The 84th GREEN Seminar

Nanomaterials with Controlled Coordination and Electronic Structure as Electrocatalysts for Water and CO_2 Electrolysis

Chair: Dr. Shoichi Matsuda (GREEN)

Dr. Kazuyuki Iwase

(Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Japan)

Developing highly efficient electrochemical devices that can convert electrical and chemical energy is desirable to realize a sustainable society. In this context, electrocatalysts with high activity and selectivity are needed for such devices. Against this background, we aimed to develop electrocatalysts that efficiently perform various reactions (water splitting and CO_2 electrolysis). Here, we introduce nanomaterial-based CO_2 reduction electrocatalysts and oxide-based oxygen evolution electrocatalysts. Our results revealed that the modulation of the electronic and coordination structure of metal active centers is essential to improve catalytic activity.

Venue: Rm. 409/410, 4F, Collaborative Research Bldg., Namiki-site

Date: Monday, February 27th

Time: 15:00-16:00

Contact: MATSUDA.Shoichi@nims.go.jp