# Curriculum vitae

# Name: Petr Mikeš

# Date of birth: 2.4.1978

# Place of birth: Dvůr Králové nad Labem

# Adress: Na Kopečku 50E Mníšek u Liberce

# Phone: +420 48 535 3230

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| **Education and academic degrees**  |

**MSc., Specialization: Solid State Physics**

Technical University of Liberec, Faculty of Mechatronics and Interdisciplinary, Jun 2003

**Ph.D. Program: Applied Sciences in Engineering, Physical engineering.**

Physical principles of electrostatic spinning

Technical University of Liberec, Department of Physics. Jun 2011

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| **Professional profile**  |

**Assistant professor**

Technical university of Liberec, Czech Republic,(Specialization: Physical principles of electrostatic spinning) 2007- until now

**Researcher**

Institute of Physics, Academy of Science, Prague, Czech Republic *(Specialization: Monte carlo simulations, ROOT analysis, R&D of particle detectors for International linear collider) 2005-2007*

**Young researcher**

Joint Institute for Nuclear Research, Dubna, Russian Federation, 2004-2005 (one year)

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| **Teaching experience and supervised doctoral thesis**  |

Stereology (Master study programe FT TUL)

Materials for tissue engineering (Master study programe FT, FM TUL)

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| **Supervised doctoral thesis**  |

Mgr. Jana Horáková (consultant)

**Recently supervised Ph.D. students**

Ing. Aleš Šaman

Ing. Lucie Vejsadová

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| **Selected publications including Impact Factors**  |

**2016**

Efremova EO., Photoluminescent materials based on PMMA and a highly-emissive octahedral molybdenum metal cluster complex, JOURNAL OF MATERIALS CHEMISTRY C, Volume: 4, Issue: 3, Pages: 497-50, IF 4.696

**2015**

Erben J., et. al., The combination of meltblown and electrospinning for bone tissue engineering, MATERIALS LETTERS, Volume: 143 Pages: 172-176, 2015, IF 2.489

**2014**

Pokorny P., Kostakova E., Sanetrnik F., Mikes P., Chvojka J., et.el. Effective AC needleless and collectorless electrospinning for yarn production, Physical chemistry chemical letters, Vol. 16, Iss. 48, p 26816 – 26822, IF 4.493

**2013**

Rampichova M., Chvojka J., Buzgo M., Prosecka E., Mikes P., et. al.;Elastic three-dimensional poly (epsilon-caprolactone) nanofibre scaffold enhances migration, proliferation and osteogenic differentiation of mesenchymal stem cells, Cell Proliferation, Vol. 46, Iss. 1, p. 23-37, 2013, IF 3.116

**2012**

**2011**

Ch. Tsai, P.Mikes, T. Andrukh, E. White, D. Monaenkova, O. Bortovyy, R. Bortovyy, B. Rubin, D. Lukas, I. Luzinov, J.R.Owens, K. Kornev, Nanoporous artificial proboscis for probing minute amount of liquids, Nanoscale, Vol 3, Issue 11, 4685-4695, IF 7.394

M. Rampichova, Chvojka J., Prosecka E., Mikes P., Lukas D., Amler E., MSCS Proliferation and osteogenic differentiation on 2D and 3D PCL Nanofibrous scaffolds,Int. Journal of Artificial Organs, Vol 34, Issue 8, 654, IF 1.861

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| **H-index and citation index**  |

H-index: 35

Citation index according ISI Web of Knowledge: 3894

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| **Grants received (last 5 years)**  |

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| **Participation in projects**  |

# MZ ČR: NV15-29241A. 2015-2018. Nanofibrous biodegradable small diameter vascular graft. Principial investigator: Technical University of Liberec. David Lukáš. Co-investigators: University of Defence Hradec Králové, Palacky University, Olomouc, Subsidies: 10 431 ths. Kč, TUL 6 441 ths. Kč.

