

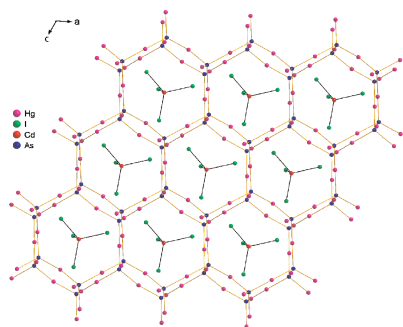
CONTENTS

Abstracted/indexed in BioEngineering Abstracts, Chemical Abstracts, Coal Abstracts, Current Contents/Physics, Chemical, & Earth Sciences, Engineering Index, Research Alert, SCISEARCH, Science Abstracts, and Science Citation Index. Also covered in the abstract and citation database SCOPUS[®]. Full text available on ScienceDirect[®].

Regular Articles

Synthesis, crystal and band structures, and properties of a new supramolecular complex (Hg₂As)₂(CdI₄)

Jian-Ping Zou, Dong-Sheng Wu, Shu-Ping Huang, Jing Zhu, Guo-Cong Guo and Jin-Shun Huang
Page 805

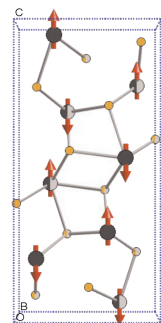


A new quaternary supramolecular complex (Hg₂As)₂(CdI₄) (**1**) has been prepared by the solid-state reaction, and structurally characterized by single crystal X-ray diffraction analysis. The structure of **1** is characterized by a 3-D tridymite-like cationic framework with the channels being occupied by discrete CdI₄²⁻ tetrahedral guest-anions.

Regular Articles—Continued

Tight binding prediction of the α-Gd₂S₃ magnetic structure

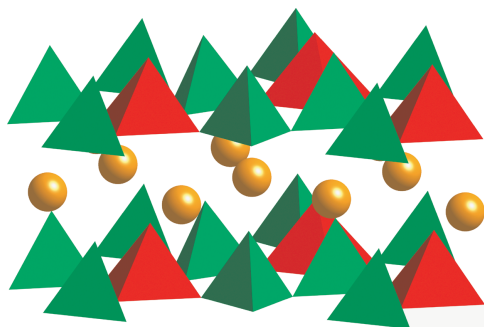
Lindsay E. Roy and Timothy Hughbanks
Page 818



The spin-dependent EHTB method correctly predicts the magnetic structure of α-Gd₂S₃ determined from neutron diffraction experiments.

Structural modulation in K₂V₃O₈

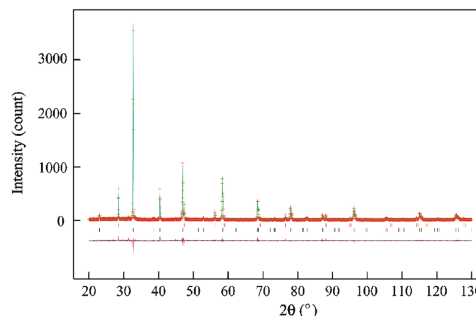
B.C. Chakoumakos, R. Custelcean, T. Kamiyama, K. Oikawa, B.C. Sales and M.D. Lumsden
Page 812



The 115K phase transition in the fresnoite-type K₂V₃O₈ is elucidated by neutron powder and single-crystal X-ray diffraction. Below 115 K, weak superlattice reflections are clearly evident in X-ray diffraction patterns recorded by a CCD detector, and these extra reflections can be indexed with the wave vector ±1/3 <110>* + 1/2c*.

Phase transitions in A-site substituted perovskite compounds: The (Ca_{1-2x}Na_xLa_x)TiO₃ (0 ≤ x ≤ 0.5) solid solution

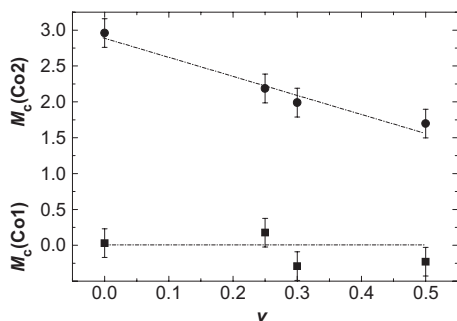
Yuan Li, Shan Qin and Friedrich Seifert
Page 824



X-ray diffraction data and calculated pattern for Na_{1/2}La_{1/2}TiO₃, the end-member of the Ca_{1-2x}Na_xLa_xTiO₃ (x = 0.5). The experimental data are shown as crosses, the calculated fits and difference curves as solid lines. Tick marks (upper row for internal standard silicon) indicate the calculated positions of peaks.

Crystal structure and magnetic properties of the solid-solution phase $\text{Ca}_3\text{Co}_{2-v}\text{Sc}_v\text{O}_6$

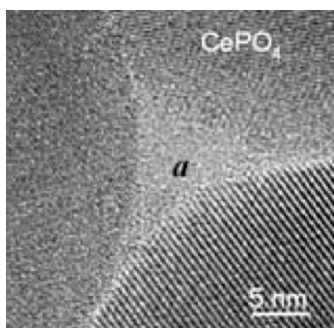
Charles H. Hervoches, Vivian Miksch Fredenborg, Arne Kjekshus, Helmer Fjellvåg and Bjørn C. Hauback
Page 834



The quasi-one-dimensional $\text{Ca}_3\text{Co}_2\text{O}_6$ phase forms a substitutional solid-solution system with Sc, in which the Sc atoms enter the Co2 sublattice exclusively. The homogeneity range of $\text{Ca}_3\text{Co}_{2-v}\text{Sc}_v\text{O}_6$ extends up to $v \approx 0.55$. The magnetic moment decreases rapidly with increasing amount of the non-magnetic Sc solute in the lattice.

