



JASTIP-WP2 Activity Report

JASTIP

Professor Hideaki Ohgaki
Japan ASEM
Science, Technology and
Innovation Platform
Institute of Advanced Energy
Kyoto University

JASTIP (Japan ASEAN Science and Technology Innovation Platform) Program

To establish the “Japan – ASEAN Collaborative Research **Framework**”

- Aims at contribution to SDGs, to solve the global issues through promoting international (ASEAN-Japan) collaboration researches in the fields of **Environment & Energy,** bio-resource & biodiversity, disaster prevention.
- To implement the collaboration research outcomes to the real society.

Project Structure

JASTIP Head Office
Kyoto University ASEAN Center



Networking
Social implementation
Getting External Budget






Environment and Energy
National Science and Technology
Development Agency (NSTDA, Thailand)



Disaster Prevention
Malaysia-Japan International Institute of
Technology (MJIIT)



Bioresources and Biodiversity
Indonesian Institute of Sciences (LIPI)



Energy & Environment Joint Lab.(WP2)

- Place : National Science and Technology Development Agency, Thailand
 - President, Dr. Narong Sirilertworakul
 - Project leader : Dr. Thumrongrut Mungcharoen
 - Japan side representative : Prof. Hideaki Ohgaki/Keiichi Ishihara
- Function
 - Promotion and coordination of collaboration researches (including “JASTIP-NET” CRs)
 - Technology Transfer
 - Training young researchers (students)



2016 Activities

- MOC on collaboration research and coordination
- Collaboration Research, Lab work (+ individual budget)
- Annual workshop and steering committee meeting
- Researcher/students dispatch and invitation for collaboration research
- Promotion of “JASTIP-NET” collaboration research



Collaborative Research Agreement
on
Japan-ASEAN Science, Technology and Innovation Platform on
“Energy and Environment”
between
Kyoto University
and
National Science and Technology Development Agency

This Agreement is made and entered into this 23 day of September, 2016 (the “Effective Date”) at 111 Thailand Science Park, Phahonyothin Road, Khlong Nueng, Khlong Luang, Pathum Thani, 12120, Thailand, by and between

Appendix A Project Descriptions

Project Directors

KU Project Director: Prof. Dr. Hideaki Ohgaki, Institute of Advanced Energy, Kyoto University

NSTDA Project Director: Asst.Prof. Dr.Suthum Patumsawad

Appendix A-1 Photocatalytic conversion of biomass to value-added fuels and chemicals

Collaboration responsibilities

Evaluations of photocatalytic conversion of biomass to value-added fuels and chemicals and complementation to enzymatic process, and fabrication of high-selectivity photocatalysts and development of photo-bio flow reactor for conversion of lignocellulose-derive components to chemicals

Coordination Activities Agreement

This Agreement is made and entered into this 1 day of April 2016 (the “Effective Date”) at 111 Thailand Science Park, Phahonyothin Road, Khlong Nueng, Khlong Luang, Pathum Thani, 12120, Thailand, by and between

Kyoto University (hereinafter referred to as “KU”), located at 36-1, Yoshida-honmachi, Sakyo-ku, Kyoto-shi, Kyoto 606-8501, JAPAN, represented by President Juichi Yamagiwa, as evidenced by Certificate of Complete Historical Records dated on the 1st day of October, 2014 (A.D.), Appendix A attached hereto, and

National Science and Technology Development Agency (hereinafter referred to as “NSTDA”) located at 111 Thailand Science Park, Phahonyothin Road, Khlong Nueng, Khlong Luang, Pathum Thani, 12120, Thailand, represented by Narong Sirilertworakul, as evidenced by order of National Science and Technology Development Agency Board of Directors No. 1/2559 dated on the 25 day of January B.E.2559 (A.D.2016), Appendix B attached hereto.

Objectives

This Coordination Activities Agreement describes the tasks that NSTDA will perform to facilitate and promote the JASTIP WP2 activities.

Joint Seminar under JASTIP program

—Innovations in Application of Sustainable Sources for Material Synthesis and Energy Devices—

Participants Graduate School of Engineering, Kyoto University

N. Sano (Associate Professor)

Shoichi Amiuchi (M2)

Kensuke Tsubouchi (M2)

Teppei Hata (M2)

Tomohiro Shimizu (M1)

Daiki Hirai (M1)

Schedule

August 31 Depart from KIX

September 1 Seminar in NANOTEC Center/NSTDA

September 2 Lab visit at Center of Excellence in Particle Technology,
Chulalongkorn University

