



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 Geological Science
<u>Subject Area:</u>	Mineralogy-Petrology
<u>Name of Supervisor:</u>	Prof. Dr. Timm John (Project 3)
<u>Number of Open PhD Positions:</u>	1
<u>Type of the PhD Study:</u>	Full-time
<u>Project Title:</u>	Provenance of the Tianshan HP-UHP sedimentary sequence

PhD Project description:

The southern Tianshan Metamorphic Belt (NW China) represents a unique example of a deeply buried ~4-5 km-thick coesite-bearing sequence dominated by trench infill metasediments, with km-scale variations in volcanoclastic and pelitic components. Recent studies have shown that these rocks were subducted down to ~80 km, as shown by evenly distributed pressure-temperature conditions of 2.5 ± 0.2 GPa and 537 ± 12 °C. Considering sedimentary budgets and geophysical constraints on subduction channel thickness (< 2-5 km), this sequence must have been detached from the descending plate as several 0.5-1 km thick individual slices, which were then accreted to the upper plate within ≥ 2 million years. In order to better understand the provenance of the sediments thus the lithological evolution and geodynamic changes of the arc of the subduction zone, while the sediments got deposited, it is planned to perform a detailed study on zircon U-Pb ages and Hf isotopes along with Sr and Nd isotope determinations on inclusions in zircon along two north-south transects crossing the HP-UHP unit. The study will be based on field work in the Tianshan as well as hands on work with RAMAN probe, EPMA and LA-ICP-MS.

Language requirements:

IELTS: 6,5 oder TOEFL: 95 ibt

Academic requirements:

Requirements: Master Degree in Geosciences or Mineralogy
Desired qualifications: Good knowledge of Mineralogy and Petrology. Being trained in field work and experienced in electron microscopic techniques (e.g., SEM) and analytical methods with high spatial resolutions (e.g., electron microprobe, RAMAN probe) is of advantage. Basic knowledge in Matlab coding will be helpful, but is not required.

Information of the professor or research group leader:

<http://www.geo.fu-berlin.de/geol/fachrichtungen/geochemhydromin/mineralogie/Personen/John/index.html>

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.