Synthesis and characterization of mixed-morphology CePO_4 nanoparticles

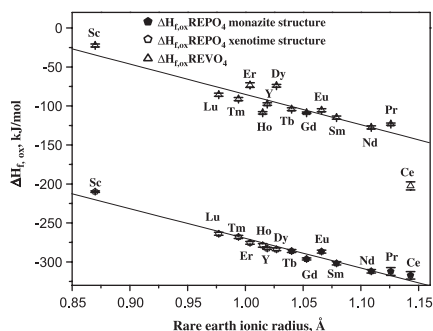
L. Karpowich, S. Wilcke, Rong Yu, G. Harley, J.A. Reimer and L.C. De Jonghe
Page 840



High resolution electron microscopy image of amorphous intergranular phase (a) in polycrystalline monazite CePO_4 .

Enthalpies of formation of rare earth orthovanadates, REVO_4

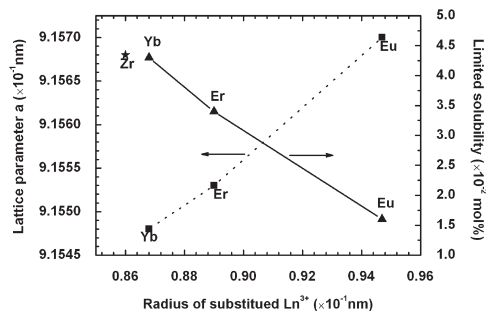
M. Dorogova, A. Navrotsky and L.A. Boatner
Page 847



Comparison of enthalpies of formation from oxides at 298 K for REVO_4 [this work] and REPO_4 compounds [S.V. Ushakov, K.B. Helean, A. Navrotsky, L.A. Boatner, J. Mater. Res. 16(9) (2001) 2623] vs. RE^{3+} ionic radius. Filled symbols indicate scheelite structure, open symbols zircon structure.

$\text{Zr}_{1-x}\text{Ln}_x\text{W}_2\text{O}_{8-x/2}$ ($\text{Ln} = \text{Eu}, \text{Er}, \text{Yb}$): Solid solutions of negative thermal expansion-synthesis, characterization and limited solid solubility

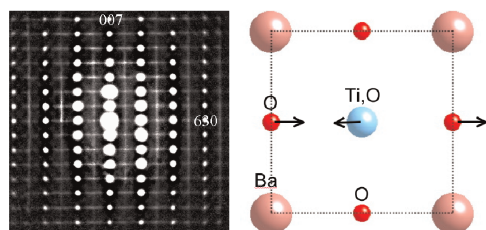
Hai-Hua Li, Jing-Sa Han, Hui Ma, Ling Huang and Xin-Hua Zhao
Page 852



The graphic displays the lattice parameters of saturated solid solutions and solubility of $\text{Zr}_{1-x}\text{Ln}_x\text{W}_2\text{O}_{8-x/2}$, as a function of the radius of substituted Ln^{3+} ions. A more sensitive method is developed to measure the low solubility of the solid solutions. This correlation demonstrates the increase in limited solid solubility follows the lanthanide contraction trend in a way that is opposite to that observed for lattice parameters.

Structured diffuse scattering and polar nano-regions in the $\text{Ba}(\text{Ti}_{1-x}\text{Sn}_x)\text{O}_3$ relaxor ferroelectric system

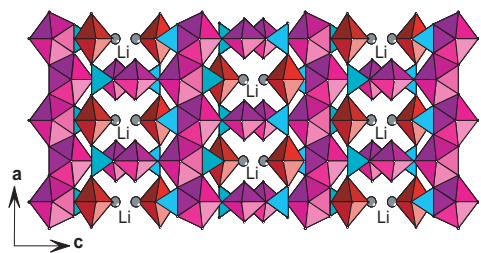
Yun Liu, Ray L. Withers, Xiaoyong Wei and John D. FitzGerald
Page 858



The characteristic $\mathbf{G} \pm \{001\}^*$ sheets of diffuse intensity characteristic of the relaxor ferroelectric $\text{Ba}(\text{Ti}_{1-x}\text{Sn}_x)\text{O}_3$ (BTS), $0.1 \leq x \leq 0.5$, system along with the inherently polar, transverse optical modes of distortion responsible.

Three-dimensional framework of uranium-centered polyhedra with non-intersecting channels in the uranyl oxy-vanadates $\text{A}_2(\text{UO}_2)_3(\text{VO}_4)_2\text{O}$ ($\text{A} = \text{Li}, \text{Na}$)

S. Obbade, L. Duvieubourg, C. Dion and F. Abraham
Page 866

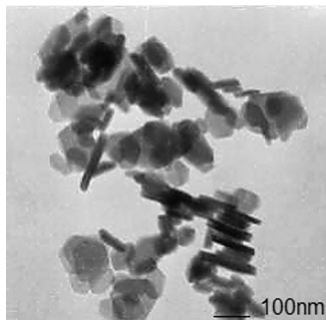


A view of the 3-D structure of $\text{Li}_2(\text{UO}_2)_3(\text{VO}_4)_2\text{O}$.

Continued

Stabilization of Co^{2+} in layered double hydroxides (LDHs) by microwave-assisted ageing

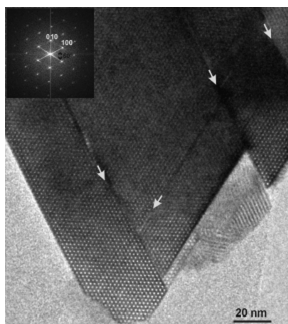
M. Herrero, P. Benito, F.M. Labajos and V. Rives
Page 873



The use of microwave-hydrothermal treatment, controlling both temperature and ageing time, permits to synthesize well-crystallized nanomaterials with controlled surface properties. An enhancement in the crystallinity degree and an increase in the particle size are observed when the irradiation time is prolonged.

