

Jared J. Schoepf

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EDUCATION

- Doctorate of Philosophy (**PhD**) in Engineering - Chemical Engineering July 2017
Arizona State University, Tempe, AZ GPA: 3.8/4.0
- Master of Science (**MS**) in Engineering – Chemical Engineering December 2016
Arizona State University, Tempe, AZ GPA: 3.8/4.0
- Bachelor of Science (**BS**) in Engineering - Chemical Engineering May 2013
Barrett, The Honors College; Ira A. Fulton Schools of Engineering GPA: 3.75/4.0
Arizona State University, Tempe, AZ

SKILLS

- Six Sigma Green Belt Certified
- Engineering Instructor
- Rapid Prototyping
- Elemental Analysis by XRF, XRD, and LIBS
- Business Pitches and Public Speaking
- Electron Microscopy & EDX (TEM and SEM)
- Entrepreneurial Mentorship
- Grant Proposal Writing
- Wet Lab Techniques

EXPERIENCE

Arizona State University – Tempe, Arizona July 2017 – Present
Assistant Director of Engineering Projects in Community Service (EPICS)

- Instruct and mentor 250 bachelor engineering students on the Human Center Design Engineering Process
- Mentored and managed over 40 engineering teams, aiding in the delivery of 10 projects in 3 years

Arizona State University – Tempe, Arizona August 2013 – June 2017
PhD Graduate Research Assistant

- Developed a tiered analytical process to characterize size, composition, and surface coating of inorganic nanomaterials (CNTs, SiO₂, TiO₂, CaPO₄, ZnO, MgO, CeO₂, Ag, Au, Cd QD, activated Carbon, CaCO₃, AlSiO₅, and graphene)
- Characterized nanomaterials in polymer membranes, films, and fibers, glass fiber optics, textiles, adhesives, coatings, biological matrices, water, and consumer products (sunscreen, fruits, vegetables, food products, and food additives)
- Developed physical (cellulose filters, glass filters, and polymer membranes) and surfactant based extraction processes (cloud point extraction) to remove nanomaterials dispersed in powder, solid, and liquid samples

Arizona State University – Tempe, Arizona January 2014 – May 2017
Instructor

- Instruct and mentor 215 bachelor engineering students on the Human Center Design Engineering Process
- Mentored and managed over 30 engineering teams, aiding in the delivery of 5 projects in 3 years

Henkel Corporation – Scottsdale, Arizona May 2013 - August 2013
Research and Development Intern – Personal Care

- Formulated and filed a **patent** for Dial Antibacterial Liquid Hand Soap formula with a new active drug ingredient
- Discovered a superior surfactant to solids ratio in liquid soap resulting in a 10X anti-microbial performance increase

ASU Fulton Undergraduate Research Initiative – Tempe, Arizona July 2011 - May 2013
Undergraduate Researcher

- Characterized and developed a particle stabilized, ionic liquid based Pickering emulsion by analyzing fluid dynamic behavior of solid, ionic liquid, oil, and water interactions. Resulted in 2nd author on scientific publication.

Henkel Corporation – Scottsdale, Arizona May 2012 - August 2012
Research and Development Intern – Laundry Care

- Formulated Purex UltraPacks unit dose surfactant laundry detergent pouches resulting in cost-savings
- Implemented Six Sigma analytics to optimize detergent formulas, improve performance, and produce cost savings
- Analyzed process manufacturing quality issues of unit dose laundry detergent pouches by Electron Microscopy

PROJECTS

SafeSIPP, LLC – Tempe, Arizona May 2011 - Present
CEO and Co-Founder

- Named Top 5 College Entrepreneur in the USA by Entrepreneur Magazine (over 1,000 applicants)
- Invented a **patented** system that simultaneously transports, purifies, and stores 25 gallons of water
- Composed six grant proposals and pitched in eight competitions that resulted in over \$60K in funding.
- Designed manufacturing facility and quality assurance and quality control programs for product manufacturing

Sustainable Storm Solutions, LLC – Tempe, Arizona August 2009 - August 2012
CEO and Founder

- Designed a **patent-pending** grate filtration systems for municipalities to remove debris from storm water
- Built 1/24th to 1/4th scale prototypes and designed a testing rig to analyze debris interactions under high flow scenarios

