Subject Index of Volume 206

Alkaline-earth metals duce cemented carbides and metal-matrix composites, compounds of alkaline-earth and divalent rare-earth metals 77 stabilized by hydrogen impurities. The Yb₅Sb₃ and Cerium Mn₅Si₃ structure types for pnictides, L15 new cerium nitride chlorides: Ce₆Cl₁₂N₂ and CeNCl, 95 Aluminium Chlorides crystal structure of orthorhombic Co₄Al₁₃, 243 new cerium nitride chlorides: Ce₆Cl₁₂N₂ and CeNCl, 95 Anilite Chromium study on sulfur vaporization from covellite (CuS) and anihomogeneity ranges and thermodynamic properties of the lite ($Cu_{1.75}S$), 113 Te-rich phases in the Cr-Te system, 201 Annealing Cobalt on the order and disorder of the transition metal (T) and crystal structure of orthorhombic Co₄Al₁₃, 243 silicon atoms in ternary thorium transition metal silithe crystal chemistry of Ni₃AsVO₈ and Co₃AsVO₈, 255 cides of the compositions Th₂TSi₃ and ThTSi, 133 electrode characterisation of MmNi5-based alloys for Antiferromagnetism nickel-metal hydride batteries, L3 crystallographic and magnetic structure of TbPtGa, 225 Columbite concentrates Antimony carbothermic reduction of a columbite concentrate to prosolid state phase equilibria in the Ni-Ga-Sb system: experduce cemented carbides and metal-matrix composites, imental and calculated determinations, 21 77 Arc melting Complex on the order and disorder of the transition metal (T) and the preparation and luminescence of Eu(III) activated osilicon atoms in ternary thorium transition metal siliphenanthroline containing Gd(III) succinate phosphors, cides of the compositions Th₂TSi₃ and ThTSi, 133 195 Atomic diffusion mechanism Copper on the atomic diffusion mechanism and diffusivity of nitroinformation on calcium-copper-orthoarsenates: gen atoms in Sm₂Fe₁₇, 1 Ca15Cu15(AsO4)2, 155 Au-Cu-Pt ternary system coherent phase diagram of the AuCu-Pt section in the coherent phase diagram of the AuCu-Pt section in the Au-Cu-Pt ternary system, 217 Au-Cu-Pt ternary system, 217 behaviour of Cu(II) hydroxide during mechanical treatment, 267 Corrosion behaviour Barium-gold alloy information on the first barium-potassium-oxo-acetyl-oranisotropic hydrogen decrepitation and corrosion behaviour ates(III): KBa₄AuO₄(C₂)₂, 259 in NdFeB magnets, L7 Covellite Bervllium on new CaBe₂Ge₂-type representatives MAu₂Al₂, 263 study on sulfur vaporization from covellite (CuS) and anilite (Cu_{1.75}S), 113 Bond order new cerium nitride chlorides: Ce₆Cl₁₂N₂ and CeNCl, 95 Crystal chemistry Boron crystal chemistry of BaNiPr2O5 and BaMn0.36Mg0.64Nd2O5, on the order and disorder of the transition metal (T) and 159 silicon atoms in ternary thorium transition metal silicrystal chemistry of CaBeGd₂O₅ and BaBeNd₂O₅, 175 cides of the compositions Th₂TSi₃ and ThTSi, 133 Crystal field parameters correlation between the luminescence and the crystal structure of the hexagonal phase of RbGd₃F₁₀, 109 Calcium Crystal structure information on calcium-copper-orthoarsenates: synthesis and crystal structure of the potassium imido Ca15Cu15(AsO4)2, 155 nitrido polytungstate(VI) K14W6N16NH, 15 on new CaBe2Ge2-type representatives MAu2Al2, 263 syntheses, crystal structures, and vibrational spectroscopic Calculations properties of MgCN₂, SrCN₂, and BaCN₂, 179 solid state phase equilibria in the Ni-Ga-Sb system: experstructure and magnetic properties of CeCo₃Ga₂, 189 imental and calculated determinations, 21 crystallographic and magnetic structure of TbPtGa, 225 Carbides crystal structure of orthorhombic Co₄Al₁₃, 243 kinetics and mechanism of the oxidation of ZrC, 237 the crystal chemistry of Ni₃AsVO₈ and Co₃AsVO₈, 255 information on the first barium-potassium-oxo-acetyl-oron new CaBe₂Ge₂-type representatives MAu₂Al₂, 263 ates(III): $KBa_4AuO_4(C_2)_2$, 259 Cyanamides Carbothermic reduction syntheses, crystal structures, and vibrational spectroscopic carbothermic reduction of a columbite concentrate to proproperties of MgCN₂, SrCN₂, and BaCN₂, 179 duce cemented carbides and metal-matrix composites, 77

