



## Tohoku University & National Taipei University of Technology 2024 Joint Symposium (7<sup>th</sup> TU-TaipeiTech JS )

Date: November 26 (Tue)– 27 (Wed), 2024  
Venue: IMRAM South Multidisciplinary Research Laboratory 2  
Topics: Keynote Speech, Invited Talk (Young Researchers),  
Collaborative Project Presentation,  
Poster Competition (Students)

This symposium aims to not only promote research exchange between researchers and students from Tohoku University and National Taipei University of Technology but also to unearth the seeds of research themes that can lead to future collaborative research. This is the 7<sup>th</sup> time the symposium has been held, and there will be keynote speeches from both institutions that focus on future research visions, invited talk by up-and-coming young researchers, project reports and a poster competition by students from both universities. We hope you will participate.

### ■ Program

#### November 26 (Tuesday), 2024

OPENING REMARKS: 09:00 – 9:15

#### MORNING SESSION: KEYNOTE SPEECH I

09:15-09:45 Prof. Hsu-Wei Fang (Biomaterials)

“Bridging the gap: from biomaterial research to commercial success”

09:45-10:15 Prof. Yukio Takahashi (Synchrotron radiation measurement)

“Visualization of nanoscale structures and chemical states by coherent X-ray diffraction imaging”

---(Break)---

#### MORNING SESSION: INVITED TALK I

10:30-10:50 Prof. Ying-Chieh Hung (Computational Molecular Design)

“Combining experimental and theoretical investigations toward amines' influence on CO<sub>2</sub> capture efficiency in a water/DEGDDE cosolvent biphasic system”

10:50-11:10 Assistant Prof. Shunya Yoshino (Photocatalysis)

“Development of visible light responsive photocatalysts for water splitting”

11:10-11:30 Prof. Chun-Che Lin (Photoelectronics Composites)

“Investigating a simple and sustainable photoluminescence improvement approach of highly applicable perovskite-ZIF-8 composite by using water”

11:30-11:50 Assistant Prof. Takuya Taniguchi (Magnetic Materials)

“Towards fundamental understanding of iron loss in soft magnets”

---(Lunch)---

#### AFTERNOON SESSION: INVITED TALK II

13:30-13:50 Prof. Yueh-Ting Shih (Glass Materials)

“Accelerating the development of glass materials through molecular dynamics simulation”

13:50-14:10 Assistant Prof. Tomoyuki Yamasaki (Hydride Materials)

“Development of protonic and electronic mixed conductors”

14:10-14:30 Prof. Wing-Kiu Yeung (Plasma Electrolysis)

“En operando optical emission revealing PEO discharge mechanism of Ti surface”

14:30-14:50 Assistant Prof. Ken Ikeuchi (Structural Biology)

“Cryo-TEM structural analysis for the recognition mechanism of aberrant translation through ribosome”

---(Break)---

#### POSTER COMPETITION: 15:10-17:00\*

(5 min x 20 students; \*Possibility of time extension)

BANQUET: 19:00-21:00

#### November 27 (Wednesday), 2024

#### MORNING SESSION: KEYNOTE SPEECH II

09:00-09:30 Prof. Chi-Ching Kuo (Optoelectronic Devices)

“Self-healable Polymer-pervoskite enabled next generation multifunctional optoelectronics and underwater wearable electronics”

09:30-10:00 Associate Prof. Yohei Sato (Electron Microscopy)

“Material property analysis using electron energy loss spectroscopy”

--(Break)---

#### COLLABORATIVE PROJECT PRESENTATION

10:10-10:30 Prof. Yi-Hsuan Lee

“Analysis of the mechanisms of electrolytes and cathode materials in solid oxide electrolysis cells”

10:30-10:50 Prof. Tomoyuki Akutagawa / Prof. Hsiu-Hui Chen

“Functional organic materials using hydrogen-bonded supramolecular assemblies”

10:50-11:10 Prof. Ren-Xuan Yang

“Ce-UiO-66 derived core-shell catalyst for hydrogen production from dry reforming of methane”

11:10-11:30 Prof. Taku J. Sato

“Quantum magnetism of new fluorinated metal complexes”

---(Break)---

CLOSING REMARKS: 11:45-12:00

GROUP TOUR: 13:30-

#### November 28 (Thursday), 2024

#### OPTIONAL TOUR

09:20-10:20 NanoTerasu @ Aoba-yama Campus

#### Registration & Contact

Satoshi Kameoka | IMRAM, Tohoku University

Email: [satoshi.kameoka.b4@tohoku.ac.jp](mailto:satoshi.kameoka.b4@tohoku.ac.jp)

※Registration deadline: November 15 (Friday), 2024