TEM investigation of the microporous compound VSB-1: Building units and crystal growth mechanisms

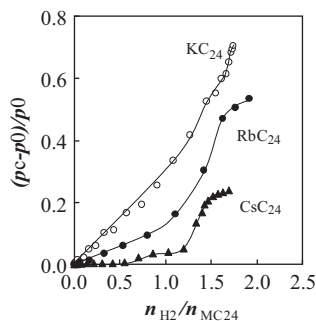
Marie Colmont and Osamu Terasaki
Page 885



TEM investigation of the microporous compound VSB-1 evidenced defects and information about building units and crystal growth. As usually observed for microporous materials, the crystal growth via a layer by layer mechanism.

Effect of sorbed molecules on the resistivity of alkali metal-graphite intercalation compounds

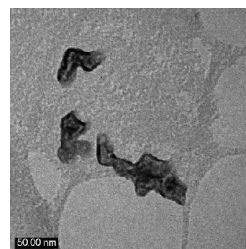
Noboru Akuzawa, Yoji Kunihashi, Yuki Sato, Ken-ichi Tsuchiya and Rika Matsumoto
Page 894



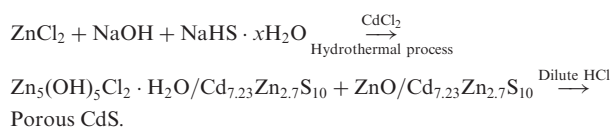
The resistivity of MC_{24} increased with increase of the sorbed amount of H_2 . The magnitude of the increase was in the order $\text{KC}_{24} > \text{RbC}_{24} > \text{CsC}_{24}$. This resistivity increase was considered to be due to the expansion along c -direction which reduces the charge-transfer interaction between the carbon layers and potassium ions.

Preparation of mesoporous cadmium sulfide nanoparticles with moderate pore size

Zhaohui Han, Huaiyong Zhu, Jeffrey Shi, Gordon Parkinson and G.Q. Lu
Page 902

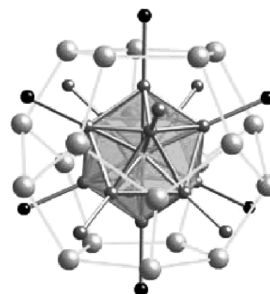


The preparation involves a hydrothermal process and a subsequent acid treatment process, the majority of the particles have a moderate pore size, which complements and fills the gap between existing porous materials usually have a pore size either less than 10 nm or well above 100 nm.



Growth of new ternary intermetallic phases from Ca/Zn eutectic flux

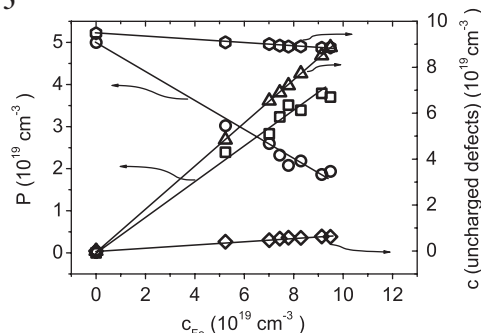
Milorad Stojanovic and Susan E. Lattner
Page 907



The calcium/zinc eutectic is a useful synthesis medium for the growth of new intermetallic phases. Addition of group 10 transition metals to this flux produces ternary phases CaNi_2Zn_3 , $\text{Ca}_{21}\text{Ni}_2\text{Zn}_{36}$, $\text{CaPd}_{0.85}\text{Zn}_{1.15}$, and $\text{Ca}_6\text{Pt}_3\text{Zn}_5$. The nickel-centered zinc icosahedron surrounded by a pentagonal dodecahedron of calcium atoms is found in $\text{Ca}_{21}\text{Ni}_2\text{Zn}_{36}$.

Defect structure of $\text{Sb}_{2-x}\text{Fe}_x\text{Te}_3$ single crystals

J. Horák, P. Lošťák, Č. Drašar, J. Navrátil and C. Uher
Page 915



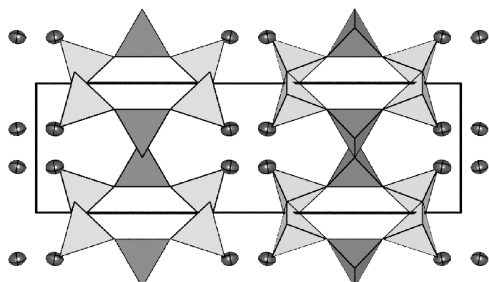
The concentration of holes P and the concentration of defects c in $\text{Sb}_{2-x}\text{Fe}_x\text{Te}_3$ single crystals on Fe-content.

Li₂Si₃O₇: Crystal structure and Raman spectroscopy

Hannes Krüger, Volker Kahlenberg and

Reinhard Kaindl

Page 922

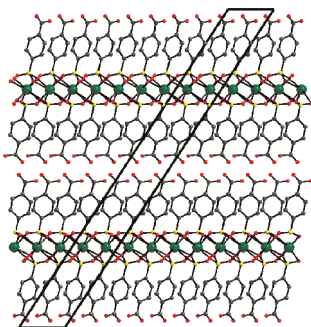


Structure of Li₂Si₃O₇: [Si₆O₁₄] silicate layers formed by two independent *zweier* single chains. Lithium atoms represented by 95% probability displacement ellipsoids.

