



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>	Graphene – Organic Chemistry
<u>Name of Supervisor:</u>	Prof. Dr. Siegfried Eigler
<u>Number of Open PhD Positions:</u>	2
<u>Type of the PhD Study:</u>	Full-time
<u>Project Title:</u>	Graphene Type Materials Functionalization at Edges

PhD Project Description:

Graphene and graphene oxide will enable novel technology in many fields of science, including spintronics, high-speed electronics, conductive coatings, membrane technology, corrosion or bio-applications.

In this project we target the synthesis of novel 2D materials based on graphene with the focus on applying chemical reaction at the edges of graphene. Our approach is based on graphene prepared by chemical vapor deposition and oxo-functionalized graphene. The latter oxo-functionalized graphene can solely be prepared in our groups and is intact graphene with oxo-groups on the surface, enabling processing and chemical processing and manipulation in solution.

The novel materials will be characterized by chemical analysis. Subsequently, we will prepare devices using electron beam lithography and measure I-V characteristics.

Language Requirements:

IELTS: 6,5 / TOEFL: 95 ibt OR German: TestDaF 16 / DSH 2

Academic Requirements:

Master (M. Sc.) in chemistry with focus on organic synthesis, semiconductor synthesis or similar is required.

Information of the Professor or Research Group Leader:

Workgroup: Eigler – Prof. Dr. Siegfried Eigler

Our work group is combining the fields of organic synthesis of π -systems functionalized by charged moieties, functionalization of graphene with focus on precise analysis and device characterization and tuning of chemical reactivity in devices.

Further information can be found on our website: www.eiglerlab.de

Please Note: In a first step, the complete application should be submitted 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.