



The Department of Material Sciences and Process Engineering, Institute of Physics and Materials
Science is currently seeking a

Postgraduate Research Associate / Doctoral student Project employment (Reference code: 170)

Extent of employment: 30 Hours per Week
Duration of employment: starting October 2020, limited for 3 years
(a first contract will be issued for 6 months and renewed yearly upon satisfactory
performance)

Gross monthly salary and pay grade in terms of collective agreement for university staff (payable 14
times per year): B1, € 2.196,80

We are looking for a doctoral student to perform their thesis research in the framework of the BOKU
Doctoral School “Biomaterials and Biointerfaces”. The position is funded by the FWF project “Why do
Schwann cells like spider silk?”

The work is performed in collaboration with Medical University of Vienna (MUW).

Background:

Spider silk has been shown to be a very suitable biomaterial to be used as conduit for nerve
regeneration. Up to now it is not known, why Schwann cells prefer it over other materials and why some
spider silks seem to work better than others. In this thesis, a materials science approach shall be used
to answer a medical question in collaboration with our partner MUW.

Responsibilities

- Research on spider silk materials properties with focus on ultrastructure investigations by x-
ray scattering, mechanical testing and development of a moisture cell for wet testing
- Sample preparation, scientific experiments, data evaluation
- Working with delicate instruments, handling thin fibres, developing and setting up moisture cell
- Co-operation with our research partners in the project and outside
- Publication in scientific journals and presentation at conferences

Required skills and qualifications

- Master’s degree or equivalent in materials science, physics, (bio-/polymer-) chemistry,
biotechnology, (bio-)engineering, or a related field
- Laboratory skills (skilled with hands for handling delicate samples and equipment, engineering
skills)
- Mathematical skills
- Excellent skills in spoken and written English
- Highly dedicated to scientific work
- Team player
- Ability to work independently
- Willingness to travel abroad for research purposes is required (synchrotron experiments
2-4 times a year, a few days each)

Desirable skills and qualifications

- Experience with materials characterization (bio-)polymers and/or x-ray scattering will be of advantage
- German language skills are not required, willingness to learn German would be of advantage

We offer

- Interdisciplinary project with funding for a three-year doctoral thesis
- Participation in BOKU Doctoral School "Biomaterials and Biointerfaces" (<https://boku.ac.at/docservice/doktoratsstudien/doktoratsschulen/biomaterials-and-biointerfaces>)
- Supervision of the doctoral-thesis by team of 2 Faculty members + 1 external expert
- Excellent interaction with other doctoral researchers and external collaborators
- Possibility to visit (inter-)national research conferences
- Modern and high-end working equipment

Further information

- Institute webpage: <https://www.map.boku.ac.at/physik/>
- Project leader: Univ.Prof.ⁱⁿ Dr.ⁱⁿ Helga Lichtenegger, helga.lichtenegger@boku.ac.at

Applications can be submitted until: 2nd of October 2020

University of Natural Resources and Life Sciences Vienna seeks to increase the number of its female faculty and staff members. Therefore qualified women are strongly encouraged to apply. In case of equal qualification, female candidates will be given preference unless reasons specific to an individual male candidate tilt the balance in his favour.

People with disabilities and appropriate qualifications are specifically encouraged to apply.

Please send your job application incl.

- Cover letter including your motivation to apply and research interests
- Curriculum Vitae
- Diploma for highest finished degree (expected date of graduation if not yet finished)
- Full transcript of grades for your university studies (with grade key in English)
- List of minimum 2 reference persons with contact information (optional: 2 reference letters)

to Univ.Prof.ⁱⁿ Dr.ⁱⁿ Helga Lichtenegger, E-Mail: helga.lichtenegger@boku.ac.at;
(Reference code: 170)

We regret that we cannot reimburse applicants travel and lodging expenses incurred as part of the selection and hiring process.

Financial support for candidates from abroad for travel to the interview may be obtained via <https://www.ffg.at/en/career-grants/tender>.

www.boku.ac.at