Ian Hunter Wiatric

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914–327–1442 | Huntsville, AL

Professional Experience

Materials & Process Engineer I October 2024 – February 2025
Blue Origin Huntsville, AL

- Improved surface treatment throughput by performing statistical process control (SPC).
- Created data pipeline to continuously assess process stability and capability via control charts.
- Developed nickel superalloy etchant to balance production bottlenecking with safety hazards.
- Solved emergent production issues in industrial manufacturing by root cause analysis (RCA).
- Audited internal cleanrooms to ISO 14644, and external suppliers for precision cleaning techniques.
- Assessed material compatibility risks to prevent $20,000 in chemical waste and 100s of part NCs.

Drug Delivery R&D Co-op January 2023 – August 2023
GenerationBio Cambridge, MA

- Created a novel fluorimetry assay to predict LNP stability, enabling thousandfold cost reduction.
- Analyzed lipid nanoparticle (LNP) properties using high throughput screening assays.
- Maintained sterile workflow in biosafety cabinets, pipetting technique, and endotoxin testing.
- Formulated pre-clinical scale pharmaceuticals with experimental nucleic acids.

Chemistry & Materials Science Co-op January 2022 – August 2022
Draper Laboratory Cambridge, MA

- Characterized Si wafers and coatings using Raman, SEM, and EDX in ISO 6 cleanroom.
- Developed a novel electrochemical plating process using highly sensitive ionic liquids.
- Performed RCA on MEMs silicon eutectic failure using dynamic mechanical analysis (DMA).
- Optimized adhesive curing with rotational rheometery and lap shear testing.
- Applied ATR-FTIR to solve emergent production issue in aerospace manufacturing.

Battery Engineering Co-op January 2021 – June 2021
Cuberg Emeryville, CA

- Assembled hundreds of test cells for multivariate process development and equipment validation.
- Achieved industry record by collaborating with R&D team: 512 cycles for a 5 Ah Li-metal battery.
- Programmed image analysis tool to screen fluid wetting properties and train ML model.
- Gained 500+ hours handling reactive materials inside controlled atmosphere glove boxes.

Education

B.S. in Chemical Engineering and Biochemistry September 2019 – May 2024
Northeastern University Boston, MA

- Distinctions: 3.75 GPA, Dean's Merit Scholarship, passed FE Exam with EIT pending
- Academic Groups: Science the World, ChemE Car, AiChE

Skills

- SPC
- Design Of Experiment
- SQL
- Simulink
- Aspen
- MATLAB
- Python
- FTIR
- Raman

Projects

- Continuous synthesis and separation of phthalic anhydride at pilot scale.
- Sustainable mycoprotein production via hydrolysis and fermentation of coffee waste.