FEMS EUROMAT 23

03 - 07 Sep 2023 (Frankfurt am Main)

euromat2023.com

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 A: Functional Materials

A07: Functional Cellulose Based Materials

Concerns about sustainability have attracted great interest in bioproducts and renewable materials from nature as emerging solutions to satisfy a range of technological challenges. Cellulose-based materials match the current needs for a circular (bio)economy, are sustainable, biocompatible, and earth-abundant with low net carbon print. However, those materials also have nature-provided intrinsic structures with potential transformative impact on new recyclable electronic and photonic devices like paper displays, smart labels, bio-and medical applications, point-of-care devices, RFID tags, disposable sensors and actuators, and energy harvesting devices, among others.

To enable all these possible applications, some challenges in fundamental research and understanding must be surpassed, which include giving new functionalities to cellulose and structures with tailored properties, novel devices with both proper functionality and mechanical flexibility, cost-effectiveness, scalable and reliable manufacturing techniques, and system-level integration.

This symposium aims to gather scientists and engineers from diverse and multidisciplinary fields with a strong interest in working with cellulose-based materials.

Topics will include:
Micro/nano-fibers functionalization and assembling
New cellulose-based substrates (nanocellulose, bacterial cellulose, etc.),
New materials design
Stimuli-responsive materials and structures
Nanocomposites with other functional materials (conductors, semiconductors, insulators, piezoelectric/triboelectric, ion-permeable)
Advanced applications of cellulose-based materials in multi-functional devices:
- Electronics—Flexible and printed electronics, photonics, plasmonic, sensors, actuators, etc
- Bio applications — Biosensors, etc
- Energy - batteries, supercapacitors, energy harvesting devices, etc.
Other Emerging applications
Cost-effective manufacturing technologies on a large area (printing and roll-to-roll processes).

Symposium Organizer


Dr. Marco Beaumont
BOKU, Vienna


Dr. Diana Filipa Gaspar
AlmaScience CoLAB


Dr. Wim Thielemans
KU Leuven


Prof. Dr. Silvia Vignolini
University of Cambridge

DGM