Biofunctional Materials and Cell-based analysis

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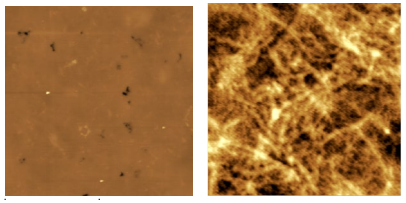
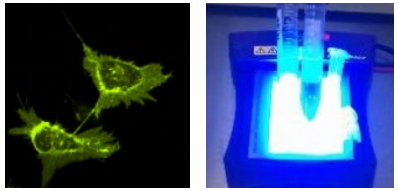
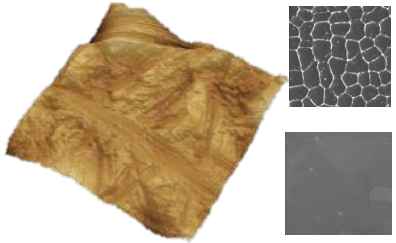
Surface treatment



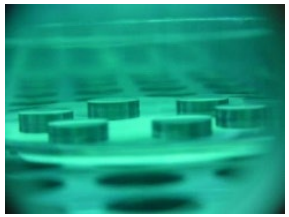
Nano-scale surface roughness



Biofunctionalized NPs for nanomedicine



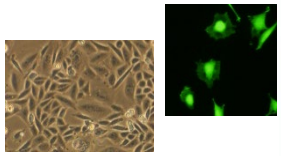
Surface topography

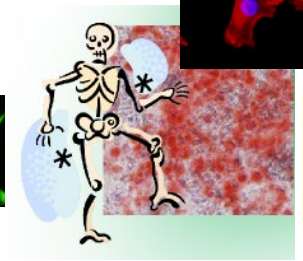


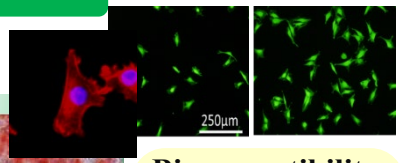
UV-ozone treatment

Cell-based analysis

Osteoblast
Endothelial cell
Keratinocyte







- **Biocompatibility**
- **Cytotoxicity**
- **Differentiation**
- **Proliferation**
- **Gene expression**

Content:
Our research aim is development of biofunctional materials for cellular function. Microenvironment, for instance surface topography or/and surface chemical composition, act as physicochemical stimuli which effect to gene expression and cell adhesion. Therefore, biofunctional materials could lead to increase biocompatibility.

We use various types of cells such as osteoblasts, endothelial cells, mesenchymal stem cells, and keratinocyte, and etc for cell-based analysis of the materials. Also, cytotoxicity of drug candidates, chemicals, and environmental substances are also able to analyze using these types of cells.

Appealing point:
We positively promote R&D based on industry-academia collaboration.

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