

## CONTENTS

|   |     |
|---|-----|
| <b>G. Kaptay, Y. Du, D. Manasijević</b>   |     |
| <i>Preface</i> .....  | 163 |
| <b>D. Manasijević, Lj. Balanović</b>  |     |
| <i>Professor dr. Dragana T. Živković – Biography &amp; Bibliography</i> .....   | 165 |
| <b>B. Sundman</b>   |     |
| <i>A note on models for phases with order/disorder transitions in thermodynamic software and databases</i> .....  | 173 |
| <b>H. Zhang, C. Zhang, W.W Wang, Y. Du, P. Zhou, B. Hu, Z. Liu, J.C Wang, J. Wang</b>   |     |
| <i>Thermodynamic assessment of the Pb–Sr system</i> .....   | 179 |
| <b>D. Minić, Y. Du, Milena Premović, D. Manasijević, N. Talijan, D. Milisavljević, A. Marković, A. Đordjević, M. Tomović</b>  |     |
| <i>Experimental and thermodynamic description of ternary Bi-Cu-Ga system</i> .....  | 189 |
| <b>A. Dębski, G. Garzela, W. Zakulski, W. Gąsior</b>  |     |
| <i>Calorimetric measurements of the Ca-Li liquid alloys</i> .....   | 203 |
| <b>D.F. Soares, M. Abreu, D. Barros, F. Castro</b>  |     |
| <i>Experimental study of the Cu-Al-Sn phase equilibria, close to the copper zone</i> .....  | 209 |
| <b>D. Jendrzejczyk-Handzlik</b>   |     |
| <i>Phase equilibria in the ternary Ag-Au-Ga system: isothermal sections at 250 °C and 450 °C</i> .....  | 215 |
| <b>B.Z. Onderka, K. Fitzner, M. Kopyto, W. Przybylo</b>   |     |
| <i>Thermodynamics of <math>Bi_2O_3</math>-<math>SiO_2</math> System</i> .....   | 223 |
| <b>W. Gierlotka</b>   |     |
| <i>Size-dependent thermodynamic description of the binary Pb-Sn system</i> .....  | 233 |
| <b>J. Vřešťál, J. Pavlů, U.D. Wdowik, M. Šob</b>  |     |
| <i>Modelling of phase equilibria in the Hf-V system below room temperature</i> .....  | 239 |
| <b>J. Šesták</b>  |     |
| <i>On history and recent applications of the Holba and Korzhinskii treatments of special hyperfree energy effective to thermodynamics of partially open geological, metallurgical and other nonstoichiometric systems</i> ..... | 249 |
| <b>Y. Liu, D. Liu, Y. Du*, S. Liu, D. Kuang, P. Deng, J. Zhang, C. Du, Z. Zheng, X. He</b>  |     |
| <i>Calculated interdiffusivities resulting from different fitting functions applied to measured concentration profiles in Cu-rich fcc Cu-Ni-Sn alloys at 1073 K</i> .....   | 255 |
| <b>T.D. Mutava, L.A. Cornish, I. Sigalas</b>  |     |
| <i>Kinetics of grain growth in Ti-2.7Al-5.7Fe-6Mo-6V alloy</i> .....  | 263 |
| <b>X. Shuai, H. Mao, Y. Kong, Y. Du</b>   |     |
| <i>Phase field crystal simulation of the structure evolution between the hexagonal and square phases at elevated pressures</i> .....  | 271 |
| <b>Y. Plevachuk, V. Sklyarchuk, G. Pottlacher, A. Yakymovych, O. Tkach</b>  |     |
| <i>Thermophysical properties of liquid binary Mg-based alloys</i> .....   | 279 |
| <b>P. Turalska, M. Homa, G. Bruzda, N. Sobczak, I. Kaban, N. Mattern, J. Eckert</b>   |     |
| <i>Wetting behaviour and reactivity between liquid Gd and <math>ZrO_2</math> substrate</i> .....  | 285 |
| <b>S. Delsante, D. Li, R. Novakovic, G. Borzone</b>   |     |
| <i>Design of Ag-Ge-Zn braze/solder alloys: experimental thermodynamics and surface properties</i> .....   | 295 |

