Enric Baduell

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OBJECTIVE

To obtain an internship position in the Petroleum Industry.

EDUCATION

Florida State University, Tallahassee, FL **May 2018**
Bachelor of Science in Chemical Engineering
Overall GPA: 3.9/4.0

COURSEWORK

- Introduction to Petroleum Engineering, Senior Process Design I & II, Separation Processes, Transport Phenomena I & II, Unit Operations Laboratory, Kinetics and Reactor Design, Process Control, Introduction to Electrochemical Engineering.

EXPERIENCE

Florida State University, Tallahassee, FL **Spring 2014 – Fall 2016**
Advisor: Dr. Kenneth Hanson
Undergraduate Research Assistant, Department of Chemistry and Biochemistry

- Synthesized polymers with photomechanical properties for solar cell devices.
- Synthesized photosensitizers for low-cost solar cell devices.
- Contributed to a research article published on ACS Energy letters:
  Sean P. Hill, Tristan Dilbeck, **Enric Baduell**, and Kenneth Hanson*. Integrated Photon Up-conversion Solar Cell via Molecular Self-Assembled Bilayers. ACS Energy Lett., 2016, 1 (1), pp 3-8.

PROJECTS

Methanol Production Plant, Tallahassee, Florida, FAMU-FSU College of Engineering. **Spring 2018**

- Designed a chemical plant using ASPEN to improve the economics of corn to ethanol production by implementing a CO_2 recovery process. Rather than releasing the CO_2 during fermentation, the gas was captured and used to make methanol. 99.9% pure methanol was produced at 27˚C and 1 bar.

Cumene Production Plant, Tallahassee, Florida, FAMU-FSU College of Engineering **Fall 2017**

- Designed a chemical plant using ASPEN that produced 100,000 metric tons per year of 99% cumene using propylene and benzene as the starting material. The project included economic analysis for building and running the plant, as well as safety restrictions with a maximum operating temperature of 400 ºC.

United Nuclear Waste Solutions, Fukushima, Japan, The Green Program **Summer 2017**

- Proposed a mechanism to reduce nuclear waste storage by using a recycling cycle for spent fuel and utilizing the resulting product in nuclear battery research.

Reduction of H_2S Emissions by Hellisheidi Power Plant, Reykjavik, Iceland **Spring 2017**

- Proposed a solution for reducing the amount of H_2S released to the atmosphere in Hellisheidi Power Station by incorporating a scrubber and catalyst to the main geothermal process.

Heat Exchanger, Tallahassee, Florida, FAMU-FSU College of Engineering **Spring 2017**

- Designed an experiment to determine the effect of fluid velocity in the shell on the overall heat-transfer coefficient of a double-pipe heat exchanger.

LEADERSHIP

The Green Program, Philadelphia, PA **Fall 2017 - Spring 2018**
Ambassador

- Work directly with The Green Program team as liaison on Florida State University campus.
- Build a GREEN home-away-from-home by bringing together GREEN alumni on campus around my initiatives and events.

SKILLS

Application: ASPEN Plus, MATLAB, Microsoft Excel, Statistical Analysis.
Laboratory: Design of Experiment (DOE), Fluorometer, NMR, Potentiostat, UV-Vis Spectroscopy.
Certifications: SAChE Basic Laboratory Safety, SAChE Chemical Reactivity Hazards.