

Subject Index of Volume 203

- A.c. impedance**
 an investigation of the electrochemical kinetics of deuterium insertion into a Pd membrane electrode in 0.1 M LiOD solution by the a.c. impedance technique, 149
- Aging**
 the isothermal section of the Cu-rich Cu–Be–Co ternary system at 500 °C, L5
- Alkali metal uranates**
 magnetic studies on alkali metal uranates(V) MUO_3 with the perovskite structure, 251
- Alkaline earth metal vanadates**
 reactions of the alkaline earth metal pyro- and orthovanadates with ammonia, 181
- Alloying**
 isothermal section from 50 to 75 at.% Mg of the ternary system Y–La–Mg, 177
- Alloys**
 thermodynamic properties of liquid alloys of 3d transition metals with metalloids (silicon, carbon and boron), 103
- Aluminium**
 ^{155}Gd Mössbauer effect in AlB_2 -type $\text{GdGa}_{2-x}\text{Al}_x$ compounds, 97
 magnetic properties of $\text{Ce}_2\text{Fe}_{17-x}\text{Al}_x(\text{N}_y)$ compounds, 217
 $\text{Al}_{69}\text{Ta}_{39}$ —A new variant of a face-centred cubic giant cell structure, 271
- Ammonia**
 reactions of the alkaline earth metal pyro- and orthovanadates with ammonia, 181
- Amorphous alloys**
 solid state nitritization reaction of amorphous tantalum aluminium nitride alloy powders: The role of amorphization by reactive ball milling, 117
- Annealing**
 the isothermal section of the Cu-rich Cu–Be–Co ternary system at 500 °C, L5
 the crystal structure of $\text{NdFe}_{1-x}\text{Sb}_2$ and isotypic compounds $\text{RE}(\text{Fe}, \text{Co})_{1-x}\text{Sb}_2$ ($\text{RE} \equiv \text{La}, \text{Ce}, \text{Pr}, \text{Sm}, \text{Gd}$), 133
- Antiferromagnetism**
 structural and magnetic characterization of novel stoichiometric LnCaCrO_4 oxides (Ln, rare earth), 148
- 3D-Antiferromagnetism**
 characterization and magnetic properties of the new green-coloured R_2BaCoO_5 oxides ($\text{R} \equiv \text{Dy-Lu}$ and Y), 15
- Arc melting**
 the crystal structure of $\text{NdFe}_{1-x}\text{Sb}_2$ and isotypic compounds $\text{RE}(\text{Fe}, \text{Co})_{1-x}\text{Sb}_2$ ($\text{RE} \equiv \text{La}, \text{Ce}, \text{Pr}, \text{Sm}, \text{Gd}$), 133
- Ball milling**
 effect of ball milling on the hydrogen absorption rate of FeTi and Mg_2Ni compounds, L7
- Bonding strengths**
 thermochemical assessment and systematics of bonding strengths in solid and liquid “MeN” 3d transition metal nitrides, 77
- Boride**
 new incommensurate structures of the borides $\text{Pr}_{41}(\text{Mn}_4\text{B}_4)_{35}$ and $\text{Pr}_7(\text{Re}_4\text{B}_4)_6$, 55
- Boron carbides**
 thermal conductivity and specific heat of boron carbides, 67
- Bromine**
 room temperature synthesis and structural characterization of monoclinic LiCuO_2 by X-ray and neutron diffraction, 203
- Canting**
 structural and magnetic characterization of novel stoichiometric LnCaCrO_4 oxides (Ln, rare earth), 148
- Carbides**
 R_2Fe_{17} and RM_{12} carbide and carbonitride synthesis from heavy hydrocarbon compounds, 157
- Carbonitrides**
 R_2Fe_{17} and RM_{12} carbide and carbonitride synthesis from heavy hydrocarbon compounds, 157
- Cell structure**
 $\text{Al}_{69}\text{Ta}_{39}$ —A new variant of a face-centred cubic giant cell structure, 271
- Ceramic composites**
 preparation and microstructure of Al_2O_3 –TiC composites by self-propagated high temperature synthesis, 127
- Ce valence**
 structural study of CeM_2 ($\text{M} \equiv \text{Fe}, \text{Co}, \text{Ni}$), 35
- Chloroborates**
 luminescence in the chloroborates $\text{Ba}_2\text{LN}(\text{BO}_3)_2\text{Cl}$, 267
- Clusters**
 synthesis, high resolution electron microscopy and crystal structure refinement of the cluster compound $\text{Ba}_3\text{Nb}_{16}\text{O}_{23}$ by X-ray and neutron diffraction, 209
- Copper**
 the isothermal section of the Cu-rich Cu–Be–Co ternary system at 500 °C, L5
 partial phase diagram for the system $\text{Cu}_{0.5}\text{Au}_{0.5-x}\text{Ni}_x$ with $x \leq 0.15$, 45
- Crystal field**
 note on the crystal field and intersublattice coupling in $\text{Er}_2\text{Fe}_{17}\text{C}$ and $\text{Tm}_2\text{Fe}_{17}\text{C}$ studied by means of the ^{166}Er and ^{169}Tm Mössbauer effect, 199
- Crystal field parameters**
 ^{155}Gd Mössbauer effect in AlB_2 -type $\text{GdGa}_{2-x}\text{Al}_x$ compounds, 97
- Crystallization**
 solid state nitritization reaction of amorphous tantalum aluminium nitride alloy powders: The role of amorphization by reactive ball milling, 117
- Crystal structure**
 new incommensurate structures of the borides $\text{Pr}_{41}(\text{Mn}_4\text{B}_4)_{35}$ and $\text{Pr}_7(\text{Re}_4\text{B}_4)_6$, 55
 the crystal structure of $\text{NdFe}_{1-x}\text{Sb}_2$ and isotypic compounds $\text{RE}(\text{Fe}, \text{Co})_{1-x}\text{Sb}_2$ ($\text{RE} \equiv \text{La}, \text{Ce}, \text{Pr}, \text{Sm}, \text{Gd}$), 133
 the structure of some ternary intermetallic compounds of the rare earths, 137
 synthesis, high resolution electron microscopy and crystal structure refinement of the cluster compound $\text{Ba}_3\text{Nb}_{16}\text{O}_{23}$ by X-ray and neutron diffraction, 209

