Lichttechnisches Institut
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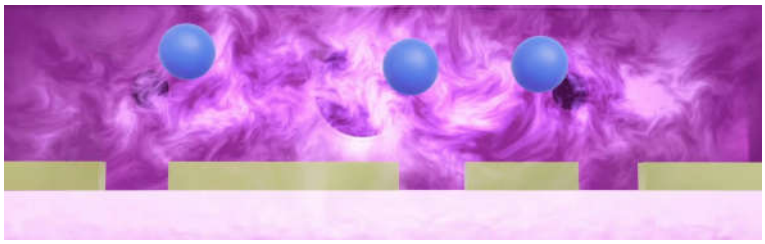
Master Thesis

Plasma nanostructuring for functional surfaces



Motivation

In parallel to wet chemistry etching, plasma-based dry etching technology has been applied in many fields including nano- and microstructures for functional devices, such as fabrication of IC chip, superhydrophilicity/superhydrophobicity surface and so on. Plasma etching yields good results when combining with polymers in terms of easy but precise control of the surface morphology below micrometre scale, , and therefore attracts many interests in utilizing it for surface nanostructuring and functionalization.

Task

The work will focus on using a plasma-etching chamber to fabricate surface morphologies on different polymers for applications such as sensor, light management and so on.

Prerequisites

Prerequisite for the work is independent experimental work, team spirit as well as interest in innovations. Masters students in Optics, Material Science, Chemistry, Physics or related disciplines are proper candidates for the work. Experience and knowledge of AFM, UV/VIS/NIR spectrometer, Labview are desired but not necessary.

Research areas
Plasma science,
Material science,
Photonics

Type of work
Experimental

Location
LTI (KIT, Campus South)

Starting date
As soon as possible

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