**2018 Helmholtz – OCPC – Program**

**for the involvement of postdocs in bilateral collaboration projects**

**DESY\_OCPC\_2018-07**

**PART A**

**Title of the project: Elementary steps of the ultrafast dynamics in solute-solvent interactions**

**Helmholtz Centre and Research Group: DESY / CFEL Controlled Molecule Imaging**

**Project leader: Dr. Sebastian Trippel, Prof. Dr. Jochen Küpper**

**Web-address:** https://www.controlled-molecule-imaging.org

**Description of the project:**

We have demonstrate the preparation of pure solute-solvent clusters, such as pure water clusters or molecule-water dimers and have performed ground breaking experiments on their combined ultrafast electronic-nuclear dynamics using time-resolved electron-ion-coincidence detection following x-ray ionization. In this project, we will extend these approaches to further molecules and to faster timescales, i.e., in order to be able to directly see the proton transfer, at 10 fs, and eventually the electronic dynamics at ~1 fs.

**Description of existing or sought Chinese collaboration partner institute:**

**Required qualification of the post-doc:**

* PhD in Experimental Physics, Physical Chemistry, or related field
* Extensive background in molecular physics and quantum mechanics is required.
* Experience with molecular beams, high-vacuum equipment, and short-pulse lasers is envisioned; experience with large-scale/x-ray facilities would be a plus.
* Fluent in written and spoken English

**PART B**

**Documents to be provided by the post-doc, necessary for an application to OCPC via a postdoc-station:**

* + Detailed description of the interest in joining the project (motivation letter)
  + Curriculum vitae, copies of degrees
  + List of publications
  + 2 letters of recommendation
  + Proof of command of English language

**PART C**

**Additional requirements to be fulfilled by the post-doc:**

* Max. age of 35 years
* PhD degree not older than 5 years
* Very good command of the English language
* Strong ability to work independently and in a team