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CONTENTS

SPECTROSCOPY, LUMINESCENCE AND PHOSPHORS

- A highly sensitive luminescent metal–organic framework thermometer for physiological temperature sensing
Lin Zhang, Yadan Xie, Tifeng Xia, Yuanjing Cui, Yu Yang, Guodong Qian 561
- Color-tunable $\text{Ca}_{10}\text{Na}(\text{PO}_4)_7:\text{Ce}^{3+}/\text{Tb}^{3+}/\text{Mn}^{2+}$ phosphor via energy transfer
Jingru Sun, Ping Huang, Yongfu Liu, Lei Wang, Cai'e Cui, Qiufeng Shi, Yue Tian 567

RARE EARTH CATALYSIS

- CeO_2 nanoscale particles: Synthesis, characterization and photocatalytic activity under UVA light irradiation
Laouedj Nadja, Elaziouti Abdelkader, Benhadria Naceur, Bekka Ahmed 575
- Low temperature catalytic oxidation of NO over different-shaped CeO_2
Wenhuan Wang, Ruitang Guo, Weiguo Pan, Guoxin Hu 588
- Promoting effect of tantalum and antimony additives on deNO_x performance of $\text{Ce}_3\text{Ta}_3\text{SbO}_x$ for NH_3 -SCR reaction and DRIFT studiesNing Liu, Jingyu Wang, Fengying Wang, Jun Liu 594
- Effective removal of automobile exhausts over flower-like $\text{Ce}_{1-x}\text{Cu}_x\text{O}_2$ nanocatalysts exposed active {100} plane
A. Selvamani, K. Shanthi, D. Santhanaraj, C.M. Babu, V.V. Srinivasan, P. Thirukumaran, V. Ramkumar, A. Shakilaparveen, R. Balasubramanian 603

MAGNETISM AND MAGNETIC MATERIALS

- Table-like magnetocaloric effect and large refrigerant capacity of composite magnetic refrigerants based on $\text{LaFe}_{11.6}\text{Si}_{1.4}\text{H}_y$ alloys.....Lingtong Zhou, Yongbai Tang, Yungui Chen, Huaqiang Guo, Wenkai Pang, Xi Zhao 613
- Effect of magnetic layer thickness on magnetic properties of Ce-Fe-B thin films
Yachao Sun, Minggang Zhu, Wei Liu, Rui Han, Wei Li 619

ADVANCED RARE EARTH MATERIALS

- Submicron LaB_6 powders with high purity prepared in large scale by salt-assisted combustion synthesis
Zhengning Li, Yujing Ou, Peiqing La, Yu Shi 623
- Absorption behavior of lattice oxygen in $\text{Ce}_{0.8}\text{Y}_{0.2}\text{O}_{2-\delta}$ at intermediate temperature
Chencen Sun, Guanzhong He, Liangchao Gao, Shaolei Song, Rong Li, Qiang Zhen 630
- Structural, morphological and optical properties of new Eu-doped and vacancied lead molybdate-tungstates
M. Piątkowska, E. Tomaszewicz 635

CHEMISTRY AND HYDROMETALLURGY

- Extraction and back-extraction behaviors of 14 rare earth elements from sulfuric acid medium by TODGA
Huiling Yuan, Weixiang Hong, Yushan Zhou, Baisong Pu, Aijun Gong, Tao Xu, Qishan Yang, Fukai Li, Lina Qiu, Weiwei Zhang, Yuning Liu 642
- Rate analysis of sorption of Ce^{3+} , Sm^{3+} , and Yb^{3+} ions from aqueous solution using Dowex 50W-X8 as a sorbent in a continuous flow reactorEsmail Monazam, Ranjani Siriwardane, Duane Miller, Dustin McIntyre 648

METALLOGRAPHY AND PYROMETALLURGY

- Electrochemical properties of gadolinium on liquid gallium electrode in LiCl–KCl eutectic
Bo Li, Kui Liu, Jingwen Pang, Liyong Yuan, Yalan Liu, Mingzhang Lin 656
- Solidification behavior, microstructure and silicon twinning of Al-10Si alloys with ytterbium addition
Zhi Hu, Zhou Dong, Zheng Yin, Hong Yan, Jian Tian, Hecong Xie 662

