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**Reporte de Producción Académica**



**MIGUEL AVALOS BORJA**

## Datos Generales

**Nombre:** MIGUEL AVALOS BORJA

**Máximo nivel de estudios:** DOCTORADO

**Antigüedad académica en la UNAM:** 32 años, 1 mes, 10 días

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## Nombramientos

**Último:** INVESTIGADOR TITULAR C TC Definitivo  
Centro de Nanociencias y Nanotecnología en la  
UNAM  
Desde 01-01-2008 (fecha inicial de registros en el  
SIIA) hasta 15-04-2011

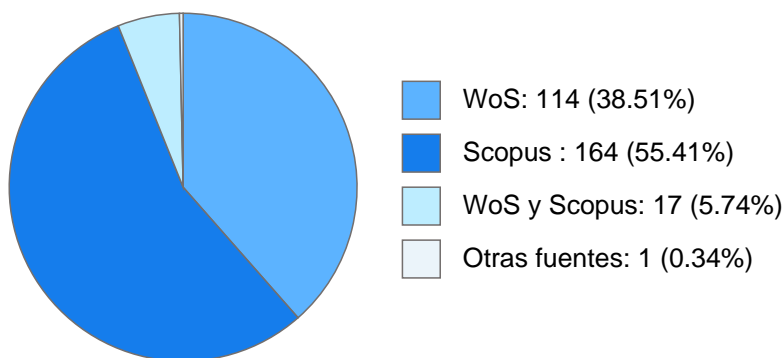
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## Estímulos, programas, premios y reconocimientos

SNI Emérito 2023  
SNI III - 2022  
PRIDE D - 2011

## DOCUMENTOS EN REVISTAS

### Histórico de Documentos



#	Título	Autores	Revista	Año
1	Influence of the Valence of Iron on the NO Reduction by CO over Cu-Fe-Mordenite	YULIA KOTOLEVICH TRINO ARMANDO ZEPEDA PARTIDA ROSARIO ISIDRO YOCUPICIO GAXIOLA et al.	CATALYSTS	2023
2	Influence of alumina pH on properties of Fe <sub>2</sub> O <sub>3</sub> /Al <sub>2</sub> O <sub>3</sub> catalyst for high-density polyethylene decomposition to H <sub>2</sub> generation	MIGUEL AVALOS BORJA L. A. Flores-Sanchez J. M. Quintana-Melgoza et al.	REACTION KINETICS MECHANISMS AND CATALYSIS	2022
3	Fast benzene vapor capture by natural macroporous carbonized fibers improved with carbon nanostructures	MIGUEL AVALOS BORJA Joel Gutierrez-Martinez Cesar Nieto-Delgado et al.	SEPARATION AND PURIFICATION TECHNOLOGY	2021
4	Interaction of silver nanoparticles with the aquatic fern Azolla filiculoides: root structure, particle distribution, and silver accumulation	MIGUEL AVALOS BORJA ANA LUISA ALARCON JIMENEZ OLGA ARACELI PATRON SOBERANO et al.	JOURNAL OF NANOPARTICLE RESEARCH	2021
5	Controlled modification of sodium montmorillonite clay by a planetary ball-mill as a versatile tool to tune its properties	MIGUEL AVALOS BORJA Valera-Zaragoza M. Agüero-Valdez D. et al.	ADVANCED POWDER TECHNOLOGY	2021

