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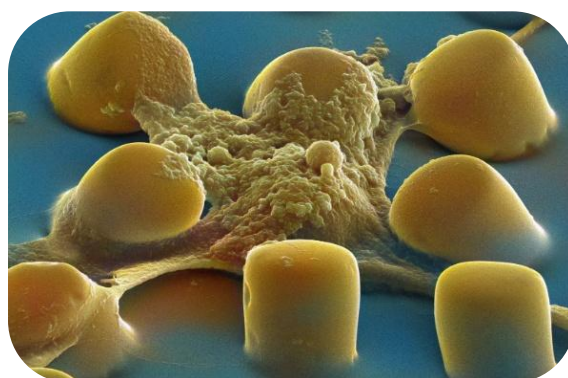
Dipartimento di Scienze della Vita

Advanced NanoBiomaterials

MO-51 Aula 1.1

via Campi 103, Modena

08/06/2026



The 1st Mini-Workshop on Advanced NanoBiomaterials, hosted by the Life Sciences Department of the University of Modena and Reggio Emilia, aims to explore recent advances in the application of nanotechnologies to the field of biomaterials for cutting-edge biomedical applications. Special focus will be given to regenerative medicine, with emphasis on stimuli-responsive, micro- and nanostructured scaffolds and hydrogels designed to promote cell adhesion, proliferation, and differentiation while recreating physiologically relevant microenvironments. The program will also address smart nanocarrier systems for targeted and controlled drug delivery, aiming to improve therapeutic efficacy and reduce systemic side effects. In addition, emerging strategies for integrating 2D and multilayered biomaterials into advanced biosensing platforms capable of high sensitivity and selectivity will be discussed. Overall, this mini-workshop seeks to bridge nanotechnology-driven innovation with translational biomaterial applications.

Program of the Workshop

9.30-10:00: Welcome: Michele Bianchi and Fabio Biscarini (workshop chairpersons)

Session I. Chairman: Giovanni Tosi

10.00-10:45: **Luisa De Cola** (PoliMI, KIT, Keynote) - *Hybrid materials: from responsive nanoparticles to biomimetic systems*

10:45-11:15: **Silvia Panseri** (ISSMC-CNR, Invited) - *Multi-Stimuli Responsive and Biomimetic Interfaces: Advancing Physiologically Relevant In Vitro Models and Regenerative Therapies*

11:15-11:40 Coffee break

Session II. Chairman: Gianluca Carnevale

11:40-12:00: **Ilaria Ottonelli** - *Precision by Design: The Nanoscale Toolbox for Gene and Drug Delivery*

12:00-12:20: **Eliana Leo** - *Design Flexibility in Nano-Biomaterials to Overcome Drug-Delivery Barriers*

12:20-12:40: **Andrea Alessandrini** - *Multiscale Mechanical Characterization of Biological Systems*

12:40-13:00: **Matteo Sensi** - *Electrolyte-Gated Transistors Featuring Functional Bio-Interfaces for Health and Food Sensing*

Conclusions: Michele Bianchi and Fabio Biscarini

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