

The 22nd KONA Award

Dr. Yoshio Otani, Professor of Kanazawa University, was selected as the winner of the 22nd KONA Award. The KONA Award is sponsored by Hosokawa Powder Technology Foundation and presented to scientists or groups who have achieved distinguished research work in the field of particle science and technology.

Dr. Otani received his B.E. in 1977, M.E. in 1979, from Kanazawa University, and Ph.D. in 1982 from Syracuse University, New York. After completion of his Ph.D., he joined Kanazawa University as a research associate in 1982. He became a professor of the Faculty of Engineering in 1998. Since then, he has steered the particle technology lab to be the one of the leading labs in the field of particle technology and aerosol science in Japan. In 1999–2000, he took a sabbatical leave to the School of Public Health, Harvard University, where he worked on the irreversibility of inhaled air in the periphery of the lung.

He has served on the executive board of the Society of Powder Technology, Japan, the Japan Association of Aerosol Science and Technology, and Japan Air Cleaning Association. He hosted the 2015 Asian Aerosol Conference (AAC2015) in June, 2015, inviting more than 500 attendees from abroad and Japan. At the AAC2015 he was appointed as President of Asian Aerosol Research Assembly to lead in the collaboration of Asian aerosol societies.

In over thirty years of his career at Kanazawa University, Dr. Otani has made outstanding contributions to aerosol science and technology through research on aerosol generation, measurement and collection. He is one of the research authorities making substantial achievements in the development of air cleaning technology with air filters. He has supervised over ten Ph.D. students and more than 200 master course students. Most of his students now work actively in companies related to particle technology. His contribution is not limited to academics. He has served as the chairmen of ISO/TC24/SC4 and ISO/TC142 Japanese mirror committees and contributed to the international standardization of particle measurement instruments and air cleaning equipment.

He has over 150 published research papers and more than 50 review articles, book chapters and textbooks. In recent five years, he has been an invited lecturer of six Asian and international conferences. His research field covers (i) influence of filter structure on the collection performance, (ii) evaluation method of air filter performance, (iii) generation of test aerosol, (iv) charging of aerosol particles, and (v) aerosol instrumentation. He was the first to apply an air filter to classify aerosol nanoparticles by passing aerosol particles through an air filter at an extremely high filtration velocity, which is now commercialized as “Nanosampler” for the measurement of atmospheric nanoparticles.

He has conducted much collaborative research work with companies dealing with powder products, industrial hygiene, air filter and aerosol measuring instruments, since air filtration is an immediate research topic closely related to the problems which many manufacturing companies are now confronted with.

In summary, his contributions to academics and societies are outstanding and his progress in networking the international research collaboration is making great strides forward.

On March 9, 2015, Mr. Kiyomi Miyata, Vice-President of the Foundation, presented the 22nd KONA Award to Dr. Yoshio Otani at the presentation ceremony held at Hosokawa Micron Corporation in Hirakata.

