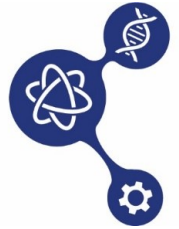


# Seminario de Química Física



Miércoles 23 de abril de 2025 – 11:30 h



Sala de Grados de la Biblioteca

**Dr. Ali Khodayari – Prof. Arn Mignon**  
*Department of Materials Engineering*  
*KU Leuven*



## ‘Smart’ polymeric systems for biomedical applications

Dr. Ali Khodayari will start with an introduction on KU Leuven, the different research groups focusing on Future Materials and Technologies. Then we will highlight the main research lines of the group of Prof. Arn Mignon. The Smart Polymeric Biomaterials Research group focuses on the development of stimuli-responsive polymers for a variety of applications such as healing of burn wounds and diabetic ulcers, flexor tendon repair, new aortic valve support structures, dental implants and controlled drug release for inflammatory bowel disease.

The synthesized polymers are being processed into either nanofibers through electrospinning (Fig.1) and melt electrowriting or into nanoparticles such as polymersomes.

By introducing the response to external stimuli such as pH, temperature, enzymes, reactive oxygen species..., a control can be made over drug release from the nanoparticles or swelling of the nanofibers.

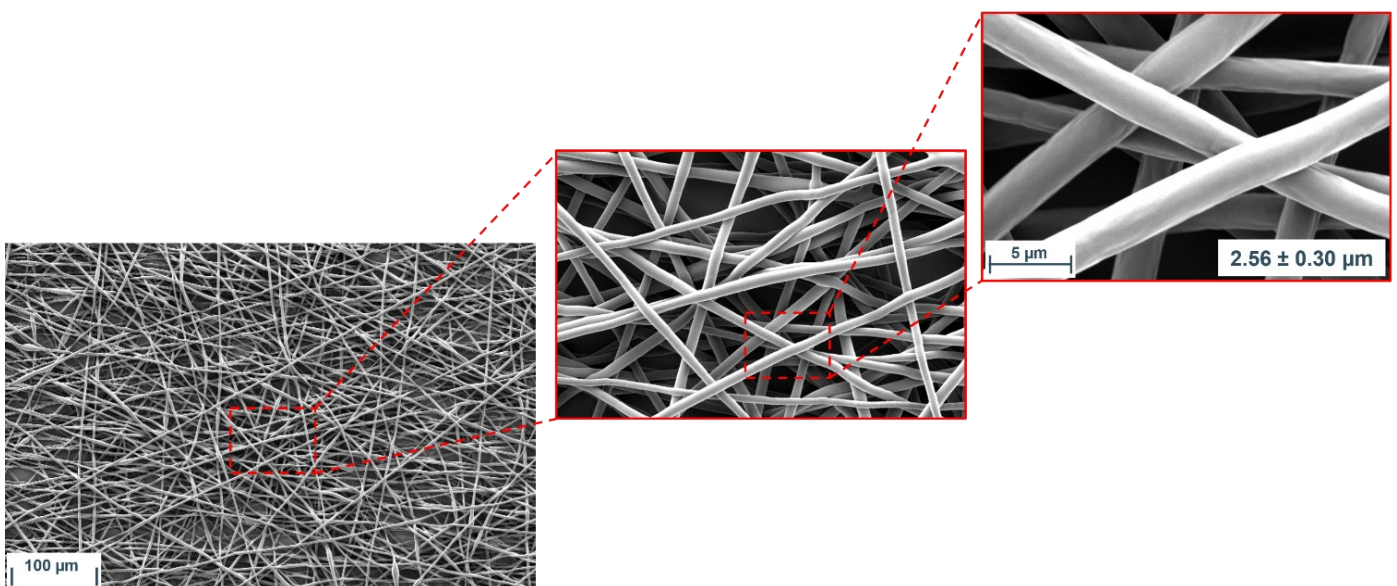


Figure 1: example of electrospun meshes