Synthesis and characterization of new strontium 4-carboxyphenylphosphonates

Vítězslav Zima, Jan Svoboda, Ludvík Beneš, Klára Melánová, Miroslava Trchová and Jiří Dybal

Page 929

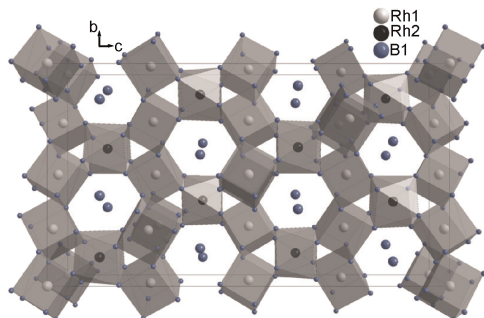


The structure of β -Sr(HOOC₆H₄PO₃H)₂ viewed in the direction of the *bc* plane.

Comparative high-pressure study and chemical bonding analysis of Rh₃Bi₁₄ and isostructural Rh₃Bi₁₂Br₂

Q.F. Gu, G. Krauss, Yu. Grin and W. Steurer

Page 940

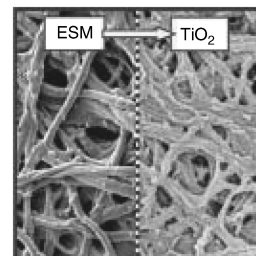


Rh₃Bi₁₄ isostructural with Rh₃Bi₁₂Br₂ consists of a 3D framework of edge-sharing cubes and square antiprisms. High-pressure X-ray powder diffraction measurements of Rh₃Bi₁₄ and Rh₃Bi₁₂Br₂ indicate a high stability of both compounds in the investigated range from ambient pressure to ca 30 GPa at room temperature.

Synthesis and characterizations of hierarchical biomorphic titania oxide by a bio-inspired bottom-up assembly solution technique

Qun Dong, Huilan Su, Wei Cao, Di Zhang, Qixin Guo and Yijian Lai

Page 949

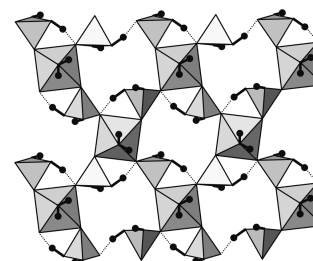


Hierarchical mesoporous TiO₂ is assembled by nanoparticles from the nanoscale to the macroscale through a bio-inspired sol-gel approach with eggshell membrane used as the biotemplate. As-prepared hierarchical titania shows porous characters within the pore size range of 2 nm–4 μ m.

Crystal chemistry of M[PO₂(OH)₂]₂·2H₂O compounds (M=Mg, Mn, Fe, Co, Ni, Zn, Cd): Structural investigation of the Ni, Zn and Cd salts

Violeta Koleva and Herta Effenberger

Page 956

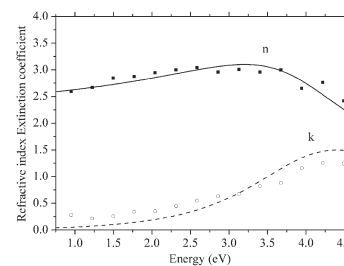


IR spectroscopy showed the internal PO₄ vibrations to be insensitive to the size and the electronic configuration of the M²⁺ ions and reflect the more ionic character of the Mg–O bonds. The observed “ABC trio” characteristic for acidic salts is discussed. Single-crystal X-ray investigations were performed at 120 and 295 K. One of the four hydrogen bonds is worth mentioning because of the short O_h...O bond distance of 2.57–2.61 Å at room temperature (2.56–2.57 Å at 120 K).

Experimental and theoretical contributions to the determination of optical properties of synthetic paramelaconite

J.F. Pierson, E. Duverger and O. Banakh

Page 968

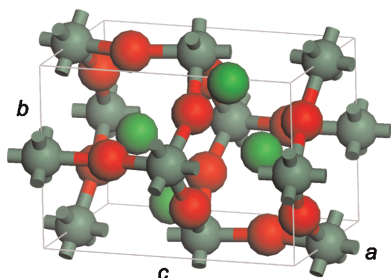


Comparison between experimental (lines) and calculated (points) refractive index and extinction coefficient values. For experimental measurements, the film was deposited on silicon substrate.

Continued

Ab initio structural, electronic and optical properties of orthorhombic CaGeO₃

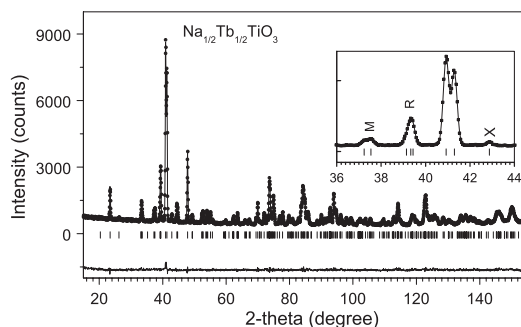
J.M. Henriques, E.W.S. Caetano, V.N. Freire, J.A.P. da Costa and E.L. Albuquerque
Page 974



Orthorhombic CaGeO₃ was studied using density-functional theory (DFT) considering both the local density and generalized gradient approximations, LDA and GGA, respectively. The electronic band structure, density of states, effective masses, dielectric function and optical absorption were obtained after geometry optimization of the unit cell.

