

## Program at a glance

| Event   | July<br>20 | July<br>21 | July<br>22 | July<br>23 | July<br>24 | July<br>25 |
|---|------------|------------|------------|------------|------------|------------|
| Plenary Session   |            |            |            | ○          |            |            |
| Physics & Materials Workshop                                | ○          | ○          |            |            |            |            |
| Hydro-Science Workshop                                      |            |            |            |            | ○          | ○          |
| Frontiers in Biological and Biomedical Engineering Workshop |            |            |            |            | ○          |            |
| Surface Science and Related Areas Workshop                  |            |            |            | ○          |            |            |
| Rethinking East Asian History of Architecture Workshop      |            |            |            |            | ○          | ○          |
| Public Safety and Media Workshop                            |            |            |            |            | ○*         |            |
| Humanities Workshop   |            |            |            |            | ○          |            |
| Materials and Devices Workshop                              |            |            | ○          |            |            |            |
| Chemical Engineering for Future Energy and Materials        |            |            |            |            | ○          |            |
| Industrial Academic Workshop                                |            |            |            | ○          | ○          | ○          |
| Environment and Energy Workshop                             |            |            |            |            | ○          |            |
| Round Table on R+D Management (closed)                      |            |            |            |            | ○          |            |

\* To be confirmed

# Opening Ceremony and Plenary Session

July 23 (Mon) 13:30 – 17:30  
Takeda Hall, Asano Campus, The University of Tokyo

## Opening Ceremony

**13:30-14:00**

MC: Satoshi Watanabe *The University of Tokyo*

### Welcome Addresses

Makoto Gonokami *President, The University of Tokyo*

Yong Qiu *President, Tsinghua University*

Wan Wang *Counselor of the Exchange Office, Chinese Embassy in Japan*

### Group Photo

## Plenary Session

Chair: Shin Muramatsu *The University of Tokyo*

### Keynote Presentation 1

**14:00-14:45**

Industrialization in prewar Japan: Complementary roles of the government and private firms

Tetsuji Okazaki *Graduate School of Economics, The University of Tokyo*

### Keynote Presentation 2

**14:45-15:30**

The mystery of high temperature superconductors

Yayu Wang *Department of Physics, Tsinghua University*

### Break

**15:30-15:50**

Chair: Hongen Liao *Tsinghua University*

### Keynote Presentation 3

**15:50-16:35**

De-carbonization and de-centralization of energy systems in the future

Yasumasa Fujii *Graduate School of Engineering, The University of Tokyo*

### Keynote Presentation 4

**16:35-17:20**

Energy conversion and storage technologies for developing sustainable society

Baoguo Wang *Department Chemical Engineering, Tsinghua University*

### Closing Remark

**17:20-17:25**

Naoto Sekimura *Vice President, The University of Tokyo*

# Physics & Materials Workshop

## Program

Lecture room 42, 43, 44, 4<sup>th</sup> Engineering Building, Hongo Campus

### July 20

**Opening Remarks**

**Room 42, 9:30-9:50**

Prof. Yayu Wang *Phys, Tsinghua University*

Prof. Shuji Hasegawa *Phys, The University of Tokyo*

**Group Photo** at the entrance of Engineering Building IV

Chair: Tsuyohito Ito, *Adv. Mater. Sci., UTokyo*

**Session I**

**Room 42, 9:50-11:50**

**9:50-10:10**

Prof. Yayu Wang, *Tsinghua*

Quantum phase transitions in magnetic topological insulators

**10:10-10:30**

Prof. Shuji Hasegawa, *UTokyo*

Dissipationless currents at atomic layers

**10:30-10:50**

Prof. CanLi Song, *Tsinghua*

Scanning tunneling spectroscopy of interface superconductivity

**10:50-11:10**

Prof. Eiji Abe, *UTokyo*

Structure and unique stabilization of novel high-strength LPSO-Mg alloys

**11:10-11:30**

Prof. Wei Pan, *Tsinghua*

A new approach to probe the migration of oxygen in solid oxide electrolytes

**11:30-11:50**

Prof. Kazuki Morita, *UTokyo*

Thermodynamic evaluation of new metallurgical refining processes for solar grade silicon production

