The Institution of Engineers, Malaysia

WEBINAR

Organised by Material Engineering Technical Division (MaTD) , IEM

NANOCELLULOSE: SURFACE FUNCTIONALIZATION AND THEIR APPLICATION

Speaker:

Assoc. Prof. Dr. Sam Sung Ting

BEM APPROVED CPD HOURS: 2.0
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Synopsis

Cellulose, which is an abundantly available “green” material, can be derived from plant fibers and tailored for a plethora of possible uses where it can be used as a substrate or as a filler material. However, emerging technologies and product advancements necessitate the search for materials that are small, biodegradable, lightweight, and strong. Nanocellulose, which can be obtained through as mechanical and chemical production methods with tensile strength and Young's modulus of up to 0.5 and 130 GPa, respectively, proves to be the answer that they were looking for. However, the inherent hydrophilic nature of nanocellulose limited its potential widespread application. Surface modifications of nanocellulose to alter and diminish its hydrophilicity were done to address the aforementioned issues. The emerging application of nanocellulose includes biosensor, nanoremediation, papermaking, and automotive.

About Speaker

Assoc. Prof. Dr. Sam Sung Ting is currently a lecturer in Faculty of Chemical Engineering Technology, Universiti Malaysia Perlis (UniMAP). He received the Ph.D. in polymer engineering from Universiti Sains Malaysia in the year 2012. He joined UniMAP in 2012 and has since then served UniMAP until today. He is a research fellow in Center of Excellence Geopolymer and Green Technology (CEGeoGTech). He was appointed as a coordinator of industrial linkages and quality management in 2014-2016 by the School of Bioprocess Engineering. He is actively involved in industrial consultancy and networking.

His research specializes on polymer composites, microbial degradation of polymer, polymer coagulant and nanocomposites. He received various industrial and government grant as a project leader. He has published more than 200 international research papers, reviews, and books. Through his research, he has won more than 30 medals in national and international competition and exhibition. He is currently an EXCO in Microscopy Society of Malaysia and also a member in Institute of Materials Malaysia and the Plastic and Rubber Institute of Malaysia. He is also a Professional Technologist certified by the Malaysia Board of Technologists.