Crystal structures of Na_{1/2}Ln_{1/2}TiO₃ (Ln: La, Eu, Tb)

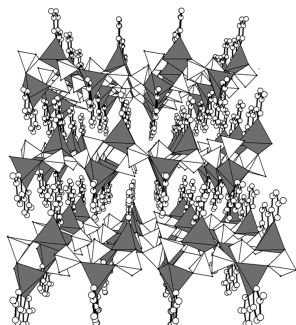
Rajeev Ranjan, Anatoliy Senyshyn, Hans Boysen, Carsten Baecht and Friedrich Frey
Page 995



Rietveld plot of Na_{1/2}Tb_{1/2}TiO₃ after refinement with space group *Pbmn*.

Crystal structures and spectroscopic properties of a new zinc phosphite cluster and an unexpected chainlike zinc phosphate obtained by hydrothermal reactions

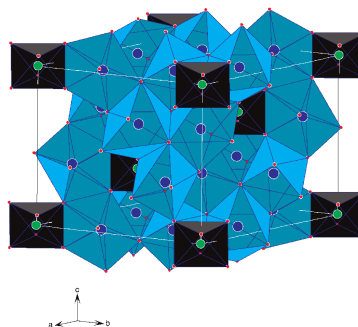
Zhi-En Lin, Wei Fan, Jinlou Gu and Tatsuya Okubo
Page 981



A new molecular zinc phosphite and a new chainlike zinc phosphate have been synthesized under hydrothermal conditions. The two compounds exhibit intensive photoluminescence originated from the intraligand $\pi-\pi^*$ transitions.

Cation ordering in the fluorite-like transparent conductors In_{4+x}Sn_{3-2x}Sb_xO₁₂ and In₆TeO₁₂

J. Choisnet, L. Bizo, M. Allix, M. Rosseinsky and B. Raveau
Page 1002



Hexagonal cell of the fluorite-like oxygen-deficient *M*₇O₁₂ structure: symmetrical octahedra and distorted sevenfold-coordinated polyhedra are shown.

A simple method for systematically controlling ZnO crystal size and growth orientation

Rong Zhang and Lei L. Kerr
Page 988

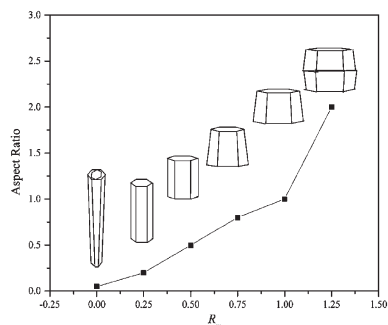
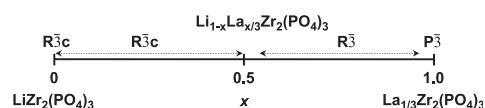


Illustration of ZnO crystals morphology evolution from long-and-slim hexagonal rods to fat-and-short hexagonal pyramids, and then to twinning hexagonal dots as a function of Cd²⁺/Zn²⁺ molar ratio, *R_m*.

Synthesis and structural study of a new NASICON-type solid solution: Li_{1-x}La_{x/3}Zr₂(PO₄)₃

M. Barré, M.P. Crosnier-Lopez, F. Le Berre, E. Suard and J.L. Fourquet
Page 1011

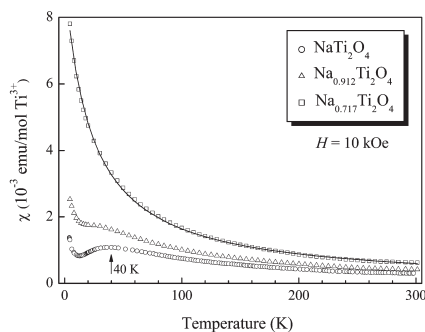


Schematic drawing of the space group evolution at 800 °C in the solid solution Li_{1-x}La_{x/3}Zr₂(PO₄)₃ (0 ≤ *x* ≤ 1).

Single-crystal synthesis, structure analysis, and physical properties of the calcium ferrite-type $\text{Na}_x\text{Ti}_2\text{O}_4$ with $0.558 < x < 1$

Yasuhiko Takahashi, Kunimitsu Kataoka, Ken-ichi Ohshima, Norihito Kijima, Junji Awaka, Kenji Kawaguchi and Junji Akimoto

Page 1020

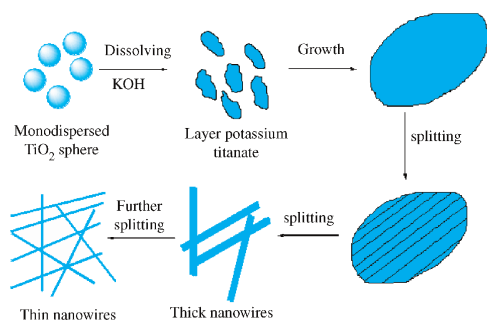


Magnetic susceptibility of three $\text{Na}_x\text{Ti}_2\text{O}_4$ samples below 300 K. The broad maximum around 40 K observed in as-grown NaTi_2O_4 is suppressed by an Na deficiency and vanishes in $\text{Na}_{0.717}\text{Ti}_2\text{O}_4$.

Large aspect ratio titanate nanowire prepared by monodispersed titania submicron sphere via simple wet-chemical reactions

Baoxiang Wang, Yong Shi and Dongfeng Xue

Page 1028

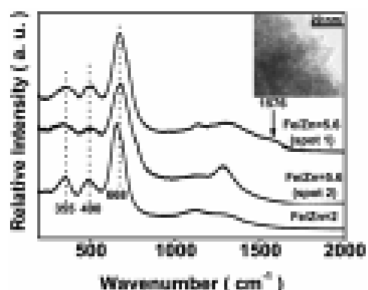


Monodispersed raw titania powders are beneficial to get the long and uniform $\text{K}_2\text{Ti}_6\text{O}_{13}$ nanowires with a large aspect ratio. A formation mechanism of nanowires is proposed based on the dissolving, growth, thickening and splitting of $\text{K}_2\text{Ti}_6\text{O}_{13}$ nano-intermediates.

