

CONTENTS

REVIEWS

Rare earth upconversion nanophosphors: synthesis, functionalization and application as biolabels and energy transfer donors

.....ZHANG Chao, SUN Lingdong, ZHANG Yawen, YAN Chunhua 807

Recent progress report on DNA B-Z transition modulated by rare earth-amino acid complex and Alzheimer's disease amyloid beta.....GENG Jie, QU Xiaogang 820

Lanthanide NIR luminescence for telecommunications, bioanalyses and solar energy conversion.....Jean-Claude G. Bünzli, Svetlana V. Eliseeva 824

Research trends in rare earths: A preliminary analysis.....Gin-ya Adachi, Nobuhito Imanaka, Shinji Tamura 843

CHEMISTRY AND HYDROMETALLURGY

Molecular modeling of the octacoordinated tetracarboxylate-Nd(III), $[\text{Nd}(\text{CO}_3)_4]^{5-}$, complex and its nonacoordinated fluoro- and aquo-adducts

.....S. P. Sinha, Alfredo M. Simas, Gustavo L. C. Moura 847

Photophysical properties of a new ternary europium complex with 2-thenoyltrifluoroacetone and 5-nitro-1,10-phenanthroline.....XU Cunjin 854

Characteristic of synergistic extraction of oxalic acid with system from rare earth metallurgical wastewater

.....QIU Tingsheng, LIU Qingsheng, FANG Xihui, PENG Shizhong 858

Evaluation of D113 cation exchange resin for the removal of Eu(III) from aqueous solution.....XIONG Chunhua, ZHENG Zhanwang 862

SPECTROSCOPY, LUMINESCENCE AND PHOSPHORS

Kinetic and spectral studies of EHPG systems using chemi- and electrochemiluminescence methods

.....S. Lis, M. Kaczmarek, K. Staninski, S. Krompiec, N. Kuznik 868

Phase structure and temperature dependent luminescence properties of $\text{Sr}_2\text{LiSiO}_4\text{F}:\text{Eu}^{2+}$ and $\text{Sr}_2\text{MgSi}_2\text{O}_7:\text{Eu}^{2+}$ phosphors

.....XIA Zhiguo, SUN Jiayue, LIAO Libing, DU Haiyan 874

Luminescent properties and application of Eu^{3+} -activated $\text{Gd}_2(\text{MoO}_4)_3$ red-emitting phosphor with pseudo-pompon shape for solid-state lighting

.....HE Xianghong, GUAN Mingyun, LI Zhongchun, SHANG Tongming, LIAN Ning, ZHOU Quanfa 878

EXAFS investigation and luminescent properties of nanosized $\text{Tb}:\text{Lu}_2\text{O}_3$ phosphors.....REN Yuying, SHI Ying, ZHOU Ding, XIE Jianjun 883Anion/Cation (H_2PO_4^- and Fe^{3+}) induced dual luminescence quenching effect based on terbium solid sensor

.....TAN Chaoliang, WANG Qianming, ZHENG Yuhui 888

Thermal and radiative characteristics of oxyfluoride glass singly doped with lanthanide ions

.....Barbara KLIMESZ, Grażyna DOMINIAK-DZIK, Witold RYBA-ROMANOWSKI 893

Theoretical study of the VUV spectroscopy of Ce^{3+} and Tb^{3+} in BaBPO_5 crystal using an empirical-ab initio hybrid method

.....HU Liusen, WEN Jun, XIA Shangda, YIN Min 899

Intense upconversion luminescence of $\text{Er}^{3+}/\text{Yb}^{3+}$ codoped oxyfluoride borosilicate glass ceramics containing Ba_2GdF_7 nanocrystals

.....ZHAO Shilong, XU Shiqing, DENG Degang, FAN Xianping 903

RARE EARTH CATALYSIS

Hydrogen and syngas production from two-step steam reforming of methane over $\text{CeO}_2\text{-Fe}_2\text{O}_3$ oxygen carrier

.....ZHU Xing, WANG Hua, WEI Yonggang, LI Kongzhai, CHENG Xianming 907

Study on rare earth electrolyte of SDC.....YAN Duanling, LIU Xiaomei, LIU Qian, WANG Haopeng, XU Jianghong, QI Song, ZHENG Minzhang, SU Wenhui 914

Preparation and characterization of $\text{La}_{0.5}\text{Sr}_{0.04}\text{Ca}_{0.16}\text{Co}_{0.6}\text{Fe}_{0.4}\text{O}_{3-\delta}\text{-La}_{0.5}\text{Sr}_{0.1}\text{Ga}_{0.8}\text{Mg}_{0.2}\text{O}_3$ composite cathode thin film for SOFC by slurry spin coating

.....SUN Hongyan, MA Wenhui, YU Jie, CHEN Xuhua, LIN Hangsheng 917

METALLURGY AND PYROMETALLURGY

Process optimization of electroless copper plating and its influence on electrochemical properties of AB_5 -type hydrogen storage alloy

.....ZHANG Bo, WU Wenyuan, YIN Shaohua, LI Shiwei, LUO Yao, BIAN Xue, TU Ganfeng 922

Effect of erbium on properties and microstructure of Al-Si eutectic alloy.....XING Pengfei, GAO Bo, ZHUANG Yanxin, LIU Kaihua, TU Ganfeng 927

MAGNETISM AND MAGNETIC MATERIALS

Optical and magnetic properties of GaN epilayers implanted with ytterbium

.....W.M. Jadwisieniczak, J. Wang, H. Tanaka, J. Wu, R. Palai, H. Huhtinen, A. Anders 931

High-pressure scheelite-type polymorph of SmCrO_4 : synthesis, structural characterization and magnetic properties

.....Regino Sáez-Puche, Mahmoud Gamal Rabie, Julio Romero de Paz, José-Manuel Gallardo-Amores, Esteban Climent Pascual 936

 Er^{3+} -substituted W-type barium ferrite: preparation and electromagnetic properties

.....HUANG Xiaogu, ZHANG Jing, WANG Hongzhou, YAN Shaoteng, WANG Lixi, ZHANG Qitu 940

Effect of titanium addition on the magnetic property of $\text{Nd}_2\text{Fe}_{14}\text{B}/\alpha\text{-Fe}$ nanocomposite alloys

.....ZHANG Pengyue, PAN Minxiang, JIAO Zhiwei, WU Qiong, GE Hongliang, FU Rui 944

Study on solid solution and aging process of AZ91D magnesium alloy with cerium.....GUO Feng, LI Pengfei, GAO Xia, XU Juan 948

RARE EARTH APPLICATIONS

Effects of rare earth on inclusions and corrosion resistance of 10PCuRE weathering steel.....YUE Lijie, WANG Longmei, HAN Jinsheng 952

GEOLOGY AND ORE DRESSING

Effects of the accumulation of the rare earth elements on soil macrofauna community.....LI Jinxia, HONG Mei, YIN Xiuqin, LIU Jiliang 957

Synthesis and anticancer properties of tungstosilicic polyoxometalate containing 5-fluorouracil and neodymium

.....LIU Xia, WANG Shuaishuai, FENG Changgen 965

Journal of Rare Earths List of Contents in Vol.28 (2010) I