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Journal of Rare Earths

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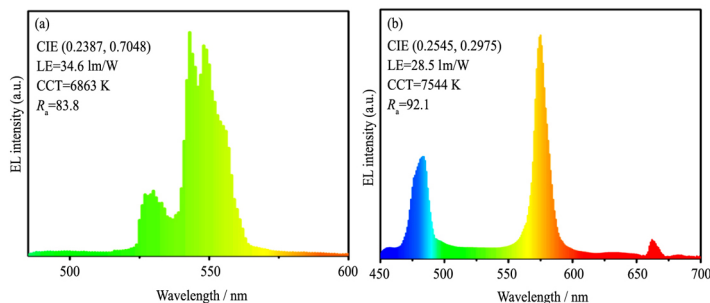
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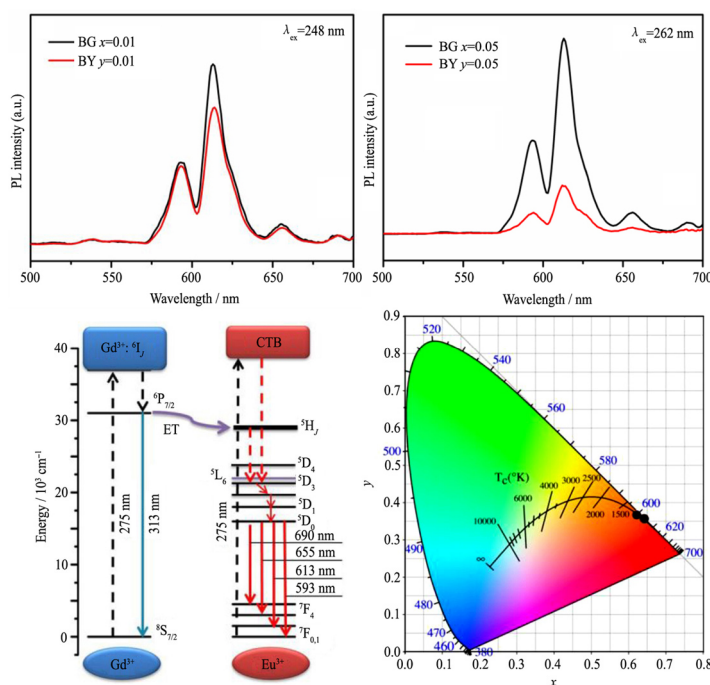


The EL spectra and optical parameters of w-LEDs for NNAO:0.01 Er^{3+} (a) and NNAO:0.03 Dy^{3+} (b) phosphors under the operation current of 20 mA (recorded at 380 nm excitation)

J. Rare Earths, (36) 2018: 789-794

- 795 Synthesis and luminescent properties of $\text{BaGd}_2\text{O}_4\text{:Eu}^{3+}$ phosphors with highly efficient red-emitting

Yue Li, Jinkai Li, Zongming Liu, Weilin Zhao

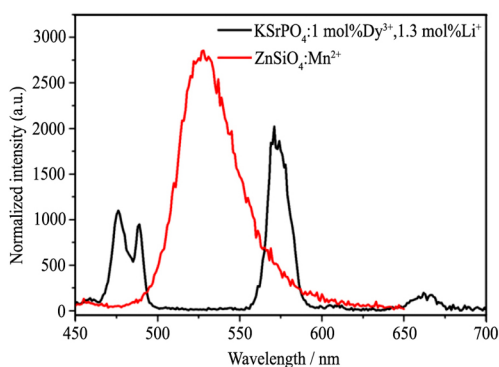


Regardless of 248 or 262 nm excitation, the fluorescence emission intensity of BG phosphors is much higher than the BY phosphors owing to the efficient Gd^{3+} - Eu^{3+} energy transfer. All the $\text{BaGd}_{2-2x}\text{Eu}_{2x}\text{O}_4$ samples with vivid red emission have similar color coordinates and temperature of $(0.64 \pm 0.02, 0.36 \pm 0.01)$, ~ 2000 K, respectively

