



## **MARIO HUMBERTO FARIAS SANCHEZ**

### **Datos Generales**

**Nombre:** MARIO HUMBERTO FARIAS SANCHEZ

**Máximo nivel de estudios:** DOCTORADO

**Antigüedad académica en la UNAM:** 40 años

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### **Nombramientos**

**Vigente:** INVESTIGADOR TITULAR C TC Definitivo  
Centro de Nanociencias y Nanotecnología en la UNAM  
Desde 01-01-2008 (fecha inicial de registros en el SIIA)

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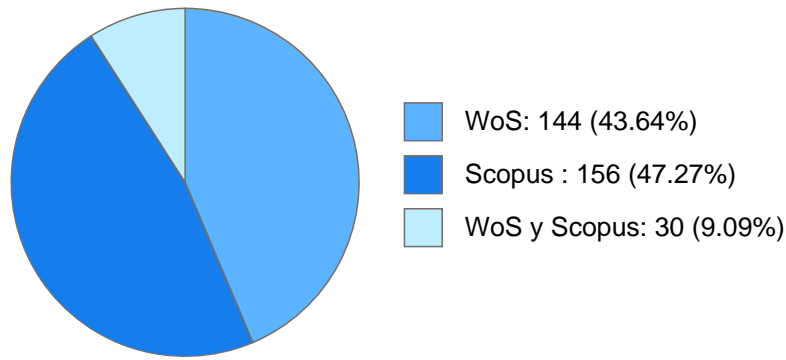
### **Estímulos, programas, premios y reconocimientos**

SNI III - 2024  
PRIDE C 2012 - 2024  
PRIDE Fijo 2010 - 2012  
PRIDE D - 2009

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**DOCUMENTOS EN REVISTAS**

**Histórico de Documentos**



#	Título	Autores	Revista	Año
1	P-type ZnO:N thin films deposited at room temperature on different substrates for p-channel thin film transistor fabrication	MARIO HUMBERTO FARIAS SANCHEZ WENCEL JOSE DE LA CRUZ HERNANDEZ Regalado-Contreras A.	Vacuum	2025
2	XRD as an Alternative Technique for Cation Distribution Characterization of $MFe_2O_4$ Magnetic Nanoparticles	ANA KARINA CUENTAS GALLEGOS DAVID ALEJANDRO DOMINGUEZ VARGAS HUGO JESUS TIZNADO VAZQUEZ et al.	Journal of Nanotechnology	2024
3	Magnetic, structural, and morphological properties behavior of $Ni_{1-x}Co_xFe_2O_4$ magnetic nanoparticles: Theoretical and experimental study	DAVID ALEJANDRO DOMINGUEZ VARGAS SERGIO ANDRES AGUILA PUENTES JONATHAN GUERRERO SANCHEZ et al.	MATERIALS CHARACTERIZATION	2024
4	Ultrathin nanocapacitor assembled via atomic layer deposition	JAVIER ALONSO LOPEZ MEDINA MARIO HUMBERTO FARIAS SANCHEZ HUGO JESUS TIZNADO VAZQUEZ et al.	Nanotechnology	2024
5	$\beta$ -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

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6	Dehydrogenation, polymerization and self-assembly in the inhibition of copper surfaces by an ultrathin imidazole film	JESUS ANTONIO DIAZ HERNANDEZ MARIO HUMBERTO FARIAS SANCHEZ Barzaga R. et al.	CORROSION SCIENCE	2024
7	Moléculas orgánicas adsorbidas sobre superficies metálicas: formación de nanoestructuras y evaluación de sus propiedades físicoquímicas	MARIO HUMBERTO FARIAS SANCHEZ Sánchez M.P.H. Guzmán R.B. et al.	Anales De La Academia De Ciencias De Cuba	2024
8	Synthesis and optimization of photothermal properties of NIR emitting LiGa5O8: Cr <sup>3+</sup> and gold nanorods as hybrid materials for theranostic applications	PRAKHAR SENGAR GUSTAVO ALONSO HIRATA FLORES MARCELA LIZANO SOBERON et al.	TRANSLATIONAL ONCOLOGY	2023
9	Experimental and theoretical assessment of the Eu <sup>3+</sup> doped Bi <sub>4</sub> Ge <sub>3</sub> O <sub>12</sub>	RODRIGO PONCE PEREZ ABDUL MAURICIO REYES USUGA GERARDO SOTO HERRERA et al.	JOURNAL OF ALLOYS AND COMPOUNDS	2023
10	Room temperature deposition of stable p-type ZnO:N thin films through chemical species modulation using reactive pulsed laser deposition	MARIO HUMBERTO FARIAS SANCHEZ WENCEL JOSE DE LA CRUZ HERNANDEZ Regalado-Contreras A.	APPLIED SURFACE SCIENCE	2023
11	O <sub>3</sub> -Annealing Effect on the Etching Resilience of a TiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> filter Prepared by Atomic Layer Deposition	EDER GERMAN LIZARRAGA MEDINA BONIFACIO ALEJANDRO CAN UC MARIO HUMBERTO FARIAS SANCHEZ et al.	ACS APPLIED MATERIALS & INTERFACES	2023
12	Photocatalytic activity of Fe <sub>3</sub> O <sub>4</sub> ?Fe <sub>2</sub> O <sub>3</sub> particles supported on mordenite under visible light exposure for methylene blue degradation	MARIO HUMBERTO FARIAS SANCHEZ FELIPE FRANCISCO CASTILLON BARRAZA Avilés-Monreal R. et al.	Sn Applied Sciences	2023
13	HfO <sub>2</sub> :Y <sub>2</sub> O <sub>3</sub> ultrathin nanolaminate structures grown by ALD: Bilayer thickness and annealing temperature effects on optical properties	JAVIER ALONSO LOPEZ MEDINA MARIO HUMBERTO FARIAS SANCHEZ HUGO JESUS TIZNADO VAZQUEZ et al.	CERAMICS INTERNATIONAL	2022
14	Solvent-free functionalization of graphene oxide powder and paper with aminobenzo-crown ethers and complexation with alkali metal cations	FLAVIO FERNANDO CONTRERAS TORRES VICTOR HUGO MEZA LAGUNA EDGAR ALVAREZ ZAUCO et al.	MATERIALS CHEMISTRY AND PHYSICS	2021
15	Solvothermal synthesis of three-dimensional molybdenum and rhenium diselenides and their performance in the hydrodesulfurization of dibenzothiophene	GABRIEL ALONSO NUÑEZ MARIO HUMBERTO FARIAS SANCHEZ Vega-Granados K. et al.	MATERIALS LETTERS	2021

