ELSEVIER

Volume 204, August 2013

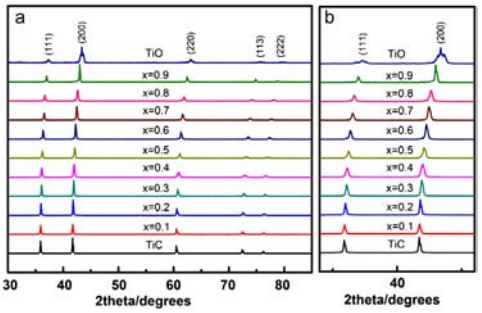
JOURNAL OF SOLID STATE CHEMISTRY

www.elsevier.com/locate/jssc

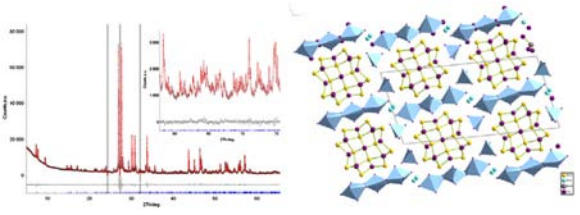
CONTENTS

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 SciVerse SCOPUS®. Full text available on SciVerse ScienceDirect®.

Regular Articles

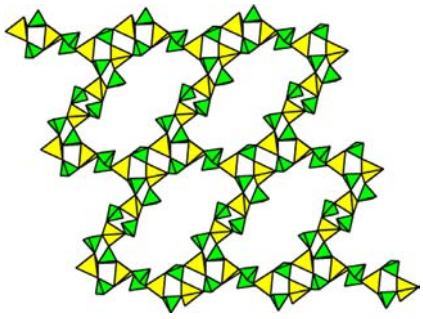


XRD of series of titanium oxycarbides ($TiC_{1-x}O_x$, $0 \le x \le 1$) solid solution prepared by adjusting the proportion of TiO in the starting material.

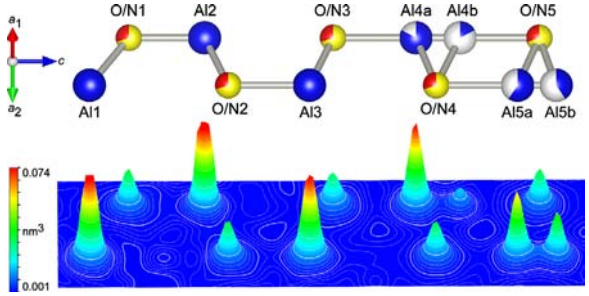


Measured and calculated diffraction spectra for $Bi_{12.8}Co_{0.2}Mo_5O_{34\pm\delta}$ and projection of the $Bi_{12.8}Co_{0.2}Mo_5O_{34\pm\delta}$ crystal structure onto the *ac* plane.

Regular Articles—Continued



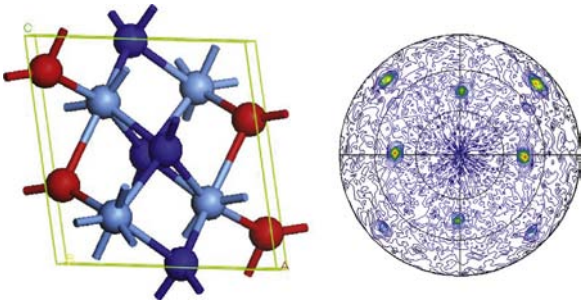
The first layered metal phosphite with large 20-ring windows, (C8H17NH3)4Zn3(HPO3)5 · $3H_2O$ (1), sandwiched by water molecules and protonated *tert*-octylamine molecules.



A bird's eye view of electron densities up to 50% (0.074 nm^{-3}) of the maximum on the plane parallel to (110) with the corresponding atomic arrangements of $Al_9O_3N_7$.

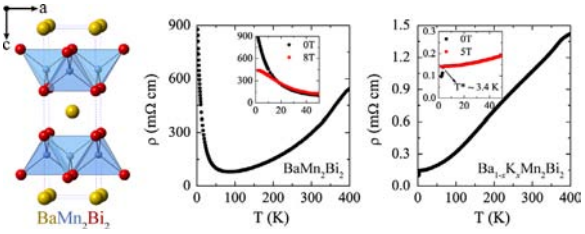
Continued

Growth of single crystalline TaON on yttria-stabilized zirconia (YSZ)
Junguang Tao, J.W. Chai, L.M. Wong, Z. Zhang, J.S. Pan and S.J. Wang
page 27



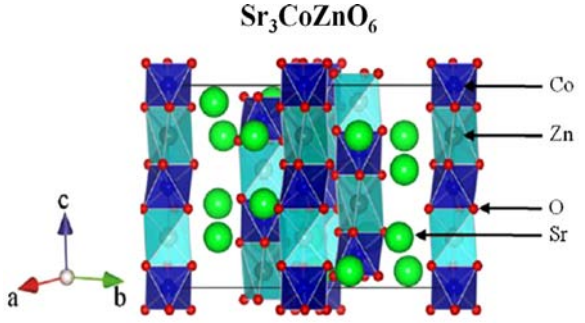
Structure of single crystalline β-TaON and its diffraction pole figure.

