



**Sistema Integral de Información Académica**  
**Coordinación de Planeación, Evaluación y**  
**Simplificación de la Gestión Institucional**  
**Reporte individual**



**DAVID ALEJANDRO DOMINGUEZ VARGAS**

## Datos Generales

**Nombre:** DAVID ALEJANDRO DOMINGUEZ VARGAS

**Máximo nivel de estudios:** DOCTORADO

**Antigüedad académica en la UNAM:** 14 años

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## Nombramientos

**Vigente:** TECNICO ACADEMICO TITULAR C TC Definitivo  
Centro de Nanociencias y Nanotecnología en la UNAM  
Desde 01-10-2021

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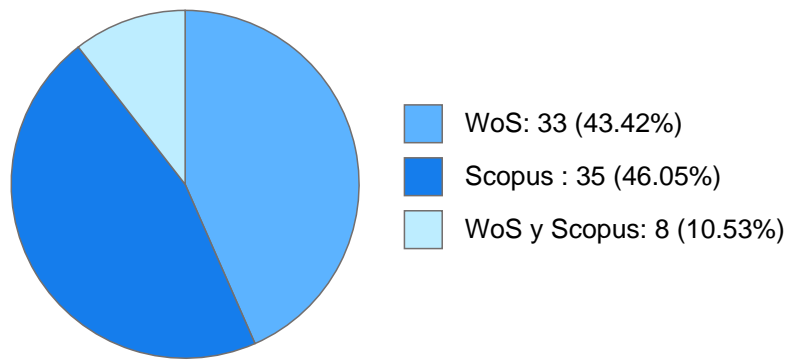
## Estímulos, programas, premios y reconocimientos

SNI I 2021 - VIGENTE  
PRIDE D 2021 - 2024  
PRIDE C 2016 - 2021  
PRIDE B 2011 - 2016

**DAVID ALEJANDRO DOMINGUEZ VARGAS**

**DOCUMENTOS EN REVISTAS**

**Histórico de Documentos**



#	Título	Autores	Revista	Año
1	Lithography-Free Ultrathin Lossless All-Dielectric Material with Magnetic Activity	JAVIER ALONSO LOPEZ MEDINA DAVID ALEJANDRO DOMINGUEZ VARGAS MARIO HUMBERTO FARIAS SANCHEZ et al.	Acs Applied Nano Materials	2025
2	Exploring Al <sub>2</sub> O <sub>3</sub> blister evolution through cathodoluminescence and attenuated total reflectance infrared analyses	DAVID ALEJANDRO DOMINGUEZ VARGAS OSCAR EDEL CONTRERAS LOPEZ HUGO JESUS TIZNADO VAZQUEZ et al.	JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A	2024
3	β-Ga <sub>2</sub> O <sub>3</sub> nanostructures for photocatalytic degradation of red amaranth toxic dye	DAVID ALEJANDRO DOMINGUEZ VARGAS LUIS ALEJANDRO ARCE SALDAÑA MARIO HUMBERTO FARIAS SANCHEZ et al.	Nano Express	2024
4	Direct obtaining of pure anatase TiO <sub>2</sub> nanostructures, characterization, size-tuning, and applications	DAVID ALEJANDRO DOMINGUEZ VARGAS URIEL CAUDILLO FLORES SERGIO FUENTES MOYADO et al.	Nano-Structures and Nano-Objects	2024
5	XRD as an Alternative Technique for Cation Distribution Characterization of MFe <sub>2</sub> O <sub>4</sub> Magnetic Nanoparticles	ANA KARINA CUENTAS GALLEGOS DAVID ALEJANDRO DOMINGUEZ VARGAS HUGO JESUS TIZNADO VAZQUEZ et al.	Journal of Nanotechnology	2024