AWARDS

- 2014 - AZ Water Association Scholarship
- 2013 - Named Top 5 College Entrepreneur of the Year in the USA by Entrepreneur Magazine (over 1,000 applicants)
- 2013 - Mac6 Manufacturing Space Recipient – 2,000 sq. ft. of space for 18 months
- 2012 - ASU EPICS Gold Student of the Year (out of 300 students)
- 2012 - ASU EPICS Gold Team of the Year for SafeSIPP
- 2010 - ASU EPICS Gold Team of the Year for the Rio Salado Habitat Team*
- 2009 - 2013 Arizona State University Presidential Scholarship
- Dean's List for Academics for Fall 2009, Fall 2010, Spring 2011, Fall 2011, Spring 2012, Fall 2012, Spring 2013

PRESENTATIONS & PITCH COMPETITIONS

- 2016 Keynote Speaker - EPICS High Olympiad
- 2016 - 1st place Nanolytica Poster Competition
- 2016 Sustainable Nanotechnology Organization Presentation – *Dissolution and Presence of NMs in Infant Formula*
- 2015 Sustainable Nanotechnology Organization Presentation – *Rapid Assessment of Nanomaterials in Foods*
- 2015 Gordon Research Conference: Environmental Nanotechnology – *Rapid Assessment of Nanomaterials in Foods*
- 2014 Sustainable Nanotechnology Organization Lecture Presentation - *Nanoparticles in Wastewater Effluent*
- 2014 - 3rd place at Arizona Collegiate Venture Competition for SafeSIPP
- 2014 - Clinton Global Initiatives University attendee and poster presenter for SafeSIPP
- 2014 - Global Social Entrepreneurship Competition semi-finalist for SafeSIPP
- 2013 - Clinton Global Initiatives University attendee and poster presenter for Sustainable Storm Solutions
- 2013 - 1st Place at Presidents Group Pitch Competition for SafeSIPP
- 2013 - Presidents Group Presenter for Sustainable Storm Solutions
- 2012 - 1st People's Choice Award President's Board of General Dynamics for SafeSIPP
- 2012 - 2nd Place at ASU EPICS Project Presentation Palooza for SafeSIPP
- 2012 - 2nd Place at ASU Makerpitch Competition for SafeSIPP
- 2012 - 3rd Place at ASU Makerpitch Competition for Sustainable Storm Solutions
- 2011 - 1st Place ASU EPICS Project Presentation Palooza for SafeSIPP
- 2011 - 3rd Place Project Presentation Palooza for the Rio Salado Habitat Team*
- 2010 - 2nd Place National Academy of Engineers (NAE) Grand Challenges Summit Poster Presentation for the Rio Salado Habitat Team*

GRANTS

- 2014 - GLC Network Grant for Sustainable Storm Solutions
- 2013 - Edson Mac6 Manufacturing Space Grant
- 2013 - GLC Network Grant for SafeSIPP
- 2013 - GLC Network Grant for Sustainable Storm Solutions
- 2013 - Arizona State University Innovation Challenge Grant for SafeSIPP
- 2013 - Arizona State University Innovation Challenge Grant for Sustainable Storm Solutions
- 2012 - Henkel MIT Program Recipient for SafeSIPP
- 2012 – 1st Prize Grand Prize winner of ASU 10,000 Solutions Competition for SafeSIPP
- 2012 - Edson Student Entrepreneur Initiative Grant for SafeSIPP
- 2012 - Arizona State University Innovation Challenge Grant for SafeSIPP
- 2012 - Arizona State University Innovation Challenge Grant for Sustainable Storm Solutions
- 2010 - ASU Innovation Challenge “Challenges Innovator” Grant for the Rio Salado Habitat Team*
- 2010 - ASU Innovation Challenge “Community Changemaker” Grant for the Rio Salado Habitat Team*
- 2010 - Dean of Engineering Dr. Meldrum Excellence Grant for the Rio Salado Habitat Team*
- 2009 - Arizona State University Entrepreneur Advantage Project Grant for the Rio Salado Habitat Team*