6	Improvement in the hydrodesulfurization of dibenzothiophene over supported NiMoW catalysts	MIGUEL AVALOS BORJA Gallegos-Hernández A.Y. Martínez-Rosales M. et al.	REACTION KINETICS MECHANISMS AND CATALYSIS	2021
7	Rhenium borides (Re <sub>3</sub> B and ReB <sub>2</sub> ) mechanosynthesis and their use as a catalyst for H <sub>2</sub> production from biomass pyrolysis	MIGUEL AVALOS BORJA Granados-Fitch M.G. Quintana-Melgoza J.M. et al.	MATERIALS RESEARCH BULLETIN	2021
8	Hexagonal phase into Au plate-like particles: A precession electron diffraction study	MARIA CRISTINA MENDOZA RAMIREZ HECTOR GABRIEL SILVA PEREYRA MIGUEL AVALOS BORJA	MATERIALS CHARACTERIZATION	2020
9	Dynamics and Mechanism of Carbon Filament Formation during Methane Reforming on Supported Nickel Clusters	MIGUEL AVALOS BORJA Leung S.L. Wei J. et al.	JOURNAL OF PHYSICAL CHEMISTRY C	2020
10	Selective antifungal activity of silver nanoparticles: A comparative study between <i>Candida tropicalis</i> and <i>Saccharomyces boulardii</i>	MIGUEL AVALOS BORJA NINA BOGDANCHIKOVA Jesus D. Guerra et al.	COLLOID AND INTERFACE SCIENCE COMMUNICATIONS	2020
11	Mechanosynthesis of metastable cubic d-Ta <sub>1-x</sub> N	MIGUEL AVALOS BORJA García-Mendoza T. Martínez-García A. et al.	CERAMICS INTERNATIONAL	2020
12	Novel route of synthesis of ultra-small Au nanoparticles on SiO <sub>2</sub> supports	HUGO JESUS TIZNADO VAZQUEZ MIGUEL AVALOS BORJA NINA BOGDANCHIKOVA et al.	Fuel	2019
13	Mechanism to H <sub>2</sub> production on rhenium carbide from pyrolysis of coconut shell	MIGUEL AVALOS BORJA Granados-Fitch M.G. Quintana-Melgoza J.M. et al.	INTERNATIONAL JOURNAL OF HYDROGEN ENERGY	2019
14	Plasmonic Sensing of Aqueous-Divalent Metal Ions by Biogenic Gold Nanoparticles	MIGUEL AVALOS BORJA Luisa E. Silva-De Hoyos Victor Sanchez-Mendieta et al.	JOURNAL OF NANOMATERIALS	2019
15	Degradation of rhenium carbide obtained by mechanochemical synthesis at oxygen and moisture environmental conditions	MIGUEL AVALOS BORJA Granados-Fitch M.G. Quintana-Melgoza J.M. et al.	MATERIALS CHEMISTRY AND PHYSICS	2019
16	Effect of ball to powder ratio on the mechanosynthesis of Re <sub>2</sub> C and its compressibility	MIGUEL AVALOS BORJA Martínez-García A. Navarro-Mtz A.K. et al.	JOURNAL OF ALLOYS AND COMPOUNDS	2019
17	Compressibility, microcalorimetry, elastic properties and EELS of rhenium borides	MIGUEL AVALOS BORJA HECTOR GABRIEL SILVA PEREYRA Neun C. et al.	SOLID STATE SCIENCES	2018



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18	High-Pressure Synthesis of $\beta$ -Ir <sub>4</sub> B <sub>5</sub> and Determination of the Compressibility of Various Iridium Borides	MIGUEL AVALOS BORJA Petermüller B. Neun C. et al.	INORGANIC CHEMISTRY	2018
19	Chemical stability of superhard rhenium diboride at oxygen and moisture ambient environmental conditions prepared by mechanical milling	MIGUEL AVALOS BORJA Granados-Fitch M.G. Quintana-Melgoza J.M. et al.	JOURNAL OF THE AMERICAN CERAMIC SOCIETY	2018
20	Dual function of EDTA with silver nanoparticles for root canal treatment-A novel modification	MIGUEL AVALOS BORJA Martínez-Andrade J.M. Vilchis-Nestor A.R. et al.	PLOS ONE	2018
21	Coexistence of two-photon absorption and saturable absorption in ion-implanted platinum nanoparticles in silica plates	CARLOS TORRES TORRES JHOVANI ENRIQUE BORNACELLI CAMARGO LUIS RODRIGUEZ FERNANDEZ et al.	JOURNAL OF THE OPTICAL SOCIETY OF AMERICA B-OPTICAL PHYSICS	2018
22	SYNTHESIS OF CALCIUM ARSENATES (GUERINITE, HAIDINGERITE AND PHARMACOLITE) MORPHOLOGICALLY SIMILAR TO THOSE FOUND IN CONTAMINATED SOILS	MIGUEL AVALOS BORJA Hernández-Bárcenas, G. Castillo, F. et al.	REVISTA INTERNACIONAL DE CONTAMINACION AMBIENTAL	2017
23	Nanoscale influence on photoluminescence and third order nonlinear susceptibility exhibited by ion-implanted Pt nanoparticles in silica	JHOVANI ENRIQUE BORNACELLI CAMARGO LUIS RODRIGUEZ FERNANDEZ MIGUEL AVALOS BORJA et al.	METHODS AND APPLICATIONS IN FLUORESCENCE	2017
24	A New Route for the Synthesis of Ammonium Thio tungstate, a Catalyst Precursor	GABRIEL ALONSO NUÑEZ MIGUEL AVALOS BORJA Vega-Granados, K. et al.	CATALYSIS LETTERS	2017
25	Arsenic contamination in irrigation water, agricultural soil and maize crop from an abandoned smelter site in Matehuala, Mexico	FERMIN CASTILLO MEJIA MIGUEL AVALOS BORJA Ruíz-Huerta, E.A. et al.	JOURNAL OF HAZARDOUS MATERIALS	2017
26	Redox reaction of nitric oxide and carbon monoxide over Fe <sub>2</sub> O <sub>3</sub> and Co <sub>3</sub> O <sub>4</sub> phases	AMELIA OLIVAS SARABIA MIGUEL AVALOS BORJA Flores-Sanchez, L. A. et al.	REACTION KINETICS MECHANISMS AND CATALYSIS	2016
27	Mechanosynthesis of rhenium carbide at ambient pressure and temperature	MIGUEL AVALOS BORJA Granados-Fitch, M. G. Juarez-Arellano, E. A. et al.	INTERNATIONAL JOURNAL OF REFRACTORY METALS & HARD MATERIALS	2016

