

# Revealing the structure of nanoparticles in mesocrystalline grains using Angular X-ray Cross-correlation Analysis (AXCCA)

This project aims to elucidate the intricate structure of colloidal crystals formed by nanoparticles covered by proteins. These crystals will be characterized using small-angle X-ray scattering (SAXS). We aim to utilize the Angular X-ray Cross-Correlation Analysis (AXCCA) technique to analyse the ordering of nanoparticles within the superlattices. Our focus lies on understanding the interactions between different proteins, in assembling superlattices comprising gold and metal oxide nanoparticles. Our findings will contribute to designing and fabricating superlattices with tailored functional properties.

## Group

FS-PS-CXI

## Project Category

A1. Solid-state physics and nanoscience

## Special Qualifications

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