e-ASIA Joint Research Program (e-ASIA JRP)

Japan-Thai-Philippines Joint Research Project in the field of Functional Materials

The Japan Science and Technology Agency (JST)[*1], the National Science and Technology Development Agency of Thailand (NSTDA)[*2] and the Department of Science and Technology of the Philippines (DOST)[*3], with the approval of the e-ASIA Board, have agreed to commence support for 1 collaborative research project in the field of 'Functional Materials' within the framework of the e-ASIA Joint Research Program[*4] (e-ASIA JRP).

The selected project is as follows:

1. "Development of Functional Nanocarbon-Based Catalysts for Biomass Conversion Processes" to be conducted jointly by Tetsuya Kida, Professor, Department of Applied Chemistry and Biochemistry, Kumamoto University in Japan, Artiwan Shotipruk, Associate Professor, Department of Chemical Engineering, Faculty of Engineering, Chulalongkorn University in Thailand and Joseph Auresenia, Professor, Chemical Engineering Department, College of Engineering, De La Salle University-Manila in the Philippines.

   This collaborative research aims to synthesize nanocarbon materials such as graphene oxide, carbon nanotube and hydrothermal carbon, and utilize them for efficient conversion of vast biomass resources available in Southeast Asian region into useful compounds under special reaction field of supercritical fluid and microwave irradiation.

A total of 2 proposals were submitted in response to the joint call implemented by JST, NSTDA and DOST in the research field of 'Functional Materials'. Separate expert evaluations were commissioned by the three parties, conducted according to their respective criteria to assess the quality of the research plan and expected effectiveness of exchange activities among other aspects, before a joint selection meeting in July concluded with the selection of the one (1) successful project. Support will commence in November 2014, and will last for 3 years.

[*1] Japan Science and Technology Agency (JST)

JST is one of the core institutions responsible for the implementation of science and technology policy in Japan. JST's comprehensive mission spans knowledge creation - the wellspring of innovation - to ensuring that the fruits of research are shared with society and Japan's citizens. JST also works to provide a sound infrastructure of science and technology information and to raise awareness and understanding of science and technology-related issues in Japan.

JST homepage: http://www.jst.go.jp/EN/index.html

[*2] National Science and Technology Development Agency (NSTDA)

NSTDA was created by the Science and Technology Development Act of 1991 and officially commenced its operations in 1992. It was founded with the explicit aim to "...conduct, support, coordinate, and promote efforts in scientific and technological development between the public and the private sectors towards maximizing benefit for national development..."

NSTDA homepage: http://www.nstda.or.th/eng/

[*3] Philippine Department of Science and Technology (DOST)
DOST supports, directs and coordinates all scientific and technological activities in the Philippines, encourages greater private sector participation in research and development, and formulates policies, programs and projects to support national development towards achieving technological self-reliance for the Philippines.

DOST homepage: http://www.dost.gov.ph/

[*4] 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 environmental protection, natural disaster mitigation and infectious diseases prevention.
As part of that objective, the e-ASIA JRP is intended to support collaborative research implemented among 3 or more of the member countries. Through the implementation of joint research among participating countries in agreed fields of research, it is the goal of the e-ASIA JRP to contribute to economic and human resource development, as well as the resolution of various challenges in the East Asian region.

e-ASIA JRP Homepage: http://www.the-easia.org/jrp/

Attachments

Attachment 1: e-ASIA Joint Research Program (e-ASIA JRP) List of Japan-Thai-Philippines Joint Research Project Selected for Funding

Attachment 2: Overview of this Joint Call for Proposals within the Framework of the e-ASIA Joint Research Program (e-ASIA JRP)

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Attachment 1

e-ASIA Joint Research Program (e-ASIA JRP)

List of Japan-Thai-Philippines Joint Research Project Selected for Funding

Project Title	Japanese Researcher / Thai Researcher / Filipino Researcher	Position and Institution	Abstract of Research Project
Development of Functional Nanocarbon-Based Catalysts for Biomass Conversion Processes	Tetsuya Kida	Professor, Department of Applied Chemistry and Biochemistry, Kumamoto University	This project aims to synthesize nanocarbon materials such as graphene oxide (Japanese team), carbon nanotube (Philippine team) and hydrothermal carbon (Thai team). The materials will be functionalized to develop heterogeneous catalysts that will be utilized for efficient conversion of vast biomass resources in the region including marine biomass, microalgae and inedible oil into biofuels and biochemicals under special reaction field of supercritical fluid and microwave irradiation. By working together on catalysts development and optimization, reaction model and life cycle assessment (LCA), it is expected that technology will be developed for effective utilization of biomass resources exclusively available in Southeast Asia.
	Artiwan Shotipruk	Associate Professor, Department of Chemical Engineering, Faculty of Engineering, Chulalongkorn University	
	Joseph Auresenia	Professor, Chemical Engineering Department, College of Engineering, De La Salle University-Manila	

Attachment 2

Overview of this Joint Call for Proposals within the Framework of the e-ASIA Joint Research Program (e-ASIA JRP)

1. Aims of the Program

By implementing and supporting joint projects in strategically important research fields, as determined by its Board, the e-ASIA Joint Research Program aims to promote collaboration with and among members and prospective members of the e-ASIA JRP and to contribute to the future development of science and technology in the region.

2. Field of collaboration

Proposals for research projects in the field of “Functional Materials” were jointly called for by JST of Japan, NSTDA of Thailand and DOST of the Philippines.

3. Prospective Applicants

Researchers at universities, research institutes or private companies in Japan, Thailand and the Philippines were invited to submit proposals.

4. Period of Research

Three years (36 months).

5. Amount of Funding

JST will provide 15.6 million Japanese Yen (maximum) to the Japanese researchers of each project, in principle. NSTDA will provide 5 million Thai Baht (maximum) to the Thai researchers. DOST will provide about 15 million Filipino Pesos (maximum) to the Filipino researchers.

6. Funded Expenses

Funding provided within this call is intended to enhance the capacity of the applicants to collaborate. Funding will therefore be provided mainly in support of activities that enable collaboration such as travel and holding symposia/seminars, and may cover some local research expenses such as facilities, equipment and consumables that are necessary for the collaboration.

7. Evaluation Process and Criteria

Expert evaluations were initially commissioned separately by JST, NSTDA and DOST to assess the proposals received, on which basis the three parties negotiated to jointly select the successful projects. The following were among the general criteria considered in the evaluation process:

(1) Conformity with e-ASIA JRP aims and designated research fields
(2) Capability of the research leaders and relevance of their current research activities
(3) Effectiveness and synergistic benefit of the joint research activities
(4) Validity of the research plan
(5) Effectiveness and continuity of exchange
(6) Validity of the exchange plan