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HiLASE Centre is pleased to invite you to attend the seminar:

Water Repellent Surface Structures by Laser Patterning

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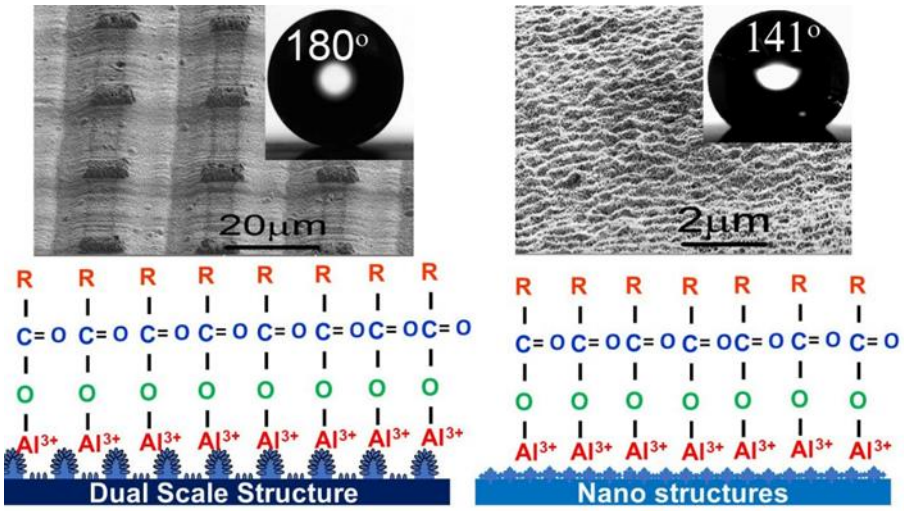
In recent years, there is strong demand from the industries to develop a technology which suits the industrial environments for the production of new range of products with properties that make easier the consumer life, i.e. anti-finger print, easy to clean, bactericidal effects or oil repellent properties, at low costs. Nature has variety of functional surfaces to meet the harsh environments on the day today life. For eg. *Morpho Deidamia*, butterfly, makes advantage of micro/nano ratchetlike structures on the wings for the detachment of water droplets.

Inspired by the natural water repellent surfaces, different kinds of wetting surface such as superhydrophilic/hydrophobic, underwater super hydrophilic/hydrophobic surfaces were successfully fabricated. Functionalization by mechanical transformation consists on the modification of the topography (micro/nanostructure) of a surface by removing or melting and solidification of material. This presentation gives an outline about the ultrafast laser processed surface structures and associated chemical transformation for super/ultrahydrophobic metal surfaces by different technique such as vacuum processing, chemical vapor deposition and aging method. The mechanism of chemical transformation leads to lotus effect and rose petal effect depends on various surface structures would be discussed.



When: Tuesday **29**th of **October**, 14:00, Seminar room, HiLASE Centre

Akademie věd České republiky
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