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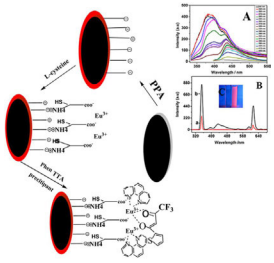
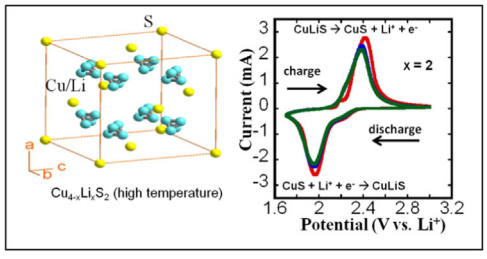
Regular Articles

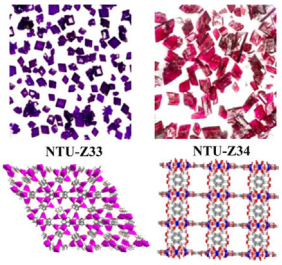


Schematic illustration of the synthesis and basic composition of the luminescent material. Inset figures were luminescence emission spectra of g-C_3N_4 (A), europium (III) complex (a) and luminescent material (b) with the same concentration in (B) (K_{ex} = 350 nm) and photographs of (left) H_2O and (right) the H_2O dispersion of luminescence emission spectra under 350 nm UV radiation. The energy transfer in the luminescent material matchs very well and it exhibits multi-color emissions simultaneously. The enhanced photoluminescence quality and density of the europium (III) makes them suiting for multipurpose applications in practical fields.

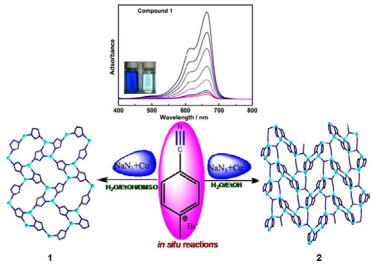


Tuning Li content in $Cu_{4-x}Li_xS_2$/Li half-cells to maintain a Cu/Li ratio equal to unity affords maximum capacity and high stability of the charge–discharge process.

Regular Articles—Continued



Employing surfactants as reaction media, two new metal-organic frameworks (MOFs) have been successfully synthesized and magnetic study suggests that both compounds have weak antiferromagnetic behaviors.



Two Cu^ICPs have been solvothermally synthesized through the *in situ* [2+3] cycloaddition and metal reduction reaction. Both compounds exhibit intense luminescence and high photocatalytic degradation under visible light.

Continued

Broadband sensitized white light emission of g-C_3N_4/Y_2MoO_6:Eu^{3+} composite phosphor under near ultraviolet excitation

Bing Han, Yongfei Xue, Pengju Li, Jingtao Zhang, Jie Zhang and Hengzhen Shi

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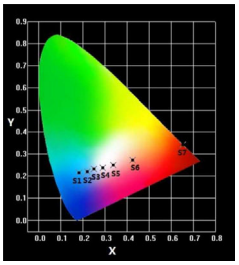

Under the excitation of 360 nm near ultraviolet light, the g-C_3N_4/Y_2MoO_6:Eu^{3+} composite phosphors show tunable emission from blue to red region, in which white light emission can be obtained.

Synthesis and investigation of proton conductivity for intercalated kaolinite with 4-amidinopyridinium chloride

Li-Te Ren, Xiao-Pei Li, Jian-Lan Liu and Xiao-Ming Ren

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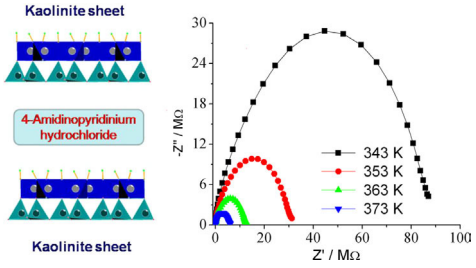

The intercalated hybrid of mineral kaolinite with 4-amidinopyridinium hydrochloride is prepared to use as proton conducting material.

Synthesis, crystal and electronic structure, and optical property of the pentanary chalcohalide $Ba_3KSb_4S_9Cl$

Hua-Jun Zhao and Peng-Fei Liu

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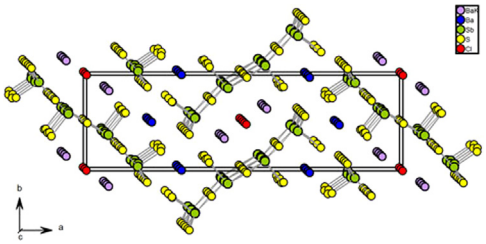

The pentanary chalcohalide $Ba_3KSb_4S_9Cl$ has been prepared, which contains one-dimensional (1D) $[Sb_3S_7]^{5-}$ chains running down the [001] direction separated by isolated dimeric Sb_2S_4 polyhedra, Ba^{2+}, K^+, and Cl^-, respectively.

Comparative study of phase transition and textural changes upon calcination of two commercial titania samples: A pure anatase and a mixed anatase-rutile

Eleana Kordouli, Vassileios Dracopoulos, Tiverios Vaimakis, Kyriakos Bourikas, Alexis Lycourghiotis and Christos Kordulis

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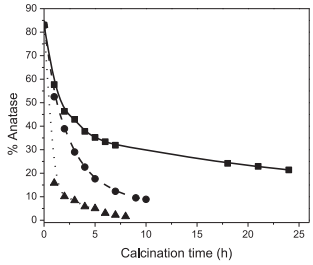

Dependence of anatase content of P25 on the calcination temperature (600 °C (■), 650 °C (●), 700 °C (▲)) and time.

Superconductivity in the orthorhombic phase of thermoelectric $CsPb_xBi_{4-x}Te_6$ with $0.3 \le x \le 1.0$

R.X. Zhang, H.X. Yang, H.F. Tian, G.F. Chen, S.L. Wu, L.L. Wei and J.Q. Li

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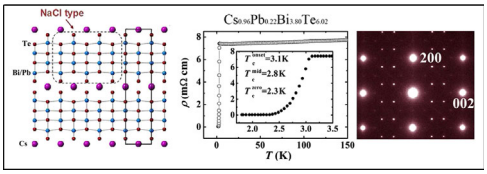

Bulk superconductivity is discovered in the orthorhombic $Cs_{0.96}Pb_{0.22}Bi_{3.80}Te_{6.02}$ materials with the superconducting transition T_c=3.1 K. The compound shows a clear ordered structure with a modulation wave vector of q≈a*/2+c*/1.35 on the *a*–*c* plane.

$Cs_7Sm_{11}[TeO_3]_{12}Cl_{16}$ and $Rb_7Nd_{11}[TeO_3]_{12}Br_{16}$, the new tellurite halides of the tetragonal $Rb_6LiNd_{11}[SeO_3]_{12}Cl_{16}$ structure type

Dmitri O. Charkin, Cameron Black, Lewis J. Downie, Dmitry E. Sklovsky, Peter S. Berdonosov, Andrei V. Olenev, Wuzong Zhou, Philip Lightfoot and Valery A. Dolgikh

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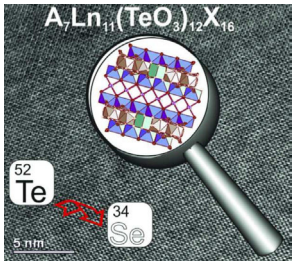

Two new rare-earth – alkali – tellurium oxide halides were predicted and synthesized.