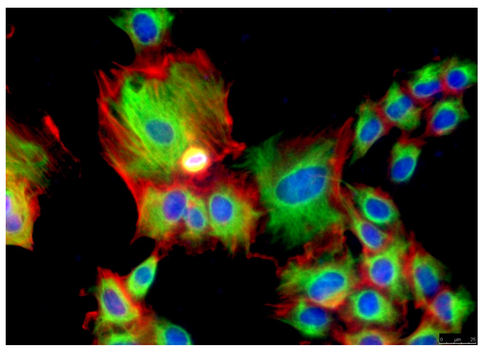
Neue Materialien Bayreuth

Biopolymers

Director: Prof. Thomas Scheibel

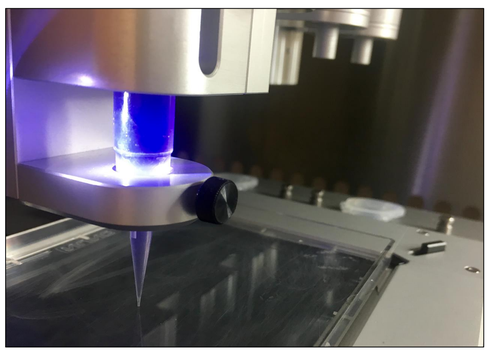
Expertise:

- Biomedical engineering
- Biopolymer processing (e.g. spinning, casting, microfluids, coating, etc.)
- Cell biology
- 3D-printing
- Drug delivery
- Functionalization and modification of proteins
- Recombinant protein production / Biotechnology
- Peptid-/ Proteindesign
- Protein analytics



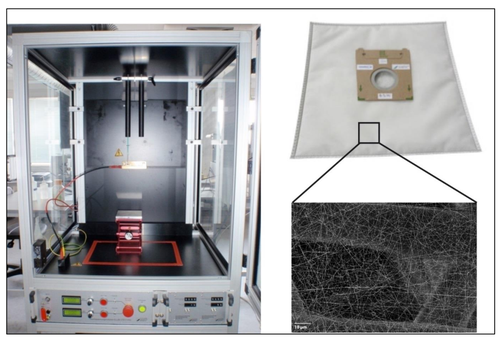
Coating surfaces with spider silk as tissue scaffolds.

Routine protein production and fermentation of recombinant spider silk proteins.



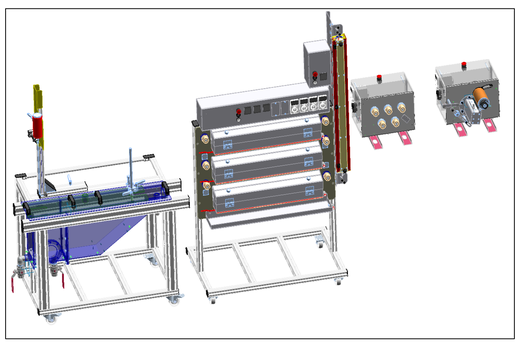
Production and characterization of 3-D scaffolds by dispense plotting

Applications of biopolymeres



Electrospinning:
Well established technology for the production of submicron and nano biopolymer fiber yarns or nonwoven mats.

Centrifuge-electrospinning:
Cutting-edge technology for the up-scaled production of nano- to submicron biopolymer fiber mats.



Wet spinning :
Device for large scale production of endless- biopolymer fiber mono- and multifilaments.