RARE EARTH APPLICATIONS

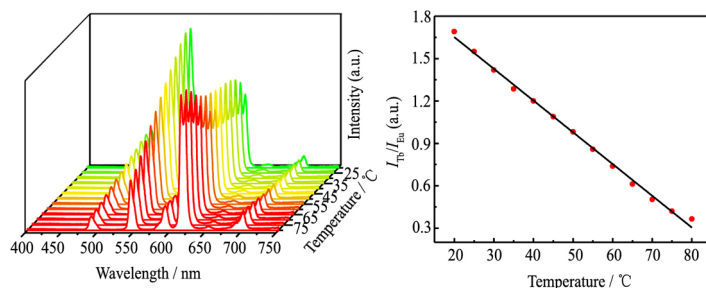
- Preparation and properties of temperature sensitive paint based on $\text{Eu}(\text{DBM})_3\text{phen}$ as probe molecule
Siyu Lu, Jing Sun, Yuan Wang, Wensheng Yu, Mengting Sun, Siyuan Cui 669

CONTENTS

SPECTROSCOPY, LUMINESCENCE AND PHOSPHORS

- 561 A highly sensitive luminescent metal–organic framework thermometer for physiological temperature sensing

Lin Zhang, Yadan Xie, Tifeng Xia,
Yuanjing Cui, Yu Yang, Guodong Qian

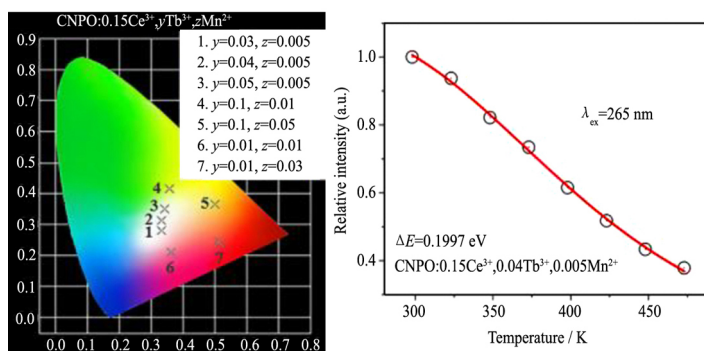


A highly sensitive mixed-lanthanide metal-organic framework has been explored for ratiometric and colorimetric luminescent temperature sensing in the physiological range

J. Rare Earths, (36) 2018: 561-566

- 567 Color-tunable $\text{Ca}_{10}\text{Na}(\text{PO}_4)_7:\text{Ce}^{3+}/\text{Tb}^{3+}/\text{Mn}^{2+}$ phosphor via energy transfer

Jingru Sun, Ping Huang, Yongfu Liu,
Lei Wang, Cai'e Cui, Qiufeng Shi, Yue Tian



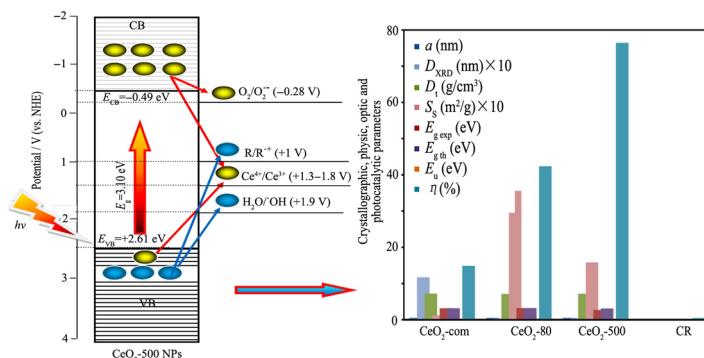
By modulating the relative content of $\text{Tb}^{3+}/\text{Mn}^{2+}$, white light-emitting $\text{CNPO}:0.15\text{Ce}^{3+}$, 0.04Tb^{3+} , 0.005Mn^{2+} phosphor with good thermal stability has been obtained

J. Rare Earths, (36) 2018: 567-574

RARE EARTH CATALYSIS

- 575 CeO_2 nanoscale particles: Synthesis, characterization and photocatalytic activity under UVA light irradiation

