



2019-2023 PhD studentships (University of Liverpool, United Kingdom)

Self-Assembly and Bioengineering of Macromolecular Machinery

Self-assembly is a common and important phenomenon in biology, physics and chemistry. Biological organisms have evolved large self-assembling macromolecular systems, to enhance metabolic activities. The projects represent highly multidisciplinary nature and will apply synthetic biology, molecular genetics, biochemistry, proteomics, microscopic techniques (fluorescence microscopy, electron microscopy, atomic force microscopy) and metabolomics to study the molecular basis underlying the biogenesis, self-assembly dynamics and regulation of photosynthetic membranes (Project 1) and microcompartments (Project 2). Advanced understanding will facilitate rational design and engineering of artificial machineries in microbes and plants, to provide scientific solutions to grand challenges such as food and energy security and therapeutic development.

Institute of Integrative Biology at the University of Liverpool provides a unique combination of facilities and expertise for research, including the Centres for Cell Imaging, Synthetic Biology, Genomics, Proteomics, Structural Biology, Bioinformatics and Computational Modelling. Training in all aspects of the project will be provided with access to state-of-the-art infrastructure in the Institute and with collaborators in the UK, EU, US, China, Japan, Singapore and Australia, which are excellent opportunities for career development.

The full PhD studentships will be funded by Liverpool-China Scholarship Council (CSC) Award program and will start from October 2019 for 4 years. Highly motivated applicants with experience in microbiology, molecular biology, biochemistry or equivalent are encouraged to apply. The applicants are expected to have a valid English qualification (IELTS6.5). If you are interested, please contact Dr Luning Liu (luning.liu@liverpool.ac.uk, www.luningliu.org) for details and send a CV and a cover letter at your earliest convenience.

References: Plant Physiology 2018, in press; Frontier Plant Sci 2018, 9:739; Mol Plant, 2017, 10:1434; Nanoscale, 2017, 9:10662; Science, 2017, 356:1293; Nano Lett, 2016, 16:1590-5; Plant Physiol, 2016, 171:530-41; Trends Plant Sci, 2013, 18:277; Nature, 2014, 513:547; Cell, 2013, 155:1131; PNAS 2012, 109:11431; PNAS 2011, 108:9455; Science, 2010, 327:1258-61.