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6	Magnetic, structural, and morphological properties behavior of $\text{Ni}_{1-x}\text{Co}_x\text{Fe}_2\text{O}_4$ magnetic nanoparticles: Theoretical and experimental study	DAVID ALEJANDRO DOMINGUEZ VARGAS SERGIO ANDRES AGUILA PUENTES JONATHAN GUERRERO SANCHEZ et al.	MATERIALS CHARACTERIZATION	2024
7	Maximizing Ru-YSZ-Au battery capacity using an interfacial Ru:YSZ intermixed layer	DAVID ALEJANDRO DOMINGUEZ VARGAS HUGO JESUS TIZNADO VAZQUEZ Vazquez-Arce J.L. et al.	Journal of Energy Storage	2024
8	Photodegradation of ceftriaxone using g-C <sub>3</sub> N <sub>4</sub> -ZnO nanocomposite as an efficient photocatalyst	KARINA PORTILLO CORTEZ JOSUE ESAU ROMERO IBARRA DAVID ALEJANDRO DOMINGUEZ VARGAS et al.	JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY A-CHEMISTRY	2023
9	Thickness effect of Yttria-Stabilized Zirconia as the electrolyte in all-solid-state thin-film supercapacitor with a wide operating temperature range	DAVID ALEJANDRO DOMINGUEZ VARGAS OSCAR EDEL CONTRERAS LOPEZ GERARDO SOTO HERRERA et al.	JOURNAL OF POWER SOURCES	2022
10	Insight into alcohol transformation over binary $\text{Al}_2\text{O}_3$ - $\text{Y}_2\text{O}_3$ mixed oxide nanoparticles	DAVID ALEJANDRO DOMINGUEZ VARGAS OSCAR EDEL CONTRERAS LOPEZ SERGIO FUENTES MOYADO et al.	APPLIED CATALYSIS B-ENVIRONMENTAL	2022
11	Effect of inert ambient annealing on structural and defect characteristics of coaxial N-CNTs@ZnO nanotubes coated by atomic layer deposition	DAVID ALEJANDRO DOMINGUEZ VARGAS MANUEL HERRERA ZALDIVAR JOSE MANUEL ROMO HERRERA et al.	CERAMICS INTERNATIONAL	2022
12	Electrochemical Determination of Glucose Using Nitrogen-Doped Graphene	DAVID ALEJANDRO DOMINGUEZ VARGAS E. A. Reynoso-Soto R. M. Felix-Navarro et al.	TOPICS IN CATALYSIS	2022
13	Magnetic nanostructured based on cobalt-Zinc Ferrites designed for photocatalytic dye degradation	DAVID ALEJANDRO DOMINGUEZ VARGAS JORGE NOE DIAZ DE LEON HERNANDEZ SUSANA GOMEZ GOMEZ et al.	JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS	2021
14	Effect of oxygen based functional groups on the nucleation of $\text{TiO}_2$ by atomic layer deposition: A theoretical and experimental study	HUGO ALEJANDRO BORBON NUÑEZ JESUS MUÑIZ SORIA DAVID ALEJANDRO DOMINGUEZ VARGAS et al.	MATERIALS CHEMISTRY AND PHYSICS	2021
15	The effect of shape and size of 1D and 0D titanium oxide nanorods in the photocatalytic degradation of red amaranth toxic dye	JORGE NOE DIAZ DE LEON HERNANDEZ DAVID ALEJANDRO DOMINGUEZ VARGAS JOSE MANUEL ROMO HERRERA et al.	Nano-Structures and Nano-Objects	2021

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16	Modifying nitrogen species of nitrogen-doped carbon nanotubes by thermal annealing to explore their role in the triiodide reduction reaction	DAVID ALEJANDRO DOMINGUEZ VARGAS HUGO ALEJANDRO BORBON NUÑEZ HUGO JESUS TIZNADO VAZQUEZ et al.	Carbon	2020
17	Noble metals supported on binary $\gamma$ -Al <sub>2</sub> O <sub>3</sub> - $\alpha$ -Ga <sub>2</sub> O <sub>3</sub> oxide as potential low-temperature water-gas shift catalysts	JORGE NOE DIAZ DE LEON HERNANDEZ TRINO ARMANDO ZEPEDA PARTIDA DAVID ALEJANDRO DOMINGUEZ VARGAS et al.	Fuel	2020
18	Tuning the nitrogen species content in N-doped CNTs for catalytic applications	DAVID ALEJANDRO DOMINGUEZ VARGAS HUGO JESUS TIZNADO VAZQUEZ JOSE MANUEL ROMO HERRERA et al.	Abstracts Of Papers Of The American Chemical Society	2019
19	Membranes made of nitrogen-doped CNTs decorated with magnetite NPs for cleaning treated wastewater	ENRIQUE CONTRERAS BERNABE DAVID ALEJANDRO DOMINGUEZ VARGAS HUGO JESUS TIZNADO VAZQUEZ et al.	Abstracts Of Papers Of The American Chemical Society	2019
20	Ag nanoparticles embedded in a magnetic composite for magnetic separation applications	DAVID ALEJANDRO DOMINGUEZ VARGAS HUGO JESUS TIZNADO VAZQUEZ GERARDO SOTO HERRERA et al.	JOURNAL OF ALLOYS AND COMPOUNDS	2019
21	N-Doped carbon nanotubes enriched with graphitic nitrogen in a buckypaper configuration as efficient 3D electrodes for oxygen reduction to H <sub>2</sub> O <sub>2</sub>	ENRIQUE CONTRERAS BERNABE DAVID ALEJANDRO DOMINGUEZ VARGAS HUGO JESUS TIZNADO VAZQUEZ et al.	Nanoscale	2019
22	Synthesis of Aluminium Doped Na-Titanate Nanorods and Its Application as Potential CO <sub>2</sub> Hydrogenation Catalysts	DAVID ALEJANDRO DOMINGUEZ VARGAS TRINO ARMANDO ZEPEDA PARTIDA SERGIO FUENTES MOYADO et al.	CATALYSIS LETTERS	2019
23	Optimal sidewall functionalization for the growth of ultrathin TiO <sub>2</sub> nanotubes via atomic layer deposition	DAVID ALEJANDRO DOMINGUEZ VARGAS JOSE MANUEL ROMO HERRERA HUGO JESUS TIZNADO VAZQUEZ et al.	JOURNAL OF MATERIALS SCIENCE	2018
24	Plasma synthesis of carbon powder with embedded Fe <sub>3</sub> C nanoparticles for magnetic separation of biomolecules	DAVID ALEJANDRO DOMINGUEZ VARGAS MARIO HUMBERTO FARIAS SANCHEZ GERARDO SOTO HERRERA et al.	ADVANCED POWDER TECHNOLOGY	2018
25	Low-temperature ozone treatment for carbon nanotube template removal: improving the template-based ALD method	DAVID ALEJANDRO DOMINGUEZ VARGAS JOSE MANUEL ROMO HERRERA OSCAR EDEL CONTRERAS LOPEZ et al.	JOURNAL OF NANOPARTICLE RESEARCH	2018

