

Publications:

Papers:

1. P. Jarosz, K. Gargul, **W. Gierlotka**, “Density and viscosity of the binary Hg-Tl solutions” Proceedings of the VIII. seminar : *Diffusion and Thermodynamics of Materials* : Brno, September 4–6, 2002 ed. J.Čermák, J.Vřešťál ; Institute of Physics of Materials AS CR Brno 2000, pp. 225–228
2. K. Gargul, P. Jarosz, **W. Gierlotka**, “The application of cubic spline functions in thermodynamical description of binary liquid solutions” Proceedings of the VIII. seminar : *Diffusion and Thermodynamics of Materials* : Brno, September 4–6, 2002 ed. J.Čermák, J.Vřešťál ; Institute of Physics of Materials AS CR Brno 2000, pp. 196–199
3. Piotr Jarosz, Maksymilian Sukiennik, Krzysztof Gargul, **W. Gierlotka** , “Description of experimental data in thermodynamics analysis of binary solutions” *Inżynieria Materiałowa* ; 4 (2001), pp. 392–393.
4. M. Sukiennik, **W. Gierlotka**, Piotr Jarosz, K. Gargul, J. Mendez Nonell, “Equilibrium of thermodynamical reduction of strontium sulphate gaseous phase (CO+CO₂)”, *Inżynieria Materiałowa* ; 5(2001), pp.881–883.
5. K.Gargul, M. Sukiennik, P. Jarosz, **W. Gierlotka** “The influence of choice of the activity functions on possibility of intermetallic compounds identification in metal solutions” *Inżynieria Materiałowa* 4(2001) pp.330–331.
6. **W. Gierlotka**, K. Fitzner, M. Sukiennik, “Thermodynamic properties of the liquid Hg-Tl alloys determined from vapour pressure measurements”, *Journal of Mining and Metallurgy B*, 38B, Issue 3-4, (2002), pp: 237-247, **IF:1.294**
7. D. Jendrzeczyk, **W. Gierlotka**, K. Fitzner, „Thermodynamic properties of liquid silver – indium – antimony alloys determined from e.m.f. measurements”, *Z. Metallkd.*, 97 (2006), pp. 1519 – 1525 **IF:0.86**
8. **W. Gierlotka**, J. Sopousek, K. Fitzner, „Thermodynamic assessment of the Hg – Tl system”, *Calphad*, 30 (2006), pp. 425 – 430, **IF:1.429**
9. I. Isomaki, M. Hamalainen, **W. Gierlotka**, B. Onderka, K. Fitzner, “Thermodynamic evaluation of the In – Sn – O system”, *J. Alloys Comp.*, 422 (2006), pp. 173 – 177, **IF:2.134**