September 3 Depart from Bangkok

40 days Students Internship Program

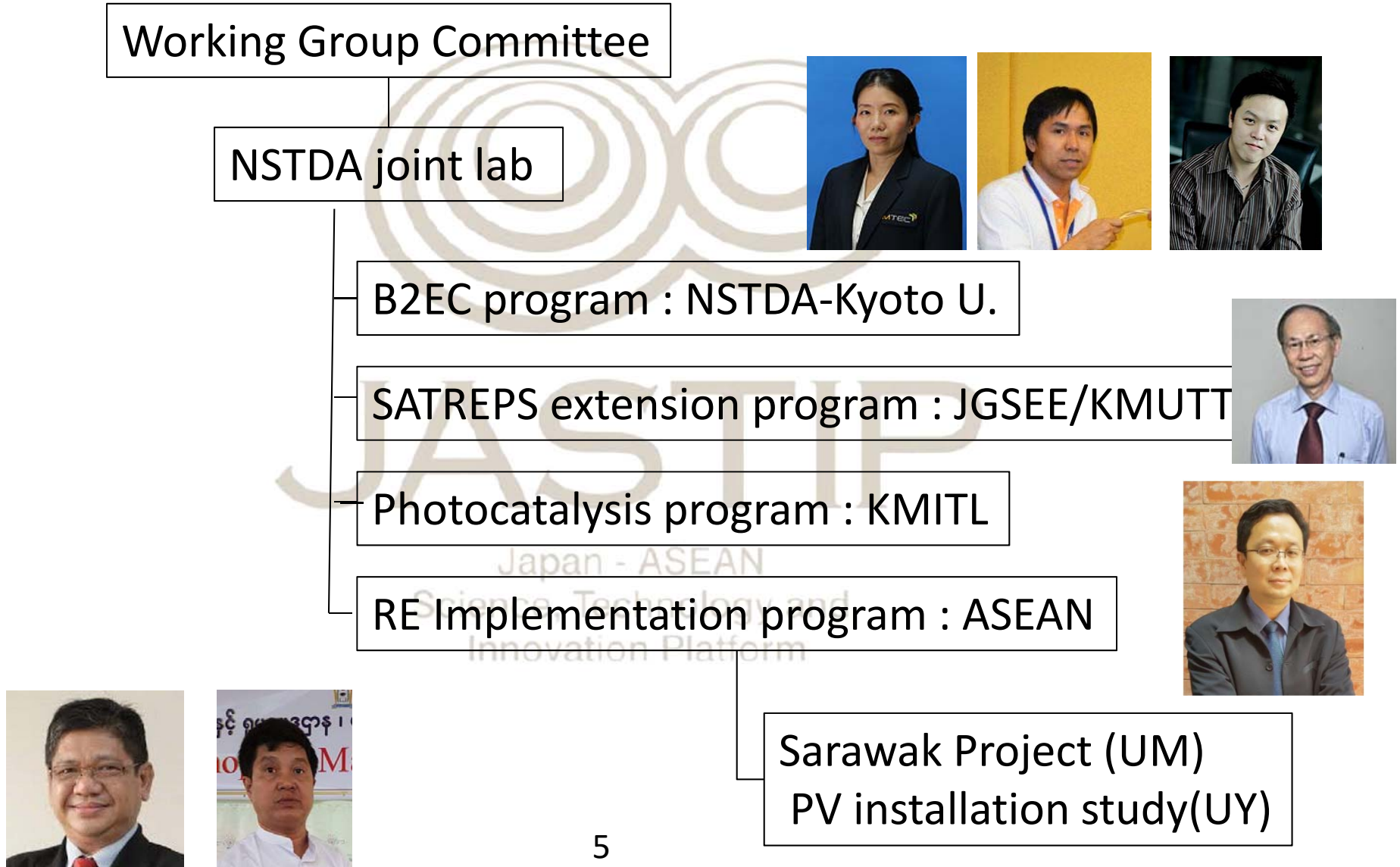
supported by

“Wild and Wise program” Kyoto U.

- JASTIP-WP2 CR groups invite 10 students from Thailand
 - KMITL: 2, KMUTT: 5, Chularongkorn: 3



Structure of the Joint Lab.



