

Feb. 5, 2018 at Novotel Bangkok on Siam Square Hotel

# JASTIP-WP2 activity report



## JASTIP

Japan - ASEAN  
Science, Technology and  
Innovation Platform

- Collaboration Research Hub
  - **INC1, Thailand Science Park, NSTDA**
    - 2017- JASTIP Headquarter also uses
  - MTEC, NANOTEC, BIOTEC
    - None in NECTEC : smart (mini) grid research??
- Satellite Labs
  - King Mongkut's University of Technology, Thonburi (KMUTT), Bangkhuntien Campus (SATREPS related)
  - King Mongkut's Institute of Technology, Ladkrabang, Nano Center (Photocatalysis project)
  - Other countries are wishing to have the satellite lab.
    - Budget!?
    - May discuss in discussion session



- Promoting Collaboration Research

- NSTDA(NANOTEC) : Photocatalytic conversion of biomass to value-added fuels and chemicals
- NSTDA(MTEC) : Development of Carbon Materials from Biomass for Energy Storage Applications
- NSTDA(BIOTEC) : Innovations in Biomass Application for Catalytic Material Synthesis and Energy Devices
- JGSEE/KMUTT : Extension of “Solvent Treatment Method” developed by SATREPS program to ASEAN region (Laos : 2016-, Myanmar : 2018-)
- KMITL : Development of New Functional Materials for Energy and Environment
- University of Yangon (Kyocera Asia Pacific, local company) : PV system installation in UY
- JASTIP-net



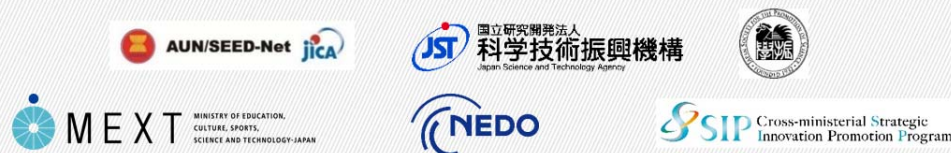
## 4<sup>th</sup> JASTIP Symposium “Biomass to Energy, Chemicals and Function Materials” (2017.7.3-4, NSTDA)

Supported by AUN/Seed-Net, JST, JSPS, MEXT NEDO and SIP program of  
Cabinet Office, Government of Japan, 23 private companies

>250 participants

18 booths from private companies and funding agencies

### Supported by



### In Collaboration with



## Proceeding of The 4<sup>th</sup> JASTIP Symposium “Biomass To Energy, Chemicals and Functional Materials”



- **JASTIP Joint Seminar between NANOTEC/NSTDA and Kyoto University**

- **Date: September 23-27, 2017**
- Place: NANOTEC/NSTDA, Chulalongkorn University
- Prof. Sano + 3 graduate students visited Thailand
- **Date: November 11, 2017**
- Place: Kyoto University, Katsura Campus
- Dr. Kajornsak + 3 researchers visited Kyoto

- **Supporting AUN/SEED-Net Regional Conference on Energy Engineering**

- Date: Nov. 9-11
- Place: YTU and UY






# Invitation / dispatch program

- 2017 May 29 – June 30: 40 days internship program (W&W program)
  - KMITL 2 (+2 by KMITL support), KMUTT 4, CU 2, TA 2 (+ MTEC)
- 2017 Jan. – Sep. : Joint supervision of Ph. D Student from KMITL (NRF Royal Jubilee Program)
- 2017 May 8 – Oct. 29 Ph. D student from JGSEE/KMUTT, PD April- (SATREPS)
- Researcher from NUOL 1 month training in JGSEE (JASTIP)



## 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.

Title	PI	collaborators
Community Renewable Energy Implementation in Thailand	Chatachwan Chaichana (CMU)	 Kyoto U
Local energy governance and Community Renewable Energy in Vietnam	Takuo Nakayama (Kyoto U)	 VNU, Hanoi
Study on Energy Usage and Quality of Life for Rural Community Through Rural Electrification using Renewable Energy	Nasrudin Abd Rahim, (UM)	 Kyoto U UPM

**2017.10 - 2018.9**

**Research Theme:**

- ☐ Studies on Rural/Community Renewable Energy.
- ☐ Development of Renewable Energy Technology adapted to the ASEAN region.
- ☐ Studies on Energy Policy/Security in the ASEAN region.

