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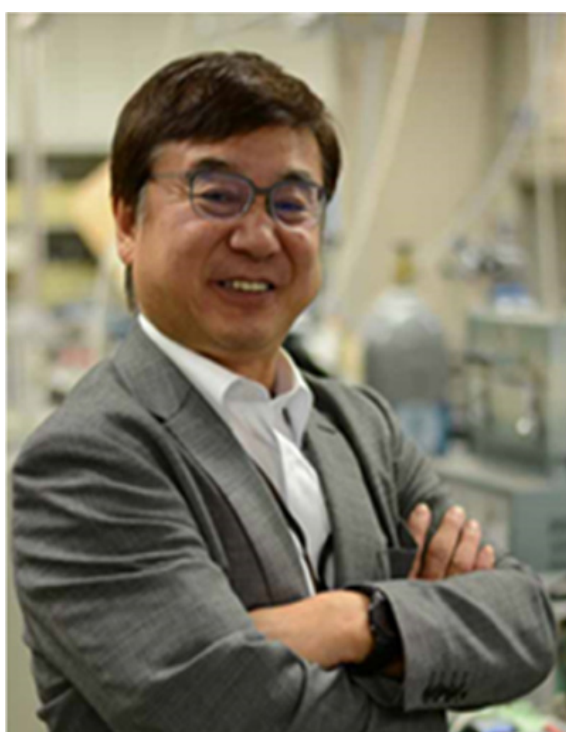
WEDNESDAY, APRIL 11, 2018 • 3:30PM • 3-180 KENNETH H. KELLER HALL

# **NANOFIBER FILTERS AND NEW APPLICATION OF AIR FILTERS FOR AEROSOL MEASUREMENTS**

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**Abstract:** Air filters are the simplest and most economical means to obtain clean air. There is an increasing demand of air filters with high collection performance for the application to indoor air cleaning and waste gas treatment. Kanazawa University has a long history of filtration research starting with Prof. Hitoshi Emi's seminal work on numerical modeling of aerosol filtration almost 50 years ago. Many researchers from this group are now successful academics and technologists in filtration industry. We may use air filters not only for the removal of particles but also for classification of particles by selecting an appropriate filter and operating it under optimized filtration condition for classification. In the present lecture, air filters consisting of nanofibers are introduced from the view point of collection performance, i.e., low pressure drop and high collection efficiency, and Inertial filter, metal screens and centrifugal filter are explained as examples of application of air filters to aerosol classification.



**Yoshio Otani** is Professor of Department of Chemical Engineering, Kanazawa University, Japan. Professor Otani currently serves as the Vice President of Kanazawa University for International Affairs. He graduated from Kanazawa University with a B.S. degree in chemical engineering, and received his Ph.D. in chemical engineering from Syracuse University. He is widely acknowledged for his research on air filtration and aerosol dynamics. Through both experimental and theoretical studies, he has made great contributions to our knowledge of air cleaning and contamination control as well as waste gas treatment. Professor Otani received the KONA Award of Hosokawa Powder Technology Foundation in 2015, an award considered the highest honor bestowed for work in the field of powder and aerosol technology. He is the previous President of Asian Aerosol Research Assembly holding a highly successful Asian Aerosol Conference 2015 in Kanazawa, Japan.

He is currently the president of Japan Association of Aerosol Science and Technology and is a leading member of ISO/TC142 of cleaning devices for air and other gases, chairing the Japanese mirror committee. He received the Award of Minister of Economy, Trade and Industry in 2016 for his distinguished contributions to standardization of aerosol measuring instruments and testing procedures.

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