Chair: Zhengcao Li, *Mater. Sci. Eng., Tsinghua*  
**Room 42, 13:30-15:10**

## Session II

- 13:30-13:50** Prof. Baohua Li, *Tsinghua*  
Energy storage materials towards high-energy density, long life and good safety
- 13:50-14:10** Prof. Tsuyohito Ito, *UTokyo*  
Laser electric field measurements in atmospheric-pressure nonequilibrium plasma
- 14:10-14:30** Prof. Bilu Liu, *Tsinghua*  
2D materials: mass production and application explorations
- 14:30-14:50** Prof. Xiaodong Wu, *Tsinghua*  
Active sites for urea conversion over Cu-SAPO-34 SCR catalysts
- 14:50-15:10** Coffee Break@Room 43, 44

Chair: Yayu Wang, *Phys., Tsinghua*  
**Room 42, 15:10-16:30**

## Session III

- 15:10-15:30** Prof. Tetsuya Hasegawa, *UTokyo*  
Superconductivity in unusual low valence compounds
- 15:30-15:50** Prof. Ding Zhang, *Tsinghua*  
Emergent two-dimensional superconductivity in few-layer stanene
- 15:50-16:10** Prof. Iwao Matsuda, *UTokyo*  
Two-dimensional Dirac nodal line fermions in a monatomic layer
- 16:10-16:30** Prof. Wei Li, *Tsinghua*  
Stripes and topological states in FeSe films

## July 21

Chair: Satoshi Watanabe, *Mater. Eng., UTokyo*

### Session IV

**Room 42, 10:00-11:20**

**10:00-10:20**

Prof. Wanjun Jiang, *Tsinghua*

Dynamics of skyrmions driven by spin currents and thermal fluctuations

**10:20-10:40**

Prof. Tomohiro Matsui, *UTokyo*

STM/S Studies of the Spin Polarized Zigzag Graphene Edge States

**10:40-11:00**

Prof. Zhengcao Li, *Tsinghua*

Materials degradation and safety issues of nuclear power systems

**11:00-11:20**

Prof. Xiang Li, *UTokyo*

The Boundary of Sol and Gel Seen by Light

### Closing Remarks

**Room 42, 11:20-11:30**

Prof. Wei Pan *Mater. Sci. Eng., Tsinghua University*

Prof. Satoshi Watanabe *Mater. Eng., The University of Tokyo*

# Hydro-Science Workshop

## Program

Lecture room 13, 1<sup>st</sup> Engineering Building, Hongo Campus

### July 24

Chair: Dawen Yang, *Tsinghua*

#### Session 1 Regional Scale Hydrological Studies

**9:00-10:40**

**9:00-9:10**

Prof. Taikan Oki, *UTokyo*

Opening Welcome Talk

**9:10-9:40**

Prof. Guangheng Ni, *Tsinghua*

Application and modification of WRF-Lake for a deep reservoir

**9:40-9:55**

Mr. Hiroaki Ikeuchi, *UTokyo*

Incorporation of the nesting method on flood inundation modelling for estuaries and deltas using global flood models

**9:55-10:10**

Mr. Hideaki Kamiya, *UTokyo*

Evaluation of multiple global radiative transfer schemes with focusing on their input variables related to forest structure

**10:10-10:25**

Mr. Xuejian Cao, *Tsinghua*

Effects of Spatial Resolution of Underlying Surface on Urban Hydrological Simulation in Fine drainage Modeling

**10:25-10:40**

Ms. Xiaojun Guo, *UTokyo*

Analysis of local intraseasonal air-sea interaction over East Asia using a regional atmosphere-ocean coupled model

#### Coffee Break

Chair: Masashi Kiguchi, *UTokyo*

#### Session 2 Global to Local Socio-Hydrology

**11:10-12:10**

**11:10-11:25**

Ms. Jing Wei, *Tsinghua*

Understanding the evolution of societal values on water resources in Australia

**11:25-11:40**

Mr. Tidar Bayu, *UTokyo*

Water Governance Performance to Inequality of Access to Water and Sanitation Services in Developing Countries

**11:40-11:55** Mr. Ryo Taguchi, *UTokyo*  
Development of the estimation method of river flood indirect loss at the global scale

