NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

PAP Seminar Announcement

The Quest for Solar fuel

By

Dr. Jingshan Luo

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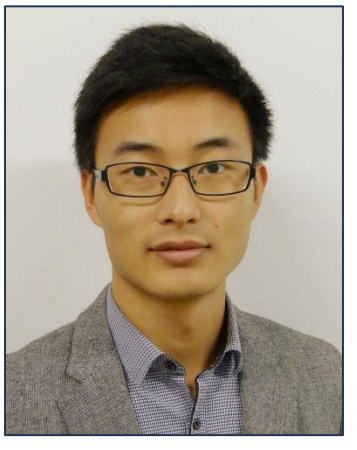

Date: 27 June 2017 (Tuesday)
Time: 2:00pm to 3.00pm
Venue: Hilbert Space (PAP-02-02)
Host: Prof. Sum Tze Chien

Abstract

Fossil fuels are finite energy resources, and their burning causes air pollution and emits large amounts of CO_2, leading to global warming. This urges the search for green and sustainable energy sources. Solar energy is sufficient to supply the human energy demand as a renewable energy source. However, the seasonal, regional, and diurnal cycle variations of solar radiation demand an effective method of energy storage beyond electricity generation with photovoltaics. Inspired by natural photosynthesis, converting solar energy directly into chemical fuels through artificial photosynthesis is considered as one of the most promising ways to store solar energy, and it is considered as the Holy Grail of photoelectrochemistry. In this seminar, I will talk about the recent advances in our lab on solar water splitting and CO_2 reduction, including photoelectrochemical and buried p-n junction photoelectrodes, catalysts development, and overall systems.

Short Biography

Jingshan Luo received his BSc degree in Jilin University, China in 2010. He is a PhD alumni of Nanyang Technological University. In 2014, he obtained his PhD degree from Division of Physics and Applied Physics, under the supervision of Prof. Hongjin Fan. After that, he went to École Polytechnique Fédérale de Lausanne (EPFL) in Switzerland for postdoctoral research in the laboratory of Prof. Michael Grätzel, where he is currently the group leader in solar fuel research direction. Jingshan Luo has authored/coauthored 1 book chapter and 60 peer-reviewed publications in *Science, Nature Chemistry, Nature Energy* and other journals in the field, which have garnered more than 4700 literature citations and an h-index of 33 (Google Scholar). He is a recipient of the Chinese National Thousand Talents Plan for Young Professionals, the Marie Curie Fellowship, the Clariant Cleantech Award (First Prize), the E-MRS Young Scientist Award and the Chinese Government Award for Outstanding Self-financed Students Abroad. Currently, he serves as an Early Career Advisory Board member for *Nano Letters*.

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