GIST graduate Dr. Hojoon Lim appointed as assistant professor at Myongji University

- After receiving his bachelor's, master's, and doctoral degrees (advisor: Professor Bongjin Simon Moon) from the Department of Physics and Photon Science at GIST, he worked as a postdoctoral researcher at Brookhaven National Laboratory (BNL) in the U.S. and was appointed to the Department of Chemistry and Energy Convergence at Myongji University on March 1 of this year.

- Focusing on analyzing surface and interface characteristics of next-generation energy materials such as catalysts, semiconductors, and battery materials using synchrotron radiation accelerator-based X-ray spectroscopy equipment and elucidating atomic-level reaction mechanisms

▲ Dr. Hojoon Lim, who was appointed as an assistant professor in the Department of Chemistry and Energy Convergence at Myongji University

The Gwangju Institute of Science and Technology (GIST, President Kichul Lim) announced that Dr. Hojoon Lim (advised by Professor Bongjin Simon Moon), a graduate of the Department of Physics and Photon Science, was appointed as an assistant professor in the Department of Chemistry and Energy Convergence at Myongji University on March 1 of this year.

Dr. Lim received his bachelor's degree (February 2016), master's degree (August 2017), and doctorate (August 2022) from GIST under the supervision of Professor Bong-jin Moon in the field of condensed matter physics. Afterwards, he worked as a postdoctoral researcher at Brookhaven National Laboratory (BNL)* in the United States, conducting research on catalysts and energy materials.

* Brookhaven National Laboratory (BNL): A world-class scientific research institute located in Long Island, New York, USA, and one of the national research institutes operated by the U.S. Department of Energy (DOE). Established in 1947, it mainly conducts research in physics, chemistry, biology, materials science, and energy.

Dr. Hojoon Lim is an expert in X-ray spectroscopy research using synchrotron radiation accelerators, and has conducted research to elucidate physical and chemical phenomena occurring at surfaces and interfaces. In particular, he has focused on elucidating the correlation between the surface electronic structure of catalyst and semiconductor materials and chemical reactions.

The main research area is the analysis of operando characteristics occurring on the surface and interface of catalyst materials, semiconductors, and battery materials*, and the goal is to elucidate the atomic-level mechanism of energy conversion and storage processes through real-time surface reaction research.

Dr. Lim has published more than 20 papers in internationally recognized scientific journals (such as Angewandte Chemie and ACS Nano) and has been recognized for his research capabilities by winning numerous excellent presentation awards at international and domestic academic conferences.

* analysis of operando characteristics: This is a method to analyze in real time how materials react in an actual operating environment, not just in a laboratory.

Dr. Hojoon Lim said, “I believe that a fundamental understanding of surface and interface science is essential for the development of sustainable future energy technologies,” and expressed his ambition to “elucidate how next-generation energy materials react at the atomic level through research utilizing synchrotron radiation-based X-ray spectroscopy techniques, and contribute to the development of innovative materials based on this.”

He also said, “Science demonstrates greater value when applied beyond the laboratory to real society and industry. We will continue to conduct creative and challenging research while also fostering future scientific talent and creating a research environment where academia and industry can cooperate.”

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