



Distinguished Lecture Series

Microalgal Cultivation on Wastewaters for Energy and Environmental Sustainability



25 May 2021 (Tuesday)
4:00-5:00 p.m. GMT+8 (Hong Kong Time)



Online via Zoom
(Meeting ID and password will only
be provided to registrants)



ABSTRACT

Algal cultivation has drawn great attention world-wide as green solution for diverse problems as they serve as a sustainable feedstock for biofuel production, animal and human food/nutrition, and a natural alternative for numerous pharmaceuticals like antioxidants and polyunsaturated fatty acids. However, despite their ubiquitous presence in nature, microalgae need to be cultivated in enormous quantities to accomplish these roles. Algal cultivation, harvesting and dewatering for biomass production (for the recovery of value-added products) are the most cost incurring part of algal-based products. Efficient recovery of resources seem key for sustainable energy and environmental development and also for cost effective algal biomass production.

Algae are also a commercial source of high value products such as carotenoids (astaxanthin) and polyunsaturated fatty acids, in addition to carbohydrates, proteins, and lipids. An algal biorefinery aims at complete utilization of the biomass for the production of a range of products which would be beneficial from the economic perspective. Resource efficiency could be highly effective if coupled, bringing environmental protection and sustainability. Microalgae-based wastewater treatment for efficient COD and nutrients removal and flue gas treatment for the reduction of carbon emissions appear to be very promising avenues for algae utilization.

The lecture would discuss various issues on microalgae cultivation on industrial wastewater for energy and environmental sustainability.

Professor Ashok Pandey

Distinguished Scientist

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Professor Ashok Pandey's major research and technological development interests are industrial and environmental biotechnology and energy biosciences. He has published over 700 papers and over 100 books/book chapters. His publications have been cited over 50,000 times with h index of 107. Professor Pandey is the recipient of many national and international awards and honours, which include Highest Cited Researcher (Top 1% in the world); Life-Time Achievement Award from the International Society for Energy, Environment and Sustainability (2017); Fellow, Royal Society of Biology, UK (2016); Academician of European Academy of Sciences and Arts, Austria (2015); Fellow, National Academy of Sciences, India (2012); UNESCO Professor (2000). Professor Pandey is Founder President of the Biotech Research Society, India, and Chairman of the International Society for Energy, Environment and Sustainability.

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