Laouedj Nadja, Elaziouti Abdelkader,
Benhadria Naceur, Bekka Ahmed

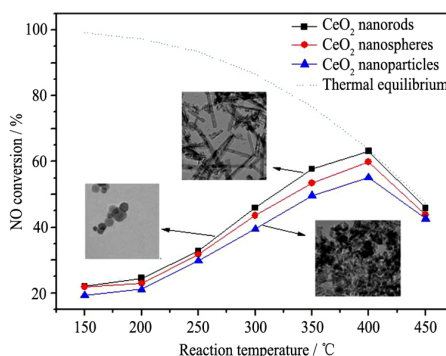


Photocatalytic performance of CeO_2 -500 NPs in the course of Congo red azo-dye degradation

J. Rare Earths, (36) 2018: 575-587

- 588 Low temperature catalytic oxidation of NO over different-shaped CeO_2

Wenhuan Wang, Ruitang Guo, Weiguo Pan,
Guoxin Hu

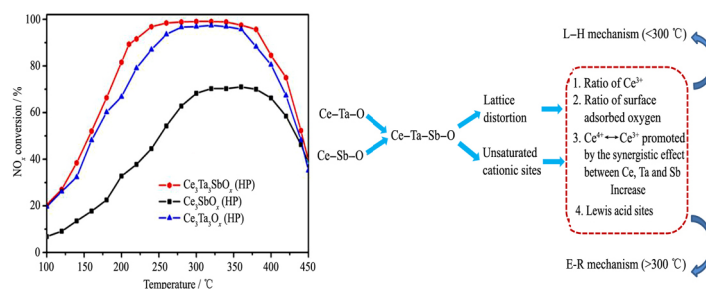


CeO_2 nanorods showed the best catalytic performance for NO oxidation, which could be ascribed to its low crystallinity, high reducibility, strong NO adsorption ability and the presence of more surface chemisorbed oxygen

J. Rare Earths, (36) 2018: 588-593

- 594 Promoting effect of tantalum and antimony additives on deNO_x performance of Ce₃Ta₃SbO_x for NH₃-SCR reaction and DRIFT studies

Ning Liu, Jingyu Wang, Fengying Wang,
Jun Liu

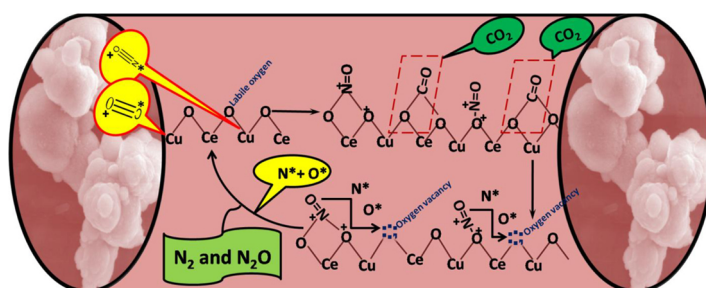


A superior Ce-Ta-Sb composite oxide catalyst exhibited excellent deNO_x efficiency with broad operation temperature window and better resistance to higher space velocity, which is attributed to the elevated Ce³⁺ concentrations, abundant active surface oxygen species, as well as surface acidity and reducibility

J. Rare Earths, (36) 2018: 594-602

- 603 Effective removal of automobile exhausts over flower-like Ce_{1-x}Cu_xO₂ nanocatalysts exposed active {100} plane

A. Selvamani, K. Shanthi, D. Santhanaraj,
C.M. Babu, V.V. Srinivasan, P. Thirukumaran,
V. Ramkumar, A. Shakilaparveen,
R. Balasubramanian



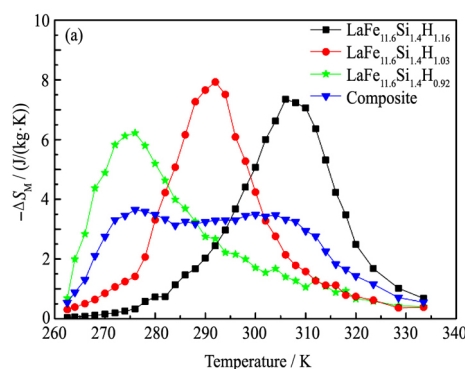
Study on low temperature oxidation of automobile exhausts on flower-like Ce_{1-x}Cu_xO₂ catalysts

