

VOLUME 36 NUMBER 12
DECEMBER 2018

ISSN: 1002-0721
CODEN JREAE 6

Journal of **Rare Earths**



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CHEMISTRY AND HYDROMETALLURGY

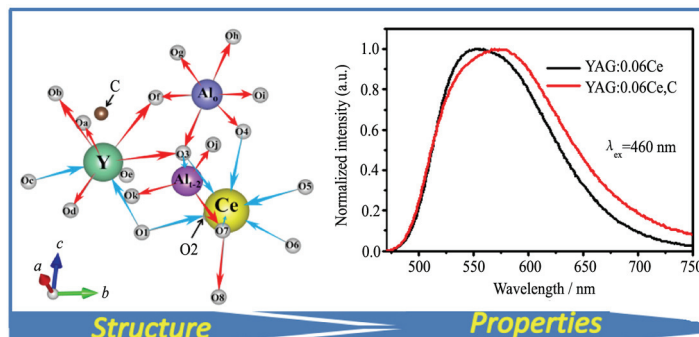
- Evaluating the fractionation of ion-adsorption rare earths for *in-situ* leaching and metallogenic mechanism
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SPECTROSCOPY, LUMINESCENCE AND PHOSPHORS

- 1239 Carbon interstitial defects causing emission red shift in YAG:Ce phosphor:
First-principles calculation

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Lei Chen, Xiaole Ma

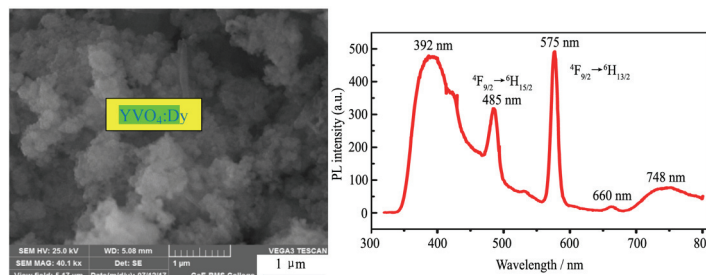


Carbon atoms tend to from interstitials defect to occupy the next-nearest sites of Ce^{3+} ion in $\text{Y}_3\text{Al}_5\text{O}_{12}:\text{Ce}^{3+}$ lattice. These interstitial defects can shorten the $\text{Ce}^{3+}-\text{O}^{2-}$ bond length, leading to a larger crystal field splitting of 5d orbital of the Ce^{3+} atom and bigger 5d centroid shift. These two factors cause that the emission spectrum of $\text{Y}_3\text{Al}_5\text{O}_{12}(\text{C}):\text{Ce}^{3+}$ has an additional red emission

J. Rare Earths, (36) 2018: 1239-1244

- 1245 Luminescence properties of dysprosium doped YVO_4 phosphor

H.J. Rajendra, C. Pandurangappa,
D.L. Monika

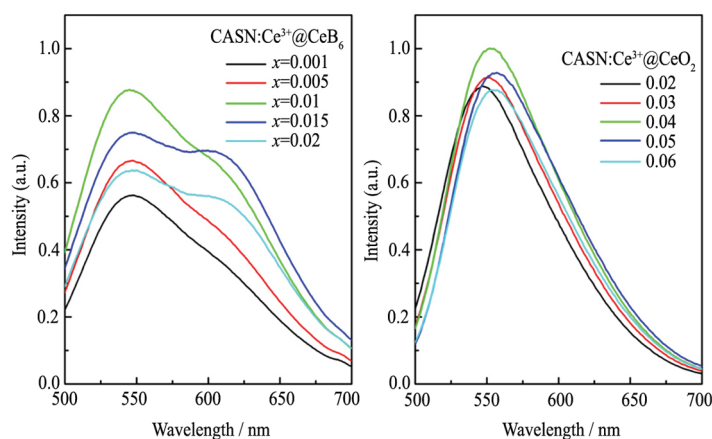


A SEM image of Dy doped YVO_4 nanoparticles; photoluminescence spectrum of 5%Dy-doped YVO_4 nanoparticles

J. Rare Earths, (36) 2018: 1245-1249

- 1250 Enhanced orange emission by doping CeB_6 in $\text{CaAlSiN}_3:\text{Ce}^{3+}$ phosphor for application in white LEDs