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16	Nanostructured silica-supported gold: Effect of nanoparticle size distribution and electronic state on its catalytic properties in oxidation reactions	YULIA KOTOLEVICH OXANA MARTYNYUK JUAN CARLOS GARCIA RAMOS et al.	CATALYSIS TODAY	2021
17	Effect of the Metal Deposition Order on Structural, Electronic and Catalytic Properties of TiO <sub>2</sub> -Supported Bimetallic Au-Ag Catalysts in 1-Octanol Selective Oxidation	YULIA KOTOLEVICH MARIO HUMBERTO FARIAS SANCHEZ NINA BOGDANCHIKOVA et al.	CATALYSTS	2021
18	Metal-free electrocatalysts obtained from agave waste by solar pyrolysis for oxygen reduction reaction	HEIDI ISABEL VILLAFAN VIDALES CAMILO ALBERTO ARANCIBIA BULNES ANA KARINA CUENTAS GALLEGOS et al.	INTERNATIONAL JOURNAL OF HYDROGEN ENERGY	2021
19	Sulfur doped carbon nanohorns towards oxygen reduction reaction	GABRIEL ALONSO NUÑEZ MARIO HUMBERTO FARIAS SANCHEZ Montiel Macias E. et al.	DIAMOND AND RELATED MATERIALS	2020
20	Non-quarter-wave dielectric mirror prepared by thermal atomic layer deposition	HUGO ALEJANDRO BORBON NUÑEZ NOEMI ABUNDIZ CISNEROS ROBERTO MACHORRO MEJIA et al.	OPTICS AND LASER TECHNOLOGY	2020
21	Effect of gold electronic state on the catalytic performance of nano gold catalysts in n-octanol oxidation	TRINO ARMANDO ZEPEDA PARTIDA HUGO JESUS TIZNADO VAZQUEZ MARIO HUMBERTO FARIAS SANCHEZ et al.	NANOMATERIALS	2020
22	Structure and Surface Morphology Effect on the Cytotoxicity of [Al <sub>2</sub> O <sub>3</sub> /ZnO](n)/316L SS Nanolaminates Growth by Atomic Layer Deposition (ALD)	HUGO JESUS TIZNADO VAZQUEZ MARIO HUMBERTO FARIAS SANCHEZ D. Osorio et al.	Crystals	2020
23	Refractive index of ZnO ultrathin films alternated with Al <sub>2</sub> O <sub>3</sub> in multilayer heterostructures	MARIO HUMBERTO FARIAS SANCHEZ HUGO JESUS TIZNADO VAZQUEZ J. Lopez-Medina et al.	Nanotechnology	2020
24	Phase stability, microstructure, and dielectric properties of quaternary oxides In <sub>12</sub> Ti <sub>10</sub> A <sub>2</sub> BO <sub>42</sub> (A: Ga or Al; B: Mg or Zn)	FELIPE FRANCISCO CASTILLON BARRAZA ALEJANDRO CESAR DURAN HERNANDEZ MARIO HUMBERTO FARIAS SANCHEZ et al.	JOURNAL OF THE AMERICAN CERAMIC SOCIETY	2019
25	Melamine-assisted synthesis of nitrogen-doped ReS <sub>2</sub> nanosheets/carbon composites	MARIO HUMBERTO FARIAS SANCHEZ GABRIEL ALONSO NUÑEZ Benavente E. et al.	MATERIALS LETTERS	2019
26	Green Oxidation of n-octanol on Supported Nanogold Catalysts: Formation of Gold Active Sites under Combined Effect of Gold Content, Additive Nature and Redox Pretreatment	NINA BOGDANCHIKOVA MARIO HUMBERTO FARIAS SANCHEZ Pakrieva E. et al.	Chemcatchem	2019

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27	From the Terrace Contraction to the Hexameric Sulfur Phase in the Au(100) Surface: A Combined Density Functional Theory and Scanning Tunneling Microscopy Study	MARIO HUMBERTO FARIAS SANCHEZ Barzaga R. Martínez J.A. et al.	JOURNAL OF PHYSICAL CHEMISTRY C	2019
28	Deposit of AlN thin films by nitrogen reactive pulsed laser ablation using an Al target	WENCEL JOSE DE LA CRUZ HERNANDEZ Conett Huerta Escamilla MARIO HUMBERTO FARIAS SANCHEZ et al.	REVISTA MEXICANA DE FISICA	2019
29	Selective oxidation of n-octanol on unmodified and La-modified nanogold catalysts: Effect of metal content	NINA BOGDANCHIKOVA MARIO HUMBERTO FARIAS SANCHEZ Kolobova E. et al.	CATALYSIS TODAY	2019
30	Electrochemical hydrogen evolution over hydrothermally synthesized re-doped MoS <sub>2</sub> flower-like microspheres	MARIO HUMBERTO FARIAS SANCHEZ GABRIEL ALONSO NUÑEZ Aliaga J. et al.	Molecules	2019
31	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
32	Cu-Ag/mordenite catalysts for NO reduction: Effect of silver on catalytic activity and hydrothermal stability	ANDREY SIMAKOV MARIO HUMBERTO FARIAS SANCHEZ FELIPE FRANCISCO CASTILLON BARRAZA et al.	MATERIALS RESEARCH BULLETIN	2018
33	NANOCOMPÓSITOS BASADOS EN ZnO: COMPOSICIÓN, ESTRUCTURA, PROPIEDADES ÓPTICAS Y BIOCONJUGACIÓN	MARIO HUMBERTO FARIAS SANCHEZ JESUS ANTONIO DIAZ HERNANDEZ PATRICIA SANTIAGO JACINTO et al.	Anales De La Academia De Ciencias De Cuba	2018
34	One-step nondestructive functionalization of graphene oxide paper with amines	VICTOR HUGO MEZA LAGUNA MARIO HUMBERTO FARIAS SANCHEZ LUIS ARMANDO PEREZ REY et al.	RSC ADVANCES	2018
35	Modified Ag/TiO <sub>2</sub> systems: Promising catalysts for liquid-phase oxidation of alcohols	MARIO HUMBERTO FARIAS SANCHEZ NINA BOGDANCHIKOVA Kolobova E. et al.	Fuel	2018
36	Influence of the Synthesis Parameters in Carbon Nanotubes Doped with Nitrogen for Oxygen Electroreduction	GABRIEL ALONSO NUÑEZ MARIO HUMBERTO FARIAS SANCHEZ Zeferino González I. et al.	ECS JOURNAL OF SOLID STATE SCIENCE AND TECHNOLOGY	2017
37	ANGLE-RESOLVED X-RAY PHOTOELECTRON SPECTROSCOPY STUDY OF THE THIOUREA DERIVATIVE ADSORPTION ON Au(111) FROM ETHANOLIC SOLUTION	MARIO HUMBERTO FARIAS SANCHEZ Hernández M.P. Navarro-Marín G. et al.	REVISTA CUBANA DE FISICA	2017
38	Effect of Co-Doping on the Structural, Electronic and Magnetic Properties of CoxZn1-xO Nanoparticles	MARIO HUMBERTO FARIAS SANCHEZ O. Estevez-Hernandez M. P. Hernandez et al.	Materials Focus	2017

