

MINI-SYMPOSIUM ON Electromaterials and Systems



SEP 29, 2022

YOKOHAMA NATIONAL UNIV. MEDIA HALL

YNU
YOKOHAMA National University



ACERC
Advanced Chemical Energy Research Center

OPENING REMARKS (Masayoshi WATANABE)

10:30-11:20 **Keynote: Douglas MacFarlane, Monash University**

*Electrochemical reduction of N_2 to ammonia at ambient conditions :
Fascinating electrochemistry and scale-up potential*
- ONLINE -

11:20-12:00 **Invited: Hiroki OTA, YNU**

Stretchable electro-mechanical systems using liquid metals

LUNCH BREAK (12:00-13:00)

13:00-13:25 **Naoki SHIDA, YNU**

Electrosynthesis governed by coordination of electrolyte

13:25-13:50 **Karolina Matuszek, Monash University**

*Molecular patterns in the thermophysical properties of ionic liquids as phase
change materials for energy storage in the intermediate temperature range*
- ONLINE -

13:50-14:15 **Naoki YABUUCHI, YNU**

*Ordered layered and disordered rocksalt electrode materials for
Li storage applications*

14:15-14:40 **Kaoru DOKKO, YNU**

Li-ion conduction in solvate electrolytes

COFFEE BREAK (14:40-15:10)

15:10-15:35 **Yoshiyuki KURODA, YNU**

*Design of metal hydroxide-based nanomaterials as highly active
and durable electrode for alkaline water electrolysis*

Early Career Session

15:35-15:50 **Ashraf Abdel Haleem, YNU**

*Renewable energy-powered bipolar alkaline water electrolyzers :
reverse current phenomenon and accelerated durability test*

15:50-16:05 **Shinji KONDOU, YNU**

*Ion transport of weakly coordinating polyanions in nonaqueous
solvents and their application in secondary batteries*

16:05-16:30 **Arnab Ghosh, YNU**

*Challenges of practical lithium-sulfur battery pouch cells and
plausible mitigation strategies*



Douglas MacFarlane
Distinguished Professor
Monash University



Hiroki OTA
Associate Professor
Yokohama National University



Karolina Matuszek
Dr., Research Fellow
Monash University

Prof. Masayoshi WATANABE, ACERC director

We are pleased to announce that the Advanced Chemical Energy Research Center (ACERC), Yokohama National University (YNU) will host a mini-symposium on "Electromaterials and Systems" on September 29th, 2022. The goal of ACERC is the advancement of chemical energy research and technology, including efficient conversion of chemical energy into electrical energy for practical applications and the reversal of electrical energy into chemical energy for storage and transportation. The ACERC will organize this mini-symposium as an international outreach activity of our center. The number of participants who may physically attend the mini-symposium is restricted due to the COVID-19 pandemic. Active participants will be considered on the basis of early bird registration.

