



Subject Index of Volume 499

- Acoustic Debye temperature
thermodynamic properties of Mg_2Si and Mg_2Ge investigated by first principles method 68
- Amidoboranes
towards $\text{Y}(\text{NH}_2\text{BH}_3)_3$: Probing hydrogen storage properties of $\text{YX}_3/\text{MNH}_2\text{BH}_3$ ($\text{X} = \text{F, Cl; M} = \text{Li, Na}$) and $\text{YH}_{x-3}/\text{NH}_3\text{BH}_3$ composites 144
- Annealing at different temperature
annealing effects of co-doping with Al and Sb on structure and optical-electrical properties of the ZnO thin films 265
- Ball milling
the mechanochemical stability of hydrogen titanate nanostructures 113
- Band gap
preparation and characterization of $\text{Ga}_{2x}\text{In}_{2(1-x)}\text{O}_3$ films deposited on ZrO_2 (1 0 0) substrates by MOCVD 75
- Band structures
first-principles study of the ternary semiconductor alloys (Ga,Al)(As,Sb) 80
- Barium strontium titanate
Sol–gel synthesis and characterization of $\text{Ba}_{(1-x)}\text{Sr}_x\text{TiO}_3$ ceramics 255
- Bi: 2212
effect of melting time on the superconductivity in $\text{Bi}_{1.7}\text{Pb}_{0.3}\text{Sr}_2\text{CaCu}_2\text{O}_8$ superconducting system 238
- Boron doping
inductively coupled plasma-assisted RF magnetron sputtering deposition of boron-doped microcrystalline Si films 166
- Bound magnetic polaron model
room-temperature ferromagnetism in $\text{Ti}_{1-x}\text{V}_x\text{O}_2$ nanocrystals synthesized from an organic-free and water-soluble precursor 160
- CBD
effect of electron irradiation on properties of chemically deposited TiO_2 nanorods 63
- Cellular materials
the manufacture of spherical salt beads and their use as dissolvable templates for the production of cellular solids via a powder metallurgy route 43
- Ceramic composite
ultrafine $\text{Al}_2\text{O}_3\text{--B}_4\text{C}$ composites consolidated by pulsed electric current sintering 200
- Ceramics
the effect of B site doping on infrared emissivity of lanthanum manganites $\text{La}_{0.8}\text{Sr}_{0.2}\text{Mn}_{1-x}\text{B}_x\text{O}_3$ ($\text{B} = \text{Ti or Cu}$) 212
dielectric and relaxor behavior of $\text{BaBi}_4\text{Ti}_4\text{O}_{15}$ ceramics 221
compressive property and energy absorption characteristic of open-cell $\text{SiCp}/\text{AlSi}_9\text{Mg}$ composite foams 227
- Characterization
effect of melting time on the superconductivity in $\text{Bi}_{1.7}\text{Pb}_{0.3}\text{Sr}_2\text{CaCu}_2\text{O}_8$ superconducting system 238
- Chemical synthesis
porous and superparamagnetic magnesium ferrite film fabricated via a precursor route 30
structural, optical and microscopic studies of tungsten substituted molybdenum diselenide thin films 187
synthesis, thermal stability, and photocatalytic activity of nanocrystalline gallium nitride via the reaction of Ga_2O_3 and NH_4Cl at low temperature 269
- Cobalt magnesium ferrite
synthesis and characterization of novel conductive and magnetic nanocomposites 98
- Co-based Heusler alloys
powder neutron diffraction studies for the $L2_1$ phase of Co_2YGa ($\text{Y} = \text{Ti, V, Cr, Mn and Fe}$) Heusler alloys 1
- Co-doped with Al and Sb
annealing effects of co-doping with Al and Sb on structure and optical-electrical properties of the ZnO thin films 265
- Combined substitution
the effect of the combined substitution of NH_4^+ and Cl^- on the structure of $[\text{Cs}_{0.8}(\text{NH}_4)_{0.2}]_2\text{TeBr}_{5.6}\text{Cl}_{0.4}$ powder L5