*The Rio Salado Habitat Team is now Sustainable Storm Solutions, LLC

Total: \$106,500

PATENTS AND PUBLICATIONS

Patents

- Water treatment and conveyance apparatus. **Jared Joseph Schoepf**, Taylor Lynn Barker, Lindsay Fleming, Jacob Edward Arredondo. SafeSIPP LLC. Patent US 9416025 B2

Final Review Stage by US Patent Office:

- Skin cleansing composition with enhanced rheological properties. **Jared Schoepf**, Kanani Guerra, Nancy Rodgers. The Dial Corporation. Patent US 20150150831 A1
- Grate Filtration System. **Jared Joseph Schoepf**, Philip James Woods, Zachary David Wilson, Harvey Gatchalian Bowler, Chelsea Anne Cummings, Nicholas Christian Peterson, Brannon Maldonado, Michael Steven King, assignee. Sustainable Storm Solutions LLC. Patent US 20140138298 A1

Publications

1. **Schoepf, J.**, Bi, Y., Kidd, J., Herckes, P., Hristovski, K., Westerhoff, P., *Detection and Dissolution of Needle-like Hydroxyapatite Nanomaterials in Infant Formula*. NanoImpact, 5:22-28 (2017)
2. Frost, D., **Schoepf, J.**, Nofen, E., Dai, L. *Understanding droplet bridging in ionic liquid-based Pickering emulsions*. Journal of Colloid and Interface Science. 383 (2012) 103-109.
3. Yang, Y., Faust, J., **Schoepf, J.**, Hristovski, K., Capco, D., Herckes, P., Westerhoff, P. *Survey of food-grade silica dioxide nanomaterial occurrence, characterization, human gut impacts and fate across its lifecycle*. Journal of Science of The Total Environment. (2016)
4. Yang, Y., Reed, R., **Schoepf, J.**, Hristovski, K., Herckes, P., Westerhoff, P. *Prospecting nanomaterials in aqueous environments by cloud-point extraction coupled with transmission electron microscopy*. Science of the Total Environment (accepted January 2017)
5. O. Apul, N. von Hoogesteijn, **J. Schoepf**, D. Ladner, K. Hristovski, P. Westerhoff. *Superfine Powdered Activated Carbon Incorporated Into Electrospun Polystyrene Fibers Preserve Adsorption Capacity*. Science of the Total Environment

In Preparation for Publication:

6. **J. Schoepf**, P. Herckes, K. Hristovski, P. Westerhoff. *Towards Rapid Assessment of Nanomaterial Additives in Foods Using Laser Induced Breakdown Spectroscopy*.
7. **J. Schoepf**, J. Faust, R. Reed, P. Herckes, K. Hristovski, P. Westerhoff. *Detecting Nano Structures on the Surface of Fresh Fruits and Vegetables*.
8. **J. Schoepf**, P. Herckes, K. Hristovski, P. Westerhoff. *Towards Rapid Assessment of Nanomaterial Additives in Foods Using X-Ray Fluorescence*
9. D. Hanigan, L. Truong, R. Tanguay, **J. Schoepf**, T. Nosaka, A. Mulchandani, P. Westerhoff. *Comparative Human- and Eco-toxicity of Nanomaterial and Organic Chemical Active Ingredients in Sunscreens Superfine*.
10. Y. Bi, T. Zaikova, **J. Schoepf**, P. Herckes, J. Hutchison, P. Westerhoff. *The Efficacy of Engineered TiO₂ Nanoparticles in a Commercial Floor Coating and Environmental Implications*
11. L. Ling, H. Tugaoen, J. Brame, S. Sinha, C. Li, **J. Schoepf**, K. Hristovski, J. Kim, C. Shang, P. Westerhoff. *Coupling Light Emitting Diodes with Photocatalyst-Coated Optical Fibers Improves Quantum Yield of Pollutant Oxidation*

CLUBS AND ORGANIZATIONS

- ChemE Car
- American Institute for Chemical Engineering
- Snowdevils (Arizona State University Ski and Snowboarding Club)
- Trusted Outside International Travel Group LLC (Founder)
 - Lead and organize monthly outdoor hikes, backpacking trips, and ski and snowboarding trips for groups of 5 to 30 people in Arizona, Colorado, California, Utah, Nevada, Mexico, and Canada
 - Grown the group to over 60 members