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39	More Insights into Support and Preparation Method Effects in Gold Catalyzed Glycerol Oxidation	NINA BOGDANCHIKOVA MARIO HUMBERTO FARIAS SANCHEZ Tuzovskaya, Inga et al.	CURRENT ORGANIC SYNTHESIS	2017
40	Phase Relations in Ternary Systems in the Subsolidus Region: Methods to Formulate Solid Solution Equations and to Find Particular Compositions	MARIO HUMBERTO FARIAS SANCHEZ FLOR BROWN GROSSMAN FELIPE FRANCISCO CASTILLON BARRAZA et al.	JOURNAL OF CHEMICAL EDUCATION	2017
41	4-Piperidinecarboxylic Acid-Functionalized Ni <sub>x</sub> Zn <sub>1-x</sub> O Nanoparticles: Structural, Electronic and Optical Properties	MARIO HUMBERTO FARIAS SANCHEZ L. Jimenez-Hernandez O. Estevez-Hernandez et al.	Materials Focus	2017
42	Phase Relations in Ternary Systems in the Subsolidus Region: Methods To Formulate Solid Solution Equations and To Find Particular Compositions	MARIO HUMBERTO FARIAS SANCHEZ FELIPE FRANCISCO CASTILLON BARRAZA Alvarez-Montano, Victor E. et al.	JOURNAL OF CHEMICAL EDUCATION	2017
43	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
44	Influence of the bilayer thickness on the optical properties of Al <sub>2</sub> O <sub>3</sub> -Y <sub>2</sub> O <sub>3</sub> dielectric nanolaminate films grown by thermal atomic layer deposition	FELIPE FRANCISCO CASTILLON BARRAZA ROBERTO MACHORRO MEJIA MARIO HUMBERTO FARIAS SANCHEZ et al.	MATERIALS RESEARCH BULLETIN	2017
45	n-Octanol oxidation on Au/TiO <sub>2</sub> catalysts promoted with La and Ce oxides	MARIO HUMBERTO FARIAS SANCHEZ HUGO JESUS TIZNADO VAZQUEZ A. Pestryakov et al.	Molecular Catalysis	2017
46	Microspherical ReS <sub>2</sub> as a High-Performance Hydrodesulfurization Catalyst	MARIO HUMBERTO FARIAS SANCHEZ SERGIO FUENTES MOYADO DONALD HOMERO GALVAN MARTINEZ et al.	CATALYSIS LETTERS	2017
47	Al <sub>2</sub> O <sub>3</sub> -Y <sub>2</sub> O <sub>3</sub> ultrathin multilayer stacks grown by atomic layer deposition as perspective for optical waveguides applications	ROBERTO MACHORRO MEJIA MARIO HUMBERTO FARIAS SANCHEZ HUGO JESUS TIZNADO VAZQUEZ et al.	OPTICAL MATERIALS	2017
48	Low-temperature CO oxidation on Ag/ZSM-5 catalysts: Influence of Si/Al ratio and redox pretreatments on formation of silver active sites	NINA BOGDANCHIKOVA MARIO HUMBERTO FARIAS SANCHEZ Kolobova, E. et al.	Fuel	2017
49	Refractive index and bandgap variation in Al <sub>2</sub> O <sub>3</sub> -ZnO ultrathin multilayers prepared by atomic layer deposition	FELIPE FRANCISCO CASTILLON BARRAZA ROBERTO MACHORRO MEJIA MARIO HUMBERTO FARIAS SANCHEZ et al.	JOURNAL OF ALLOYS AND COMPOUNDS	2017

