

Yuliya Preger

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EDUCATION

Massachusetts Institute of Technology

Candidate for Bachelor of Science in Chemical Engineering

GPA: 4.7/5.0

Relevant Coursework: Chemical Kinetics and Reactor Design, Separation Processes, Chemical Engineering Projects Lab, Transport Processes, Chemical Engineering Thermodynamics

Cambridge, MA

June 2013

WORK EXPERIENCE

3M

R&D – Materials and Engineering Intern

St. Paul, MN

June 2012 - present

- Planning and executing runs in a novel bench-scale reactor to evaluate its potential use for emulsion polymerization
- Modeling polymerization in Aspen Polymers to predict impact of various parameters on conversion
- Reduced residence time and clogging, and increased conversion to desired levels for scale-up in a variant of a PSA formulation
- Performed extensive patent search to identify opportunities for filing

Biomaterials Science and Engineering Laboratory

Undergraduate Research Opportunities Program (UROP)

Cambridge, MA

October 2010-May 2012

- Performed bench-scale experiments to determine the optimal solvent purification and extraction process for various compounds in palm oil effluent (process will ultimately be raised to plant level)
- Created procedures for the analysis and quantification of compounds of interest using high performance liquid chromatography
- Investigated the micellization of compounds of interest using HPLC, spectroscopy and surface tension analysis

Jet Propulsion Laboratory

Summer Research Intern

Pasadena, CA

June-August 2009

- Worked as part of a team of summer students to characterize various Pt-alloy thin films for use as catalysts in fuel cells
- Analyzed pre/post corrosion data by SEM, XRD and profilometer to identify the most stable alloy and composition

LEADERSHIP & MANAGEMENT

Society of Women Engineers – Outreach

Vice President and Keys to Empowering Youth Co-Chair

Cambridge, MA

February 2010 – present

- Oversee six committees: 14 program chairs, 100+ volunteers, 1000+ K-12 participants
- Increased publicity and collaborations with campus and community groups, significantly raising the number of event volunteers and program applicants
- Worked with a co-chair to coordinate all aspects (marketing, logistics, program agenda, volunteer recruitment) of a Society of Women Engineers STEM outreach program for middle school girls

MIT Career Fair

Director: Day-of Logistics

Cambridge, MA

May 2010 – May 2011

- Worked with a team of six other students to plan and coordinate all aspects of the MIT Career Fair and associated infosessions
- Negotiated contracts amounting to ~\$70,000 with external vendors for venue preparation
- Arranged all details in venue (booth set-up, catering, etc.) for the day of the Career Fair for 300+ companies and ~5000 students

INTERESTS/ACTIVITIES

Gordon-MIT Engineering Leadership Program, FIRST Robotics, STEM K-12 Education