

Curriculum Vitae

Stanfield Youngwon Lee (이영원)
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Education

Ph.D., Major: Chemistry (In Progress) Ulsan National Institute of Science and Technology, Department of Chemistry	2015-Current
M.S., Major: Electrochemistry Seoul National University, Department of Chemical and Biological Engineering	March 2015
B.A., Major: Biochemistry, Minor: Chemistry University of Colorado at Boulder, Department of Chemistry and Biochemistry Dean's List Fall 2008	May 2009
High School Diploma Fairview High School, Boulder, CO Graduation with Honors	May 2004

Research and Work Experience

Researcher (2016-Current) Center for Multidimensional Carbon Materials (CMCM), Department of Chemistry, Ulsan National Institute for Science and Technology (UNIST)

- Researching methods to synthesize multidimensional carbon materials via electrochemical approaches
- Utilizing novel approaches toward analyzing multidimensional carbon materials

Researcher (2013-2015) Photochemical and Electrochemical Energy (PEEL) Lab, Chemical and Biological Engineering, Seoul National University

- Conducted research into utilizing non-precious metal/metal free catalysts for the oxygen reduction reaction
- Assisted in researching methods for increasing the efficiency of renewable energy devices

English Teacher/Head Instructor (2009-2013) Chungdahm Learning Institute (CDI), Seoul, Korea

- Prepared students for the TOEFL Jr. and iBT TOEFL.
- Worked as a facilitator between the instructors and management. Supervised instructors and trained new instructors in the CDI academy structure.

Research Assistant (2005-2009) Monson Lab, Department of Ecology and Evolutionary Biology, University of Colorado at Boulder

- Assisted in investigating the response of subalpine ecosystem carbon cycling to changes in spring snow pack and feedbacks between root exudates and soil microbial respiration
- Conducted laboratory investigations of isoprene emissions and plant physiological responses to elevated atmospheric CO₂, temperature, and drought

Senior Independent Research Project (2009)

University of Colorado at Boulder

- Designed, conducted, and presented an independent research project.
- Assisted in analyzing soil sugar concentrations via High Performance Liquid Chromatography (HPLC)

Undergraduate Research Opportunities Program (2006-2007)

University of Colorado at Boulder

- Wrote and received a grant proposal for a project designed around implementing this laboratory experiment
- Apprenticed in the use of specific laboratory equipment (Licor-6400)

Publications

1. **Lee S.**, Chung D.Y., Lee M.J., Kang Y.S., Shin H., Kim M.J., Bielawski C.W., Sung Y.E. (2016)
Charting the Outer Helmholtz Plane and the Role of Nitrogen Doping in the Oxygen Reduction Reaction Conducted in Alkaline Media Using Nonprecious Metal Catalysts. *The Journal of Physical Chemistry C*. Volume 120. Pg. 24511-24520. DOI: 10.1021/acs.jpcc.6b04771
2. Kang Y.S., Choi K.H., Ahn D., Lee M.J., Baik J., Chung D.Y., Kim M.J., **Lee S.**, Kim M., Shin H., Lee K.S., Sung Y.E. (2016)
Effect of Post Heat-Treatment of Composition-Controlled PdFe Nanoparticles for Oxygen Reduction Reaction. *The Journal of Power Sources*. Volume 303. Pg. 234-242. DOI:10.1016/j.jpowsour.2015.11.011
3. Chung D.Y., Lee K.J., Yu S.H., Kim M., **Lee S.**, Kim O.H., Park H.J., Sung Y.E. (2015)
Alveoli-Inspired Facile Transport Structure of N-Doped Porous Carbon for Electrochemical Energy Application. *Advanced Energy Materials*. Volume 5, Issue 3. Pg. 1401309. DOI: 10.1002/aenm.201401309
4. Monson R.K., Wilkinson M., Monson N., Trahan N., **Lee S.**, Rosenstiel T.R. and Fall, R. (2009)
Biochemical Controls on the CO₂ Response of Leaf Isoprene Emission: An Alternative View of Sanadze's Double Carboxylation Scheme. *Annals of Agrarian Science*. Volume 7. Pg. 21-29.
5. Wilkinson M., Monson R.K., Trahan N., **Lee S.**, Brown E., Jackson R.B., Polley, H.W. and Fall, R. (2008)
Leaf Isoprene Emission Rate as a Function of Atmospheric CO₂ Concentration. *Global Change Biology* Volume 15, Issue 5. Pg. 1189-1200. DOI: 10.1111/j.1365-2486.2008.01803.x