

Position Profile for Chinese Applicants running for 2019 Helmholtz – OCPC – Program

PART A (Info about the Position)

Helmholtz Centre and institute: **DESY Deutsches Elektronen-Synchrotron**

Title of the project:

Ultrafast Optics and X-ray Sources / High Energy Terahertz Generation

Project leader: **Prof. Dr. Franz Kärtner**

Web-address:

URL: <https://ufox.cfel.de/>

Email: franz.kaertner@cfel.de

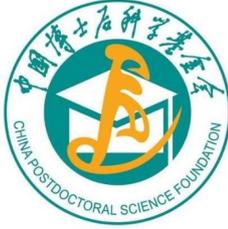
Phone: +49 40 8998 6350

Description of the project (max. half page):

High energy Terahertz (THz) pulses in the multi-mJ range open up new applications such as the study of strong-field effects in gases, liquids, solids and nanostructures as well as compact electron acceleration. We have developed several schemes based on difference frequency generation and cascade optical parametric amplification to enhance the efficiency of laser based THz generation both in the single- as well as multicycle regime. The interested candidate is expected to implement new generation approaches and use the high energy THz source in the above applications.

Required qualification of the post-doc:

- PhD in Physics or Electrical Engineering.
- Experience with laser oscillators, amplifiers free space nonlinear optic.
- Additional skills: We are looking for a team-oriented and enthusiastic candidate who can interact well with the other team members and have skills in numerical methods for analyzing thermal, optical and mechanical performance of systems is helpful.

**PART B (Materials and Procedures)**

The applicants shall submit the following documents to a Chinese postdoc station affiliated to a research institution or a university, after passing through the internal selection, the qualified application shall be forwarded to OCPC, and then to Helmholtz for evaluation:

- 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 (General Conditions)

Additional requirements on the postdoctoral fellows:

- Chinese citizenship from Mainland China (allows application while staying abroad)
- Max. age of 35 years, PhD degree not more than 5 years by submission of application
- Very good command of English language
- Strong ability to work independently and in a team