Magnetic diphase nanostructure of $\text{ZnFe}_2\text{O}_4/\gamma\text{-Fe}_2\text{O}_3$

Xiangxi Bo, Guangshe Li, Xiaoqing Qiu, Yanfeng Xue and Liping Li

Page 1038

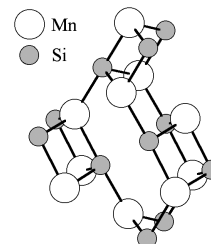


Spherical diphase nanostructure of $\text{ZnFe}_2\text{O}_4/\gamma\text{-Fe}_2\text{O}_3$ was obtained by varying the initial molar ratio of Fe/Zn .

Crystal structure, phase relations and electrochemical properties of monoclinic $\text{Li}_2\text{MnSiO}_4$

V.V. Politaev, A.A. Petrenko, V.B. Nalbandyan, B.S. Medvedev and E.S. Shvetsova

Page 1045

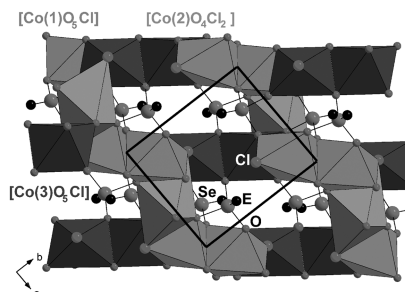


Arrangement of Mn (large white balls) and Si (small grey balls) atoms in $\text{Li}_2\text{MnSiO}_4$ structure. Bold lines connect atoms linked via common oxygen (not shown).

Crystal structure and magnetic properties of two new cobalt selenite halides: $\text{Co}_5(\text{SeO}_3)_4\text{X}_2$ ($\text{X} = \text{Cl}, \text{Br}$)

Richard Becker, Mladen Prester, Helmuth Berger, Ping Hui Lin, Mats Johansson, Djuro Drobac and Ivica Zivkovic

Page 1051

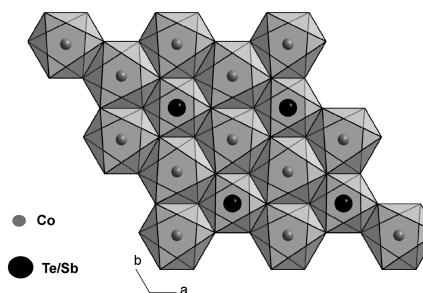


Two new iso-structural cobalt selenite halides $\text{Co}_5(\text{SeO}_3)_4\text{Cl}_2$ and $\text{Co}_5(\text{SeO}_3)_4\text{Br}_2$ have been synthesized which are iso-structural to $\text{Ni}_5(\text{SeO}_3)_4\text{Br}_2$. Magnetic susceptibility measurements on oriented single-crystalline samples show anisotropic response in a broad temperature range, revealing significant single-ion anisotropy effects.

Structure and basic magnetic properties of the honeycomb lattice compounds $\text{Na}_2\text{Co}_2\text{TeO}_6$ and $\text{Na}_3\text{Co}_2\text{SbO}_6$

L. Viciu, Q. Huang, E. Morosan, H.W. Zandbergen, N.I. Greenbaum, T. McQueen and R.J. Cava

Page 1060

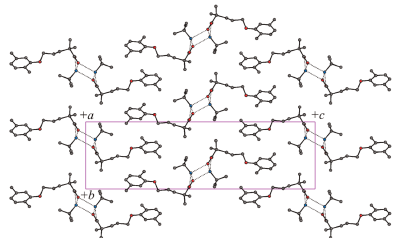


The layer of edge-shared MO_6 octahedra, showing the honeycomb Co array.

Continued

Structural properties of a family of hydrogen-bonded co-crystals formed between gemfibrozil and hydroxy derivatives of *t*-butylamine, determined directly from powder X-ray diffraction data

Eugene Y. Cheung, Sarah E. David, Kenneth D.M. Harris, Barbara R. Conway and Peter Timmins
Page 1068

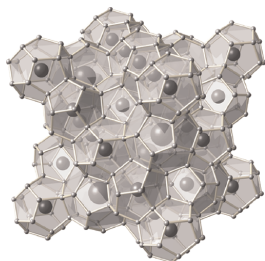


Structural properties of a family of co-crystals containing gemfibrozil and hydroxy derivatives of *t*-butylamine are discussed and rationalized.

Synthesis and single-crystal X-ray diffraction studies of new framework substituted type II clathrates,



M. Beekman, W. Wong-Ng, J.A. Kaduk, A. Shapiro and G.S. Nolas
Page 1076

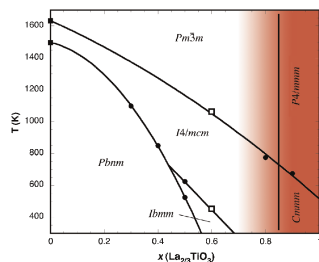


The synthesis of framework-substituted type II germanium clathrates, $\text{Cs}_8\text{Na}_{16}\text{Ag}_x\text{Ge}_{136-x}$, is reported for the first time. Single crystal X-ray diffraction studies indicate that Ag substitutes for Ge on the clathrate framework, with preferential substitution occurring on the 96g site. These results offer new direction in the synthesis of novel clathrate compounds, materials of interest for potential thermoelectric applications.

