Ho Joong Kim

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EDUCATION

Ph.D. in Chemical Engineering Jan. 2018 ~
Purdue University, West Lafayette, IN
- Advisor: Dr. Bryan Boudouris
  Research Area: New organic semiconductors for organic electrochemical transistors

M.S. in Chemical Engineering Apr. 2014
Stanford University, Stanford, CA
- Overall GPA: 3.6 / 4.0
- Advisor: Dr. Curtis Frank
  Research Area: Baking soda, tartaric acid, and cornstarch as additives for PHBV foaming

B.E. in Chemical Engineering May 2012
The Cooper Union for the Advancement of Science and Art, New York, NY
- Overall GPA: 3.6 / 4.0
- Undergraduate Advisor: Dr. Benjamin J. Davis
  Research Area: Process simulation and cost analysis of ethylene carbonate production

PROFESSIONAL EXPERIENCE

Graduate Research Assistant May 2018 - Present
Purdue University, West Lafayette, IN
- Fabricate and test organic electrochemical transistors composed of various organic semiconductors
- Analyze, design and develop radical semiconducting polymers

Research Associate Jun. 2016 – Sep. 2017
Institute of Convergence Chemical Engineering Systems, Korea University, Seoul, Republic of Korea
- Synthesized and characterizing palladium-based mono- & bi-metallic nanoparticles
- Investigated how alloying affects the physical properties and catalytic activity of nanoparticles
- Developed research papers for publication based on experimental data

R&D Engineer Aug. 2014 – May 2016
STATS ChipPAC, Incheon, Republic of Korea
- Developed packaging and assembly processes for APUs and RF modules
- Selected and validated packaging materials and assembly processes
- Prepared evaluation reports, process specifications, and assembly instructions

Graduate Research Intern Jul. 2013 – Sept. 2013
Korean Institute of Science and Technology (KIST), Seoul, Republic of Korea
- Investigated composition and treatment effects on the hygroscopicity of polyelectrolyte gel
- Simulated numerical models for gel swelling and relaxation

Teaching Assistant Jul. 2011 – Aug. 2011
The Cooper Union, New York, NY
- Supervised students during an introductory Polymer Science course
- Devised the program agenda for student interns
- Researched the synthesis and characterization of high-performance polymers

Research Intern Jun. 2010 – Aug. 2010
Hamburg University of Applied Science, Hamburg, Germany
- Compiled and analyzed energy consumption of 100 municipal buildings
- Designed and drafted preliminary catalog and data sheet for subsequent projects

PUBLICATIONS

1. Seo MG, **Kim HJ**, Han SS, Lee KY. Direct synthesis of hydrogen peroxide from hydrogen and oxygen using tailored Pd nanocatalysts: A review of recent findings. Published online in *Catalysis Surveys from Asia* (2016) – Co-author
2. Seo MG, **Kim HJ**, Han SS, Lee KY. Effect of shell thickness on the direct synthesis of hydrogen peroxide from hydrogen and oxygen over Pd core/porous SiO2 shell catalysts. Accepted for publication in *Journal of Molecular Catalysis A: Chemical* – Second author

HONORS, SKILLS, AND ACTIVITIES

- **Scholarship:** Full-tuition scholarship (Cooper Union)
- **Honors:** Dean's list for outstanding academic achievements and cum laude (Cooper Union)
- **Leadership:** President ('11–'12) and Secretary ('10 –'11), Korean Association of the Cooper Union
- **Programming Languages:** C, Java, advanced MATLAB
- **Engineering Simulation Software:** PRO/II, COMSOL, SPARTAN, ChemCAD
- **Laboratory techniques:** UV-Vis, GC- and LC-MS, FTIR, FL spectroscopy
- **Extracurricular activities:** singing, soccer, bowling, and billiards