ELSEVIER

Volume 226, March 2015

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JOURNAL OF SOLID STATE CHEMISTRY

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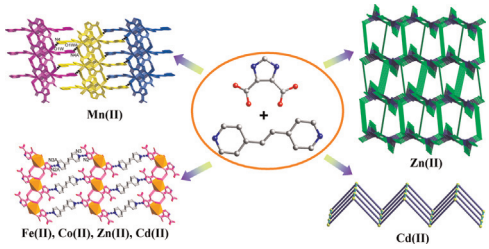
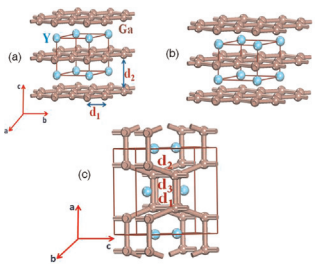
Regular Articles

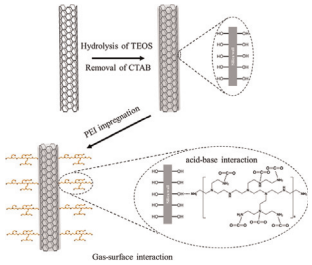


Seven new complexes based on different structural characteristics have been hydrothermally synthesized by the mixed ligands. The fluorescent properties, the magnetic property and the water vapor adsorption have been investigated.

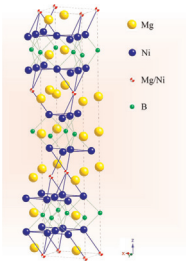


High pressure X-ray diffraction patterns of YGa_2 up to ~35 GPa shows an isostructural phase transition at ~5 GPa and transition to an orthorhombic structure ~14 GPa.

Regular Articles—Continued



Fabrication and CO_2 adsorption process of the S-MWCNTs impregnated with PEI.



The crystal structure of the $Mg_{3+x}Ni_{7-x}B_2$ phase

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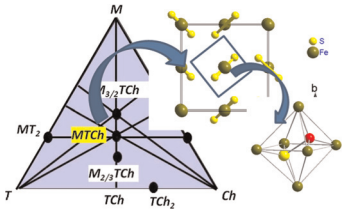
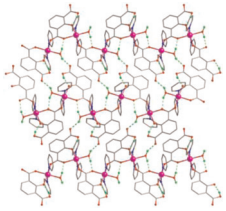


Compositional and structural stability of MTCh compounds is investigated from first principle calculations. A conceptional approach is presented to study and predict novel stable and metastable compounds and structures of low gap semiconductors with TCh dumbbell units that are isoelectronic and structurally related to pyrite (FeS_2).



Synopsis: Two Co(II)/Ni(II) complexes with zig-zag chain structures have been reported. **1**-Co shows cant-antiferromagnetism while **2**-Ni shows ferromagnetism. Magnetocaloric effect is also found in both of them.

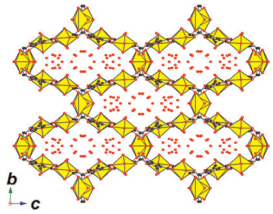
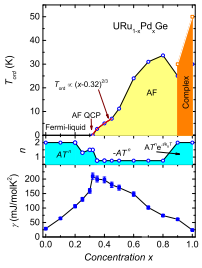
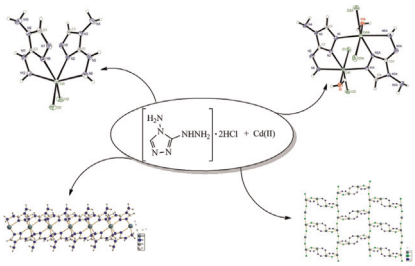


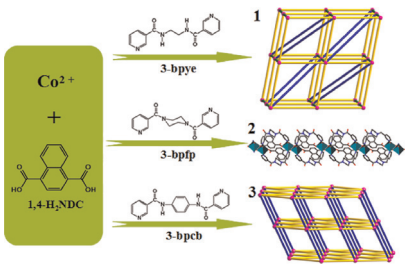
Table of content: three new uranium(VI) coordination polymers with pyromellitic acid (H_4btca) have been synthesized via room temperature and hydrothermal synthesis methods, and structurally characterized. Two to three dimensional (3D) frameworks are revealed. All 3D frameworks have unique 1D large channels. Their vibrational modes, thermal stabilities and photoluminescence properties have been investigated.



Magnetic phase diagram of $URu_{1-x}Pd_xGe$. Middle and bottom panel: concentration dependence of the exponent n in the resistivity AT^n term and the Sommerfeld ratio of $URu_{1-x}Pd_xGe$ at 2 K, respectively.



Four Cd(II) complexes based on 3-hydrazino-4-amino-1,2,4-triazole ligands exhibit diverse structures from mononuclear to 2D networks.



Three multifunctional cobalt(II) complexes constructed from three bis-pyridyl-bis-amide and 1,4-naphthalenedicarboxylic acid have been hydrothermally synthesized and characterized. The fluorescent, electrochemical and magnetic properties of **1**–**3** have been investigated.