

KN1

XFEL- and synchrotron-based serial crystallography studies of the membrane-bound proton pump cytochrome c oxidase

Gisela Brändén¹

¹University of Gothenburg - Goteborg (Sweden)

Serial crystallography is a relatively novel method within macromolecular crystallography that allows determination of protein structures at room temperature and enables time-resolved studies of protein dynamics. We use this method to study the membrane-bound respiratory enzyme cytochrome c oxidase, with the hope of being able to describe the mechanistic details of proton pumping. I will present our work on microcrystallization of membrane proteins, developments within crystal injection, and show results from recent static and time-resolved X-ray diffraction experiments at synchrotrons and XFELs.