# **Dane D. Fearon**

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# EDUCATION

B.E. Chemical Engineering • Grove School of Engineering • City College of New York • Expected: 2017 • GPA: 3.52

### **DESIGN EXPERIENCE**

#### **Senior Design Project**

The City College of New York

- Worked in team of 3 to create feasible method of generating hydrogen via the catalytic partial oxidation of methane
- Used Aspen Plus Software to simulate hydrogen production plant
- Developed process flow diagram and conducted material and energy balance for system
- Placed 1<sup>st</sup> out of 12 groups in class; achieved perfect scores for Aspen simulation and design presentation

# **RESEARCH EXPERIENCE**

#### Student Research Intern,

Louis Stokes Alliance, Combustion Catalysis Labs, Dr. Marco J. Castaldi

- Building bench scale reactor to simulate tar fouling in biomass gasification
- ٠ Building bench scale reactor to synthesize carbon nanofibers and determine how they form as a byproduct of gasification
- Using bomb calorimetry to determine heating values of waste plastics, fuels, virgin resins, and charred materials
- Analyzing surfaces of sample residues using scanning electron microscopy, energy dispersive X-ray spectroscopy
- Presented research findings at CUNY Summer Research Symposium

#### **Student Research Intern**

Tokyo Institute of Technology, Dr. Kunio Yoshikawa

- Used already existing reactor to gasify biomass and later char with the goal of comparing the outcomes in order to optimizing char gasification
- Determined optimal gasification temperature range and equivalence ratio for 100% carbonized cedar char

# OTHER EXPERIENCE

#### **Peer Mentor**

**Retention Achievement Professionalism Success Institute** 

Assisted mentee with setting and achieving goals, finding internships, and using the university's resources more effectively

# Peer-Lead Team Learning (PLTL) Workshop Leader

- The City College of New York
- Assisted students in understanding concepts in chemistry, collaborated with other leaders to improve lesson quality Volunteer Brooklyn, NY 09/2011-09/2015

#### **Cobble Hill Health Center**

• Assisted in planning, set-up, and execution of resident activities as well as in orientation of new volunteers

## **TECHNICAL SKILLS**

 Lab Safety Thermogravimetric Analysis **Bench-Scale Reactor Design** • Bomb Calorimetry Scanning Electron Microscopy Aspen Simulation AWARDS Wilfred Vernon Clarke Memorial Foundation Scholarship 01/16-08/17 Macaulay Scholar (full tuition scholarship to Macaulay Honors College) 08/2013-Present

Dean's List

# **ACTIVITIES & AFFILIATIONS**

Omega Chi Epsilon CCNY Chapter – President Materials Research Society CCNY Chapter - Secretary American Institute of Chemical Engineers (AIChE)

AIChE ChemE Car Competition (2015-Present)

**CUNY IBM Case Competition Semifinalist** 

Proposed idea to use IBM Watson's cognitive computing capabilities to improve the immigration process

05/2016-Present 05/2015-05/2016 05/2014-Present

01/2015-Present

#### 10/2014-01/2015

New York, NY 02/2015-Present

New York, NY 08/2016-12/2016

Tokyo, JP 07/2016-08/2016

New York, NY 01/2014-12/2014

New York, NY 02/2015-01/2016