**11:55-12:10** Ms. Ruijie Shi, *Tsinghua*  
Analysis of long-term change of runoff in the Three Gorges Reservoir Area

**12:10-12:25** Ms. Inna Syafarina, *UTokyo*  
Implementation of a High-resolution Malaria Transmission Model in Africa

### **Lunch Break**

Chair: Hyungjun Kim, *UTokyo*

### **Session 3 New Hydrological Modeling and Applications 1** **14:00-15:30**

**14:00-14:30** Prof. Xiping Yu, *Tsinghua*  
Development of a General Two-Phase Model for Sediment Transport

**14:30-14:45** Ms. Patchares Chacuttrikul, *UTokyo*  
Impact of climate and land use changes on soil erosion and sediment yield in north of Thailand

**14:45-15:00** Mr. Shuyu Yang, *Tsinghua*  
Analysis on the Change of Hydrological Process in the Upper Chao Phraya River Basin under the Influence of Climate Change and Human Activities

**15:00-15:15** Mr. Akira Takeshima, *UTokyo*  
Discussion on the Flood Control Design in Japan

**15:15-15:30** Mr. Daisuke Tokuda, *UTokyo*  
Role of Rivers in Thermal Energy Discharge to the Global Ocean

### **Coffee Break**

Chair: Xiping Yu, *Tsinghua*

**Session 4 New Hydrological Modeling and Applications 2**

**16:00-17:50**

- 16:00-16:30** Prof. Dai Yamazaki, *UTokyo*  
New and better topography datasets for global hydrology modelling
- 16:30-16:45** Mr. Pengfei Si, *Tsinghua*  
Numerical simulation of impulse waves generated by granular landslides using a two-phase model
- 16:45-17:00** Ms. Yue Xing, *Tsinghua*  
Synergistic effects of urbanization and lakes on summer extreme precipitation in a future lakeside city: Xiong'an New Area
- 17:00-17:15** Mr. Panduka Neluwala, *UTokyo*  
Merits of Old Personal diary data in Historical Climate Reconstruction
- 17:15-17:30** Ms. Xiaoya Zhang, *UTokyo*  
Global Teleconnections between Pacific and Atlantic Ocean Surface Temperature Variability and Regional Hydrologic Cycle
- 17:30-17:40** Prof. Dawen Yang, *Tsinghua*  
Summary and Closing Remarks 1
- 17:40-17:50** Prof. Kei Yoshimura, *UTokyo*  
Summary and Closing Remarks 2



# Frontiers in Biological and Biomedical Engineering

## Workshop

### Program

Lecture room 57, 5<sup>th</sup> Engineering Building, Hongo Campus

#### July 24

Chair: Hitoshi Tabata, *UTokyo*

##### Session 1

**9:00-10:50**

**9:00-9:10**

Prof. Kouhei Tsumoto, *UTokyo*

Opening Address

**9:10-9:35**

Prof. Xinhui Xing, *Tsinghua*

Discovery and analysis of bioactive and anti-hyperuricemic peptides originated from *Andrias davidanus* cartilage