J. Rare Earths, (36) 2018: 603-612

MAGNETISM AND MAGNETIC MATERIALS

- 613 Table-like magnetocaloric effect and large refrigerant capacity of composite magnetic refrigerants based on LaFe_{11.6}Si_{1.4}H_y alloys

Lingtong Zhou, Yongbai Tang, Yungui Chen,
Huaqiang Guo, Wenkai Pang, Xi Zhao

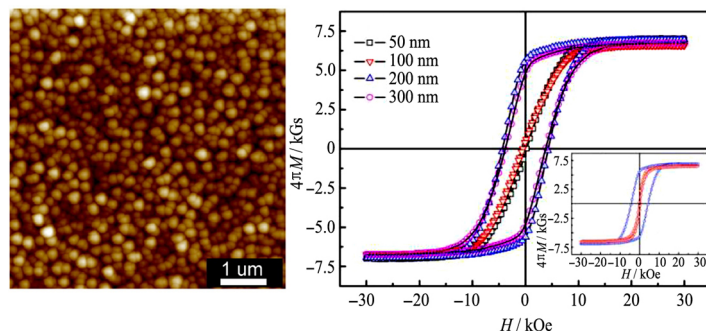


Composite magnetic refrigerant possessed wide operating temperature range, large RC value and a table-like $(-\Delta S_M)$ - T curve for Ericsson-cycle

J. Rare Earths, (36) 2018: 613-618

- 619 Effect of magnetic layer thickness on magnetic properties of Ce-Fe-B thin films

Yachao Sun, Minggang Zhu, Wei Liu,
Rui Han, Wei Li

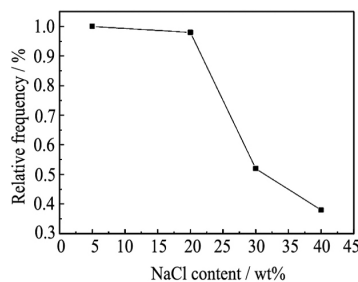


The AFM image for the Si/Ta(50 nm)/Ce-Fe-B(200 nm)/Ta(40 nm) thin film (left) and perpendicular hysteresis loops for Ce-Fe-B films with the various magnetic layer thicknesses of $d_m = 50, 100, 200$ and 300 nm at room temperature (right)

J. Rare Earths, (36) 2018: 619-622

- 623 Submicron LaB₆ powders with high purity prepared in large scale by salt-assisted combustion synthesis

Zhengning Li, Yujing Ou, Peiqing La, Yu Shi

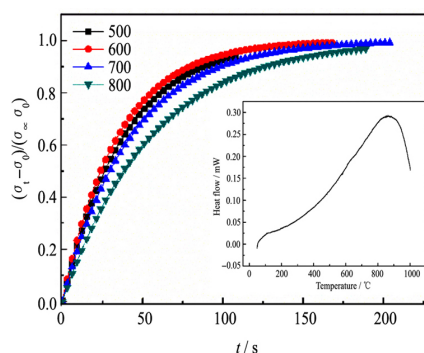


The superfine and high-purity powders of LaB₆ were synthesized in large scale by salt-assisted combustion synthesis (CS) with different NaCl diluent contents. With the increase of NaCl content, the adiabatic combustion temperature of the reaction system linearly declined, the average particle size of leached products decreased, and the product purity enhanced obviously. When NaCl content is 40 wt%, the purity is more than 98 wt%, and the average particle size is 380 nm

J. Rare Earths, (36) 2018: 623-629

- 630 Absorption behavior of lattice oxygen in Ce_{0.8}Y_{0.2}O_{2-δ} at intermediate temperature

