

Seminar by Prof. Chihaya Adachi

Date: Thursday, February 27, 2025 - 16:00 to 17:00

Location: Seminar Room Seminar Room L4E48 (Lab 4)

Description

Chihaya Adachi, Professor, OPERA, Kyushu University

### **Precise Control of CT States Pioneering Advanced Organic Devices**

**Abstract:** In organic optoelectronic devices, high performance has been achieved through precise molecular design based on various electron-donating and electron-accepting units, which control electrical conduction, exciton generation, charge separation processes, and even spontaneous dipole orientation in thin films. From the aspect of charge transfer phenomena, we will mention the improvement of the efficiency and durability of organic devices, clarify the correlation between individual molecular design and macroscopic device characteristics, and provide an overview of the future development of organic devices.

**Biography:** Chihaya Adachi is a distinguished professor at Kyushu University and director of Kyushu University's Center for Organic Photonics and Electronics Research (OPERA). He is also program coordinator of Kyushu University's Advanced Graduate da Vinci Course on Molecular Systems for Devices and director of the Fukuoka i3 center for Organic Photonics and Electronics Research. Chihaya Adachi obtained his doctorate in Materials Science and Technology in 1991 from Kyushu University and held positions as at the Chemical Products R&D Center at Ricoh Co., the Department of Functional Polymer Science at Shinshu University, the Department of Electrical Engineering at Princeton University, and Chitose Institute of Science and Technology before returning to Kyushu University as a professor.

Adachi's research combines the areas of chemistry, physics, and electronics to advance the field of organic light-emitting materials and devices from both the materials and device perspectives through the design of new molecules with novel properties, the study of processes occurring in individual materials and complete devices, and the exploration of new device structures, and he has co-authored over 700 research papers.

He co-founded and serves as scientific advisor for Kyulux Inc, which is commercializing OLED emitters based on thermally activated delayed fluorescence. In 2019, he co-founded KOALA Tech Inc to further develop and eventually commercialize the organic laser diodes. Recent awards include the Nishina Memorial Award in 2017 and the Medal with Purple Ribbon in 2023, as well as being named a Highly Cited Researcher for seven consecutive years beginning in 2018.