75 applications- WP1:6, WP2:21, WP3:32, WP4:16  
Cambodia:3, Indonesia:31, Japan:4, Laos:3, Malaysia:7,  
Myanmar:17, Philippines:3, Thailand:4, Vietnam:2

*WP2 Cambodia:1, Indonesia:5, Japan:1, Laos:3, Malaysia:3, Myanmar:7, Vietnam:1*

Title	PI	collaborators
Study on Rural Electrification using Renewable Energy Impact on Lifestyle in Rural Community	Nasrudin Abd Rahim (UM), Malaysia	Swinburne University of Technology Sarawak, Malaysia Kyoto University, JP Universiti Putra Malaysia, Malaysia Institute of Technology of Cambodia, Cambodia Technological University, Hmawbi/ Yangon, Myanmar Technological University, Myanmar Pyay University/ University of Yangon, Myanmar Kyocera Asia Pacific Co. Ltd, Thailand Earth Renewable Energy, Myanmar
Widening use of Solar Cell in Rural Areas in Indonesia: Interlinkage of Academician, Business, Government, and Community	Anugerah Yuka Asmara(LIPI), Indonesia*	Ritsumeikan U*, JP University of Brawijaya Surabaya State University
Establishing new biogas CRE model based on using water hyacinth at Giong Rieng district, Kien Giang province of Viet Nam	Tran Sy Nam (Can Tho University)*	Kyoto U

Title	PI	collaborators
Conceptual Design of Fixed Ocean Thermal Energy Conversion (OTEC) Offshore Power Plant <i>SATREPS</i>	Mohd Khairi Abu Husain(UTM), Malaysia	Saga U*
Application of Microbubble technology in biogas purification <i>AUN/SEED-Net</i>	Keonakhone KHOUNVILAY(NUOL), Laos	Tokai U*
Development of Green Microwave Carbocatalytic Technologies for Biomass Conversion Into Chemicals and Fuels Adaptable to the ASEAN Region <i>e-ASIA</i>	Armando QUITAIN(Kumamoto U)*, Japan	Universiti Teknologi PETRONAS (Malaysia) De La Salle University (Philippine*) Chulalongkorn University (Thailand) JGSEE/KMUTT (Thailand) Sepuluh Nopember Institute of Technology (Indonesia*) Mandalay Technological University (Myanmar)

ASEAN: 8 countries, Japan : 6 universities

- Social Implementation
  - Practical application of Synthesize of Carbon Nanotube from Exhaust Gas (PTT) and TiO<sub>2</sub> coating (MTEC)
  - PATENT application: Xylitol conversion by photo-catalysis (KU-BIOTEC-JGSEE/KMUTT)
  - Policy Assessment to Ministry of Energy (Thailand)
  - Advice on “Renewable Energy Policy” in Myanmar
  - Contribution to SDGs by PV installation in University of Yangon (Kyocera AP) and Renewable Energy Implementation in Rural Community
- Contribution to SDGs
  - Biofuel Development (Goal 7,11,13)
  - Renewable Energy Policy in Myanmar (Goal 7,11,13)
  - The outcomes of research on “Community Renewable Energy” were reported to Ministry of Energy in Thailand (Goal 1,5,6,7,8,10,11)
  - Rural Electrification Project in Sarawak, Malaysia; Myanmar; Cambodia (Goal 1,3,4,5,7,8,10...)

- Cooperation with SATREPS, e-Asia

- SATREPS “Development of Clean and Efficient Utilization of Low Rank Coal and Biomass by Solvent Treatment” (Prof. Miura/Prof. Bundit)

=> extension to the neighboring countries in JASTIP (Laos, Myanmar)

- The e-ASIA JRP International Workshop 2016 ([2016.10.31-11/1@Vientiane](#)) and follow-up activity=> *Proposal will be submitted*
- 4<sup>th</sup> JASTIP Symposium “Biomass to Energy, Chemicals and Function Materials” ([2017.7.3-4@NSATDA](#)): WP2-3, agencies, private sectors
- e-Asia workshop (2017.10.30-31@NSTDA)

- Cooperation with industries

- Many collaboration researches are running at NSTDA related labs.
- Sub-satellite lab in KMITL has been opened to industry and the other research institute.