

**DEPARTMENT OF MECHANICAL ENGINEERING****SEMINAR****Online**

Title: Recovery of resources from biomass residues for waste minimization and pollution prevention

Speaker: Dr. Philip Kwong
School of Chemical Engineering and Advanced Materials
The University of Adelaide
Australia

Date: 14 October, 2020 (Wednesday)

Time: 10:30 a.m. (Hong Kong time)

Zoom meeting: 1) Link to join the meeting:

<https://hku.zoom.us/j/97733491665?pwd=SzJlNU1keXBsMjhUcXoweEsrMnFBdz09>

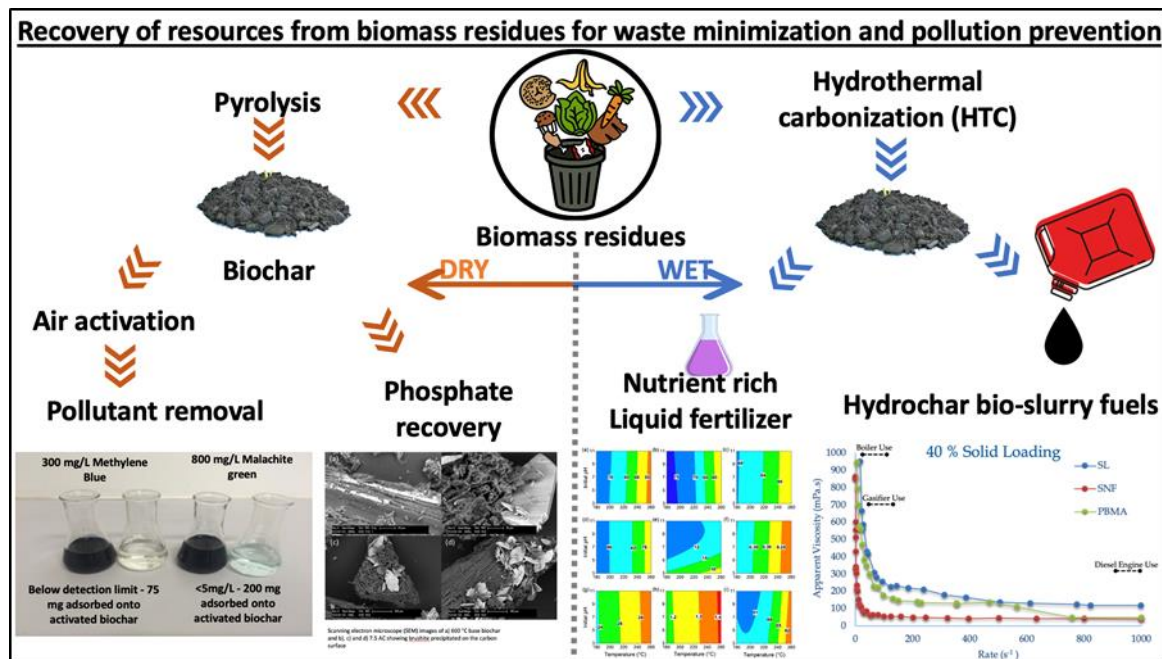
2) Meeting ID: 977 3349 1665

3) Password: 502377

Abstract:

Renewable energy and environmental technologies have become the critical elements for sustainable development. Biomass residues, such as food waste, agricultural crop residues, has been regarded as an attractive sustainable resource to support the development of bio-economy due to its neutral position in the carbon footprint cycle and its abundance in volume for large-scale value-added product manufacturing. This seminar will introduce recent research of the speaker's group on the conversion of both wet and dry biomass resources for renewable energy generations and sustainable waste management. In particular, the production of the carbonaceous functional material (e.g. biochar, hydrochar) using pyrolysis,

gasification and hydrothermal carbonization for pollution control, resource recovery and biofuels applications will be discussed. The commercialization path of the speaker's research on an integrated biomass waste conversion system for sustainable activated carbon production will also be explored.



Biography:

Dr Kwong received his PhD in Environmental Engineering from the Hong Kong University of Science and Technology and is currently a senior lecturer and the Director of Internationalisation in the School of Chemical Engineering and Advanced Materials at the University of Adelaide, Australia. He specializes in air pollution control, waste management, catalysis and biomass energy generation. He is particularly interested in converting waste materials into value-added functional products for environmental mitigations and energy generations. He has published more than 60 articles in high-impact journals, peer reviewed conferences, and technical reports in his field. He was also awarded a prestigious fellowship by the Japan Society for Promotion of Science for an innovative waste management solution. Recently, he and his PhD students established a spin-out company to bring his research to the market and develop sustainable solutions for South Australian industries to co-produce bio-energy and functional materials from agricultural resources.

ALL INTERESTED ARE WELCOME

For further information, please contact Prof. D.Y.C. Leung at 3917 7911

Research area: Natural & Built Environment