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METALLOGRAPHY AND HYDROMETALLURGY

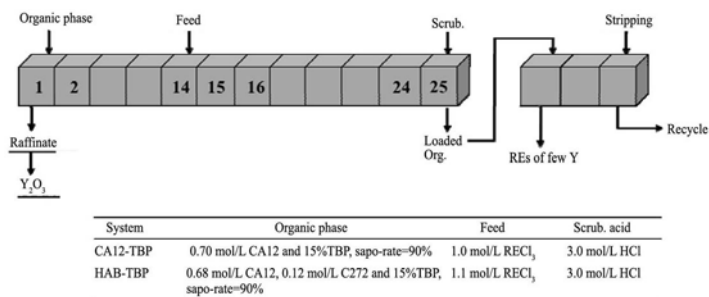
- E-pO*²⁻ diagram for rare earth elements in molten salt.....*Yixing (Kevin) Shen, Jinsuo Zhang* 187
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- In situ* observation of austenite grain growth and transformation temperature in coarse grain heat affected zone of Ce-alloyed weld metal.....*YAN Ning, YU Shengfu, CHEN Ying* 203

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INVITED REVIEW

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LI Deqian



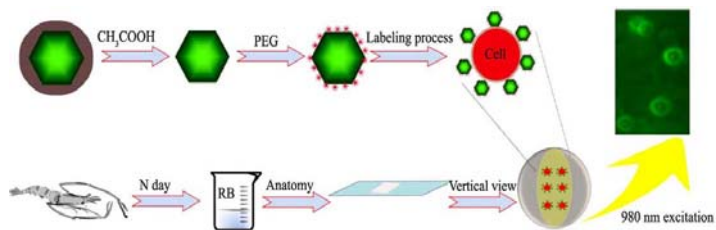
Separation process of Y with HAB

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SPECTROSCOPY, LUMINESCENCE AND PHOSPHORS

- 120 Upconversion luminescence turning of NaREF₄ (RE=0.4Y+0.4La+0.2 (Yb, Er, Tm)) nanoparticles and their applications for detecting Rhodamine B in shrimp

HU Shigang, YU Yi, WU Xiaofeng, HU Pan, CAO Huiyi, WU Qingyang, TANG Zhijun, GUO Yuanjun, LIU Yunxin

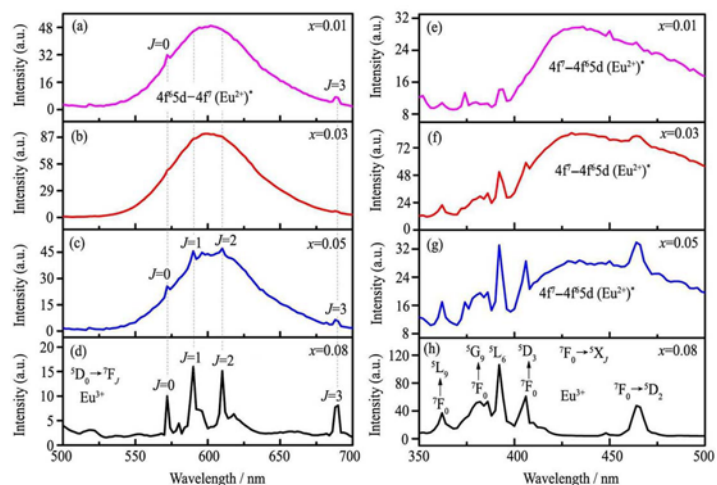


In vitro and in vivo bioimaging are carried out with shrimps using NaREF₄ (RE=0.4Y+0.4La+0.2(Yb,Er,Tm)) upconversion nanoparticles (UCNPs) as probes. The residual organic dye RB in shrimp can be detected on the basis of luminescent resonance energy transfer (LRET)

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- 127 Origin of the red luminescence in Sr₃Al₂O₆:Eu phosphor—From the synergetic effects of Eu²⁺ and Eu³⁺

CHEN Lei, ZHANG Zhao, TIAN Yunfei, FEI Mi, HE Liangrui, ZHANG Pingjuan, ZHANG Wenhua