28	Tuning emission in violet, blue, green and red in cubic GaN/InGaN/GaN quantum wells	MIGUEL AVALOS BORJA Orozco Hinostrroza, I. E. Compean Garcia, V. D. et al.	JOURNAL OF CRYSTAL GROWTH	2016
29	Termination of hollow core nanopipes in GaN by an AlN interlayer	OSCAR EDEL CONTRERAS LOPEZ MIGUEL AVALOS BORJA Ruiz-Zepeda, F. et al.	JOURNAL OF CRYSTAL GROWTH	2016
30	Reduction of nitric oxide by carbon monoxide over NiO, CuO, and ZnO catalyts	AMELIA OLIVAS SARABIA MIGUEL AVALOS BORJA FloresSanchez, L. A. et al.	REACTION KINETICS MECHANISMS AND CATALYSIS	2015
31	MoS <sub>2</sub> catalyts derived from n-methylenediammonium thiomolybdates during HDS of DBT	GABRIEL ALONSO NUÑEZ MIGUEL AVALOS BORJA SERGIO FUENTES MOYADO et al.	CATALYSIS TODAY	2015
32	Gold supported on metal oxides for volatile organic compounds total oxidation	NINA BOGDANCHIKOVA MIGUEL AVALOS BORJA Carabineiro S.A.C. et al.	CATALYSIS TODAY	2015
33	Identification of diagenetic calcium arsenates using synchrotron-based micro X-ray diffraction	FERMIN CASTILLO MEJIA MIGUEL AVALOS BORJA Jamieson H. et al.	BOLETIN DE LA SOCIEDAD GEOLOGICA MEXICANA	2015
34	Biosynthesis of lead nanoparticles by the aquatic water fern, <i>Salvinia minima</i> Baker, when exposed to high lead concentration	MIGUEL AVALOS BORJA Castro-Longoria, E. Trejo-Guillen, K. et al.	COLLOIDS AND SURFACES B-BIOINTERFACES	2014
35	Polyamide-6: The effects on mechanical and physicochemical properties by electron beam irradiation at different temperatures	ESBAIDE ADEM CHAHIN SOFIA GUILLERMINA BURILLO AMEZCUA LUIS FELIPE DEL CASTILLO DAVILA et al.	RADIATION PHYSICS AND CHEMISTRY	2014
36	Biogenic silver nanoparticles on carbonaceous material from sewage sludge for degradation of methylene blue in aqueous solution	A. -R. Vilchis Nestor MIGUEL AVALOS BORJA Trujillo-Reyes, J. et al.	INTERNATIONAL JOURNAL OF ENVIRONMENTAL SCIENCE AND TECHNOLOGY	2014
37	Enhanced refrigerant capacity in two-phase nanocrystalline/amorphous NdPrFe <sub>17</sub> melt-spun ribbons	MIGUEL AVALOS BORJA Sanchez-Valdes, C. F. Ibarra-Gaytan, P. J. et al.	APPLIED PHYSICS LETTERS	2014
38	Ultrastructural analysis of candida albicans when exposed to silver nanoparticles	MIGUEL AVALOS BORJA Vazquez-Munoz, Roberto Castro-Longoria, Ernestina	PLOS ONE	2014



