

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 H: Materials for Circularity and Sustainability

H08: Nanomaterials in Products and Processes under Circular Considerations

The symposium focuses on nanomaterials in products and processes under circular considerations on the intersection of science, technology, environment, and health issues for taking action for a sustainable world for all.

The shift from a linear economy, 'take-make-dispose' to a circular economy, including reduce, reuse, recycle, and recover, has gained much attention recently. Besides, nanotechnology, which is one of the most exciting crucial enabling technologies of the twenty-first century, has become more popular technology compared to conventional technology. The benefits of nanotechnology depend on the fact that it is possible to tailor the structures of materials at extremely small scales to achieve specific properties, thus greatly extending the materials science toolkit.

The repercussions of biodiversity loss, deforestation, careless waste disposal, air pollution, water insecurity, toxic loads, plastic pollution, global warming from fossil fuels, and climate change are presently being felt both individually and collectively around the world.

The symposium includes an overview of scientific, technical, environmental, and health issues related to nanomaterials, their synthesis and characterization techniques, physical, chemical, and biological properties. Nanotechnology, in which nanomaterials are used in order to make use of size- and structure-dependent properties and phenomena of products thanks to nanoscience, has a wide range of application fields from energy to health, from food security to the electronic industry.

The symposium covers all aspects of nanomaterials, nanoscience, and nanotechnology, such as:

- Nanomaterials, synthesis, and characterization techniques
- Nanomaterials, physical, chemical, and biological properties
- Nanomaterials, (e.g., synchrotron-based) spectroscopic techniques
- Modeling of nanomaterials, theoretical studies of nanomaterials
- Nanomaterials for renewable energy and hydrogen energy
- Nanomaterials for a clean environment
- Nanomaterials for electronics
- Nanomaterials for water and food security
- Nanomaterials for medicine (imaging, prevention, detection, and treatment of diseases/viruses)
- Nanomaterials for nanobiotechnology
- Nanomaterials in products in landfills, in organic processes, in recycling processes

with particular attention to contributions focusing on process and product design in the framework of circular economy.

This symposium is cooperating with the [European Journal of Materials \(EJM\)](#).

Symposium Organizer



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