- Composite materials
compressive property and energy absorption characteristic of open-cell $\text{SiCp}/\text{AlSi}_9\text{Mg}$ composite foams 227
- Co–Ni–Ga
refinement of the γ phase with melt undercooling in a two-phase Co_2NiGa magnetic shape memory alloy 39
microstructure, transformation temperatures, hardness and magnetic properties of $\text{Co}_{36.4+x}\text{Ni}_{33.3-x}\text{Ga}_{30.3}$ ferromagnetic SMA 183
- Core-shell
synthesis and characterization of novel conductive and magnetic nanocomposites 98
- Critical temperature
first-principles study of the ternary semiconductor alloys (Ga,Al)(As,Sb) 80
- Crystal and ligand fields
EPR and optical absorption studies of Cu^{2+} ions doped magnesium citrate decahydrate single crystals 17
- Crystal growth
EPR and optical absorption studies of Cu^{2+} ions doped magnesium citrate decahydrate single crystals 17
a new low-loss dielectric using CaTiO_3 -modified $(\text{Mg}_{0.95}\text{Mn}_{0.05})\text{TiO}_3$ ceramics for microwave applications 48
- Crystal structure
influence of doping elements (Y and Fe) on crystal structure and electrical resistivity of the RNi_2 ($\text{R} = \text{Gd, Er}$) compounds 135
- Crystallite size
effect of pH on ZnO nanoparticle properties synthesized by sol–gel centrifugation 231

- Degree of long range order
powder neutron diffraction studies for the $L2_1$ phase of Co_2YGa ($Y = \text{Ti, V, Cr, Mn and Fe}$) Heusler alloys 1
- DFT
first-principles study of the ternary semiconductor alloys (Ga,Al)(As,Sb) 80
- Dielectric function
first-principles study of the ternary semiconductor alloys (Ga,Al)(As,Sb) 80
- Dielectric properties
BiScO₃-modified ($\text{K}_{0.475}\text{Na}_{0.475}\text{Li}_{0.05}$)($\text{Nb}_{0.95}\text{Sb}_{0.05}$)O₃ lead-free piezoelectric ceramics L1
Sol-gel synthesis and characterization of $\text{Ba}_{(1-x)}\text{Sr}_x\text{TiO}_3$ ceramics 255
- Dielectric response
a new low-loss dielectric using CaTiO₃-modified ($\text{Mg}_{0.95}\text{Mn}_{0.05}$)TiO₃ ceramics for microwave applications 48
dielectric and relaxor behavior of $\text{BaBi}_4\text{Ti}_4\text{O}_{15}$ ceramics 221
- Diffusion
effect of Cu concentration, solder volume, and temperature on the reaction between SnAgCu solders and Ni 149
- Dilute magnetic semiconductor
room-temperature ferromagnetism in $\text{Ti}_{1-x}\text{V}_x\text{O}_2$ nanocrystals synthesized from an organic-free and water-soluble precursor 160
- Dislocations
a new type of (0 0 1) junction observed in a (B2) Fe–Al–Ni–B alloy by TEM *in situ* straining 176
- Dye adsorption
synthesis and characterization of novel conductive and magnetic nanocomposites 98
- Dynamic restoration processes
the effect of Cu addition on the hot deformation behavior of NiTi shape memory alloys 57
- Elastic properties
high pressure phase-transition, elastic and thermal properties of uranium chalcogenides: A model study 90
- Elasticity
elastic properties and electronic structures of 4d- and 5d-transition metal mononitrides 243
- Electrical properties
influence of doping elements (Y and Fe) on crystal structure and electrical resistivity of the RNi_2 ($R = \text{Gd, Er}$) compounds 135
- Electron irradiation
effect of electron irradiation on properties of chemically deposited TiO₂ nanorods 63
- Electron paramagnetic resonance
EPR and optical absorption studies of Cu^{2+} ions doped magnesium citrate decahydrate single crystals 17
