

Curriculum Vitae

Dr. Alyssa Gaiser

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Current Position:

2022 – Present Assistant Professor, Facility for Rare Isotope Beams joint Michigan State University Chemistry Department

Professional Preparation:

6/2016 Bachelors of Science, Chemistry. Minor, Mathematics. University of California, Los Angeles, Department of Chemistry and Biochemistry

2016-2020 Ph.D., Inorganic Chemistry. Florida State University, Department of Chemistry and Biochemistry. Albrecht- Schönzart Group

2020-2022 Postdoctoral Fellow. Lawrence Berkeley National Laboratory, Chemical Sciences, Abergel Group

Publications:

Three, Two, One, Zero: The Various Binding Mechanisms of Valinomycin to *f*-elements
Alyssa N. Gaiser, Cristian Celis-Barros, Joseph M. Sperling, Todd Poe, Frankie D. White, Michel Ruf, and Thomas E. Albrecht-Schönzart
In prep

Creation of an Unexpected Plane of Enhanced Covalency in Cerium(III) and Berkelium(III) Terpyridyl Complexes
Alyssa N. Gaiser, Cristian A. Celis-Barros, Frankie D. White, Joseph M. Sperling, Sahan Salpage, Tian Jian, Nikki Wolford, Jason Johnson, Ashley Gray, John Gibson, Ryan E Baumbach, Mike Neidig, Dayan Paez-Hernandez, Thomas E. Albrecht-Schönzart
Nature Communications **2021** 12, 7230
DOI: 10.1038/s41467-021-27576-y

Structure and Characterization of an Americium Bis(*O,O'*-diethyl)dithiophosphate Complex

R. D. M. Greer, Cristian Celis-Barros, Joseph M. Sperling, **Alyssa N. Gaiser**, Cory J. Windorff, and Thomas E. Albrecht-Schönzart

Inorganic Chemistry **2020** 59 (22), 16291-16300

DOI: 10.1021/acs.inorgchem.0c02085

Pronounced Pressure Dependence of Electronic Transitions for Americium Compared to Isomorphous Neodymium and Samarium Mellitates

Joseph M. Sperling, Evan Warzecha, Bonnie E. Klamm, **Alyssa N. Gaiser**, Cory J. Windorff, Megan A. Whitefoot, and Thomas E. Albrecht-Schönzart

Inorganic Chemistry **2021** 60 (1) 476-483

DOI: 10.1021/acs.inorgchem.0c03293

Superstructures and Superconductivity Linked with Pd Intercalation in Nb₂Pd_xSe₅

Jennifer Neu, David Graf, Kaya Wei, **Alyssa N. Gaiser**, Yan Xin, You Lai, Thomas E. Albrecht-Schönzart, Ryan Baumbach, David J. Singh, and Theo Siegrist

Chemistry of Materials **2020** 32 (19), 8361-8366

DOI: 10.1021/acs.chemmater.0c02291

A Single Small-Scale Plutonium Redox Reaction System Yields Three Crystallographically Characterizable Organoplutonium Complexes

Cory J. Windorff, Joseph M. Sperling, Thomas E. Albrecht-Schönzart, Zhuanling Bai, William J. Evans, **Alyssa N. Gaiser**, Andrew J. Gaunt, Conrad A. P. Goodwin, David E. Hobart, Zachary K. Huffman, Daniel N. Huh, Bonnie E. Klamm, Todd N. Poe, and Evan Warzecha

Inorganic Chemistry **2020** 59 (18) 13301-13314

DOI: 10.1021/acs.inorgchem.0c01671

Pressure-Induced Spectroscopic Changes in a Californium 1D Material Are Twice as Large as Found in the Holmium Analog

Joseph M. Sperling, Evan Warzecha, Cory J. Windorff, Bonnie E. Klamm, **Alyssa N. Gaiser**, Megan A. Whitefoot, Frankie D. White, Todd N. Poe, and Thomas E. Albrecht-Schönzart

Inorganic Chemistry **2020** 59 (15), 10794-10801

DOI: 10.1021/acs.inorgchem.0c01290

Compression of Curium Pyrrolidinedithiocarbamate Enhances Covalency

Joseph M. Sperling, Evan J. Warzecha, Cristian Celis-Barros, Dumitru-Claudiu Sergentu, Xiaoyu Wang, Bonnie E. Klamm, Cory J. Windorff, **Alyssa N. Gaiser**, Frankie D. White, Drake A. Beery, Alexander T. Chemey, Megan A. Whitefoot, Brian N. Long, Kenneth Hanson, Paul Kögerler, Manfred Speldrich, Eva Zurek, Jochen Autschbach, Thomas E. Albrecht-Schönzart

Nature, **2020** 583, 396-399

DOI: 10.1038/s41586-020-2479-2

Structural and Spectroscopic Investigation of Two Plutonium Mellitates

Joseph M. Sperling, **Alyssa N. Gaiser**, Cory J. Windorff, Bonnie E. Klamm, Megan A. Whitefoot, Alexander T. Chemey, Brian N. Long, Joanna G. Campbell, and Thomas E. Albrecht-Schmitt

Inorganic Chemistry **2020** 59 (5), 3085-3090

DOI: 10.1021/acs.inorgchem.9b03432

Bulk Assemblies of Lead Bromide Trimer Clusters with Geometry-Dependent Photophysical Properties

Sujin Lee, Chenkun Zhou, Jennifer Neu, Drake Beery, Ashley Arcidiacono, Maya Chaaban, Haoran Lin, **Alyssa Gaiser**, Banghao Chen, Thomas E. Albrecht-Schmitt, Theo Siegrist, and Biwu Ma

Chemistry of Materials **2020** 32 (1), 374-380

DOI: 10.1021/acs.chemmater.9b03893

Molecular and Electronic Structure, and Hydrolytic Reactivity of a Samarium(II) Crown Ether Complex

Frankie D. White, Cristian Celis-Barros, Jillian Rankin, Eduardo Solís-Céspedes, David Dan, **Alyssa N. Gaiser**, Yan Zhou, Jasmine Colangelo, Dayán Páez-Hernández, Ramiro Arratia-Pérez, and Thomas E. Albrecht-Schmitt

Inorganic Chemistry **2019** 58 (5), 3457-3465

DOI: 10.1021/acs.inorgchem.8b03566

Examination of Structure and Bonding in 10-Coordinate Europium and Americium Terpyridyl Complexes

Frankie D. White*, **Alyssa N. Gaiser***, Evan J. Warzecha, Joseph M. Sperling, Cristian CelisBarros, Sahan R. Salpage, Yan Zhou, Tristan Dilbeck, Andrew J. Bretton, David S. Meeker, Kenneth G. Hanson, and Thomas E. Albrecht-Schmitt

*authors contributed equally

Inorganic Chemistry **2018** 57 (20), 12969-12975

DOI: 10.1021/acs.inorgchem.8b02085

Presentations:

Conferences:

“Exploring Berkelium and Cerium Terpyridyl Complexes”

Accepted for ACS Meeting in Philadelphia March 2020

Posters:

“Charge Density Studies on Lanthanide and Actinide Compounds”

American Chemical Society Meeting

August 20-24, 2017, Washington DC

“Unexpected Covalency in the *f*-Block and Routes to it”

6th International Conference on the Chemistry and Physics of the Transactinide Elements
August 25-30, 2019, Wilhelmshaven, Germany

“Berkelocene”

Inorganic Gordon Conference

May 29-June 3, 2022, Newport, Rhode Island

Fellowships and Awards:

Department of Energy Carlsbad Field Office: June 2017-June 2018

The Rosenfield Fellowship Award: March 2019