

# Somin Park

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## Professional appointments

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| <b>Assistant Professor</b><br>Department of Chemistry, National University of Singapore, Singapore | Aug 2024 – present |
| <b>Postdoctoral Fellow</b> , Northwestern University, US                                           | 2023 - 2024        |
| <b>Postdoctoral Fellow</b> , University of Toronto, Canada<br>(Advisor: Prof. Edward H. Sargent)   | 2021 - 2023        |

## Education

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| <b>Ph.D.</b> in Materials Science and Engineering                                                               | 2020 |
| <b>M.S.</b> in Chemistry (Advisor: Prof. Kenneth R. Graham)<br>University of Kentucky, Lexington, KY, US        | 2017 |
| <b>B.S. and M.S.</b> in Materials Science and Engineering<br>Gyeongsang National University, Jinju, South Korea | 2013 |

## Awards and Honors

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| 1. <b>Presidential Young Professorship</b> , National University of Singapore                                                                            | 2024 |
| 2. <b>GLOW 2024 Travel Award</b> , Nanyang Technological University<br>Global conference for women leaders and emerging researchers in materials science | 2024 |
| 3. <a href="#"><b>ACS PHYS Young Investigator Award</b></a><br>American Chemical Society, Physical Chemistry division                                    | 2023 |
| 4. <a href="#"><b>MIT ChemE Rising Stars</b></a><br>Awarded to top early-stage academic career female researchers                                        | 2023 |
| 5. <a href="#"><b>Rising Stars in MSE</b></a> (Stanford, MIT, CMU)                                                                                       | 2023 |
| 6. <b>Polymer Society Korea-INNOX Young Investigator Award</b>                                                                                           | 2023 |
| 7. <b>Viji Jeganathan Scholarship</b><br>Cross-cultural understanding, International Student Center, University of Kentucky                              | 2019 |

## Selected publications

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Full list on [Google Scholar](#)

[†The authors contributed equally, \*corresponding author]

1. D. Chandrashekhara, N. Gan, F. Anies, **S. M. Park\***. Functional Organic Room-Temperature Phosphorescent Materials. *Journal of Materials Chemistry C* 2026, 14, 5586-5606.
2. B. Zhang, J. Luo\*, H. Yin, Q. Li, S. Sun, N. Zhang, N. Gan, M. Azam, T. W. Park, J. Wan, C. Jia\*, M. Wei\*, **S. M. Park\***. A Cross-linked Molecular Contact for Stable Operation of Perovskite/Silicon Tandem Solar Cells. *Science* 2025, 390, 6775, 837-842.

Highlighted by [NUS News](#), [Faculty of Science news](#), [EurekAlert! AAAS](#), [AZO Materials](#), [Perovskite-info](#), [Interesting Engineering](#), [OpenGov](#), [StatNano](#), [Technology networks](#), [Mirage News](#), [MSN](#) etc.

3. J. Zhang, N. Gan, F. Liu, X. Xie, X. Zhang, C. Wu\*, D. Shi, T. Xu, S. Cai, H. Guo, D. Li, G. Shi, Y. Wei, J. Li, M. Wei, Y. Guan, Y. Zhang, S. Zheng, B. Li\*, **S. M. Park\***. Revealing Performance-Limiting Buried Interfaces in Layered Dion–Jacobson Lead–Iodide Perovskites. *Journal of the American Chemical Society* 2025, 147, 34, 30873-30884. (Cover highlight)
4. **S. M. Park**†, M. Wei†, N. Lempesis†, W. Yu, T. Hossain, L. Agosta, V. Carnevali, H. R. Atapattu, P. Serles, F. T. Eickemeyer, H. Shin, M. Vafaie, D. Choi, K. Darabi, E. D. Jung, Y. Yang, D. B. Kim, S. M. Zakeeruddin, B. Chen, A. Amassian, T. Filleter, M. G. Kanatzidis K. R. Graham, L. Xiao, U. Rothlisberger, M. Graetzel, E. H. Sargent. Low-loss contacts on textured substrates for inverted perovskite solar cells. *Nature* 2023, 624, 289-294.  
Highlighted by [TechXplore](#), [PV magazine](#), [Perovskite-info](#), [AZO Materials](#), [my Science](#), [Northwestern Engineering](#), [EPFL news](#)
5. **S. M. Park**†, M. Wei†, J. Xu†, H. R. Atapattu, F. T. Eickemeyer, K. Darabi, L. Grater, S. Teale, Y. Yang, C. Liu, B. Chen, H. Chen, T. Wang, L. Zeng, A. Maxwell, Z. Wang, K. R. Rao, Z. Cai, S. M. Zakeeruddin, J. T. Pham, C. M. Risko, A. Amassian, M. G. Kanatzidis, K. R. Graham, M. Graetzel, E. H. Sargent. Engineering ligand reactivity enables high-temperature-operating-stable perovskite solar cells. *Science* 2023, 381, 6654, 209-215.  
Highlighted by [Chemistry World](#), [Phys.org](#), [Optica](#), [University of Toronto Engineering](#), [Northwestern Engineering](#), [EPFL news](#)
6. W. S. Shen†, Y. Liu†, L. Grater†, **S. M. Park**†, H. Wan, Y. J. Yu, J. L. Pan, F. C. Kong, Q. S. Tian, D. Y. Zhou, Z. Liu, W. Ma, B. Sun, Y. K. Wang, S. Hoogland, L. S. Liao. Thickness-variation-insensitive near-infrared quantum dot LEDs. *Science Bulletin* 2023, 68, 2954-2961.
7. **S. M. Park\***, E. H. Sargent. Navigating pathways to increase stability in perovskite solar cells. *Matter* 2023, 6, 8, 2488-2490.
8. S. Lee†, **S. M. Park**†, E. D. Jung†, T. Zhu†, J. M. Pina, H. Anwar, F. Li, G. Chen, Y. Dong, T. Cui, M. Wei, K. Bertens, Y. Wang, B. Chen, T. Filleter, S. Hung, Y. Won, K. H. Kim, S. Hoogland, E. H. Sargent. Dipole engineering through the orientation of interface molecules for efficient InP quantum dot light-emitting diodes. *Journal of the American Chemical Society* 2022, 144, 20923-20930.
9. **S. M. Park**, A. Abtahi, A. Boehm, K. R. Graham. Surface ligands for methylammonium lead iodide films: surface coverage, energetics, and photovoltaic performance. *ACS Energy Letters* 2020, 5, 799-806.
10. **S. M. Park**, S. Mazza, Z. Liang, A. Abtahi, A. Boehm, S. Parkin, J. Anthony, K. R. Graham. Processing dependent influence of the hole transport layer ionization energy on methylammonium lead iodide perovskite photovoltaics. *ACS Applied Materials & Interfaces* 2018, 10, 15548-15557.

