



## **Viera Homolová**

Senior scientist

### *contact*

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

- Faculty of sciences Pavol Jozef Šafárik University, mathematics and physics (1991-1996)
- PhD study, Department of experimental Physics, Faculty of sciences, Pavol Jozef Šafárik University (1996-2000)

### ***LINGUISTIC SKILLS***

English, Russian,

### ***SCIENTIFIC ACTIVITIES***

- Modelling of phase diagrams and phase equilibria for binary, ternary and more complex systems on base of theoretical knowledge of thermodynamics and experimental measurements.
- Development of databases of parameters for thermodynamic calculations (phase diagrams, Gibbs energy, enthalpy, equilibrium chemical and phase compositions, diffusion processes) for various systems.

### ***TEACHING ACTIVITIES***

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

#### ***COORDINATOR***

- Thermodynamic analysis of binary and ternary systems with boron, VEGA č. 2/6207/26, 2006-2008.

#### ***PARTICIPANT***

- Influence of annealing parameters on the microstructure and properties of heterogeneous weld joints and bends of progressive steels, VEGA č.2/7197/27, 2007- 2009
- Weldability of new generation creep steels for high efficiency power plant units, APVV-99-045105, 2006-2009

- Precipitation processes and embrittlement in advanced 9-12 steels and their weld joints COST-Action 536, 2005- 2008
- Material characterization for the plant components remnant life prediction COST-Action 538
- Analytical-computational method of lifetime prediction for multiphase materials, APVV No. COST-0022-06, 2007- 2008

### ***STAYS ABROAD***

- 2001 (1 month) Max-Planck Institut für Eisenforschung Düsseldorf

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

- member of Associated Phase Diagram and Thermodynamics Committee

***NUMBER OF PUBLICATIONS: 24***

***NUMBER OF CITATIONS: 20***

### ***SELECTED PUBLICATIONS***

- V. Homolová, J. Janovec, A. Kroupa: Experimental and thermodynamic studies of phase transformations in Cr-V low alloy steels, Mat. Sci. Eng. A, vol 335/1-2, 2002, pp 290-297.
- V. Homolová, J. Janovec, P. Záhumenský, A. Výrostková: Influence of thermal-deformation history on evolution of secondary phases in P91 steel, Mat. Sci. Eng. A, 349, 2003, 306-312.
- V. Homolová, J. Janovec, M. Kusý, R. Moravčík, E. Illeková, P. Grgáč: Phase transformations and equilibria in ledeburite type Ch3F12 and Ch12MF4 tool alloys, Can. Met. Quarterly, Vol. 42, No 1, 2003, 89-96.
- J. Janovec, M. Jenko, V. Homolová: Microstructure evolution on casting in special high-alloy steels, Archives of Metallurgy and Mater., Vol.49, No. 3, 2004, 481-491.
- Výrostková, V. Homolová, J. Pecha, M. Svoboda: Phase evolution in P92 and E911 weld metals during annealing, Mat. Sci. Eng. A, doi: 10.1016/j.msea.2007.07.036 *in press*