Natalie Malka Isenberg

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Education

University of Pittsburgh, Pittsburgh PA — Expected Graduation: August 2016
Swanson School of Engineering — GPA: 3.713
Bachelors of Science in Chemical Engineering — Minor Degree: Computer Science

Research Experience

DAAD Research Internship in Science and Engineering (RISE), ***Intern*** (Summer 2015)

- Awarded research internship in Germany to investigate effects of modified **ceramics** in energy storage processes
- Lived and worked in Magdeburg, Germany for 11 weeks

Swanson School of Engineering, Dr. C. Wilmer, ***Undergraduate Researcher*** (January 2015 – Present)

- Developing computational methods for chemical **gas sensors** using **metal organic frameworks**
- Working on algorithm using Python to determine ambient gas composition from measured chemical signals

Swanson School of Engineering, Dr. G. Veser, ***Undergraduate Research*** (May 2013 – August 2014)

- Studied effects of modified **nanoparticles** as oxygen carriers in **chemical looping combustion**

Mascaro Center for Sustainable Innovation (MCSI), Dr. G. Veser, ***Research Intern*** (Summer 2014)

- Headed a research project to test an array of **dopants** in cerium dioxide **supports** for improved structural integrity and oxygen availability

Pitt Excel Summer Research Internship, Dr. G. Veser, ***Research Intern*** (Summer 2013)

- Worked on optimizing oxygen utilization and stability of materials used in chemical looping combustion technology

Publications

1. More, A.; Bhavsar, S.; Isenberg, N.; Veser, G., *Lanthana-Doped Ceria as Active Support for Oxygen Carriers in Chemical Looping Combustion*. Applied Energy. (In review)
2. More, A; Isenberg, N.; Veser, G., *Doped Ceria for Improved Oxygen Carrier Stability in Multiple Cycles of Chemical Looping Combustion.* (In preparation)

Work and Volunteer Experience

Propel EAST Middle School, ***Volunteer Instructor*** (Spring 2015)

- Co-taught a weekly introductory creative programming course using Processing and Python

Department of Chemistry, ***Teaching Assistant (TA)*** (Fall 2014 & Spring 2015)

- Held weekly recitations and graded assignments for General Chemistry at the University of Pittsburgh

Department of Physics and Astronomy, ***Teaching Assistant (TA)*** (Spring 2014)

- Taught three hours of recitation weekly for Basic Physics for Science and Engineers II

Nano-scale Fabrication and Characterization Facility (NFCF), ***Technical Intern*** (Fall 2014)

- Maintained laboratory facilities and instruments in fabrication and characterization

EXCEL Engineering Diversity Program, ***Tutor*** (Spring 2014)

- Tutored local high school students in mathematics and chemistry

Awards and Proficiencies

Research Awards:

- Won the Covestro Award for outstanding undergraduate students in chemical engineering, December 2015
- Won 1st place poster presentation at "Chemical Engineering Research Day 2015" at the University of Pittsburgh
- Won 1st place in the Mascaro Center for Sustainable Innovation Internship, 2014
- Won "Best Research Mentee" in Pitt EXCEL Summer Internship, 2013

Poster Presentations: University of Pittsburgh Science 2014, ACS Central Regional Meeting 2014, AIChE Mid-Atlantic Regional Conference 2015

Programming Languages: Java, Python, C++, MATLAB, Simulink, ASPEN Plus

Languages: Fluent in Hebrew, proficient in Spanish