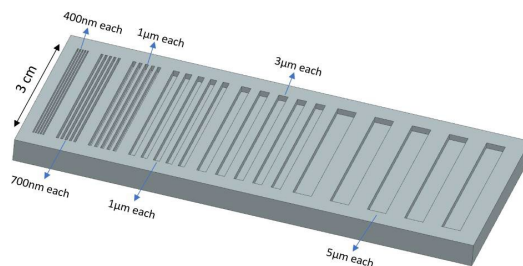


Preparation and characterization of surface-engineered hydrogel scaffolds and tubular vessel models for tissue engineering applications

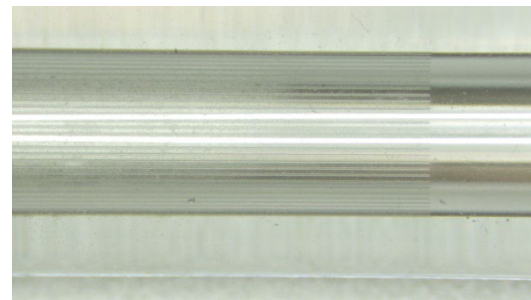
Open
Project

Background:

Due to the fact that cells can sense their microenvironment, it is vital to design an optimal environment for proper cell adhesion and growth. Gelatin hydrogels as promising biomaterials are widely used in biomedical engineering. However, more studies are needed to be performed to improve the surface properties of these materials to increase their efficacy when they are used as models for cultivation of human cells.



Microstructures on original plate



Replicated structures on hydrogel

Aim of the project:

In the frame of this project, micro-grooves or surface roughness from the original substrate that are already produced will be replicated on the surface of Gelatin hydrogels or on the lumen of Gelatin hydrogel vessel models. Afterward, the replication precision, and stability of structures on the hydrogel via SEM, confocal imaging and related methods will be measured to compare the surface values of the original substrate and the replicated samples. Discovering a suitable approach to replicate the surface properties on the second material is a challenging part of the project.

For more information contact us!

Start:

Immediately!

Supervisor:

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