

FEMS EUROMAT23

03 - 07 Sep 2023 (Frankfurt am Main)

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FEMS EUROMAT is the most important international congress in materials science and technology in Europe. It continues a successful congress series promoting the transfer of knowledge and the exchange of experience between academia and industry. **Extended submission deadline: 15 March 2023**

Area F: Materials for Healthcare

F01: Biopolymers in Medicine: Advanced Applications

The symposium will include natural polymers (e.g., proteins and polysaccharides), synthetic proteins and peptides, and bio-based synthetic polymers. A variety of chemistries and architectures will be highlighted, thereby designing a broad range of structural and functional properties in line with the envisaged biomedical application and specific needs. Possible innovative crosslinking approaches and/or chemical modification strategies for an improvement in biopolymer characteristics will be dealt with, also considering possible drawbacks. Physical and chemical crosslinking strategies will be addressed, highlighting their pros and cons with regard to biopolymer processing (deposition- versus light-based additive manufacturing, electrospinning) and applicability.

The realization of devices for healthcare applications ranging from conventional replacement strategies (e.g., biodegradable implants) to more advanced systems such as advanced hydrogels and biomimetic scaffolds for tissue engineering, controlled drug delivery, smart/bioinspired surfaces, organoids, in vitro models will be considered. In addition, innovative applications of biopolymers in the biomedical fields to better mimic the characteristics of human health or/and pathological tissues will be considered and discussed. In fact, biopolymers show great promise as candidate materials for this task, and fine-tuning of their properties for injury-specific and tissue-specific applications is the subject of much research that will be considered in the present symposium.

Symposium Organizer



Prof. Dr. Silvia Farè
Politecnico di Milano



Dr. João F. Mano
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Prof. Dr. Sandra Van Vlierberghe
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