The Institute for Materials Science / Department for Materials Physics is offering a part-time position, preferably beginning October 1st, 2023

PhD student
“atom probe tomography of liquid/solid interfaces”

The position will be compensated conform with civil service grade TVL-E13 (67%). It is temporary in compliance with the regulations of German scientific fixed-term contract law (maximum duration 6 years, offering qualification for a PhD).

Atom probe tomography is a cutting edge analytical microscopy that is well established in the analysis of nanostructured hard materials. However, applications to liquids and soft matter are rare. Recently, we developed methods of cryo-preparation that allow investigating needles of frozen liquids and demonstrated the method in studies of water, sugar solutions and nonpolar organic solvents [1-3]. The new PhD project shall extend to interfaces between two liquids or between a liquid and a solid, having in mind emulsions, liquid crystals and the space charge zone at batteries. The work will seek for specifically tailoring the laser pulse width and wave length by non-collinear optical parametric amplification. Innovative pump probe techniques shall be developed that enable a more reliable peak identification in complex time-of-flight mass spectra of organic liquids.

We are searching for a Master physicist or materials scientist who has particular interest in innovative measurement techniques and possibly a profound pre-training in materials science and microscopy in her/his Master education.

Women are especially encouraged to apply. Severely handicapped applicants with equivalent qualifications will receive preference.

Please send us your application preferably via email, to the following address:

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