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26	Physical and electrical characterization of yttrium-stabilized zirconia (YSZ) thin films deposited by sputtering and atomic-layer deposition	HUGO JESUS TIZNADO VAZQUEZ GERARDO SOTO HERRERA DAVID ALEJANDRO DOMINGUEZ VARGAS et al.	JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS	2018
27	Fabrication of hollow TiO <sub>2</sub> nanotubes through atomic layer deposition and MWCNT templates	DAVID ALEJANDRO DOMINGUEZ VARGAS JOSE MANUEL ROMO HERRERA GERARDO SOTO HERRERA et al.	POWDER TECHNOLOGY	2017
28	Structural and electrical characterization of multilayer Al <sub>2</sub> O <sub>3</sub> /ZnO nanolaminates grown by atomic layer deposition	DAVID ALEJANDRO DOMINGUEZ VARGAS EDUARDO ANTONIO MURILLO BRACAMONTES ROBERTO MACHORRO MEJIA et al.	MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING	2017
29	Thickness effect on the optical and morphological properties in Al <sub>2</sub> O <sub>3</sub> /ZnO nanolaminate thin films prepared by atomic layer deposition	DAVID ALEJANDRO DOMINGUEZ VARGAS EDUARDO ANTONIO MURILLO BRACAMONTES FELIPE FRANCISCO CASTILLON BARRAZA et al.	SUPERLATTICES AND MICROSTRUCTURES	2016
30	Enhancing the oxidation resistance of diamond powder by the application of Al <sub>2</sub> O <sub>3</sub> conformal coat by atomic layer deposition	DAVID ALEJANDRO DOMINGUEZ VARGAS HUGO JESUS TIZNADO VAZQUEZ JOSE MANUEL ROMO HERRERA et al.	DIAMOND AND RELATED MATERIALS	2016
31	Design of Step-Index Optical Waveguides by Ion Implantation	ERICK FLORES ROMERO LUIS RODRIGUEZ FERNANDEZ ALICIA MARIA OLIVER Y GUTIERREZ et al.	JOURNAL OF LIGHTWAVE TECHNOLOGY	2015
32	The control of thickness on aluminum oxide nanotubes by Atomic Layer Deposition using carbon nanotubes as removable templates	Franklin MunozMunoz GERARDO SOTO HERRERA DAVID ALEJANDRO DOMINGUEZ VARGAS et al.	POWDER TECHNOLOGY	2015
33	Insulating carbon nanotubes by atomic layer deposition for electrical wiring purposes	JOSE MANUEL ROMO HERRERA OSCAR EDEL CONTRERAS LOPEZ DAVID ALEJANDRO DOMINGUEZ VARGAS et al.	JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY	2015
34	Nanocomposite YCrO <sub>3</sub> /Al <sub>2</sub> O <sub>3</sub> : Characterization of the core-shell, magnetic properties, and enhancement of dielectric properties	ALEJANDRO CESAR DURAN HERNANDEZ HUGO JESUS TIZNADO VAZQUEZ JOSE MANUEL ROMO HERRERA et al.	INORGANIC CHEMISTRY	2014
35	Pulsed-bed atomic layer deposition setup for powder coating	HUGO JESUS TIZNADO VAZQUEZ DAVID ALEJANDRO DOMINGUEZ VARGAS F. Munoz Munoz et al.	POWDER TECHNOLOGY	2014



