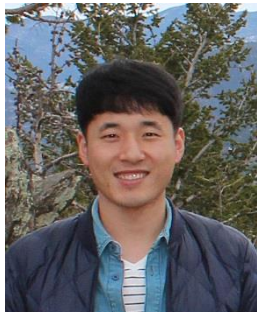


Hongseok Jo

Master course



Solar Cell & Aerosol Science Laboratory
 School of Mechanical Engineering
 Korea University
 5-Ga, Anam-dong, Seongbuk-gu,
 Seoul, Korea, 136-713
 E-mail: jhs775@korea.ac.kr
<http://solarcellaerosol.korea.ac.kr>
 Tel: 82-2-3290-3861

RESEARCH INTERESTS

- Electrohydrodynamics (Electrospinning/Electrospray applications)
- Electroplating applications
- Photocatalysis applications (Water purification, Water splitting, Antimicrobial activity)
- Self-healing composites
- Heat transfer applications (air cooling layer, pool boiling, and transparent heater film)
- Transparent conductive electrodes (TCEs)
- Supersonic gas flow

EDUCATION

- Master course in Mechanical Engineering, (4.33/4.5)
 Korea University, Seoul, Korea
 Advisor: Prof. Sam S. Yoon
- Bachelor of Science in Electrophysics, Feb. 2014 (3.84/4.5)
 Kwangwoon University, Seoul, Korea

EMPLOYMENT

- 2015/Mar. to 2015/Jun.: Teaching Assistant, School of Mechanical Engineering, *Korea University*, Thermodynamics.
- 2014/Aug. to 2014/Nov: Teaching Assistant, School of Mechanical Engineering, *Korea University*, Mechanical engineering experiment 2.
- 2009/Mar. to 2011/Sep: Teaching Assistant, *Technical College Matara in Sri Lanka*, Electronics

PUBLICATIONS (* corresponding author, † equal contribution)

International Journal Papers

1. **HS Jo**[†], S An[†], HG Park, SS Al-Deyab, AL Yarin*, SS Yoon*, Highly flexible, stretchable, patternable, transparent copper fiber heater on a complex 3D surface, *NPG Asia Materials* (IF=6.008), submitted.

