Call for 2016 DESY-ONACPR Fellowship Applicants

## **Research Laboratory: DESY (Please reference to DESY-ONACPR-2016-6)**

### Division/Group: FS-CFEL-1 (CMI)

### Supervising scientist: Prof. Dr. Jochen Küpper FRSC

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### Research Field: X-ray *Imaging / Molecular Physics / Nano Physics*

**Position:** Postdoctoral Research in Experimental Physics

**Cryogenic buffer-gas cooling of large molecules:** This project will develop strategies to cryogenically shock-freeze large molecules and nanoparticles, ranging from model peptides to whole viruses. This involves the setup of a cryogenic buffer gas cell and its coupling to various vaporization sources available or in development in our group. The resulting cold samples will be thoroughly characterized (density, distribution, charge-state,...) and systems for controlling (mass selection, isomer separation, alignment) these beams developed.

The produced and well-controlled cold samples of large molecules/nanoparticles will be investigated using X-ray or electron diffraction in laboratory experiments, as well as at Free-Electron lasers.

**Research Area:**

**Specific Requirements:**

The successful candidate will have a Ph.D. in experimental physics, physical chemistry, or a related field. Experience with cryogenics (<10 K) and vacuum equipment is highly desirable.

**Work Place:** Hamburg

**Earliest Start:** December 2016

**Language Requirement:** fluent in spoken and written English

**Further Remarks:**