Anton Vilsmeier Vorlesung

Prof. Dr. Joseph Wang

Department of Nanoengineering,
University of California, San Diego (USA)

Microrobots Go in-Vivo: From Test Tubes to Live Animals

Nanoscale robots that can effectively convert diverse energy sources into movement and forces represent a rapidly emerging and fascinating robotic research area. Such nanoscale robots offer impressive capabilities, including greatly enhanced power and cargo-towing forces, multi-functionality, easy surface functionalization, and versatility. The new capabilities of modern nanorobots indicate immense potential for a variety of biomedical applications, and should have major impact on disease diagnosis, treatment, and prevention [1,2]. Recent in vivo applications using different types of biocompatible and biodegradable microrobots will be illustrated, including enhanced drug delivery towards enhanced treatment of stomach or lung infections, active vaccine delivery, autonomous gastric fluid neutralization, microrobot pills for oral delivery, or efficient intracellular delivery of functional proteins and nucleic acids.

Donnerstag, 18. Juli 2024
15.30 Uhr, Hörsaal H44
im Rahmen des Tags der Chemie & Pharmazie

150 Years GDCh