Subject Index of Volume 177

Aluminium

difference between mechanical alloying and mechanical disordering in the amorphization reaction of Al₅₀Ta₅₀ in a rod mill, 229

effects of misch metal addition on the hot plasticity of an Al-Mg-Si wrought alloy, 175

kinetics of hydrogen absorption in the intermetallic $Zr(A_{10.2}Fe_{0.8})_2$, 183

residual stresses induced by LiH precipitation in an Al–Li alloy, 245

structural and superconducting properties of $YBa_2Cu_{3-x}Al_xO_{6+\delta}$ ($0 \le x \le 0.20$), 279

Amides

substitutional variants of nickel(II) amide: ternary amidoniccolates with lithium and caesium (Li₃Ni₄(NH)₂)₁₁·NH₃ and Cs₂Ni(NH₂)₄·NH₃, 193

Amorphous alloys

difference between mechanical alloying and mechanical disordering in the amorphization reaction of $Al_{50}Ta_{50}$ in a rod mill, 229

Antimony

synthesis, structure determination and magnetic susceptibilities of the oxides $\text{Ln}_3\text{Li}_5\text{Sb}_2\text{O}_{12}$ (Ln = Pr, Nd, Sm), 251

Barium

single-crystal investigation of Ba₃CaRu₂-O₉, L31

high-field magnetization of YBa₂Cu_{3-x}M_x-O₇ (M=Pb, Sn) at 4.2 K, 331 structural and superconducting properties of YBa₂Cu_{3-x}Al_xO_{6+ δ} (O \leq x \leq 0.20), 279

Behaviour

magnetic behaviour of heavy rare earth compounds of the type RF₁₀Cr₂, 93

Bismuth

hall effect in iron-doped Bi_{1.6}Pb_{0.4}Sr₂-Ca₂Cu₃O_y superconductors, 49

Borides

enthalpies of formation of refractory borides of 5d elements by high temperature direct synthesis calorimetry I. IrB_{1.35} and OsB_{2.5}, 159

Boron

high coercivity sintered Pr-Fe-B-Cu magnets using the hydrogen decrepitation process, 311

substitutional variants of nickel(II) amide: ternary amidonic colates with lithium and caesium $(\text{Li}_3\text{Ni}_4(\text{NH})_2)_{11}$ \cdot NH₃ and Cs₂Ni(NH₂)₄ \cdot NH₃, 193

Cadmium

partition of lanthanum and neodymium metals and chloride salts between molten cadmium and molten LiCl– KCl eutectic, 129

Caesium

substitutional variants of nickel(II) amide: ternary amidonic colates with lithium and caesium $(\text{Li}_3\text{Ni}_4(\text{NH})_2)_{11} \cdot \text{NH}_3$ and $\text{Cs}_2\text{Ni}(\text{NH}_2)_4 \cdot \text{NH}_3$, 193

Calcium

single-crystal investigation of Ba_3 - $CaRu_2O_9$, L31

hall effect in ion-doped Bi_{1.6}Pb_{0.4}Sr₂-Ca₂Cu₃O_y superconductors, 49 thermodynamic stability of CaRuO₃, 273

Calibration

phosphorus implantation in titanium: application to calibration analysis, 265

Chlorides

partition of lanthanum and neodymium metals and chloride salts between molten cadmium and molten LiCl– KCl eutectic, 129

Chromium

magnetic behaviour of heavy rare earth compounds of the type RF₁₀Cr₂, 93

Cobalt

magnetic and structural properties of TbFe_{10.8-x}Co_xW_{1.2} alloys, 259

note on the effect of cobalt substitution on the hard magnetic properties of NdFeC ingot magnets, L7

Copper

high coercivity sintered Pr-Fe-B-Cu magnets using the hydrogen decrepitation process, 311

high-field magnetization of YBa₂Cu_{3-x}- M_xO_7 (M \equiv Pb, Sn) at 4.2 K, 331 structural and superconducting properties of YBa₂Cu_{3-x}Al_xO_{6+ δ} (0 \leq x \leq 0.20), 279

Enthalpies of formation

enthalpies of formation of refractory borides of 5d elements by high temperature direct synthesis calorimetry I. IrB_{1.35} and OsB_{2.5}, 159

Gadolinium

¹⁵⁵Gd Mössbauer effect and magnetic properties of GdMn₆Sn₆, L11

synthesis, structural determination and magnetic behaviour of $Y_xGd_{1-x}VO_4$ phases ($x=0.25,\ 0.50,\ 0.75$), 143

Germanium

description of the Ag-Ge-Te ternary system, 337

Hafnium

thermodynamics of processes of hydrogen sorption by hydrides of intermetallic compounds of CrB structural type, 1

