

Aluminate-based nanostructured luminescent materials : design of processing and functional properties

Rojas Hernandez, Rocio Estefania; Rubio-Marcos, Fernando; Fernandez, Jose Francisco; **Hussainova, Irina** Materials 2021 / art. 4591 <https://doi.org/10.3390/ma14164591> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Bidirectional Mo4/3CTx MXene/graphene aerogels for tailored microwave absorption

Shamshirgar, Ali Saffar; Qin, Lei; **Rojas Hernandez, Rocio Estefania;** Halim, Joseph; Fernandez, Jose F.; **Hussainova, Irina;** Rosen, Johanna ACS Applied Nano Materials 2025 / p. 1978–1990 <https://doi.org/10.1021/acsanm.4c06555>

Boosting phosphorescence efficiency by crystal anisotropy in SrAl2O4:Eu,Dy textured ceramic layers

Rojas Hernandez, Rocio Estefania; Rubio-Marcos, Fernando; Serrano, Aida; **Hussainova, Irina;** Fernandez, Jose Francisco Journal of the European Ceramic Society 2020 / p. 1677–1683 : ill <https://doi.org/10.1016/j.jeurceramsoc.2019.11.019> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Cost-effective screen printing approach for Ce/Nd-doped ZnAl2O4 films: tuning crystallinity induced by the substrate

Rojas Hernandez, Rocio Estefania; Rubio-Marcos, Fernando; **Necib, Jallouli;** **Danilson, Mati;** Fernandez, Jose Francisco; **Hussainova, Irina** Physical chemistry chemical physics 2023 / p. 15829–15838 <https://doi.org/10.1039/D3CP02005C> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Deep-ultraviolet emitter : rare-earth-free ZnAl2O4 nanofibers via a simple wet chemical route

Rojas Hernandez, Rocio Estefania; Rubio-Marcos, Fernando; Romet, Ivo; Del Campo, Adolfo; Gorni, Giulio; **Hussainova, Irina;** Fernandez, Jose Francisco; Nagirnyi, Vitali Inorganic Chemistry 2022 / p. 11886–11896 <https://doi.org/10.1021/acs.inorgchem.2c01646> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Development of Rare-Earth-Free Zinc Silicate as a Novel Deep UV Emitter : Synthesis Strategies and Luminescent Properties = Haruldaste muldmetallide vaba tsinksilikaadi kui uue süva-UV kiirguri arendus : sünteesistrateegiad ja luminesentsomadused

Necib, Jallouli 2025 <https://digikogu.taltech.ee/et/Item/67078497-d42a-4e55-8a09-d665a3a023b1> <https://doi.org/10.23658/taltech.63/2025> https://www.ester.ee/record=b5754738*est

Doping engineering for controlled hydration and mechanical properties in Portland cement mortar with ultra-low ZnO concentration

Tamashiro, Jacqueline Roberta; de la Rubia, Miguel Angel; Rubio-Marcos, Fernando; **Rojas Hernandez, Rocio Estefania;** Silva, Lucas Henrique Pereira; de Paiva, Fabio Friol Guedes; Kinoshita, Angela; Terrades, Amparo Moragues Journal of building engineering 2023 / art. 107748 <https://doi.org/10.1016/j.jobe.2023.107748> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of annealing temperature of brownish-red pigment based on iron oxide extracted by hydrothermal route from mill-scale steel slag

Eticha, Zekarias G.; **Rojas Hernandez, Rocio Estefania;** **Hussainova, Irina** Journal of Sustainable Metallurgy 2022 / p. 218–227 <https://doi.org/10.1007/s40831-021-00470-z> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of silica precursor on the synthesis of Zn2SiO4-based material

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Elucidating reaction mechanism by molten salt of potential rare-earth-free Zn2SiO4 UV-B emitter: Insights into morphology and emission features

Necib, Jallouli; **Feldbach, Eduard;** **Romet, Ivo;** **Nagirnyi, Vitali;** **Hussainova, Irina;** **Jüstel, Thomas;** **Rojas Hernandez, Rocio Estefania** Ceramics international 2025 / p. 34922–34931 : ill <https://doi.org/10.1016/j.ceramint.2025.05.212>

Enhancement of the persistent luminescence of SrAl2O4:Eu, dy ceramics through incorporation of Ag and Au nanoparticles

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Enhancing NIR emission in ZnAl2O4:Nd,Ce nanofibers by co-doping with Ce and Nd: a promising biomarker material with low cytotoxicity