- Electronic properties
elastic properties and electronic structures of 4d- and 5d-transition metal mononitrides 243
- Electronic structure
the influence of B variation on the electronic properties of $\text{Al}_3\text{Ni}_{20}\text{B}_x$ 11
- Energy transfer
role of PbO substitution by Bi₂O₃ on 1.47 μm luminescence properties of $\text{Tm}^{3+}/\text{Tb}^{3+}$ -doped $\text{Bi}_2\text{O}_3\text{-GeO}_2\text{-Ga}_2\text{O}_3$ glass 126
- Equation of state
high pressure phase-transition, elastic and thermal properties of uranium chalcogenides: A model study 90
- Er123
influence of hot-spot temperature on oxygen sensing response behavior of Er123 ceramic rods with hot spot 206
- Excess oxygen and melting operation
effect of melting time on the superconductivity in $\text{Bi}_{1.7}\text{Pb}_{0.3}\text{Sr}_2\text{CaCu}_2\text{O}_8$ superconducting system 238
- Exchange coupling
magnetic properties of Fe–Co ferromagnetic layers and Fe–Mn/Fe–Co bilayers obtained by thermo-ionic vacuum arc 23
- FeAl
a new type of (0 0 1) junction observed in a (B2) Fe–Al–Ni–B alloy by TEM *in situ* straining 176
- Ferroelectricity
BiScO₃-modified ($\text{K}_{0.475}\text{Na}_{0.475}\text{Li}_{0.05}$)($\text{Nb}_{0.95}\text{Sb}_{0.05}$)O₃ lead-free piezoelectric ceramics L1
- Ferromagnetic shape memory alloy
microstructure, transformation temperatures, hardness and magnetic properties of $\text{Co}_{36.4+x}\text{Ni}_{33.3-x}\text{Ga}_{30.3}$ ferromagnetic SMA 183
- Ferromagnetism
the magnetic properties of La doped and codoped BiFeO₃ 108
room-temperature ferromagnetism in $\text{Ti}_{1-x}\text{V}_x\text{O}_2$ nanocrystals synthesized from an organic-free and water-soluble precursor 160
- FP-LAPW
first-principles study of the ternary semiconductor alloys (Ga,Al)(As,Sb) 80
- Fullprof
the effect of the combined substitution of NH_4^+ and Cl^- on the structure of $[\text{Cs}_{0.8}(\text{NH}_4)_{0.2}]_2\text{TeBr}_{5.6}\text{Cl}_{0.4}$ powder L5
- Gallium nitride
synthesis, thermal stability, and photocatalytic activity of nanocrystalline gallium nitride via the reaction of Ga_2O_3 and NH_4Cl at low temperature 269
- Galvanizing
the Zn-rich corner of the Zn–Al–Ti system at 723 K 194
- $\text{Ga}_{2x}\text{In}_{2(1-x)}\text{O}_3$ film
preparation and characterization of $\text{Ga}_{2x}\text{In}_{2(1-x)}\text{O}_3$ films deposited on $\text{ZrO}_2(1\ 0\ 0)$ substrates by MOCVD 75
- Grain size
low-field magnetoresistance of $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ perovskite synthesized by reactive milling method 131
- Growth mechanism
effect of pH on ZnO nanoparticle properties synthesized by sol-gel centrifugation 231
- Hardness
effects of cerium content on wettability, microstructure and mechanical properties of Sn–Ag–Ce solder alloys 154
- Heusler alloy
magneto-thermal and magneto-transport behavior around the martensitic transition in $\text{Ni}_{50-x}\text{Co}_x\text{Mn}_{40}\text{Sb}_{10}$ ($x = 9, 9.5$) Heusler alloys 140
- HgTe
solution-chemical syntheses of nanostructure HgTe via a simple hydrothermal process 121
- High pressure phase transition
high pressure phase-transition, elastic and thermal properties of uranium chalcogenides: A model study 90
- High-temperature microstructure
high-temperature microstructural characteristics of a novel biomedical titanium alloy 171
- Hot deformation
