

The Erich Schmid Institute of Materials Science ([ESI](#)) of the Austrian Academy of Sciences ([ÖAW](#)) and the University of Leoben (Montanuniversität Leoben), Department of Materials Science, Chair of Materials Physics are offering a

PHD STUDENT POSITION (F*M)

(part-time, 30h per week)

in **Patterning/Characterization Techniques of Biocompatible Metallic Glasses** for a fixed-term 3 years appointment.

The international Joint Project from the Austrian Science Fund ([FWF](#)) entitled “[Thermoplastic Net-Shaping of Low-Density and Biocompatible Ti-based Metallic Glasses for Dental Implants](#)” has been granted for supporting bilateral research projects with closely integrated content with our partner organization (INSA Lyon).

PI: [Dr. Baran Sarac](#), Co-Proposer: Prof. [Dr. Jürgen Eckert](#) (PhD Supervisor), [Dr. Florian Spieckermann](#).

Project:

The ultimate target of this project is to develop a biocompatible Ti-based metallic glass (MG) implant with modulated topography, which potentially promotes the cellular response from initial attachment and migration to differentiation and production of new tissue without the need of exogenous growth factors. In order to achieve this goal four main scientific milestones are targeted: (i) Developing a novel Ti-based biocompatible MG with enhanced (micro) patterning kinetics. (ii) Defining appropriate routes to achieve material properties, which function as an excellent stress-shielding material in daily use. (iii) Production and tuning of surface patterns with improved antimicrobial/osseointegrative properties. (iv) Investigation and understanding the mechanisms of cell adhesion, bactericidal adhesion and bio corrosion.

Requirements:

The call is open for candidates with a wide range of backgrounds including materials science, surface/polymer science or related disciplines. Experience on surface patternization/functionalization via mechanical/electrochemical methods considered an advantage. The applicant must have a Master's degree and must fulfill the [requirements for doctoral students](#) at University of Leoben.

We offer an annual gross salary of € 30.273,60 (before taxes, 14 payments a year) according to the salary scale of the Austrian Science Fund ([FWF](#))

Please submit your application material (merged PDF file) including

1. motivation letter (English - maximum one A4 page)
2. CV and other proof of scientific activity (publications, conference papers etc.)
3. a certified copy of master's degree certificate and official transcript of records and their translations (if not in German or English)
4. an English abstract or summary the MSc thesis

via e-mail to baran.sarac@oeaw.ac.at.

For additional information and applications, please contact Prof. Dr.-Ing. habil. h. c. Jürgen Eckert or Dr. Baran Sarac, email: baran.sarac@oeaw.ac.at

The Austrian Academy of Sciences values diversity and is committed to equality of opportunity.