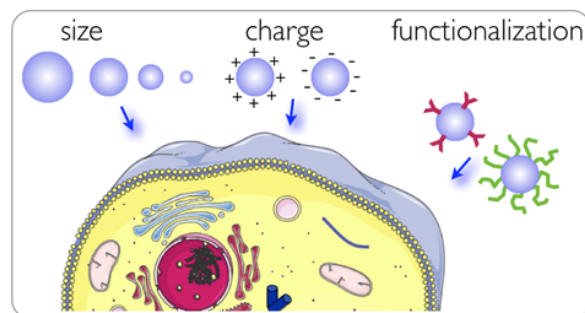


# Physikalisches Kolloquium

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## Controlling nanomaterials and their interfaces for biology applications



Nanomaterial interactions with living cells depend on multiple factors including size, charge and interfacial properties.

Engineered nanomaterials are essential components in the development of nanotechnologies. In this lecture, I will discuss the use of nanomaterials, including nanoparticles for applications in nanomedicine and biophysics. I will provide examples of particles used as diagnostic and therapeutic agents for the treatment of major diseases. I will also talk about inhaled pollution particles emitted by industrial activities and about their impact on human health. On the physical chemistry side, emphasis will be put on strategies developed in my group to control particle interfaces. It is now recognized that these interfaces determine for a significant part their fate in biological environments. Finally, I will show how in some conditions particles can be translated into nano- and microdevices and manipulated to allow the measurements of physical quantities of biological materials (such as viscosity and elasticity).

**Montag, 17.12.2018, 16:15 Uhr**  
**Ort: Hörsaal 6**