Structures and phase diagram for the system $\text{CaTiO}_3\text{-La}_{2/3}\text{TiO}_3$

Zhaoming Zhang, Gregory R. Lumpkin, Christopher J. Howard, Kevin S. Knight, Karl R. Whittle and Keiichi Osaka

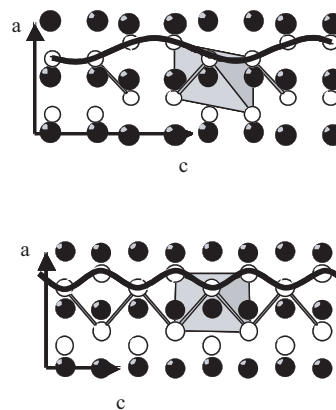
Page 1083



Phase diagram for $\text{Ca}_{(1-x)}\text{La}_{2x/3}\text{TiO}_3$ based on transition temperatures obtained from *in situ* neutron and synchrotron X-ray powder diffraction studies: depending on whether or not we have in-phase and/or out-of-phase octahedral tilting, whether we have long-range cation/vacancy ordering (the degree of ordering is indicated by shading), six distinct structures occur.

The incommensurately modulated $\text{NiGe}_{1-x}\text{P}_x$, $\sim 0.3 \leq x \leq \sim 0.7$, solid solution: The ‘missing link’ between the *NiP* and *MnP* structure types

A.-K. Larsson, F.J. García-García and R.L. Withers
Page 1093

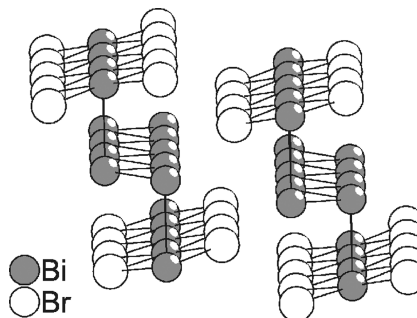


The NiP (top) and NiGe (bottom) crystal structures. The structural relationship is emphasised by indicating the $x\sin[\text{Ge/P}]$ modulation wave in the 4-d space group setting $Amam(0\ 0\ \gamma)s00$; $\gamma = 1$ for NiP, $\gamma = 1/2$ for NiP and $0.78 < \gamma < 0.70$ for $\text{NiGe}_{1-x}\text{P}_x$ with $0.4 > x > 0.7$.

Electronic structure, galvanomagnetic and magnetic properties of the bismuth subhalides Bi_4I_4 and Bi_4Br_4

T.G. Filatova, P.V. Gurin, L. Kloo, V.A. Kulbachinskii, A.N. Kuznetsov, V.G. Kytin, M. Lindsjo and B.A. Popovkin

Page 1103

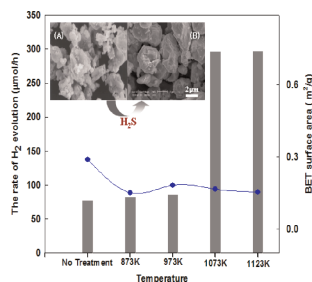


Quasi one-dimensional compounds Bi_4Br_4 and Bi_4I_4 have been investigated theoretically (electronic structure calculations) and experimentally (galvanomagnetic and magnetic measurements). Both compounds are found to be diamagnetic, room-temperature semiconductors with n-type conductivity and a possibility of significant directional anisotropy. Magnetoresistivity data indicate some weak interactions between isolated bismuth fragments in Bi_4I_4 .

AgGaS₂-type photocatalysts for hydrogen production under visible light: Effects of post-synthetic H₂S treatment

Jum Suk Jang, Sun Hee Choi, Namsoo Shin, Chungjong Yu and Jae Sung Lee

Page 1110

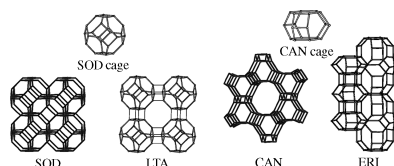


Post-treatment of AgGaS₂ under H₂S flow at 1123 K resulted in the well-defined chalcopyrite structure, which was revealed mainly by Rietveld analysis of XRD and detailed EXAFS study. The diameters of AgGaS₂ particles treated at 873–1123 K under H₂S gas flow are ca. 2–3 nm, almost the same as that of H₂S-untreated material. In untreated sample, AgGaS₂ particles were surrounded by the broken powders having sharp edges. But there were almost no broken particles and the surface became smoother for AgGaS₂ treated with H₂S gas at 1123 K. The rates of hydrogen evolution over H₂S treated AgGaS₂ at higher temperatures (1073 and 1123 K) were higher than those of photocatalysts untreated or treated at lower temperatures (873, 973 K). There is almost no correlation between BET surface areas and hydrogen evolution rates.

Sulfur radicals embedded in various cages of ultramarine analogs prepared from zeolites

Stanisław Kowalak, Aldona Jankowska, Sebastian Zeidler and Andrzej B. Więckowski

Page 1119

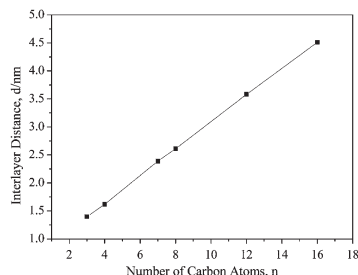


Structures of SOD, LTA, cancrinite and erionite.