Decomposition

on β -phase decomposition in the In-Sn binary system, 215

Cemented carbides

carbothermic reduction of a columbite concentrate to pro-

Deformation crystal chemistry of BaNiPr2O5 and BaMn0.36Mg0.64Nd2O5, 159 Deuterides monoclinic Sr₂Mg₃H₁₀ with Ba₂Ni₃F₁₀-type structure, 73 Deuterium absorption deuterium absorption and material phase characteristics of Zr₂Fe, 83 Diffusion on the atomic diffusion mechanism and diffusivity of nitrogen atoms in Sm₂Fe₁₇, 1 Electrical conduction study of electrical conduction behaviour of the $Sr_{1-x}La_xTi_{1-x}Ni_xO_3$ (x < 0.10) system, 147 Electrical resistivity CeCuSb₂ and CeNiSb: new exotic Kondo systems, 141 Electrode reactions electrode reactions of uranium during electrolysis of its oxide in a molten fluoride mixture, 249 Electrolysis electrode reactions of uranium during electrolysis of its oxide in a molten fluoride mixture, 249 Electron compacting additives effects of electrode compacting additives on the cycle life and high-rate dischargeability of $Zr(V_{0.25}Ni_{0.75})_2$ metal hydride electrodes in alkaline solution, 31 Equilibrium characteristics of titanium-based C14-type Laves phase alloys and their hydride electrodes, 43 thermodynamic assessment of the Ti-Zr system and calculation of the Nb-Ti-Zr phase diagram, 121 Ermanium on new CaBe₂Ge₂-type representatives MAu₂Al₂, 263 Europium the preparation and luminescence of Eu(III) activated ophenanthroline containing Gd(III) succinate phosphors, 195 information on Eu₂TiO₅, L11 Excitation study of electrical conduction behaviour of the $Sr_{1-x}La_{x}Ti_{1-x}Ni_{x}O_{3}$ (x < 0.10) system, 147 Fluoride correlation between the luminescence and the crystal structure of the hexagonal phase of $RbGd_3F_{10}$, 109 electrode reactions of uranium during electrolysis of its oxide in a molten fluoride mixture, 249 Gadolinium correlation between the luminescence and the crystal structure of the hexagonal phase of RbGd₃F₁₀, 109 the preparation and luminescence of Eu(III) activated ophenanthroline containing Gd(III) succinate phosphors, 195 Gallium solid state phase equilibria in the Ni-Ga-Sb system: experimental and calculated determinations, 21 Gold coherent phase diagram of the AuCu-Pt section in the Au-Cu-Pt ternary system, 217 Rb₂Au₃, a layered structure in the rubidium-gold system, 277 Heat capacity effect of hydrogen absorption on structure, superconductiv-

ity, magnetic susceptibility and heat capacity of Zr₂Rh, 47 Heating tailormade: K_3 {Li[IrO₄]} = $K_{6\infty}^1$ [(O_{2/2}LiO₂IrO_{2/2})₂], the first lithooxoiridate, 271 Heating rate differential scanning calorimetry study of the effects of heating rate on the $\alpha \rightarrow \beta$ transformation in unalloyed plutonium, 103 High temperature reactions the crystal structure of earth alkali metal-lanthanoid-zincates: (I) Ba₂Tm₂Zn₈O₁₃, (II) $Ba_2Y_2Zn_8O_{13}$, (III) $BaEr_2ZnO_5$ and (IV) $Ba_5Er_8Zn_4O_{21}$, 163 Homogeneity homogeneity ranges and thermodynamic properties of the Te-rich phases in the Cr-Te system, 201 Hydride battery electrode characterisation of MmNi₅-based alloys for nickel-metal hydride batteries, L3 Hydride electrodes characteristics of titanium-based C14-type Laves phase alloys and their hydride electrodes, 43 Hydrides monoclinic Sr₂Mg₃H₁₀ with Ba₂Ni₃F₁₀-type structure, 73 Hydrogen absorption effect of hydrogen absorption on structure, superconductivity, magnetic susceptibility and heat capacity of Zr₂Rh, 47 Hydrogen decrepitation anisotropic hydrogen decrepitation and corrosion behaviour in NdFeB magnets, L7 Hydrogen impurities compounds of alkaline-earth and divalent rare-earth metals stabilized by hydrogen impurities. The Yb₅Sb₃ and Mn₅Si₃ structure types for pnictides, L15 Hydrogen storage alloy

electrode characterisation of MmNi₅-based alloys for nickel-metal hydride batteries, L3

Hydroxides

behaviour of Cu(II) hydroxide during mechanical treatment, 267

Impact toughness

effect of RE elements on the structure and impact toughness of sand-cast Zn-12%Al alloy, 169

Indium

- on β -phase decomposition in the In-Sn binary system, 215 Iron
 - deuterium absorption and material phase characteristics of Zr_2Fe , 83
 - magnetic properties of Ce₂Fe_{17-x}Si_x compounds, L1