Wenjie Wu, Kefu Chao, Wenquan Liu,
Lesi Wei, Dahai Hu, Taiyang Wang, O. Tegus



Compared with $\text{CaAlSiN}_3:\text{Ce}^{3+}@\text{CeO}_2$, the photoluminescence spectrum of $\text{CaAlSiN}_3:\text{Ce}^{3+}@\text{CeB}_6$ is wider, in other words, the red emission component of Ce^{3+} is much stronger in $\text{CaAlSiN}_3:\text{Ce}^{3+}@\text{CeB}_6$, which is ascribed to energy transfer of intra- Ce^{3+} (within one Ce^{3+} ion) and inter- Ce^{3+} (between Ce^{3+} and Ce^{3+} ions). In addition, the replacements of N^{3-} (0.132 nm for CN=4) and O^{2-} (0.124 nm for CN=4) by B^{2-} (0.140 nm for CN=4), which can lead to a marked expansion of the host lattice and a decrease of the oxidation of samples, are also responsible for the increase of red emission component

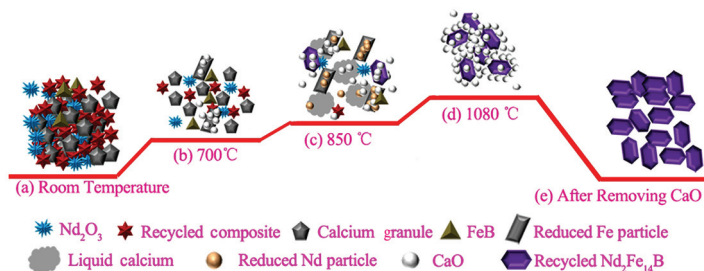
J. Rare Earths, (36) 2018: 1250-1255

MAGNETISM AND MAGNETIC MATERIALS

- 1284 Recycled Nd-Fe-B sintered magnets prepared from sludges by calcium reduction-diffusion process

Xiaowen Yin, Min Liu, Baicen Wan,
Yu Zhang, Weiqiang Liu, Yufeng Wu,
Dongtao Zhang, Ming Yue

J. Rare Earths, (36) 2018: 1284-1291

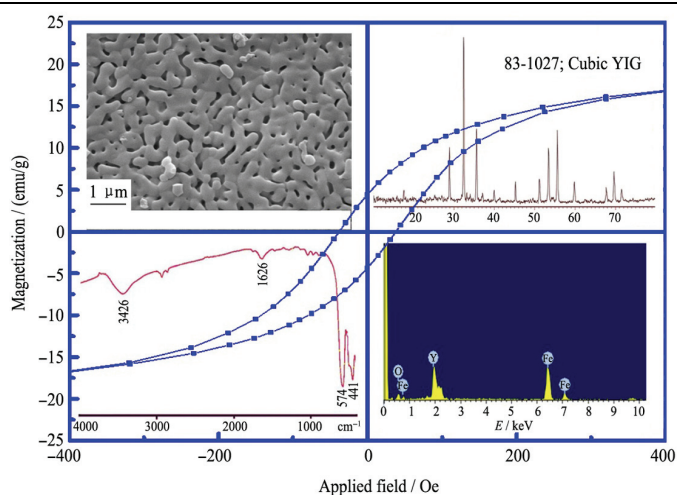


A recycling route based on reduction-diffusion process for Nd-Fe-B sludge was set up; most of useful elements were recovered from the sludges; recycled Nd-Fe-B sintered magnets were obtained as the final product; the reduction-diffusion process was described; The new recycling route has been proved to be a short route.

- 1292 Yttrium-iron garnet and yttrium orthoferrite nanocrystals: Hydrothermal synthesis, magnetic property and phase transformation study

