

PhD studentship (Full-time)



Institution	Xi'an Jiaotong-Liverpool University, China
Department	Department of Chemistry
Supervisors	Primary supervisor: Yi Lin (Xi'an Jiaotong-Liverpool University) Co-supervisor: Alexander Cowan..(University of Liverpool, UK);
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Development of New Organic Semiconductors for Use in Organic Photovoltaics via Molecular Topology Approaches 有机共轭半导体材料的二维拓扑扩展
Contact	Please email doctoralstudies@xjtlu.edu.cn and copy to yi.lin@xjtlu.edu.cn 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 Organic Chemistry. Evidence of good spoken and written English is essential. The candidate should have an IELTS score of 6.5 or above, or an equivalent qualification, 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 3500 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 three months, if this is required by the project.

Project Description:

Organic semiconductor based photovoltaic technology has been considered as the next generation renewable energy technology for the advantages of low cost, light weight, and easy of large area fabrication. Most of the organic semiconductors used in organic photovoltaic (OPV) are 1D linear conjugated polymer or small molecules. Increasing the molecular dimensionality of the organic semiconductor molecules is expected to increase the light harvesting ability and the charge carrier mobility of the materials, which would be beneficial for OPV performance. With that, the proposed project will focus the researches on developing new benzodithiophene (BDT) based organic semiconductors with extended two - dimensional structure (2D) by molecular chemical topological approaches, and investigating the photophysical and electrochemical properties, as well as the photovoltaic performances of these molecules. Based on the experimental results, a general molecular structureproperty - performance relationship will be created, which could be served as a useful guideline for further development of OPV semiconductors.

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

<http://www.xjtlu.edu.cn/en/admissions/postgraduate/phd-degree/feesscholarships.html>

<http://www.xjtlu.edu.cn/en/admissions/postgraduate/phd-degree.html>.

How to Apply:

Interested applicants are advised to email the following documents to Doctoralstudies@xjtlu.edu.cn (please put the project title and primary supervisor's name in the subject line).

- CV
- Two reference letters
- Personal statement outlining your interest in the position
- Proof of English language proficiency (an IELTS score of above 6.5 or equivalent is required)
- 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)

Informal enquiries may be addressed to Dr. Yi Lin (yi.lin@xjtlu.edu.cn), whose personal profile is linked below,

<http://academic.xjtlu.edu.cn/chem/Staff/yi-lin>