

# PHYSIKALISCHES KOLLOQUIUM

SOMMERSEMESTER 2024

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## PROBING THE NANO-BIO INTERFACE WITH COMPUTATIONAL TOOLS

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The interface between nanomaterials and biomolecules represents an important area of research where various disciplines converge, from physics to medicine, and the related subjects in between. Indeed, phenomena at this type of interface play a decisive role in modulating the efficacy of many modern drugs, which depends not only on the active principle but also on the nanoscopic vectors that deliver it to the target tissue, enhancing its effect even by several orders of magnitude and/or significantly reducing its side effects. In this presentation, I will discuss key chemico-physical elements related to the functioning of therapeutic nanoparticles including for example the "stealth" effect from polymer coating, the formation processes, the internal structure and possible mechanisms of action, and how our research, based on a multi-scale computer simulation approach, has been contributing to their elucidation.

Die Einführung erfolgt durch Ilya Eremin

Die Fakultät lädt alle Interessierten herzlich ein. Die Veranstaltung findet im Hörsaal HNB statt.

