

## PHD STUDENT POSITION ON DEVELOPING ARTIFICIAL BIOFILMS

The INM research group *Bioprogrammable Materials* is looking for an enthusiastic *PhD student* with a background in biomaterials or experimental biophysics with experience in handling bacteria. We have an exciting project on developing hydrogel-based artificial biofilms for studying the effects of physical confinement on bacterial behavior. The project is highly inter-disciplinary involving collaborations with partners in biophysics, microbiology, materials science and medicine. For this, we are seeking to fill a 3-year PhD student position.

### Major duties/responsibilities

- **Fabrication and mechanical characterization** of hydrogels with a range of viscoelastic properties.
- **Culturing and encapsulating** different types of bacteria in these hydrogels
- **Studying bacterial behavior** within these hydrogels through various biochemical and microscopy techniques, including image processing
- **Processing** the data and **correlating** bacterial behavior with hydrogel mechanical properties through mathematical models
- **Active participation** in the research activities of the group in close collaboration with other team members and external partners
- **Publish** scientific papers resulting from this research and present results at international meetings

We are seeking a person with a degree in materials science, experimental biophysics or related fields, **with practical experience in handling bacteria**. Candidates should be self-motivated, have good interpersonal, communication and presentation skills, and a demonstrated ability to interact effectively with staff at all levels. The ability to work as a member of an international, multi-disciplinary team is a critical asset, and proficiency in English is mandatory. Since we work on application-oriented research, candidates with entrepreneurial interests are appreciated.

Interested candidates should submit their complete application by email to Dr. Shrikrishnan Sankaran (Shrikrishnan.sankaran@leibniz-inm.de) with the following:

- Motivation letter (included in the text of the email - max. 1 page)
- CV (max 2 pages)
- Publication list (if applicable)
- Academic transcripts (B.Sc. and M.Sc. certificates)
- Contact details of 2 references

The deadline for submission is **May 15th, 2021**.

The INM is an equal-opportunity employer with a certified family-friendly policy. We promote professional opportunities for women and strongly encourage them to apply.

The INM – Leibniz Institute for New Materials is located in Saarbrücken/Germany, at the heart of the German/French/Luxembourg/Belgian Greater Region. We are an internationally leading center for materials research, a scientific partner to national and international research institutions, and a provider of research and development for companies throughout the world. The INM is an institute of the Leibniz Association and has about 250 employees.



### CONTACT

INM – Leibniz-Institut für  
Neue Materialien gGmbH  
Campus D2 2  
66123 Saarbrücken Deutschland  
[www.leibniz-inm.de](http://www.leibniz-inm.de)

Dr. Shrikrishnan Sankaran  
Head of Bioprogrammable  
Materials

Email:  
shrikrishnan.sankaran@leibniz-  
inm.de