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50	Au/TiO <sub>2</sub> catalysts promoted with Fe and Mg for n-octanol oxidation under mild conditions	HUGO JESUS TIZNADO VAZQUEZ MARIO HUMBERTO FARIAS SANCHEZ NINA BOGDANCHIKOVA et al.	CATALYSIS TODAY	2016
51	Density functional theory simulation of the adsorption of sulphur multilayers on Au(100)	MARIO HUMBERTO FARIAS SANCHEZ Hernandez-Tamargo, Carlos E. Barzaga, Ransel et al.	PHYSICAL CHEMISTRY CHEMICAL PHYSICS	2016
52	Solvent-free one-step covalent functionalization of graphene oxide and nanodiamond with amines	VICTOR HUGO MEZA LAGUNA RAFAEL IVAN PUENTE LEE MARIO HUMBERTO FARIAS SANCHEZ et al.	RSC ADVANCES	2016
53	Causes of activation and deactivation of modified nanogold catalysts during prolonged storage and redox treatments	MARIO HUMBERTO FARIAS SANCHEZ NINA BOGDANCHIKOVA Kolobova, Ekaterina et al.	Molecules	2016
54	Identification of subnanometric ag species, their interaction with supports and role in catalytic co oxidation	MARIO HUMBERTO FARIAS SANCHEZ RODOLFO ZANELLA SPECIA JOSUE DAVID MOTA MORALES et al.	Molecules	2016
55	Morphological optimization and (3-aminopropyl) trimethoxy silane surface modification of Y <sub>3</sub> Al <sub>5</sub> O <sub>12</sub> :Pr nanoscintillator for biomedical applications	GUSTAVO ALONSO HIRATA FLORES MARIO HUMBERTO FARIAS SANCHEZ FELIPE FRANCISCO CASTILLON BARRAZA et al.	MATERIALS RESEARCH BULLETIN	2016
56	3-mercaptopropionic acid surface modification of Cu-doped ZnO nanoparticles: Their properties and peroxidase conjugation	JESUS ANTONIO DIAZ HERNANDEZ MARIO HUMBERTO FARIAS SANCHEZ Jimenez-Hernandez, O. et al.	COLLOIDS AND SURFACES A-PHYSICOCHE MICAL AND ENGINEERING ASPECTS	2016
57	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 MICROSTRUCTU RES	2016
58	Synthesis of highly destacked ReS <sub>2</sub> layers embedded in amorphous carbon from a metal-organic precursor	GABRIEL ALONSO NUÑEZ Zaira I. Bedolla Valdez MARIO HUMBERTO FARIAS SANCHEZ et al.	JOURNAL OF NON-CRYSTALLI NE SOLIDS	2016
59	Synthesis and characterization of (3-Aminopropyl)trimethoxy-silane (APTMS) functionalized Gd <sub>2</sub> O <sub>3</sub> :Eu <sup>3+</sup> red phosphor with enhanced quantum yield	GUSTAVO ALONSO HIRATA FLORES MARIO HUMBERTO FARIAS SANCHEZ FELIPE FRANCISCO CASTILLON BARRAZA et al.	Nanotechnolog y	2016
60	Study of sulfur adlayers on Au(111) from basic hydrolysis of piperazine bis(dithiocarbamate) sodium salt	JOSE VALENZUELA BENAVIDES JESUS ANTONIO DIAZ HERNANDEZ MARIO HUMBERTO FARIAS SANCHEZ et al.	APPLIED SURFACE SCIENCE	2015

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61	Influence of substrate temperature and N <sub>2</sub> /Ar flow ratio on the stoichiometry, structure and hardness of TaN <sub>x</sub> coatings deposited by DC reactive sputtering	MARIO HUMBERTO FARIAS SANCHEZ WENCEL JOSE DE LA CRUZ HERNANDEZ Valdez, K. et al.	SURFACE AND INTERFACE ANALYSIS	2015
62	A biosensor based on Corioliopsis gallica laccase immobilized on nitrogen-doped multiwalled carbon nanotubes and graphene oxide for polyphenol detection	SERGIO ANDRES AGUILA PUENTES David Shimomoto Francisco Ipinza et al.	SCIENCE AND TECHNOLOGY OF ADVANCED MATERIALS	2015
63	A scanning tunneling microscopy investigation of the phases formed by the sulfur adsorption on Au(100) from an alkaline solution of 1,4-piperazine(bis)-dithiocarbamate of potassium	JOSE VALENZUELA BENAVIDES MARIO HUMBERTO FARIAS SANCHEZ Martinez, Javier A. et al.	APPLIED SURFACE SCIENCE	2014
64	Effect of redox treatments on activation and deactivation of gold nanospecies supported on mesoporous silica in CO oxidation	NINA BOGDANCHIKOVA TRINO ARMANDO ZEPEDA PARTIDA MARIO HUMBERTO FARIAS SANCHEZ et al.	Fuel	2013
65	Enzymatically synthesized polyaniline film deposition studied by simultaneous open circuit potential and electrochemical quartz crystal microbalance measurements	FELIPE FRANCISCO CASTILLON BARRAZA MARIO HUMBERTO FARIAS SANCHEZ Carrillo, Norma et al.	JOURNAL OF COLLOID AND INTERFACE SCIENCE	2012
66	Phase mixture and anti-reflection window in visible of annealed beryllium-nitride thin films on silicon crystal	Conett Huerta Escamilla Fabio Chale Lara MARIO HUMBERTO FARIAS SANCHEZ et al.	Optik	2012
67	EDC and sulfo-NHS functionalized on PVC-g-PEGMA for streptokinase immobilization	FELIPE FRANCISCO CASTILLON BARRAZA MARIO HUMBERTO FARIAS SANCHEZ Arenas, E.	DESIGNED MONOMERS AND POLYMERS	2012
68	Growth and characterization of polycrystalline Ge <sub>1-x</sub> C <sub>x</sub> by reactive pulsed laser deposition	MARIO HUMBERTO FARIAS SANCHEZ FELIPE FRANCISCO CASTILLON BARRAZA JESUS ANTONIO DIAZ HERNANDEZ et al.	APPLIED SURFACE SCIENCE	2011
69	Nanocrystalline gold supported on Fe-, Ti- and Ce-modified hexagonal mesoporous silica as a catalyst for the aerobic oxidative esterification of benzyl alcohol	NINA BOGDANCHIKOVA TRINO ARMANDO ZEPEDA PARTIDA MARIO HUMBERTO FARIAS SANCHEZ et al.	APPLIED CATALYSIS A-GENERAL	2011



