

e-ASIA Joint Research Program (e-ASIA JRP)
The review results of the 11th Call for Proposals
in the field of “Alternative Energy”
on the topic of

“Urban and biological wastes to energy, useful biochemicals, and biofuels”, “New fuel cell science and technologies” and “ Alternative energies in the tropics and sub-tropics”

It is our great pleasure to announce the selected projects of the e-ASIA Joint Research Program (e-ASIA JRP*1) 11th Call for Proposals in the field of “Alternative Energy” on the topic of “Urban and biological wastes to energy, useful biochemicals, and biofuels”, “New fuel cell science and technologies” and “Alternative energies in the tropics and sub-tropics”.

A total of 17 proposals was submitted in response to the 11th joint call for proposals. After careful consideration based on the joint review results by the five funding organizations from five countries participating in the call*2, the following three collaborative projects were selected for support with the approval of the e-ASIA JRP Board. Support to the projects will continue for three years.

“Novel Energy Scavenging Technology”

to be conducted jointly by:

Singapore: Ady Suwardi, Scientist/Deputy Head of Department/Adj. Asst. Prof., Institute of Materials Research and Engineering, A*STAR

Thailand: Tosawat Seetawan, Scientist/Vice President for Research and Innovation/Professor, Sakon Nakhon Rajabhat University

Myanmar: Soe Ko Ko Aung, Associate Professor, Materials Research Laboratory, Department of Physics, University of Mandalay

The objective of this cooperative research project is to recycle waste photovoltaics into integrated photovoltaic-thermoelectric (PV-TE) system to effectively harvest both solar and heat energy using. Our team comprises of multiple PIs with different backgrounds in PV and TE. By integrating thin film PV with bulk TE, the ultimate aim of project is to demonstrate net increase in the efficiency of the PV-TE system compared to standalone PV.

“Sustainable Pathways to Expand ASEAN Renewables”

to be conducted jointly by:

Singapore: Xiaogang He, Assistant Professor, National University of Singapore (NUS)

Japan: Kei Yoshimura, Professor, The University of Tokyo

Thailand: Alan D. Ziegler, Professor, Maejo University

This project aims to identify sustainable and optimal pathways to expand ASEAN renewables. We will develop a novel integrated water-energy planning model to quantify how improved representation of short-term cascade reservoir operations could enhance grid resilience, increase long-term economic opportunities, and help inform investment strategies in a high-renewables system. Our analytical tools can guide strategic planning of hydropower, pumped storage, transmission lines and other solar/wind infrastructure to facilitate ASEAN to transit to a clean and resilient grid under climate change.

“Advanced Catalytic Technologies for Sustainable Utilization of Oil Palm Empty Fruit Bunch”

to be conducted jointly by:

Japan: Toshiyuki Yokoi, Associate Professor, Tokyo Institute of Technology

Thailand: Chawalit Ngamcharussrivichai, Professor, Chulalongkorn University

Philippines: Marlon Conato, Professor, University of the Philippines, Diliman

This cooperative research project aims to develop an advanced catalytic technology for sustainable utilization of oil palm empty fruit bunch as feedstock for production of biofuels and high-value chemicals, “ACT-PEFB” project. Our strategy for ACT-PEFB project is based on the design and synthesis of highly active, selective and stable heterogeneous catalysts based on the reaction mechanism. We expect that our achievement will contribute to the creation of international research networking and encouragement of young researchers as well as the achievement of SDGs through a carbon recycling by a sustainable utilization of PEFB.

On behalf of the e-ASIA JRP, we would like to offer our sincerest congratulations to the project teams and look forward to the significant impact their results will bring to our society in the future.

*1 The e-ASIA Joint Research Program (e-ASIA JRP)

Through the acceleration of science and technology research exchange and collaboration in the East Asian region, the e-ASIA Joint Research Program (e-ASIA JRP) aims to strengthen research and development capabilities towards resolution of shared challenges across the region, including those associated with materials, alternative energy, agriculture, health research, disaster risk reduction and management, advanced interdisciplinary research towards innovation, and environment. As part of that objective, the e-ASIA JRP intends to support the multilateral collaborative research projects, which must consist of three or more countries.

e-ASIA JRP’s homepage: <http://www.the-easia.org/jrp/>

*2 The list of organizations participating in the 11th joint call for proposals in the field of “Alternative Energy”:

- Japan Science and Technology Agency (JST), Japan
URL: <http://www.jst.go.jp/EN/index.html>
- Ministry of Science and Technology (MOST), Myanmar
URL: <http://www.most.gov.mm/>
<https://www.most.edu.mm/>
- Department of Science and Technology (DOST-PCIEERD), Philippines
URL: <https://www.dost.gov.ph/> (DOST)
<https://pcieerd.dost.gov.ph/> (DOST- PCIEERD)
- Agency for Science, Technology and Research (A*STAR), Singapore
URL: <https://www.a-star.edu.sg/>
- Program Management Unit for Human Resources & Institutional Development, Research and

Innovation (PMU-B), Thailand
URL: <https://www.nxpo.or.th/B/>

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