**9:35-10:00**

Dr. Taichi Ito, *UTokyo*

Hyaluronic acid-based hydrogels for treatment of cancers

**10:00-10:25**

Prof. Hongen Liao, *Tsinghua*

Advanced Theranostics Techniques for Intelligent Minimally Invasive Surgery

**10:25-10:50**

Dr. Hiroaki Matsui, *UTokyo*

Oxide semiconductors for infrared SPR biochemical sensing platforms

#### Coffee Break

Chair: Guangzhi Wang, *Tsinghua*

##### Session 2: Student presentations

**11:00-11:55**

**11:00-11:05**

Ms. Xiaoyang Li, *Tsinghua*

Construction of artificial metalloenzyme catalyst with size-dependent activity

**11:05-11:10**

Ms. Rukshani Liyanaarachchi, *UTokyo*

Intraoperative PET-laparoscope for surgical navigation

**11:10-11:15**

Ms. Xiaomei Lin, *Tsinghua*

Portable paper-based diagnosis driven by cell-free synthetic biology

- 11:15-11:20** Mr. Daiki Kashima, *UTokyo*  
Development of the platform for screening protein-protein interaction based on KIP
- 11:20-11:25** Mr. Boyu Zhang, *Tsinghua*  
Soft Robot for complicate tubular environments
- 11:25-11:30** Mr. Wen Zeng, *Tsinghua*  
Design and evaluation of colon targeting system of heparin derivative by oral
- 11:30-11:35** Mr. Kongkrongtong Tatphon, *UTokyo*  
Synthetic Control of Cell Signaling by Engineering Receptor Tyrosine Kinase in Mammalian Cell
- 11:35-11:40** Mr. Mingyu Zhu, *Tsinghua*  
Automatic classification of spinal cord tumors using autofluorescence spectroscopy analysis
- 11:40-11:45** Mr. Xiaoting Fu, *UTokyo*  
Size-controlled preparation of micro-sized perfluorocarbon emulsions as oxygen carriers via SPG membrane
- 11:45-11:50** Mr. Liang Li, *Tsinghua*  
Active vision based neurosurgery robot system
- 11:50-11:55** Ms. Xue Peng, *Tsinghua*  
The mechanism of Au transport through ferritin: A MD simulation with MSM model (MD-MSM)

**Session 3**

Chair: Hongen Liao, *UTokyo*  
**13:30-15:10**

- 13:30-13:55** Dr. Keiichi Nakagawa, *UTokyo*  
Nonlinear acoustic waves for biomedical applications
- 13:55-14:20** Dr. Yi Wang, *Tsinghua*  
Development of heparin derivatives for the therapy of ulcerative colitis

**14:20-14:45** Dr. Toshihiro Kasama, *UTokyo*  
Imnumo-wall lab-on-a-chip protein analysis devices for high precision surgery of gliomas

**14:45-15:10** Prof. Guangzhi Wang, *Tsinghua*  
Image and SEEG Guidance for treatment of medically refractory epilepsy

### **Coffee Break**

#### **Session 4**

Chair: Ryo Miyake, *Tsinghua*  
**15:20-17:35**

**15:20-15:45** Dr. Hua Guo, *Tsinghua*  
Development of fast MRI using distortion-free EPI

**15:45-16:10** Dr. Masahiro Kawahara, *UTokyo*  
A receptor-engineering approach for arbitrarily controlling cell fates

**16:10-16:35** Dr. Hui Zhang, *Tsinghua*  
Toward Motion-free PET Imaging

**16:35-17:00** Dr. Keiichiro Kushiro, *UTokyo*  
Controlling normal and cancerous cell motilities utilizing micropatterned material structures and elucidating the underlying mechanisms

**17:00-17:25** Dr. Yuan Lu, *Tsinghua*  
Cell-free synthetic biology: An emerging engineering strategy to revolutionize the biopharmaceutical industry

**17:25-17:35** Prof. Xinhui Xing, *Tsinghua*  
Closing Address

# Surface Science and Related Areas Workshop

## Program

Lecture room 142, 14<sup>th</sup> Engineering Building, Hongo Campus

### July 23

Chair: Hideki Kawakatsu, *UTokyo*

#### Session 1

**10:00-10:50**

**10:00-10:05** Prof. Masanori Kunieda, *UTokyo*  
Opening Address

**10:05-10:20** Prof. Yonggang Meng, *Tsinghua*  
Friction and wear rate of lubricated point contacts during normal running-in processes

**10:20-10:35** Prof. Hidekazu Mimura, *UTokyo*  
Ellipsoidal mirror for synchrotron radiation x-rays

**10:35-10:50** Prof. Xinchun Chen, *Tsinghua*  
Atomic-scale mechanisms of superlubricity in amorphous carbon films

Chair: Ming Ma, *Tsinghua*

#### Session 2

**11:00-12:00**

**11:00-11:15** Prof. Chenhui Zhang, *Tsinghua*  
Macroscale superlubricity enabled by hydrated ions

**11:15-11:30** Prof. Ming Ma, *Tsinghua*  
Controllable robust superlubricity on microscale

**11:30-11:45** Prof. Hideki Kawakatsu, *UTokyo*  
Colour Atomic Force Microscopy, a method to acquire potential parameters on the fly to generate a colour image

