# CURRICULUM VITAE

**prof. RNDr. Bohuslav Rezek, Ph.D.**

Date of birth: *1973*; Place of birth: *Prague*; Nationality: *Czech*

## *Current occupation*

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| since 2023 | Head of the Physics Department at the Faculty of Electrical Engineering, Czech Technical University in Prague (previous terms as the department head 2015-2021). |
| since 2015 | Group leader and principle project investigator at the Physics Department of the Faculty of Electrical Engineering, Czech Technical University in Prague. |

## *Education and work positions*

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| 2025 (2 months) | JSPS Invitation Fellowship in the group of Dr. Koizumi at the Research Center for Electronic and Optical Materials of National Institute of Materials Science (NIMS), Tsukuba, Japan. Topic: *Visible frequency plasmonic effects in graphene-semiconductor heterostructures.* |
| 2019 | Full professor of Applied Physics at the Faculty of Electrical Engineering, Czech Technical University in Prague (since May 2019). |
| 2011 - 2019 | Research team leader at the Department of Thin Films and Nanostructures, Institute of Physics, Academy of Sciences of the Czech Republic. Topic: *Fabrication, characterization, and understanding of interfaces and nanostructures based on inorganic semiconductor materials, organic molecules and cells.* |
| 2013 | Habilitation in the field of Applied physics at the Faculty of Mechanical Engineering, Brno University of Technology, doc. degree awarded in November 2013. Topic: *Microscopic properties of diamond and its molecular and biological interfaces.* |
| 2011 (2 months) | JSPS Invitation Fellowship in the group of Dr. Yamasaki (host researcher Dr. Takeuchi) at the Energy Technology Research Institute (ETRI) of National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan. Topic: *Electronic configuration and thermal stability of diamond surfaces with various terminations.* |
| 2006 - 2011 | Purkyně Fellowship at the Department of Thin Films and Nanostructures, Institute of Physics, Academy of Sciences of the Czech Republic. Topic: *Functional nano-interfaces of semiconductors and organic materials.* |
| 2004 - 2006 | Research scientist at the Diamond Research Center of National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan. Topic: *Surface Functionalized Diamond Devices.* |
| 2002 - 2004 | Research associate in Nanotechnology Group of Prof. Stemmer at the Swiss Federal Institute of Technology (ETH) Zürich. Topic: *Nanotechnology at liquid/solid state interfaces.* |
| 2001 (6 months) | Post-doctoral position in a group of Prof. Stutzmann at Walter Schottky Institut, Technische Universität München. Topic: *Diamond surfaces for sensors and electronic devices.* |
| 2001 (6 months) | Research scientist in a group of Dr. Kočka at the Institute of Physics, Academy of Sciences of the Czech Republic. Topic: S*ilicon thin films for solar cells.* |
| 2001 | RNDr. (rerum naturalium doctor) degree at the Faculty of Mathematics and Physics, Charles University in Prague, awarded February 2001. |
| 1998 - 2000 | Research stays in a group of Prof. Stutzmann at the Walter Schottky Institut, Technische Universität München, for one year in total during this period. Topic: *Development of large grain silicon thin films by the interference laser crystallization of amorphous silicon and their investigation by optical beam induced current technique with a sub-micrometer lateral resolution and with a special view to optical and electrical properties of grain boundaries.* |
| 1996 - 2000 | Post-graduate studies at the Faculty of Mathematics and Physics, Charles University in Prague, finished by PhD. degree, awarded January 2001. (specialization: Electronics and vacuum physics) Topic: *Study of charge transport in amorphous and microcrystalline silicon with lateral resolution in sub-micrometer regime.* |

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| 1995 | Cambridge First Certificate in English, grade A. |
| 1991 - 1996 | Graduate studies at the Faculty of Mathematics and Physics, Charles University in Prague, finished by Mgr. degree, awarded June 1996. (specialization: Physics of molecular and biological systems) Topic: *Nanostructural composites of conducting organic materials with metals or semiconductors.* |

***Research interests***

Characterization and modification of material properties by local probes (AFM, Kelvin probe, APS, Raman). Nanotechnologies. Physics of materials. Photovoltaics. Molecular and bio-interfaces. Biosensors.

