

**MAX-PLANCK-INSTITUT FÜR BIOPHYSIKALISCHE CHEMIE  
KARL-FRIEDRICH-BONHOEFFER-INSTITUT  
GÖTTINGEN**



**Postdoc position  
at the Max Planck Institute for Biophysical Chemistry  
(Code Number 04-10)**

The Burg-Laboratory is looking to fill one Postdoc position at the interface of new microfluidic technologies and biological imaging.

The project will complement current work of our group in developing suspended micro- and nano-fluidic channel devices for biological applications. Suspended microchannels represent a special class of microfluidic systems comprising free-standing channels of picoliter volume, which may be configured to enable a variety of precision physical measurements.

The goal of this project would be to exploit the unique thermal properties of suspended microfluidic channels in the context of cryo-fixation of single cells. Cryo-fixation is widely regarded as the gold standard for the preservation of biological ultrastructure, but existing techniques require extensive sample preparation, which often interferes with the experiment and limits time resolution. Suspended microchannel devices may be able to remove these constraints by enabling controlled, ultra-rapid cooling of the sample while allowing continuous observation by fluorescence microscopy. This may ultimately lead to a new mode of sample preparation that would greatly facilitate the precise correlation of different imaging modes, such as optical and electron microscopy. This project would involve the construction of device prototypes and supporting instrumentation at the micro- and macroscale, and the development of experimental protocols enabling proof-of-concept experiments with model cell lines.

We are looking for talented, self-motivated individuals with a strong background in applied physics, micro-/nano-fluidics, experimental biophysics or microscopy. They should be enthusiastic about designing new instrumentation and ideally will have had some exposure to working with biological samples (cells or proteins). Candidates with a background in the life sciences who are experienced in one of the above technical disciplines are also welcome to apply. Familiarity with micro-/nanofabrication is desirable, but not required.

The successful candidate will be awarded a Max Planck Fellowship. The position is available immediately.

Please send your application including a current CV, list of publications and the names and contact information of one to three references **via e-mail with reference to the code number to**

**[tburg@mpibpc.mpg.de](mailto:tburg@mpibpc.mpg.de)**.

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