the effect of Cu addition on the hot deformation behavior of NiTi shape memory alloys 57
- Hot spot
influence of hot-spot temperature on oxygen sensing response behavior of Er123 ceramic rods with hot spot 206
- Hydrogen storage
effect of TiH_2 and Mg_2Ni additives on the hydrogen storage properties of magnesium hydride 35
- Hydrogen storage materials
towards $\text{Y}(\text{NH}_2\text{BH}_3)_3$: Probing hydrogen storage properties of $\text{YX}_3/\text{MNH}_2\text{BH}_3$ ($X = \text{F, Cl}$; $M = \text{Li, Na}$) and $\text{YH}_{x-3}/\text{NH}_3\text{BH}_3$ composites 144
- Hydrothermal
solution-chemical syntheses of nanostructure HgTe via a simple hydrothermal process 121

- In-situ* hydrothermal synthesis of three-dimensional MnO₂-CNT nanocomposites and their electrochemical properties 259
- Impedance spectroscopy
dielectric and relaxor behavior of BaBi₄Ti₄O₁₅ ceramics 221
- Inductively coupled plasmas
inductively coupled plasma-assisted RF magnetron sputtering deposition of boron-doped microcrystalline Si films 166
- Inorganic materials
porous and superparamagnetic magnesium ferrite film fabricated via a precursor route 30
- InSe
structural and optical characterization of single-phase γ -In₂Se₃ films with room-temperature photoluminescence 104
- In-situ*
In-situ hydrothermal synthesis of three-dimensional MnO₂-CNT nanocomposites and their electrochemical properties 259
- Intermetallics
the influence of B variation on the electronic properties of Al₃Ni₂₀B_x 11
effect of Cu concentration, solder volume, and temperature on the reaction between SnAgCu solders and Ni 149
a new type of (0 0 1) junction observed in a (B2) Fe-Al-Ni-B alloy by TEM *in situ* straining 176
- IR spectroscopy
the effect of the combined substitution of NH₄⁺ and Cl⁻ on the structure of [Cs_{0.8}(NH₄)_{0.2}]₂TeBr_{5.6}Cl_{0.4} powder L5
- L2₁ phase
powder neutron diffraction studies for the L2₁ phase of Co₂YGa (Y = Ti, V, Cr, Mn and Fe) Heusler alloys 1
- Lead-free ceramics
BiScO₃-modified (K_{0.475}Na_{0.475}Li_{0.05})(Nb_{0.95}Sb_{0.05})O₃ lead-free piezoelectric ceramics L1
- Light absorption and reflection
the effect of B site doping on infrared emissivity of lanthanum manganites La_{0.8}Sr_{0.2}Mn_{1-x}B_xO₃ (B = Ti or Cu) 212
- Low-field magnetoresistance
low-field magnetoresistance of La_{0.7}Ca_{0.3}MnO₃ perovskite synthesized by reactive milling method 131
- Luminescence
a novel red-emitting phosphor for white light-emitting diodes 53
- 1.47 μ m luminescence
role of PbO substitution by Bi₂O₃ on 1.47 μ m luminescence properties of Tm³⁺/Tb³⁺-doped Bi₂O₃-GeO₂-Ga₂O₃ glass 126
- Magnesium hydride
effect of TiH₂ and Mg₂Ni additives on the hydrogen storage properties of magnesium hydride 35
- Magnetic and electrical properties
synthesis and characterization of novel conductive and magnetic nanocomposites 98
- Magnetic films and multi-layers
magnetic properties of Fe-Co ferromagnetic layers and Fe-Mn/Fe-Co bilayers obtained by thermo-ionic vacuum arc 23
porous and superparamagnetic magnesium ferrite film fabricated via a precursor route 30
- Magnetic moment
powder neutron diffraction studies for the L2₁ phase of Co₂YGa (Y = Ti, V, Cr, Mn and Fe) Heusler alloys 1
- Magnetic shape memory alloy
refinement of the γ phase with melt undercooling in a two-phase Co₂NiGa magnetic shape memory alloy 39
- Magnetocaloric effect
the study of the magnetic and room-temperature magnetocaloric properties in spin-reorientation Nd_{1-x}Dy_xCo₄Al (x = 0, 0.1) alloys 7
