

Sangtae Kim

+82-2-958-6623

stkim@kist.re.kr

Employment

- 2020 March. Assistant Professor, Department of Nuclear Engineering
- present *Hanyang University* *Seoul, Korea*
- 2018 Sept. Senior Research Scientist, Center for Electronic Materials
- 2020 Feb. *Korea Institute of Science and Technology* *Seoul, Korea*
- 2016 July Researcher, Center for Electronic Materials
- 2018 Aug. *Korea Institute of Science and Technology* *Seoul, Korea*

Education

- 2010 – 2016 Ph.D. in Materials Science and Engineering (Thesis Advisor: Prof. Ju Li)
Massachusetts Institute of Technology *Cambridge, MA*
Thesis Title: Electrochemically Driven Mechanical Energy Harvesting
- 2006 – 2010 (*honors*) B.S. in Materials Science and Engineering, emphasis in Materials Physics
University of California, Berkeley *Berkeley, CA*

Honors

- 2015 April Best Poster Award, *Materials Research Society Spring Meeting 2015 – San Francisco, CA*
- 2009 November Graduate Fellowship, Samsung Scholarship Foundation - *Seoul, Korea*
- Selected as a full fellowship student (\$50,000/year for 5 years) towards M.S./Ph.D.
- 2009 April Outstanding Undergraduate Student Award, Electronic Materials Symposium 2009 - *San Jose, CA*
- 2009 March Elaine C. Shen Memorial Award, Materials Science and Engineering Department,
University of California, Berkeley - Berkeley, CA

Select Publications († denotes co-first authors, * denotes corresponding authors)

1. B. Seo†, Y. Cha†, **S. Kim***, W. Choi*, “Rational Design for Optimizing Hybrid Thermo-Triboelectric Generators Targeting Human Activities” *ACS Energy Letters* 2019 **4** 2069-2074
2. H.K. Seo, J.Y. Park, J.H. Chang, K.S. Dae, M.-S. Noh, S.-S. Kim, C.-Y. Kang, K. Zhao, **S. Kim***, J.M. Yuk*, “Strong Stress-Composition Coupling in Lithium Alloy Nanoparticles” *Nature Communications* 2019 **10** 3428
3. M.-S. Noh, H. Lee, Y.G. Song, I. Jung, R. Ning, S.W. Paek, H.-C. Song, S.-H. Baek, C.-Y. Kang*, **S. Kim*** “Li Alloy-Based Non-Volatile Actuators” *Nano Energy* 2019 **57** 653-659
4. **S. Kim***, H.J. Gwon, S.W. Paek, S.K. Kim, J.-W. Choi, J.-S. Kim, J.-H. Choi, C.-Y. Kang*, S.-H. Baek* “A novel class of oxynitrides stabilized by nitrogen dimer formation” *Scientific Reports* 2018 **8** 14471
5. H. Hwang, K.Y. Lee, J.-H. Shin, **S. Kim***, W. Choi*, “Metal-free, Flexible Triboelectric Generator based on MWCNT mesh film and PDMS layers” *Applied Surface Science* 2018 **442** 693-699
6. Y.-H. Shin†, I. Jung†, M.-S. Noh, J.H. Kim, J.-Y. Choi, **S. Kim***, C.-Y. Kang*, “Piezoelectric Polymer-based Roadway Energy Harvesting via Displacement Amplification Module” *Applied Energy* 2018 **216** 741-750
7. Y.-H. Shin, I. Jung, H. Park, J.J. Pyeon, J.G. Son, C.M. Koo, **S. Kim***, C.-Y. Kang*, “Mechanical Fatigue Resistance of Piezoelectric PVDF polymers” *Micromachines* 2018 **9** 503
8. **S. Kim**, S.J. Choi, K. Zhao, H. Yang, G. Gobbi, S. Zhang, J. Li*, “Electrochemically driven Mechanical Energy Harvesting” *Nature Communications* 2016 **7** 10146