

2021-2022 ANALYTICAL CHEMISTRY SEMINAR SERIES



***Seeing is believing:
Investigations of single-particle
collisions in liquid environments
by time-resolved correlated
opto-electrochemistry***

Dr. Christophe Renault
Chargé de recherche au CRNS

Micron and sub-micron particles are ubiquitous in nature and important components of energy storage and conversion devices. Their detection and observation at the single-particle level allow us to rigorously understand their physicochemical properties and how they interact with various surfaces. Using Opto-electrochemical measurements coupled with powerful finite element simulations, we will investigate how current signals originating from individual nanoparticle collisions can lead to the sizing and counting of polystyrene microspheres, graphene oxide sheets, and graphene nanoplatelets. We will also present an original method to track the motion of graphene nanoplatelets a few milliseconds before collision as well as on the surface of an electrified microinterface. These experiments comprise important methods for studying the physicochemical properties of emerging 2D nanomaterials.

**NOVEMBER 29, NOON - 1:00PM
CHAPMAN 125 + ZOOM**