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Pohang University of Science and Technology (POSTECH), South Korea
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EDUCATION

2005.3-2011.2 **M.S & Ph.D. (Joint degree), Interdisciplinary of Nanoscience and
Technology, Seoul National University**1998.3-2005.2 **B.S., Chemical Engineering,
Seoul National University, *cum laude***

RESEARCH AND PROFESSIONAL EXPERIENCE

2023.9-present **Professor**
Department of Chemical Engineering, POSTECH2014.2-2023.8 **Assistant Professor & Associate Professor, and Professor**
Department of Materials Science and Engineering, UNIST2012.4-2014.1 **Postdoctoral Researcher**
Department of Chemistry, University of Chicago2011.34-2012.3 **Postdoctoral Researcher**
School of Chemical and Biological Engineering, Seoul National University

RECENT AWARDS AND HONORS

2024, 2020 **Samsung Humantech Gold and Bronze Medals**2020 **Fellowship, LG Yeonam Foundation**2019 **UNIST's Rising-Star Distinguished Professor**2019 **UNIST's Outstanding Faculty Award**

PROFESSIONAL SERVICES

2024 **Session Organizer at** Energy harvesting session on NANOKOREA 20242021 **Session Organizer at** The 6th International Conference on Advanced
Electromaterials(ICAIE 2021)2019 **Scientific Program Committee at** The 38th ICT/ACT 20192019 **Session Organizer at** Materials Challenges in Alternative and Renewable
Energy 2019 (MCARE 2019)2017 **Conference Committee at** 2017 Fall The Korean Ceramic Society (2017)2016 **Conference Committee at** The International Conference & Exhibition for
Nanotechnology 2016 (NANOPIA 2016)2015 **Conference Committee at** The International Conference & Exhibition for
Nanotechnology 2015 (NANOPIA 2015)

Representative PUBLICATIONS

- Seungjun Choo†, Jungsoo Lee†, Bengisu Şişik, Sung-Jin Jung, Keonkuk Kim, Seong Eun Yang, Seungki Jo, Changhyeon Nam, Sangjoon Ahn, Ho Seong Lee, Han Gi Chae, Seong Keun Kim, Saniya LeBlanc*, and **Jae Sung Son*** "Geometric design of Cu_2Se -based thermoelectric materials for enhancing power generation" *Nature Energy* **2024** in press.
 - Seung Hwaee Heo, Jisu Yoo, Hyejeong Lee, Hanhwi Jang, Seungki Jo, Jeongmin Cho, Seongheon Baek, Seong Eun Yang, Hyun Jung Mun, Min-Wook Oh, Hosun Shin*, Moon Kee Choi*, Tae Joo Shin*, and **Jae Sung Son*** "Solution-Processed Hole-Doped $SnSe$ Thermoelectric Thin-Film Devices for Low-Temperature Power Generation" *ACS Energy Letters* **2022**, 7, 2092-2101.
 - Fredrick Kim†, Seong Eun Yang†, Hyejin Ju†, Seungjun Choo, Jungsoo Lee, Gyeonghun Kim, Soo-ho Jung, Suntae Kim, Chaenyung Cha, Kyung Tae Kim, Sangjoon Ahn, Han Gi Chae*, and **Jae Sung Son*** "Direct ink writing of 3D thermoelectric architectures for fabrication of micro power generators" *Nature Electronics* **2021**, 4, 579-587. Featured as "**the August Cover**"
 - Seungjun Choo†, Faizan Ejaz†, Hyejin Ju, Fredrick Kim, Jungsoo Lee, Seong Eun Yang, Gyeonghun Kim, Hangeul Kim, Seungki Jo, Seongheon Baek, Soyoung Cho, Ju-Young Kim, Sangjoon Ahn³, Han Gi Chae*, Beomjin Kwon*, and **Jae Sung Son*** " Cu_2Se -based Thermoelectric Cellular Architectures for Efficient and Durable Power Generation" *Nature Communications* **2021**, 12, 3550.
 - Fredrick Kim,⁺ Beomjin Kwon,⁺ Youngho Eom, Ji Eun Lee, Sangmin Park, Seungki Jo, Sung Hoon Park, Bong-Seo Kim, Hye Jin Im, Min Ho Lee, Tae Sik Min, Kyung Tae Kim, Han Gi Chae, William King, and **Jae Sung Son*** "3D printing of shape-conformable thermoelectric materials using all-inorganic Bi_2Te_3 -based inks" *Nature Energy* **2018**, 3, 301-309.

Statement

Professor Jae Sung Son is a Professor in the Department of Chemical Engineering at Pohang University of Science and Technology (POSTECH), South Korea. Over the past decade, he has been at the forefront of developing printable thermoelectric materials and devices, with a particular emphasis on power generation applications. His groundbreaking work in synthesizing all-inorganic inks for paintable and 3D-printable applications represents a pioneering world-first achievement, paving the way for cost-effective thermoelectric device production. These innovative techniques also hold the promise of customizing thermoelectric material and device geometries, thereby potentially increasing power conversion efficiency. Furthermore, Professor Son has made significant contributions to the field with his development of solution-processed thermoelectric thin films that exhibit high efficiencies. Beyond his research, Professor Son is a recognized leader in the thermoelectric community, contributing as an organizer and committee member at significant international conferences like NANOKOREA 2024 and ICT/ACT 2019. His ongoing work continues to influence the evolution of thermoelectric technology. He looks forward to the possibility of serving on the ITS Board and is excited about how we can steer our international collective research and initiatives to impact society.