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70	Nano and Micro Reoriented Domains and Their Relation with the Crystal Structure in the New Fe <sub>1.5</sub> Zn <sub>1.5</sub> B <sub>7</sub> O <sub>13</sub> Cl Boracite	IVONNE ROSALES CHAVEZ LAURO BUCIO GALINDO FELIPE FRANCISCO CASTILLON BARRAZA et al.	JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY	2011
71	Influence of deposition temperature on the structural and morphological properties of Be <sub>3</sub> N <sub>2</sub> thin films grown by reactive laser ablation	F. Chale Lara MARIO HUMBERTO FARIAS SANCHEZ WENDEL JOSE DE LA CRUZ HERNANDEZ et al.	APPLIED SURFACE SCIENCE	2010
72	Structure and properties of lead and lead sulfide nanoparticles in natural zeolite	FELIPE FRANCISCO CASTILLON BARRAZA MARIO HUMBERTO FARIAS SANCHEZ Roman-Zamorano, J. F. et al.	JOURNAL OF MATERIALS SCIENCE	2009
73	Optical properties of pulse laser deposited AlN thin films on silicon	MARIO HUMBERTO FARIAS SANCHEZ Conett Huerta Escamilla MUFEI XIAO WU et al.	MATERIALS LETTERS	2009
74	Rietveld refinement of the mixed boracite Fe <sub>1.59</sub> Zn <sub>1.41</sub> B <sub>7</sub> O <sub>13</sub> Br	IVONNE ROSALES CHAVEZ LAURO BUCIO GALINDO MARIO HUMBERTO FARIAS SANCHEZ et al.	ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE	2009
75	Influence of sodium on activation of gold species in Y-zeolites	ANDREY SIMAKOV I. Tuzovskaya NINA BOGDANCHIKOVA et al.	CATALYSIS COMMUNICATIONS	2008
76	Catalytic activity in hydrocarbon conversion of pentasil containing platinum, nickel, iron, or zinc nanoparticles	I. V. Tuzovskaya NINA BOGDANCHIKOVA MIGUEL AVALOS BORJA et al.	PETROL CHEM+	2008
77	Electrochemical polymerization of an aniline-terminated self-assembled monolayer on indium tin oxide electrodes and its effect on polyaniline electrodeposition	FELIPE FRANCISCO CASTILLON BARRAZA MARIO HUMBERTO FARIAS SANCHEZ Cruz-Silva, Rodolfo et al.	Thin Solid Films	2008
78	Formation of TEM- and XRD-undetectable gold clusters accompanying big gold particles on TiO <sub>2</sub> -SiO <sub>2</sub> supports	NINA BOGDANCHIKOVA MARIO HUMBERTO FARIAS SANCHEZ JESUS ANTONIO DIAZ HERNANDEZ et al.	SOLID STATE SCIENCES	2008
79	Catalytic activity in the hydrocarbon conversion of systems containing platinum, nickel, iron, and zinc nanoparticles (communication 2)	I. V. Tuzovskaya NINA BOGDANCHIKOVA MIGUEL AVALOS BORJA et al.	PETROL CHEM+	2008

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80	Biocatalytic synthesis of polypyrrole powder, colloids, and films using horseradish peroxidase	FELIPE FRANCISCO CASTILLON BARRAZA MARIO HUMBERTO FARIAS SANCHEZ Cruz-Silva, R. et al.	JOURNAL OF COLLOID AND INTERFACE SCIENCE	2008
81	A complex study of copper reduction in erionite	VITALI PETRANOVSKI AFANASIEVNA HUGO JESUS TIZNADO VAZQUEZ MARIO HUMBERTO FARIAS SANCHEZ et al.	STUD SURF SCI CATAL	2008
82	Characterization of rhenium nitride films produced by reactive pulsed laser deposition	GERARDO SOTO HERRERA MARIO HUMBERTO FARIAS SANCHEZ WENCEL JOSE DE LA CRUZ HERNANDEZ et al.	MATERIALS CHARACTERIZATION	2007
83	Reaction of imidazole in gas phase at very low pressure with Cu foil and Cu oxides studied by X-ray photoelectron spectroscopy	MARIO HUMBERTO FARIAS SANCHEZ JESUS ANTONIO DIAZ HERNANDEZ Hernández M.P. et al.	SURFACE AND INTERFACE ANALYSIS	2007
84	Co-existence of various active gold species in Au-mordenite catalyst for CO oxidation	ANDREY SIMAKOV NINA BOGDANCHIKOVA MARIO HUMBERTO FARIAS SANCHEZ et al.	CATALYSIS COMMUNICATIONS	2007
85	Catalytic activity of gold nanoparticles incorporated into modified zeolites	ELENA SMOLENTSEVA NINA BOGDANCHIKOVA ANDREY SIMAKOV et al.	JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY	2007
86	Structure and electronic states of gold species in mordenites	NINA BOGDANCHIKOVA ANDREY SIMAKOV MIGUEL AVALOS BORJA et al.	CHEMICAL PHYSICS	2007
87	On the nature of active gold species in zeolites in CO oxidation	ANDREY SIMAKOV NINA BOGDANCHIKOVA MIGUEL AVALOS BORJA et al.	APPLIED CATALYSIS A-GENERAL	2007
88	Enzymatic polymerization of aniline in the presence of different inorganic substrates	FELIPE FRANCISCO CASTILLON BARRAZA MARIO HUMBERTO FARIAS SANCHEZ Flores-Loyola E. et al.	MATERIALS CHEMISTRY AND PHYSICS	2007
89	Effect of the Zn(II) on the reduction of Cu(II) in natural clinoptilolite	VITALI PETRANOVSKI AFANASIEVNA FELIPE FRANCISCO CASTILLON BARRAZA MARIO HUMBERTO FARIAS SANCHEZ et al.	OPTICAL MATERIALS	2006
90	Enzymatic synthesis of colloidal polyaniline particles	FELIPE FRANCISCO CASTILLON BARRAZA MARIO HUMBERTO FARIAS SANCHEZ Cruz-Silva R. et al.	Polymer	2006
91	Influence of copper modifying additive on state of gold in zeolites	ELENA SMOLENTSEVA NINA BOGDANCHIKOVA ANDREY SIMAKOV et al.	SURFACE SCIENCE	2006