J. Rare Earths, (36) 2018: 795-801

- 802 VUV photoluminescence properties of $\text{KSrPO}_4\text{:Dy}^{3+}$ phosphor

Yali Chen, Jingyan Fan, Yajun Zhou,
Jing Gou, Binxun Yu



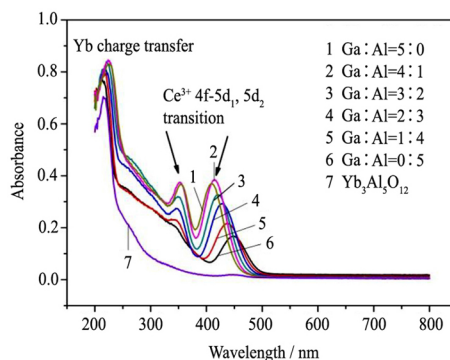
The optimal luminescent sample $\text{KSrPO}_4\text{:1 mol\%Dy}^{3+}$, 1.3 mol\% Li^{+} can directly emit warm-white light without two or more luminescent ions co-doped, and its relative luminescent intensity was measured as 60.2% of commercial PDP green phosphor $\text{Zn}_2\text{SiO}_4\text{:Mn}^{2+}$ under 147 nm excitation

J. Rare Earths, (36) 2018: 802-805

- 806 Synthesis and luminescence properties of novel Ce^{3+} -doped $\text{Yb}_3\text{Al}_{5-x}\text{Ga}_x\text{O}_{12}$ garnets with very fast decay time

Ru Li, Jie Yin, Fei Du, Peng Zhang,
Shangke Pan, Jianguo Pan

J. Rare Earths, (36) 2018: 806-810



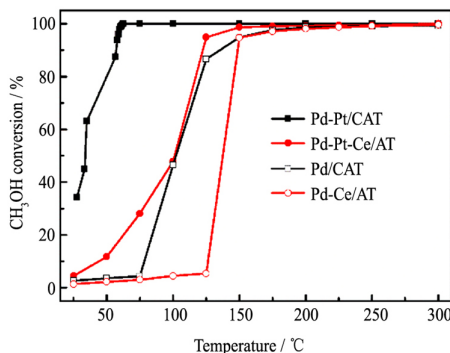
With the increase of the Ga^{3+} ionic concentration, the diffraction peaks of the 0.5 at%Ce: $\text{Yb}_3\text{Al}_{5-x}\text{Ga}_x\text{O}_{12}$ ($x = 0, 1, 2, 3, 4, 5$) garnets exhibited slight shift towards the left, and the main reason causing this phenomena is that the Ga^{3+} ionic radius is larger than the Al^{3+} ionic radius. From the picture, we speculated that the absorption band edge of 250–270 nm was mainly caused by the charge transfer luminescence of Yb^{3+}

RARE EARTH CATALYSIS

- 811 Effects of cerium doping position on physicochemical properties and catalytic performance in methanol total oxidation

Shen Zhang, Yuyu Guo, Xingying Li, Zhe Li

J. Rare Earths, (36) 2018: 811-818

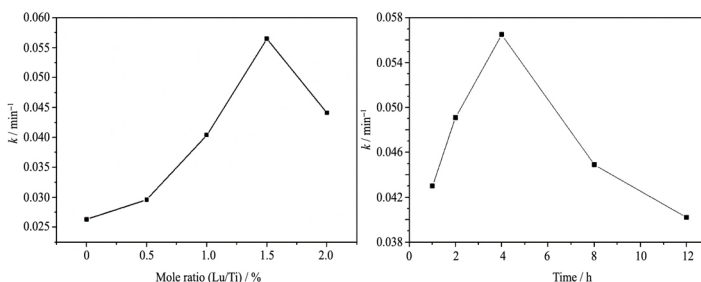


The different Ce doping position for Ce/AT and CAT catalysts did influence the reactivity of catalysts in methanol oxidation reaction

- 819 Photocatalytic activity of $\text{Lu}^{3+}/\text{TiO}_2$ prepared by ball milling method

