

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 4.22/4.3 (99.11/100), Acquired credits: 134/136 (includes 21 graduate-level coursework credits)
- Dean's List (top 3% in the department): Awarded 5 times out of 6 available semesters
- 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. 2023 - Aug. 2023

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

Next-Generation Optoelectronic Nanomaterials Lab., KAIST

Daejeon, Korea

UNDERGRADUATE RESEARCHER (ADVISOR: PROF. HIMCHAN CHO)

Jul. 2022 - Present

- 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 the Best Poster Presentation Award at the 2023 Spring Meeting of the Korean Institute of Materials and Metals (Apr. 2023)
- Awarded the Grand Prix at the 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 the 7th International Conference on Advanced Electromaterials (Nov. 2023)

Presentation

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 the Korean Institute of Metals and Materials | Jeju, Korea |

Patent

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

Honor & Award (Selected)

SCHOLARSHIP

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

HONOR

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
2022	National Delegate , Asian Students' Venture Forum	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

AWARD

2023	Grand Prix, Undergraduate Research Participation (URP) Workshop , KAIST	Daejeon, Korea
2023	CoE Leadership Award , College of Engineering, KAIST	Daejeon, Korea
2023	Global Leadership Award , KAIST	Daejeon, Korea
2022	Bronze Award, Asian Students' Venture Forum , Korea Economic Daily	Seoul, 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 Activity

KAIST Center for Excellence in Learning and Teaching

Daejeon, Korea

SPECIAL LECTURER

Nov. 2022

- Delivered a special lecture at the KAIST Tip Talk program
- The video was shared on Youtube and the KAIST Learning Management System (KLMS)

Young Engineers Honor Society, National Academy of Engineering of Korea

Seoul, Korea

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

Sep. 2020–Present

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