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Formación

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PRODEP

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Líneas de Investigación e Incidencia Social (LIES)

LIES-1: Metalurgia Extractiva, Preparación y Desarrollo de Materiales
Cerámicos y Compuestos.

LIES-2: Caracterización y Análisis de Materiales.

Publicaciones

1.- J. Zarate-Medina, K.J. Sandoval-Cedeño, A. Barrera-Villatoro, J. Lemus-Ruiz, T. Rivera_Montalvo, "Thermal effect on thermoluminescence response of hydroxyapatite", Applied Radiation and Isotopes, 100 (2015) 50-54, (June). ISSN: 0969-8043. doi:10.1016/j.apradiso.2014.12.004

2.- J. Lemus-Ruiz, A. O. Guevara-Laureno, J. Zarate-Medina, A. Arellano-Lara, L. Ceja-Cárdenas, "Interface behavior of Al₂O₃/Ti joints produced by liquid state bonding", Applied Radiation and Isotopes 98 (2015) 1-6, (April). doi:10.1016/j.apradiso.2015.01.010

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4.- U. Caudillo-Flores, J. Lara-Romero, J. Zárate-Medina, M.J. Muñoz-Batista, R. Huirache-Acuña, E.M. Rivera-Muñoz, J. A. Cortés, "Enhanced photocatalytic activity of MWCNT/TiO₂ heterojunction photocatalysts obtained by microwave assisted synthesis", Catalysis Today 266 (2016) 102-109. <https://doi.org/10.1016/j.cattod.2015.12.005>

5.- Hernández Muñoz Wilson, Serrato Rodríguez Juan¹, Muñoz Saldaña Juan², Zárate Medina Juan, Synthesis of lanthanum aluminate by reverse chemical precipitation using pseudoboehmite as alumina precursor. Applied Radiation and Isotopes 117(2016) 96-99. doi:<http://dx.doi.org/10.1016/j.apradiso.2016.01.026>

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8.- T. Rivera-Montalvo, A. Morales-Hernandez, A.A. Barrera-Angeles, R. Alvarez-Romero, C. Falcony, J. Zarate-Medina, “Modified Pechini’s method to prepare $\text{LaAlO}_3\text{:RE}$ thermoluminescent materials”, *Radiation Physics and Chemistry*, 140 (2017) , 68–73.
<http://dx.doi.org/10.1016/j.radphyschem.2017.01.022>

9.- A. Barrera-Villatoro, C. Boronat, T. Rivera-Montalvo, V. Correcher, J. Garcia-Guinea, J. Zarate-Medina, “Cathodoluminescence response of natural and synthetic lanthanide-rich phosphates (Ln^{3+} : Ce, Nd)”, *Radiation Physics and Chemistry* 141 (2017) 271–275,
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49.- Ivan F. Bedoya-Trujillo, Sebastián Pérez, Cynthia Y. Guijosa-García, Marco A. Rivera-Gil, Ravisankar Naraparaju, Juan Zárate-Medina, Juan Muñoz-Saldaña, Evaluation of the reactivity of dense lanthanum-gadolinium zirconate ceramics with Colima volcanic ashes, Surface and Coatings Technology, Volume 470, 2023. <https://doi.org/10.1016/j.surfcoat.2023.129825>.

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51.- Q. Miranda-Hernández, I. I. López-López, J. Lemus-Ruiz, A. Contreras-Cuevas, and J. Zárate-Medina, "Production of Al₂O₃-SiC composites from micrometer α -Al₂O₃ powder obtained via sol-gel", Rev. Mex. Fis., vol. 69, 3, 1-6, 2023. <https://doi.org/10.31349/RevMexFis.69.031601>

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Proyectos con financiamiento

1. Síntesis y procesamiento de cerámicos multifuncionales vía spray dryer, Proyecto CONACYT aceptado en la convocaría de ciencia básica 2012. Monto: **1,811,749.00 (dic2012-nov2015). Prorroga feb 2017**
2. CIC 2016, Efecto de las condiciones de síntesis y procesamiento de la hidroxiapatita en la respuesta termoluminiscente. UMSNH 01/01– 31/12 2017. Monto: 46,500.00 (2016) + 40,170.00 (2017)
3. **CIC 2018-2020**, Síntesis y Procesamiento de Compuestos de Matriz Metálica (Al-Mg) Reforzados con Nanoestructuras de Carbono. UMSNH 01/01– 31/12 2019. Monto: 00,000.00 (2018) + 00,000.00 (2019-2020)

4. Síntesis y procesamiento de cerámicos multifuncionales vía spray dryer, Proyecto de continuación **CONACYT** aceptado en la convocaría de ciencia básica 2016. Monto: \$1,579,447.00 **(OCT/2018-OCT/2021).**
Prorroga a 2023
5. CIC 2021-2022, Procesamiento de materiales compuestos de zeolita y hollín de carbono, para su aplicación en sistemas de acumulación termosolar.
6. CIC 2023-2025, Síntesis de nanopartículas de $\text{ZrO}_2\text{:Yb}^{3+}\text{-Tm}^{3+}\text{-Li}^+\text{@TiO}_2/\text{ZrO}_2$ y su evaluación luminiscente y fotocatalítica para Potenciales aplicaciones biomédicas y ambientales.

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