

Laboratory:Multi-Functional Materials Science 2000-2004

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Tang, XF; Chen, LD; Takashi, G; Toshio, H; Yuan, RZ

Solid state reaction synthesis of skutterudite compounds $\text{Fe}_x\text{Co}_{4-x}\text{Sb}_{12}$ and thermoelectric properties

Acta Phys. Sin. 49 (2000) 1120 – 1123

00-IMR0484

Tang, XF; Chen, LD; Goto, T; Hirai, T; Yuan, RZ

Solid state reaction synthesis and structure of filled skutterudite compounds $\text{Ba}_y\text{Fe}_x\text{Co}_{4-x}\text{Sb}_{12}$

Acta Phys. Sin. 49 (2000) 2196 – 2200

00-IMR0485

Tang, XF; Chen, LD; Goto, T; Toshio, H; Yuan, RZ

Effect of Fe content on the crystal structure and the thermoelectric transport properties of $\text{Ce}_y\text{Fe}_x\text{Co}_{4-x}\text{Sb}_{12}$

Acta Phys. Sin. 49 (2000) 2437 – 2442

00-IMR0486

Tang, XF; Chen, LD; Takashi, G; Toshio, H; Yuan, RZ

Effect of Ce filling fraction on thermoelectric transport properties of p-type $\text{Ce}_y\text{Fe}_{1.5}\text{Co}_{2.5}\text{Sb}_{12}$

Acta Phys. Sin. 49 (2000) 2460 – 2465

00-IMR0487

Chen, L; Tang, X; Goto, T; Hirai, T

Synthesis of filled skutterudite compounds: $\text{Ba}_y\text{Fe}_x\text{Co}_{4-x}\text{Sb}_{12}$

J. Mater. Res. 15 (2000) 2276 – 2279

00-IMR0488

Orihashi, M; Noda, Y; Chen, LD; Goto, T; Hirai, T

Effect of tin content on thermoelectric properties of p-type lead tin telluride

J. Phys. Chem. Solids 61 (2000) 919 – 923

00-IMR0489

Tang, XF; Chen, LD; Goto, T; Hirai, T; Yuan, RZ

Solid state reaction synthesis of filled skutterudite compounds $(\text{Ce or Y})_y\text{Fe}_x\text{Co}_{4-x}\text{Sb}_{12}$ and the effect of filling atoms Ce or Y on lattice thermal conductivity

Sci. China Ser. B-Chem. 43 (2000) 306 – 312

00-IMR0490

Tang, XF; Chen, LD; Goto, T; Hirai, T; Yuan, RZ

Thermoelectric properties of p-type BayFexCo_{4-x}Sb₁₂

Acta Phys. Sin. 50 (2001) 1560 – 1566

01-IMR0564

Wang, XR; Masumoto, H; Someno, Y; Chen, LD; Hirai, TS

Stepwise graded refractive-index profiles for design of a narrow-bandpass filter

Appl. Optics 40 (2001) 3746 – 3752

01-IMR0565

Shen, Q; Chen, L; Goto, T; Hirai, T; Yang, J; Meisner, GP; Uher, C

Effects of partial substitution of Ni by Pd on the thermoelectric properties of ZrNiSn-based half-Heusler compounds

Appl. Phys. Lett. 79 (2001) 4165 – 4167

01-IMR0566

Chen, LD; Kawahara, T; Tang, XF; Goto, T; Hirai, T; Dyck, JS; Chen, W; Uher, C

Anomalous barium filling fraction and n-type thermoelectric performance of BayCo₄Sb₁₂

J. Appl. Phys. 90 (2001) 1864 – 1868

01-IMR0567

Tang, XF; Zhang, LM; Yuan, RZ; Chen, LD; Goto, T; Hirai, T; Dyck, JS; Chen, W; Uher, C

High-temperature thermoelectric properties of n-type BayNixCo_{4-x}Sb₁₂

J. Mater. Res. 16 (2001) 3343 – 3346

01-IMR0569

Tang, XF; Chen, LD; Goto, T; Hirai, T

Effects of Ce filling fraction and Fe content on the thermoelectric properties of Co-rich CeyFexCo_{4-x}Sb₁₂

J. Mater. Res. 16 (2001) 837 – 843

01-IMR0568

Tang, XF; Chen, LD; Goto, T; Hirai, T; Yuan, RZ

Synthesis and thermoelectric properties of filled skutterudite compounds CeyFexCo_{4-x}Sb₁₂ by solid state reaction

J. Mater. Sci. 36 (2001) 5435 – 5439

01-IMR0570

Onodera, A; Matsumoto, K; Hirai, T; Goto, T; Motoyama, M; Yamada, K; Kohzuki, H

Synthesis of dense forms of B-C-N system using chemical-vapor-deposition/high-pressure process

