

Séminaire

Jeudi 16 janvier 2025 à 10h30
Amphithéâtre Henri Benoît

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Electron microscopy-based characterization of cellulose nanoparticles at sub-single crystal resolutions

Cellulose, the most abundant and accessible biopolymer on Earth, forms the foundation of our daily lives, with applications ranging from paper and textiles to food and construction materials. Its wide utility stems from its exceptional material properties, including high mechanical strength, chemical stability, and inherent polarity and chirality. Moreover, cellulose naturally exists in a nanofibrous morphology, making it high-performance, bio-sourced nanomaterials, known as nanocelluloses, when extracted from biomass. In recent years, the structure-property relationships of nanocelluloses have been a focus of research efforts in the field of cellulose science. However, fine structural details, such as nanoscale defects, remain largely underexplored despite their significant influence on cellulose's properties. In this talk, I will present our recent advancements in electron microscopy methodologies aimed at probing these structural features of cellulose nanoparticles. Specifically, I will highlight findings on nanofibrillar twists and kink defects.

Les personnes souhaitant rencontrer Yu Ogawa sont priées de prendre contact avec M. Brinkmann.