

PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	School of Science
Supervisors	Principal supervisor: Professor/Dr Xia Huang (XJTLU) Co-supervisor: Professor/Dr Li Yang (XJTLU) Co-supervisor: Professor/Dr Daniel Canniffe (UoL)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Energy harvesting and photovoltaic conversion properties of hybrid light-harvesting system
Contact	Please email xia.huang@xjtlu.edu.cn (XJTLU principal supervisor's email address) with a subject line of the PhD project title

Requirements:

The candidate should have a first class or upper second class honours degree, or a master's degree (or equivalent qualification), in Molecular Biology/ Biotechnology/ Biochemistry/Biophysics Evidence of good spoken and written English is essential. The candidate should have an IELTS score of **6.5 or above**, if the first language is not English. This position is open to all qualified candidates irrespective of nationality.

Degree:

The student will be awarded a PhD degree from the University of Liverpool (UK) upon successful completion of the program.

Funding:

The PhD studentship is available for three years subject to satisfactory progress by the student. The award covers tuition fees for three years (currently equivalent to RMB 80,000 per annum) and provides a monthly stipend of 5,000 RMB as a contribution to living expenses. It also provides up to RMB 16,500 to allow participation at international conferences during the period of the award. It is a condition of the award that holders of XJTLU PhD scholarships carry out 300-500 hours of teaching assistance work per year. The scholarship holder is expected to carry out the major part of his or her research at XJTLU in Suzhou, China. However, he or she is eligible for a research study visit to the University of Liverpool of up to six months, if this is required by the project.

Project Description:

Photosynthesis is the largest energy-capture process on earth which generates the primary energy source for lives. The first act in photosynthesis happens in light-harvesting systems, where light-harvesting (LH) antenna complexes harvest solar energy and transfer it to the reaction centre (RC) for charge current conversion. However, photosynthesis uses a very limited range of the solar spectrum, so artificial light-harvesting system with enhanced spectral coverage could hopefully improve the efficiency of energy capture.

This project proposes the idea of developing a biohybrid light-harvesting system based on protein complexes, and investigates its impacts on energy harvesting and photovoltaic conversion. We plan to fabricate a 'mix and match' combination of light-harvesting system on an ITO chip, and study how the protein distribution and spectral coupling modulate the energy capture and charge separation. This project will elucidate the fundamental principles that underlie light harvesting and energy funneling, which will be of great significance to next-generation systems for solar energy conversion.

For more information about doctoral scholarship and PhD programme at Xi'an Jiaotong-Liverpool University (XJTLU): Please visit

<https://www.xjtlu.edu.cn/en/admissions/doctoral/entry-requirement-phd/>
<https://www.xjtlu.edu.cn/en/admissions/doctoral/postgraduate-research-scholarships>

How to Apply:

Interested applicants are advised to email...xia.huang....@xjtlu.edu.cn (XJTLU principal supervisor's email address) the following documents for initial review and assessment (please put the project title in the subject line).

- CV
- Two reference letters with company/university letterhead
- Personal statement outlining your interest in the position
- Proof of English language proficiency (an IELTS score of 6.5 or above)
- Verified school transcripts in both Chinese and English (for international students, only the English version is required)
- Verified certificates of education qualifications in both Chinese and English (for international students, only the English version is required)
- PDF copy of Master Degree dissertation (or an equivalent writing sample) and examiners reports available

Informal enquiries may be addressed to Professor/Dr. Huang (xia.huang@xjtlu.edu.cn), whose personal profile is linked below, <http://www.xjtlu.edu.cn/en/faculty/>

<https://www.xjtlu.edu.cn/en/departments/academic-departments/biological-sciences/staff/xia-huang>