Mohammadreza Mansournia, Mahsa Orae

J. Rare Earths, (36) 2018: 1292-1298

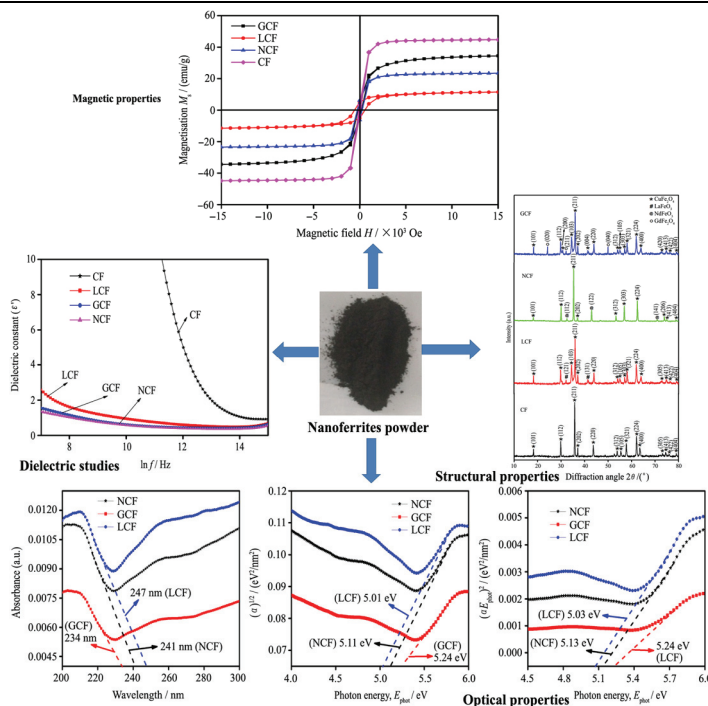


Magnetic hysteresis loop, FESEM image, XRD pattern, FT-IR and EDX spectra of the typical YIG synthesized using the ammonia atmosphere in a simple and low-cost hydrothermal-annealing manner

ADVANCED RARE EARTH MATERIALS

- 1299 Doping effect of rare-earth (lanthanum, neodymium and gadolinium) ions on structural, optical, dielectric and magnetic properties of copper nanoferrites

R. Rajesh Kanna, K. Sakthipandi,
S.M. Seeni Mohamed Aliar Maraikkayar,
N. Lenin, M. Sivabharathy



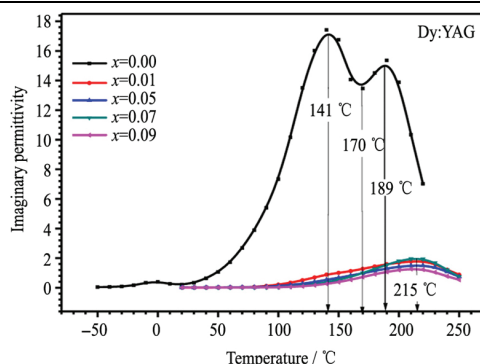
The optical bandgap energy was enhanced with facilitation of rare earth in CuFe_2O_4 ; dielectric behaviors of CuFe_2O_4 were tuned by doping rare earth ions; $M-H$ curves show low magnetisation and coercivity with soft ferromagnetic nature

J. Rare Earths, (36) 2018: 1299-1309

- 1310 Dielectric and microstructural properties of YAG:Dy³⁺ ceramics

Munirah Abdullah Almessiere, Bayram Unal, Abdulhadi Baykal

J. Rare Earths, (36) 2018: 1310-1318

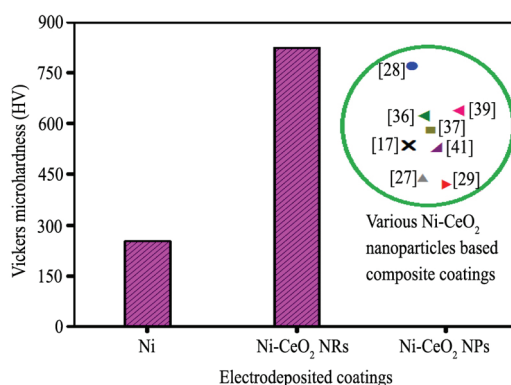


The dielectric loss versus temperature for various Dy³⁺ concentrations

- 1319 Development of CeO₂ nanorods reinforced electrodeposited nickel nanocomposite coating and its tribological and corrosion resistance properties