**11:45-12:00** Prof. Haiyan Zhao, *Tsinghua*  
Construction of graphene structure by particle beam irradiation

Chair: Kengo Hayashi, *UTokyo*  
**15:20-17:50**

**Session 3**

**15:20-16:00**

Dr. WANG, Nan, *Tsinghua*

The Rules of Square and Circle, Thousand of Different Pagodas : Analysis on the Composition Ratio of the Japanese Ancient Buddhist Pagodas

**16:00-16:40**

Mr. ZHAO, Shoutang, *Tsinghua*

Differences in the Manufacture of Artifacts: A Discussion from Four Pairs of Cases of the Detailed Structural Designs of Dougong Bracket in the Song Dynasty

**16:40-17:20**

Ms. JIANG, Yutong, *Tsinghua*

A Study on Colored Architectural Decoration of Kaihua Temple in Song Dynasty

**17:20-17:50**

Discussion

# Rethinking East Asian History of Architecture Workshop

## Program

An404, Institute of Industrial Science, Komaba Campus II

**July 24**

Chair: Keisuke Fujii, *UTokyo*

**Session 1**

**11:00-12:40**

**11:00-11:40**

Prof. WANG, Guixiang, *Tsinghua*

A Research on the Overlong Wooden-framed Main Temples or Halls  
in a Building Complex of Ancient China

**11:40-12:20**

Prof. JIA, Jun, *Tsinghua*

Wonderful Fairylands in Ancient Chinese Imperial Gardens

**12:20-12:40**

Discussion

**Lunch**

**12:40-13:30**

Chair: Kouichi Kato, *UTokyo*

**Session 2**

**13:30-15:10**

**13:30-14:10**

Assoc. Prof. LIU, Chang, *Tsinghua*

In Between Literati and Craftsmen: the designers and their life in early Song  
Dynasty

**14:10-14:50**

Dr. LI, Luke, *Tsinghua*

The Principle of Manufacturing: An Analysis of the Design Thinking Of The  
15th Century's Buddhist Library in Zhihua Temple in Beijing -- with  
Comparison to the Ancient Japanese Relics

**14:50-15:10**

Discussion

**Coffee Break**

**15:10-15:20**

Chair: Kengo Hayashi, *UTokyo*  
**15:20-17:50**

**Session 3**

**15:20-16:00**

Dr. WANG, Nan, *Tsinghua*

The Rules of Square and Circle, Thousand of Different Pagodas : Analysis on the Composition Ratio of the Japanese Ancient Buddhist Pagodas

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Ms. JIANG, Yutong, *Tsinghua*

A Study on Colored Architectural Decoration of Kaihua Temple in Song Dynasty

**17:20-17:50**

Discussion

**July 25**

Chair: Shin Muramatsu, *UTokyo*  
**10:00-16:00**

**Session 4**

**10:00-13:00**

Discussion

**13:00-14:00**

Lunch

**14:00-16:00**

Discussion

# Humanities Workshop

## Program

Collaboration Room 1, Building 18, Graduate School of Arts and Sciences  
Komaba Campus

### July 24

#### Morning Session

10:30-12:20

10:30-11:40      Opening

10:40-11:30      Prof. Weihe Xie, *Tsinghua*  
Thoughts on the Development of Liberal Arts at Tsinghua University

11:30-12:20      Prof. Hui Wang, *Tsinghua*  
Humanities in China

#### Afternoon Session

14:00-18:00

#### Round Table Discussion: The Russo-Japanese War and East Asia

Chair: Haruki Wada, *UTokyo*

Prof. Weihe Xie, *Tsinghua*  
The Russo-Japanese War and Chinese Modern Education

Prof. Zhongcheng Wang, *Tsinghua*  
The Absent China?

