Plenty of white space. CV is not cramped.

CONTACT INFORMATION

Office: ███████
Mobile: ███████
E-mail: ███████
www: ███████
www: ███████

MIT
77 Massachusetts Avenue
Building 66-██
Cambridge, MA 02139 USA

EDUCATION & CREDENTIALS

Massachusetts Institute of Technology (Dual Ph.D./MSCEP Program)

Ph.D., Chemical Engineering,   Expected Graduation: 2019

- Thesis Title: ███████
- Advisors: ███████
- Current GPA: ███ /5.0

MSCEP, David H. Koch School of Chemical Engineering Practice,   June 2016

- Station 1: Emirates Global Aluminium
- Station 2: United States Food and Drug Administration
- GPA: ███ /5.0

University of ███████

B.ChE., Chemical Engineering,   May 2014

- GPA: ███ /4.000
- Minor: Computer Science
- Honors Degree with Distinction
- Thesis Title: ███████ *Molecular Characterization and Growth Rates*
- Advisor: Professor ███████
- Magna Cum Laude
- Alpha Lambda Delta President
- Engineers Without Borders Project Manager

ENGINEERING EXPERIENCE

Author was looking for fellowhsips, so engineering experience is highlighted early.

Doctoral Candidate   January 2015 to Present

███████ Groups, Massachusetts Institute of Technology

Selective Electrochemical Hydrogenation of Reductive Catalytic Fractionation Products

- Perform kinetic studies of electrochemical hydrogenation rates on different electrode surfaces
- Optimize catalyst chemistry and structure for achieving high conversions and selectivities
- Synthesize catalyst nanoparticles for inclusion into electrode material

Techno-Economic Analysis of Electrolytic Cells for Biomass Upgrading

- Predict the selling price of commodity aromatic chemicals from electrolytic processing
- Understand design criteria for new electrolytic cells in organic processing
- Directly compare the economic costs of high temperature processing vs. electrolytic processing

Graduate Consultant   October 2015 to March 2016

Food and Drug Administration

Describes concrete outcomes and impacts of contributions in previous positions.

Custom gSOLIDS Module Permitting Residence Time Distributions

- Developed mathematical package in gPROMS language that allowed solid processing with unit operations represented by RTDs
- Developed C++ plugins for gPROMS language that allowed RTD manipulations
- Developed MATLAB GUI for users to import and fit experimental residence time distributions
- Extensions allowed users to simply model complicated solids processes in gSOLIDS software

Engineering Study of Perfusion Culture of CHO Cells - Project Lead

- Directly compared perfusion, fed-batch, and batch cultures of CHO Cells
- Constructed model for cell growth and production and estimated parameters from data
- Provided preliminary designs for control systems to allow automated operation

Important words, such as potisition titles, are in bold.

Quantified and concrete impacts are shared.

[Emirates Global Aluminium]

Operational Optimizations in Heat Recovery Steam Generation Units

- Developed detailed process simulation of EGA Jebel Ali power plant in AspenPlus software
- Proposed methods for optimizing plant operations for waste heat recovery
- Evaluated feasibility of various operational and capital-intensive changes

Understanding Aluminum Billet Discoloration - Project Lead

- Developed method to remove cosmetic discoloration from aluminum billets
- Analyzed discolored billets' microstructure using SEM-EDS and AFM
- Proposed possible changes that could be causing discoloration in the billets

Undergraduate Research Assistant June 2011 to May 2014
Catalysis Center for Energy Innovation, University of ███████

███████████████ *Molecular Characterization and Growth Rates*

- Investigated structural changes that occur during humin formation via FTIR, NMR, and SEM
- Measured particle growth kinetics using dynamic light scattering
- Investigated effects of temperature and pH changes on humin growth rates

Optimization of Biphasic Reaction Conditions for Sugar Processing

- Studied partition coefficients of sugar derived chemicals in aqueous/organic systems
- Investigated the effects of additional components on equilibrium behavior (i.e. salting out)

Project Manager March 2011 to May 2014
Engineers Without Borders University of ████ Student Chapter

Cameroon Potable Water Project

- Led team of students in finalizing designs for water project servicing community of 3000
- Prepared reports and presentations for review by national EWB organization review
- Finalized implementation of system with team of 3 other students
- Prepared operating and troubleshooting manual for full system to pass on to community

Intern May 2012 to August 2012
Air Products and Chemicals, Inc.

Design of Gas Client Database for Data Analytics

- Worked with marketing team to develop database of clients using a variety of products
- Developed scripts to quickly analyze and query database to allow for marketing optimization

TEACHING & MENTORING EXPERIENCE

Research Advisor and Mentor September 2015 to Present
Massachusetts Institute of Technology

- Train and supervise undergraduate students in laboratory research activities

Project Manager March 2011 to May 2014
Engineers Without Borders University of ████ Student Chapter

- Mentored new project manager for upcoming projects
- Assisted students throughout the chapter in technical writing and designs

COMMUNITY LEADERSHIP

President January 2012 - December 2012
Alpha Lambda Delta Honors Society, University of ████

RESEARCH AWARDS

National Science Foundation Graduate Research Fellowship 2014

ACADEMIC AWARDS

T. W. Fraser Russell Undergraduate Enrichment Award May 2013
University of ████ General Honors Award November 2012
University of ████ Chemical Engineering Industrial Sponsors Scholarship May 2011

Consistent formatting makes the CV easier to skim and find important information.

CV is between 2 and 3 pages in length.

| LANGUAGES | English | Native Proficiency |
| | Spanish | Limited Working Proficiency |

SKILLS & COURSES

Engineering & Chemistry
Kinetics, Thermodynamics, Transport Phenomena, Catalysis, Electrochemistry, Uncertainty Analysis, Organic Chemistry, Inorganic Chemistry

Computational
Numerical Methods, AI, Parallel Computing, Data Structures, Software Engineering

Modeling & Numerical
Python, MATLAB, Java, VBA, C++, gPROMS, Mathematica, Maple

Other Computer
Linux, Unix, LaTeX, HTML, Origin

Systems
Electrolyzers, HPLC, GC, Packed-bed Reactors, Batch Reactors

Materials Characterization
XRD, SEM, TEM, STEM, EDS, FTIR, UV/vis, Raman, NMR

Other Laboratory
HPLC, GC, DLS, KF titration, Safety

PROFESSIONAL MEMBERSHIPS
- American Chemical Society
- American Institute of Chemical Engineers

ACADEMIC MEMBERSHIPS
- The Order of the Engineer
- Alpha Lambda Delta
- Tau Beta Pi

JOURNAL ARTICLES

[1] ███████████████████████████████████████
██ *Green Chem.*, pages ███████,
2016.

POSTERS

[2] ████████████, ████████████████████████████████
████████████████████████████████ In *AIChE Student Conference at the National Meeting*, 2013.

[3] ████████████, ████████████████████████████████████
████████████████████████████████████. In *Catalysis Center for Energy Innovation Symposium*, 2014.