

Table of Contents

Diffusion of Ga Implanted into α -Ti Studied by Means of the Rutherford Backscattering Technique

M. Behar, J.H.R. dos Santos, F. Bernardi and F. Dyment 1

Structural Characterization of Nanostructured Ni₃Al Processed by Inert Gas Condensation

M. Yandouzi, B. Pauwels, D. Schryvers, H. Van Swygenhoven and G. Van Tendeloo 19

Vacancy Diffusion in Non-Symmetrical Grain Boundaries in α -Zr

J.R. Fernández 31

The Influence of Hydrogen Treatment upon the Atomic Ordering and Physico-Mechanical Properties of Ni-Mo(W)-Re Alloys

V.V. Fedorov, E.V. Dyomina, I.I. Bulyk, P.V. Basisty, M.D. Prusakova and N.A. Vinogradova 37

Intrinsic and 'Extrinsic' Mechanisms of the Volume Diffusion of Gold in Iridium Single Crystals

A.V. Ermakov, S.M. Klotsman, G.N. Tatarinova, S.A. Matveev, A.N. Timofeyev, V.K. Rudenko, N.I. Timofeev and G.F. Kuzmenko 45

Thermal Stability of Deformation Twins in γ' -Strengthened Alloy 718

M. Sundararaman and P. Mukhopadhyay 61

Effects of Alloying Elements on Discontinuous Precipitation in Cu-0.75wt%Be Alloy

Bicrystals

R. Monzen, H. Shigehara and K. Murase 75

Direct Molecular Dynamics Observations of Bulk and Grain Boundary Diffusion in NiAl

D. Farkas and B. Soulé de Bas 83

The Six-Jump Cycle Diffusion Mechanism in Non-Stoichiometric B2 Intermetallics: the Vacancy-Wind Factor

I.V. Belova and G.E. Murch 95

Point Defects in FeAl Studied by Perturbed Angular Correlation

G.S. Collins, L.S.J. Peng and M.O. Zacate 107

Self-Diffusion of Titanium in Single-Crystalline γ -TiAl

T. Ikeda and H. Nakajima 133

Collection of Data on Positron Lifetimes and Vacancy Formation Energies of the Elements of the Periodic Table

J.M. Campillo Robles and F. Plazaola 141

Abstracts 1