Di Wu, Chen Li, Qiushi Kong, Zaifeng Shi,
Dashuai Zhang, Lili Wang, Lizhi Han,
Xiaopeng Zhang, Qiang Lin

J. Rare Earths, (36) 2018: 819-825

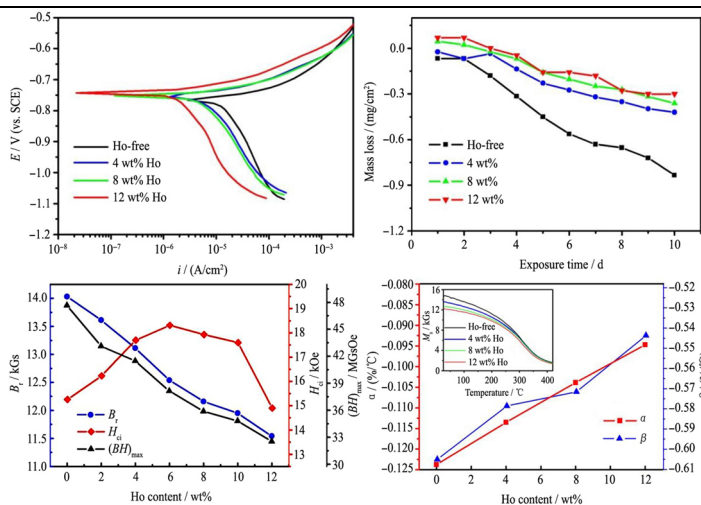


Effects of Lu^{3+} mole ratio and milling time on photocatalytic degradation reaction rate constants k of MB with $\text{Lu}^{3+}/\text{TiO}_2$ as photocatalyst

MAGNETISM AND MAGNETIC MATERIALS

- 826 Improved corrosion resistance and thermal stability of sintered Nd-Fe-B magnets with holmium substitution

Jinghui Di, Shuai Guo, Ling Chen,
Pengpeng Yi, Guangfei Ding, Kan Chen,
Ming Li, Don Lee, Aru Yan

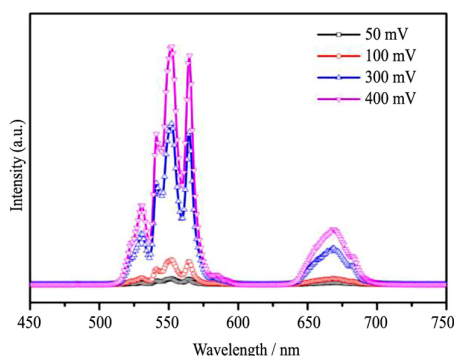


With increasing Ho substitution the grain boundary was altered and (Nd,Ho)-O phase is formed. The corrosion resistance is improved due to the increased electrode potential of the RE-rich phases by the more stable (Nd,Ho)-O phase. And the temperature coefficients for both remanence and coercivity are all improved with increasing Ho substitution. The coercivity variation with increasing Ho substitution is caused by the microstructure featuring the (Nd,Ho)-O phase in the Ho-substituted magnets

J. Rare Earths, (36) 2018: 826-831

- 832 Growth and property enhancement of Er^{3+} -doped $0.68\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$ - 0.32PbTiO_3 single crystal

Wei Long, Xing Chu, Zengzhe Xi,
Pinyang Fang, Xiaojuan Li, Wenwu Cao

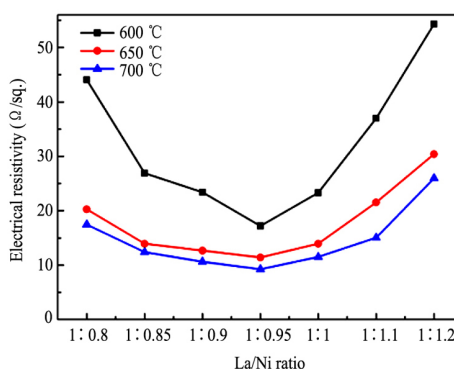


Er-doped PMN-32PT single crystal exhibited upconversion emission properties. The green (531 and 552 nm) and red (670 nm) emission bands were recorded under 980 nm diode laser excitation, corresponding to the transitions of $^4\text{H}_{11/2} \rightarrow ^4\text{I}_{15/2}$, $^4\text{S}_{3/2} \rightarrow ^4\text{I}_{15/2}$ and $^4\text{F}_{9/2} \rightarrow ^4\text{I}_{15/2}$ of Er^{3+} . In addition, the fluorescence intensities of the green and red emissions increased with the excitation power increasing