Chencen Sun, Guanzhong He, Liangchao Gao, Shaolei Song, Rong Li, Qiang Zhen

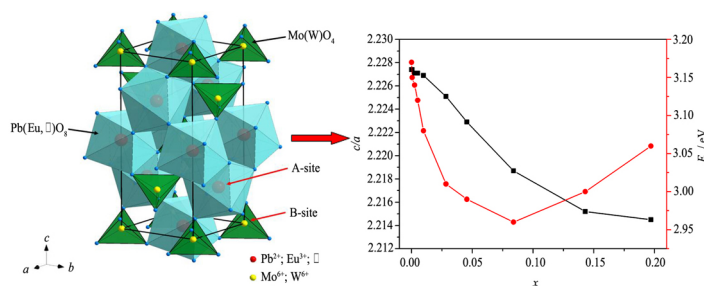


ECR data at different temperatures describe migration process of oxygen vacancies at different temperatures, suggesting that the oxygen diffusion process may be prolonged with the temperature evaluation. The illustration is the TG curve of YDC nanopowders, the increasing weight at the intermediate temperature range is related to the lattice oxygen absorption and oxygen vacancies consumption in YDC samples

J. Rare Earths, (36) 2018: 630-634

- 635 Structural, morphological and optical properties of new Eu-doped and vacancied lead molybdate-tungstates

M. Piątkowska, E. Tomaszewicz



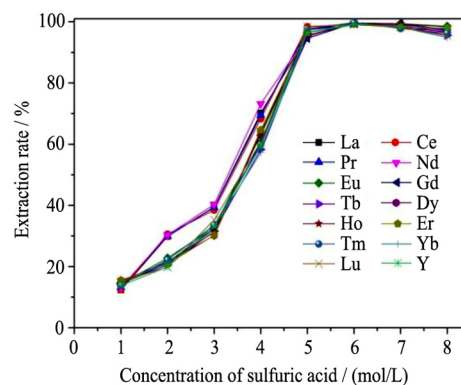
Structure of Pb_{1-3x}□_xEu_{2x}(MoO₄)_{1-3x}(WO₄)_{3x} solid solution and the variation in lattice parameter ratio *c/a* as well as *E_g* with *x* parameters

J. Rare Earths, (36) 2018: 635-641

CHEMISTRY AND HYDROMETALLURGY

- 642 Extraction and back-extraction behaviors of 14 rare earth elements from sulfuric acid medium by TODGA

Huiting Yuan, Weixiang Hong, Yushan Zhou, Baisong Pu, Aijun Gong, Tao Xu, Qishan Yang, Fukai Li, Lina Qiu, Weiwei Zhang, Yuning Liu



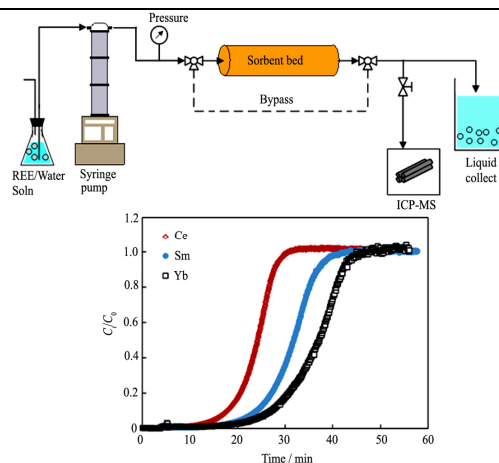
The extraction efficiency of the solution is distinctly influenced by the acidity of the system, and the optimum extraction acidity can be explored by changing the gradient experiment of sulfuric acid concentration. The optimum concentration of sulfuric acid is 6 mol/L. Meanwhile, the extraction rates of rare earth metal ions by TODGA were 99.00%–99.73%

J. Rare Earths, (36) 2018: 642-647

- 648 Rate analysis of sorption of Ce^{3+} , Sm^{3+} , and Yb^{3+} ions from aqueous solution using Dowex 50W-X8 as a sorbent in a continuous flow reactor