Kinetics

kinetics and mechanism of the oxidation of ZrC, 237 Kondo effect

CeCuSb₂ and CeNiSb: new exotic Kondo systems, 141

Lanthanide tribromides

spectroscopy of LnBr₃.6H₂O at room and helium temperature, 231

Low temperatures

study of electrical conduction behaviour of the $Sr_{1-x}La_xTi_{1-x}Ni_xO_3$ (x < 0.10) system, 147

thermal expansion of α -AuCu, AuCu(II) and AuCu(I) at low temperatures, 211

Luminescence

- correlation between the luminescence and the crystal structure of the hexagonal phase of RbGd₃F₁₀, 109
- the preparation and luminescence of Eu(III) activated ophenanthroline containing Gd(III) succinate phosphors, 195
- Magnetic properties
- structure and magnetic properties of CeCo₃Ga₂, 189 magnetic properties of Ce₂Fe_{17-x}Si_x compounds, L1
- Magnetic structure
- crystallographic and magnetic structure of TbPtGa, 225 Magnetic susceptibility
 - effect of hydrogen absorption on structure, superconductivity, magnetic susceptibility and heat capacity of Zr₂Rh, 47
- Magnetization
- high rare earth sublattice ordering temperatures in RMnSi compounds ($R \equiv La-Sm$, Gd) studied by susceptibility measurements and neutron diffraction, 55
- Mechanical treatment
 - behaviour of Cu(II) hydroxide during mechanical treatment, 267
- Mechanochemical synthesis
 - properties of TiB₂ powders obtained in a mechanochemical way, 39
- Metal hydride electrodes
 - effects of electrode compacting additives on the cycle life and high-rate dischargeability of Zr(V_{0.25}Ni_{0.75})₂ metal hydride electrodes in alkaline solution, 31

Metal-matrix composites

- carbothermic reduction of a columbite concentrate to produce cemented carbides and metal-matrix composites, 77
- Metal oxides
- tailormade: $K_{3}{Li[IrO_{4}]} = K_{6\infty}^{1}[(O_{2/2}LiO_{2}IrO_{2/2})_{2}]$, the first lithooxoiridate, 271
- NdFeB magnets
- anisotropic hydrogen decrepitation and corrosion behaviour in NdFeB magnets, L7

Neutron diffraction

- high rare earth sublattice ordering temperatures in RMnSi compounds ($R \equiv La$ -Sm, Gd) studied by susceptibility measurements and neutron diffraction, 55
- structure and magnetic properties of CeCo₃Ga₂, 189 Nickel
 - solid state phase equilibria in the Ni-Ga-Sb system: experimental and calculated determinations, 21
 - electrode characterisation of MmNi_s-based alloys for nickel-metal hydride batteries, L3
- Nitride
- new cerium nitride chlorides: Ce₆Cl₁₂N₂ and CeNCl, 95 Nitride synthesis

synthesis and structure of Li₃Ba₂TaN₄, 129

on the atomic diffusion mechanism and diffusivity of nitrogen atoms in Sm₂Fe₁₇, 1

the crystal chemistry of Ni₃AsVO₈ and Co₃AsVO₈, 255

Ordering

crystal structure of Ba₅In₂Al₂ZrO₁₃, 185

Orthovanadium

the crystal chemistry of Ni₃AsVO₈ and Co₃AsVO₈, 255 Oxidation

kinetics and mechanism of the oxidation of ZrC, 237

information on the first barium-potassium-oxo-acetylorates(III): KBa₄AuO₄(C₂)₂, 259

Oxides

- electrode reactions of uranium during electrolysis of its oxide in a molten fluoride mixture, 249
- Perovskite-like oxide
 - crystal structure of Ba₅In₂Al₂ZrO₁₃, 185

Phase diagrams

- solid state phase equilibria in the Ni-Ga-Sb system: experimental and calculated determinations, 21
- thermodynamic assessment of the Ti-Zr system and calculation of the Nb-Ti-Zr phase diagram, 121
- Phosphor
 - the preparation and luminescence of Eu(III) activated ophenanthroline containing Gd(III) succinate phosphors, 195
- Physical properties
- CeCuSb₂ and CeNiSb: new exotic Kondo systems, 141 Platinum
 - coherent phase diagram of the AuCu-Pt section in the Au-Cu-Pt ternary system, 217
- Potassium imido nitrido polytungstate

synthesis and crystal structure of the potassium imido nitrido polytungstate(VI) K14W6N16NH, 15

Quaternary nitride

synthesis and structure of Li₃Ba₂TaN₄, 129

Rare earths

- compounds of alkaline-earth and divalent rare-earth metals stabilized by hydrogen impurities. The Yb₅Sb₃ and Mn₅Si₃ structure types for pnictides, L15
- effect of RE elements on the structure and impact toughness of sand-cast Zn-12%Al alloy, 169
- on new CaBe₂Ge₂-type representatives MAu₂Al₂, 263

