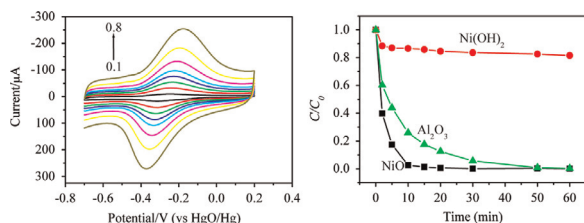


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Regular Articles

Single-crystal-like NiO colloidal nanocrystal-aggregated microspheres with mesoporous structure: Synthesis and enhanced electrochemistry, photocatalysis and water treatment properties

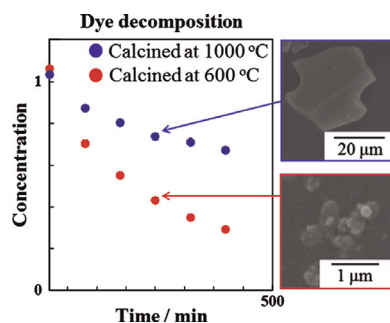
Zhirong Suo, Xiaonan Dong and Hui Liu
page 1



CNAMs with mesoporous structure synthesized via a simple microwave-assisted hydrothermal method was applied in electrochemistry and catalysis and exhibited enhanced performance.

A green synthesis of a layered titanate, potassium lithium titanate; lower temperature solid-state reaction and improved materials performance

Makoto Ogawa, Masashi Morita, Shota Igarashi and Soh Sato
page 9

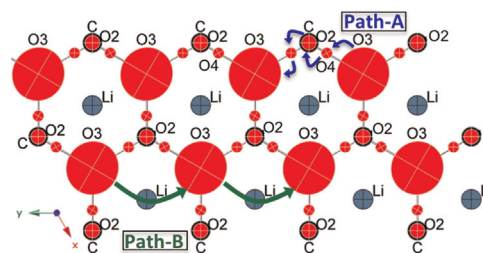


Finite particle of a layered titanate, potassium lithium titanate, was prepared by solid-state reaction at lower temperature to show modified materials performance.

Regular Articles—Continued

Synthesis, structure and electrochemical properties of layered $\text{La}_2\text{Li}_{2x}(\text{CO}_3)_{1-x}\text{O}_{2+2x}$

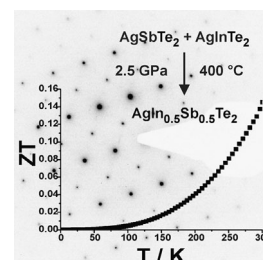
Muhammad Iqbal, Genki Kobayashi, Masaaki Hirayama and Ryoji Kanno
page 14



Thermal ellipsoid projection of the carbonate layer viewed from the *c*-axis, showing oxygen migration paths: (A, blue line) interstitial hopping and (B, green line) co-operative rotation.

A high-pressure route to thermoelectrics with low thermal conductivity: The solid solution series $\text{AgIn}_x\text{Sb}_{1-x}\text{Te}_2$ ($x=0.1-0.6$)

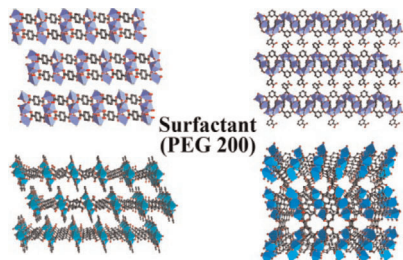
Thorsten Schröder, Tobias Rosenthal, Daniel Souchay, Christian Petermayer, Sebastian Grott, Ernst-Wilhelm Scheidt, Christian Gold, Wolfgang Scherer and Oliver Oeckler
page 20



Reaction scheme, temperature characteristics of the *ZT* value and a selected-area electron diffraction pattern (background) of $\text{AgIn}_{0.5}\text{Sb}_{0.5}\text{Te}_2$, which crystallizes in a rocksalt-type structure with statistical cation disorder.

