

Seminar

Self-assembly and macromolecular engineering for the design of novel colloidal systems for biological applications

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Abstract:

Self-assembly and macromolecular engineering are rapidly growing fields of research, offering promising prospects for the formulation of novel colloidal systems with biomedical applications. This presentation provides an exploration of these themes, highlighting recent advancements, challenges encountered, and future perspectives based on the work conducted in my group.

Our research primarily focuses on Polymerization-Induced Self-Assembly (PISA) for the synthesis of nanoparticles designed for drug delivery. Key developments include improvements in encapsulation methods, the creation of stimuli-responsive particles, and the use of degradable polymers for targeted biomedical applications.

Finally, we are investigating future directions, including polycondensation-induced self-assembly (McPISA) for the synthesis of polypeptoids based particles. These innovations are set to expand the possibilities of self-assembly and macromolecular engineering while addressing current environmental and industrial challenges.

Friday **27.03** 2026 **10 a.m.**

Room 1.11 – Edificio
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