Intercalation behavior of *n*-alkylamines into an *A*-site defective layered perovskite H₂W₂O₇

Bingshan Wang, Xiaowen Dong, Qingyi Pan, Zhixuan Cheng and Yanze Yang

Page 1125

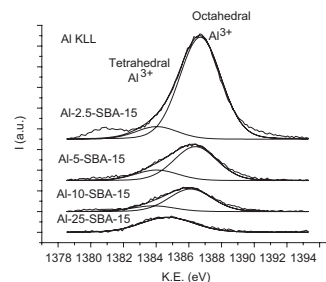


H₂W₂O₇ can accommodate *n*-alkylamines (C_{*n*}H_{2*n*+1}NH₂; *n* = 3, 4, 7, 8, 12, 16) to form intercalation compounds via an acid–base mechanism. After intercalation, the [001] reflections of H₂W₂O₇ shift to lower angles. The basal space of the intercalation products with *n*-alkylamines increases with an increase of the number of carbon atoms in *n*-alkyl chain. The relationship between the interlayer distance, *d* and the number of carbon atoms in the *n*-alkyl chain, *n*, is demonstrated in figure. A linear relationship is clearly observed, as expressed with $d = 0.241n + 0.67$.

Characterization and acidic properties of Al-SBA-15 materials prepared by post-synthesis alumination of a low-cost ordered mesoporous silica

M. Gómez-Cazalilla, J.M. Mérida-Robles, A. Gurbani, E. Rodríguez-Castellón and A. Jiménez-López

Page 1130

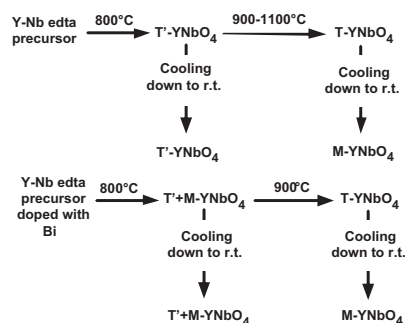


Al KLL spectra of Al-SBA-15 materials with different Si/Al ratios.

A new molecular precursor route for the synthesis of Bi–Y, Y–Nb and Bi-doped Y–Nb oxides at moderate temperatures

D.A. Bayot, A.M. Dupont and Michel M. Devillers

Page 1141

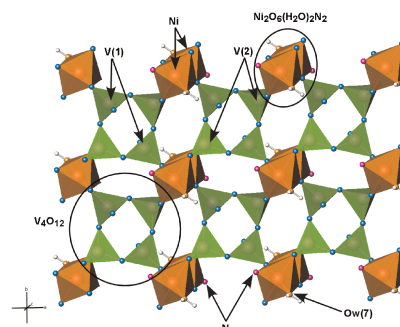


Bi–Y, Nb–Y and Bi-doped Nb–Y oxides were prepared by a molecular precursors method from pre-isolated water-soluble edta-based complexes. The cubic Bi_{1–*x*}Y_{*x*}O_{1.5} and Y₃NbO₇ oxides were obtained in a pure form at the moderate temperature of 650 °C. A distorted tetragonal YNbO₄ phase was also stabilized at room temperature by calcining the precursor at 800 °C, and the pure corresponding monoclinic oxide has been obtained near 1100 °C.

Hydrothermal synthesis and crystal structure of the Ni₂(C₄H₄N₂)(V₄O₁₂)(H₂O)₂ and Ni₃(C₄H₄N₂)₃(V₈O₂₃) inorganic–organic hybrid compounds. Thermal, spectroscopic and magnetic studies of the hydrated phase

Edurne S. Larrea, José L. Mesa, José L. Pizarro, María I. Arriortua and Teófilo Rojo

Page 1149



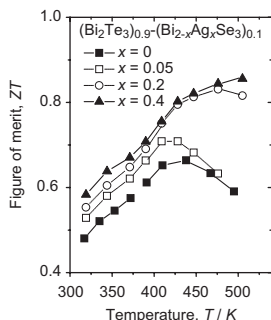
Crystal structure of a sheet of Ni₂(C₄H₄N₂)(V₄O₁₂)(H₂O)₂.

Rapid Communications

Thermoelectric properties of Ag-doped n-type $(\text{Bi}_2\text{Te}_3)_{0.9}-(\text{Bi}_{2-x}\text{Ag}_x\text{Se}_3)_{0.1}$ ($x = 0-0.4$) alloys prepared by spark plasma sintering

J.L. Cui, W.J. Xiu, L.D. Mao, P.Z. Ying, L. Jiang and X. Qian

Page 1158



The temperature dependence of dimensionless thermoelectric figure of merit ZT for different $(\text{Bi}_2\text{Te}_3)_{0.9}-(\text{Bi}_{2-x}\text{Ag}_x\text{Se}_3)_{0.1}$ ($x = 0-0.4$) alloys prepared by spark plasma sintering.

Erratum

Erratum to "CONTENTS" [J. Solid State Chem. 179(12) (2006)]

Page 1163

Author inquiries

Submissions

For detailed instructions on the preparation of electronic artwork, consult Elsevier's Author Gateway at <http://authors.elsevier.com>.

Other inquiries

Visit Elsevier's Author Gateway (<http://authors.elsevier.com>) for the facility to track accepted articles and set up e-mail alerts to inform you of when an article's status has changed. The Author Gateway also provides detailed artwork guidelines, copyright information, frequently asked questions and more.

Contact details for questions arising after acceptance of an article, especially those relating to proofs, are provided after registration of an article for publication.

Language Polishing

Authors who require information about language editing and copyediting services pre- and post-submission should visit <http://www.elsevier.com/wps/find/authorshome.authors/languagepolishing> or contact authorsupport@elsevier.com for more information. Please note Elsevier neither endorses nor takes responsibility for any products, goods, or services offered by outside vendors through our services or in any advertising. For more information please refer to our Terms & Conditions at http://www.elsevier.com/wps/find/termsconditions.cws_home/termsconditions.

For a full and complete Guide for Authors, please refer to *J. Solid State Chem.*, Vol. 180, Issue 1, pp. *bmi-bmv*. The instructions can also be found at http://www.elsevier.com/wps/find/journaldescription.cws_home/622898/authorinstructions.

Journal of Solid State Chemistry has no page charges.