J. Mater. Sci. 36 (2001) 679 – 684

01-IMR0145

Shen, Q; Zhang, LM; Chen, LD; Goto, T; Hirai, T

Thermoelectric properties of ZrNiSn-based half-Heusler compounds by solid state reaction method

J. Mater. Sci. Lett. 20 (2001) 2197 – 2199

01-IMR0571

Yonenaga, I; Akashi, T; Goto, T

Thermal and electrical properties of Czochralski grown GeSi single crystals

J. Phys. Chem. Solids 62 (2001) 1313 – 1317

01-IMR0157

Akashi, T; Yonenaga, I; Gunjishima, I; Goto, T

High temperature transport property of B- and P-doped GeSi single crystals prepared by a Czochralski method

Mater. Trans. 42 (2001) 1024 – 1027

01-IMR0162

Gunjishima, I; Akashi, T; Goto, T

Thermoelectric properties of single crystalline B4C prepared by a floating zone method

Mater. Trans. 42 (2001) 1445 – 1450

01-IMR0573

Akashi, T; Morita, K; Hirai, T; Yamane, H; Goto, T

Phase relationship in a BaO-Bi2O3-TiO2 system and electrical properties of BaTiO3 with addition of Bi4Ti3O12

Mater. Trans. 42 (2001) 1823 – 1826

01-IMR0574

Tu, R; Goto, T; Chen, LD; Hirai, T; Zhang, LM

Corrosion behavior of glass coated Hastelloy-XR in boiling sulfuric acid

Mater. Trans. 42 (2001) 2093 – 2097

01-IMR0575

Tohma, T; Masumoto, H; Hirai, T; Goto, T

Preparation of barium titanate film by metal-organic chemical vapor deposition and its thermodynamic analysis

Mater. Trans. 42 (2001) 702 – 706

01-IMR0572

Ma, YW; Watanabe, K; Awaji, S; Masumoto, H; Motokawa, M

Effect of magnetic field on growth of YBa2Cu3O7 films on MgO substrates by metalorganic chemical vapor deposition

Physica C-Superconductivity and Its Application 353 (2001) 283 – 288

01-IMR0082

Goto, T; Ono, T; Hirai, T

Electrochemical properties of iridium-carbon nano composite films prepared by MOCVD

Scr. Mater. 44 (2001) 1187 – 1190

01-IMR0576

Tang, XF; Chen, LD; Goto, T; Hirai, T; Yuan, RZ

Thermoelectric properties of n-type BayNixCo4-xSb12

Acta Phys. Sin. 51 (2002) 2823 – 2828

02-IMR0589

Goto, T; Homma, H; Hirai, T

Effect of oxygen partial pressure on the high-temperature oxidation of CVD SiC

Corrosion Sci. 44 (2002) 359 – 370

02-IMR0590

Goto, T

High-temperature oxidation behavior of chemical vapor deposited silicon carbide

J. Ceram. Soc. Jpn. 110 (2002) 884 – 889

02-IMR0591

Goto, T; Homma, H

High-temperature active/passive oxidation and bubble formation of CVD SiC in O-2 and CO2 atmospheres

J. European Ceram. Soc. 22 (2002) 2749 – 2756

02-IMR0592

Tang, XF; Chen, LD; Goto, T; Hirai, T; Yuan, RZ

Synthesis and thermoelectric properties of p-type barium-filled skutterudite BayFexCo4-xSb12

J. Mater. Res. 17 (2002) 2953 – 2959

02-IMR0593

Tang, XF; Chen, LD; Zhang, LM; Goto, T; Hirai, T; Yuan, RZ

Effect of Ba filling fraction on thermoelectric properties of p-type BayFe1.6CO2.4Sb12

J. Wuhan Univ. Technol.-Mat. Sci. 17 (2002) 8 – 12
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02-IMR0594

Tohma, T; Masumoto, H; Goto, T

Preparation of BaTiO3-BaZrO3 films by metal-organic chemical vapor deposition

Jpn. J. Appl. Phys. Part 1 – Regul. 41 (2002) 6643 – 6646
Pap. Short Notes Rev. Pap.

02-IMR0595

Masumoto, H; Kojima, A; Iijima, T; Goto, T

Preparation of Ag-alloy top-electrode for ferroelectric Pb(Zr,Ti)O-3 films under various atmospheres

Jpn. J. Appl. Phys. Part 1 – Regul. 41 (2002) 6882 – 6885
Pap. Short Notes Rev. Pap.

