



## **Dr. Radovan Bureš**

senior scientist

Division of functional and hybrid systems

### ***contact***

Institute of Materials Research, SAS

Watsonova 47, 040 01 Kosice, SLOVAKIA

**tel:** + 421 55 7922 431

**fax:** + 421 55 7922 408

**email:** rbures@saske.sk

**ORCID:** <https://orcid.org/0000-0003-0827-405X>

### ***CURRICULUM, EDUCATION***

- 2016- senior scientist – vice head of Functional and Hybrid Systems
- 2000-2015 head of department Informatics computers and applied mathematics, Dpt. of Ferrous Powder Metallurgy, scientist
- 1993- Institute of Materials Research, SAS, Košice, Dpt. of ferrous powder metallurgy, scientist
- 1990-1993 Technical University in Košice, Faculty of Metallurgy, Department of Nonferrous Metals, PhD student, thesis: Metallurgical aspects of preparing of Cu-Zn-Pb-Mn alloys
- 1989-1990 VSŽ Košice (US Steel Košice)
- 1984-1988 Technical University in Košice, Faculty of Metallurgy, student, Metallurgy of nonferrous metals

### ***LINGUISTIC SKILLS***

- English, Russian, Slovak

### ***SCIENTIFIC ACTIVITIES***

- Preparation and characterization of soft magnetic composites
- Advanced powder metallurgy technologies – micro/nano powder composites, microwave sintering
- Chemical thermodynamics of heterogeneous systems focused on PM technologies
- Application of digital image processing and analysis - qualitative and quantitative evaluation of microstructure parameters

Other professional activities:

- 1994-2015 administrator of local area network of IMR SAS
- 2000- Technical manager of scientific journal “Powder Metallurgy Progress” edited by IMR SAS
- 1999-2012 member of organizing committee of international conferences organized by IMR SAS: Deformation and Fracture in PM Materials and Fractography and “50 years of IMR SAS”
- 2013- co-chairman of conferences: Functional Composite Materials (2013, 2014, 2015)

### ***TEACHING ACTIVITIES***

- 2012 training course “Analysis, quantification and simulation of microstructure and fractures”
- 2008 training course “Image analysis in technical practice”
- 1990 Technical University in Košice, Faculty of Metallurgy “Thermodynamics of metallurgical processes”

### ***PROJECTS (COORDINATOR, PARTICIPANT)***

- 2018-2020 Bilateral mobility project Institute of Macromolecular Chemistry, Czech Academy of Sciences and Institute of Materials Research, Slovak Academy of Sciences, “Syntesis and characterization of novel organic-inorganic polymeric hybrids for 3D printing”, IMR SAS coordinator: R. Bureš, IMC CAS coordinator: J. Brus
- 2018-2019 Bilateral mobility project Vietnam Academy Science and Technology and Slovak Academy of Sciences: Compaction of soft magnetic powder materials with limited plastic deformation ability, IMR SAS coordinator: R. Bureš, IMS VAST coordinator: Doan Dinh Phuong
- 2018-2020 project VEGA 2/0108/18 Investigation of the progressive powder processing methods designated for fabrication of the soft magnetic composite, coordinator: R. Bureš
- 2016-2019 project SRDA MACOMA APVV-15-0115, Design of the structure and the functional properties of soft magnetic 3-d transitions metals based composites, IMR SAS coordinator: R. Bureš, project coordinator: prof. P. Kollár, UPJŠ Košice
- 2016-2017 Bilateral mobility project Institute of Macromolecular Chemistry, Czech Academy of Sciences and Institute of Materials Research, Slovak Academy of Sciences, “Functional composites based on elastomer matrix and inorganic filler”, IMR SAS coordinator: R. Bureš, IMC CAS coordinator: J. Brus
- 2015-2017 project VEGA 2/0185/15 “Microstructure development and properties of functional composites based on progressive soft magnetic alloys “, coordinator: R. Bureš
- 2010-2013 project ERDF ITMS: 26220220105 MIKROMATEL “Progressive Technology of Preparation of Microcomposite Materials for Electrotechnics”, project coordinator: R. Bureš
- 2012-2014 project VEGA 2/0155/12 “Preparation, microstructure and properties of magnetic composites based on iron powders“, coordinator: R. Bureš
- 2009-2011 project VEGA 2/0149/09 “Compaction of Microcomposite Materials Based on Iron Powders ”, coordinator: R. Bureš
- 2012 project ERDF ITMS: 26110230054 “Improving of quality of utilisation of sophisticated equipment and methods in research and education on IMR SAS ”, participant
- 2011 – 2014 project SRDA MAGCOMP 0222-10 “Microstructure and properties of micro- and nano-composite materials for middle frequency applications”, participant, coordinator E. Dudrova
- 2009-2011 projekt ERDF ITMS: 26220120019 NANOCEXMAT “Center of excellence of progresive materials with nano and submicron structure“, participant, coordinator: J. Dusza
- 2009-2011 project VEGA 2/0103/09 “Initiation, Subcritical Growth, Coalescence and Propagation of Fatigue Microcraks in Sintered Fe-Cr-Mn-Mo-C Steels”, participant, coordinator: E. Dudrova
- 2008-2010 project SRDA MICOMAT 0490-07 “Compactizing Microstructure and Properties of Microcomposite Materials based on Coated Fe Powders”, participant, coordinator: E. Dudrova
- 2006-2008 project VEGA 2/6209/26 “Microstructural Fracture Mechanics of High Strength Sintered Steels”, participant, coordinator: E. Dudrova
- 2003-2005 project VEGA 2/3207/23 “Microstructural Substance of Fatigue and Tribological Properties of Sintered Steels“,participant, coordinator: E. Dudrova
- 2000-2002 project VEGA 2/7228/20 "Microstructure, Properties, Failure and Reliability of Sintered Steels", participant, coordinator: E. Dudrova
- 1999-2002 NATO Science for Peace project 972395 "Development of Powder Metallurgy Manganese Steels for Structural Components", participant, Country project directors: Prof.A.S. Wronski (UK), M. Selecka, PhD. (SR), M. Stoytchev, PhD. (BU)
- 1999 project under Aktion Oesterreich-Slowakei wissenschafts und erziehungskooperation "Oberflächenhartung und sinteraktivierung von pulverstählen durch bor", participant, principal

