



# PHOTO INJECTOR.

## DESY, Zeuthen location, is seeking: Postdoc (f/m) for the Photo Injector Test Facility PITZ in Zeuthen

### DESY

DESY is one of the world's leading research centres for photon science, particle and astroparticle physics as well as accelerator physics.

The Photo Injector Test Facility PITZ in Zeuthen (near Berlin) develops high brightness electron sources for unique applications, e.g. short wavelength, high duty-cycle Free Electron Lasers (FELs) like FLASH and European XFEL. One key component of the overall setup is the photocathode laser with two laser systems currently installed at PITZ. Laser pulse shaping is used to improve the electron beam quality and the current aim is to achieve ultimate optimization of high brightness electron beams by generating ellipsoidal electron bunches with a profiled volume Bragg grating.

### The position

- Calculations/simulations to prepare the upgrade of the existing laser systems at PITZ and the European XFEL to generate ellipsoidal laser pulses
- Realization of the improved setup at PITZ and characterization of the laser pulse shape and the generated electron beam quality
- Know-how transfer to the European XFEL
- Participation in the photo injector optimization and shift operation at PITZ

### Requirements

- PhD degree in physics or engineering
- Deep knowledge of laser and incoherent optics and laser technology - experience of working with pulsed laser systems
- Interest and ability to cooperate with international working groups
- Good communication skills. Very good knowledge of English (oral and written) is required and knowledge of German is of advantage
- Knowledge of accelerator physics and accelerator technology is of advantage

For further information please contact Dr. Matthias Groß, +49-33762-7-7323 or [matthias.gross@desy.de](mailto:matthias.gross@desy.de).

The position is limited to 2 years.

Salary and benefits are commensurate with those of public service organisations in Germany. Classification is based upon qualifications and assigned duties. DESY operates flexible work schemes. Handicapped persons will be given preference to other equally qualified applicants. DESY is an equal opportunity, affirmative action employer and encourages applications from women.

We are looking forward to your application quoting the reference code preferably via our electronic application System: Online-Application

### Deutsches Elektronen-Synchrotron DESY

Human Resources Department | Code: MPO003/2016

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**Deadline for applications: 30 September 2016**

**[www.desy.de](http://www.desy.de)**