

WEBINAR TALK

GREEN HYDROGEN AND BIOMASS

Organised by Material Engineering Technical Division (MaTD)



Presented by:

***PROF. DR. MASAHARU
KOMIYAMA***

DATE: 24 MAY 2022, TUESDAY
TIME: 10.00AM - 12.00PM
PLATFORM: ZOOM

Register online at www.myiem.org.my

IEM Student : FOC
IEM Members : RM15
Non IEM Members : RM70

SYNOPSIS

Green Hydrogen, produced through carbon neutral route, is building up momentum. There exist three types of feedstocks for green hydrogen production with various technological maturity: water splitting through sun irradiation, biomass conversion and water electrolysis using renewable electricity. Here focus is given to biomass feedstock and explores three possible technologies for green hydrogen production from it: anaerobic digestion, thermal pyrolysis and gasification and supercritical water gasification, all of which may be followed by steam reforming. Details of each process will be described and compared, along with the possibility of utilizing biomass as a hydrogen carrier. Based on the current hydrogen value chain, possible quantum that could be supplied from biomass will be discussed.

SPEAKER'S DETAILS

Prof. Dr. Masaharu Komiyama received his M.S. from University of California, Berkeley in 1977 and was conferred Ph. D. from Cornell University in 1980, both under the supervision of Prof. Dr. Robert P. Merrill. He has held positions at Tohoku University, Institute for Molecular Science, University of Yamanashi and currently at UTP. His research is focused on catalysis, from fundamentals to industrial applications, with present emphasis on renewable energy conversion. He authored over 150 original and review papers, 9 book chapters and 9 patent applications. He has mentored about 20 postdoc fellows, more than half of them are now university professors in Japan, China and India. He was conferred Professor Emeritus from University of Yamanashi in 2017 and received Distinguished Service Award from the Catalysis Society Japan in 2018.