

## ***Sergey Starinskiy, Ph.D.*** <sup>1,2</sup>: ***Modification of silicon surface for control of wettability: laser ablation, HW CVD, laser patterning***

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Laser treatment technique is widely used for changing wettability properties of material surfaces. In this seminar, it will be demonstrated that, by nanosecond laser irradiation in a very narrow conditions, it is possible to form a superhydrophilic structure on silicon surface. A detailed analysis will be given on how the surface micro/nanostructure depends on oxygen content in ambient atmosphere, background pressure, number of laser pulses applied to the same surface area, laser fluence and wavelength. The controlled transition from superhydrophilicity to superhydrophobicity was obtained by hot wire chemical vapor deposition of fluoropolymer on laser-treated silicon surface. The wettability contrast patterns on the samples may be achieved by local fluoropolymer removal by additional laser impact. Some potential applications of structured samples will be discussed.

**HiLASE laser centre, seminar room, Thursday, September 12, at 14:00**

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