10. D. Jendrzeczyk-Handzlik, D. Zivkovic, , **W. Gierlotka**, D. Manasijevic, K. Fitzner and D. Minic, "Phase Relations near Ternary Eutectic point in the Ag-In-Sb system", *Journal of Mining and Metallurgy*, 43 B (2) (2007) 161-170, **IF:1.294**
11. **W. Gierlotka**, S. – W. Chen, S.-K. Lin, „Thermodynamic description of the Cu – Sn system”, *Journal of Material Research*, 22 no. 11 (2007), pp. 3158-3165, **IF:1.395**
12. Y.-C. Huang, S.-W. Chen, **W. Gierlotka**, C.-H. Chang, J.-C. Wu, „Dissolution and interfacial reaction of Fe in molten Sn – Cu and Sn – Pb solders“, *Journal of Material Research*, 22 no. 10 (2007), pp.2924 – 2929, **IF:1.395**
13. **W. Gierlotka**, S. – W. Chen, "Thermodynamic description of the Cu - Zn system", *Journal of Material Research*, 23 no. 1 (2008) 258 - 263, **IF:1.395**
14. S. – w. Chen, C. – c. Chen, **W. Gierlotka**, A. – r. Zi, P – y. Chen, H. – j. Wu "Phase equilibria of the Sn-Sb binary system", *Journal of Electronic Materials*, 37 no.7 (2008) 992-1002, **IF:1.39**
15. D. Jendrzeczyk, **W. Gierlotka**, K. Fitzner, „Thermodynamic properties of liquid silver – indium – tin alloys determined from e.m.f. measurements”, *Z. Metallkd*, 11 (2008) 1213-1221, **IF:0.86**
16. C.-c. Chen, **W. Gierlotka**, S.-w. Chen, "Phase Equilibria of Sn-V System and Interfacial Reactions in Sn/V couples, *Journal of Electronic Materials*, 37 no.11 (2008) 1727-1733, **IF:1.39**
17. C-f. Yang, F.-l. Chen, **W. Gierlotka**, S.-w. Chen, K.-c. Hsieh, L.-l. Huang, „Thermodynamic properties and phase equilibria of Sn-Bi-Zn ternary alloys”, *Materials Chemistry and Physics*, 112 (1) (2008) 94-103, **IF:2.353**
18. **W. Gierlotka**, Y.-c. Huang, S.-w. Chen, "Phase equilibria of Sn-Sb-Ag ternary system (II): Calculation", *Met. Trans. A*, 39 A (2008) 3199-2009, **IF:1.712**
19. D. Jendrzeczyk, **W. Gierlotka**, K. Fitzner, "Thermodynamic properties of liquid copper – indium – tin alloys determined from e.m.f. measurements", *Journal of Chemical Thermodynamics*, 41,2 (2009) 250-256, **IF:2.794**
20. Y.-c. Huang, S.-w. Chen, C.-y. Chou, **W. Gierlotka**, "Liquidus projection and thermodynamic modeling of Sn-Zn-Cu ternary system", *Journal of Alloys and Compounds*, 477 (2009) 283-289, **IF:2.134**
21. **W. Gierlotka**, P. Jarosz, S.-w. Chen, "Liquid phase vapor pressure measurement and thermodynamic assesment of the Hg-In binary system", *Thermochimica Acta*,491 (2009) 29 - 34, **IF:1.899**

22. **W. Gierlotka**, J. Łapsa, D. Jendrzeczyk-Handzlik “Thermodynamic optimization of Pb-Te system using ionic liquid model”, *Journal of Alloys and Compounds*, 479 (2009) 152-156, **IF:2.134**
23. **W. Gierlotka**, D. Jendrzeczyk – Handzlik, “Thermodynamic description of Cu-Sb system” *Journal of Alloys and Compounds*, 484 (2009), 172 - 176, **IF:2.134**
24. **W. Gierlotka**, “Thermodynamic assessment of Ag-Te system” *Journal of Alloys and Compounds*, 485 (2009), 231 – 235, **IF:2.134**
25. **W. Gierlotka**, “Thermodynamic description of the Hg – Te binary system”, *Journal of Alloys and Compounds* 494 (2010) 102-108, **IF:2.134**
26. Y. C. Huang, **W. Gierlotka**, S. W. Chen, "Sn-Bi-Fe thermodynamic modeling and Sn-Bi/Fe interfacial reactions", *Intermetallics* 18 (2010) 984-991, **IF:2.327**
27. S. W. Chen, H. J. Wu, Y. C. Huang, **W. Gierlotka**, "Phase equilibria and solidification of ternary Sn-Bi-Ag alloys", *Journal of Alloys and Compounds* 497 (2010) 110-117, **IF:2.134**
28. **W. Gierlotka**, J. Łapsa, K. Fitzner, „Thermodynamic description of the Ag – Pb – Te ternary system”, *Journal of Phase Equilibria and Diffusion* 31 (2010) 509-517, **IF:0.444**
29. **W. Gierlotka**, “Thermodynamic description of Te-Tl binary system using associated solution model”, *Journal of Electronic Materials*, 39 (2010) 1319-1325, **IF:1.39**
30. C.E. Ho, **W. Gierlotka**, S. W. Lin, “Strong Effect of Pd Concentration on the Soldering Reaction between Ni and Sn-Pd Alloys”, *Journal of Materials Research*, 25 (2010) 2078 – 2081, **IF:1.395**
31. **W. Gierlotka**, D. Jendrzeczyk – Handzlik, “Thermodynamic description of the binary Ag-Ga system”, *Journal of Alloys and Compounds*, 509 (2011) 38-42, **IF:2.134**
32. **W. Gierlotka**, W.-h. Wu, „The reoptimization of the binary Se – Te system”, *International Journal of Material Research*, accepted for publication, **IF:0.86**
33. D. Jendrzeczyk-Handzlik, M. Rechchach, **W. Gierlotka**, H. Ipser, H. Flandorfer, “Enthalpies of mixing of liquid systems for lead-free soldering: Cu – Sn – Sb system”, *Thermochimica Acta*, 512 (2011) 217-224, **IF:1.899**

