JOSEPH THIEBES

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EDUCATION

***Doctor of Philosophy* in Physical Chemistry** *expected May 2023*
Montana State University

***Bachelor of Science* in Chemistry** *June 2017*
Portland State University

***Bachelor of Arts* in Physics & Liberal Studies** (double major) *June 2017*
Portland State University

***Associate of Science* in Oregon Transfer Program** *September 2013*
Portland Community College

AWARDS & RECOGNITION

· TechConnect World Innovation Conference & Expo, **National Innovation Award** (team) *2018*
· American Chemical Society, Portland Section, Green Chemistry Essay Contest, **First Place** *2016*
· National Meeting of Sigma Xi, Student Research Symposium, **Superior Presentation** *2015*
· NASA Glenn Research Center Intern Design Challenge, **Second Place** (team) *2015*
· Sigma Xi Columbia-Willamette Chapter, Student Research Symposium, **Outstanding Research** *2015*
· Portland Community College Foundation Scholarship, awarded for academic excellence *2012*
· James F. & Marion L. Miller Foundation Scholarship, awarded for academic excellence *2012*
· NASA National Community College Aerospace Scholar, **First Place** (team) *2012*

RESEARCH EXPERIENCE

Graduate Research Assistant Jun. 2018 - present
Montana State University · Research Advisor: Prof. Erik Grumstrup *Bozeman, MT*
· Ultrafast laser spectroscopy and fluorescence spectroscopy of lead-halide perovskites
· Mentorship and training of one undergraduate REU participant

Chemist I May 2017 - Dec. 2017
Diatomix *Portland, OR*
· Research and development of a photocatalytic paint additive which continuously eliminates VOCs
· Assistance in writing, editing, and proofreading grant proposals, including successful NSF SBIR
· Characterization by x-ray diffractometry (XRD), UV-Vis spectrophotometry, and gas chromatography

Undergraduate Research Assistant Dec. 2013 - Jun. 2017
Portland State University · Faculty Mentor: Prof. Raj Solanki *Portland, OR*
· Synthesis of nano-scale materials and preparation of electrodes and cells
· Characterization by SEM/EDX, cyclic voltammetry (CV), and galvanic charge/discharge cycling (GC)
· Developed MATLAB data analysis script for use by our group, saving hours of effort per experiment

Research Intern Jun. - Aug. 2015
NASA Glenn Research Center · Mentor: Dr. Dionne Hernandez-Lugo *Cleveland, OH*
· Prepared and characterized electrodes, and assembled lithium-sulfur coin cells
· Characterized by SEM/EDX, CV, GC, infrared (FTIR) spectroscopy, Raman spectroscopy, and thermogravimetric analysis (TGA)

Research Intern Jan. - Mar. 2014
Center for Electron Microscopy & Nanofabrication at PSU *Portland, OR*
· SEM/EDX analysis for industry, government, and academic clients

TEACHING EXPERIENCE

Graduate Teaching Assistant Jan. 2018 - May 2018
Montana State University *Bozeman, MT*
- Instruction for undergraduate general and physical chemistry lab sections
- Preparation of quizzes and evaluation of lab reports

Freelance Tutor Dec. 2015 - Dec. 2017
Self-Employment *Portland, OR*
- Personalized assistance in mathematics, chemistry, and physics for adults and high-school age children

Teacher and Tutor May 2016 - Dec. 2017
The Princeton Review *Portland, OR*
- Facilitation of SAT and ACT preparatory coursework in a classroom setting and individual tutoring

Volunteer Tutor Mar. 2013 - Apr. 2014
PCC Volunteer Literacy Tutoring Program *Portland, OR*
- Provided individual instruction to adults in basic mathematical literacy through beginning algebra

Chemistry Instructional Support Technician Nov. 2012 - Jul. 2013
Portland Community College, Rock Creek Campus *Portland, OR*
- Prepared reagents, glassware, and instruments for chemistry and physics labs

Peer Mentor Sep. 2011 - Jun. 2012
Portland Community College, Cascade Campus *Portland, OR*
- Facilitated weekly study sessions for Calculus I-III, in a program of the Associated Students of PCC