magneto-thermal and magneto-transport behavior around the martensitic transition in Ni_{50-x}Co_xMn₄₀Sb₁₀ (x = 9, 9.5) Heusler alloys 140
- Magnetocrystalline anisotropy
the study of the magnetic and room-temperature magnetocaloric properties in spin-reorientation Nd_{1-x}Dy_xCo₄Al (x = 0, 0.1) alloys 7
- Magnetoresistance
magneto-thermal and magneto-transport behavior around the martensitic transition in Ni_{50-x}Co_xMn₄₀Sb₁₀ (x = 9, 9.5) Heusler alloys 140
- Manganite
low-field magnetoresistance of La_{0.7}Ca_{0.3}MnO₃ perovskite synthesized by reactive milling method 131
- Martensitic transformation
microstructure, transformation temperatures, hardness and magnetic properties of Co_{36.4+x}Ni_{33.3-x}Ga_{30.3} ferromagnetic SMA 183
- Martensitic transition
magneto-thermal and magneto-transport behavior around the martensitic transition in Ni_{50-x}Co_xMn₄₀Sb₁₀ (x = 9, 9.5) Heusler alloys 140
- Mechanical properties
the manufacture of spherical salt beads and their use as dissolvable templates for the production of cellular solids via a powder metallurgy route 43
a new type of (0 0 1) junction observed in a (B2) Fe-Al-Ni-B alloy by TEM *in situ* straining 176
compressive property and energy absorption characteristic of open-cell SiCp/AlSi₃Mg composite foams 227
effect of differential speed rolling on the anisotropy of mechanical properties and texture evolution of AZ31 Mg alloys 273
- Metals and alloys
the manufacture of spherical salt beads and their use as dissolvable templates for the production of cellular solids via a powder metallurgy route 43
effect of differential speed rolling on the anisotropy of mechanical properties and texture evolution of AZ31 Mg alloys 273
- Mg₂Ge
thermodynamic properties of Mg₂Si and Mg₂Ge investigated by first principles method 68
- Mg₂Si
thermodynamic properties of Mg₂Si and Mg₂Ge investigated by first principles method 68
- Microcrystalline silicon
inductively coupled plasma-assisted RF magnetron sputtering deposition of boron-doped microcrystalline Si films 166
- Microstructure
porous and superparamagnetic magnesium ferrite film fabricated via a precursor route 30
the manufacture of spherical salt beads and their use as dissolvable templates for the production of cellular solids via a powder metallurgy route 43
effects of cerium content on wettability, microstructure and mechanical properties of Sn-Ag-Ce solder alloys 154
ultrafine Al₂O₃-B₄C composites consolidated by pulsed electric current sintering 200
dielectric and relaxor behavior of BaBi₄Ti₄O₁₅ ceramics 221
Sol-gel synthesis and characterization of Ba_(1-x)Sr_xTiO₃ ceramics 255
- MnO₂-CNT nanocomposite
In-situ hydrothermal synthesis of three-dimensional MnO₂-CNT nanocomposites and their electrochemical properties 259
- MOCVD
preparation and characterization of Ga_{2x}In_{2(1-x)}O₃ films deposited on ZrO₂ (1 0 0) substrates by MOCVD 75
structural and optical characterization of single-phase γ -In₂Se₃ films with room-temperature photoluminescence 104
- MOKE
magnetic properties of Fe-Co ferromagnetic layers and Fe-Mn/Fe-Co bilayers obtained by thermo-ionic vacuum arc 23
- Multiferroic
the magnetic properties of La doped and codoped BiFeO₃ 108
- Nano-composite
synthesis and characterization of novel conductive and magnetic nanocomposites 98

- Nanomaterials
