

# 20<sup>th</sup> International Symposium on Clean Technology

- Hosts**
- **Clean Energy Priority Research Center at YU** (supported by MOE)
  - The Institute of Clean Technology at YU
  - BK21 FOUR: IT-Energy Materials and Processes Cultivation Program
  - Hydrogen Education & Research Consortium

**V e n u e** : Chemical Eng. (Bldg. E24) Room 214 & 212, Yeungnam University

**Date/Time** : Tuesday, January 26 2021

10:30-10:45      **Registration**

## Opening Ceremony

Moderator: Prof. Woo Kyoung Kim / Chairman & Professor, School of Chemical Engineering

10:45-11:00      **Opening Address**

Prof. Jae-Jin Shim / Director, Institute of Clean Technology  
& Director, Clean Energy Priority Research Center

**Congratulatory Address**

Prof. Yeongmog Park / Dean, College of Engineering

## Research Presentations

### **Session 1:      Electrode Materials for Energy Storage**

Chair      Prof. Woo Kyoung Kim / Chairman & Professor, School of Chemical Engineering

11:00-11:40      ***Invited Speech***

**How Fast Can We Charge TiO<sub>2</sub>(B)? A model study with nanosheet electrodes**

Prof. Wataru Sugimoto (Nihon, Japan)

11:40-12:20      ***Invited Speech***

**Zinc-based electrochemical energy storage: cathode materials and mechanism**

Prof. Hongjin Fan (Nanyang Technical University, Singapore)

12:20-13:30      **Lunch Break**

### **Session 2:      Enhancement of Electrochemical Capacitors and Perovskite Photocatalysts**

Chair      Youngsoo Kim / Professor, School of Chemistry and Biochemistry

13:30-14:10      ***Invited Speech***

**Redox-Enhanced Electrochemical Capacitors: Electrolyte Design and Device Engineering**

Prof. Seung Joon Yoo (GIST, Korea)

14:10-14:50      ***Invited Speech***

**Organic-inorganic Mixed Halide Perovskite: Fundamentals of Photoinstability and Development of Strategy to Obtain Photostability**

Prof. Seog Joon Yoon (Yeungnam University, Korea)

14:50-15:00      **Coffee Break**

### **Session 3:      Energy Conversion via Biotechnology**

Chair      Moonyong Lee / Director, BK Four Chem Eng Education Program

15:00-15:40      ***Invited Speech***

**Integrated Waste Biorefineries: Future for Sustainable Development Goals**

Prof. Abdul-Sattar Nizami (Government College University, Pakistan)

15:40-16:20	<b><i>Invited Speech</i></b> <b>Conversion of waste CO<sub>2</sub> into green gold microalgae</b> Prof. Sang Jun Sim (Korea University, Korea)
16:20-16:30	<b>Coffee Break</b>
<b>Session 4: Batteries and Supercapacitors for Energy Storage</b>	
Chair	Taeho Yoon / Associate Director, Institute of Clean Technology
16:30-17:10	<b><i>Keynote Speech</i></b> <b>Research toward high-efficiency Li-metal Li-ion batteries</b> Prof. Nae-Lih Wu (National Taiwan University, Taiwan)
17:10-17:50	<b><i>Invited Speech</i></b> <b>New pseudocapacitive oxides for aqueous supercapacitors</b> Prof. Thierry Brousse (University of Nantes, France)
17:50-18:00	<b>Closing Remarks and Lucky Draw</b> Prof. Jae-Jin Shim / Director, Institute of Clean Technology