

Professor Minkyung Kim, the first Korean to receive the 'Nanophotonics New Researcher Award'

- Professor Minkyung Kim of the Department of Mechanical and Robotics Engineering, the first Korean to receive the 'Early Career Award' established by Nanophotonics... Selected as one of the world's top 4 young scientists in the field of nanophotonics within 5 years of obtaining a doctorate
- Published more than 60 papers in renowned international academic journals... Proven international influence with achievements in nanophotonics research such as the optical spin Hall effect and light topology "I will do my best in research for the basics and applications of nanophotonics"



▲ Professor Minkyung Kim of the Department of Mechanical and Robotics Engineering

The Gwangju Institute of Science and Technology (GIST, President Kichul Lim) announced that Professor Minkyung Kim of the Department of Mechanical and Robotics Engineering was the first Korean to receive the '2024 Early Career Award' from the international academic journal Nanophotonics.

The 'Early Career Award' is an international academic award established by Nanophotonics in 2021 to discover and encourage young scientists who have achieved outstanding results in the field of nanophotonics. It is awarded to four researchers who have received their doctorate within the past five years, and is considered one of the most prestigious awards worldwide.

Professor Minkyung Kim received her doctorate in nanophotonics and metamaterials in 2022, and has been actively conducting research across the entire field of nanophotonics.

In particular, he has led original theoretical and experimental research on topics including the 'spin Hall effect of light*', a subtle directional optical phenomenon that occurs during the reflection or refraction of light, and the 'topological properties of light*', which are robust to external environments. This award is evaluated as a result of these studies being recognized for both creativity and academic influence in the international academic community.

* spin Hall effect of light: A phenomenon in which the path of light changes slightly depending on the polarization state (spin) when reflected or refracted. This occurs due to the interaction between the spin and orbit of light, and appears as a change in position at the nanometer level. It has great potential for application in various optical technologies such as precision sensors, metamaterials, and optical information processing.

* topological properties of light: Physical properties based on the topological structure of light, and has high stability that does not easily collapse even under external disturbances. It is attracting attention in the fields of next-generation optical devices, quantum information, and communications, as it enables precise control of light through the topological protection effect.

Professor Kim has published more than 60 papers in renowned international academic journals such as Nanophotonics, Nature Communications, and Laser & Photonics Reviews, and has been recognized for his research capabilities internationally, including by receiving the SPIE Scholarship in 2021.

With this award, Professor Kim will receive a cash prize and a plaque, as well as the privilege of publishing an invited paper in Nanophotonics.

Professor Minkyung Kim said, “I am very honored and grateful to be the first Korean to receive the Nanophotonics New Researcher Award,” and added, “I will continue to do my best in basic research on nanophotonics as well as research that can lead to practical applications.”

