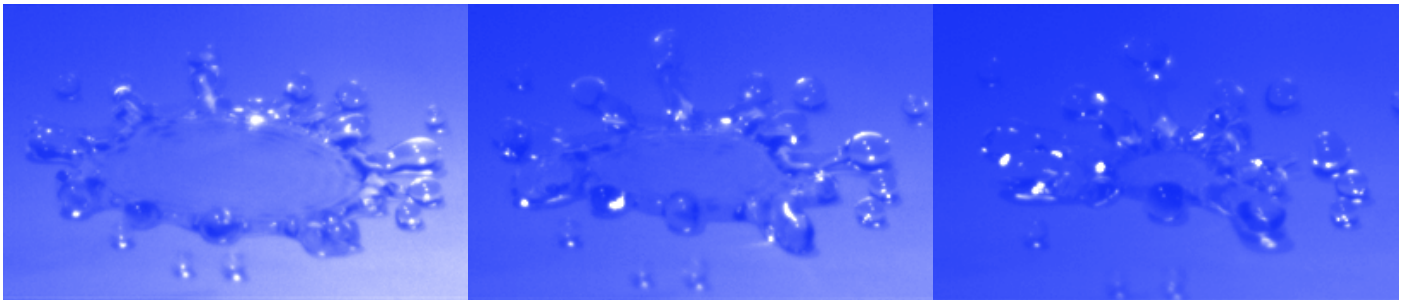
INSTITUT CARNOT MICA

Materials Institute Carnot Alsace

A key player in Innovative Materials

A remarkable ultrahydrophobic surface area



Researchers from the Institut Carnot MICA have just successfully developed textured silicone surfaces with remarkable ultrahydrophobic properties. These surfaces, characterised by extreme resistance to wetting by aqueous solutions, have also shown promising behaviour in terms of controlling bacterial growth, paving the way for the development of new biomaterials.

Chosen by the research teams, the surface texturing technique by femtosecond laser has enabled the production, for specific machining conditions, of four types of surface texture, each with ultrahydrophobic properties. An unexpected consequence of this result is the need to develop a totally new method for characterising ultrahydrophobicity, based on tensiometric techniques.

These results from the MICA resourcing project "µSurf" are the fruit of the collaboration of MICA's four structures, all experts in their fields: surface texturing by femtosecond laser by IREPA LASER, characterisation of surface wettability by the Institute of Science of Materials of Mulhouse (IS2M), the study of adhesive properties by the Institute Charles Sadron (ICS) and the development of biofunctional surfaces by INSERM.

IREPA LASER
INSTITUT CARNOT MICA

IS2M
Institut de Science des Matériaux de Mulhouse

Institut Charles SADRON
CNRS - UdS - STRASBOURG

Inserm
BioMaterials
BioEngineering
UMR-S 1121
Strasbourg