



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

### Open PhD position at FUB for CSC scholarship candidates 2018

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

<b><u>Department/Institute:</u></b>	Department of Biology, Chemistry, Pharmacy / Institute of Chemistry and Biochemistry
<b><u>Subject area:</u></b>	Biophysical Chemistry
<b><u>Name of Supervisor:</u></b>	Prof. Dr. Thomas Risse
<b><u>Number of open PhD positions:</u></b>	1
<b><u>Type of the PhD Study:</u></b>	Full-time
<b><u>Project title:</u></b>	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.[1,2] 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.

#### **Language requirements:**

IELTS 6.5 or 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:** In a first step, the complete application must be submitted to the Beijing Office for evaluation by January 4<sup>th</sup>, 2018. 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.