

18. **Microstructural study and thermal shock behavior of thermal barrier coating reinforced with YSZ fiber**
Supervisor: Prof. D. Galusek, FunGlass, Slovakia
Co - supervisor: Dr. A. H. Pakseresht, FunGlass, Slovakia

19. **Evaluation of Glass - ceramic multilayer thermal barrier coating**
Supervisor: Prof. D. Galusek, FunGlass, Slovakia
Co - supervisor: Dr. A. H. Pakseresht, FunGlass, Slovakia

20. **Corrosion behavior of NiTi alloy coated by silicon glass-based and hydroxyapatite composite**
Supervisor: prof. D. Galusek, FunGlass, Slovakia
Co - supervisor: Dr. A. H. Pakseresht, FunGlass, Slovakia



FunGlass

Your application package should include the following: application form, cover letter (including a description of your research interest), CV, and a copy of your diploma.

Application deadlines **Admissions exam dates**

March 20, 2020 March 30-31, 2020

May 8, 2020 May 19-21, 2020

If you have questions regarding the application process or visa requirements, please, contact **Ms. Daniela Vavrová, PhD Study Advisor** (daniela.vavrova@tnuni.sk).

**PhD research topics
for academic year
2020/2021**

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1. **Advanced materials with eutectic microstructure for high temperature and functional applications**
Supervisor: Prof. D. Galusek, FunGlass, Slovakia
Co - supervisor: Dr. A. Prnová, FunGlass, Slovakia
2. **Transparent polycrystalline materials with additional optical functionalities**
Supervisor: Prof. D. Galusek, FunGlass, Slovakia
Co - supervisor: Dr. A. Talimian, FunGlass, Slovakia
3. **Acid corrosion surface modification of zirconia-based dental materials for enhanced biological properties**
Supervisor: Prof. D. Galusek, FunGlass, Slovakia
Co - supervisor: Dr. D. Galusková, FunGlass, Slovakia
Co - supervisor: Dr. H. Reveron and Prof. J. Chevalier, MATEIS, INSA Lyon, France
4. **Corrosion kinetics and study of tableware glass native surface morphology using advanced spectral methods**
Supervisor: Dr. M. Chromčíková, FunGlass, Slovakia
Co - supervisor: Prof. M. Liška, FunGlass, Slovakia
5. **Structure and properties of bioactive glasses doped with ions with potential therapeutic and antibacterial effects**
Supervisor: Dr. M. Chromčíková, FunGlass, Slovakia
Co - supervisor: Prof. M. Liška, FunGlass, Slovakia
6. **Novel oxysulfides for NIR mechanoluminescence and biomechanical imaging**
Supervisor: Dr. R. Klement, FunGlass, Slovakia
Partner co - supervisor: Prof. L. Wondraczek, FSU, Germany
7. **Interlayer adhesion in functional multilayer coatings on glass**
Supervisor: Dr. R. Klement, FunGlass, Slovakia
Partner co - supervisor: Prof. L. Wondraczek, FSU, Germany
Partner co - supervisor: Prof. A. Durán, CSIC, Spain
8. **Multifunctional polymer-derived glass-ceramic coatings**
Supervisor: prof. D. Galusek, FunGlass, Slovakia
Partner co - supervisor: Prof. E. Bernardo, UNIPD, Italy
Partner co - supervisor: Prof. A. Durán, CSIC, Spain
9. **Geopolymer-like materials from engineered mixtures of inorganic waste**
Supervisor: Dr. J. Kraxner, FunGlass, Slovakia
Partner co - supervisor: Prof. E. Bernardo, UNIPD, Italy
Partner co - supervisor: Prof. A. R. Boccaccini, FAU, Germany
10. **Characterization, functionalization and improvement of glasses for pharma**
Supervisor: Dr. J. Kraxner, FunGlass, Slovakia
Partner co - supervisor: Prof. E. Bernardo, UNIPD, Italy
Co - supervisor: Dr. F. Nicoletti, Nuova Ompi, Italy
11. **Preparation and study of selected mechanical and optical properties of glassceramics materials in Al_2O_3 - RE_2O_3 system**
Supervisor: Dr. A. Prnová, FunGlass, Slovakia
Co - supervisor: Dr. J. Valúchová, FunGlass, Slovakia
12. **Advanced manufacturing of 3D scaffolds using solid, hollow and mesoporous bioactive glass microspheres**
Supervisor: Dr. M. Michálek, FunGlass, Slovakia
Partner co - supervisor: Prof. A. R. Boccaccini, FAU, Germany
13. **Hybrid polymer-nanocomposites via embedding various bioactive glass nanoparticles prepared by sol-gel method for bone tissue engineering**
Supervisor: Dr. M. Michálek, FunGlass, Slovakia
Co - supervisor: Dr. Si Chen, FunGlass, Slovakia
Partner co - supervisor: Dr. Kai Zheng, FAU, Germany
Partner co - supervisor: Prof. A. R. Boccaccini, FAU, Germany
14. **Multifunctional glass-composite scaffolds for tissue regeneration**
Supervisor: Dr. M. Michálek, FunGlass, Slovakia
Co - supervisor: Dr. Z. Vargas, FunGlass, Slovakia
Partner co - supervisor: Prof. A. R. Boccaccini, FAU, Germany
15. **Degradation properties of novel bioactive materials with additional functionalities**
Supervisor: Dr. D. Galusková, FunGlass, Slovakia
Co - supervisor: Dr. D. Rohanová, VŠChT Praha, Czechia
16. **Translucent luminescent glass-ceramic materials sintered in viscous flow**
Supervisor: Dr. M. Micháková, FunGlass, Slovakia
Co - supervisor: Dr. J. Kraxner, FunGlass, Slovakia
17. **Development of corrosion resistant polymer derived ceramic coatings on stainless steel substrates**
Supervisor: Dr. M. Parchovianský, FunGlass, Slovakia
Co - supervisor: Prof. D. Galusek, FunGlass, Slovakia