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92	Formation of catalytically active copper nanoparticles in natural zeolites for complete oxidation of hydrocarbons	VITALI PETRANOVSKI AFANASIEVNA MARIO HUMBERTO FARIAS SANCHEZ Pestryakov A.N. et al.	INTERNATIONAL JOURNAL OF MODERN PHYSICS B	2005
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94	XPS, AES, and EELS characterization of nitrogen-containing thin films	GERARDO SOTO HERRERA WENCEL JOSE DE LA CRUZ HERNANDEZ MARIO HUMBERTO FARIAS SANCHEZ	JOURNAL OF ELECTRON SPECTROSCOPY AND RELATED PHENOMENA	2004
95	Study of Ga <sub>x</sub> As <sub>1-x</sub> semiconducting films grown by laser pulsed deposition on crystalline and amorphous substrates	MARIO HUMBERTO FARIAS SANCHEZ JESUS ANTONIO DIAZ HERNANDEZ Cardona-Bedoya J.A. et al.	APPLIED SURFACE SCIENCE	2004
96	Comparative study of polyaniline cast films prepared from enzymatically and chemically synthesized polyaniline	MARIO HUMBERTO FARIAS SANCHEZ FELIPE FRANCISCO CASTILLON BARRAZA JESUS ANTONIO DIAZ HERNANDEZ et al.	Polymer	2004
97	Electronic properties of Co and Ni silicides: A theoretical approach using extended Huckel method	DONALD HOMERO GALVAN MARTINEZ MARIO HUMBERTO FARIAS SANCHEZ Amarillas A.P.P. et al.	PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS	2004
98	Experimental and theoretical DOS of Co and Ni silicides	MARIO HUMBERTO FARIAS SANCHEZ DONALD HOMERO GALVAN MARTINEZ García-Méndez M. et al.	SURFACE SCIENCE	2003
99	Tungsten nitride films grown via pulsed laser deposition studied in situ by electron spectroscopies	GERARDO SOTO HERRERA WENCEL JOSE DE LA CRUZ HERNANDEZ FELIPE FRANCISCO CASTILLON BARRAZA et al.	APPLIED SURFACE SCIENCE	2003
100	Kinetics of Cu underpotential deposition on iodine-modified Au(111) electrodes	JOSE VALENZUELA BENAVIDES MARIO HUMBERTO FARIAS SANCHEZ Martínez-Ruíz A. et al.	JOURNAL OF PHYSICAL CHEMISTRY B	2003
101	Pulsed Laser Deposition in a Zinc Alloy Corrosion Study	MARIO HUMBERTO FARIAS SANCHEZ LEONEL SUSANO COTA ARAIZA Guerrero-Penalva R.	Materials Research Society Symposium Proceedings	2003
102	Optical and surface analysis of DC-reactive sputtered AlN films	ROBERTO MACHORRO MEJIA STEPHEN MUHL SAUNDERS JESUS LEONARDO HEIRAS AGUIRRE et al.	DIAMOND AND RELATED MATERIALS	2003

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103	Characterization of tungsten oxide films produced by reactive pulsed laser deposition	GERARDO SOTO HERRERA WENCEL JOSE DE LA CRUZ HERNANDEZ JESUS ANTONIO DIAZ HERNANDEZ et al.	APPLIED SURFACE SCIENCE	2003
104	Surface analysis of the environmental corrosion of zinalco (Zn-22Al-2Cu) alloy	MARIO HUMBERTO FARIAS SANCHEZ LEONEL SUSANO COTA ARAIZA Guerrero-Penalva R.	Materials Research Society Symposium Proceedings	2003
105	Increase in corrosion resistance of Zn-22Al-2Cu alloy by depositing an Y2O3 film studied by Auger electron spectroscopy	MARIO HUMBERTO FARIAS SANCHEZ LEONEL SUSANO COTA ARAIZA Guerrero R.	APPLIED SURFACE SCIENCE	2002
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107	Surface analysis of the environmental corrosion of zinalco (Zn-22Al-2Cu) alloy	MARIO HUMBERTO FARIAS SANCHEZ LEONEL SUSANO COTA ARAIZA Guerrero R.	APPLIED SURFACE SCIENCE	2002
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109	Chemical and structural characterization of Co-Ni silicide thin films	MARIO HUMBERTO FARIAS SANCHEZ GUSTAVO ALONSO HIRATA FLORES García-Mendez M. et al.	SURFACE REVIEW AND LETTERS	2002
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116	Study of thermal diffusion between Al <sub>2</sub> O <sub>3</sub> and Al thin films	GUSTAVO ALONSO HIRATA FLORES MARIO HUMBERTO FARIAS SANCHEZ García-Méndez M. et al.	APPLIED SURFACE SCIENCE	1999
117	Electronic structure of $\beta$ -Be <sub>3</sub> N <sub>2</sub>	ARMANDO REYES SERRATO GERARDO SOTO HERRERA FRANCISCO ARTURO GAMIETEA Y DOMINGUEZ et al.	JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS	1998
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119	El análisis elemental de las superficies de los sólidos mediante las espectroscopias Auger y de fotoelectrones de rayos X	MARIO HUMBERTO FARIAS SANCHEZ Bartolo-Pérez P. Peña J.L.	REVISTA MEXICANA DE FISICA	1998
120	Characterization of excess Si in nonstoichiometric SiO <sub>2</sub> films by optical and surface analysis techniques	JESUS MARIA SIQUEIROS BELTRONES ROBERTO MACHORRO MEJIA LEONEL SUSANO COTA ARAIZA et al.	JOURNAL OF THE ELECTROCHEMI CAL SOCIETY	1997
121	Characterization of CdTe-Sb co-sputtered films	MARIO HUMBERTO FARIAS SANCHEZ Picos-Vega A. Ramírez-Bon R. et al.	JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A	1997
122	Auger electron spectroscopy analysis of oxidation states of Te in amorphous CdTe oxide thin films	MARIO HUMBERTO FARIAS SANCHEZ Zapata-Navarro A. Bartolo-Pérez P. et al.	JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A	1997
123	Deposition of polycrystalline BaFe <sub>12</sub> O <sub>19</sub> thin films by using a Nd-YAG laser system	MARIO HUMBERTO FARIAS SANCHEZ Garcí T. Sánchez J.L. et al.	MATERIALS LETTERS	1996
124	Phosphorus promoted WS <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> catalysts studied by transmission electron microscopy	MIGUEL AVALOS BORJA SERGIO FUENTES MOYADO MARIO HUMBERTO FARIAS SANCHEZ et al.	CATALYSIS LETTERS	1996
125	Structural, optical and electrical properties characterization of CdSbTe thin films grown by radiofrequency sputtering	MARIO HUMBERTO FARIAS SANCHEZ LEONEL SUSANO COTA ARAIZA Alvarez-Fregoso O. et al.	JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS	1995
126	Diamond films grown on p-type microcrystalline-SiC:H/crystalline-Si substrates	GUSTAVO ALONSO HIRATA FLORES LEONEL SUSANO COTA ARAIZA MARIO HUMBERTO FARIAS SANCHEZ et al.	DIAMOND AND RELATED MATERIALS	1994

