

Southeast Asia Potentials for Biobased Chemicals and Fuels

Dr. Geng Anli

Senior manager, School of Life Sciences and Chemical Technology Ngee Ann Polytechnic, Singapore

Tel: (65) 64608617; Fax: (65) 64679109; Email: gan2@np.edu.sg

Abstract

With the depletion of fossil resources, our future economy will depend highly on bioresources, such as plants, animals and their byproducts. Biobased economy refers to the conversion of such bioresources to agricultural, health, food, chemical and energy products. One example of the bio-based economy is the evolution of the biotechnology industry and its application to chemical or energy industries. Southeast Asia has rich plant bioresources, such as oil palm, sugar cane, coconuts, sweet sorghum, cassava, and seaweed etc. In addition, it has vast amount of plant biomass resources, such as oil palm waste and cassava residue, that can be potentially used to generate power and produced chemicals and fuels. A few multinational companies started their investment in white biotechnology in this region and Singapore can potentially be the regional R&D hub to support the emerging biobased chemical and fuel industries.

Biography of Speaker



Dr. Geng Anli is currently the President of the BioEnergy Society of Singapore (BESS). She is the Senior Manager for Technology Development and a Senior Lecturer at School of Life Sciences and Chemical Technology of Ngee Ann Polytechnic. Prior to joining Ngee Ann Polytechnic, she worked at the Institute of Environmental Science and Engineering (IESE) as a Research Scientist and group leader. Dr. Geng obtained her Ph. D in Chemical and Environmental Engineering from the National University of Singapore (NUS) under a government scholarship. She received her M. Eng and B. Eng degrees in Biochemical Engineering from Tianjin University, P. R. China. Dr. Geng has more than 20 years R&D experience, working extensively on environmental biotechnology, green energy technology and industrial biotechnology. Her work has been presented in numerous scientific journals and international conferences. Her current research focus at Ngee Ann

Polytechnic is on development of novel biocatalysts for bioconversion of lignocelluloses to fuels and chemicals, industrial enzymes, and novel nutraceutical products. She obtained Ngee Ann Polytechnic Staff Excellence Award - Technology Award and Institution of Chemical Engineers (ICHEME) Singapore Award on Sustainable Technology in 2012.