

Sang-Heon Song

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Education

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| Ph.D Nuclear Engineering | University of Michigan Thesis Advisor: Prof. Mark J. Kushner | (Sep. 2009 – present) |
| B.S. and M.S. Nuclear Engineering | Seoul National University Thesis Advisor: Prof. Gon-Ho Kim | (Mar. 1999 – Aug. 2005) |

Research and Professional Experience

- Research Assistant, University of Michigan (Sep. 2009 – present)
- Engineer, Samsung Electronics Co., Ltd., LCD Business (Aug. 2005 – Jul. 2009)
- Research Assistant, Seoul National University, Korea (Sep. 2003 – Aug. 2005)

Awards and Honors

- Tau Beta Pi, Sigma Xi, Alpha Nu Sigma, Phi Kappa Phi
- Fellowship, Michigan Institute for Plasma Science and Engineering (MIPSE), 2011
- Encouragement Award, Busan Metropolitan City Office of Education, Physics Contest, 1998
- Excellence Award, Korea Nuclear Energy Foundation (KNEF), Essay Writing Contest, 1997

Publications

1. **Sang-Heon Song** and Mark J. Kushner, “Time Resolved Electron Energy Distributions and Plasma Characteristics in a Pulsed Capacitively Coupled Plasma”, IEEE Trans. Plasma Sci. **39**, 2542 (2011).
2. **Sang-Heon Song** and Mark J. Kushner, “Control of Electron Energy Distributions and Plasma Characteristics of Dual Frequency, Pulsed Capacitively Coupled Plasmas Sustained in Ar and Ar/CF₄/O₂”, submitted to Plasma Sources Sci. Technol. (2012).

Conference Presentations and Posters

1. **Sang-Heon Song** and Mark J. Kushner, “Electron Energy Distribution Control in Capacitively Coupled Plasmas”, DOE Plasma Science Center 1st annual meeting, Ann Arbor, MI, May, 2010. (Poster)
2. **Sang-Heon Song**, Mark Strobel, Seth Kirk, and Mark J. Kushner, “Fluorination with Remote

- Inductively Coupled Plasmas Sustained in Ar/F₂ and Ar/NF₃ Gas Mixtures”, 37th IEEE International Conference on Plasma Science, Norfolk, VA, June, 2010. (Oral)
3. **Sang-Heon Song**, Mark Strobel, Seth Kirk, and Mark J. Kushner, “Fluorination Property with Varying F and F₂ Fluxes in a Remote Plasma Fluorination System”, Gordon Research Conference (Plasma Processing Science), New London, NH, July, 2010. (Poster)
 4. **Sang-Heon Song** and Mark J. Kushner, “Control of Electron Energy Distributions and Flux Ratios in Pulsed Capacitively Coupled Plasmas”, 57th American Vacuum Society International Symposium and Exhibition, Albuquerque, NM, October, 2010. (Oral)
 5. **Sang-Heon Song** and Mark J. Kushner, “Control of Electron Energy Distributions and Etch Profile in Pulsed Capacitively Coupled Plasmas”, DOE Plasma Science Center 2nd annual meeting, Ann Arbor, MI, May, 2011. (Poster)
 6. **Sang-Heon Song** and Mark J. Kushner, “Control of Electron Energy Distributions and Etch Properties in Pulsed Capacitively Coupled Plasmas”, 38th IEEE International Conference on Plasma Science, Chicago, IL, June, 2011. (Oral)
 7. **Sang-Heon Song** and Mark J. Kushner, “SiO₂ Etch Rate and Profile Control Using Pulse Power in Capacitively Coupled Plasmas”, 20th International Symposium on Plasma Chemistry, Philadelphia, PA, July, 2011. (Oral)
 8. **Sang-Heon Song** and Mark J. Kushner, “SiO₂ Etch Property Control Using Pulse Power in Capacitively Coupled Plasmas”, 58th American Vacuum Society International Symposium and Exhibition, Nashville, TN, November, 2011. (Oral)
 9. **Sang-Heon Song** and Mark J. Kushner, “Electron and Ion Energy Distribution Control Using Pulse Power in Capacitively Coupled Plasma”, DOE Plasma Science Center 3rd annual meeting, Princeton, NJ, May, 2012. (Poster)

Issued Patents

- Liquid crystal display apparatus, Min-Wook Park, Young-Goo Song, In-Woo Kim, and **Sang-Heon Song**, Patent Number: US 7,532,278 (May 12, 2009).
- Method of manufacturing a thin film transistor array substrate, Woong-Kwon Kim, Ho-Jun Lee, Hong-Kee Chin, **Sang-Heon Song**, Jung-Suk Bank, Jun-Ho Song, Byeong-Jae Ahn, Bae-Heuk Yim, Patent Number: US 7,902,006 (March 8, 2011).
- Touch screen display apparatus and method of manufacturing the same, Doo-Hwan You, Young-Je Cho, In-Ho Park, **Sang-Heon Song**, Patent Number: US 8,188,982 (May 29, 2012)