Theme: Fundamental technology for semiconductor equipment

- Sub Theme: Precision Heater and Temperature Measurement Technology

As the width of the semiconductor pattern is becoming smaller, the performance of the system is also increasing. In particular, in the photolithography process, there is a process of heating the photoresist after exposure. In this process, efforts have been made to improve the temperature uniformity of the wafer surface.

The wafer temperature uniformity target level required by the recent process is very high and we have no answer yet to solve this problem.

Therefore, precision heating technology is needed to make temperature uniformity of the wafer surface during the wafer baking process. In addition, a measurement system shall be constructed to measure this. Finally, we would also like to investigate materials and components that can ensure long-term reliability when constructing the heating system in the high temperature band.

The topics we are through this GRO are as follows:

· Heating method and system for high-precision temperature uniformity of the wafer surface
· Measurement methods and devices that can evaluate the performance of the heating system
· Materials and parts that can be reliable in high temperature areas

※ The topics are not limited to the above examples and the participants are encouraged to propose original idea.
※ Funding: Up to USD $150,000 per year