Verification of ‘superconductors’… GIST holds an internal meeting

- Hosted by the Vice President of Research... Internal researchers gathered to hold a verification meeting for ‘superconductors at room temperature and normal pressure’
- GIST’s research capabilities will be gathered and verification discussions will continue… “Need a cautious approach”

▲ Vice President for R&D Kwanghee Lee (Professor in the School of Materials Science and Engineering)

GIST (Gwangju Institute of Science and Technology, President Kichul Lim) announced that it held a meeting with related researchers inside GIST to discuss whether it is possible to scientifically verify the ‘room temperature, normal pressure* superconductor’ that has recently attracted worldwide attention.

* room temperature: Room temperature (25℃) / normal pressure: Atmospheric pressure

A superconductor is a material that completely loses electrical resistance at a certain temperature, and power transmission and storage is possible without loss. It is a ‘dream material’ that can be used for maglev trains, magnetic resonance imaging (MRI), and quantum computers.

However, since superconductivity can only be observed at cryogenic temperatures (-196℃) or high pressure (270 GPa*) at room temperature, the development of normal-temperature and normal-pressure superconductors that can be applied to real life remains as one of the challenges in the academic world.

* GPa: gigapascal, a unit for very high pressure

Recently, a paper by a research team in Korea claiming that superconductivity is possible at room temperature and pressure has been published, and it has become a global topic. It was published through the ‘Archive’, a thesis site that does not undergo cross-validation with fellow researchers, and became the center of controversy.

GIST internal experts who majored in materials, theory, and low-temperature experiments attended. Regarding the experimental results published in the three recently published papers on superconductors at room temperature and normal pressure, lively discussions were held on ▲ expert analysis by field, ▲ whether it is possible to produce samples for verification, and ▲ meaning of scientific verification.

Vice President Lee who hosted the meeting said, "As attention is focused on superconductivity from the international community beyond academia, it is thought that a cautious approach is needed for verification. However, as a research-oriented university, I believe that it is meaningful to contribute to society by actively responding to major issues in the scientific community.

In addition, Vice President Lee said that he plans to collect various opinions of internal experts on normal-temperature and normal-pressure superconductors and continue to discuss them.

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