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39	Arsenic mobility controlled by solid calcium arsenates: A case study in Mexico showcasing a potentially widespread environmental problem	MIGUEL AVALOS BORJA MARIO VILLALOBOS PEÑALOSA Martinez-Villegas, Nadia et al.	ENVIRONMENTAL POLLUTION	2013
40	Chemical modification of carbon nanofibers with plasma of acrylic acid	MIGUEL AVALOS BORJA Neira-Velazquez, Maria G. Hernandez-Hernandez, Ernesto et al.	PLASMA PROCESSES AND POLYMERS	2013
41	SERS Properties of Different Sized and Shaped Gold Nanoparticles Biosynthesized under Different Environmental Conditions by Neurospora crassa Extract	MIGUEL AVALOS BORJA Alfredo Rafael Vilchis Nestor Quester, Katrin et al.	PLOS ONE	2013
42	Biosynthesis and microscopic study of metallic nanoparticles	MIGUEL AVALOS BORJA Quester, Katrin Castro-Longoria, E.	Micron	2013
43	Template-free synthesis of CoMoO <sub>4</sub> rods and their characterization	MIGUEL AVALOS BORJA Rico, J. L. Barrera, A. et al.	MATERIALS RESEARCH BULLETIN	2013
44	Oxygen K-edge electron energy loss spectra of hydrous and anhydrous compounds	MIGUEL AVALOS BORJA Winkler, B. Milman, V. et al.	JOURNAL OF PHYSICS-CONDENSED MATTER	2013
45	Gold nanoparticles supported on carbon materials for cyclohexane oxidation with hydrogen peroxide	MIGUEL AVALOS BORJA Carabineiro, S. A. C. Martins, L. M. D. R. S. et al.	APPLIED CATALYSIS A-GENERAL	2013
46	Preparation and characterization of silver nanoparticles supported in cotton fibers [Obtención y caracterización de nanopartículas de plata soportadas en fibra de algodón]	MIGUEL AVALOS BORJA López Iturbe J. Vilchis Nestor A.R. et al.	Superficies Y Vacío	2013
47	Morphology and solubility products of calcium arsenates found in arsenic contaminated soils in an abandoned smelter	MIGUEL AVALOS BORJA MARIO VILLALOBOS PEÑALOSA Nadia Martinez-Villegas et al.	Procedia Earth and Planetary Science	2013
48	Carbenoid Etherifications Catalyzed by "Green" Silver Nanoparticles and Iron-Copper Nanoparticles	Marco A. Garcia Angel Garcia Munoz Josue A. Pena et al.	LETTERS IN ORGANIC CHEMISTRY	2012
49	Evidence for low-temperature isotopic ordering in methyl-monodeuterated lithium acetate dihydrate	MIGUEL AVALOS BORJA Schroeder, F. Winkler, B. et al.	JOURNAL OF CHEMICAL THERMODYNAMICS	2012



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50	Grafting of styrene and 2-vinylnaphthalene onto silicone rubber to improve radiation resistance	Giovanni Gonzalez Perez SOFIA GUILLERMINA BURILLO AMEZCUA TAKESHI OGAWA MURATA et al.	POLYMER DEGRADATION AND STABILITY	2012
51	Production of Platinum Nanoparticles and Nanoaggregates Using Neurospora crassa	A. R. Vilchis Nestor MIGUEL AVALOS BORJA Castro-Longoria, E. et al.	JOURNAL OF MICROBIOLOGY AND BIOTECHNOLOGY	2012
52	Comparative Activity of Ni-W and Co-Mo Sulfides Using Transition Metal Oxides as Precursors in HDS Reaction of DBT	GABRIEL ALONSO NUÑEZ Donald Homero Galvan MIGUEL AVALOS BORJA et al.	CATALYSIS LETTERS	2012
53	Effect of Phosphate on the Particle Size of Ferric Oxyhydroxides Anchored onto Activated Carbon: As(V) Removal from Water	MIGUEL AVALOS BORJA Arcibar-Orozco, Javier A. Rene Rangel-Mendez, J.	ENVIRONMENTAL SCIENCE & TECHNOLOGY	2012
54	Ni-mordenite system: Influence of SiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> molar ratio on the catalytic activity in no reduction [Sistema ni-mordenita: Influencia de la relación molar SiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> en la actividad catalítica para la reducción de no]	ANDREY SIMAKOV MIGUEL AVALOS BORJA FELIPE FRANCISCO CASTILLON BARRAZA et al.	REVISTA MEXICANA DE INGENIERIA QUIMICA	2012
55	Silver nanoparticles biosynthesized using Opuntia ficus aqueous extract	MIGUEL AVALOS BORJA Silva-De-Hoyos L.E. Sánchez-Mendieta V. et al.	Superficies Y Vacío	2012
56	In situ observation of the reaction of scandium and carbon by neutron diffraction	MIGUEL AVALOS BORJA Juarez-Arellano, Erick A. Winkler, Bjorn et al.	JOURNAL OF ALLOYS AND COMPOUNDS	2011
57	Biosynthesis of silver, gold and bimetallic nanoparticles using the filamentous fungus Neurospora crassa	MIGUEL AVALOS BORJA Castro-Longoria, E. Vilchis-Nestor, Alfredo R.	COLLOIDS AND SURFACES B-BIOINTERFACES	2011
58	Gold Supported on Metal Oxides for Carbon Monoxide Oxidation	NINA BOGDANCHIKOVA MIGUEL AVALOS BORJA Carabineiro, Sonia A. C. et al.	NANO RES	2011
59	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
60	Observation and formation mechanism of individual graphene foils inside multi-walled carbon nanotubes	GABRIEL ALONSO NUÑEZ MIGUEL AVALOS BORJA Lara-Romero, J. et al.	MATERIALS RESEARCH BULLETIN	2011



