

## ADAM J. KEITH

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### RELATED EXPERIENCE

Concept Alloys

#### Operations Manager

2021 – Present

- Manage manufacturing team and projects
- Working to introduce ultrasonic cleaner into manufacturing process

Chem-Trend LLC, Howell, MI

#### Senior Chemist

2014 – 2021

- Formulated state-of-the-art release coatings for polyurethane foam fabrication while meeting OEM specifications
- Introduced a new water-based line of products for dual density footwear to the market
- Engaged with polyurethane suppliers and fabricators globally, including travelling to 6 countries on 3 continents
- Completed RISE leadership development program

Avomeen Analytical Services, Ann Arbor, MI

#### Senior Analytical Chemist

2013 – 2014

- Developed numerous custom products for clients covering a diverse range of industries
- Provided in-depth analysis in the areas of failure analysis and patent infringement
- Interfaced with customers to provide services tailored to meet individual client needs
- Integral in obtaining ISO accreditation

University of Toledo, Toledo, OH

#### Graduate Student

2008 – 2013

- Developed catalytic systems in ionic liquids, with a focus on the design and synthesis of ion-tagged indolylphosphine ligands
- Synthesized late transition metal complexes and assessed catalytic
- Screened catalytic systems for lignin hydrogenolysis in ionic liquids

Anatrace, Inc., Maumee, OH

#### Production Chemist II

2005 – 2008

- Synthesized, purified, and analyzed detergents for membrane protein purification and characterization on scales of up to six moles
- Instrumental in getting a promotion system for entry level chemists implemented
- Played a key role in improving processes to eliminate accumulated back order

Michigan State University, East Lansing, MI

#### Undergraduate Researcher

2004

- Developed titanium-based catalysts for hydroamination of diynes to afford substituted pyrroles
- Independent research on transition metal mediated ring opening of aziridines

Michigan State University, East Lansing, MI

#### Professorial Assistant

1998

- Research on the adsorption of small probe molecules to porous carbon surfaces

### TEACHING EXPERIENCE

University of Toledo, Toledo, OH

#### Teaching Assistant – to Professor Zubricky in “Organic Chemistry Lab I”

2008

- Oversaw laboratory experiments, gave introductory lectures, graded all written work, met with students upon request

#### Teaching Assistant – to Professor Mason in “General Chemistry I”

2010

- Lead recitation sections, met with students upon request, graded all written work, helped grade exams

#### Teaching Assistant – to Professor Cohen-Schmidt in “General Chemistry II”

2011

- Lead recitation sections, met with students upon request, graded all written work, helped grade exams

**Teaching Assistant – to Professor Findsen in “Advanced Lab II”****2013**

- Oversaw laboratory experiments, helped instruct and maintain laboratory instruments, graded all written work, met with students upon request

## EDUCATION

University of Toledo, Toledo, OH

**Ph.D. in Chemistry****2014**

Dissertation: “Ion-tagged Phosphines for Catalysis in Ionic Liquids”

Michigan State University, East Lansing, MI

**B.S. in Chemistry****2004**

## PROFESSIONAL DEVELOPMENT

Dispersions in Liquids: Suspensions, Emulsions, and Foams, American Chemical Society Short Course

2015

GC-MS Fundamentals Seminar, Restek

2013

## AWARDS

University Fellowship, University of Toledo

2009 – 2012

Outstanding First Year Graduate Student, University of Toledo Department of Chemistry

2009

ACS Summer School on Green Chemistry and Sustainability Attendee, American Chemical Society

2010

CIBA Travel Grant winner, American Chemical Society

2012

## PUBLICATIONS

*“Ion-tagged Phosphines as Ligands for Suzuki Coupling of Aryl Halides in a Phosphonium Ionic Liquid”*Adam J. Keith, Stephen D. Kosik, L. M. Viranga Tillekeratne, Mark R. Mason, *Synlett.*, **2014**, 25, 977-982.*“Pyrrole Syntheses Based on Titanium-Catalyzed Hydroamination of Dienes “*Balasubramanian Ramanathan, Adam J. Keith, Douglas Armstrong, Aaron L. Odom, *Org. Lett.*, **2004**, 6, 2957-2960.

## PRESENTATIONS

*“Graminophosphines: A New Class of Ionic Liquid Soluble Ligands and Their Application in C–C Coupling Reactions”*Presentation given at the ACS Central Eastern Regional Meeting, *Indianapolis, Indiana*

2011

*“Graminophosphines: A New Class of Ionic Liquid Soluble Ligands and Their Application in C–C Coupling Reactions”*Presentation given at the Inorganic Discussion Weekend, *Windsor, Ontario*

2011

*“Graminophosphines: A New Class of Ionic Liquid Soluble Ligands and Their Application in C–C Coupling Reactions”*Presentation given at the Ohio Inorganic Weekend, *Cincinnati, Ohio*

2011

*“Phosphinogranines: Ligands for Catalysis in Ionic Liquids”*Poster presented at the Ohio Inorganic Weekend, *Columbus, Ohio*

2010

*“Use of Ion-Tagged Indolyl Phosphines for Palladium-Catalyzed Cross-Coupling Reactions in Ionic Liquids”*Poster presented at the ACS Conference on Green Chemistry and Engineering, *Washington, D.C.*

2012

*“Use of Ion-Tagged Indolyl Phosphines for Palladium-Catalyzed Cross-Coupling Reactions in Ionic Liquids”*Poster presented at the Ohio Inorganic Weekend, *Detroit, Michigan*

2012

## LANGUAGES

English – native language

Spanish and German – speak, read, and write at beginner level

## MEMBERSHIPS

American Chemical Society

## SKILLS

**Instrumental:** X-ray crystallography,  $^1\text{H}$  NMR,  $^{13}\text{C}$  NMR, heteronuclear NMR, GC/FID, GC/MS, HPLC, GPC, LC/ESI-MS, FT-IR, UV/Vis, X-ray fluorescence, SEM/EDXA, TGA, DSC

**Technical:** Air sensitive synthetic techniques, flash/column chromatography (micro scale to batch scale), ion-exchange resins, vacuum distillation, and sublimation

**Mechanical/Maintenance Skills:** Maintenance of gas chromatographs, vacuum pumps, Schlenk lines, and dry boxes.

**Computer Literacy:** Microsoft Windows, Word, Excel, PowerPoint, ChemDraw, Adobe Acrobat, SciFinder Scholar, and C++.