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Jouha Sylvia Min

Education

Massachusetts Institute of Technology Expected May 2015
PhD – Chemical Engineering (GPA 5.0/5.0)
Advisors: Professor Paula T. Hammond and Professor Richard D. Braatz

Master of Science in Chemical Engineering Practice Sep 2012

Cornell University College of Engineering May 2010
Bachelor of Science – Chemical Engineering (GPA 4.13/4.3, Summa Cum Laude)

Current Research Interest

Thesis: Engineering a polyelectrolyte multilayer film for extended release of various biomaterials for surface delivery applications and modeling release behavior

- Providing the first substantive models for controlling biomaterial release from an electrostatically assembled thin film
- Developing a "smart" delivery system capable of releasing multiple biomaterials in a timely controlled and sequential manner for drug delivery and other potential applications

Work Experience

BP Chemicals Naperville, IL & Hull, United Kingdom Oct 2011 – Dec 2011
Technical Consultant (MIT Practice School)

- Worked on (1) Hydro-processing feed characterization project and (2) STaaR (syngas to acetic acid revolution) modeling project
- Evaluated the latest version of uncertainty analysis tools by making a quantitative comparison with a previous version
- Investigated deficiencies of kinetic and deactivation models for the STaaR process and improved the overall predictive power by employing Matlab, Aspen and Athena

General Mills Minneapolis, MN Aug 2011 – Oct 2011
Technical Consultant (MIT Practice School)

- Worked on (1) Broccoli blanching optimization project with Green Giant team and (2) Algae oil (omega-3) encapsulation project with Big G (cereal) team
- Leader of omega-3 encapsulation project for generating algae oil micro-pellets with mechanical and chemical stability
- Applied our knowledge of chemical engineering, esp. heat transfer and enzyme kinetics, to develop a simple model that can be used for controlling and predicting the effects of parameter variations
- Identified major factors influencing lipid oxidation of algae oil emulsions and proposed effective strategies for controlling the product quality degradation

Research Assistant at Cornell University Ithaca, NY Aug 2008 – May 2010
3D VISUALIZATION OF EMBRYONIC CHICKEN HEART THROUGH MICRO CT

- Trained on MicroCT scanning and analytic skills using sophisticated computer programs such as osirix or microview
- Solved pitfalls of research techniques through discussion and innovation of new ideas and techniques
- Published a paper as a co-first author (The Anatomical Record, 2011)

Samsung Economics Research Institute (SERI) Seoul, Korea Jun 2008 – Aug 2008
Summer Intern

- In Business & Marketing department, learned specifically how consulting process works and how to find "Blue-ocean" in Korean food markets, by working on a consulting project, called "*Everland* Food-Culture business Expansion"
- Based on *Global Habbo Youth Survey 2008,* explored and analyzed Korean Youth Market (consuming trends, behaviors, etc.)
- Learned how workers distribute their jobs and cooperate each other

Awards & Professional Recognition

Recipient of **Merrill Presidential Scholarship** 2010

Recipient of **summer research award** from Intel corporation and Cisco 2009

General Secretary of MIT Korean Graduate Students Association (KGSA) Present

- In charge of general affairs and financial management for the association

Recording Secretary of Tau Beta Pi National Engineering Honors Society 2008 - 2010

- Help officers to keep track of job-recruiting events and schedules

Member of AIChE (National Chemical Engineering Society) 2007- 2010

Skills

Matlab, Python, Java , Mathematica, Origin, Microview, Osirix, Microsoft Office, Adobe Photoshop, Adobe Illustrator
Languages: Korean (Fluent), Some knowledge of Japanese