#  <http://www.isvav.cz/projectDetail.do?rowId=NV15-29241A>

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TAČR: TA 03010609. 2013-2015. Nanofibers and nanoparticles abrasives as the basis for a new generation of tools for ultra-fine polishing surfaces. Principal investigator: Institute of Plasma Physics ASCR, v.v.i. Investigator: Technical University of Liberec, prof. RNDr. David Lukas, PhD. Subsidies TUL 3,060 thousand. CZK. - R & D member of the research team Mikes
     <http://www.isvav.cz/projectDetail.do?rowId=TA03010609>

GA ČR:P208/12/0105. 2012-2015. Solutions of polymers in external field: molecular understanding electrospinning. Investigator: J.E.Purkyně University, prof. RNDr. Ivo Nezbeda, Dr.Cs. Investigator: Technical University of Liberec, prof. RNDr. David Luke, PhD. subsidies TUL, 3196 thousand. CZK. - R & D member of the research team Mikes
     <http://www.isvav.cz/projectDetail.do?rowId=GAP208%2F12%2F0105>

MVO ČR:: VG20102014049. 2010-2014. Research of possibilities of application of new materials (with a focus on nanomaterials) and advanced technologies to protect people against the effects of CBRN materials, with an emphasis on critical infrastructure. Coordinating beneficiary / Coordinator: National Institute for Nuclear, Chemical and Biological Protection v.v.i., Ing. Jiří Slabotinský, PhD. Recipient / Manager: TU Liberec, prof. RNDr. David Lukas, PhD. Subsidies TUL 7,398 thousand. CZK. - R & D member of the research team Mikes
     <http://www.isvav.cz/projectDetail.do?rowId=VG20102014049>

Ministry of Education: centralized development projects. 2013. An integrated system of education in tissue engineering, regenerative medicine and nanotechnology at CU, CTU and TUL. TUL Investigator: prof. RNDr. David Lukas, PhD. Subsidies 2,765 thousand. CZK - member R & D research team Mikes

MŠMT ­ČR: ME KONTAKT ME 10145. 2010-2012. Modification of nanofibre materials by plasma technologies for biological applications. Recipient: Technical University of Liberec; The recipient / Investigator: prof. Ing. Petr Louda, PhD., Faculty of Mechanical Engineering. Co-investigator: prof. RNDr. David Lukas, CSc., Faculty of Textile. The co-: Charles University in Prague. Investigator: doc. RNDr. Evžen Amler, MD., 2nd Medical School, Charles University, Institute of Biophysics. CARSILA project was a joint Polish-Czech project. Cooperating partner: Technical University of Lodz, Faculty of Mechanical Engineering, Department of Materials Engineering, Multilateral Cooperation - ERA-NET. - R & D member of the research team Mikes
     <http://www.isvav.cz/projectDetail.do?rowId=ME10145>

MŠMT ČR: VaVpI Pre-seed CZ.1.05/3.1.00/14.0308. 2014-2015. Nanofiber materials for tissue engineering. Principal investigator: Technical University in Liberec, Ing. Jana Drašarová, Ph.D. Subsidy: 25,073 thousand. CZK.

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| **Patents and industrial collaboration (last 5 years)**  |

**Patents granted by the World Intellectual Property Organization**

Kocis, [Pokorny](http://www.google.com/search?tbo=p&tbm=pts&hl=en&q=ininventor:%22Pavel+Pokorny%22), [Lukas](http://www.google.com/search?tbo=p&tbm=pts&hl=en&q=ininventor:%22David+Lukas%22), [Mikes](http://www.google.com/search?tbo=p&tbm=pts&hl=en&q=ininventor:%22Petr+Mikes%22), [Chvojka](http://www.google.com/search?tbo=p&tbm=pts&hl=en&q=ininventor:%22Jiri+Chvojka%22), [Kostakova](http://www.google.com/search?tbo=p&tbm=pts&hl=en&q=ininventor:%22Eva+Kostakova%22), [Beran](http://www.google.com/search?tbo=p&tbm=pts&hl=en&q=ininventor:%22Jaroslav+Beran%22), [Bilek](http://www.google.com/search?tbo=p&tbm=pts&hl=en&q=ininventor:%22Martin+BILEK%22), [Valtera](http://www.google.com/search?tbo=p&tbm=pts&hl=en&q=ininventor:%22Jan+Valtera%22), Method for production of polymeric nanofibers by spinning of solution or melt of polymer in electric field, and a linear formation from polymeric nanofibers prepared by this method, WO2014094694 A1.