2. MW Kim[†], H Yoon[†], TY Ohm, S An, **HS Jo**, SK Choi, H Park, SS Al-Deyab, MT Swihart, SS Yoon*, Nanotextured cupric oxide nanofibers as highly efficient photocathodes, *Nanoscale* (IF=7.760), Submitted
3. JG Lee[†], DY Kim[†], JH Lee, MW Kim, S An, **HS Jo**, N Carlo, SS Al-Deyab, MT Swihart, SS Yoon*, Scalable binder-free supersonic cold spraying of nanotextured cupric oxide (CuO) films as efficient photocathodes, *ACS Applied Materials & Interfaces* (IF=7.145), 8, 15406-15414, 2016.
4. S An[†], JS Lee[†], BN Joshi, **HS Jo**, K Titov, JS Chang, CH Jun, SS Al-Deyab, YK Hwang*, JC Tan*, SS Yoon*, Freestanding nanofiber mats of zeolitic imidazolate framework-7 via one-step scalable electrospinning, *Journal of Applied Polymer Science* (IF=1.768), 133, 43788, 2016.
5. S An[†], **HS Jo**[†], DY Kim HJ Lee, BK Ju, SS Al-Deyab, JH Ahn, Y Qin, MT Swihart, AL Yarin*, SS Yoon*, Self-junctioned copper nanofiber transparent flexible conducting film via electrospinning and electroplating, *Advanced Materials* (IF=17.493), Online published.
6. BN Joshi[†], S An[†], **HS Jo**, KY Song, HG Park, S Hwang, WY Yoon, SS Al-Deyab, SS Yoon*, Flexible, Freestanding, and Binder-free SnO_x-ZnO/Carbon Nanofiber Composites for Lithium Ion Battery Anodes, *ACS Applied Materials & Interfaces* (IF=6.723), 8, 19466-19474, 2016
7. S An[†], DY Kim[†], JG Lee, **HS Jo**, MW Kim, SS Al-Deyab, J Choi*, SS Yoon*, Supersonically sprayed reduced graphene oxide film to enhance critical heat flux in pool boiling, *International Journal of Heat and Mass Transfer* (IF=2.383), 98, 124-130, 2016.
8. S An[†], **HS Jo**[†], SS Al-Deyab, AL Yarin*, SS Yoon*, Nano-textured copper oxide nanofibers for efficient air cooling, *Journal of Applied Physics* (IF=2.183), 119, 065306, 2016.
9. S An[†], MW Lee[†], **HS Jo**, SS Al-Deyab, SS Yoon*, Weaving nanofibers by altering counter-electrode electrostatic signals, *Journal of Aerosol Science* (IF=2.236), 95, 67, 2016.
10. MW Lee[†], S An[†], KY Song, BN Joshi, **HS Jo**, SS Al-Deyab, SS Yoon*, AL Yarin*, Polyacrylonitrile nanofibers with added zeolitic imidazolate frameworks (ZIF-7) to enhance mechanical and thermal stability, *Journal of Applied Physics* (IF=2.183), 118, 245307, 2015.
11. S An, **HS Jo**, KY Song, MG Mali, SS Al-Deyab, SS Yoon*, Electrically-charged recyclable graphene flakes entangled with electrospun nanofibers for the adsorption of organics for water purification, *Nanoscale* (IF=7.394), 7, 19170-19177, 2015.
12. S An[†], M Liou[†], KY Song, **HS Jo**, MW Lee, SS Al-Deyab, AL Yarin*, SS Yoon*, Highly flexible transparent self-healing composite based on electrospun core-shell nanofibers produced by coaxial electrospinning for anti-corrosion and electrical insulation, *Nanoscale* (IF=7.394), 7, 17778-17785, 2015.
13. MW Lee, S An, **HS Jo**, SS Yoon*, AL Yarin*, Self-healing nanofiber-reinforced polymer composites: 2. Delamination/debonding, and adhesive and cohesive properties, *ACS Applied Materials & Interfaces* (IF=6.723), 7, 19555-19561, 2015.
14. MW Lee, S An, **HS Jo**, SS Yoon*, AL Yarin*, Self-healing nanofiber-reinforced polymer composites: 1. Tensile Testing and Recovery of Mechanical Properties, *ACS Applied Materials & Interfaces* (IF=6.723), 7, 19546-19554, 2015.
15. HJ Lee, S An, JH Hwang, SG Jung, **HS Jo**, KN Kim, YS Shim, CH Park, SS Yoon, YW Park, BK Ju*, Novel composite layer based on electrospun polymer nanofibers for efficient light scattering, *ACS Applied Materials & Interfaces* (IF=6.723), 7, 68-74, 2015.
16. S An, C Lee, M Liou, **HS Jo**, JJ Park, AL Yarin*, SS Yoon*, Supersonically blown ultrathin thorny devil nanofibers for efficient air cooling, *ACS Applied Materials & Interfaces* (IF=6.723), 6, 13657-13666, 2014.

Patents

1. Suk Goo Yoon, Seongpil An, **Hong Seok Jo**, Jong San Chang, Young Kyu Hwang, Ji Sun Lee, *Apparatus for manufacturing the gas adsorption membrane possessed of structure of textile using ZIF-7 and method for controlling the same*, 10-2016-0024660

Proceeding/Conference Papers

1. Hyun Yoon, Min-woo Kim, **Hong Seok Jo**, Sam S. Yoon, Enhanced photoelectrochemical solar water splitting using a platinum-decorated CIGS/CdS/ZnO photocathode, ***18th Topical Meeting of the International Society of Electrochemistry***, Gwangju, Korea, March 8-11, 2016.
2. **Hong Seok Jo**, Seongpil An, Kyo Yong Song, Hyun Goo Park, Efficient air cooling using optimized nano-textured surface comprised of copper oxide nanofibers, ***5th Annual International Conference on Sustainable Energy and Environmental Sciences***, Singapore, Feb. 22-23, 2016.
3. **Hongseok Jo**, Sam S. Yoon, Self-healing nanofibers-reinforced polymer composites: tensile testing and recovery of mechanical properties, ***The 5th East Asia Mechanical and Aerospace Engineering Workshop***, Seoul, Korea, May 28-30, 2015.

SKILLS

- Technique: SEM (Scanning electron microscopy), EDX (Energy dispersive x-ray spectroscopy), AFM (Atomic force microscopy), XRD (X-ray diffraction), XPS (X-ray photoelectron spectroscopy), FTIR (Fourier transform infrared spectroscopy), Raman spectroscopy, , UV-VIS spectrometer, TGA/DTG (Thermogravimetry analysis), Optical surface profiler, Fluidic properties (Viscosity, electrical conductivity, surface tension, dielectric constant)
- Device fabrication: Electrospinning/electrospray device, Electroplating device, Supersonic flow nozzle, Water contact angle measurement device
- Computational program: FLUENT, FORTRAN

REFERENCE

- Sam S. Yoon
Professor
School of Mechanical Engineering
Korea University
E-mail: skymoon@korea.ac.kr
Tel: 82-2-3290-3376.