Call for 2015 DESY-ONACPR Fellowship Applicants

## **Code: DESY-2015-16**

## 

## **Research Laboratory: DESY**

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

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

### Email/Phone: [Jochen.kuepper@desy.de](mailto:Jochen.kuepper@desy.de) / +49-40-89986330

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

**Position:** Postdoctoral Research in X-ray imaging/Molecular/Nano Physics

**Control of aerodynamically focussed beams of large molecules and nanoparticles:** This project will develop strategies to transfer large molecules/particles into high-vacuum through the use of aerodynamic lenses and liquid-sample injectors. Methodologies to cool the produced beams will be implemented and beams thoroughly characterized (density, distribution, charge-state,...) and systems for controlling these beams developed, such as mass selection, isomer separation, angular alignment. The produced and well-controlled cold samples of large molecules/nanoparticles will be investigated using X-ray or electron diffraction experiments 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, nanoscience, physical chemistry, or a related field. Experience with lasers, vacuum equipment, aerosol technologies, or optical or x-ray imaging is highly desirable.

[*Opt. Exp.* **21**, 30492 (2013)](http://desy.cfel.de/cid/cmi/opportunities/projects/http%3E//dx.doi.org/10.1364/oe.21.030492)

[*Phys. Rev.* X **2**, 031002 (2012)](http://dx.doi.org/10.1103/PhysRevX.2.031002)

[*Aerosol Sci. Technol.* **22**, 314 (1995)](http://dx.doi.org/10.1080/02786829408959749)

**Work Place:** Hamburg

**Earliest Start:** December 2015

**Language Requirement:**

**Further Remarks:**