a novel red-emitting phosphor for white light-emitting diodes 53
- Nanorods
effect of electron irradiation on properties of chemically deposited TiO₂ nanorods 63
- Nanostructure
solution-chemical syntheses of nanostructure HgTe via a simple hydrothermal process 121
- Nanotubes
the mechanochemical stability of hydrogen titanate nanostructures 113
- Neutron powder diffraction
powder neutron diffraction studies for the L2₁ phase of Co₂YGa (Y = Ti, V, Cr, Mn and Fe) Heusler alloys 1
- Nickel-based aluminides
the influence of B variation on the electronic properties of Al₃Ni₂₀B_x 11
- NiTi alloy
the effect of Cu addition on the hot deformation behavior of NiTi shape memory alloys 57
- NiTiCu alloys
the effect of Cu addition on the hot deformation behavior of NiTi shape memory alloys 57
- Octahedral rotation
the effect of the combined substitution of NH₄⁺ and Cl⁻ on the structure of [Cs_{0.8}(NH₄)_{0.2}]₂TeBr_{5.6}Cl_{0.4} powder L5
- Optical and electrical properties
annealing effects of co-doping with Al and Sb on structure and optical-electrical properties of the ZnO thin films 265
- Optical properties
EPR and optical absorption studies of Cu²⁺ ions doped magnesium citrate decahydrate single crystals 17
the effect of B site doping on infrared emissivity of lanthanum manganites La_{0.8}Sr_{0.2}Mn_{1-x}B_xO₃ (B = Ti or Cu) 212
- Organic crystals
EPR and optical absorption studies of Cu²⁺ ions doped magnesium citrate decahydrate single crystals 17
- Oxygen sensor
influence of hot-spot temperature on oxygen sensing response behavior of Er123 ceramic rods with hot spot 206
- Oxygen vacancies and interstitials
room-temperature ferromagnetism in Ti_{1-x}V_xO₂ nanocrystals synthesized from an organic-free and water-soluble precursor 160
- Particle size
effect of pH on ZnO nanoparticle properties synthesized by sol-gel centrifugation 231
- Pb-free solder
effects of cerium content on wettability, microstructure and mechanical properties of Sn-Ag-Ce solder alloys 154
- pH
effect of pH on ZnO nanoparticle properties synthesized by sol-gel centrifugation 231
- Phase diagram
the Zn-rich corner of the Zn-Al-Ti system at 723 K 194
- Phase transformation
high-temperature microstructural characteristics of a novel biomedical titanium alloy 171
- Phase transitions
elastic properties and electronic structures of 4d- and 5d-transition metal mononitrides 243
- Photocatalysis activity
synthesis, thermal stability, and photocatalytic activity of nanocrystalline gallium nitride via the reaction of Ga₂O₃ and NH₄Cl at low temperature 269
- Photoluminescence
structural and optical characterization of single-phase γ-In₂Se₃ films with room-temperature photoluminescence 104
- Piezoelectricity
BiScO₃-modified (K_{0.475}Na_{0.475}Li_{0.05})(Nb_{0.95}Sb_{0.05})O₃ lead-free piezoelectric ceramics L1
- Polyaniline
synthesis and characterization of novel conductive and magnetic nanocomposites 98
- Powder metallurgy
the manufacture of spherical salt beads and their use as dissolvable templates for the production of cellular solids via a powder metallurgy route 43
- Precipitation
improved thermoelectric properties of AgSbTe₂ based compounds with nanoscale Ag₂Te *in situ* precipitates 215
- Pulsed electric current sintering
ultrafine Al₂O₃-B₄C composites consolidated by pulsed electric current sintering 200
- Raman
the magnetic properties of La doped and codoped BiFeO₃ 108
- Rare earth alloys and compounds