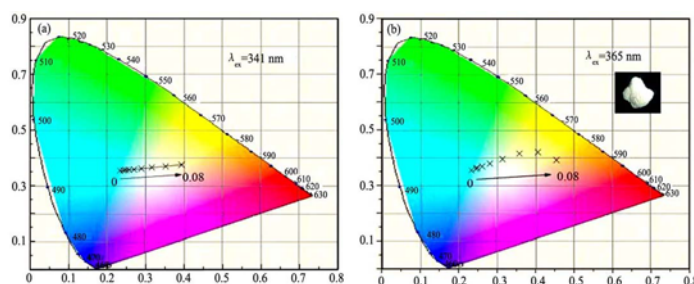


Emission (a–d) and excitation (e–h) spectra of the (Sr_{1-x}Eu_x)₃Al₂O₆ (x=0.01, 0.03, 0.05, and 0.08) phosphors synthesized with combustion-assisted solid-state reaction method

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- 135 Synthesis and luminescent properties of $\text{Ba}_2\text{V}_2\text{O}_7:\text{Sm}^{3+}$

LI Fei, FANG Hongwei, CHEN Yonghu

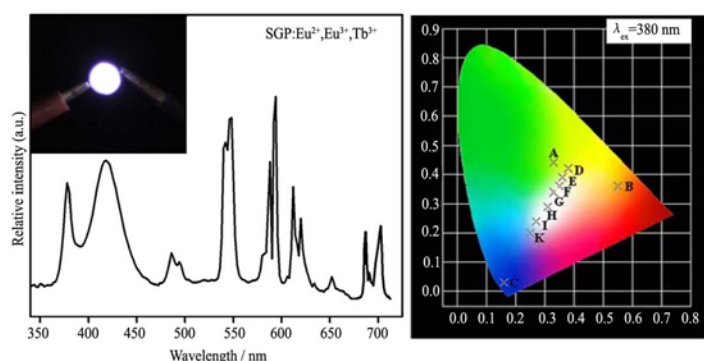


CIE chromaticity diagram for sample $\text{Ba}_2\text{V}_2\text{O}_7:\text{xSm}^{3+}$ ($\text{x}=0.01, 0.02, 0.03, 0.04, 0.05, 0.06, 0.07$ and 0.08 , respectively) excited at 341 nm (a) and 365 nm (b) (The inset is the photograph of the $\text{Ba}_{1.95}\text{V}_2\text{O}_7:0.05\text{Sm}^{3+}$ powder excited at 365 nm)

J. Rare Earths, (35) 2017: 135-141

- 142 Synthesis and luminescence of $\beta\text{-SrGe}(\text{PO}_4)_2$: RE (RE= $\text{Eu}^{2+}, \text{Eu}^{3+}, \text{Tb}^{3+}$) phosphors for UV light-emitting diodes

JIANG Yu, LIU Wei, CAO Xiyu, SU Ge, CAO Lixin, GAO Rongjie



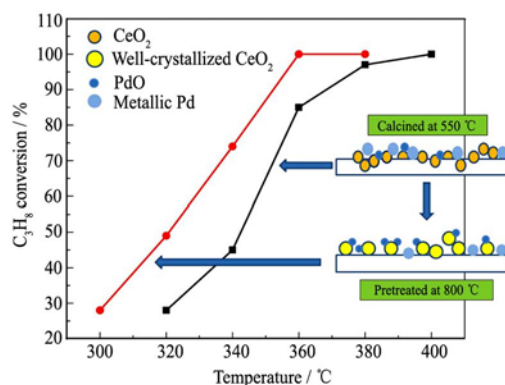
Electroluminescent spectra of the LED based on SGP:RE (RE= $\text{Eu}^{2+}, \text{Eu}^{3+}, \text{Tb}^{3+}$) phosphors (the inset shows the corresponding light image), and the CIE chromaticity coordinates of the mixed samples under 380 nm excitation

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RARE EARTH CATALYSIS

- 149 Effect of high temperature pretreatment on the thermal resistance properties of $\text{Pd}/\text{CeO}_2/\text{Al}_2\text{O}_3$ close-coupled catalysts