Esmail Monazam, Ranjani Siriwardane,
Duane Miller, Dustin McIntyre

J. Rare Earths, (36) 2018: 648-655



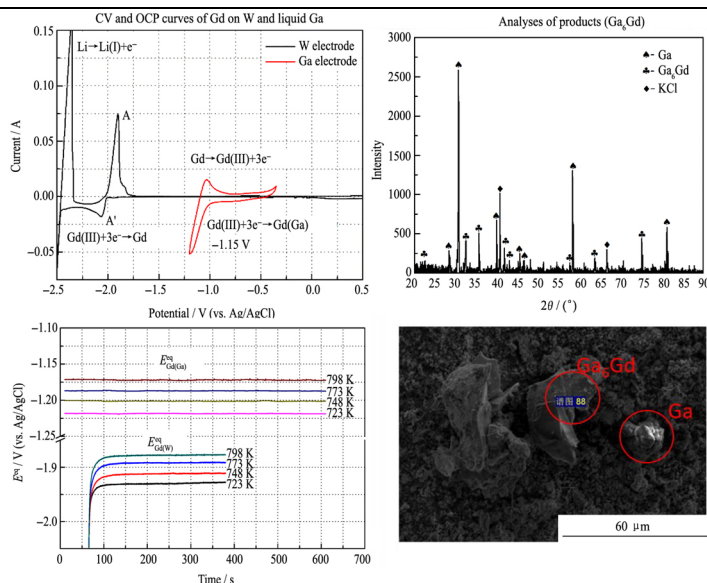
Breakthrough curves for the Ce^{3+} , Sm^{3+} , and Yb^{3+} nitrates with Dowex 50W-X8 ion-exchange resin using the liquid flow fixed bed reactor system

METALLOGRAPHY AND PYROMETALLURGY

- 656 Electrochemical properties of gadolinium on liquid gallium electrode in LiCl-KCl eutectic

Bo Li, Kui Liu, Jingwen Pang, Liyong Yuan,
Yalan Liu, Mingzhang Lin

J. Rare Earths, (36) 2018: 656-661

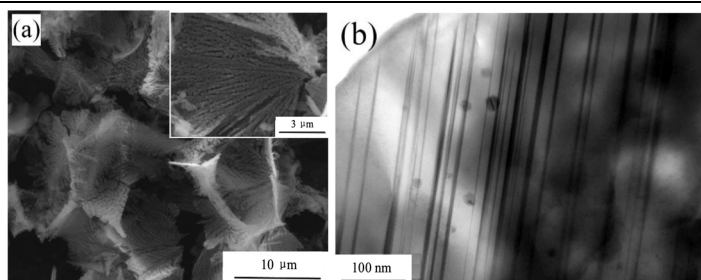


CV and OCP curves of Gd on W and liquid Ga, analyses of products (Ga_6Gd)

- 662 Solidification behavior, microstructure and silicon twinning of Al-10Si alloys with ytterbium addition

Zhi Hu, Zhou Dong, Zheng Yin, Hong Yan,
Jian Tian, Hecong Xie

J. Rare Earths, (36) 2018: 662-668



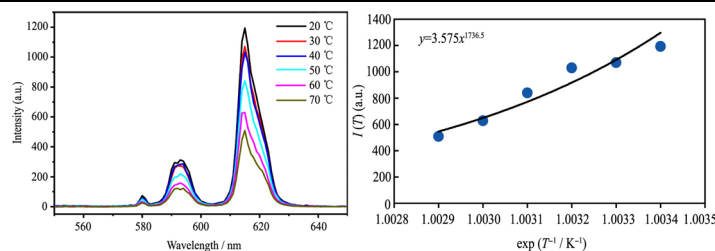
(a) 3D morphologies of eutectic Si powder extracted from the Al-10Si-0.7Yb alloy; (b) TEM image of twins in the Al-10Si-0.7Yb alloy

RARE EARTH APPLICATIONS

- 669 Preparation and properties of temperature sensitive paint based on $\text{Eu}(\text{DBM})_3\text{phen}$ as probe molecule

Siyu Lu, Jing Sun, Yuan Wang, Wensheng Yu,
Mengting Sun, Siyuan Cui

J. Rare Earths, (36) 2018: 669-674



$\text{Eu}(\text{DBM})_3\text{phen}/\text{PMMA}$ was successfully synthesized. The analysis shows that the $\text{Eu}(\text{DBM})_3\text{phen}/\text{PMMA}$ has good characteristics of fluorescence quenching of temperature at 20–70 °C, and the temperature range of the highest temperature sensitivity is 50–60 °C