

Anthony Pyka, Ph.D, E.I.T.

(858) 382-5353

anthonyrpyka@gmail.com

410 NE 70 Street, Seattle, WA, 98115

<https://www.linkedin.com/in/anthony-pyka>

EDUCATION

Ph.D. Chemical Engineering: Data Science - University of Washington

11/16/2023

M.S. Chemical Engineering - University of Washington

9/10/2022

B.S. Chemical Engineering - Oregon State University

6/14/2019

WORK EXPERIENCE

Graduate Researcher - Stuve Lab, University of Washington

9/2019 – 12/2023

- Designed and constructed a high-vacuum system to synthesize and test nickel single crystals for charge transport, electrochemical urea oxidation, and water electrolysis kinetics in alkaline mediums
- Synthesized nickel iron, nickel chromium, nickel silicon, and nickel manganese electrocatalysts within membrane-electrode assemblies (MEA) for integration into fuel cell stacks
- Conducted modeling and finite element analysis using COMSOL to establish design parameters, such as flowrates, partial pressures, and pH, for a direct urea fuel cell
- Developed experience with mills, lathes, and other machining tools as well as software such as SolidWorks, Python, and SQL to build a high-vacuum RGA mass spectrometry characterization system

DAAD RISE Intern - Fraunhofer UMSICHT, Germany

6/2018 – 9/2018

- Performed hydrotreating experiments for upgrading crude bio-oil to gasoline, kerosene, and diesel
- Designed and conducted inductive hydrotreating experiments to determine effects of magnetic fields on crude bio-oil samples from a thermo-catalytic reactor

Undergraduate Researcher - AuYeung Lab, Oregon State University

6/2017 – 6/2018

- Designed and implemented electrical circuits to simulate a corona discharge for the conversion of methane to ethane through free radicalization
- Coordinated with graduate students to create a Design of Experiments (DOE) to find relationships between voltage, current, concentration, and single-pass conversion

Funai Corporation Intern - Oregon State University

6/2017 – 9/2017

- Integrated a real-time imaging system within a microfluidic dispensing device for life science applications
- Utilized MATLAB/Simulink for precise image acquisition analysis and for a graphical user interface.

ACTIVITIES, AWARDS, AND CREDENTIALS

- Washington State Engineer-In-Training (E.I.T.) certification
- University of Washington Rugby Club
- Eagle Scout - Boy Scouts of America

11/2023

6/2021 – 9/2022

2011

SKILLS

- Proficient in Aspen, Hysys, SolidWorks, Labview Microsoft Office, C, C++, SQL, SQL++, Python, and Git
- Strong communication skills with the ability to convey technical concepts effectively to diverse audiences
- Skilled in drafting engineering specifications and other document
- Developed a Printed Circuit Board (PCB) using EAGLE and programmed an Atmel AtTiny84 microcontroller to construct a vacuum-tube watch
- Created a solid-state Tesla coil through controlling an H-bridge power circuit with a tunable Schmitt Trigger oscillator and Insulated-Gate Bipolar Transistor (IGBT) components

REFERENCES

Philip Harding, Ph.D, P.E. - Amazon
Philp.h.harding@gmail.com
(541)737-6240

David Bergsman, Ph.D. - University of Washington
dbergs@uw.edu
(206) 221-7332