



Contribution ID: 126

Type: **Invited speaker**

Vectorial ptychography: when polarization comes into play

Thursday, 20 June 2024 10:50 (30 minutes)

Traditional ptychography usually assumes that the objects being imaged scatter light without changing its polarization state. However, when this assumption does not hold, we have shown the need for a more comprehensive vectorial approach to ptychography to accurately characterize such objects.

In this presentation, I will cover the fundamental concepts of light polarization and introduce the framework of vectorial ptychography. I will also delve into the experimental and numerical implementations of this technique. Several recent applications of this method will be presented for various challenging materials, including biominerals, engineered metasurfaces, and cholesteric liquid crystal films. Additionally, I will discuss the imaging of vectorial light, where polarization varies across the beam's cross-section.

Presenter: FERRAND, Patrick (Aix-Marseille université, Marseille)

Session Classification: Ptychography at different wavelengths - S3