Prof. Hui Wang, *Tsinghua*  
Between the Russo-Japanese War and the Contemporary Situation of Korean  
Peninsular

Prof. Yoichi Komori, *UTokyo*  
The Russo-Japanese War and Colonialism

Prof. Toshiko Ellis, *UTokyo*  
Japanese Poets and Dalian after the Russo-Japanese War

Prof. Shaoyang Lin, *UTokyo*  
The Russo-Japanese War in the Eyes Chinese Intellectuals in Tokyo



# Materials and Devices Workshop

## Tsinghua-Tokyo Joint Shenzhen Institute of Advanced Materials and Devices (TTSI) –a New Strategic Partnership Program

Room 33B2, 2<sup>nd</sup> Engineering Building, Hongo Campus

**July 22**

Chair: Yi Luo, *Tsinghua*

### Session 1 Materials

**13:30-15:20**

- 13:30-13:40** Prof. Yoshiaki Nakano, *UTokyo*  
Opening remarks
- 13:40-14:00** Prof. Bilu Liu, *TBSI Tsinghua*  
Preparation and electronic applications of graphene and two-dimensional materials
- 14:00-14:20** Prof. Sze Set, *UTokyo, RCAST*  
Carbon nanotubes and graphene for photonics and laser applications
- 14:20-14:40** Prof. Baohua Li, *Graduate School at Shenzhen, Tsinghua*  
Energy storage materials towards high-energy density, long life and good safety
- 14:40-15:00** Prof. Yukihiro Shimogaki, *UTokyo*  
Metal-organic chemical vapor deposition of III-nitride semiconductors (tentative)
- 15:00-15:20** Dr. Jiadong Yu, *Tsinghua*  
Low-temperature growth of III-nitride semiconductors on non-single-crystalline substrates

**Closing Remarks**

**15:20-15:40**

Chair: Yoshiaki Nakano, *UTokyo*  
**15:40-17:30**

**Session 2 Devices**

- 15:40-16:00** Prof. Yoshitaka Okada, *RCAST UTokyo*  
Advanced concepts and technology for high-efficiency solar cells
- 16:00-16:20** Prof. Changzheng Sun, *Tsinghua*  
Integrated OAM laser at telecom wavelengths
- 16:20-16:40** Prof. Yoshiaki Nakano, *UTokyo*  
Lightwave manipulation with semiconductor photonic integrated circuits
- 16:40-17:00** Prof. Yi Luo, *Tsinghua*  
Semiconductor up-converter based on cascade carrier transport for infrared detection/imaging
- 17:00-17:20** Dr. Xueliang Song, *API*  
Forthcoming optical interconnection business trend
- 17:20-17:30** Prof. Yi Luo, *Tsinghua*  
Closing remarks

# Chemical Engineering for Future Energy and Materials

## Workshop

### Program

Lecture room 341, 5<sup>th</sup> Engineering Building, Hongo Campus

## July 24

Chair: Ryuji Kikuchi, *UTokyo*  
Baoguo Wang, *Tsinghua*  
**9:30-12:05**

### Session 1

- 9:30-9:55** Prof. Jianhong Xu, *Tsinghua*  
Microfluidic Preparation of Smart Emulsions and Functional Microparticles
- 9:55-10:20** Research Associate Enju Sakai, *UTokyo*  
Analysis of precipitation process and modification of film structure of  $\text{CH}_3\text{NH}_3\text{PbI}_3$  thin films for perovskite solar cell devices
- 10:20-10:45** Assoc. Prof. Jianwei Guo, *Tsinghua*  
To Extend in situ preparation towards  $\text{Fe}_x\text{Co}_y$ -PANI/CNT ( $\text{Fe}_x\text{Co}_y$  NPs polyaniline/carbon nanotube) structures for Oxygen Reduction Reaction in acid medium
- 10:50-11:15** Research Associate Zhendong Liu, *UTokyo*  
Ultrafast and Continuous Flow Synthesis of Crystalline Microporous Materials
- 11:15-11:40** Prof. Jianbo Zhang, *Tsinghua*  
Theoretical Framework for Deciphering Oxygen Reduction Reaction on Pt
- 11:40-12:05** Assoc. Prof. H. Sugiyama, *UTokyo*  
Process Systems Engineering for Pharmaceuticals