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127	Effect of silver in Y1Ba2Cu3O7-x samples	DONALD HOMERO GALVAN MARTINEZ MIGUEL AVALOS BORJA MARIO HUMBERTO FARIAS SANCHEZ et al.	JOURNAL OF MATERIALS SCIENCE	1994
128	Yields, sensitivities and natural line shapes of high-energy Auger lines: Ta, W, Pt, Au, Pb and Bi	MARIO HUMBERTO FARIAS SANCHEZ Goldstein Y. Many A. et al.	JOURNAL OF ELECTRON SPECTROSCOPY AND RELATED PHENOMENA	1994
129	Blue photoluminescence from CeCl2 doped Al2O3 films	ISRAEL GRADILLA MARTINEZ GERARDO SOTO HERRERA LEONEL SUSANO COTA ARAIZA et al.	JOURNAL OF THE ELECTROCHEMI CAL SOCIETY	1994
130	Mobility-lifetime products in glow discharge and rf sputter deposited $\alpha$ -Si:H	MARIO HUMBERTO FARIAS SANCHEZ Roche A. Weisz S.Z. et al.	Materials Research Society Symposium Proceedings	1994
131	Auger electron spectroscopy study of silver incorporation in epitaxial Y-Ba-Cu-O superconducting films grown on MgO by laser ablation	GUSTAVO ALONSO HIRATA FLORES LEONEL SUSANO COTA ARAIZA MARIO HUMBERTO FARIAS SANCHEZ et al.	APPLIED PHYSICS LETTERS	1994
132	Lineshapes and yields of high-energy Auger lines	MARIO HUMBERTO FARIAS SANCHEZ Weisz S.Z. Gomez M. et al.	JOURNAL OF PHYSICS-COND ENSED MATTER	1993
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134	Luminescent characteristics of Tb doped Al2O3 films deposited by spray pyrolysis	MARIO HUMBERTO FARIAS SANCHEZ GERARDO SOTO HERRERA Falcony C. et al.	JOURNAL OF THE ELECTROCHEMI CAL SOCIETY	1992
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136	Hydrodesulfurization catalysts prepared by two methods analyzed by transmission electron microscopy	MIGUEL AVALOS BORJA MARIO HUMBERTO FARIAS SANCHEZ Cruz-Reyes J. et al.	JOURNAL OF CATALYSIS	1992
137	Mixed impregnated thiosalt decomposition catalysts characterized by X-ray diffraction	MIGUEL AVALOS BORJA MARIO HUMBERTO FARIAS SANCHEZ Cruz-Reyes J. et al.	CATALYSIS LETTERS	1991

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139	Nuclear reactions as a probe of fluorine content in SnO <sub>2</sub> :F thin films	JORGE EDUARDO RICKARDS CAMPBELL MARIO HUMBERTO FARIAS SANCHEZ LEONEL SUSANO COTA ARAIZA et al.	Thin Solid Films	1991
140	Electron beam effects on Bi-Sr-Ca-Cu-O superconductors	LEONEL SUSANO COTA ARAIZA DONALD HOMERO GALVAN MARTINEZ MARIO HUMBERTO FARIAS SANCHEZ	JOURNAL OF MATERIALS RESEARCH	1991
141	The Role of an Amorphous Si <sub>3</sub> N <sub>4</sub> Buffer in the High-Performance $\mu$ c-Si:H/aSi <sub>3</sub> N <sub>4</sub> /Poly-Si Heterojunction Solar Cells	GUSTAVO ALONSO HIRATA FLORES MARIO HUMBERTO FARIAS SANCHEZ LEONEL SUSANO COTA ARAIZA et al.	IEEE ELECTRON DEVICE LETTERS	1991
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145	Homogeneous sulfide precipitation catalysts characterized by X-ray diffraction	MIGUEL AVALOS BORJA MARIO HUMBERTO FARIAS SANCHEZ GABRIELA ALICIA DIAZ GUERRERO et al.	MATERIALS LETTERS	1989
146	Catalytic activity of hydrodesulfurization catalysts prepared by two methods	MIGUEL AVALOS BORJA MARIO HUMBERTO FARIAS SANCHEZ Cruz-Reyes J.	CATALYSIS LETTERS	1989
147	Hydrogen detection in hydrogenated amorphous silicon by ion-induced Auger spectroscopy	MARIO HUMBERTO FARIAS SANCHEZ LEONEL SUSANO COTA ARAIZA DONALD HOMERO GALVAN MARTINEZ et al.	JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A	1989
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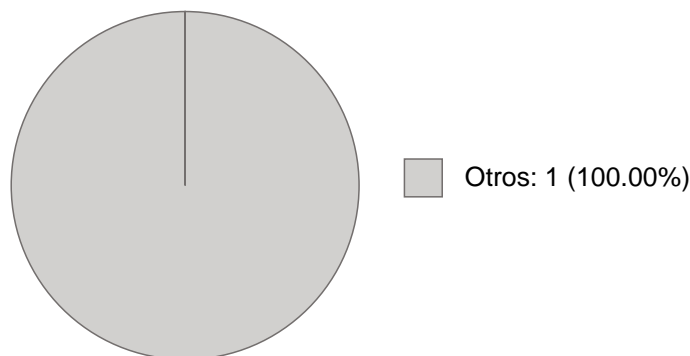
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150	Large grain size CdTe films grown on glass substrates	MARIO HUMBERTO FARIAS SANCHEZ LEONEL SUSANO COTA ARAIZA Zelaya O. et al.	JOURNAL OF APPLIED PHYSICS	1988
151	MODIFICATION OF BENZENE AND CARBON MONOXIDE ADSORPTION ON Pt(111) BY THE COADSORPTION OF POTASSIUM OR SULFUR.	MARIO HUMBERTO FARIAS SANCHEZ Garfunkel E.L. Somorjai G.A.	JOURNAL OF THE AMERICAN CHEMICAL SOCIETY	1985
152	The adsorbate induced facetting of the Mo(111) surface	MARIO HUMBERTO FARIAS SANCHEZ Zhang C. Gellman A.J. et al.	MATERIALS RESEARCH BULLETIN	1985
153	The catalytic hydrodesulfurization of thiophene on the Mo(100) crystal surface	MARIO HUMBERTO FARIAS SANCHEZ Gellman A.J. Somorjai G.A.	JOURNAL OF CATALYSIS	1984
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156	On the chlorine content in chemically sprayed tin oxide films: A quantitative analysis	MARIO HUMBERTO FARIAS SANCHEZ Chambouleyron I. Constantino C. et al.	Solar Energy Materials	1983
157	Interaction of potassium with p-electron orbital containing molecules on Pt(111)	MARIO HUMBERTO FARIAS SANCHEZ Garfunkel E.L. Maj J.J. et al.	J PHYS CHEM-US	1983
158	SIMS AND AES ANALYSIS OF H:TiO <sub>2</sub> /2 ELECTRODES.	MARIO HUMBERTO FARIAS SANCHEZ Pena J.L. Sanchez-Sinencio F.	JOURNAL OF THE ELECTROCHEMICAL SOCIETY	1982
159	STUDY OF GRAIN BOUNDARY DIFFUSION OF POTASSIUM IN GOLD FILMS USING A CLEAN, CONTROLLED, AND LOCALIZED SOURCE OF ALKALI ATOMS.	MARIO HUMBERTO FARIAS SANCHEZ Pena J.L. Sanchez-Sinencio F.	Journal Of Vacuum Science & Technology	1982