influence of doping elements (Y and Fe) on crystal structure and electrical resistivity of the RNi₂ (R = Gd, Er) compounds 135
- Rare earth element
effects of cerium content on wettability, microstructure and mechanical properties of Sn-Ag-Ce solder alloys 154
- Rare-earth ions
role of PbO substitution by Bi₂O₃ on 1.47 μm luminescence properties of Tm³⁺/Tb³⁺-doped Bi₂O₃-GeO₂-Ga₂O₃ glass 126
- Refinement
refinement of the γ phase with melt undercooling in a two-phase Co₂NiGa magnetic shape memory alloy 39
- Semiconductors
structural, optical and microscopic studies of tungsten substituted molybdenum diselenide thin films 187
- Silver antimony tellurides
improved thermoelectric properties of AgSbTe₂ based compounds with nanoscale Ag₂Te *in situ* precipitates 215
- Sintering
the manufacture of spherical salt beads and their use as dissolvable templates for the production of cellular solids via a powder metallurgy route 43
ultrafine Al₂O₃-B₄C composites consolidated by pulsed electric current sintering 200
- Slack's equation
thermodynamic properties of Mg₂Si and Mg₂Ge investigated by first principles method 68
- Solar cells
inductively coupled plasma-assisted RF magnetron sputtering deposition of boron-doped microcrystalline Si films 166
- Soldering
effect of Cu concentration, solder volume, and temperature on the reaction between SnAgCu solders and Ni 149
- Sol-gel method
effect of pH on ZnO nanoparticle properties synthesized by sol-gel centrifugation 231
- Sol-gel process
Sol-gel synthesis and characterization of Ba_(1-x)Sr_xTiO₃ ceramics 255
- Sol-gel spin-coating method
annealing effects of co-doping with Al and Sb on structure and optical-electrical properties of the ZnO thin films 265
- Solid-state reaction
a novel red-emitting phosphor for white light-emitting diodes 53
the effect of B site doping on infrared emissivity of lanthanum manganites La_{0.8}Sr_{0.2}Mn_{1-x}B_xO₃ (B = Ti or Cu) 212
- Solid-state reactions
dielectric and relaxor behavior of BaBi₄Ti₄O₁₅ ceramics 221

- Solution-chemical
 solution-chemical syntheses of nanostructure HgTe via a simple hydrothermal process 121
- Spectroscopic properties
 role of PbO substitution by Bi₂O₃ on 1.47 μm luminescence properties of Tm³⁺/Tb³⁺-doped Bi₂O₃-GeO₂-Ga₂O₃ glass 126
- Spin-polarized tunneling
 low-field magnetoresistance of La_{0.7}Ca_{0.3}MnO₃ perovskite synthesized by reactive milling method 131
- Spin-reorientation
 the study of the magnetic and room-temperature magnetocaloric properties in spin-reorientation Nd_{1-x}Dy_xCo₄Al (*x* = 0, 0.1) alloys 7
- Structural phase transitions
 the mechanochemical stability of hydrogen titanate nanostructures 113
- Supercapacitor
In-situ hydrothermal synthesis of three-dimensional MnO₂-CNT nanocomposites and their electrochemical properties 259
- Synthesis
 effect of melting time on the superconductivity in Bi_{1.7}Pb_{0.3}Sr₂CaCu₂O₈ superconducting system 238
- TEM
 a new type of (0 0 1) junction observed in a (B2) Fe-Al-Ni-B alloy by TEM *in situ* straining 176
 effect of differential speed rolling on the anisotropy of mechanical properties and texture evolution of AZ31 Mg alloys 273
- Tensile strength
 effects of cerium content on wettability, microstructure and mechanical properties of Sn-Ag-Ce solder alloys 154
- Ternary alloys
 first-principles study of the ternary semiconductor alloys (Ga,Al)(As,Sb) 80