Cuprates

room temperature synthesis and structural characterization of monoclinic LiCuO_2 by X-ray and neutron diffraction, 203

Demixing

magnetic susceptibility and demixing in liquid Fe–Sn, 139

Deuterium absorption

an investigation of the electrochemical kinetics of deuterium insertion into a Pd membrane electrode in 0.1 M LiOD solution by the a.c. impedance technique, 149

Deuterium diffusivity

an investigation of the electrochemical kinetics of deuterium insertion into a Pd membrane electrode in 0.1 M LiOD solution by the a.c. impedance technique, 149

Diffraction profiles

room temperature synthesis and structural characterization of monoclinic LiCuO_2 by X-ray and neutron diffraction, 203

Electrical properties

the ionic conductivity properties of $\text{Bi}_{1-x}^{2+}(\text{A}_{0.5}^{2+}\text{B}_{0.5}^{5+})_x\text{O}_{1.5+0.25x}$ ($\text{A} \equiv \text{Pb, Mg; B} \equiv \text{Nb, Ta}$), 229

Electrical resistivity

coexistence of ordered and disordered phases in a CeGe_{2-x} single crystal, 1
electrical resistivity in the R_3Si_3 systems ($\text{R} \equiv \text{La, Ce, Pr, Nd, Sm}$), L11
investigation by ^{119}Sn Mössbauer spectroscopy, magnetic and electrical resistivity measurements of $\text{U}_2\text{M}_2\text{Sn}$ stannides ($\text{M} \equiv \text{Fe, Co, Ni, Ru, Rh, Pd}$), 29

Electrochemical kinetics

an investigation of the electrochemical kinetics of deuterium insertion into a Pd membrane electrode in 0.1 M LiOD solution by the a.c. impedance technique, 149

