

MinJae Kim

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Education

Korea Advanced Institute of Science and Technology (KAIST)

Daejeon, Korea

UNDERGRADUATE, DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING

Feb. 2019 - Present

- KAIST Presidential Fellowship (2021 - Present), Honor Student (Mar. 2021 - Present)
- Total GPA of 4.23/4.3 (99.3/100), Acquired credits: 147/136 (includes 27 graduate-level coursework credits)
- Department Honor Scholarship (top 4 in department): 3 times, Dean's List (top 3% in department): 5 times
- Served Korean military duty (Mar. 2021 – Sep. 2022)

Research Experience

Wellman Center for Photomedicine, Massachusetts General Hospital

Boston, MA

RESEARCH INTERN (ADVISOR: PROF. CONOR L. EVANS)

Jun. 2022 – Aug. 2023

- Project title: Intrinsically stretchable pCO₂ sensor enabled by multi-functional block copolymer matrices
 - Devised and synthesized novel block copolymer matrices for realization of stretchable pCO₂ sensors with excellent sensing capability and mechanical properties
 - Awarded People's Choice Award at poster session of Harvard-MIT Summer Institute at MGH

Next-Generation Optoelectronic Nanomaterials Lab., KAIST

Daejeon, Korea

UNDERGRADUATE RESEARCHER (ADVISOR: PROF. HIMCHAN CHO)

Jul. 2022 – Dec. 2023

- Project title: Development of highly luminescent and stable quasi-2D perovskites based on multi-functional asymmetric spacers
 - Devised and validated geometrically and electronically asymmetric spacer for Dion-Jacobson phase quasi-2D perovskite
 - Granted KAIST Undergraduate Research Program (KRW 5M)
 - Awarded Best Poster Presentation Award at 2023 Spring Meeting of Korean Institute of Materials and Metals (Apr. 2023)
 - Awarded Grand Prix at 2023 Undergraduate Research Program Workshop (Aug. 2023)
- Project title: Effective passivation of quasi-2D perovskites enabled by π -conjugated planar molecules
 - Delivered an oral presentation at 7th International Conference on Advanced Electromaterials (Nov. 2023)

Presentations

ORAL

- | | | |
|------|--|-------------|
| 2023 | Effective Passivation of Quasi-2D Perovskites Enabled by π-conjugated Planar Molecules,
7th International Conference on Advanced Electromaterials (ICAE 2023) | Jeju, Korea |
| 2020 | Application of PEDOT:PSS Thin Film Fabricated via Hot-casting as Hole Transport Layer of Perovskite Solar Cell,
Stockholm International Youth Science Seminar (SIYSS) | On-line |

POSTER

- | | | |
|------|--|-------------|
| 2023 | Intrinsically Stretchable pCO₂ Sensor Enabled by Multi-functional Block Copolymer Matrices,
Harvard-MIT Summer Institute at MGH | Boston, MA |
| 2023 | Highly Luminescent and Stable Quasi-2D Perovskites based on Multi-functional Asymmetric Spacer,
Spring Meeting of Korean Institute of Metals and Materials | Jeju, Korea |

Patents

- | | | | |
|------|---|-----------|-------|
| 2023 | Passivation agents donating pi-conjugated electron density, inorganic semiconductors and perovskites including the same, and methods for producing the same | Submitted | Korea |
| | | (Pending) | |
| 2023 | Perovskite material including multi-functional asymmetric organic spacer and light-emitting device including the same | Submitted | Korea |
| | | (Pending) | |

Honors & Awards (Selected)

SCHOLARSHIPS

2023	Yeonghan Kim Global Leader Scholarship , KAIST	Daejeon, Korea
2023	Woonhae Scholarship (2023-2024) , Woonhae Foundation	Changwon, Korea
2022	Dream Supporter Scholarship (2022-2024) , Global Hansang Dream Foundation	Ulsan, Korea
2021	KAIST Presidential Fellowship (2021-2024) , KAIST	Daejeon, Korea
2019	National Presidential Science Scholarship (2019-2024) , Korea Student Aid Foundation	Seoul, Korea

HONORS

2024	Nominee to 73rd Lindau Nobel Laureate Meeting , Korean Academy of Science and Technology	Seoul, Korea
2023	Young Future Energy Leader , Khalifa University	Abu Dhabi, UAE
2023	Representative of KAIST, Young Engineers Honor Society , National Academy of Engineering of Korea	Seoul, Korea
2020	National Delegate and Nobel Ceremony Guest , Stockholm International Youth Science Seminar(SIYSS)	On-line
2020	Cadet of Research Officer for National Defense (과학기술전문사관) , Ministry of Science and ICT	Seoul, Korea

AWARDS

2023	Donggyo Injae Award (동교인재상) , Surim Foundation	Seoul, Korea
2023	Grand Prix, Undergraduate Research Participation (URP) Workshop , KAIST	Daejeon, Korea
2023	Best Poster Presentation Award , 2023 Spring Meeting, Korean Institute of Metals and Materials	Jeju, Korea
2021	Talent Award of Korea (대한민국 인재상) , Ministry of Education	Seoul, Korea
2021	Youth Hero Prize , Korea Scout Association	Seoul, Korea
2020	Excellence in Mentorship Award , Samsung Welfare Foundation	Ansan, Korea

Extracurricular Activities

KAIST Center for Excellence in Learning and Teaching

Daejeon, Korea

SPECIAL LECTURE SPEAKER

Nov. 2022

- Delivered a special lecture entitled "Connecting dots in your undergraduate life" at KAIST Tip Talk program
- Lecture video was shared on Youtube and KAIST Learning Management System (KLMS)

Young Engineers Honor Society, National Academy of Engineering of Korea

Seoul, Korea

2023 REPRESENTATIVE OF KAIST, FULL MEMBER (REGISTRATION NO. Y34-14)

Sep. 2020 –Present

- Served as representative of KAIST (Jan. 2023 - Dec. 2023)
- Hosted Junior Engineering Classes for elementary and middle school students, and delivered lectures at Specialty Info Sessions for high school students

References

Himchan Cho, Ph.D.

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