- Thermal analysis
 the influence of B variation on the electronic properties of Al₃Ni₂₀B_x 11
- Thermal conductivity
 thermodynamic properties of Mg₂Si and Mg₂Ge investigated by first principles method 68
- Thermodynamic properties
 the influence of B variation on the electronic properties of Al₃Ni₂₀B_x 11
- Thermoelectric materials
 improved thermoelectric properties of AgSbTe₂ based compounds with nanoscale Ag₂Te *in situ* precipitates 215
- Thermoelectric properties
 improved thermoelectric properties of AgSbTe₂ based compounds with nanoscale Ag₂Te *in situ* precipitates 215
- Thermogravimetric analysis
 synthesis, thermal stability, and photocatalytic activity of nanocrystalline gallium nitride via the reaction of Ga₂O₃ and NH₄Cl at low temperature 269
- Thermophysical properties
 high pressure phase-transition, elastic and thermal properties of uranium chalcogenides: A model study 90
- Thin films
 effect of electron irradiation on properties of chemically deposited TiO₂ nanorods 63
 structural, optical and microscopic studies of tungsten substituted molybdenum diselenide thin films 187
- Three-dimensional nanostructure
In-situ hydrothermal synthesis of three-dimensional MnO₂-CNT nanocomposites and their electrochemical properties 259
- TiO₂
 effect of electron irradiation on properties of chemically deposited TiO₂ nanorods 63
- Titanates
 the mechanochemical stability of hydrogen titanate nanostructures 113
- Titanium alloy
 high-temperature microstructural characteristics of a novel biomedical titanium alloy 171
- Ti_{1-x}V_xO₂ nanocrystals
 room-temperature ferromagnetism in Ti_{1-x}V_xO₂ nanocrystals synthesized from an organic-free and water-soluble precursor 160
- Transition metal alloys and compounds
 elastic properties and electronic structures of 4d- and 5d-transition metal mononitrides 243
- Transmission electron microscopy
 high-temperature microstructural characteristics of a novel biomedical titanium alloy 171
- Transmission electron microscopy
 effect of differential speed rolling on the anisotropy of mechanical properties and texture evolution of AZ31 Mg alloys 273
- TVA
 magnetic properties of Fe-Co ferromagnetic layers and Fe-Mn/Fe-Co bilayers obtained by thermo-ionic vacuum arc 23
- Undercooling
 refinement of the γ phase with melt undercooling in a two-phase Co₂NiGa magnetic shape memory alloy 39
- UV-LEDs
 a novel red-emitting phosphor for white light-emitting diodes 53
- Wettability
 effects of cerium content on wettability, microstructure and mechanical properties of Sn-Ag-Ce solder alloys 154
- X-ray diffraction
 structural, optical and microscopic studies of tungsten substituted molybdenum diselenide thin films 187
 synthesis, thermal stability, and photocatalytic activity of nanocrystalline gallium nitride via the reaction of Ga₂O₃ and NH₄Cl at low temperature 269
- Yttrium
 towards Y(NH₂BH₃)₃: Probing hydrogen storage properties of YX₃/MNH₂BH₃ (X = F, Cl; M = Li, Na) and YH_{x-3}/NH₃BH₃ composites 144
- Zn-Al-Ti system
 the Zn-rich corner of the Zn-Al-Ti system at 723 K 194
- ZnO thin films
 annealing effects of co-doping with Al and Sb on structure and optical-electrical properties of the ZnO thin films 265
- Zn-rich corner
 the Zn-rich corner of the Zn-Al-Ti system at 723 K 194
- ZrO₂ substrate
 preparation and characterization of Ga_{2x}In_{2(1-x)}O₃ films deposited on ZrO₂(1 0 0) substrates by MOCVD 75