

# Instrumentation development for the polarized luminescence measurements at P66, PETRA III

P66 time-resolved vacuum-ultraviolet spectroscopy beamline started its operation in autumn 2021 and is devoted to the study of the electronic structure of the wide-bandgap luminescent materials. Circularly-polarized luminescence (CPL) is emitted by the chiral enantiopure (no inversion centre) materials and is an interesting fundamental process, structural relationship of which that is not yet completely understood. The CPL measurement scheme at P66 is realized using a quarter-wave plate and a linear film analyzer.

The aim of the project is the design, production and programming of a new motorized stage supporting the quarter wave plate.

## Group

FS-PETRA-S

## Project Category

A4. Development of experimental techniques

## Special Qualifications

## DESY Site

Hamburg

**Primary authors:** KATAEV, Aleksandr (FS-PETRA-S); KOTLOV, Aleksei (FS-PETRA-S (FS-PET-S Fachgruppe P66(Time-r-lumi.))); CHUKOVA, Oksana (FS-PETRA-S (FS-PET-S Fachgruppe P66(Time-r-lumi.))); SMORTSOVA, Yevheniia (FS-PETRA-S (FS-PET-S Fachgruppe P66(Time-r-lumi.)))

**Presenters:** KATAEV, Aleksandr (FS-PETRA-S); KOTLOV, Aleksei (FS-PETRA-S (FS-PET-S Fachgruppe P66(Time-r-lumi.))); CHUKOVA, Oksana (FS-PETRA-S (FS-PET-S Fachgruppe P66(Time-r-lumi.))); SMORTSOVA, Yevheniia (FS-PETRA-S (FS-PET-S Fachgruppe P66(Time-r-lumi.)))