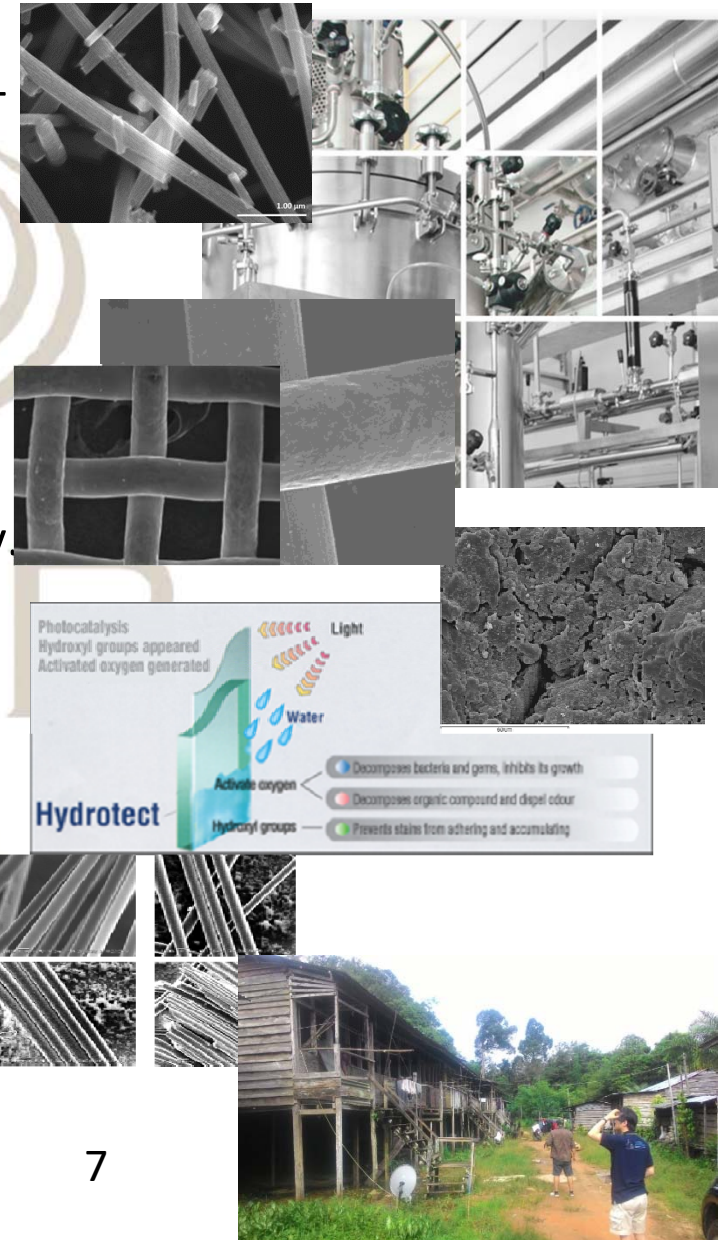
Project member

| | Thailand | Japan |
|---|--|---|
| Joint Lab. leader | Thumrongrut Mungcharoen (NSTDA) | Hideaki Ohgaki(Kyoto) |
| Biomass to Energy and Chemicals @ NSTDA | Sumittra Charojrochkul (MTEC) | Takeshi Abe(Kyoto) |
| | Kajornsak Funawakij (NANOTEC) | Noriaki Sano(Kyoto) |
| | Verawat Champreda (BIOTEC) Navadol Laosiripojana(JGSEE) | Takeshi Sagawa(Kyoto) |
| SATREPS extension @ JGSEE/KMUTT | Bundit Fungtammasan (KMUTT) | Koichi Miura(Kyoto), Katsuyasu Sugawara(Akita U) |
| Photo catalysis program @ KMITL | Wisanu Pecharapa (KMITL) | Keiichi Ishihara(Kyoto) |
| RE implementation program @ ASEAN | Nasurdin Bin Abd Rahim (UM) Hla Toe (UY-SU) | Hideaki Ohgaki(Kyoto), Keiichi Ishihara(Kyoto) |

Coordinator : Ms. Papitchaya Utanun

Joint Research Activities

- ❑ Photocatalytic conversion of biomass to value-added fuels and chemicals (NSTDA-JGSEE/KMUTT-Kyoto Univ.)
- ❑ Development of Carbon Materials from Biomass for Energy Storage Applications(NSTDA- Kyoto Univ.)
- ❑ Innovations in Biomass Application for Catalytic Material Synthesis and Energy Devices (NSTDA-Chulalongkorn Univ.-Kasetsart Univ.-Mahidol Univ. VISTEC-Naresuan Univ.-Kyoto Univ.)
- ❑ Extension of “Solvent Treatment Method” developed by SATREPS program to ASEAN region (JGSEE/KMUTT-Kyoto Univ.)
- ❑ Development of New Functional Materials for Energy and Environment (KMITL-RMUTT-Kyoto Univ.)
- ❑ RE implementation (University of Malaya-Kyoto Univ., University of Yangon-Kyoto Univ.)



JASTIP-net 2016 Research Themes

(2) Environment and Energy Joint Laboratory

(Core Researchers: Prof. Hideaki Ohgaki, Prof. Keiichi Ishihara)

- **Research Theme:**

1. Studies on Rural Electrification by Renewable Energy.

2. Studies on Implementation of Renewable Energy in the ASEAN region.

3. Studies on Energy Development in the ASEAN region.

We will revise next 2017 application.

JASTIP-Net WP2 2016-

- Nasrudin Abd Rahim, University of Malaya
"Study on energy usage and quality of life for rural community through rural electrification using renewable energy"
- Mohd Amran Mohd Radzi, Universiti Putra Malaysia
"Optimal design of green energy systems based on multi-renewable resources for rural electrification"
- Takuo Nakayama Kyoto University – VNU, Hanoi
"Local energy governance" and Community renewable energy (CRE) in Vietnam"
- Chatchawan Chaichana, Chiang Mai University
"Community renewable energy implementation in Thailand "



JASTIP-Net WP3 (+WP2) 2016-

- Euis Hermiati, LIPI - NSTDA (Dr. Verwat)

“Development of integrated process for conversion of sugarcane trash to bioethanol and value-added chemicals”

Japan - ASEAN
Science, Technology and
Innovation Platform