34. D. Jendrzeczyk – Handzlik, **W. Gierlotka**, K. Fitzner, “Thermodynamic properties of liquid copper – antimony – tin alloys determined from e.m.f. measurements”, *International Journal of Material Research*, accepted for publication, **IF:0.86**
35. **W. Gierlotka**, K.-c. Zhang, Y.-p. Chen, “Thermodynamic description of the binary Cu – Zr system”, *Journal of Alloys and Compounds*, 509 (2011) 8313-8318, **IF:2.134**
36. **W. Gierlotka**, „Thermodynamic modeling of the lead – free quaternary solder Ag – Cu – In – Sn”, *Journal of Electronic Materials* 41 (2012) 86-108, **IF:1.39**
37. S.-w. Chen, A.-r. Zi, **W. Gierlotka**, C.-f. Yang, C.-h. Wang, S.-k. Lin, „Phase equilibria of Sn-Sb-Cu system” *Materials Chemistry and Physics* 132 (2012) 703-715, **IF:2.353**
38. **W. Gierlotka**, Md. A. Haque, “On the binary Cu – Si system: thermodynamic modeling of the phase diagram and atomic mobilities in the face centered cubic phase”, *Journal of Chemical Thermodynamics*, under review.
39. **W. Gierlotka**, Md. A. Haque, Y. H. Chen, “Atomic mobilities in the face centered cubic phase of the ternary Ag – Cu – Sn system.”, *Journal of Alloys and Compounds*, under review.

Papers in preparation:

40. **W. Gierlotka**, Md. A. Haque, Y. H. Chen, “Thermodynamic optimization of the ternary Cu – Zn – Zr system”
41. **W. Gierlotka**, Md. A. Haque, Y. H. Chen, “Thermodynamic description of the ternary Al – Zn – Zr system”

Book chapters:

1. S.-w. Chen, **W. Gierlotka**; H.-j. Wu, S.-k. Lin, „Lead-free Solders: Materials Reliability for Electronics” , ISBN 978-0-47097-182-6

Conference paper:

1. M. Sukiennik, **W. Gierlotka**, „The different view at the Gibbs–Duhem equation”, XVII Zjazd Termodynamików, 6–11.09.1999, Zakopane, Poland
2. M. Sukiennik, K. Gargul, **W. Gierlotka**, “Experimental data description in associated solutions “, Discussion meeting on Thermodynamics of solutions, 20–22.11.2000 Kraków, Poland
3. P. Jarosz, M. Sukiennik, K. Gargul, **W. Gierlotka**, „ Description of experimental data in thermodynamics analysis of binary solutions”, XVIth physical metallurgy and materials science conference on Advanced Materials & Technologies : Gdańsk–Jurata, 16–20.09.2001, Gdańsk, Poland
4. Maksymilian Sukiennik, **Wojciech Gierlotka**, Piotr Jarosz, Krzysztof Gargul, J. Mendez Nonell, “Equilibrium of thermodynamical reduction of strontium sulphate gaseous phase (CO+CO₂)”, XVIth physical metallurgy and materials science conference on Advanced Materials & Technologies : Gdańsk–Jurata, 16–20.09.2001, Gdańsk, Poland
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9. **W. Gierlotka**, F.-L. Chen, S.-W. Chen, „Thermodynamic and phase equilibrium study of Sn – Zn – Bi ternary system”, 2006 International Conference on Chemical and Molecular Technologies, 09.12.2006, Tainan, Taiwan

