

# Implement topography for x-ray crystal optics in the lab

The development of novel and highly brilliant x-ray sources, like 3rd generation synchrotrons and free-electron lasers (FEL) has enabled the investigation of nonlinear effects in x-ray regime. These phenomena offer high potential for applications, but require highly specialized detection schemes. In our group, we develop x-ray optics specifically dedicated to detect these nonlinear effects.

Join our group for this summer-project to implement a topography-routine of x-ray crystal optics in the x-ray laboratory and to program an analysis tool to characterize existing optics. In addition, you can learn how to simulate your experimental setup with ray-tracing software and help designing new optical setups.

## Group

FS-PS

## Project Category

A4. Development of experimental techniques

## Special Qualifications

**Primary authors:** BOEMER, Christina (DESY); KREBS, Dietrich (CFEL (CFEL))