investigator prof. H. Danninger (Austria), prof. L. Parilak (Slovakia)

- 1997-1999 project VEGA 2/4153/97 "Influence of Microstructure on Failure Micromechanisms and Limiting State of Steels and Sintered Materials" participant, coordinator: Prof. L. Parilak
- 1994-1996 project GAV 2/1315/94 "Microstructural Substance of Strength and Plasticity of Sintered Heterogeneous Systems", participant, coordinator: E. Dudrova
- 1992-1995 international project with Albany Research Centre of U.S. Bureau of Mines "Development of New Materials Via Powder Metallurgy Using Method of Rapid Solidification and Activated Sintering", participant, principal investigator Richard Walters (USA)
- 1991-1993 GAV SAV 331/91 "Activated Sintering of Heterogeneous Systems", participant, coordinator: E. Dudrova
- 1992-1994 project GAV 9208 "Recovering of precious and heavy metals from diluted solutions", participant, coordinator: Prof. J. Schmiedl

### ***PROJECT EVALUATIONS***

- Research Agency - The Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic for the Structural Funds of EU
- Slovak Research and Development Agency
- VEGA - Scientific grant agency of the Ministry of Education of the Slovak Republic

### ***STAYS ABROAD***

- 2018 Institute of Materials Science, Vietnam Academy of Science and Technology, Hanoi, Vietnam (2 weeks)
- 2015-2019 Institute of Physics of Academy of Sciences, Czech Republic (1 week per year)
- 2014 Institute of Materials Science, Vietnam Academy of Science and Technology, Hanoi, Vietnam (1 week)
- 2012 Universidad Politécnica de Valencia, Instituto de Tecnología de Materiales, Valencia, Spain (1 week)
- 2010-2019 Institute of Macromolecular Chemistry of Academy of Sciences, Czech Republic (1 week per year)
- 2009 Politecnico di Torino, Italy (1 week)
- 2009 Institute of Mathematics of Academy of Sciences, Czech Republic (2 weeks)
- 2008 Institute of Mathematics of Academy of Sciences, Czech Republic (2 weeks)
- 2001 Dornier MedTech, Munich, Germany (1 week)
- 2000 ESC Medical Systems, Haifa, Israel (2 weeks)
- 1999 Laboratoire de Mécanique des Solides Ecole Polytechnique Palaiseau, France (1 week)
- 1996 Chiron Technolas, Munich, Germany (1 week)

### ***MEMBERSHIPS, AWARDS***

- 2018 – member of Slovak Metal Science Society
- 2016 – member of the Scientific Council of Institute of Materials Research SAS
- 2014 – member of IEEE Magnetic society
- 2010 – member of Slovak Chemical Society
- member of organising committee of international conferences: DFPM 1999-2011, Fractography 2000-2012
- 1997 - 2004 chairman of Slovak Metallurgical Society at IMR SAS

- member of Editorial office of scientific journal “Powder Metallurgy Progress” (SCOPUS indexed)  
ISSN 1335-8987 edited by IMR SAS Košice

***PUBLICATION ACTIVITIES:***

***<https://orcid.org/0000-0003-0827-405X>***

***Web of Science ResearcherID: A-8682-2008***