|  |     |
|--|-----|
| <b>C. Che, S. Yang, M. Wei, L. Zhang *, Q. Li, J. Gao, Y. Du</b><br><i>Microstructure, hardness and interfacial energy in Co-9Al-10W-xNi (<math>x=15, 25, 35</math> at.%) alloys during aging .....</i>  | 303 |
| <b>J. Pstrus</b><br><i>The role of physico-chemical properties liquid solder in reactive wetting: the Cu/SnZnIn system .....</i>   | 309 |
| <b>M. Godzsák, G. Levai, K. Vad, A. Csik, J. Hakl, T. Kulcsar, G. Kaptay</b><br><i>Coloring hot-dip galvanization of steel samples in industrial zinc-manganese baths .....</i>  | 319 |
| <b>M. Czagany, P. Baumli</b><br><i>Effect of pH on the characteristics of electroless Ni-P coatings .....</i>  | 327 |
| <b>M. Palcut, L. Ďuriška, M. Špoták, M. Vrbovský, Ž. Gerhátorová, I. Černičková, J. Janovec</b><br><i>Electrochemical corrosion of Al-Pd alloys in HCl and NaOH solutions .....</i>  | 333 |
| <b>V. Stanković, M. Gojo, V. Grekulovic, N. Pajkić, T. Cigula</b><br><i>Surface quality of the Ni-TiO<sub>2</sub> Composite coatings produced by electroplating .....</i>  | 341 |
| <b>V. Grekulovic, M. Rajcic Vujsasinovic, A. Mitovski</b><br><i>Electrochemical behavior of AgCu50 in alkaline media in the presence of chlorides and 2-mercaptopbenzothiazole .....</i>   | 349 |
| <b>R. Pereira Batista, A. Augusto Martins, A.L.V. Costa e Silva</b><br><i>The effects of deoxidation practice on the quality of thin foil low-carbon steel .....</i>   | 357 |
| <b>Q. Wang, L.J. Wang, Y.Q. Liu, K.C. Chou</b><br><i>Using Ce to modify inclusion in spring steel .....</i>  | 365 |
| <b>L. Falat, L. Čiripová, V. Homolova, A. Kroupa</b><br><i>The influence of isothermal ageing and subsequent hydrogen charging at room temperature on local mechanical properties and fracture characteristics of martensitic-bainitic weldments for power engineering .....</i>     | 373 |
| <b>Y.D. Wu, G.H. Zhang, K.C. Chou</b><br><i>Preparation of high quality ferrovanadium nitride by carbothermal reduction nitridation process .....</i>  | 383 |
| <b>O. Martiník, B. Smetana, J. Dobrovská, A. Kalup, S. Zlá, M. Kawuloková,</b><br><b>K. Gryc, P. Dostál, L. Drozdová, B. Baudišová</b><br><i>Prediction and measurement of selected phase transformation temperatures of steels .....</i>  | 391 |
| <b>A. Udovsky, V. Grafutin, V. Kolotushkin, V. Miloseredin, I. Evstukhina,</b><br><b>A. Mischenko, V. Ermakov, V. Samosadny, Y. Funtikov</b><br><i>Changes of electron density and defects distribution in binary and ternary iron alloys studied by positron annihilation .....</i> | 399 |
| <b>M. Dimitrijević, D. Urošević, S. Milić, M. Sokić, R. Marković</b><br><i>Dissolution of copper from smelting slag by leaching in chloride media .....</i>  | 407 |
| <b>T. Holjevac Grgurić, D. Manasijević, S. Kožuh, I. Ivanić, Lj. Balanović, I. Anžel,</b><br><b>B. Kosec, M. Bizjak, M. Knežević, M. Gojić</b><br><i>Phase transformation and microstructure study of the as-cast Cu-rich Cu-Al-Mn ternary alloys .....</i>                          | 413 |
| <b>M. Vončina, S. Kores, M. Ernecl, J. Medved</b><br><i>The role of Zr and T6 heat treatment on microstructure evolution and hardness of AlSi9Cu3(Fe) diecasting alloy .....</i>   | 423 |
| <b>N. Dolić, Z. Zovko Brodarac</b><br><i>Evaluation of en AW-5083 aluminum alloy homogeneity using statistical analysis of mechanical properties....</i>   | 429 |
| <b>A. Watson</b><br><i>From the COST531/MP0602 Family .....</i>  | 441 |