Freie Universität Berlin

Geowissenschaftliches Kolloquium

Experimental constraints on the properties of subduction zone fluids

Donnerstag, 31. Januar 2019 - 16.15 Uhr

Marion Louvel
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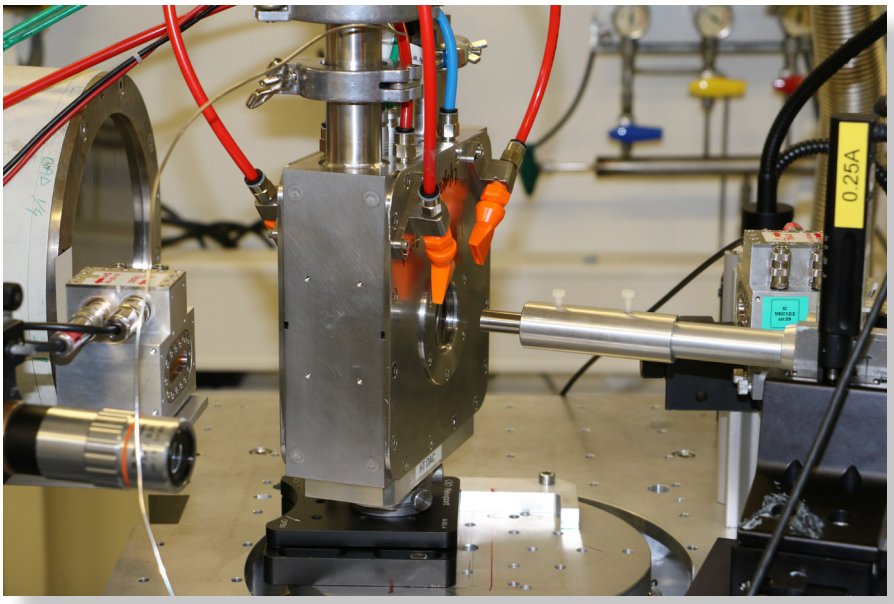

High P-T fluids are critical actors of the subduction factory, contributing to the development of volcanic arcs or the formation of porphyry ore deposits. Yet, their composition, properties (dielectric constant, density) and actual role remain a great matter of debate, mostly due to difficulties in their sampling. Here I will present some of the experimental developments made over the last decade to improve our understanding of these elusive phases. Particular focus will be given to in-situ studies in diamond-anvil cell.

Dr. Marion Louvel's experimental research focuses on the physico-chemical properties of high P-T fluids that can be found in subduction zones or ore deposits. She has for instance worked on the hydrothermal speciation of elements such as Br, Se, Cu or the HFSEs. In 2018, she was granted a Marie Curie fellowship to study Rare Earth elements in magmatic-hydrothermal system at WWU-Muenster.

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