Ing. Karel Saksl PhD.

scientist

contact

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CURRICULUM, EDUCATION

- 2006– current Senior Research Fellow, IMR SAS, department of nano structured materials
- 2000-2006 researcher, IMR SAS, department of nano structured materials
- 2002-2007 post-doctoral stay, HASYLAB at DESY, Hamburg, Germany
- 2001-2001 post-doctoral stay, Department of Physics, DTU, Denmark
- 1997-2000 PhD study, IMR SAS, scientific branch: Material Engineering and Limit States of Materials
- 1992-1997 MSc. study, Technical University in Košice, Faculty of Metallurgy, Department of materials science

LINGUISTIC SKILLS

English (advanced), Russian (intermediate), German (intermediate)

SCIENTIFIC ACTIVITIES

- determination of structure and characterization of structural transformations by means of X-ray powder diffraction (XRD) and X-ray absorption spectroscopy (XAS) techniques
- investigation of thermal properties by means of differential scanning calorimetry (DSC) method
- Modeling of highly disordered atomic structures by Reverse Monte Carlo (RMC) method
- preparation of amorphous and nanocrystalline powders by mechanical milling

TEACHING ACTIVITIES

- 2007 – current Štefan Michalík, PhD thesis - consultant
- 2007 – current Vladimír Kolesár, PhD thesis – consultant
- 2004 – 2007 Štefan Michalík, MSc. thesis - supervisor
- 2007 – 2007 Vladimír Kolesár, MSc. thesis - consultant
- 2003 – 2006 supervisor of 6 students in "DESY sumerstudent program"

PROJECTS (COORDINATOR, PARTICIPANT)

- 2007-current co-proposer, 7.FP EU FP7-211536-2, “Macro, Micro and Nano Aspects of Machining“
- 2001 – 2004 participant, 5.FP of EU G5RD–CT 2000 - 00341, "High efficiency forming technology of light weight MMC components for automotive and household application"
- 1997 – 1999 participant, INCO–Copernicus CT– 96 0750, "Formability modelling of aluminium base PM alloys"

- 1997 – current co–author of domestic research grant projects: VEGA, APVV

STAYS ABROAD

- September - December 2000 MIC - Department of Micro and Nanotechnology, DTU, Denmark

MEMBERSHIPS, AWARDS

- Member and scientific secretary of commission for cooperation with European X-ray Free Electron Laser Facility.

NUMBER OF PUBLICATIONS: 45 (30 CC)
NUMBER OF CITATIONS: 114

SELECTED PUBLICATIONS

- Jóvári P, **Saksl K**, Pryds N, et al. Atomic structure of glassy $Mg_{60}Cu_{30}Y_{10}$ investigated with EXAFS, x-ray and neutron diffraction, and reverse Monte Carlo simulations, PHYSICAL REVIEW B 76 (5): Art. No. 054208 AUG 2007

- **Saksl K**, Vojtech D, Franz H Quasicrystal-crystal structural transformation in Al-5 wt.% Mn alloy JOURNAL OF MATERIALS SCIENCE 42 (17): 7198-7201 SEP 2007

- **Saksl K**, Bednarcik J, Nicula R, et al. The influence of short-time ball-milling on the stability of amorphous CoFeB alloys JOURNAL OF PHYSICS-CONDENSED MATTER 19 (17): MAY 2 2007

- **Saksl K**, Jóvári P, Franz H, et al. Atomic structure of $Al_{89}La_6Ni_5$ metallic glass JOURNAL OF PHYSICS-CONDENSED MATTER 18 (32): 7579-7592 AUG 16 2006

- **Saksl K**, Jóvári P, Franz H, et al. Atomic structure of $Al_{88}Y_7Fe_5$ metallic glass JOURNAL OF APPLIED PHYSICS 97 (11): JUN 1 2005

- **Saksl K**, Ďurišin J, Orolínová M, et al. Structural study on Al-26 mass% Si-8 mass% Ni powder JOURNAL OF MATERIALS SCIENCE 40 (8): 1975-1978 APR 2005

- **Saksl K**, Franz H, Jóvári P, et al. Evidence of icosahedral short-range order in $Zr_{70}Cu_{30}$ and $Zr_{70}Cu_{29}Pd_1$ metallic glasses APPLIED PHYSICS LETTERS 83 (19): 3924-3926 NOV 10 2003

- **Saksl K**, Medvecký L, Ďurišin J Preparation of nanocrystalline Cu-xMgO mixture JOURNAL OF MATERIALS SCIENCE 36 (15): 3675-3678 2001