PUBLICATIONS & PRESENTATIONS

Peer-Reviewed Publications

- Kuperman, N.; Padigi, P.; Goncher, G.; Evans, D.; **Thiebes, J.**; Solanki, R. High performance Prussian Blue cathode for nonaqueous Ca-ion intercalation battery. *Journal of Power Sources* **2017**, *342*, 414-418.
- Padigi, P.; Kuperman, N.; **Thiebes, J.***; Goncher, G.; Evans, D.; Solanki, R. Calcium cobalt hexacyanoferrate cathodes for rechargeable divalent ion batteries. *Journal of New Materials for Electrochemical Systems* **2016**, *19*, 57-64. (*Corresponding author.)
- Padigi, P. **Thiebes, J.**; Swan, M.; Goncher, G.; Evans, D.; Solanki, R. Prussian green: a high rate capacity cathode for potassium ion batteries. *Electrochimica Acta* **2015**, *166*, 32-39.

Conference Proceedings

- Day, N.; Olsen, J; Dereviankin, V.; **Thiebes, J.**; Beyers, B.; Polliak, A. Diatom Frustules as Substrates for Photocatalysts. *TechConnect Briefs* **2018**, *5*, 263-266.

Presentations & Poster Sessions

- National Meeting of the American Chemical Society. Poster session. *April 2017*
- National Meting of Sigma Xi Scientific Research Honor Society. Poster session. *October 2015*
- NASA Glenn Research Center Summer Intern Research Symposium. Poster session. *August 2015*
- Northeast Ohio Undergraduate Research Symposium. Poster session. *August 2015*
- NASA Glenn Research Center Summer Intern Mid-Term Presentation. Presentation. *July 2015*
- Sigma Xi Columbia-Willamette Chapter, Student Research Symposium. Poster session. *April 2015*
- Undergraduate Poster Symposium, ACS Portland Section. Poster session. *October 2014*

PROFESSIONAL MEMBERSHIPS

· SPIE. (The International Society for Optical Engineering) *since 2018*
· National Education Association (NEA) *since 2018*
· American Academy for the Advancement of Science (AAAS) *since 2016*
· Sigma Xi Scientific Research Honor Society (ΣΞ) *since 2015*
· American Chemical Society (ACS) *since 2014*

PROGRAMMING & SOFTWARE SKILLS

· **Data Acquisition** LabView, CorrWare, Arduino
· **Programming** Mathematica, MATLAB, MathCAD, Python, Visual Basic
· **Design** AutoDesk 3D Fusion, TinkerCAD
· **Graphics / Publishing** LaTeX, ChemDraw, Adobe InDesign, Photoshop, HTML/CSS
· **Office Software** Microsoft Word, Excel, Access, PowerPoint

OTHER EXPERIENCE & ACTIVITIES

Student Club Volunteer Treasurer Jan. 2015 - Jun. 2017
PSU Student Affiliates of the ACS (SAACS), and PSU Physics Society *Portland, OR*
· Duties include bookkeeping, event planning, chemistry demonstrations, and recruitment
· Received training in leadership and campus organization policies and procedures

Gravimetry Laboratory Technician Aug. 2016 - May 2017
Chester LabNet *Tigard, OR*
· Gravimetric analysis at microgram levels following EPA & CFR protocols
· Acceptance testing of all filter media, QA/QC, and record keeping

Independent Reporter Sep. 2014 - Jun. 2015
PSU Vanguard · Portland Spectrum *Portland, OR*
· Science-related journalism, including writing, photography, and video production for two publications

Founding President, Campus Cycling Club Sep. 2011 - Jun. 2013
Portland Community College *Portland, OR*
· Organized club activities including bike rides, classes, and other events
· Promoted cycling culture and human-powered transportation on campus

Student Representative Sep. 2011 - Jun. 2012
Portland Community College Bike Task Force *Portland, OR*
· Represented student interests to the PCC department of Parking and Transportation Services
· Assisted with events to promote bicycle commuting

Earlier Experience 1999-2011
Various *Missoula, MT and Portland, OR*
· Employment prior to 2011 has included writing, proofreading, editing, professional training, employee supervision, retail management, customer service, desktop publishing, graphic design, and website development

REFERENCES

Prof. Raj Solanki
Portland State University
solanki@pdx.edu
503-725-3231

Dr. Dionne Hernandez-Lugo
NASA Glenn Research Center
dionne.m.hernandez-lugo-1@nasa.gov
216-433-5911

Dr. Michael Mackel
Portland Community College
mike.mackel@pcc.edu
971-722-6341