

# KENNY NGUYEN

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## EDUCATION

**San José State University** – Bachelor of Science, Chemical Engineering—Minor in Applied Mathematics

May 2019

Activities and Societies: Men's Club Volleyball, American Institute of Chemical Engineers

## SKILLS & ABILITIES

Microsoft Office Suite, SOP Development, Scanning Acoustic Microscopy, Benchtop Micro CT, Sample Prep, Data Analysis, Root Cause Analysis, Surface Roughness Analysis, 3D Reconstruction, NMR and IR Analysis, Thermogravimetric Analysis, Scanning Electron Microscopy. Familiarity in MatLab, Python, AutoCAD, ChemCAD, OBS DragonFly, MDI Jade, MiniTab.

## WORK EXPERIENCE

### Covalent Metrology – Lab Analyst

November 2019 – Present

- Apart of X-Ray characterization group measuring and imaging samples ranging from PCBAs, wafers, batteries, and thin films.
- Managed the Micro CT and SAM assisting the failure analysis team view voids, cracks, and other delimitations in parts
- Used other metrology instruments such as: X-Ray diffraction/reflectometry, Wavelength dispersive x-ray fluorescence, Energy dispersive x-ray fluorescence, Scanning acoustic microscopy, 3D laser confocal microscope, and Surface roughness
- Performed analysis via phase identification, elemental analysis, and quantitative analysis
- Provided images and measurements base on specific sample needs

### City Beach – Volleyball Head Coach

August 2018 – Present

- Coached high school students to develop habits that will make them successful on and off the court
- Strive to push players to be respectful, have sportsmanlike attitude, and be competitive in the sport of volleyball
- Taught players the rules and techniques that allow them to perform at the highest level and the importance of communication and teamwork
- Held practices 2-3 times a week and attended bi-weekly tournaments ran by the Northern California Volleyball Association (NCVA)

## RESEARCH EXPERIENCE

### Thermochemical Energy Applications Laboratory (San Jose State University)

Feb 2019 – April 2019

- Focus on kinetic and mass transfer effects of solid fuel devolatilization
- Studied thermochemical conversion of particles with varying heating rate and particle size
- Shadowed graduate students who performed thermal analysis tasks via thermogravimetric analysis

### Simocko Lab Organic Chemistry and Polymer Science (San Jose State University)

June 2018 – Dec 2019

- Designed and implemented experiments on polymers for different projects including: Poly-ketone, ADMET, and SADMET polymerizations.
- Demonstrated ability to follow basic research protocols and follow instructions
- Knowledge of laboratory safety in accordance with OSHA standards as well as interpersonal, verbal, and written communications to interact with a diverse group of people
- Performed experiments using column chromatography, candela transfer, thin-layer chromatography, and gel permeation chromatography for different types of monomers (3,3 6,6 and 9,9 Ketone)
- Analyzed data via NMR spectroscopy and GPC and presented monthly presentations to research group members

### Undergraduate Chemical Engineering Lab

August 2018 – April 2019

- Performed experiments using chemical engineering processes with an emphasis on mass transfer and chemical reactor operations.
- Practiced competence in engineering experiments: Biodiesel synthesis, ONPG reactions, Alginate bead creation, Centrifugal Pump system, Packed bed, and more.

### Organic Chemistry Lab

Spring 2018

- Synthesized aspirin from salicylic acid and ensured purity through colorimetric testing
- Practiced fractional distillation and gas chromatography (GC) on different alcohol mixtures; Used IR Spectra and 300 MHz NMR spectrum to identify unknown alcohols
- Performed thin-layer chromatography (TLC) to separate and identify compounds in a mixture and determine its purity
- Executed different separation techniques including: crystallization, vacuum/gravity Filtration, simple/fractional distillation, precipitation, and sublimation

## PROJECTS

### EPRI: Senior Design Project – Environmental Regulations and Audits

November 2018 – May 2019

- Given a task to design a power plant that reduces carbon dioxide emissions via the production of wood pellets and co-firing them with coal
- Researched different livestock and wood to determine heating value of produced wood pellets
- Used ChemCAD and hand calculations to scale the design for real world applications
- Conducted research on environmental audit reports, regulations, and personal regulations
- Designed the PFD and P&ID using AutoCAD along with arrangement of plant and equipment