**Patents granted by the Industrial Property Office**

Pokorný P. Lukáš D. Mikeš P. Vysloužilová L. Chvojka J. Hégrová B. Lukáš R. Amler E. Buzgo M. Louda P. (2011) Method of producing functional nanofibrous layer and apparatus for making the same, patent CZ 302901,

Kočiš L. Pokorný P.  Lukáš D. Mikeš P. Chvojka J. Košťáková E. Beran J. Bílek M. Valtera J. Amler E. Buzgo M. Míčková A. Process for preparing polymeric nanofibers by spinning a solution of polymer melt in electric field and linear form of polymeric nanofibers prepared in such a manner, patent, CZ 304137

Pokorný P. Lukáš D. Mikeš P. Martinová L. Zálešáková D. Vodseďálková K. Sanetrník F. (2011) Principe and apparatus for manufacturing of nanofibers by weir electrostatic spinning, patent CZ 302876

Pokorný P. Lukáš D. Mikeš P. (2009) X-ray radiator and/or accelerator of electrically charged particles, patent CZ 305429, [2009-424](http://isdv.upv.cz/portal/pls/portal/portlets.pts.det?xprim=1401489&lan=cs&s_majs=Technick%C3%A1%20univerzita%20v%20Liberci&s_puvo=pokorn%C3%BD&s_naze=&s_anot=).

Chvojka,Mikeš, Sanetrník, Erben, Lukáš (2013) Method of preparing three-dimensionally shaped layer of polymeric nanofibers and method of covering a three-dimensionally shaped surface of a body by three-dimensionally shaped layer of polymeric nanofibers, patent 305569

Chvojka J. Lukáš D. Košťáková E. Mikeš P. Pokorný P. Brustmann (2013), Layered material/fabric for polishing hard surfaces, utility model 27192,

Chvojka, Košťáková, Lukaš, Šafka, Kříž, (2014) 3D composite material intended particularly as biologically degradable replacement of cartilage, utility model 27202

Chvojka J. Lukáš D. Košťáková E. Mikeš P. Pokorný P. Chaloupek J. Saterník F. (2014) Nanofibrous material with incorporated particles, utility model 28410,

Lukáš D. Mikeš P. Kuželová-Košťáková E. Pokorný P. Novák O. Sanetrník F. Chvojka J. Havlíček J. Jenčová V. Horáková J. Blažková L. Pilařová K. Erben J. Kovačičin J. (2014) Apparatus to manufacture composite textile material containing polymeric nanofibers, utility model 28190,

Chvojka, Lukáš, Kuželová Košťáková, Mikeš, Pokorný, Blažková (2015) Filler for polishing wheels, utility model 27933

Chvojka, Lukáš, Kuželová Košťáková, Mikeš, Pokorný, Blažková, (2015) Vessel replacement, especially small-diameter vessel replacement, utility model 28387

**Commercially used patents and utility models**

Pokorný P. Lukáš D. Mikeš P. Martinová L. Zálešáková D. Vodseďálková K. Sanetrník F. (2011) Principe and apparatus for manufacturing of nanofibers by weir electrostatic spinning, patent CZ 302876

**Cooperation with industry**

Contract research Technical University in Liberec Zentiva (Sanofi): Research and development ODF films in 2015 - 2016. The total volume of CZK 1.3 mil. Kč Supervisor: Mikes.

MPO ČR: OPPI - CZ.1.03/5.1.00/12.00018. NANOPROGRES. 2011-2014. Prof. David Lukáš, a member of the steering committee leading professional advice and expert guarantor no. 1. The development of reproducible methods for the production of nanofibers of the "core / shell". Member of the research team Mikes

 http://nanoprogres.cz/cs/podnikatelsky-program/zakladni-model-klastru-nanoprogres-podnikatelskyD

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| **Intershops aboroad**  |

Innventia AB, Stockholm, Sweden, 2015 - 2016 (five months)

School of Material Science and Engineering, Clemson University, Clemson, South Carolina, USA, 2009-2010 (five months)

CERN Switzerland; DESY Germany, 2005-2007 (four months)

RIKEN, Tokyo, Japan, 2005-2007 (one month)

DESY, Hamburg/Berlin, Germany, 2005-2007 (three months)

Brookhaven National Laboratory, Fermi National Laboratory, USA 2005-2007 (four months)

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| **Membershops in scientific boards and professional memberships**  |

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| **Honours and awards**  |

The 2016 Théophile Legrand International Prize for Textile Innovation

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| **Other experience**  |