

## The 57th Symposium on Powder Technology

The 57th Symposium on Powder Technology organized by the Hosokawa Powder Technology Foundation took place at the Hotel Tokyo Garden Palace in Japan on Wednesday, September 3, 2025. The theme of the symposium this year was “Structural Control of Powders and Their Applications in Advanced Fields”. There were six lectures, including the KONA Award commemorative lecture, from the perspectives of the fundamentals and applications of powder technology. As in the previous year, the symposium was held in a hybrid style, allowing participation both on-site and online.

President Yoshio Hosokawa of the Foundation delivered the opening address, welcoming the participants from a wide range of fields in academia and industry. He explained the background to the symposium and the Foundation’s activities in the field of powder technology both domestically and internationally.

The KONA Award presentation ceremony then took place. Managing Director Makio Naito, Professor Emeritus of Osaka University, introduced the 2024 Awardee, Anthony J. Hickey, Professor Emeritus of the University of North Carolina at Chapel Hill, and the President presented him with the KONA Award plaque. The KONA Award is an international award given to researchers who have achieved outstanding accomplishments in the field of powder technology. Each year, one person is selected from a selection of candidates nominated from around the world through a review process. This year marks the 39th awardee, and Professor Hickey is the third recipient from the United States.

In the subsequent session, the KONA Award Lecture was presented. The lecture focused on aerosol drug delivery systems, which have been undergoing remarkable advances as therapeutic modalities for various pulmonary diseases. From both pharmaceutical and powder engineering perspectives, it addressed the research and development of safe and efficacious inhalation formulations, designed with careful consideration of the physicochemical properties of active pharmaceutical ingredients, excipients, and related components.

This was followed by two invited lectures representing the powder science community. Professor Takashi Ogi of Hiroshima University delivered a presentation on the structural control of fine particles in the gas phase and its application to the development of advanced materials. Associate Professor Motoyuki Iijima of Yokohama National University reported on the design of functional materials based on the dispersion and controlled assembly of fine particles in the liquid phase.

Subsequently, from the industrial sector, lectures were delivered on the application of powder technology and nanoparticle synthesis/processing techniques to product development, which has attracted considerable attention in recent years. Dr. Hideyuki Emoto of Denka Co., Ltd. presented on the improvement of the properties of SiAlON phosphors and their practical implementation; Dr. Hideaki Hikosaka of Niterra Co., Ltd. reported on the development of lithium-ion



Opening address by President Yoshio Hosokawa.



The 2024 KONA Award commemorative lecture by Prof. Emeritus Anthony J. Hickey.



Lectures by Prof. Takashi Ogi, Assoc. Prof. Motoyuki Iijima, Dr. Hideyuki Emoto, Dr. Hideaki Hikosaka, and Mr. Tsuyoshi Higashiwada.

conductive oxide solid electrolytes, including particle surface modification and their application to batteries; and Mr. Tsuyoshi Higashiwada of Hosokawa Micron Corporation discussed particle structural control through dry processing operations.

At the conclusion of the symposium, the closing address was delivered by Dr. Kohei Hosokawa, President of Hosokawa Micron Corporation, bringing the event to a successful close. Following the symposium, a lively reception was held, as in the previous year, providing a valuable opportunity for meaningful interactions between speakers and participants in a relaxed atmosphere. This year, the number of on-site attendees exceeded 100, filling the venue to capacity, and when combined with online participation, the total number of participants approached 260. The next (58th) symposium is scheduled to be held in Osaka in September 2026.



Lecture scene.



Discussion scene.



Closing address by HMC President Kohei Hosokawa.



Get-acquainted party.

## The 57th Symposium on Powder Technology

**Theme:** “Structural Control of Powders and Their Applications in Advanced Fields”

**Date:** Wednesday, September 3, 2025

**Place:** Hotel Tokyo Garden Palace, Hybrid format (on-site and online)

**Organizer:** Hosokawa Powder Technology Foundation

**Sponsor:** Hosokawa Micron Corporation

**Opening address** Mr. Yoshio Hosokawa (*President of Hosokawa Powder Technology Foundation*)

**2024 KONA Award presentation ceremony**

**Session 1** Chaired by Prof. Junya Kano (*Tohoku University*)

●KONA Award Commemorative Lecture (by the 2024 KONA Awardee)

**“Outstanding Contributions to Aerosol Drug Delivery Systems”**

Prof. Emeritus Anthony J. Hickey (*University of North Carolina at Chapel Hill, USA*)

●Lecture 1 **“Structure Control of Fine Particles in the Gas Phase and Its Application to Advanced Materials Development”**

Prof. Takashi Ogi (*Hiroshima University, Japan*)

**Session 2** Chaired by Honorary Research Advisor, Dr. Hisao Makino (*Central Research Institute of Electric Power Industry (CRIEPI), Japan*)

●Lecture 2 **“Design of Functional Polymer Dispersant for Dispersion/Assembly Structure Control of Particles and Material Processing”**

Assoc. Prof. Motoyuki Iijima (*Yokohama National University, Japan*)

●Lecture 3 **“Improvement and Practical Application of SiAlON Phosphors”**

Dr. Hideyuki Emoto (*Denka Co., Ltd., Japan*)

**Session 3** Chaired by Prof. Hidehiro Kamiya (*Tokyo University of Agriculture and Technology, Japan*)

●Lecture 4 **“Development of Lithium-Ion Conductive Oxide Solid Electrolytes and Their Particle Surface Control and Battery Applications”**

Dr. Hideaki Hikosaka (*Niterra Co., Ltd., Japan*)

●Lecture 5 **“Introduction of Particle Structure Control by Dry Processing Operations”**

Mr. Tsuyoshi Higashiwada (*Hosokawa Micron Corporation, Japan*)

**Closing address** Dr. Kohei Hosokawa (*President of Hosokawa Micron Corporation, Japan*)