Electrochemical properties

electrochemical and surface properties of $\text{Zr}(\text{V}_x\text{Ni}_{1-x})_2$ alloys as hydrogen-absorbing electrodes in alkaline electrolyte, 235

Electrode materials

electrode stability of La–Ni–Mn hydride-forming materials prepared by conventional and rapid quenching techniques, 195

Electron microscopy

synthesis, high resolution electron microscopy and crystal structure refinement of the cluster compound $\text{Ba}_3\text{Nb}_6\text{O}_{23}$ by X-ray and neutron diffraction, 209

Energy migration

luminescence in the chloroborates $\text{Ba}_2\text{LN}(\text{BO}_3)_2\text{Cl}$, 267

Faradaic impedance

an investigation of the electrochemical kinetics of deuterium insertion into a Pd membrane electrode in 0.1 M LiOD solution by the a.c. impedance technique, 149

Fluorite-type structures

the ionic conductivity properties of $\text{Bi}_{1-x}^{2+}(\text{A}_{0.5}^{2+}\text{B}_{0.5}^{5+})_x\text{O}_{1.5+0.25x}$ ($\text{A} \equiv \text{Pb, Mg; B} \equiv \text{Nb, Ta}$), 229

Gold

partial phase diagram for the system $\text{Cu}_{0.5}\text{Au}_{0.5-x}\text{Ni}_x$ with $x < 0.15$, 45

High temperature synthesis

preparation and microstructure of Al_2O_3 –TiC composites by self-propagated high temperature synthesis, 127

Homogeneity

structure and high-temperature phase of $\text{Ti}_{1-x}\text{Al}_{1+x}$, 189

Hydrides

low temperature formation of MgH_2 in $\text{Ti}_{0.6}\text{Zr}_{0.4}\text{Mn}_{0.8}\text{CrCu}_{0.2}/\text{Mg}$, 61
ternary strontium-rhodium-hydride, 91
electrode stability of La–Ni–Mn hydride-forming materials prepared by conventional and rapid quenching techniques, 195

Hydrogen absorption

effect of ball milling on the hydrogen absorption rate of FeTi and Mg_2Ni compounds, L7

Hydrogen reduction

reactions of the alkaline earth metal pyro- and orthovanadates with ammonia, 181

Hydrogen sorption

electrochemical and surface properties of $\text{Zr}(\text{V}_x\text{Ni}_{1-x})_2$ alloys as hydrogen-absorbing electrodes in alkaline electrolyte, 235

Incommensurate structure

new incommensurate structures of the borides $\text{Pr}_{41}(\text{Mn}_4\text{B}_4)_{35}$ and $\text{Pr}_7(\text{Re}_4\text{B}_4)_6$, 55

Interdiffusion

low temperature formation of MgH_2 in $\text{Ti}_{0.6}\text{Zr}_{0.4}\text{Mn}_{0.8}\text{CrCu}_{0.2}/\text{Mg}$, 61

Intermetallic compounds

the structure of some ternary intermetallic compounds of the rare earths, 137
electrode stability of La–Ni–Mn hydride-forming materials prepared by conventional and rapid quenching techniques, 195

Intersublattice coupling

note on the crystal field and intersublattice coupling in $\text{Er}_2\text{Fe}_{17}\text{C}$ and $\text{Tm}_2\text{Fe}_{17}\text{C}$ studied by means of the ^{166}Er and ^{169}Tm Mössbauer effect, 199

Ionic conductivity

the ionic conductivity properties of $\text{Bi}_{1-x}^{2+}(\text{A}_{0.5}^{2+}\text{B}_{0.5}^{5+})_x\text{O}_{1.5+0.25x}$ ($\text{A} \equiv \text{Pb, Mg; B} \equiv \text{Nb, Ta}$), 229

Iron

magnetic susceptibility and demixing in liquid Fe–Sn, 139
optimization and calculation of the Fe–Ta phase diagram, 281

Isotypic compounds

the crystal structure of $\text{NdFe}_{1-x}\text{Sb}_2$ and isotypic compounds $\text{RE}(\text{Fe, Co})_{1-x}\text{Sb}_2$ ($\text{RE} \equiv \text{La, Ce, Pr, Sm, Gd}$), 133