10. Y.-C. Huang, **W. Gierlotka** and S.-W. Chen, 2007, "Dissolution and interfacial reactions of Fe in molten Sn-Pb and Pb-free solders", "TMS Annual Meeting, March 2007, Orlando, USA.
11. D. Jendrzeczyk, **W. Gierlotka**, K. Fitzner, „Thermodynamic properties of the liquid Ag-In-Sb, Ag-In-Sn and Cu-In-Sn”, COST action 531 “Lead-Free Solder Materials” final meeting, 17-18.05.2007, Vienna, Austria
12. **W. Gierlotka**, S.-W. Chen, "Thermodynamic and phase equilibria study of Sn - Sb binary system", 2007 Annual Meeting of the Chinese Society for the Material Science, 17.11.2007, Hsinchu, Taiwan.
13. **W. Gierlotka**, S.W. Chen, A-R. Zi, P.-Y. Chen, “Thermodynamic modeling of Ag – Sb – Sn system”, TMS Annual Meeting, March 2008, Phase Stability, Phase Transformations and Reactive Phase Formation in Electronic Materials VII, 9 – 13.3.2008, New Orleans, USA.
14. Y.-C. Huang, S.-W. Chen, C.-Y. Chou, **W. Gierlotka**, “Liquidus projection of the Sn – Zn – Cu Ternary System”, TMS Annual Meeting, March 2008, Phase Stability, Phase Transformations and Reactive Phase Formation in Electronic Materials VII, 9 – 13.3.2008, New Orleans, USA.
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16. **W. Gierlotka** “The thermodynamic optimization of Ag-Te system” Associate Phase Diagram and Thermodynamics Committee Workshop, 8.11.2008, Wroclaw, Poland
17. **W. Gierlotka** “Thermodynamic assessment of lead – free solders” Associate Phase Diagram and Thermodynamics Committee Workshop, 8.11.2008, Wroclaw, Poland
18. **W. Gierlotka**, S.-w. Chen, S.-k. Lin, „Thermodynamic modeling of Cu – In – Sn ternary system”, TMS Annual Meeting, February 2009, Phase Stability, Phase Transformations and Reactive Phase Formation in Electronic Materials VIII, 15 – 19.2.2009, San Francisco, USA.
19. **W. Gierlotka**, D. Jendrzeczyk, K. Fitzner, „Thermodynamics studies of liquid copper – tin – antimony using E.M.F. and calorimetric measurements”, COST MP0602 meeting, 14 – 17.04.2009, Bochum, Germany
20. J. Łapsa, **W. Gierlotka**, K. Fitzner, „The thermodynamics of Ag – Pb – Te system” CALPHAD conference, 18 – 23.05.2009, Prague, Czech Republic

21. D. Jendrzeczyk-Handzlik, **W. Gierlotka**, K. Fitzner, „Complex measurements of Au-Sn-Sb system”, TOFA 2010 Thermodynamic of Alloys, 12 – 16.09.2010, Porto, Portugal
22. **W. Gierlotka**, K.-C. Zhang, “Thermodynamic modeling of the quaternary Ag – Cu – In – Sn system”, TMS 2011 Annual Meeting, 28.02 – 03.03.2011, San Diego, USA
23. **W. Gierlotka**, A. Haque, “The CALPHAD method”, Materials Thermodynamic Workshop, Nationla Tsing Hua University, 27.08.2011, Hsinchu, Taiwan
24. **W. Gierlotka**, S-W. Chen, H.-J. Wu, A. Haque, “The CALPHAD method and its application to lead – free soldering technology.”, 12th IUMRS International Conference Asia 2011, 19 – 22.09.2011, Taipei, Taiwan.
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27. **W. Gierlotka**, “Optimization of the quaternary system Ag – Cu – In – Sn”, 5th Thailand Metallurgy Conference – Metallurgy for Eco-Industry, 02 – 05.02.2012, Bangkok, Thailand.
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