J. Rare Earths, (36) 2018: 832-837

- 838 Fabrication of low-resistance $\text{LaNi}_x\text{O}_{3+\delta}$ thin films for ferroelectric device electrodes

Mi Xiao, Zebin Zhang, Weikang Zhang,
Ping Zhang, Kuibo Lan

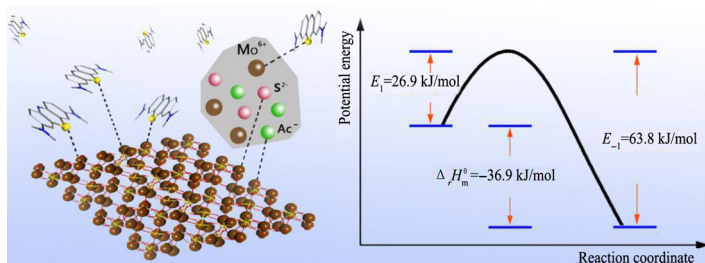


Resistivity of $\text{LaNi}_x\text{O}_{3+\delta}$ films on Si substrates. Highly (110)-oriented $\text{LaNi}_x\text{O}_{3+\delta}$ thin films were prepared on Si (100) substrates by the sol-gel method. It is proved that the $\text{LaNi}_x\text{O}_{3+\delta}$ film has the lowest electrical resistivity when La/Ni ratio is 1:0.95. Furthermore, the electrical resistivity decreased as the annealing temperature increased from 600 to 700 °C. The electrical resistivity change of $\text{LaNi}_x\text{O}_{3+\delta}$ was explained by first-principles studies

J. Rare Earths, (36) 2018: 838-843

- 844 Facile synthesis and highly efficient selective adsorption properties of $\text{Y}_2\text{Mo}_4\text{O}_{15}$ for methylene blue: Kinetics, thermodynamics and mechanical analyses

Junhua You, Renchao Wang, Chaobin Liu,
Xiaojie Shi, Fei Han, Rui Guo, Xuanwen Liu



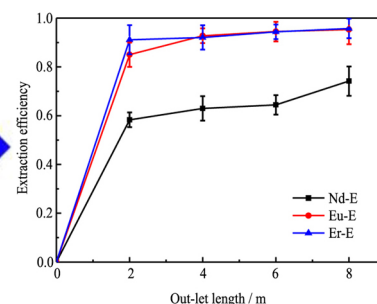
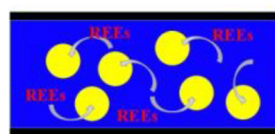
Monoclinic-phase $\text{Y}_2\text{Mo}_4\text{O}_{15}$ adsorbent with a large adsorption capacity for MB (198 mg/g) were successfully prepared by SSM. Dynamic and thermodynamic properties of the adsorption process are investigated using temperature-dependent adsorption experiments. A possible adsorption mechanism is proposed based on the competitive ion experiments

J. Rare Earths, (36) 2018: 844-850

CHEMISTRY AND HYDROMETALLURGY

- 851 Efficient extraction and stripping of Nd(III), Eu(III) and Er(III) by membrane dispersion micro-extractors

Zhuo Chen, Jianhong Xu, Funing Sang,
Yundong Wang



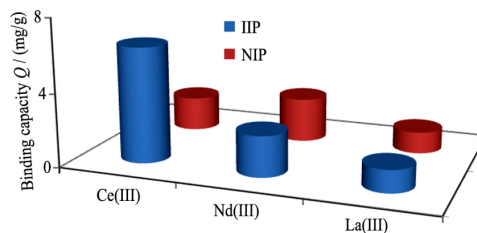
Membrane dispersion micro-extractor was used to recover and enrich the rare earth elements from waste water, the extraction efficiency could be up to almost 100% within 10 s