S. Shanmugasamy, K. Balakrishnan, A. Subasri, S. Ramalingam, A. Subramania

J. Rare Earths, (36) 2018: 1319-1325

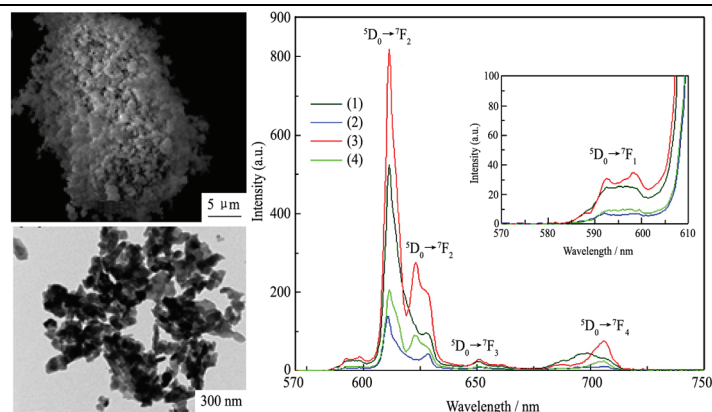


Ni-CeO₂ NRs nanocomposite coating showed higher microhardness than Ni-CeO₂ nanoparticles based composite coatings

- 1326 Solid-state synthesis of LnOCl/Ln₂O₃ (Ln = Eu, Nd) by using chitosan and PS-co-P4VP as polymeric supports

C. Diaz, D. Carrillo, R. de la Campa, A. Presa Soto, M.L. Valenzuela

J. Rare Earths, (36) 2018: 1326-1332



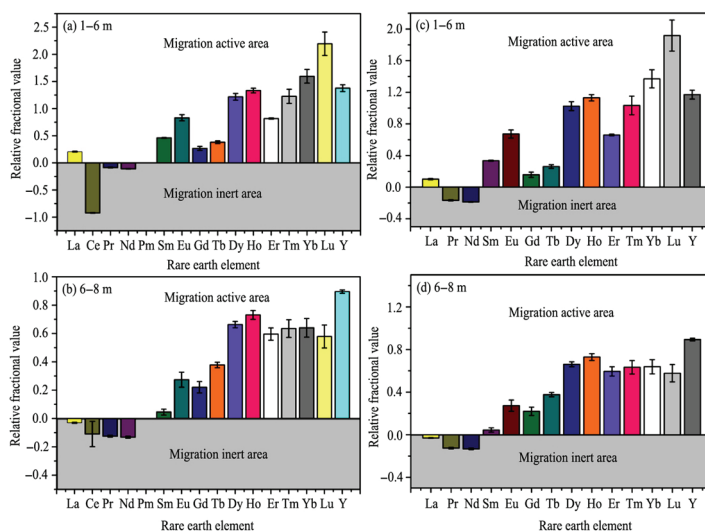
Solid-state synthesis of LnOCl/Ln₂O₃ and their luminescent properties

CHEMISTRY AND HYDROMETALLURGY

- 1333 Evaluating the fractionation of ion-adsorption rare earths for *in-situ* leaching and metallogenic mechanism

Qihua Xu, Lifeng Yang, Dashan Wang, Xiao Hou, Yuanyuan Sun, Xuezheng Zhou, Xinmu Zhou, Yongxiu Li

J. Rare Earths, (36) 2018: 1333-1341

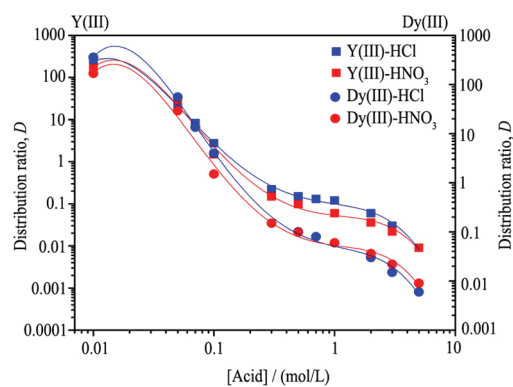


Relative fractional values of rare earth elements, showing different migration sequence. (a, b) Relative fractional value calculated using total REE data; (c, d) Relative fractional value calculated using REE data excluding Ce

1342 Comparative studies on Y(III) and Dy(III)
extraction from hydrochloric and nitric acids
by Cyanex 572 as a novel extractant

*N.E. El-Hefny, M.S. Gasser, Sh.Sh. Emam,
W.H. Mahmoud, H.F. Aly*

J. Rare Earths, (36) 2018: 1342-1350



Effect of acid
concentration on the
extraction of Y(III)
or Dy(III) with
Cy-572 in kerosene