Research Professor Soo-young Jang selected for Sejong Science Fellowship

— Conducts research on improving the stability and efficiency of organic solar cells

▲ Research Professor Soo-young Jang

GIST (Gwangju Institute of Science and Technology, President Kiseon Kim) announced that Research Institute for Solar and sustainable Energies Research Professor Soo-young Jang was selected for the Sejong Science Fellowship for New Research in 2022 supported by the Ministry of Science and ICT and the National Research Foundation of Korea.

The Sejong Science Fellowship is one of the basic research projects of the National Research Foundation for science and technology. This is a project that supports young scientists who are under the age of 39 or are within seven years of obtaining a doctoral degree to grow and settle as core science and technology experts.

Research Professor Soo-young Jang proposed the 'development of a non-volatile solid additive that improves the stability and efficiency of organic solar cells' and will receive a total of 530 million won in research funding over the next five years.

Organic solar cells are attracting attention as next-generation solar cells that can be mass-produced through the roll-to-roll printing process because they can be solution-processed. Compared to commercially available silicon solar cells, they are experiencing difficulties in commercialization due to low efficiency and stability.

Research Professor Jang plans to conduct research on non-volatile solid additives that can improve the efficiency and stability of organic solar cells through this project.

The non-volatile solid additive proposed in this project is expected to exist stably in the photoactive layer for a long period of time compared to the conventional liquid additive widely used in organic solar cells, thereby increasing solar cell efficiency and device stability.

Research Professor Soo-young Jang said, "Non-volatile solid additives can be applied to research on improving the efficiency and stability of various organic-inorganic hybrid solar cells, such as perovskite solar cells and quantum dot solar cells. Next-generation solar cells with this technology can be used as a power supply source for building-integrated photovoltaic power generation and personal mobility, and this is expected to present a new paradigm for the photovoltaic industry."

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