Crystals, magnetic and electronic properties of a new $ThCr_2Si_2$-type $BaMn_2Bi_2$ and K-doped compositions
Bayrammurad Saparov and Athena S. Sefat
page 32



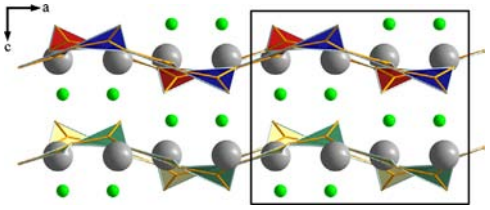
Local moment antiferromagnet $BaMn_2Bi_2$, the first bismuthide with $ThCr_2Si_2$ structure, turns metallic upon K-doping.

Crystal structure and magnetic properties and Zn substitution effects on the spin-chain compound $Sr_3Co_2O_6$
Xia Wang, Yanfeng Guo, Ying Sun, Yoshihiro Tsujimoto, Yoshitaka Matsushita and Kazunari Yamaura
page 40



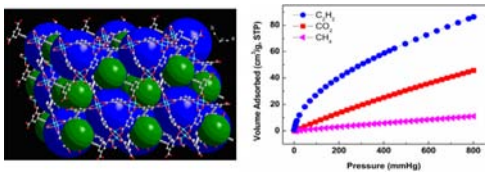
Crystal structure of the spin-chain compound Sr_3CoZnO_6 synthesized at 6 GPa. Zn atoms preferably occupy the trigonal prism sites rather than the octahedral sites. As a result, the compound is much magnetically isotropic.

High-pressure synthesis and characterization of the first cerium fluoride borate CeB_2O_4F
Ernst Hinteregger, Klaus Wurst, Martina Tribus and Hubert Huppertz
page 47



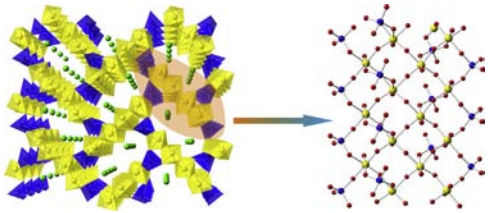
A new rare-earth fluoride borate CeB_2O_4F could be synthesized under high-pressure/high-temperature conditions of 0.9 °GPa and 1450 °Cin a Walker-type multianvil apparatus. The crystal structure represents a new structure type in the class of rare-earth fluoride borates. The structure exhibits a $9+1$ coordinated cerium ion, one three-fold coordinated fluoride ion and a one-dimensional chain of $[BO_3]^{3-}$ groups. A closer view on the *ac*-plane shows an interesting wave-like modulation of the borate chains.

A microporous metal–organic framework with butynelene functionality for selective gas sorption
Lifeng Wang, Lu Zhai, Xiaoming Ren and Wenwei Zhang
page 53



A microporous metal–organic framework with butynelene groups, $\{[Cu_2(BBTC)(H_2O)_2]\cdot 2DMSO\cdot 4H_2O\}_n$, exhibits higher gas selective sorption towards C_2H_2/CH_4 and CO_2/CH_4 at room temperature with a selectivity of 5.7 and 4.1, respectively.

$K[AsW_2O_9]$, the first member of the arsenate–tungsten bronze family: Synthesis, structure, spectroscopic and nonlinear optical properties
Evgeny V. Alekseev, Olivier Felbinger, Shijun Wu, Thomas Malcherek, Wulf Depmeier, Giuseppe Modolo, Thorsten M. Gesing, Sergey V. Krivovichev, Evgeny V. Suleimanov, Tatiana A. Gavrilova, Lev D. Pokrovsky, Alexey M. Pugachev, Nikolay V. Surovtsev and Victor V. Atuchin
page 59



$K[AsW_2O_9]$, the first member of arsenate–tungsten bronze family exhibit new three dimensional structure type, significant thermal stability and NLO properties.