
Associate Professor. Masato SUZUKI

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Dr. Masato Suzuki is a researcher in the fields of analytical chemistry and biotechnology. His research focuses on Dielectrophoresis (DEP) and Electrorotation (ROT), through which he has developed label-free and non-invasive methods for single-cell analysis. His major academic contributions include:

Label-free Single-Cell Analysis: Development of microelectrode platforms that characterize cells on the basis of their dielectric properties.

Electrorotation Systems: Innovating devices that monitor cell rotation rates to assess drug responses, immune activation, and differentiation states in real-time.

Education and Early Career

Dr. Suzuki received his Ph.D. from the Graduate School of Environmental Studies at Tohoku University, Japan, in March 2007. Following his graduation, he joined Panasonic Corporation, where he worked in the Technology Innovation Division from 2007 to 2018, focusing on the commercialization and innovation of biosensor technologies. He returned to academia in April 2018 to lead his current research group at the University of Hyogo.

Selected Key Publications

"Simple and Convenient Three-Electrode Layout for Real-Time Electrorotation Measurement Upon Chemical Stimulation" *Electrophoresis* (2025) 46, 1226-1236.

"Development of a simultaneous electrorotation device with microwells for monitoring the rotation rates of multiple single cells upon chemical stimulation" *Lab on a Chip* (2023) 23, 692-701.

"Determination of membrane capacitance and cytoplasm conductivity by simultaneous electrorotation" *Analyst* (2020) 145, 4188-4195.