Rojas Hernandez, Rocio Estefania; Rubio-Marcos, Fernando; Gorni, Giulio; Marini, Carlo; **Danilson, Mati;** Pascual, Laura; Ichikawa, Rodrigo Uchida; **Hussainova, Irina;** Fernandez, Jose Francisco Journal of materials chemistry C 2021 / p. 657–670 : ill <https://doi.org/10.1039/D0TC04752J> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Erratum: A feasible pathway to stabilize monoclinic and tetragonal phase coexistence in barium titanate-based ceramics (J. Mater. Chem. C (2022) 10 (17743–17756) DOI: 10.1039/D2TC04265G)

Necib, Jallouli; Lopez-Sanchez, Jesus; Rubio-Marcos, Fernando; Serrano, Aida; Navarro, Elena; Pena, Alvaro; Taoufik, Mnasri; Smari, Mourad; **Rojas Hernandez, Rocio Estefania;** Carmona, Noemi; Marín, Pilar Journal of materials chemistry C 2023 / p. 2397

A feasible pathway to stabilize monoclinic and tetragonal phase coexistence in barium titanate-based ceramics

Necib, Jallouli; Lopez-Sanchez, Jesus; Rubio-Marcos, Fernando; Serrano, Aida; Navarro, Elena; Pena, Alvaro; Taoufik, Mnasri; Smari, Mourad; **Rojas Hernandez, Rocio Estefania**; Carmona, Noemi; Marín, Pilar Journal of materials chemistry C 2022 / p. 17743-17756 <https://doi.org/10.1039/D2TC04265G> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Frequency conversion in lanthanide-doped sol-gel derived materials for energy applications

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Functionally graded tunable microwave absorber with graphene-augmented alumina nanofibers

Shamshirgar, Ali Saffar; **Rojas Hernandez, Rocio Estefania**; Tewari, Girish C.; Fernandez, Jose Francisco; **Ivanov, Roman**; Karppinen, Maarit; **Hussainova, Irina** ACS applied materials & interfaces 2021 / p. 21613-21625 <https://doi.org/10.1021/acsami.1c02899> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Highly textured zinc aluminate: Nd, Ce films over sapphire for NIR emitting applications

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Impact of fuel quantity on luminescence properties of Sr₃Al₂O₆ : Eu by combustion synthesis

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Investigation of deep UV emission of rare-earth-free Zn₂SiO₄ micropowders : the correlation of structural and luminescence properties

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Layered structure of alumina/graphene-augmented-inorganic-nanofibers with directional electrical conductivity

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Light-induced strain and its correlation with the optical absorption at charged domain walls in polycrystalline ferroelectrics

Rubio-Marcos, Fernando; Pamies, Paula; Del Campo, Adolfo; Tiana, Jordi; Ordonez-Pimentel, Jonathan; Venet, Michel; **Rojas Hernandez, Rocio Estefania**; Ochoa, Diego A.; Fernandez, Jose F.; García, Jose E. Applied materials today 2023 / art. 101838 <https://doi.org/10.1016/j.apmt.2023.101838> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

On the potential of Transparent Rare-Earth-Free ZnAl₂O₄ Ceramics targeted at the UV-C to UV-B emission

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One-dimensional multilayer photonic crystals

Almeida, Rui M.; **Rojas Hernandez, Rocio Estefania**; Santos, Luis F. Sol-gel derived optical and photonic materials 2021 / p. 75-94 : ill <https://doi.org/10.1016/B978-0-12-818019-8.00004-1>

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Sol-gel derived phosphors for optical applications : chapter 11

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Spinel to disorder rock-salt structural transition on (111) nickel ferrite thin films tailored by Ni content

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SrAl₂O₄ : Eu,Dy-screen-printed layers to create phosphorescent 2D shapes

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Thermal transport and thermoelectric effect in composites of alumina and graphene-augmented alumina nanofibers

Saffarshamshirgar, Ali; Belmonte, Manuel; Tewari, Girish C.; **Rojas Hernandez, Rocio Estefania**; Seitsonen, Jani; **Ivanov, Roman**; Karppinen, Maarit; Miranzo, Pilar; **Hussainova, Irina** Materials 2021 / art. 2242 <https://doi.org/10.3390/ma14092242> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Towards blue long-lasting luminescence of Eu/Nd-doped calcium-aluminate nanostructured platelets via the molten salt route

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Versatile graphene-alumina nanofibers for microwave absorption and EMI shielding

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