## Teaching

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|---------------------------------------------------------------------------------|------------------------|
| <b>CM3261 Environmental Chemistry</b> , National University of Singapore        | 2026                   |
| <b>CM4242 Advanced Analytical Techniques</b> , National University of Singapore | 2025                   |
| <b>Pedagogical Training</b>                                                     |                        |
| <i>Teaching in Higher Education THE500</i> , University of Toronto              | 2022                   |
| <i>Teaching Assistant Training Program ESL090</i> , University of Kentucky      | 2014                   |
| <b>Graduate Teaching Assistant</b> , University of Kentucky                     |                        |
| <i>CHE111, CHE113 General Chemistry</i>                                         | 2014, 2015, 2016, 2017 |
| <i>CHE226 Analytical Chemistry</i>                                              | 2015, 2016             |
| <i>CHE446 Physical Chemistry</i>                                                | 2019                   |

## Professional Academic Service

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### Independent Journal Reviewer

*Science, Science Advances, Nature Energy, Nature Photonics, Nature Communications, Journal of Physical Chemistry, Chemistry of Materials, Journal of American Chemical Society, Chem Catalysis, ACS Materials Letters, Journal of Materials Chemistry A, Energy & Environmental Science, Joule, Matter, Nanoscale, Chemical Engineering Journal, Communications Engineering, Nano Energy, Organic Electronics, Inorganic Chemistry, Small, Advanced Functional Materials*

**Associate Editor** *International Journal of Chemical Kinetics* 2024-2026

**Session Chair** Materials Research Society (MRS) meeting, Boston, US 2023

**Vice President** of Materials Research Society (MRS) University of Kentucky Chapter 2019

**President** of Korean Scholar Association at University of Kentucky 2018, 2019

### Selected invited talks

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1. American Chemical Society (ACS) Spring meeting, Atlanta, US 2026
2. Quantsol Winter Workshop, Rauris, Austria 2026
3. The 14th International Conference on Advanced Materials and Devices, Busan, South Korea 2025
4. World Laureates Forum, Shanghai, China 2025
5. KSIEC Spring Meeting and International Conference, Jeju, South Korea 2025
6. JSAP Autumn Meeting, The Japan Society of Applied Physics, Niigata, Japan 2024
7. GLOW, Nanyang Technological University, Singapore, Singapore 2024
8. Department of Materials, ETH Zurich, Zurich, Switzerland 2024
9. Institute of Chemical Sciences and Engineering, EPFL, Lausanne, Switzerland 2023

### Service and Outreach

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**Committee Activities**, National University of Singapore

- Ph.D. graduate school committee, Department of Chemistry 2024-present
- CMMAC committee, Department of Chemistry 2024-present

**Chemistry in the Frontiers of Science** 2025

Gave a lecture for a cohort of 80 high school and junior college students shortlisted for Chemistry Olympiad national team selection training

**NUS Science Summer Institute** 2025

Catalyst towards graduate studies in STEM fields, judge for oral presentations

**Material Networking Day** 2019

Wrote a proposal and received a grant from MRS, University of Kentucky Chapter

Invited keynote speakers and student talks, organized poster session and award ceremony

Engaged nearby universities, industries, and national laboratories in the Midwest local community

**Sustainability Pitch** Green planet renewables, University of Kentucky 2019

**STEM Summer Camp** 2017, 2018, 2019

Blackberry solar cell and lemon battery experiments for 5<sup>th</sup> to 12<sup>th</sup> grade students

**Women in Engineering Explore Camp** 2018

**Shape memory polymers** demonstration for high school female students