Lattice parameters

structural characterization of $\text{Sm}_{1-x}\text{Ca}_x\text{FeO}_{3-y}$ ($0 \leq x \leq 0.50$), L1

Lattice stability

structural stability and thermodynamic properties of Zr–N alloys, 221

Lanthanum

description and crystal structure of new lanthanum orates $\text{La}_4\text{Au}_2\text{O}_9$, 7

Liquid metals

magnetic susceptibility and demixing in liquid Fe–Sn, 139

Low temperature

low-temperature phase transitions in some quaternary solid solutions of IV–VI semiconductors, 51

Luminescence

luminescence in the chloroborates $\text{Ba}_2\text{LN}(\text{BO}_3)_2\text{Cl}$, 267

- Magnesium**
 low temperature formation of MgH_2 in $\text{Ti}_{0.6}\text{Zr}_{0.4}\text{Mn}_{0.8}\text{CrCu}_{0.2}/\text{Mg}$, 61
- Magnetic behaviour**
 structural and magnetic characterization of novel stoichiometric LnCaCrO_4 oxides (Ln, rare earth), 148
- Magnetic properties**
 coexistence of ordered and disordered phases in a CeGe_{2-x} single crystal, 1
 magnetic properties of rare earth–manganese compounds of the type RMnSi_2 , 23
 R_2Fe_{17} and RM_{12} carbide and carbonitride synthesis from heavy hydrocarbon compounds, 157
 structure and magnetic properties of Fe_4N –Fe alloys produced by mechanical milling, 169
 magnetic properties of $\text{Ce}_2\text{Fe}_{17-x}\text{Al}_x(\text{N}_y)$ compounds, 217
 magnetic properties of DyMn_6Ge_6 studied by neutron diffraction and magnetic measurements, 243
- Magnetic resistivity**
 investigation by ^{119}Sn Mössbauer spectroscopy, magnetic and electrical resistivity measurements of $\text{U}_2\text{M}_2\text{Sn}$ stannides ($\text{M} \equiv \text{Fe, Co, Ni, Ru, Rh, Pd}$), 29
- Magnetic structure**
 magnetic properties of DyMn_6Ge_6 studied by neutron diffraction and magnetic measurements, 243
- Magnetic studies**
 magnetic studies on alkali metal uranates(V) MUO_3 with the perovskite structure, 251
- Magnetic susceptibility**
 magnetic susceptibility and demixing in liquid Fe–Sn, 139
- Magnetic transitions**
 electrical resistivity in the R_5Si_3 systems ($\text{R} \equiv \text{La, Ce, Pr, Nd, Sm}$), L11
- Manganese**
 magnetic properties of rare earth–manganese compounds of the type RMnSi_2 , 23
- Mechanical alloying**
 solid state nitridation reaction of amorphous tantalum aluminium nitride alloy powders: The role of amorphization by reactive ball milling, 117
 structure and magnetic properties of Fe_4N –Fe alloys produced by mechanical milling, 169
- Metallography**
 structure and high-temperature phase of $\text{Ti}_{1-x}\text{Al}_{1+x}$, 189
- Metalloid**
 thermodynamic properties of liquid alloys of 3d transition metals with metalloids (silicon, carbon and boron), 103
- Metal nitrides**
 thermochemical assessment and systematics of bonding strengths in solid and liquid “MeN” 3d transition metal nitrides, 77
 solid state nitridation reaction of amorphous tantalum aluminium nitride alloy powders: The role of amorphization by reactive ball milling, 117