02-IMR0596

Goto, T; Masumoto, H; Niizuma, M

Low temperature oxidation of CVD SiC by electron cyclotron resonance plasma

Mater. Chem. Phys. 75 (2002) 235 – 240

02-IMR0597

Akashi, T; Itoh, T; Gunjishima, I; Masumoto, H; Goto, T

Thermoelectric properties of hot-pressed boron suboxide (B6O)

Mater. Trans. 43 (2002) 1719 – 1723

02-IMR0599

Gunjishima, I; Akashi, T; Goto, T

Characterization of directionally solidified B4C-SiC composites prepared by a Floating Zone method

Mater. Trans. 43 (2002) 2309 – 2315

02-IMR0600

Tu, R; Kimura, T; Goto, T

Rapid synthesis of yttria-partially-stabilized zirconia films by metal-organic chemical vapor deposition

Mater. Trans. 43 (2002) 2354 – 2356

02-IMR0601

Zhang, BP; Masumoto, H; Someno, Y; Goto, T

Preparation of Au/SiO2 nano-composite multilayers by helicon plasma sputtering and their optical properties

Mater. Trans. 43 (2002) 2855 – 2859

02-IMR0602

Tohma, T; Masumoto, H; Goto, T

Microstructure and dielectric properties of barium titanate film prepared by MOCVD

Mater. Trans. 43 (2002) 2880 – 2884

02-IMR0603

Gunjishima, I; Akashi, T; Goto, T

Characterization of directionally solidified B4C-TiB2 composites prepared by a floating zone method

Mater. Trans. 43 (2002) 712 – 720

02-IMR0598

Fujishiro, H; Ikebe, M; Akashi, T; Goto, T

*Thermal diffusivity of La1-*X*Ca*X*MnO3 up to 1200K*

Physica B 316 (2002) 261 – 264

02-IMR0604

Kimura, T; Goto, T; Yamane, H; Iwata, H; Kajiwara, T; Akashi, T

A ferroelectric barium titanate,

Acta Crystallogr. Sect. C-Cryst. 59 (2003) I128 – I130
Struct. Commun.

03-IMR0525

Tu, R; Goto, T

Oxidation of Hastelloy-XR alloy for corrosion-resistant

J. Mater. Sci. Technol. 19 (2003) 19 – 22

03-IMR0527

Shen, Q; Zhang, LM; Chen, LD; Goto, T; Hirai, T

Synthesis and sintering of ZrNiSn-based half-Heusler

J. Mater. Sci. Technol. 19 (2003) 511 – 512

03-IMR0528

Tohma, T; Masumoto, H; Goto, T

Dielectric properties of Ba(Ti_{0.85}Zr_{0.15})O₃ film prepared by metalorganic chemical vapor

Jpn. J. Appl. Phys. Part 1 – Regul. 42 (2003) 6969 – 6972
Pap. Short Notes Rev. Pap.

03-IMR0529

Miyazaki, H; Kimura, T; Goto, T

Acceleration of deposition rates in a chemical vapor deposition process by laser

Jpn. J. Appl. Phys. Part 2 – Lett. 42 (2003) L316 – L318

03-IMR0530

Akashi, T; Gunjishima, I; Goto, T

Characterization of directionally solidified B4C-TiB₂ and B4C-SiC eutectic composites prepared by floating-zone method

Key Eng. Mat. 247 (2003) 209 – 212

03-IMR0531

Ito, A; Masumoto, H; Goto, T

Optical properties of Au nanoparticle dispersed TiO₂ films prepared by laser

Mater. Trans. 44 (2003) 1599 – 1603

03-IMR0537

Akashi, T; Iwata, H; Goto, T

Dielectric property of single crystalline BaTi₂O₅ prepared by a floating zone

Mater. Trans. 44 (2003) 1644 – 1646

03-IMR0538

Garcia, JRV; Goto, T

Chemical vapor deposition of iridium, platinum, rhodium and

Mater. Trans. 44 (2003) 1717 – 1728

03-IMR0539

Kim, TS; Kang, IC; Goto, T; Lee, BT

Fabrication of continuously porous alumina body by fibrous monolithic and sintering

Mater. Trans. 44 (2003) 1851 – 1856

03-IMR0540

Zhang, BP; Masumoto, H; Someno, Y; Goto, T
Optical properties of Au/SiO₂ nano-composite films prepared by induction-coil-coupled plasma sputtering

Mater. Trans. 44 (2003) 215 – 219

03-IMR0532

Narushima, T; Goto, T; Maruyama, M; Arashi, H; Iguchi, Y
Oxidation of boron carbide-silicon carbide composite at 1073 to 1773

