PATRICK M. BROWN

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OBJECTIVES

- To contribute to research, development, and testing of chemical processing technologies in support of energy and aerospace applications, including novel technologies and process improvement

EDUCATION

University of Rhode Island, Kingston, RI

B.S. Chemical Engineering *December 2014*

Current GPA: 3.91/4.00 (overall); 4.00/4.00 (major)

EXPERIENCE

Teaching Assistant, URI Department of Chemical Engineering, Kingston, RI *September 2013 – Present*

- Facilitate in the understanding of chemical engineering first principles
- Demonstrate the use of MATLAB and MS Excel for numerical and analytical computations
- Encourage students to work through problems using appropriate assumptions and concepts

Engineering Intern, NASA Johnson Space Center, Propulsion & Power Division, Houston, TX *Summer 2014*

- Designed, built, and tested novel steam methane reformer for solid oxide fuel cell development under budget
- Performed extensive literature review and design calculations; created fluid schematics and models using Graphite and Pro/ENGINEER for system layout; communicated effectively with and procured components from multiple vendors; collaborated with other engineers and technicians for system development and testing
- Supported several projects and trade studies to examine potential chemical processing technologies for a future human Mars mission; contributed to the areas of in-situ resource utilization, propellant production, fuel reforming, fuel cells, and electrolysis with an emphasis on systems engineering and integration

Director – Learn to Skate Program, Ocean Community YMCA, Westerly, RI *Winters 2011 – 2014*

- Improved the daily operations of a local skating facility using my ice skating expertise, teaching abilities, and organizational skills
- Developed and implemented ice skating instruction programs for over 200 students of varying skill levels and ages
- Coordinated with and effectively managed other instructors

Process Engineering Intern, Amgen, West Greenwich, RI *Summer 2013*

- Developed engineering test plan and characterized ultrasonic probe technology for leak detection and monitoring of mechanical wear in manufacturing equipment and utilities; presented findings and recommendations to the facilities and engineering group
- Set up, calibrated, and implemented 3D printer for on-site rapid prototyping
- Extracted process data from systems including OSIsoft PI and DeltaV for troubleshooting process improvement
- Interpreted P&IDs and performed equipment walk-downs; followed SOPs and cGMPs for testing and manufacturing purposes; assisted in technology transfers for several biologics

Mechanical Design Engineer's Assistant, Owner of Syba Systems LLC, Westerly, RI *Summer 2012*

- Designed a mobile solar array for off-grid power supply
- Drafted and modeled mechanical systems and electrical components with AutoCAD and SolidWorks

COMPUTER SKILLS

Proficient in MS Office and MATLAB; working knowledge of Aspen, AutoCAD, Graphite, Pro/ENGINEER, POLYMATH, SolidWorks, Spanish, and Synergy data acquisition systems

HONORS & ACTIVITIES

Treasurer, URI AIChE Student Chapter
Tau Beta Pi Engineering Honor Society
Volunteer, Chorus of Westerly & YMCA
Dean's List
Member, Theta Chi Fraternity

U.S. National Defense Medal
Induction, USAFA Cadet Wing
Service Academy Nominations
- U.S. Senators Lincoln Chafee & Jack Reed
- U.S. Congressman James Langevin