Reduction

- magnetic properties of Ce₂Fe_{17-x}Si_x compounds, L1 Resistivity
- on β -phase decomposition in the In-Sn binary system, 215 Rubidium
 - Rb₂Au₃, a layered structure in the rubidium-gold system, 277

Silicon

on the order and disorder of the transition metal (T) and silicon atoms in ternary thorium transition metal silicides of the compositions Th₂TSi₃ and ThTSi, 133

Single crystals

- crystal chemistry of BaNiPr2O5 and BaMn0.36Mg0.64Nd2O5, 159
- the crystal structure of earth alkali metal-lanthanoid-zincates: (I) Ba₂Tm₂Zn₈O₁₃, (II) $Ba_2Y_2Zn_8O_{13}$, (III) $BaEr_2ZnO_5$ and (IV) $Ba_5Er_8Zn_4O_{21}$,
- 163 crystal chemistry of CaBeGd₂O₅ and BaBeNd₂O₅, 175 tailormade: $K_3{Li[IrO_4]} = K_{6\infty}^1 [(O_{2/2}LiO_2IrO_{2/2})_2]$, the first
- lithooxoiridate, 271 Solid state reaction

information on calcium-copper-orthoarsenates: Ca_{1.5}Cu_{1.5}(AsO₄)₂, 155

Spectroscopy

spectroscopy of LnBr₃·6H₂O at room and helium temperature, 231

Nitrogen

Structure determination

synthesis and structure of Li₃Ba₂TaN₄, 129

- Sulfur vaporization
 - study on sulfur vaporization from covellite (CuS) and anilite (Cu_{1.75}S), 113

Superconductivity

- effect of hydrogen absorption on structure, superconductivity, magnetic susceptibility and heat capacity of Zr₂Rh, 47
- Susceptibility measurements
- high rare earth sublattice ordering temperatures in RMnSi compounds (R≡La-Sm, Gd) studied by susceptibility measurements and neutron diffraction, 55

Synthesis

- synthesis and crystal structure of the potassium imido nitrido polytungstate(VI) K₁₄W₆N₁₆NH, 15
- syntheses, crystal structures, and vibrational spectroscopic properties of MgCN₂, SrCN₂, and BaCN₂, 179

Tellurium

- homogeneity ranges and thermodynamic properties of the Te-rich phases in the Cr-Te system, 201
- Ternary compounds crystallographic and magnetic structure of TbPtGa, 225 Thermal expansion
- thermal expansion of α-AuCu, AuCu(II) and AuCu(I) at low temperatures, 211

Thermal stability

- monoclinic $Sr_2Mg_3H_{10}$ with $Ba_2Ni_3F_{10}\mbox{-type}$ structure, 73 Thermodynamics
 - thermodynamic assessment of the Ti-Zr system and calculation of the Nb-Ti-Zr phase diagram, 121
 - homogeneity ranges and thermodynamic properties of the Te-rich phases in the Cr-Te system, 201

Thorium

on the order and disorder of the transition metal (T) and silicon atoms in ternary thorium transition metal silicides of the compositions Th_2TSi_3 and ThTSi, 133

Tin

on β -phase decomposition in the In-Sn binary system, 215

Titanium characteristics of titanium-based C14-type Laves phase alloys and their hydride electrodes, 43 Titanium diboride properties of TiB₂ powders obtained in a mechanochemical way, 39 Titanium oxide information on Eu₂TiO₅, L11 Transformations differential scanning calorimetry study of the effects of heating rate on the $\alpha \rightarrow \beta$ transformation in unalloyed plutonium, 103 Transition metals on the order and disorder of the transition metal (T) and silicon atoms in ternary thorium transition metal silicides of the compositions Th₂TSi₃ and ThTSi, 133 Unalloyed plutonium differential scanning calorimetry study of the effects of heating rate on the $\alpha \rightarrow \beta$ transformation in unalloyed plutonium, 103 Uranium electrode reactions of uranium during electrolysis of its oxide in a molten fluoride mixture, 249 Vacancies crystal structure of Ba₅In₂Al₂ZrO₁₃, 185 Valence bonds

crystal chemistry of $BaNiPr_2O_5$ and $BaMn_{0.36}Mg_{0.64}Nd_2O_5$, 159

Vibrational spectroscopy

syntheses, crystal structures, and vibrational spectroscopic properties of MgCN₂, SrCN₂, and BaCN₂, 179

Vibronic spectra spectroscopy of LnBr₃.6H₂O at room and helium temperature, 231

Zirconium

deuterium absorption and material phase characteristics of Zr_2Fe , 83