J. Rare Earths, (36) 2018: 851-856

- 857 Ion imprinted cryogel-based supermacroporous traps for selective separation of cerium(III) in real samples

Rüstem Keçli, İbrahim Dolak,
Berrin Ziyadanoğulları, Arzu Ersö,
Rıdvan Say

J. Rare Earths, (36) 2018: 857-862

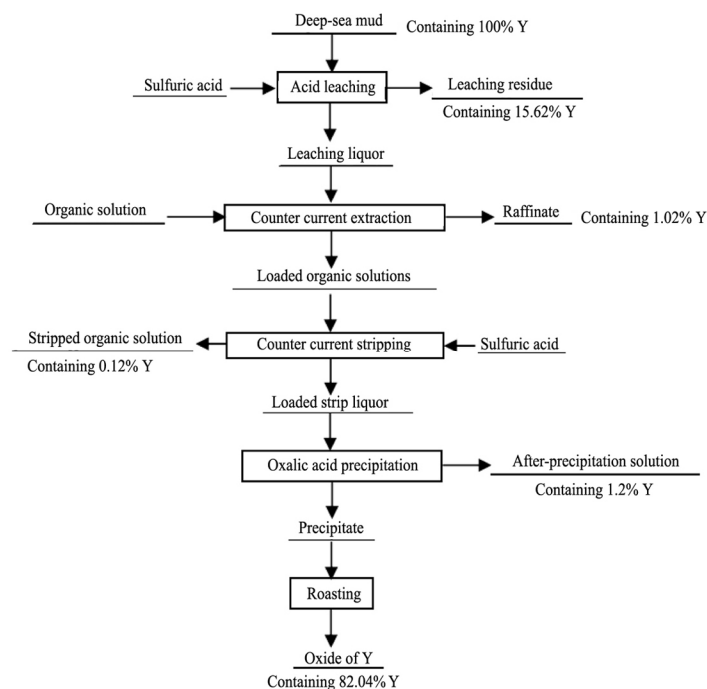


Ce(III) extraction from bastnäsite ore sample in the presence of Nd(III) and La(III)

- 863 Recovery of yttrium from deep-sea mud

Kuifang Zhang, Zhiqiang Liu,
Changyong Sun, Hongyang Cao, Kechao Zhu,
Wei Zhu, Wei Li

J. Rare Earths, (36) 2018: 863-872

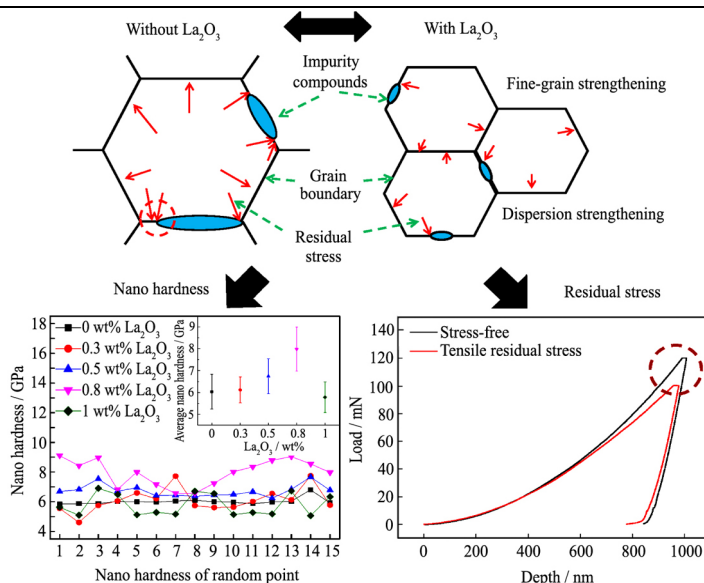


The novel process, which mainly including the following three parts: acid leaching, solvent extraction, and oxalic acid precipitation-roasting, could achieve the recovery of Y from deep-sea mud. Over the whole process, the Y yield was 82.04%, and the oxide of Y in which the purity of Y_2O_3/REO was 79.02% and the contents of major non-rare earth impurities were less than 0.21% was obtained

