

- Review Papers
- [1] Atomic-Scale Modelling of Intergranular Segregation: the Case of Alloys with Strong Size-Effect Jerome Creuze p. 3
- [2] Atomic Defects and Diffusion in Intermetallic Compounds: the Impact of the ab initio Electron Theory Manfred Fahnle p. 37
- [3] Interdiffusion Issues in Pt-Modified NiAl Coatings S.Datta and R.Filipek and M.Danielewski p. 47
- [4] Long-Term Life of Ni/Cu Bellows: Effect of Diffusion on Thermomechanical Properties Olivier Arnould and Francois Hild p. 61
- [5] On-the-Fly Evaluation of Diffusional Parameters during a Monte Carlo Simulation of Diffusion in Alloys: a Challenge J.L.Bocquet p. 81
- Research Papers
- [6] Monte Carlo Study of the Evolution of the Phase Morphology in Coherent Metallic Multilayers with Immiscible Components A.Ullrich and M.Bobeth and W.Pompe p. 113
- [7] Determination of Atom-Vacancy Exchange-Frequency Ratios from Experimental Intrinsic Diffusivities in Disordered Binary and Ternary Alloys I.V.Belova and G.E.Murch p. 125
- [8] Investigation of Diffusion Kinetics by Auger Electron Spectroscopy Z.Erdelyi and D.L.Beke and J.Bernardini and Ch.Girardeaux and A.Rolland p. 131
- [9] Limits of Ion-Beam Depth-Proiling as used in Diffusion Studies of Oxidation-Sensitive Materials H.Ehmler and A.Rehmet and K.Ratzke and F.Faupel p. 147
- [10] Effect of Treatment in Hydrogen on Physiomechanical Properties of Fe-Ni Alloys ([30at%Ni) V.V.Fedorov and E.V.Dyomina and P.V.Basisty and U.G.Bachinskyi and M.D.Prusakova and N.A. Vinogradova p. 153
- [11] Energy of Vacancy Formation and Migration of Two [Sigma]5 Tilt Grain Boundaries in Ni₃Al Intermetallic: a Monte Carlo Simulation Study Jiri Cermak p. 161
- [12] Ni Tracer Self-Diffusion, Interdiffusion and Diffusion Mechanisms in NiAl S.V.Divinski and Chr.Herzig p. 177
- [13] Dendrite Growth Characteristics of the [gamma]-Precipitates in a Single-Crystal Ni-Based Superalloy J.H.Zhang and X.Wu and Y.B.Xu and Z.Q.Hu p. 193
- [14] Microstructure Control Factors of H Diffusion through Pd and Pd₇₇Ag₂₃ Membranes Y.Cao and J.A.Szpunar and W.Shmayda p. 211
- [15] H-Diffusivity and Solubility in Crystalline Pd-Ni Alloys Dilson S. dos Santos p. 219
- [16] Activation Energy of Diffusion of H in Pd₈₁Pt₁₉ Membrane during Absorption and Desorption of H D.Dudek p. 225
- [17] Theoretical and Experimental Studies of Zr Oxidation: Stress and Anisotropy Effects J.Favergeon and T.Montesin and C.Valot and G.Bertrand p. 231
- Selected papers arising from the Summer School on Mechanical Spectroscopy Q⁻¹ 2001, Aussois, France, June 25-29, 2001
- [18] Low-Temperature Acoustic and Thermal Properties of Plastically Deformed, High-Purity Crystalline Specimens of Al, Nb and Ta W. Wasserbach p. 245
- [19] Thermally Activated Dislocation Motion Studied by Internal Friction Z. Trojanova and P. Lukac and W. Riehemann p. 249
- [20] Mechanical Spectroscopy in Martensitic and Cold-Worked Carbon Steels I. Tkalcec and D. Mari p. 253

- [21] Internal Friction Study of Intermetallic Compound Fe₃Al Single Crystals A. Nagy and U. Harms and H. Neuhauser p. 257
- [22] Low-Frequency Damping Measured under Isothermal Conditions: Martensite Variant Interface Motion in Shape Memory Alloys V. Pelosin and A. Riviere p. 261
- [23] Mechanical Spectroscopy of Bulk Metallic Glasses J.M. Pelletier and B. Van de Moortele p. 265
- [24] Magnetomechanical Damping in Magnetized Nickel Aurel Ercuta and Ioan Mihalca p. 269
- [25] Internal Friction in a ZC63 Matrix Composite Z. Trojanova and P. Lukac p. 273
- [26] The Effect of Particle Reinforcement upon the Precipitation of Secondary Phases in Composites with Aluminum Matrix M. Nicoara and A. Raduta p. 277
- [27] Anelastic Properties of Magnesium-Matrix Composites as a Function of Temperature O. Couteau and R. Schaller p. 281
- [28] Internal Friction of Copper Thin Layers on Silicon Substrates J. von der Hagen and M. Weller and E. Arzt p. 285
- [29] Mechanical Spectroscopy of Icosahedral Al-Cu-Fe Quasicrystals Metal-Based Composites J. Fikar and R. Schaller and N. Guilbaud and N. Baluc p. 289
- Abstracts p. 293
- Ag p. 293
- Al p. 294
- Au p. 316
- Co p. 318
- Cr p. 321
- Cu p. 322
- Fe p. 342
- Ga p. 366
- In p. 366
- Ir p. 366
- K p. 367
- Mg p. 368
- Mn p. 368
- Mo p. 368
- Nb p. 371
- Ni p. 373
- Pd p. 401
- Pt p. 404
- Sn p. 405
- Ta p. 406
- Ti p. 409
- U p. 423
- V p. 423
- W p. 426
- Zn p. 430
- Zr p. 431

- General p. 434
- Author Index p. 503
- Keyword Index p. 523