- Mössbauer effect**
 ^{155}Gd Mössbauer effect in AlB_2 -type $\text{GdGa}_{2-x}\text{Al}_x$ compounds, 97
 note on the crystal field and intersublattice coupling in $\text{Er}_2\text{Fe}_{17}\text{C}$ and $\text{Tm}_2\text{Fe}_{17}\text{C}$ studied by means of the ^{166}Er and ^{169}Tm Mössbauer effect, 199
- Mössbauer spectra**
 structure and magnetic properties of Fe_4N –Fe alloys produced by mechanical milling, 169
- Mössbauer spectroscopy**
 investigation by ^{119}Sn Mössbauer spectroscopy, magnetic and electrical resistivity measurements of $\text{U}_2\text{M}_2\text{Sn}$ stannides ($\text{M} \equiv \text{Fe, Co, Ni, Ru, Rh, Pd}$), 29
- Neutron diffraction**
 magnetic properties of DyMn_6Ge_6 studied by neutron diffraction and magnetic measurements, 243
- Nickel**
 partial phase diagram for the system $\text{Cu}_{0.5}\text{Au}_{0.5-x}\text{Ni}_x$ with $x \leq 0.15$, 45
- Nitrogenation**
 magnetic properties of $\text{Ce}_2\text{Fe}_{17-x}\text{Al}_x(\text{N}_y)$ compounds, 217
- Non-stoichiometry**
 structural and magnetic characterization of novel stoichiometric LnCaCrO_4 oxides (Ln, rare earth), 148
- Orthoferrites**
 structural characterization of $\text{Sm}_{1-x}\text{Ca}_x\text{FeO}_{3-y}$ ($0 \leq x \leq 0.50$), L1
- Oxides**
 characterization and magnetic properties of the new green-coloured R_2BaCoO_5 oxides ($\text{R} \equiv \text{Dy-Lu and Y}$), 15
- Oxoniobates**
 synthesis, high resolution electron microscopy and crystal structure refinement of the cluster compound $\text{Ba}_3\text{Nb}_{16}\text{O}_{23}$ by X-ray and neutron diffraction, 209
- Oxygen**
 description and crystal structure of new lanthanum orates $\text{La}_4\text{Au}_2\text{O}_9$, 7
- Palladium**
 an investigation of the electrochemical kinetics of deuterium insertion into a Pd membrane electrode in 0.1 M LiOD solution by the a.c. impedance technique, 149
- Perovskite structures**
 magnetic studies on alkali metal uranates(V) MUO_3 with the perovskite structure, 251
- Phase diagrams**
 the isothermal section of the Cu-rich Cu–Be–Co ternary system at 500 °C, L5
 partial phase diagram for the system $\text{Cu}_{0.5}\text{Au}_{0.5-x}\text{Ni}_x$ with $x \leq 0.15$, 45
 structural stability and thermodynamic properties of Zr–N alloys, 221
 phases in rapidly cooled scandium–silicon samples, 259
 optimization and calculation of the Fe–Ta phase diagram, 281
- Phase relationships**
 isothermal section from 50 to 75 at.% Mg of the ternary system Y–La–Mg, 177
- Phase transformations**
 structural phase transformation and shape memory effect in ZrRh and ZrIr, 165
- Phase transitions**
 low-temperature phase transitions in some quaternary solid solutions of IV–VI semiconductors, 51
- Physical properties**
 structural study of CeM_2 ($\text{M} \equiv \text{Fe, Co, Ni}$), 35
- Polymorphism**
 characterization and magnetic properties of the new green-coloured R_2BaCoO_5 oxides ($\text{R} \equiv \text{Dy-Lu and Y}$), 15