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61	Decomposition of $W(CO)_6$ at high pressures and temperatures	MIGUEL AVALOS BORJA Rademacher, Nadine Bayarjargal, Lkhamsuren et al.	JOURNAL OF APPLIED CRYSTALLOGRAPHY	2011
62	Origin of the low temperature excess heat capacity of isotopically substituted acetylsalicylic acid	MIGUEL AVALOS BORJA Schroeder, F. Winkler, B. et al.	CHEMICAL PHYSICS LETTERS	2011
63	Pressure dependence of the lattice dynamics of diaspore, $\alpha\text{-AlO(OH)}$ , from Raman spectroscopy and density functional perturbation theory	MIGUEL AVALOS BORJA San Juan-Farfan, Roberto E. Bayarjargal, Lkhamsuren et al.	PHYS CHEM MINER	2011
64	Formation of scandium carbides and scandium oxycarbide from the elements at high-(P, T) conditions	MIGUEL AVALOS BORJA Juarez-Arellano, Erick A. Winkler, Bjoern et al.	JOURNAL OF SOLID STATE CHEMISTRY	2010
65	Low-temperature structural phase transition in deuterated and protonated lithium acetate dihydrate	MIGUEL AVALOS BORJA Schroeder, F. Winkler, B. et al.	JOURNAL OF CHEMICAL THERMODYNAMICS	2010
66	Alternative bio-reduction synthesis method for the preparation of $\text{Au(AgAu)/SiO}_2\text{-Al}_2\text{O}_3$ catalysts: Oxidation and hydrogenation of CO	A. R. Vilchis Nestor MIGUEL AVALOS BORJA AMELIA OLIVAS SARABIA et al.	APPLIED CATALYSIS B-ENVIRONMENTAL	2009
67	Characterization of interpenetrating networks of acrylic acid (AAc) and N-isopropylacrylamide (NIPAAm) synthesized by ionizing radiation	ESBAIDE ADEM CHAHIN SOFIA GUILLERMINA BURILLO AMEZCUA EMILIO BUCIO CARRILLO et al.	RADIATION PHYSICS AND CHEMISTRY	2009
68	PZT ferroelectric ceramics obtained by sol-gel method using 2-methoxyethanol route for pyroelectric sensors	MIGUEL AVALOS BORJA Rivera-Ruedas, M. G. Flores-Noria, J. R. et al.	MATERIALS RESEARCH INNOVATIONS	2009
69	Synthesis, characterization and catalytic activity in the hydrogenation of cyclohexene with molybdenum carbide	E. Flores Aquino MIGUEL AVALOS BORJA SERGIO FUENTES MOYADO et al.	CATALYSIS LETTERS	2008
70	Synthesis of silver nanoparticles in a polyvinylpyrrolidone (PVP) paste, and their optical properties in a film and in ethylene glycol	MIGUEL AVALOS BORJA FELIPE FRANCISCO CASTILLON BARRAZA Slistan-Grijalva, A. et al.	MATERIALS RESEARCH BULLETIN	2008
71	Influence of sodium on activation of gold species in Y-zeolites	ANDREY SIMAKOV I. Tuzovskaya NINA BOGDANCHIKOVA et al.	CATALYSIS COMMUNICATIONS	2008





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72	Polymer nanocomposites containing carbon nanotubes and miscible polymer blends based on poly[ethylene-co-(acrylic acid)]	MIGUEL AVALOS BORJA Antolin-Ceron, V. H. Gomez-Salazar, S. et al.	JOURNAL OF APPLIED POLYMER SCIENCE	2008
73	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
74	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
75	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
76	Reaction of rhenium and carbon at high pressures and temperatures	MIGUEL AVALOS BORJA Juarez-Arellano, Erick A. Winkler, Bjoern et al.	Z KRISTALLOGR	2008
77	Growth of Multi-Walled Carbon Nanotubes by Nebulized Spray Pyrolysis of a Natural Precursor: Alpha-Pinene	MIGUEL AVALOS BORJA Lara-Romero, J. Alonso-Nunez, G. et al.	JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY	2008
78	Synthesis, characterization and cyclohexene hydrogenation activity of high surface area molybdenum disulfide catalysts	ERIC FLORES AQUINO MIGUEL AVALOS BORJA SERGIO FUENTES MOYADO et al.	CATALYSIS LETTERS	2007
79	Aqueous deposition of metals on multiwalled carbon nanotubes to be used as electrocatalyst for polymer exchange membrane fuel cells	GABRIEL ALONSO NUÑEZ MIGUEL AVALOS BORJA Verde Y. et al.	J FUEL CELL SCI TECH	2007
80	Structural properties of Al <sub>2</sub> O <sub>3</sub> -La <sub>2</sub> O <sub>3</sub> binary oxides prepared by sol-gel	SERGIO FUENTES MOYADO MIGUEL AVALOS BORJA NINA BOGDANCHIKOVA et al.	MATERIALS RESEARCH BULLETIN	2007
81	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