HUANG Mulan, WANG Suning, LI Lan, ZHANG Hailong, SHI Zhonghua, CHEN Yaoqiang



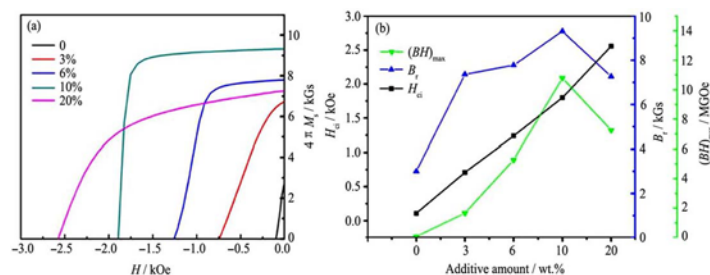
Improved catalytic performance of aged catalysts after $800 \text{ }^\circ\text{C}$ pretreatment

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MAGNETISM AND MAGNETIC MATERIALS

- 158 Coercivity enhancement of Ce-Fe-B sintered magnets by low-melting point intergranular additive

CHEN Kan, GUO Shuai, FAN Xiaodong, DING Guangfei, CHEN Ling, CHEN Renjie, LEE Don, YAN Aru

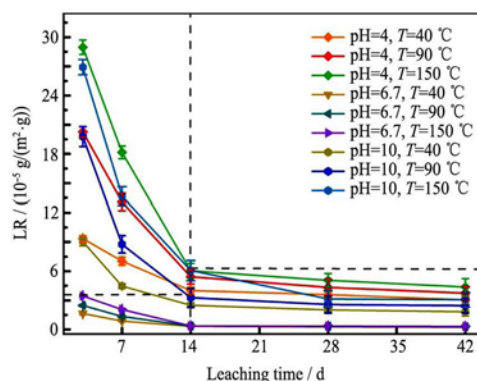


Demagnetization curves of $\text{Ce}_{17}\text{Fe}_{77}\text{B}_6$ with increasing Nd-based additive amounts (a) and the plot of magnetic properties of the $\text{Ce}_{17}\text{Fe}_{77}\text{B}_6$ magnet versus the increasing Nd-based additive amounts (b)

J. Rare Earths, (35) 2017: 158-163

- 164 Chemical stability of Ce-doped zircon ceramics: Influence of pH, temperature and their coupling effects

XIE Yi, FAN Long, SHU Xiaoyan,
CHI Fangting, DING Yi, MA Dengsheng,
LU Xirui

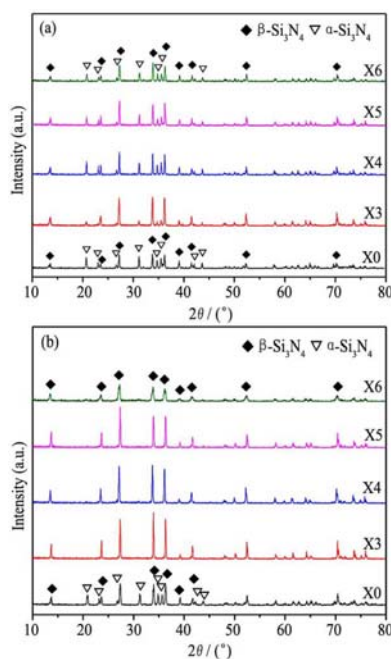


Normalized release rates of Ce in all discussed leachates

J. Rare Earths, (35) 2017: 164-171

- 172 Effect of CeO₂ on low temperature pressureless sintering of porous Si₃N₄ ceramics

LIU Tiantian, JIANG Cuifeng, GUO Wei



XRD patterns of Si₃N₄ ceramics at different temperatures

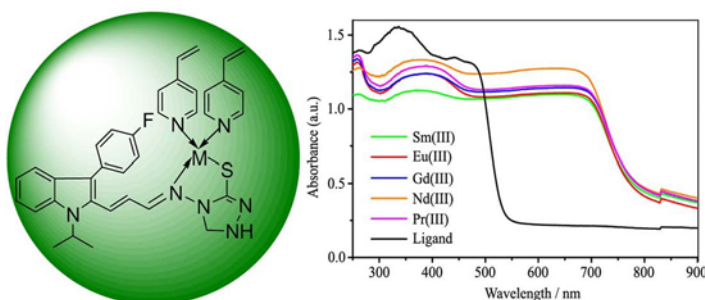
(a) At 1500 °C; (b) At 1550 °C

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CHEMISTRY AND HYDROMETALLURGY