Hall effect

hall effect in iron-doped Bi_{1.6}Pb_{0.4}Sr₂-Ca₂Cu₃O_y superconductors, 49

Holmium

an investigation of the Ho-Ni phase diagram, 101

Hydrides

proton nuclear magnetic resonance line narrowing and tetragonal lattice distortion in SmH_{2+x} (0 $\leq x \leq$ 0.40), 83

thermodynamics of processes of hydrogen sorption by hydrides of intermetallic compounds of CrB structural type, 1

Hydrogen

high coercivity sintered Pr-Fe-B-Cu magnets using the hydrogen decrepitation process, 311

kinetics of hydrogen absorption in the intermetallic Zr(Al_{0.2}Fe_{0.8})₂, 183

nuclear magnetic resonance study of the electronic structure of TaV_2H_x - (D_x) , 63

residual stresses induced by LiH precipitation in an Al-Li alloy, 245

Hydrogen sorption

thermodynamics of processes of hydrogen sorption by hydrides of intermetallic compounds of CrB structural type, 1

Hydrogenation

microstructural correlation with the hydrogenation kinetics of $FeTi_{1+x}$ alloys, 107

Ingot magnets

note on the effect of cobalt substitution on the hard magnetic properties of NdFeC ingot magnets, L7

Iridium

growth of intermetallic layers in the iridium-molybdenum system, 219

Iron

a Mössbauer study of microcrystalline YFe₁₀V₂, L25

high coercivity sintered Pr-Fe-B-Cu magnets using the hydrogen decrepitation process, 311

kinetics of hydrogen absorption in the intermetallic Zr(Al_{0.2}Fe_{0.8})₂, 183

magnetic and structural properties of TbFe_{10.8-x}Co_xW_{1.2} alloys, 259

magnetic behaviour of heavy rare earth compounds of the type RF₁₀Cr₂, 93 microstructural correlation with the

hydrogenation kinetics of FeTi_{1+x} alloys, 107

Lanthanum

partition of lanthanum and neodymium metals and chloride salts between molten cadmium and molten LiCl-KCl eutectic, 129

Lead

hall effect in iron-doped $\rm Bi_{1.6}Pb_{0.4}Sr_{2^-}$ $\rm Ca_2Cu_3O_y$ superconductors, 49 high-field magnetization of $\rm YBa_2Cu_{3-x^-}$ $\rm M_xO_7$ (M \equiv Pb, Sn) at 4.2 K, 331 Lithium

residual stresses induced by LiH precipitation in an Al-Li alloy, 245 substitutional variants of nickel(II) amide: ternary amidoniccolates with lithium and caesium (Li₃Ni₄(NH)₂)₁₁·NH₃ and Cs₂Ni(NH₂)₄·NH₃, 193

synthesis, structure determination and magnetic susceptibilities of the oxides $\text{Ln}_3\text{Li}_5\text{Sb}_2\text{O}_{12}$ (Ln \equiv Pr, Nd, Sm), 251

Magnesium

effects of misch metal addition on the hot plasticity of an Al-Mg-Si wrought alloy, 175

investigation on electronically conducting oxide systems

XX. MgNiMnO₄ and properties of Mg_zNiMn_{2-z}O₄ spinels, 149

thermodynamics of formation of tetramagnesium niobate from e.m.f. measurements, L21

Magnetic behaviour

synthesis, structural determination and magnetic behaviour of $Y_xGd_{1-x}VO_4$ phases (x=0.25, 0.50, 0.75), 143

Magnetic properties

¹⁵⁵Gd Mössbauer effect and magnetic properties of GdMn_eSn_e, L11

magnetic and structural properties of TbFe_{10.8-x}Co_xW_{1.2} alloys, 259

note on the effect of cobalt substitution on the hard magnetic properties of NdFeC ingot magnets, L7

Magnetization

high-field magnetization of $YBa_2Cu_{3-x}M_xO_7$ (M=Pb, Sn) at 4.2 K, 331

Magnets

high coercitivity sintered Pr-Fe-B-Cu magnets using the hydrogen decrepitation process, 311

Manganese

¹⁵⁵Gd Mössbauer effect and magnetic properties of GdMn₆Sn₆, L77

investigation on electronically conducting oxide systems

XX. MgNiMnO₄ and properties of Mg_zNiMn_{2-z}O₄ spinels, 149

Microscopy

transmission electron microscopy study of a locally ordered Zr-O solid solution obtained by an oxidation treatment of a Zircaloy-4 alloy, 71

