, M., "Cosmic-Ray-Induced Ship-Effect Neutron Measurements and Implications for Cargo Scanning at Borders" *Nucl. Instrum. Meth. A* **2007**, 587, 89–100.

NOTABLE ORAL PRESENTATIONS
(Presenters Underlined)

<u>Oliveri, A. F.</u> "Inorganic Nanoscale Clusters: Solution Dynamics and Structure Probed via NMR" SOU Friday Science Seminar.	Ashland, OR 2018
<u>Oliveri, A. F.</u> "Clare C. Patterson's Story" Scientist Speak even hosted at ScienceWorks for Earth Day and the March for Science.	Ashland, OR 2017
<u>Oliveri, A. F.</u> "Structural Studies of Aqueous Uranyl-Phosphite Cage-Clusters via 1D (^1H and ^{31}P) and 2D (DOSY and HSQC) Solution NMR" Material Science of Actinides Energy Frontier Research Center (EFRC) Annual Meeting.	South Bend, IN 2015
<u>Oliveri, A. F.</u> "Solution Characterization of Inorganic Cluster via ^1H -NMR and DOSY" Sacramento State Chemistry Department Seminar.	Sacramento, CA 2015
<u>Oliveri, A. F.</u> "Solution Studies of Persistent Aqueous Inorganic Nanoclusters" 248th American Chemical Society Conference.	San Francisco, CA 2014

- Oliveri, A. F.; Kamunde-Devonish, M. K. "Center for Sustainable Materials Chemistry Presents: Women in Science" **American Association of University Women** (AAUW). Eugene, OR 2013
- Oliveri, A. F. "Solution Studies of Persistent Aqueous Inorganic Nanoclusters" **Center for Sustainable Materials Chemistry** (CSMC) Annual Meeting. Eugene, OR 2012
- Oliveri, A. F. "Solution Studies of Group 13 Metal Clusters" **Material Science Institute** (MSI) Conference. Eugene, OR 2012
- Oliveri, A. F. "Solution Studies of Persistent Aqueous Inorganic Nanoclusters" **Center for Sustainable Materials Chemistry** (CSMC) Kick-Off Event. Corvallis, OR 2011
- Oliveri, A. F. "Metal Clusters: Thin Film Precursors. Synthesis, Development, and Application" University of Oregon **Technology Program Inventor Days**. Eugene, OR 2011
- Fitzsimmons, T.; Oliveri, A. F. "Hands on Presentation with Atomic Force Microscope" **Pennsylvania Science Teacher Association**. Harrisburg, PA 2006

NOTABLE POSTER PRESENTATIONS
(Presenters Underlined)

- Colla, C. A.; Pilgrim, C. D.; Oliveri, A. F.; *et al.* "NMR Studies of Uranyl and Neptunyl Compounds" **Material Science of Actinides Energy Frontier Research Center** (EFRC) Annual Meeting. South Bend, IN 2015
- Villena, E. G.; Oliveri, A. F.; Hazlett, C. R.; *et al.* "Synthesis and Characterization of Clusters." **Center for Sustainable Materials Chemistry** (CSMC) Annual Meeting. Corvallis, OR 2015
- Oliveri, A. F.; Elliott, E. W.; Jackson, M. N.; *et al.* "Solution Studies of Persistent Inorganic Nanoscale Clusters" **Gordon Conference: Clusters, Nanocrystals & Nanostructures**. South Hadley, MA 2013
- Oliveri, A. F.; Wang, W.; Johnson, D. W.; *et al.* "Group 13 Polynuclear Metal Clusters for Microelectronic Fabrication" **Center for Green Materials Chemistry** (CGMC) Site Review. Irvine, CA 2011
- Oliveri, A. F.; Fairley, K. C.; Mensing, Z. L.; *et al.* "Future Directions in Group 13 Metal Hydroxide Clusters" **Materials Science Institute/IGERT Conference**. Newport, OR 2010
- Oliveri, A. F.; Hark, R. "SEM/EDX Analysis of Pigmentation Found on Neolithic Bone Fragments" 237th **American Chemical Society Conference**. Salt Lake City, UT 2009
- Oliveri, A. F.; Borgardt, J.; Kouzes, R. T.; *et al.* "Combating nuisance alarms caused by the "ship effect" in helium 3 based neutron detection radiation portal monitors" 235th **American Chemical Society Conference**. New Orleans, LA 2008
- Oliveri, A. F.; Borgardt, J.; Kouzes, R. T.; *et al.* "Combating nuisance alarms caused by the "ship effect" in helium 3 based neutron detection radiation portal monitors" **Juniata College Alumni Weekend**. Huntingdon, PA 2007

VOLUNTEER/OUTREACH EXPERIENCE**Southern Oregon University***Southern Oregon*

- ◆ AWSEM: ChemArtistry
- ◆ Friday Science Seminar: Halloween Demo Show
- ◆ Academy, Summer Camp: Chemistry in the Kitchen
- ◆ Academy, Summer Camp: The Art of Chemistry
- ◆ Summer Better than Others, Summer Camp: Chemistry in the Kitchen

2017-Present

University of Oregon*Oregon*

- ◆ Leap into Science (Heppner Elementary): student/parent science night
- ◆ Sail Camp: chemistry and art day camp for elementary age girls
- ◆ Science Factory Days: day camp for elementary students
- ◆ Lab Tours: ranging from adults to elementary students

2010-2014

Juniata College/Science in Motion*Pennsylvania**Community Demo Shows*

2006-2009

- ◆ Huntingdon Community Center After School Program
- ◆ Altoona Public Library
- ◆ Lewistown Nursing Home
- ◆ Sciencepalooza

Juniata College Chemistry Camp

2009

AFFILIATIONS, ACTIVITIES, AND OFFICES

SOU Chemistry ClubFaculty Advisor (2016-Present)
 American Chemical Society (2007-2009, 2014, 2016)
 UO Women in Graduate Sciences..... (2009-2014)
 Big Brothers Big Sisters (2010-2012) Mentor (2010-2012)
 JC Chemistry Club (2006-2009) President (2008- 2009)
Ombudsman (2007-2008)
 Gamma Sigma Epsilon (2008-2009)Treasurer (2008-2009)
 Juniata College Women's Rugby (2006-2009) Scrum Captain (2008)

AWARDS AND HONORS

2021 *National ACS Student Chapter* Honorable Mention Award (acting as advisor)
 2021 Tenured by *Southern Oregon University*
 2020 *National ACS Student Chapter* Commendable Award (acting as advisor)
 2019 *National ACS Student Chapter* Honorable Mention Award (acting as advisor)
 2018 *National ACS Student Chapter* Honorable Mention Award (acting as advisor)
 2017 Nominee for the "Of the Month Award" presented by the *National Residence Hall Honorary* (NRHH)
 2017 Nominee for the "Outstanding Leader Award" presented by *SOU*
 2012 *National Science Foundation* CSMC Outreach Fellowship
 2011 *National Science Foundation* GK-12 Fellowship
 2009 *Juniata College* Rockwell Chemistry Prize