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36	PH-sensitive electrical behavior of 4-vinylpyridine grafts on poly(propylene) films	HUGO JESUS TIZNADO VAZQUEZ DAVID ALEJANDRO DOMINGUEZ VARGAS Arenas E.	Procedia Engineering	2012
37	TiO <sub>2</sub> and Al <sub>2</sub> O <sub>3</sub> ultra thin nanolaminates growth by ALD; instrument automation and films characterization	HUGO JESUS TIZNADO VAZQUEZ DAVID ALEJANDRO DOMINGUEZ VARGAS WENCEL JOSE DE LA CRUZ HERNANDEZ et al.	REVISTA MEXICANA DE FISICA	2012



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**LIBROS Y CAPITULOS CON ISBN**

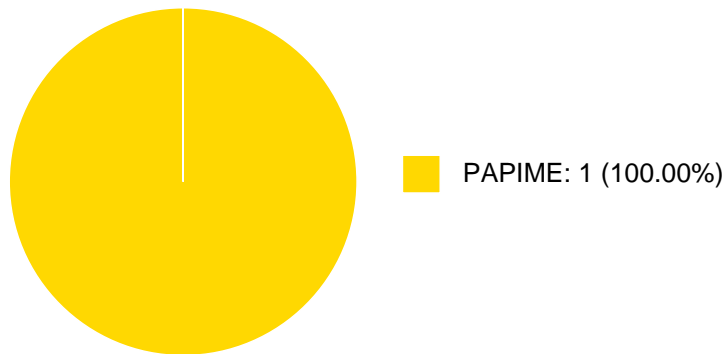
**No se encuentran registros en la base de datos de Humanindex asociados a:**

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**PARTICIPACIÓN EN PROYECTOS**

**Histórico de participación en proyectos**



#	Nombre	Participantes	Fuente	Fecha inicio	Fecha fin
1	Practicadas de laboratorio enfocadas a la degradacion de contaminantes industriales mediante estructuras semiconductoras ID	DAVID ALEJANDRO DOMINGUEZ VARGAS JORGE NOE DIAZ DE LEON HERNANDEZ	Recursos PAPIME	01-02-2018	31-12-2018





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**PARTICIPACIÓN EN TESIS**

**No se encuentran registros en la base de datos de TESIUNAM asociados a:**

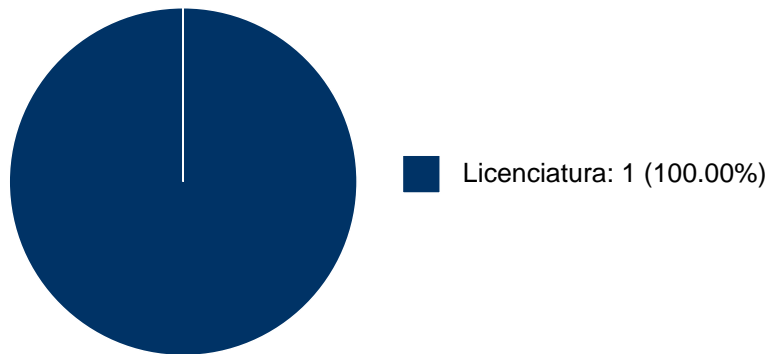
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## DOCENCIA IMPARTIDA

### Histórico de docencia



#	Nivel titulación	Asignatura	Entidad	Alumnos	Semestre
1	Licenciatura	NANOMATERIALES II: CARACTERIZACION-335986	Centro de Nanociencias y Nanotecnología en la UNAM	2	2016-2



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**PATENTES**

**No se encuentran registros en la base de datos de patentes asociados a:**

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**FUENTES DE INFORMACIÓN**

**Internos**

#	Información	Fuente	Sistema	Periodo
1	Grupos ordinarios y resumen de historias académicas	DGAE	SIAE	2008-2025
2	Nombramientos, datos generales, estímulos, premios y reconocimientos	DGAPA	RUPA	2008-2025
3	Producción Académica	CH	Humanindex	2008-2021
4	Producción Académica	CIC	SCIC	2000-2017
5	Proyectos	DGPO	SISEPRO	2018-2022
6	Tesis	DGB	TESIUNAM	2008-2025
7	Tutorías en Posgrado	CGEP	SIIPosgrado	2008-2021

**Externos**

#	Información	Fuente	Sistema	Periodo
8	Documentos Indexados	Elsevier	Scopus	2008-2025
9	Documentos Indexados	Thomson Reuters	WoS	2008-2025
10	Obras con registro ISBN	INDAUTOR	Agencia ISBN	2008-2025
11	Patentes	IMPI	SIGA	2008-2024