Molybdenum

growth of intermetallic layers in the iridium-molybdenum system, 219 surface alloying of molybdenum single crystal, L1

some constitutional studies on the molybdenum rhodium system, 321

Mössbauer study

¹⁵⁵Gd Mössbauer effect and magnetic properties of GdMn₆Sn₆, L11

Mössbauer spectroscopy as a nuclear probe for solid state transuranium chemistry, 285

Neodymium

partition of lanthanum and neodymium metals and chloride salts between molten cadmium and molten LiCl– KCl eutectic, 129

Neptunium

Mössbauer spectroscopy as a nuclear probe for solid state transuranium chemistry, 285

specific heats of NpTe and PuTe, 167 Nickel

an investigation of the Ho–Ni phase diagram, 101

investigation on electronically conducting oxide systems

XX. MgNiMnO₄ and properties of Mg_zNiMn_{2-z}O₄ spinels, 149

substitutional variants of nickel(II) amide: ternary amidoniccolates with lithium and caesium (Li₃Ni₄(NH)₂)₁₁· NH₃ and Cs₂Ni(NH₂)₄·NH₃, 193

the Ti-N-Ni system: investigations relevant for cermet sintering, 119

thermodynamics of processes of hydrogen sorption by hydrides of intermetallic compounds of CrB structural type, 1

Niobium

thermodynamics of formation of tetramagnesium niobate from e.m.f. measurements, L21

Nitrodoferrates

structural principles of nitridoferrates:
"isosteric" relations to main group
systems, L17

Nitrogen

substitutional variants of nickel(II) amide: ternary amidoniccolates with lithium and caesium (Li₃Ni₄(NH₂)₁₁·NH₃ and Cs₂Ni(NH₂)₄·NH₃, 193

the Ti-N-Ni system: investigations relevant for cermet sintering, 119,

Nuclear magnetic resonance

nuclear magnetic resonance study of the electronic structure of TaV_2H_x - (D_x) , 63 proton nuclear magnetic resonance line narrowing and tetragonal lattice distortion in SmH_{2+x} (0 $\leq x \leq$ 0.40), 83

Oxides

investigation on electronically conducting oxide systems

XX. MgNiMnO₄ and properties of Mg_zNiMn_{2-z}O₄ spinels, 149

synthesis, structure determination and magnetic susceptibilities of the oxides $Ln_3Li_5Sb_2O_{12}$ (Ln = Pr, Nd, Sm), 251

Oxygen

transmission electron microscopy study of a locally ordered Zr-O solid solution obtained by an oxidation treatment of a Zircaloy-4 alloy, 71

single-crystal investigation of Ba₃-CaRu₂O₉, L31

structural and superconducting properties of $YBa_2Cu_{3-x}Al_xO_{6+\delta}$ ($0 \le x \le 0.20$), 279

synthesis, structural determination and magnetic behaviour of $Y_xGd_{1-x}VO_4$ phases ($x=0.25,\ 0.50,\ 0.75$), 143 thermodynamic stability of CaRuO₃, 273

Phosphorus

phosphorus implantation in titanium: application to calibration analysis, 265

Plutonium

specific heats of NpTe and PuTe, 167 Potassium

partition of lanthanum and neodymium metals and chloride salts between molten cadmium and molten LiCl– KCl eutectic, 129

Praseodymium

high coercitivity sintered Pr-Fe-B-Cu magnets using the hydrogen decrepitation process, 311

Rare earths

magnetic behaviour of heavy rare earth compounds of the type RF₁₀Cr₂, 93 solid-state crystal growth of rare earth metals and alloys adopting the h.c.p. crystal structure, 31

Rhenium

surface alloying of molybdenum single crystal, L1

Rhodium

some constitutional studies on the molybdenum rhodium system, 321 Ruthenium

single-crystal investigation of Ba₃-

CaRu₂O₉, L31 thermodynamic stability of CaRuO₃, 273

Samarium

proton nuclear magnetic resonance line narrowing and tetragonal lattice distortion in SmH_{2+x} (0 $\leq x \leq$ 0.40), 83

synthesis, structure determination and magnetic susceptibilities of the oxides Ln₃Li₅Sb₂O₁₂ (Ln≡Pr, Nd, Sm), 251

Silicon

effects of misch metal addition on the hot plasticity of an Al-Mg-Si wrought alloy, 175

