Jessica Claire

Montgomery Street, San Francisco, CA 94105 (555) 432-1000 resumesample@example.com

SUMMARY

My Ph.D. career focused on developing technologies and materials to advance the fields of sulfur based infrared optical polymers, optical telecommunications, and lithium-sulfur batteries. This work was highly collaborative as highlighted by the numerous publications produced as an effort between different groups/ colleges at the University of Arizona, as well as other institutions. Given the nature of this multi-disciplinary work, I have I have a strong background not only in organic/polymer synthesis and characterization, but also in a variety of device fabrication techniques.

SKILLS

- **Device Fabrication:**
- Coin cell fabrication/testing
- Melt/solution polymer processing
- Fabrication of bulk and microoptic elements
- Glove box use
- Clean room and photolithography experience
- **Laboratory Synthesis:**
- Synthetic desing/planning
- Small molecule synthesis/characterization
- Polymer synthesis and characterization (RAFT, ATRP, Lactide ROP, ROMP)
- **Instrumentation Experience**
- Spectroscopy (UV-Vis, ATR/FTIR, NMR)
- Size Exclusion Chromatography
- Differential Scanning Calorimetry
- Thermogravimetric Analysis

EXPERIENCE

CONSULTANT

06/2020 to CURRENT

L&T Infotech | Dallas, TX

- Worked as a consultant to support an NSF SBIR grant aimed at bringing to market the minimum viable product using sulfur based materials as part of the optical component for IR imaging

PRINCIPLE RESEARCH SPECIALIST

11/2019 to CURRENT

The New School | New York, NY

- ·Designed new materials enabling novel methods for connecting photonic integrated circuits to meet industrial requirements/metrics of reducing the cost of optical alignment and enabling greater modularity in fabrication processes.
- Worked to synthesize and process biodegradable materials into stents to help reduce clotting and aide in tissue regeneration following heart surgery.
- Designed and synthesized new organic comonomer motifs for sulfur based IR optical materials to chemically engineer new windows of transparency

GRADUATE RESEARCH ASSISTANT

08/2014 to 12/2019

The University Of Arizona | City, STATE

- Improved thermomechanical properties while retaining desired performance of sulfur based infrared optical devices
- Devised methods of increasing the refractive index of sulfur based materials by incorporating other chalcogens into the polymer
- Development of highly efficient, wholly solution processable dielectric mirrors utilizing high refractive index sulfur based materials
- Developed materials that undergo photolithographically defined changes in refractive index to facilitate fabrication of polymer waveguides devoid of etching steps

EDUCATION AND TRAINING

Bachelor of Science | Chemistry *06/2014*

California Polytechnic State University-San Luis Obispo, San Luis Obispo, CA

PhD. | Chemistry *12/2019*

The University of Arizona, Tucson, AZ