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Employment and positions

Institute of Metallurgy and Materials Science, Polish Academy of Sciences: research assistant (2000-2007). From 2007 assistant professor a at the same Institute.

Scientific Career

M.Sc.: University of Mining and Metallurgy, Cracow, Faculty of Metallurgy and Materials Science, 2000

Ph.D.: Institute of Metallurgy and Materials Science, Polish Academy of Sciences, 2007

Scientific achievements

20 papers, among them: 19 papers in reference to journals cited by the Institute for Scientific Information.

The most relevant publications during last 5 years:

1.

M. Kopyto, **G. Garzel**: L.A Zabdyr: *Thermodynamic properties of the liquid Bi-Cu-Sn lead-free solder alloys,* Journal of Mining and Metallurgy B : Metallurgy 45, (2009) 95-100.

2.

G. Garzel, J. Janczak-Rusch, J., L. Zabdyr : *Reassessment of the Ag-Cu phase diagram for nanosystems including particle size and shape effect*
,Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 36, (2012),

52-56.

3.

P. Fima , **G. Garzeł**: *Thermal analysis and microstructure of the as-cast Ag-Bi-Cu alloys*, Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, (2014), 44, pp. 48-53.

4.

P. Fima , **G. Garzeł**, A. Sypien: Wetting of Cu Pads by Bi-2.6Ag-xCu Alloys and Phase Equilibria in the Ag-Bi-Cu System,
JOURNAL OF ELECTRONIC MATERIALS (2014),43, pp. 4365-4373.

5.

G. Garzel, M.Kopyto, L. A. Zabdyr, *Thermodynamic properties of the liquid Ag-Bi-Cu-Sn Lead-Free Solder Alloys*
J. Min. Metall. Sect. B-Metall. (2014), 50, pp145-148.

Research Projects

European Union Projects

· COST, Action 531 – *Lead-free solder materials*, Task: Diffusion soldering- perspective technology of materiale lead-free joining, IMMS PAS, contractor, 2002-2006

· COST, Action MP 0602 – *Advanced solder materials for high temperature applications* – HISOLD, Working group I –
Complex study of thermodynamic and physico-chemical properties and structural characteristics of materials for potential use as high-temperature lead-free solder
s, Project: No. 85/N-COST/2007/0, 2007-2010, IMMS PAS, contractor, 2007-2010.

Organisation of conferences and scientific events

Member of the Local Organizing Committee:

CALPHAD XXXIII An International Conference on Phase Diagram Calculations and Computational Thermochemistry, Cracow , Poland

COST Materials Action 531 – Lead-free Solder Materials, Joint Working Group Meeting (WG1+WG2) (2004), (2005)

TOFA 2008 – Discussion Meeting on Thermodynamics of Alloys, Cracow, Poland (2008).

Main scientific interest

Experimental determination of thermodynamic properties metallic systems by electrochemical methods, supported by DSC, DTA, EDS and XRD analyses. Thermodynamic assessment of phase diagrams by CALPHAD approach. Calculation of phase equilibria and phase diagrams of multicomponent systems (Thermo-Calc and Pandat program).