- 177 Synthesis of ion imprinted polymers for selective recognition and separation of rare earth metals

Mashitah M. Yusoff, Nik Rohani Nik Mostapa,
Md Shaheen Sarkar, Tapan Kumar Biswas,
Md Lutfor Rahman, Sazmal Effendi Arshad,
Mohd Sani Sarjadi, Ajaykumar D. Kulkarni

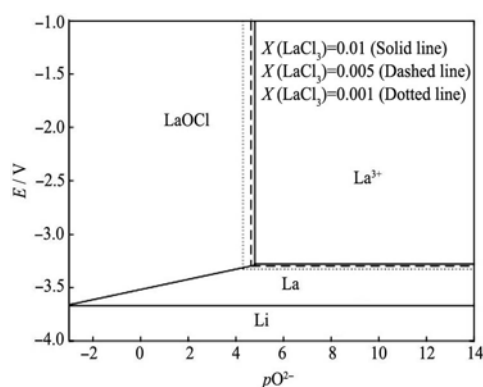


Schiff base lanthanide ion imprinted polymers (IIPs at left) and UV-vis absorption spectra for IIPs bind with lanthanide ions: Schiff base ligand (black line) and L-IIPs show various coloured line (right)

J. Rare Earths, (35) 2017: 177-186

- 187 E - pO^{2-} diagram for rare earth elements in molten salt

Yixing (Kevin) Shen, Jinsuo Zhang

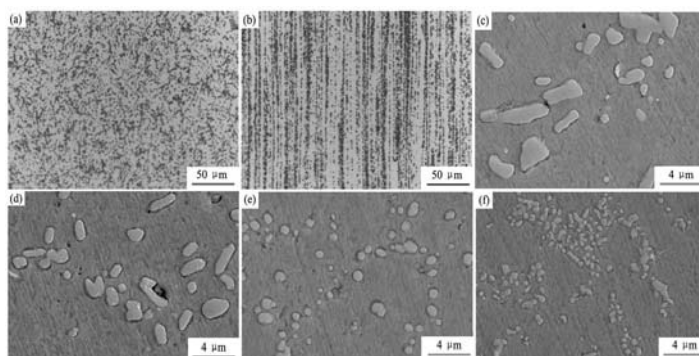


E - pO^{2-} diagram of La in eutectic LiCl-KCl melt at 723 K

J. Rare Earths, (35) 2017: 187-192

- 193 Effect of combinative addition of mischmetal and titanium on the microstructure and mechanical properties of hypoeutectic Al-Si alloys used for brazing and/or welding consumables

WANG Bo, XUE Songbai, WANG Jianxin, LIN Zhongqiang



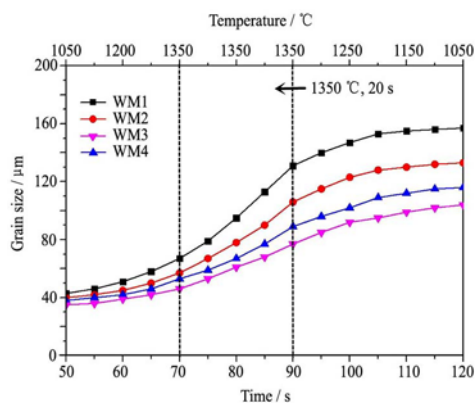
Microstructures of hot-extruded AST- x RE welding rods

(a) $x=0.05$, cross-sectional metallographic structure; (b) $x=0.05$, longitudinal-sectional metallographic structure; (c) $x=0$, cross-sectional SEM structure; (d) $x=0.01$, cross-sectional SEM structure; (e) $x=0.05$, cross-sectional SEM structure; (f) SEM microstructure of hot-extruded AST-0.02Sr welding rod for comparison

J. Rare Earths, (35) 2017: 193-202

- 203 *In situ* observation of austenite grain growth and transformation temperature in coarse grain heat affected zone of Ce-alloyed weld metal

YAN Ning, YU Shengfu, CHEN Ying



Change in the average austenite grain size with the increase of high-temperature residence time

J. Rare Earths, (35) 2017: 203-210