Silver

description of the ag-Ge-Te ternary system, 337

Stresses

residual stresses induced by LiH precipitation in an Al–Li alloy, 245 Strontium

hall effect in iron-doped $\mathrm{Bi}_{1.6}\mathrm{Pb}_{0.4}\mathrm{Sr}_2$ $\mathrm{Ca}_2\mathrm{Cu}_3\mathrm{O}_y$ superconductors, 49 Structure

magnetic and structural properties of $TeBe_{10.8-x}Co_xW_{1.2}$ alloys, 259

microstructural correlation with the hydrogenation kinetics of $FeTi_{1+x}$ alloys, 107

nuclear magnetic resonance study of the electronic structure of TaV_2H_x - (D_x) , 63

solid-state crystal growth of rare earth metals and alloys adopting the h.c.p. crystal structure, 31

structural principles of nitridoferrates: "isosteric" relations to main group systems, L17

synthesis, structural determination and magnetic behaviour of $Y_xGd_{1-x}VO_4$ phases (x=0.25, 0.50, 0.75), 143

synthesis, structural determination and magnetic susceptibilities of the oxides $\text{Ln}_3\text{Li}_5\text{Sb}_2\text{O}_{12}$ (Ln = pr, Nd, Sm), 251

Sublimation

sublimation study of the tin sulphides SnS_2 , Sn_2S_3 and SnS, 17

Sulphides

sublimation study of the tin sulphides SnS₂, Sn₂S₃ and SnS, 17

Superconductors

Hall effect in ion-doped

 $Bi_{1.6}Pb_{0.4}Sr_2Ca_2Cu_3O_y$ superconductors, 49

Surface alloying

surface alloying of molybdenum single crystal, L1

Synthesis

enthalpies of formation of refractory borides of 5d elements by high temperature direct synthesis calorimetry I. IrB_{1,35} and OsB_{2,5}, 195

synthesis, structure determination and magnetic susceptibilities of the oxides $\text{Ln}_3\text{Li}_5\text{Sb}_2\text{O}_{12}$ (Ln \equiv Pr, Nd, Sm), 251

Tantalum

difference between mechanical alloying and mechanical disordering in the amorphization reaction of Al₅₀Ta₅₀ in a rod mill, 229

nuclear magnetic resonance study of the electronic structure of $TaV_2H_{x^-}$ (D_x), 63

Technetium

description of the Ag-Ge-Te ternary system, 337

Tellurium

specific heats of NpTe and PuTe, 167 Terbium

magnetic and structural properties of TbFe_{10.8-x}Co_xW_{1.2} alloys, 259

Thermodynamics

thermodynamic stability of $CaRuO_3$, 273

thermodynamics of formation of tetramagnesium niobate from e.m.f. measurements, L21

thermodynamics of processes of hydrogen sorption by hydrides of intermetallic compounds of CrB structural type, 1

Tin

155Gd Mössbauer effect and magnetic properties of GdMn₆Sn₆, L11
 high-field magnetization of YBa₂Cu_{3-x}-M_xO₇ (M≡Pb, Sn) at 4.2 K, 331

sublimation study of the tin sulphides SnS₂, Sn₂S₃ and SnS, 17

Titanium

microstructural correlation with the hydrogenation kinetics of $FeTi_{1+x}$ alloys, 107

phosphorus implantation in titanium: application to calibration analysis, 265

the Ti-N-Ni system: investigations relevant for cermet sintering, 119

Transuranium chemistry

Mössbauer spectroscopy as a nuclear probe for solid state transuranium chemistry, 285

Tungston

magnetic and structural properties of TbFe_{10.8-x}Co_xW_{1.2} alloys, 259

Vanadium

a Mössbauer study of microcrystalline $YFe_{10}V_2$, L25

nuclear magnetic resonance study of the electronic structure of TaV_2H_x -(D_x), 63

synthesis, structural determination and magnetic behaviour of $Y_xGd_{1-x}VO_4$ phases (x=0.25, 0.50, 0.75), 143

Yttrium

a Mössbauer study of microcrystalline $YFe_{10}V_2$, L25

high-field magnetization of YBa_2Cu_{3-x} - M_xO_7 ($M \equiv Pb$, Sn) at 4.2 K, 331

structural and superconducting properties of $YBa_2Cu_{3-x}Al_xO_{6+\delta}$ ($0 \le x \le 0.20$), 279

synthesis, structural determination and magnetic behaviour of $Y_xGd_{1-x}VO_4$ phases (x=0.25, 0.50, 0.75), 143

Zirconium

transmission electron microscopy study of a locally ordered Zr-O solid solution obtained by an oxidation treatment of a Zircaloy-4 alloy, 71

kinetics of hydrogen absorption in the intermetallic Zr(Al_{0.2}Fe_{0.8})₂, 183

thermodynamics of processes of hydrogen sorption by hydrides of intermetallic compounds of CrB structural type, 1