Tuning metal–carboxylate coordination in crystalline metal–organic frameworks through surfactant media

Junkuo Gao, Kaiqi Ye, Mi He, Wei-Wei Xiong, Wenfang Cao, Zhi Yi Lee, Yue Wang, Tom Wu, Fengwei Huo, Xiaogang Liu and Qichun Zhang
page 27



Surfactants have been used as reaction media to grow MOF single crystals for the first time. Eight new two-dimensional or three-dimensional MOFs were successfully synthesized in surfactant polyethylene glycol-200 (PEG-200). Coordination modes of carboxylates up to eight were founded. Our strategy of growing crystalline MOFs in surfactant could offer exciting opportunities for preparing novel MOFs with diverse structures and interesting properties.

Electronic environments in $\text{Ni}_3\text{Pb}_2\text{S}_2$ (shandite) and its initial oxidation in air

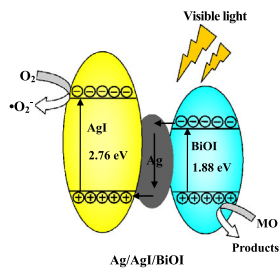
William M. Skinner, Gujie Qian and Alan N. Buckley
page 32



Shandite ingot fracture surface in sample holder.

Facile synthesis of novel Ag/AgI/BiOI composites with highly enhanced visible light photocatalytic performances

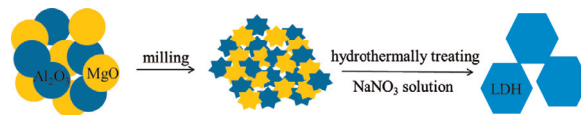
Jing Cao, Yijie Zhao, Haili Lin, Benyan Xu and Shifu Chen
page 38



Ag/AgI/BiOI displayed excellent photocatalytic activities for methyl orange degradation under visible light, which was mainly ascribed to the highly efficient separation of electrons and holes through Z-scheme pathway.

Mechano-hydrothermal synthesis of $\text{Mg}_2\text{Al-NO}_3$ layered double hydroxides

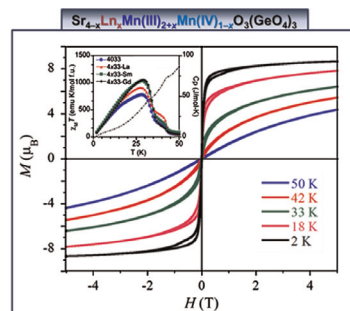
Fengrong Zhang, Na Du, Shue Song, Jianqiang Liu and Wanguo Hou
page 45



The novel mechano-hydrothermal route to synthesize LDH has advantages in low reaction temperature and short reaction time, and the target product was of high crystallinity, good dispersion and regular shape.

Enhanced ferromagnetic order in $\text{Sr}_4\text{Mn}_3\text{O}_3(\text{GeO}_4)_3$ featuring canted $[\text{MnO}_4]_\infty$ spin chains of mixed-valent Mn(III)/Mn(IV). Aliovalent substitution of the $\text{Sr}_{4-x}\text{Ln}_x\text{Mn}_{2+x}^{\text{III}}\text{Mn}_{1-x}^{\text{IV}}\text{O}_3(\text{GeO}_4)_3$ solid-solution

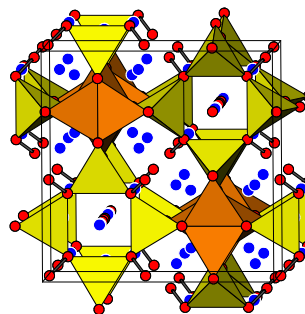
J. Palmer West, Dino Sulejmanovic, Gregory Becht, Jian He, Dale Hitchcock, Yonggao Yan and Shiou-Jyh Hwu
page 51



$\text{Sr}_{4-x}\text{Ln}_x\text{Mn}(\text{III})_{2+x}\text{Mn}(\text{IV})_{1-x}\text{O}_3(\text{GeO}_4)_3$

Rare-earth manganese germanides $\text{RE}_{2+x}\text{MnGe}_{2+y}$ ($\text{RE}=\text{La}, \text{Ce}$) built from four-membered rings and stellae quadrangulae of Mn-centred tetrahedra

Anton O. Oliynyk and Arthur Mar
page 60



MnGe_4 tetrahedra share corners to form four-membered rings and edges to form stellae quadrangulae in the structure of $\text{La}_{2.1}\text{MnGe}_{2.2}$.

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