Chair: Baoguo Wang, *Tsinghua*  
Ryuji Kikuchi, *UTokyo*  
**13:00-17:55**

**Session 2**

- 13:00-13:25** Prof. Xiangming He, *Tsinghua*  
Thermal Runaway of Li-ion Batteries
- 13:25-13:50** Lecturer Yuki Yamada, *UTokyo*  
Concentrated electrolytes for lithium-ion batteries
- 13:50-14:15** Assoc. Prof. Li Wang, *Tsinghua*  
Probing the Heat Sources During Thermal Runaway of Li-ion Batteries
- 14:15-14:40** Assoc. Prof. Ryuji Kikuchi, *UTokyo*  
Anode materials for solid oxide fuel cells with internal dry reforming of methane
- 14:40-15:05** Prof. Baoguo Wang, *Tsinghua*  
Hydrogen generation with acid/alkaline amphoteric water electrolysis
- 15:10-15:30** Mr. Peican Wang, *Tsinghua*  
Synthesis of MoS<sub>2</sub>/CoS<sub>2</sub>/CC electrocatalytic 3D electrodes for hydrogen evolution reaction
- 15:30-15:50** Mr. Naoya Fujiwara, *UTokyo*  
Study of Solid Oxide Electrolysis Cell Cathodes for Direct Methane Synthesis
- 15:50-16:10** Mr. Zewei Lyu, *Tsinghua*  
Suppression strategies for carbon deposition on Ni-YSZ anodes of solid oxide fuel cells: Gas regulation and anodes modification
- 16:10-16:30** Mr. Kensaku Matsunami, *UTokyo*  
Economic evaluation of batch and continuous manufacturing technologies for solid drug products in clinical development
- 16:35-16:55** Ms. Nan Piao, *Tsinghua*  
Electrochemical Behavior of Various Metal as Current Collectors in High-concentration Electrolytes for High-Voltage Lithium Batteries
- 16:55-17:15** Mr. Koji Takada, *UTokyo*

Unusual Passivation Ability of Superconcentrated Electrolytes toward Hard Carbon Negative Electrodes in Sodium-ion Batteries

**17:15-17:35**

Mr. Jin Xie, *Tsinghua*

Enhanced lithium sulfur batteries: polymer based redox mediator for the catalysis of polysulfide intermediates

**17:35-17:55**

Mr. Peng Shi, *Tsinghua*

Scaled-up synthesis of carbon fiber based composite anode for robust lithium metal batteries

# **Industrial Academic Workshop Program**

## **July 23**

**10:00-12:00** Campus tour (Laboratory)

**12:00-13:00** Lunch meeting

## **July 24**

**9:10-9:50** Update of Innovation and entrepreneurship education at each university

**9:50-10:30** IPC, Tus Holdings ,  
How IPC/Tus Holdings supports IE at each university

**10:30-10:50** Coffee break

**10:45-11:15** Special guest from UT Alumni

**11:15-11:30** Q&A

**12:30-17:00** Introduction of projects of each university's student

**17:00-17:15** Closing /Wrap Up

## **July 25**

**10:00-12:00** Visit Japanese startups

# Environment and Energy Workshop

## Program

Conference room 235, Environmental Studies Building, Kashiwa Campus

### July 24

Chair: Peixue Jiang, *Tsinghua*  
**13:30-15:10**

#### Session 1

**13:30-13:40** Prof. Eiji Hihara, *UTokyo*  
Welcome Speech

**13:40-14:10** Dr. Yin Hai Zhu, *Tsinghua*  
Study on two-phase ejector instead of the expansion valve in the transcritical CO<sub>2</sub> heat pump system

**14:10-14:40** Dr. Chaobin Dang, *UTokyo*  
Research of Concentration Photovoltaic System Combined with Efficient Waste-Heat Driving Air-Conditioning System

**14:40-15:10** Dr. Yu Song, *Tsinghua*  
Experimental study on temperature control of a low pressure cabin using liquid nitrogen

**Coffee break** **15:10-15:20**

Chair: Eiji Hihara, *UTokyo*  
**15:20-17:00**

#### Session 2

**15:20-15:50** Mr. Jiacheng He, *UTokyo*  
Heat transfer characteristics of organic fluids under supercritical pressures

**15:50-16:20** Mr. Taojie Lu, *Tsinghua*  
Investigations of gas seepage and adsorption mechanism in confined nanopores

**16:20-16:50** Mr. Tomohiro Higashi, *UTokyo*  
Study on Desiccant Coated Heat Exchanger -Air conditioning and Humidity Control

**16:50-17:00** Prof. Peixue Jiang, *Tsinghua*  
Wrap up

**Lab Tour**

**17:00-17:30**