



Methods tags: holographic lithography, electron beam lithography, atomic layer deposition, optics and electromagnetic simulations

Scientific tags: metasurfaces, optics, metamaterials, X-ray imaging, MAX IV

Supervisor: Matias Kagias, matias.kagias@fysik.lu.se

Website: <https://portal.research.lu.se/en/persons/matias-kagias>

Matias Kagias' research group works on developing and characterizing metamaterials with a focus on sustainable development. The team has a strong background in advanced nanofabrication including 3D lithography, and method development at large scale facilities (MAXIV) for multimodal X-ray characterization. The group currently offers several project opportunities in the domain of metamaterials (including optical metasurfaces) e.g inverse design, multiphysics modeling, and fabrication. Alternative research directions include design and fabrication of X-ray optical elements as well as modeling and characterization of 3D metamaterials with coherent X-ray imaging approaches.