Séminaire

Mardi 4 novembre 2025 à 11h00

Amphithéâtre Henri Benoît

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Robust Sequence-Defined Oligoamides for Material Traceability and Beyond

Natural sequence-defined polymers, like DNA and peptides, have been extensively studied over the past century for a wide range of applications, including biotechnology and material science. But their chemical and physical properties are inherently constrained by the limited library of natural building blocks that constitute these biomacromolecules. In this context, abiotic sequence-defined polymers have garnered significant interest in recent years with the advantage of being fully tailor-made, offering significant advantages for numerous applications, specifically data storage. Our group tackled this application by introducing amine-thiol-ene conjugation based on thiolactone chemistry. However, the thermal stability of the obtained structures as well as those developed by other research groups have not yet been thoroughly investigated, while this is crucial for certain applications, particularly anticounterfeiting. Based on our expertise on the synthesis of sequence defined-oligoamides, we demonstrate in this study that such synthetic macromolecules exhibit high thermal stability (> 300°C) and can serve as robust carriers for digital information.

Les personnes souhaitant rencontrer T. Schutz sont priées de prendre contact Loic Jierry.