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82	Catalytic activity of gold nanoparticles incorporated into modified zeolites	ELENA SMOLENTSEVA NINA BOGDANCHIKOVA ANDREY SIMAKOV et al.	JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY	2007
83	Structure and electronic states of gold species in mordenites	NINA BOGDANCHIKOVA ANDREY SIMAKOV MIGUEL AVALOS BORJA et al.	CHEMICAL PHYSICS	2007
84	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
85	Influence of copper modifying additive on state of gold in zeolites	ELENA SMOLENTSEVA NINA BOGDANCHIKOVA ANDREY SIMAKOV et al.	SURFACE SCIENCE	2006
86	Multi-wavelength images detector for micro-cathodoluminescence analysis	ISRAEL GRADILLA MARTINEZ ROBERTO MACHORRO MEJIA MIGUEL AVALOS BORJA et al.	REVISTA MEXICANA DE FISICA	2006
87	Influence of the Si/Al framework ratio on the microporosity of dealuminated mordenite as determined from N <sub>2</sub> adsorption	VITALI PETRANOVSKI AFANASIEVNA MIGUEL AVALOS BORJA Hernández M.A. et al.	SEPARATION SCIENCE AND TECHNOLOGY	2006
88	Classical theoretical characterization of the surface plasmon absorption band for silver spherical nanoparticles suspended in water and ethylene glycol	MIGUEL AVALOS BORJA FELIPE FRANCISCO CASTILLON BARRAZA Slistan-Grijalva A. et al.	PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES	2005
89	Comparative study of natural and synthetic clinoptilolites containing silver in different states	NINA BOGDANCHIKOVA PEDRO BOSCH GIRAL MIGUEL AVALOS BORJA et al.	MICROPOROUS AND MESOPOROUS MATERIALS	2005
90	Catalysts based on gold nanosized species incorporated into zeolites	ANDREY SIMAKOV NINA BOGDANCHIKOVA MIGUEL AVALOS BORJA et al.	Proceedings of SPIE	2005
91	Assessment of growth of silver nanoparticles synthesized from an ethylene glycol-silver nitrate-polyvinylpyrrolidone solution	MIGUEL AVALOS BORJA FELIPE FRANCISCO CASTILLON BARRAZA Slistan-Grijalva A. et al.	PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES	2005



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92	Complementary methods for cluster size distribution measurements: Supported platinum nanoclusters in methane reforming catalysts	MIGUEL AVALOS BORJA Ramallo-López J.M. Requejo F.G. et al.	JOURNAL OF MOLECULAR CATALYSIS A-CHEMICAL	2005
93	Correlation functions between specific volume and stoichiometry for transition metal nitrides	GERARDO SOTO HERRERA MARTHA ELOISA APARICIO CEJA MIGUEL AVALOS BORJA	JOURNAL OF ALLOYS AND COMPOUNDS	2005
94	Surface properties of Ni-Pt/SiO <sub>2</sub> catalysts for N <sub>2</sub> O decomposition and reduction by H <sub>2</sub>	JESUS ANGEL ARENAS ALATORRE LUCIANO ANTONIO GOMEZ CORTES MIGUEL AVALOS BORJA et al.	JOURNAL OF PHYSICAL CHEMISTRY B	2005
95	The effect of gold on the phase transitions of titania	MIGUEL AVALOS BORJA VITALI PETRANOVSKI AFANASIEVNA Debeila M.A. et al.	MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING	2005
96	The influence of gold on the optical properties of sol-gel derived titania	MIGUEL AVALOS BORJA VITALI PETRANOVSKI AFANASIEVNA Debeila M.A. et al.	MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING	2005
97	Elastic properties of tantalum carbide (TaC)	MIGUEL AVALOS BORJA López-De-La-Torre L. Winkler B. et al.	SOLID STATE COMMUNICATIONS	2005
98	Surface characterization of binary grafting of AAc/NIPAAm onto poly(tetrafluoroethylene) (PTFE)	ESBAIDE ADEM CHAHIN MIGUEL AVALOS BORJA EMILIO BUCIO CARRILLO et al.	NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS	2005



