Fakultät für Naturwissenschaften

Institut für Chemie

lädt ein

gemeinsam mit der Gesellschaft Deutscher Chemiker zum

GDCh
GESELLSCHAFT DEUTSCHER CHEMIKER

Vortrag
von Herrn

em. Prof.Dr. Michael Grunze

Department of Cellular Biophysics

Max-Planck-Institut für medizinische Forschung Heidelberg

“Droplet Micro Arrays: a high throughput method for antibiotic screening”

am: 26. März 2025 - **Mittwoch**

um: 16:00 Uhr

wo: im Raum 1/232

Gäste sind herzlich willkommen!

TECHNISCHE UNIVERSITÄT
IN DER KULTURHAUPTSTADT EUROPAS
CHEMNITZ

Prof. Dr. Michael Sommer
Telefon: 0371 / 531 32507
E-Mail: michael.sommer@chemie.tu-chemnitz.de

Fakultät für Naturwissenschaften

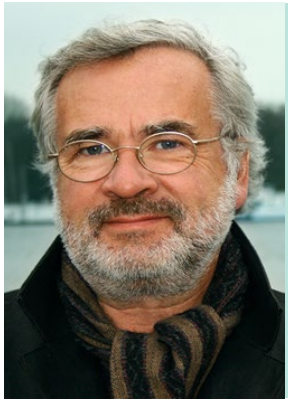
Institut für Chemie

em. Prof. Dr.

Michael Grunze

Department of Cellular Biophysics

Max-Planck-Institut für medizinische Forschung Heidelberg



GDCh Gesellschaft Deutscher Chemiker

"Droplet Micro Arrays: a high throughput method for antibiotic screening"

Micro-patterned super-hydrophobic/ hydrophilic surfaces are used for medical diagnostics and drug screening. The infusion of oils into these surfaces creates so called SLIPS (slippery) surfaces. Their preparation has been followed *in situ* by synchrotron holo-tomography with 50 nm resolution, showing the formation of a complex polymer/air/oil/water interface. Tests in the marine environment and in contact with bacteria demonstrate their excellent-but limited- non-fouling properties. Bacterial film formation starts on defects and then covers the whole surface by first building bridges between defects in the SLIPS surface.

These micro-patterned super-hydrophobic/ hydrophilic surfaces are used to separate and prevent mixing of aqueous droplets confined in the hydrophilic areas. These Droplet Micro Arrays (DMA) can contain cells, bacteria, zebrafish embryos, or dissolved chemical compounds (drugs) and are used as high throughput biomedical and biochemical screening and drug discovery platforms. In this talk I will focus on their use as antibiotic drug screens for personalized medical applications.

TECHNISCHE UNIVERSITÄT
IN DER KULTURHAUPTSTADT EUROPAS
CHEMNITZ

Prof. Dr. Michael Sommer
Telefon: 0371 / 531 32507
E-Mail: michael.sommer@chemie.tu-chemnitz.de