



PhD Program between the Freie Universität Berlin (FUB) and the China Scholarship Council (CSC)

Open PhD Position at Freie Universität Berlin, offered only to Chinese CSC scholarship candidates 2019

Please Note: this PhD position is only offered to Chinese PhD candidates for the application in the framework of the FUB-CSC PhD Program.

<u>Department/Institute:</u>	Institute of Chemistry and Biochemistry
<u>Subject Area:</u>	Biophysical Chemistry
<u>Name of Supervisor:</u>	Prof. Dr. Thomas Risse
<u>Number of Open PhD Positions:</u>	1
<u>Type of the PhD Study:</u>	Full-time
<u>Project Title:</u>	Using a Combination of X-ray Crystallography and EPR Spectroscopy to Study the Structure and Dynamics of Proteins

PhD Project Description:

The PhD-Project is concerned with the investigation of structural and dynamic properties of proteins as revealed by a combination of X-ray crystallography and EPR spectroscopy. The combination of both techniques applied to spin labeled protein single crystals offers the possibility to reveal interesting information on the conformational properties namely the thermodynamics of different conformational states or the nano-second dynamics of the system at hand.[1-3] A starting point of this project will be to evaluate the impact of cavities in the structure of proteins on the structural properties of conformational states as well as their thermodynamic or dynamic properties. To this end it should also be explored how different spin labeling strategies can be used to optimize the sensitivity of the method towards the properties mentioned above.

[1] P. Consentius et al., J. Am. Chem. Soc. **2016**, 138, 12868.

[2] P. Consentius et al., J. Chem. Phys. Lett. **2017**, 8, 1113.

[3] P. Consentius et al., Phys. Chem. Chem. Phys. **2017**, 19, 20723-20734.

Language Requirements:

IELTS: 6,5 / TOEFL: 95 ibt

Academic Requirements:

A master degree in Chemistry, Biochemistry or related fields. The applicant should have a background in spectroscopy and molecular biology/biochemistry. Hands on experience with techniques to prepare recombinant proteins and/or electron paramagnetic resonance spectroscopy is a plus.

Information of the Professor or Research Group Leader:

Prof. Dr. Thomas Risse
Freie Universität Berlin
Institute for Chemistry and Biochemistry

Takustr. 3
14195 Berlin
Germany

Web-Page: <http://www.bcp.fu-berlin.de/en/chemie/chemie/forschung/PhysTheoChem/agrisse/index.html>

Please note that the students should submit their complete application at first to the Beijing Office for evaluation before they get in contact with you. You can fill in your website here but we appreciate it when you inform the students who will contact you directly that they should follow the usual procedure and submit at first their application via the Beijing Office.

Please Note: In a first step, the complete application must be should to the Beijing Office for evaluation by January 4th, 2019. Please do not contact the professor before. He/she will get in contact with you after having received the complete application via the Beijing Office in January.