METALLOGRAPHY AND PYROMETALLURGY

- 873 Influence of La_2O_3 addition on nano indentation hardness and residual stress of Stellite 6 coating prepared by plasma cladding

Yongchao Fang, Xiufang Cui, Zhaobing Cai,
Chang Wang, Guo Jin

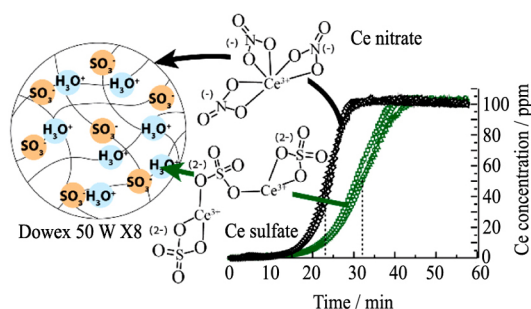


In order to distribute the residual stress in the plasma cladding Stellite 6 coating, the La_2O_3 was added. The results show that the 0.8 wt% La_2O_3 / Stellite 6 coating has the the smallest grain size, the maximum nano indentation hardness and the minimum value of residual stress

J. Rare Earths, (36) 2018: 873-878

- 879 Anion structural effects on interaction of rare earth element ions with Dowex 50W X8 cation exchange resin

Duane D. Miller, Ranjani Siriwardane,
Dustin McIntyre

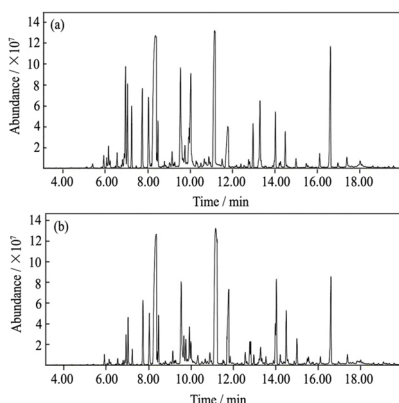


Inductively coupled plasma mass spectrometry Ce^{3+} breakthrough curves during Ce nitrate and Ce sulfate sorption on the Dowex 50W 8X

J. Rare Earths, (36) 2018: 879-890

- 891 Effects of lanthanum on the growth and essential oil components of lavender under osmotic stress

Liyun Zhu, Linzhen Song, Yongsheng Gao,
Junqing Qian, Xiaodong Zhang, Sufang Li



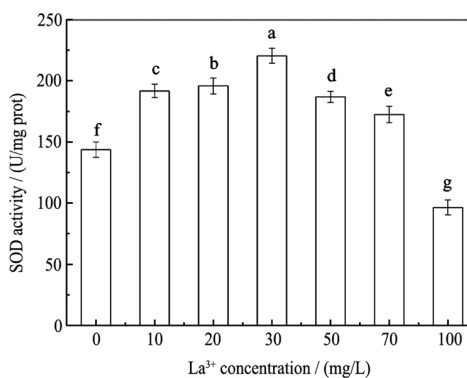
GC-MS total ion current of essential oil in lavender flowers. (a) Water stress group in the presence of LaCl_3 ; (b) Water stress group.

The chemical compositions and relative contents of essential oils in leaves and flowers of lavender were detected and identified by GC-MS analysis in the presences and absence of LaCl_3 under water stress. The results displayed the relative percentage contents of camphor, linalool, linalyl acetate, and lavandulol acetate. Moderate rare earth treatment could elevate the quality of essential oil of lavender flowers to some extent under water stress

J. Rare Earths, (36) 2018: 891-898

- 899 Effect of La^{3+} on seed germination and seedling growth of *Salvia miltiorrhiza*

Qingxin Sun, Liangyue Sun, Shangcai Feng,
Shaofen Guo



SOD activity in *Salvia miltiorrhiza* seedling treated with different concentrations of La^{3+}

J. Rare Earths, (36) 2018: 898-902