

MSE 2024

24 - 26 Sep 2024 (Darmstadt)

dgm.de

Topic B: Biomaterials

B05: Biomaterials Applications

This symposium will attract experts working in the broad field of biomedical applications of materials, including metals, ceramics, polymers, and their composites. Presentations will include topics ranging from biomedical implants, coatings, and surface treatment of biomaterials to novel biomaterial approaches for tissue engineering, drug delivery, and biofabrication. Thus biomedical applications of both permanent and biodegradable materials will be considered in this symposium. Moreover, advanced methods for the characterization and testing of biomaterials in in-vivo relevant conditions will also be considered, emphasizing the tissue/biomaterial interface and interactions. Other topics will include innovative multifunctional bioactive coatings for biomedical devices and tailored surface functionalization approaches for eliciting specific biological responses. Biomaterial-based approaches to develop advanced scaffolds for tissue regeneration will also be covered in this symposium. New concepts directed at the development of multifunctional scaffolds (next-generation scaffolds) will be presented, which can have a drug delivery or biomolecular signaling function, thus providing enhanced support to cell attachment, growth, and proliferation. The symposium will offer an excellent forum to present and discuss the most recent and relevant contributions to the application of materials in the biomedical field, bringing together material scientists, biologists, pharmacists, tissue engineers, and medical doctors.

The oral presentations shall address these topics:

- Bioactive materials as dense and porous implants
- Functionally-graded biomaterials
- Scaffolds for tissue engineering and biofabrication application
- Cells/Biomaterial Interface Interactions
- Biodegradable materials and medical devices
- Clinical applications
- Materials for controlled drug delivery

Symposium Organizer



Prof. Dr.-Ing. Aldo R. Boccaccini
Friedrich-Alexander-Universität Erlangen-N...



Dr. Sahar Salehi-Müller
University of Bayreuth

