
BIOGRAPHICAL SKETCH



NAME

Sasha Alden

POSITION TITLE

Graduate student/Associate Instructor

Email: sealden@iu.edu

Phone: 425-647-0814

Office: A663

Twitter: @SashaAlden



EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	MM/YY	FIELD OF STUDY
Indiana University (Bloomington, IN)	Ph.D.	Expected 2023	Analytical Chemistry
Western Washington University (Bellingham, WA)	B.S.	6/18	Chemistry

A. Personal Statement

I graduated with a B.S. in Chemistry in 2018 from Western Washington University in Bellingham, WA. I worked as an undergraduate researcher for over two years with Dr. David Rider. My research included development of photocathodes for fuel catalysis, TGA-IR studies of CuInS₂ quantum dots and crosslinking polymers, and characterization of nanoparticle-microgel composites. In the fall of 2018, I joined the Baker group to pursue fabrication of carbon microelectrode arrays. With these arrays, I developed the Array Microcell Method (AMCM) where a movable borosilicate pipette can address individual electrodes electrochemically with a droplet. This new tool is another way to get at single-entity measurements and high throughput electrochemical characterization or synthesis.

B. Honors

2017 Outstanding Poster Award WWU Scholars Week Symposium
2017 Verna Alexander Price Scholarship for Academic Merit and Continuation in Chemistry
2017 WWU Research for Undergraduates Experience Summer Internal Student (NSF-REU)
2017 WWU RSP Creative Opportunities Research Grant
2016 WWU RSP Creative Opportunities Research Grant

C. Publications

3. Alden, S.E.; Siepser, N.P.; Patterson, J.A.; Jagdale, G.S.; Choi, M.; Baker, L.A. Array Microcell Method (AMCM) for Serial Electroanalysis *ChemElectroChem*, **2020**, accepted. (<https://doi.org/10.1002/celec.201901976>)
2. Butler, T.; Alden, S. E.; Taylor, M.; Deese, S.; Rider, D. A.; Laskoski, M. Oligomeric Phthalonitriles and Tetrakis(Phenylethynyl)Benzene Blend with Improved Processing and Thermal Properties. *J. Polym. Sci., Part A: Polym. Chem.* **2018**, 56, 2630-2640. DOI: 10.1002/pola.29244
1. Curtis, T.; Taylor, A. K.; Alden, S. E.; Swanson, C.; Lo, J.; Knight, L.; Gates, B. D.; Emory, S. R.; and Rider, D. A. Synthesis and Characterization of Tunable, pH-Responsive Nanoparticle-Microgel Composites for Surface-Enhanced Raman Scattering Detection. *ACS Omega*. **2018**, 3, 10572-10588. DOI: 10.1021/acsomega.8b01561

D. Presentations

Posters

6. Micropipettes for Serial Electrochemical Array Analysis. S.E. Alden, N.P. Siepser, J.A. Patterson, L.A. Baker. Turkey Run Analytical Chemistry Conference, Marshall, IN, September 2019.
5. Pyrolyzed Photoresist Film Microelectrode Arrays as Substrates to Probe Catalytic Activity. S.E. Alden, N.P. Siepser, J.A. Patterson, L.A. Baker. 6th Annual Materials Research Symposium, Indiana University Bloomington, July 2019.
4. Titania Stabilized Cuprous Oxide Photocatalyst for the Reduction of Carbon Dioxide. S. Alden & D.A. Rider. 255th ACS National Conference in New Orleans, LA. Mar. 2018
3. A Titania Stabilized Cuprous Oxide Photocatalyst for the Synthesis of Solar Fuels. S. Alden & D.A. Rider. WWU NSF Research Experience for Undergraduates Symposium in Bellingham, WA. Aug. 2017
2. Highly Active Cuprous Oxide Photocathode for the Selective Photoelectrochemical Reduction of Carbon Dioxide: The Development of a Stable Nano Catalyst for Water Splitting." S. Alden & D.A. Rider 253rd ACS National Conference in San Francisco, CA. Apr. 2017
1. Highly Active Cuprous Oxide Photocathode for the Selective Photoelectrochemical Reduction of Carbon Dioxide. S. Alden & D.A. Rider. Linus Pauling Medal Symposium at Pacific Lutheran University in Tacoma, WA. Nov. 2016