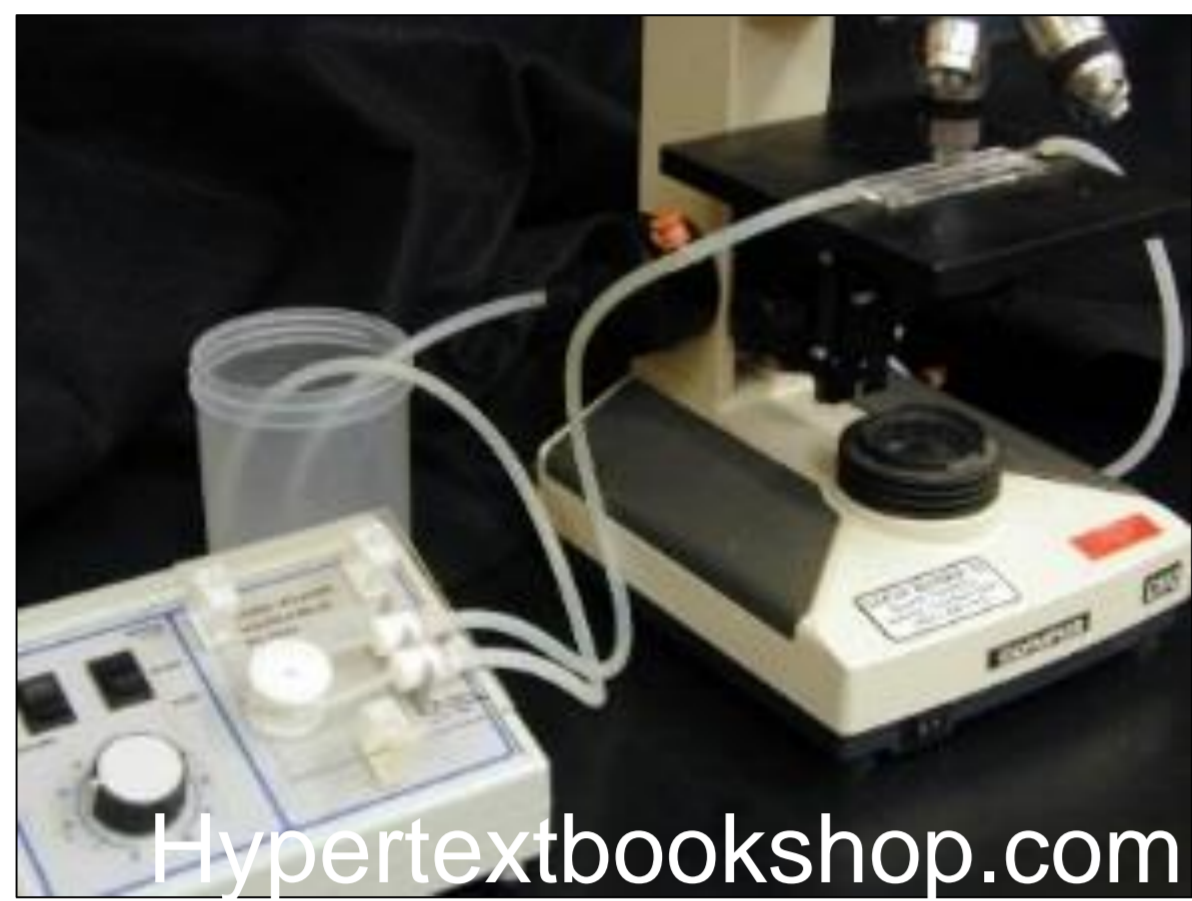


Bachelor or Master thesis

Assembly of a positioning system for flow cells

Project description:



Optical Coherence Tomography (OCT) is an application which can be used to investigate biofilms growing in flow cells. With this technique it is possible to determine structural parameters of biofilms and the distribution of biomass. Biofilms are sessile microbial consortia embedded in a matrix of extracellular polymeric substances (EPS). Normally they grow in aquatic environments and can have negative or beneficial impacts on their environment. Therefore the analysis of this aggregations is a great discipline in water technology.

Tasks:



The aim of the project is to build up an automatic positioning module which can be used for the OCT. With this setup it is possible to position the OCT always in the same dimensions above the flow cells. Thereby the analysis of biofilms growing in the flow cells stays comparable and objective. This is important for getting replicates with which one can make assumptions between cultivation conditions and structure. After the assembly there will be calibration tests to investigate the correctness of the converted CNC fraise. For a master thesis also feasible are first tests with growing biofilms.

What you need:

Technical comprehension, pleasure working with technical stuff
English or german language, eventually programming skills

What we offer:

Technical, independent work
Room for new ideas and a nice community
Insights in different microscopy applications

For students from the following disciplines:

no specific discipline, most likely technical or mechanical
experimental work

Type of work:

Start:

from now on and upon consultation

Supervisor:

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