

The Institute of Agrophysics, Polish Academy of Sciences, Department of Microstructure and Mechanics of Biomaterials is looking for **PhD student** in the Doctoral School of Quantitative and Natural Sciences. PhD student will receive a scholarship (48 months) in the amount of PLN 5,000 / month (gross).

PhD thesis proposal:

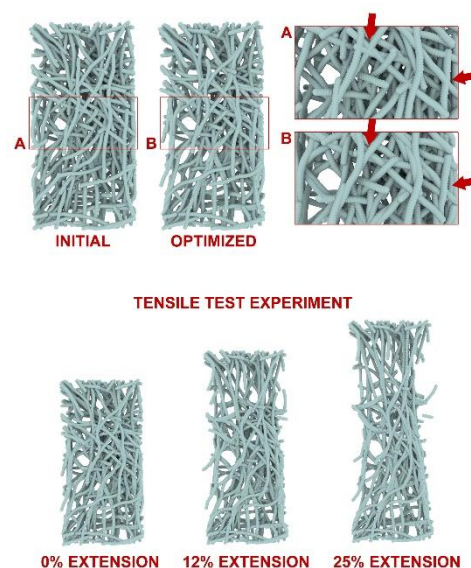
Modeling of interactions between cellulose and cellulose-hemicellulose fibers in plant cell walls

Keywords: *numerical modeling, plant cell walls, structure, bacterial cellulose, polysaccharides*

Project aims:

The PhD will focus on revision of the cellulose-cellulose and cellulose-hemicellulose fiber interaction in plant cell walls with aid of new robust experimental methods supported by computational modeling tools. In this Ph.D. project we propose study of the hemicellulose-cellulose fibrous networks using well established analogues of plant cell walls based on cellulose synthesized by bacteria in hemicellulose-rich medium with aid of modern numerical modeling techniques to simulate properties of obtained structures of the networks.

In case of any question related to the PhD project please contact with Piotr Pieczywek PhD (p.pieczywek@ipan.lublin.pl)



Terms and conditions:

- The PhD project will take place for 48 months (from 01.10.2020) at the Department of Microstructure and Mechanics of Biomaterials, Institute of Agrophysics, Polish Academy of Sciences, Lublin, Poland under PhD supervision of prof. dr hab. Artur Zdunek (a.zdunek@ipan.lublin.pl, www)
- The PhD project is financed within the NCN project SONATA. Studentship is ensured during the PhD project.
- For application details (documents, procedures, deadlines) please go to website of [the Doctoral School of Quantitative and Natural Sciences](http://www.doktorantura.ipan.lublin.pl)
- Language of PhD course and thesis: English or Polish

Qualification requirements:

- The PhD candidate should meet the minimum skill standard in chemistry, biotechnology or plant physiology
- Master Degree completed before the contract starting date is required
- Other formal requirements at: <https://www.umcs.pl/pl/wymogi-formalne.19437.htm>