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**LIBROS Y CAPITULOS CON ISBN**

**Obras con registro ISBN**

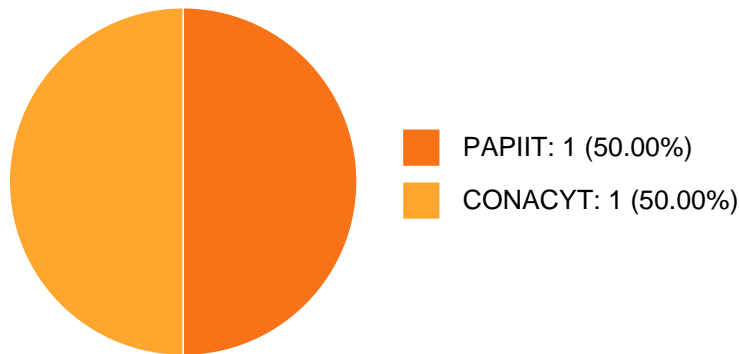


#	Título	Autores	Alcance	Año	ISBN
1	Formation and stabilization of gold clusters and nanoparticles in mordenites	NINA BOGDANCHIKOVA MIGUEL AVALOS BORJA MARIO HUMBERTO FARIAS SANCHEZ et al.	Conferenc e Paper	2010	9781439834015

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**PARTICIPACIÓN EN PROYECTOS**

**Histórico de participación en proyectos**



#	Nombre	Participantes	Fuente	Fecha inicio	Fecha fin
1	Desarrollo de dieléctricos nano-estructurados 2D para capacitores MOS	MARIO HUMBERTO FARIAS SANCHEZ	Recursos PAPIIT	01-01-2017	31-12-2019
2	Coportamiento del Band-Gap óptico en dieléctricos ultradelgados: Régimen subnanométrico.	MARIO HUMBERTO FARIAS SANCHEZ	Recursos CONACYT	31-10-2019	31-10-2023



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



**MARIO HUMBERTO FARIAS SANCHEZ**

**PARTICIPACIÓN EN TESIS**

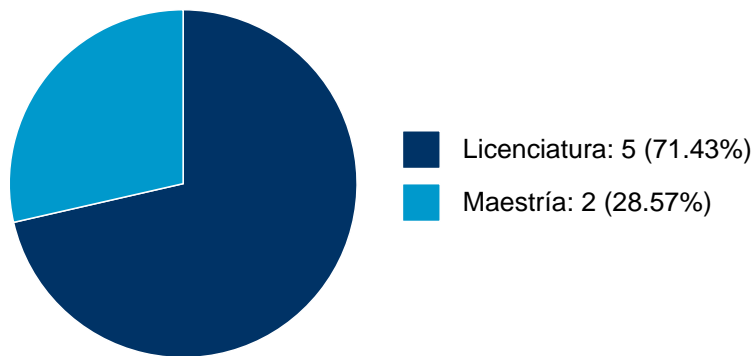
**No se encuentran registros en la base de datos de TESIUNAM asociados a:**

**MARIO HUMBERTO FARIAS SANCHEZ**

**MARIO HUMBERTO FARIAS SANCHEZ**

**DOCENCIA IMPARTIDA**

**Histórico de docencia**



#	Nivel titulación	Asignatura	Entidad	Alumnos	Semestre
1	Licenciatura	NANOMATERIALES II: CARACTERIZACION	Centro de Nanociencias y Nanotecnología en la UNAM	7	2017-2
2	Licenciatura	NANOMATERIALES II: CARACTERIZACION	Centro de Nanociencias y Nanotecnología en la UNAM	4	2017-2
3	Licenciatura	NANOMATERIALES II: CARACTERIZACION	Centro de Nanociencias y Nanotecnología en la UNAM	7	2017-2
4	Licenciatura	NANOMATERIALES II: CARACTERIZACION	Centro de Nanociencias y Nanotecnología en la UNAM	8	2017-2
5	Maestría	FUNDAMENTOS DE MATEMATICAS PARA MATERIALES	Instituto de Investigaciones en Materiales	2	2016-1
6	Licenciatura	CALCULO II	Centro de Nanociencias y Nanotecnología en la UNAM	17	2013-2
7	Maestría	FENOMENOS DE SUPERFICIES	Instituto de Investigaciones en Materiales	2	2011-1



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



**MARIO HUMBERTO FARIAS SANCHEZ**

**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	2008-2024
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