

# WEBINAR TALK ON **BIOMASS THERMOCHEMICAL CONVERSIONS: CHALLENGES AND OPPORTUNITIES**



**SPEAKER :**  
**DR. SUCHITHRA THANGALAZHY GOPAKUMAR**

**3 APRIL 2021 • SATURDAY**  
**11.30AM - 1.30PM**

**BEM APPROVED FOR CPD : 2    REF. NO : IEM21/HQ/025/T (w)**

**Registration Fee (effective from 1st August 2020)**

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# Synopsis

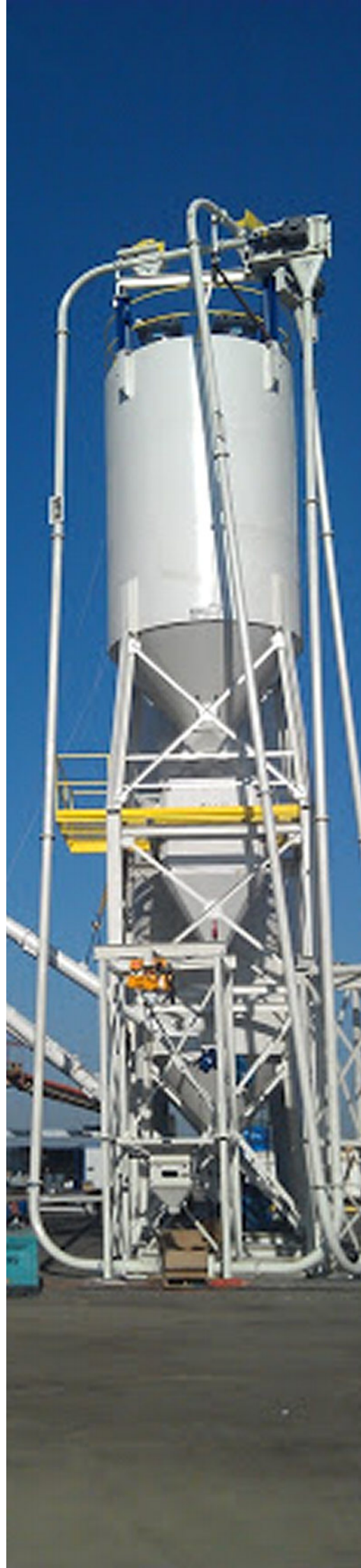
There are different types of renewable energy sources: Solar, hydro, biomass, geothermal and wind, which provide various forms of energy. Then why biomass? Biomass energy is unique. It is the only renewable source for organic carbon and thus, for carbon-based liquid fuels and chemicals. Biomass are organic materials, mainly composed of carbon, hydrogen, oxygen and nitrogen. Sources of biomass include energy crops, algae, animal manure as well as agriculture, municipal and forest waste. Examples of biomass are wood chips, corn, sugar cane, palm oil, poultry litter and sewage sludge. Biomass is diverse in nature and are distributed widely. Therefore, collecting and processing biomass is still a challenge.

A bio refinery, which is analogous to today's petro refinery, is an integrated approach to convert biomass into a variety of fuels and chemicals. Two major platforms in biorefinery are sugar platform (bio-chemical) and syngas platform (thermo-chemical). As compared to bio-chemical routes, thermo-chemical routes can timely utilize complete biomass for value added chemicals.

What are the different thermo-chemical routes? What are the products? what are the challenges with biomass thermo-chemical conversions? Are biorefinery products in compact with existing petroleum-derived products?



Want to get better understanding about biomass thermo-chemical conversion? See you on the AFETD webinar talk.



# Speaker's Details

**Dr. Suchithra Thangalazhy Gopakumar** is currently working as Associate Professor in Chemical and Environmental Engineering at University of Nottingham Malaysia. Dr. Suchithra Thangalazhy Gopakumar received her Doctoral degree in Chemical Engineering from Auburn University, Alabama, USA in 2012. Her Masters degree is in Chemical Engineering (specialization: Industrial Pollution Control) from National Institute of Technology Karnataka, Surathkal, India (2007), and Bachelors degree in Chemical Engineering from Government Engineering College Thrissur, Kerala, India (2004). Dr. Suchithra's research focuses on the development of liquid biofuels and extraction of chemicals from various biomass feedstocks through thermo-chemical conversions and catalytic upgrading; more specifically fast pyrolysis, torrefaction, hydrothermal operations & bio-oil upgrading. She has authored more than 40 journal papers. Dr. Suchithra has been part of organizing some international conferences and has presented her findings in various international conferences and exhibitions. She is also the recipient of some research grants at the university and national levels. Suchithra has achieved the status of 'Fellow of the Higher Education Academy', UK. She is also an associate member of Institute of Chemical Engineers (IChemE), life member in Indian Institute of Chemical Engineers (IICChE) and Engineering Technologist in Board of Engineers Malaysia (BEM).