- Powder metallurgy**
 solid state nitridation reaction of amorphous tantalum aluminium nitride alloy powders: The role of amorphization by reactive ball milling, 117
- Powder neutron diffraction**
 structural studies of Li_5ReO_6 , Li_4NpO_5 and Li_5NpO_6 by neutron and X-ray powder diffraction, 289
- Rapid quenching**
 electrode stability of La–Ni–Mn hydride-forming materials prepared by conventional and rapid quenching techniques, 195
- Rare earths**
 the structure of some ternary intermetallic compounds of the rare earths, 137
- Reactive ball milling**
 solid state nitridation reaction of amorphous tantalum aluminium nitride alloy powders: The role of amorphization by reactive ball milling, 117
- Rhodium**
 ternary strontium-rhodium-hydride, 91
- Scandium**
 phases in rapidly cooled scandium–silicon samples, 259
- Semiconductors**
 low-temperature phase transitions in some quaternary solid solutions of IV–VI semiconductors, 51
- Shape memory effect**
 structural phase transformation and shape memory effect in ZrRh and ZrIr, 165
- Silicides**
 electrical resistivity in the R_5Si_3 systems ($\text{R} \equiv \text{La}, \text{Ce}, \text{Pr}, \text{Nd}, \text{Sm}$), L11
- Silicon**
 phases in rapidly cooled scandium–silicon samples, 259
- Single crystals**
 description and crystal structure of new lanthanum orates $\text{La}_4\text{Au}_2\text{O}_9$, 7
- Solid solutions**
 the ionic conductivity properties of $\text{B}_{1-x}^{\text{A}} (\text{A}_{0.5}^{\text{B}} \text{B}_{0.5}^{\text{B}})_x \text{O}_{1.5+0.25x}$ ($\text{A} \equiv \text{Pb}, \text{Mg}; \text{B} \equiv \text{Nb}, \text{Ta}$), 229
- Solid state amorphization**
 solid state nitridation reaction of amorphous tantalum aluminium nitride alloy powders: The role of amorphization by reactive ball milling, 117
- Solid-state reactions**
 structural studies of Li_5ReO_6 , Li_4NpO_5 and Li_5NpO_6 by neutron and X-ray powder diffraction, 289
- Space group**
 new incommensurate structures of the borides $\text{Pr}_{41}(\text{Mn}_4\text{B}_4)_{35}$ and $\text{Pr}_7(\text{Re}_4\text{B}_4)_6$, 55
- Specific heat**
 thermal conductivity and specific heat of boron carbides, 67
- Strontium**
 ternary strontium-rhodium-hydride, 91
- Structure preparation**
 structural characterization of $\text{Sm}_{1-x}\text{Ca}_x\text{FeO}_{3-y}$ ($0 \leq x \leq 0.50$), L1
- Surface properties**
 electrochemical and surface properties of $\text{Zr}(\text{V}_x\text{Ni}_{1-x})_2$ alloys as hydrogen-absorbing electrodes in alkaline electrolyte, 235
- Symmetry relationship**
 structure and high-temperature phase of $\text{Ti}_{1-x}\text{Al}_{1+x}$, 189
- Synthesis**
 structural studies of Li_5ReO_6 , Li_4NpO_5 and Li_5NpO_6 by neutron and X-ray powder diffraction, 289
- Systematics**
 thermochemical assessment and systematics of bonding strengths in solid and liquid “MeN” 3d transition metal nitrides, 77
- Tantalum**
 $\text{Al}_{69}\text{Ta}_{39}$ – A new variant of a face-centred cubic giant cell structure, 271
 optimization and calculation of the Fe–Ta phase diagram, 281
- Ternary phases**
 the structure of some ternary intermetallic compounds of the rare earths, 137
- Thermal conductivity**
 thermal conductivity and specific heat of boron carbides, 67
- Thermochemical assessment**
 thermochemical assessment and systematics of bonding strengths in solid and liquid “MeN” 3d transition metal nitrides, 77
- Thermodynamic properties**
 structural stability and thermodynamic properties of Zr–N alloys, 221
 thermodynamic properties of liquid alloys of 3d transition metals with metalloids (silicon, carbon and boron), 103
 optimization and calculation of the Fe–Ta phase diagram, 281
- Tin**
 magnetic susceptibility and demixing in liquid Fe–Sn, 139
- 3d Transition metal**
 thermodynamic properties of liquid alloys of 3d transition metals with metalloids (silicon, carbon and boron), 103
- Valence instability**
 magnetic properties of rare earth–manganese compounds of the type RMnSi_2 , 23
- Vapour pressures**
 structural stability and thermodynamic properties of Zr–N alloys, 221
- X-ray diffraction**
 partial phase diagram for the system $\text{Cu}_{0.5}\text{Au}_{0.5-x}\text{Ni}_x$ with $x \leq 0.15$, 45
 isothermal section from 50 to 75 at.% Mg of the ternary system Y–La–Mg, 177