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99	Radiation compatibilization of polyamide-6/polypropylene blends, enhanced by the presence of compatibilizing agent	ESBAIDE ADEM CHAHIN SOFIA GUILLERMINA BURILLO AMEZCUA MIGUEL AVALOS BORJA et al.	NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS	2005
100	High-pressure and high-temperature powder diffraction on molybdenum diphosphide, MoP <sub>2</sub>	MIGUEL AVALOS BORJA Soto V. Knorr K. et al.	Z KRISTALLOGR	2004
101	Changes in the physical and chemical properties of PVDF irradiated by 4 MeV protons	ESBAIDE ADEM CHAHIN JORGE EDUARDO RICKARDS CAMPBELL EDUARDO ADALBERTO MUÑOZ PICONE et al.	REVISTA MEXICANA DE FISICA	2003
102	Crystal chemistry of molybdenum phosphides from density functional theory calculations	MIGUEL AVALOS BORJA Winkler B. Knorr K. et al.	JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS	2003
103	Erratum: Crystal chemistry of molybdenum phosphides from density functional theory calculations (Journal of Physics and Chemistry of Solids (2003) 64:3 (405-411) PII: S0022369702002937)	MIGUEL AVALOS BORJA Winkler B. Knorr K. et al.	JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS	2003
104	Reduction of NO by CO over NiWO <sub>4</sub> , NiO, and WO <sub>3</sub> catalyts	LUCIANO ANTONIO GOMEZ CORTES MIGUEL AVALOS BORJA Quintana-Melgoza J.M.	REACT KINET CATAL L	2002
105	A selectivity of zeolite matrices in the Cu(II) reduction process	VITALI PETRANOVSKI AFANASIEVNA NINA BOGDANCHIKOVA MIGUEL AVALOS BORJA et al.	STUD SURF SCI CATAL	2002
106	EXAFS and optical spectroscopy characterisation of silver within zeolite matrices	NINA BOGDANCHIKOVA VITALI PETRANOVSKI AFANASIEVNA MIGUEL AVALOS BORJA et al.	STUD SURF SCI CATAL	2002
107	Microstructural characterization of bimetallic Ni-Pt catalysts supported on SiO <sub>2</sub>	JESUS ANGEL ARENAS ALATORRE MIGUEL AVALOS BORJA GABRIELA ALICIA DIAZ GUERRERO	APPLIED SURFACE SCIENCE	2002
108	Influence of pH of the impregnation solution on the phosphorus promotion in W/Al <sub>2</sub> O <sub>3</sub> hydrotreating catalysts	MIGUEL AVALOS BORJA Cruz J. López Cordero R. et al.	APPLIED CATALYSIS A-GENERAL	2002

