Title: Surfactants in Our Daily Life

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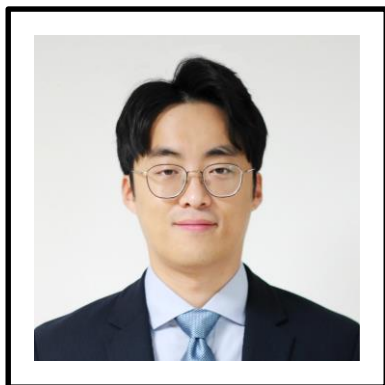Email: jincheol.kim@mq.edu.au | Tel: +61 415 443 920|
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Abstract

Surfactants are ubiquitous and are currently indispensable in daily life. It is a special amphiphilic compound composed of water-loving (hydrophilic) and hating (hydrophobic) parts. The remarkable physical properties like interfacial tension, wettability, emulsifying, and dispersing ability make the surfactant accessible for numerous applications from laboratory to commercial products. The utility of surfactants in the global market has increased steadily since their formulation with several beneficial aspects in various industries such as personal care products, cleaners, pharmaceuticals, enhanced oil recovery, and paint. This talk briefly introduces the history and types of surfactants with the basics of surfactants found in industry, their properties, and how those properties translate into improved performance in specific applications.

Bio

Dr Jincheol Kim received his B.S. and M.S. in materials science and engineering from Seoul National University, Korea in 2008 and 2011, respectively. After working as a senior researcher at LG Household & Healthcare between 2011 and 2014, he received his Ph.D. degree in photovoltaic engineering from the University of New South Wales (UNSW) in 2018. After obtaining Ph.D. degree under the supervision of Profs Anita Ho-Baillie, Shujuan Huang and Martin Green – a world expert in the field of solar cells, he was awarded an Australian Centre for Advanced Photovoltaics (ACAP) postdoctoral fellowship at UNSW with a topic of high-performance large-area perovskite-silicon tandem solar cells. In 2019, he moved to Korea Electronics Technology Institute (KETI) as a senior researcher undertaking advanced independent research about perovskite PV module. He is currently working at Macquarie university as a research fellow on the topic of perovskite solar cells.