***Foreign languages***

fluently: English, German
passively: Japanese, French, Russian

***Publication activities***

Author or co-author of over 200 scientific articles in international peer-reviewed journals that were cited more than 5000 times (WoS h-index 37), over 20 publications in the last 3 years. Author or co-author of 7 patents (2 EU, 2 US) and 4 utility models. Author or co-author of several book chapters and many contributions in proceedings. Various invited talks at international conferences and seminars (>20). For more details see the google scholar profile scholar.google.cz/citations?user=mb1IXcUAAAAJ. ORCID 0000-0002-0378-4598.

***Other commitments and activities (selected)***

Supervisor of doctoral students (since 2006): successfully defended 9, currently studying 4. Two Dean's Awards.
Chairman of the doctoral study program "Applied Physics" at FEE CTU (since 2019).
Member of the governmental RVVI science evaluation panel Natural Sciences (since 2021, chairman since 2024).
Member of the Scientific Board of the Faculty of Mathematics and Physics, Charles University (2021-2023).
Member of the SCI Commission for the Science Support Programs at the Charles University (since 2023).
Member of editorial boards: Scientific Reports (since 2016), Functional Diamond (since 2023).
Member of the Biointerfaces division within IUVSTA (International Union for Vacuum Science, Technology and Applications) since 2010. Secretary of the Biointerfaces division since 2022.
Evaluator of the TAČR and TAČR Competence Center projects since 2012.

***Grant projects - Principle investigator or co-investigator***

**24-12872S** (GAČR) 2024-2026: Advanced confined CsPbBr3/ZnO/PS nanocomposite structure with efficient…
**24-10607J** (GAČR Taiwan) 2024-2026: Spin polarized zinc oxide nanostructures.
**TM03000033** (TAČR Delta2) 2022-2025: Development of correlative AFM and SEM/AirSEM microscope.
**19-02858J** (GAČR Taiwan) 2019-2021:Charge transfer and microbiological interactions of hybrid metal oxides.
**17-19968S** (GAČR) 2017-2019: Localized electronic effects of antibody binding on nanocomposite materials.
**16-34856L** (GAČR Austria) 2016-2018: Atomic and electronic properties of graphene-on-diamond.
**15-01809S** (GAČR) 2015-2017: Study of surface-functionalized diamond nanoparticles for energy conversion.
**15-32497A** (AZV) 2015-2017: Bioactive nanostructured surfaces for histocompatible implants.
**P108/12/0996** (GACR) 2012-2014: Bio-inspired scaffolds as active sensor systems.
**M100101209** (ASCR) 2012-2015: Diamond interfaces for novel electronics.
**M100100902** (ASCR), 2009-2012: Diamond films and nanocomposites for optical and electronic applications.
**KAN400100701** (ASCR) 2007-2011: Functional hybrid nanosystems of semiconductors with organic materials.
**Fellowship J.E.Purkyně** (ASCR) 2006-2011: Hybrid nanostructures of organic molecules and semiconductors.

***Grant projects - Key researcher or team member (selected)***

**CZ.02.01.01/00/22_008/0004596** (OPJAK) 2024-2028: Sensors and Detectors for Future Information Society
**CZ.02.01.01/00/22_008/0004607** (OPJAK) 2024-2027: Energy Conversion and Storage
**CZ.02.1.01/0.0/0.0/16_019/0000778** (OPVVV) 2018-2023: Centre of Advanced Applied Sciences
**CZ.02.1.01/0.0/0.0/15_003/0000464** (OPVVV) 2017-2022: Centre of Advanced Photovoltaics
**EH22_012_0006347** (OPJAK PhD Infra) 2023-2027: Rozvoj infrastrukturního zázemí DSP na ČVUT
**CZ.02.1.01/0.0/0.0/16_017/0002280** (OPVVV) 2016-2022: Výzkumná infrastruktura pro doktorské studijní programy na ČVUT FEL; **CZ.02.2.69/0.0/0.0/16_018/0002185** (OPVVV) 2016-2022: Rozvoj a transformace doktorského studia na ČVUT FEL.

*In Prague 5.10.2025.*