Mater. Trans. 44 (2003) 401 – 406

03-IMR0533

Kimura, T; Goto, T
Rapid synthesis of yttria-stabilized zirconia films by laser chemical vapor

Mater. Trans. 44 (2003) 421 – 424

03-IMR0534

Akashi, T; Iwata, H; Goto, T
Preparation of BaTi₂O₅ single crystal by a floating zone

Mater. Trans. 44 (2003) 802 – 804

03-IMR0535

Tu, R; Goto, T
Corrosion behavior of ceramics-coated Hastelloy-XR alloy in an Ar-SO₂

Mater. Trans. 44 (2003) 962 – 967

03-IMR0536

Yonenaga, I; Itoh, S; Goto, T
Dislocation mobility and photoluminescence of plastically deformed

Physica B 340 (2003) 484 – 487

03-IMR0221

Goto, T; He, G; Narushima, T; Iguchi, Y
Application of Sr beta-alumina solid electrolyte to a CO₂ gas

Solid State Ion. 156 (2003) 329 – 336

03-IMR0541

Zhang, AY; Akashi, T; Goto, T
Anisotropy of electrical conductivity for alkaline earth beta-alumina single crystals prepared by a floating zone method

Solid State Ion. 156 (2003) 349 – 355

03-IMR0542

Zhang, AY; Akashi, T; Goto, T
Electrical conductivity of non-stoichiometric Sr beta-alumina single crystals prepared by a floating zone method

Solid State Ion. 156 (2003) 425 – 431

03-IMR0543

Akashi, T; Maruyama, T; Goto, T
Transport of lanthanum ion and hole in LaCrO₃ determined by electrical conductivity

Solid State Ion. 164 (2003) 177 – 183

03-IMR0544

Kimura, T; Goto, T

Preparation of RuO₂-YSZ nano-composite films by
Surf. Coat. Technol. 167 (2003) 240 – 244

03-IMR0545

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Preparation of hydrogenated amorphous silicon by ECR plasma sputtering and the effect on retinoic acid and membrane protein polypeptides
Thin Solid Films 438 (2003) 90 – 96

03-IMR0546

Tang, XF; Chen, LD; Jun, W; Luo, PF; Zhang, QJ; Goto, T; Hirai, T; Yuan, RZ

Lattice thermal conductivity of $RyMxCo_{4-x}Sb_{12}$

Acta Phys. Sin. 53 (2004) 1463 – 1468

04-IMR0532

Waghmare, U; Sluiter, MHF; Kimura, T; Goto, T; Kawazoe, Y

A lead-free high-T-C ferroelectric $BaTi_2O_5$: A first-principles study

Appl. Phys. Lett. 84 (2004) 4917 – 4919

04-IMR0172

Miyazaki, H; Goto, T; Miwa, Y; Ohno, T; Suzuki, H; Ota, T; Takahashi, M

Preparation and evaluation of $LaNiO_3$ thin film electrode with chemical solution deposition

J. European Ceram. Soc. 24 (2004) 1005 – 1008

04-IMR0533

Masumoto, H; Goto, T

Ionic conductivity enhancement of YSZ film induced by piezoelectric vibration

Mater. Trans. 45 (2004) 240 – 243

04-IMR0534

Liu, YX; Masumoto, H; Goto, T

Electrical and optical properties of IrO_2 thin films prepared by laser-ablation

Mater. Trans. 45 (2004) 3023 – 3027

04-IMR0537

Kim, TS; Kim, KH; Goto, T; Lee, BT

Microstructure control of Al_2O_3/ZrO_2 composite by fibrous monolithic process

Mater. Trans. 45 (2004) 431 – 434

04-IMR0535

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Preparation of IrO_2 thin films by oxidating laser-ablated Ir

Mater. Trans. 45 (2004) 900 – 903

04-IMR0536

Kim, TS; Jang, DH; Goto, T; Lee, BT

Microstructure control of $Al_2O_3-ZrO_2$ composite by fibrous monolithic process

Rev. Adv. Mater. Sci. 6 (2004) 1 – 6

04-IMR0538

Zhang, AY; Akashi, T; Goto, T

Electrical conductivity of nonstoichiometric Ba beta-alumina single crystals prepared by a floating zone method

Solid State Ion. 166 (2004) 77 – 82

04-IMR0539

Goto, T

High-speed deposition of zirconia films by laser-induced plasma CVD

Solid State Ion. 172 (2004) 225 – 229

04-IMR0540

Tu, R; Kimura, T; Goto, T

High-speed deposition of yttria stabilized zirconia by MOCVD

Surf. Coat. Technol.

187 (2004) 238 – 244

04-IMR0541