109	On the nature of the silver phases of Ag/Al <sub>2</sub> O <sub>3</sub> catalysts for reactions involving nitric oxide	NINA BOGDANCHIKOVA MIGUEL AVALOS BORJA Meunier F.C. et al.	APPLIED CATALYSIS B-ENVIRONMENTAL	2002
110	Electronic properties and chemical bonding of orthorhombic chromium carbide	DONALD HOMERO GALVAN MARTINEZ FELIPE FRANCISCO CASTILLON BARRAZA MIGUEL AVALOS BORJA et al.	PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS	2002
111	Synthesis and characterization of NiWO <sub>4</sub> crystals	MIGUEL AVALOS BORJA Quintana-Melgoza J.M. Cruz-Reyes J.	MATERIALS LETTERS	2001
112	Interface analysis of CVD diamond on TiN surfaces	OSCAR EDEL CONTRERAS LOPEZ GUSTAVO ALONSO HIRATA FLORES MIGUEL AVALOS BORJA	APPLIED SURFACE SCIENCE	2000
113	Microstructure, chronology and growth of the pinto abalone, <i>Haliotis kamtschatkana</i> , in Alaska	MIGUEL AVALOS BORJA Shepherd S.A. Woodby D. et al.	JOURNAL OF SHELLFISH RESEARCH	2000
114	Evolution of crystalline phases in nickel-tungsten sulfide catalysts	AMELIA OLIVAS SARABIA MIGUEL AVALOS BORJA SERGIO FUENTES MOYADO	MATERIALS LETTERS	2000
115	Structural and catalytic properties of Pd/Al <sub>2</sub> O <sub>3</sub> -La <sub>2</sub> O <sub>3</sub> catalysts	SERGIO FUENTES MOYADO NINA BOGDANCHIKOVA MIGUEL AVALOS BORJA et al.	CATALYSIS TODAY	2000
116	Formation of NbSe <sub>2</sub> nanotubes by electron irradiation	DONALD HOMERO GALVAN MARTINEZ MIGUEL AVALOS BORJA ESBAIDE ADEM CHAHIN et al.	FULLERENE SCIENCE TECHNOLOGY	2000
117	Cordierite glass-ceramic from geothermic waste	MIGUEL AVALOS BORJA Diaz C. Valle-Fuentes F.J. et al.	AM CERAM SOC BULL	1999
118	Study of different forms of carbon by analytical electron microscopy	MIGUEL AVALOS BORJA GUSTAVO ALONSO HIRATA FLORES LEONEL SUSANO COTA ARAIZA et al.	JOURNAL OF ELECTRON SPECTROSCOPY AND RELATED PHENOMENA	1999
119	Influence of preparation on the structure and CO conversion of $\gamma$ -Bi <sub>2</sub> MoO <sub>6</sub> catalysts	DONALD HOMERO GALVAN MARTINEZ FELIPE FRANCISCO CASTILLON BARRAZA MIGUEL AVALOS BORJA et al.	REACT KINET CATAL L	1999
120	Bismuth-molybdenum-oxide catalyst: A high-resolution transmission electron microscopy study	DONALD HOMERO GALVAN MARTINEZ MIGUEL AVALOS BORJA Ning X.G.	J MATER SCI LETT	1999



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122	EELS characterization of TiN grown by the DC sputtering technique	OSCAR EDEL CONTRERAS LOPEZ GUSTAVO ALONSO HIRATA FLORES MIGUEL AVALOS BORJA et al.	JOURNAL OF ELECTRON SPECTROSCOPY AND RELATED PHENOMENA	1999
123	Changes in poly-vinylidene fluoride produced by electron irradiation	ESBAIDE ADEM CHAHIN JORGE EDUARDO RICKARDS CAMPBELL SOFIA GUILLERMINA BURILLO AMEZCUA et al.	RADIATION PHYSICS AND CHEMISTRY	1999
124	Crosslinking of recycled polyethylene by gamma and electron beam irradiation	ESBAIDE ADEM CHAHIN MIGUEL AVALOS BORJA MARIA DEL PILAR CARREON CASTRO et al.	RADIATION PHYSICS AND CHEMISTRY	1998
125	Synthesis and characterization of nickel sulfide catalyts	AMELIA OLIVAS SARABIA VITALI PETRANOVSKI AFANASIEVNA MIGUEL AVALOS BORJA et al.	JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A	1998
126	Structural properties of Pd catalysts supported on Al <sub>2</sub> O <sub>3</sub> -La <sub>2</sub> O <sub>3</sub> prepared by sol-gel method	NINA BOGDANCHIKOVA SERGIO FUENTES MOYADO MIGUEL AVALOS BORJA et al.	APPLIED CATALYSIS B-ENVIRONMEN TAL	1998
127	Hydrodesulfurization activity of MoS <sub>2</sub> catalysts modified by chemical exfoliation	MIGUEL AVALOS BORJA SERGIO FUENTES MOYADO Del Valle M. et al.	CATALYSIS LETTERS	1998
128	Structure and reactivity of PdOx/ZrO <sub>2</sub> catalysts for methane oxidation at low temperatures	MIGUEL AVALOS BORJA Fujimoto K.-I. Ribeiro F.H. et al.	JOURNAL OF CATALYSIS	1998
129	Synthesis of Ni/SiO <sub>2</sub> catalysts through precipitation of silica-sols: Effect of aging and Ca(Ba) additives	FELIPE FRANCISCO CASTILLON BARRAZA SERGIO FUENTES MOYADO MIGUEL AVALOS BORJA et al.	APPLIED CATALYSIS A-GENERAL	1998
130	Structure and catalytic properties of PdOx/ZrO <sub>2</sub> catalysts for methane oxidation at low temperatures	MIGUEL AVALOS BORJA Fujimoto K. Ribeiro F.H. et al.	American Chemical Society, Division of Petroleum Chemistry, Preprints	1997
131	The shell microstructure and chronology of the abalone haliotis corrugala	MIGUEL AVALOS BORJA Shepherd S.A.	MOLLUSCAN RESEARCH	1997



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132	PEELS and EXELFS characterization of diamond films grown by the HF-CVD technique on non-scratched Si substrates	OSCAR EDEL CONTRERAS LOPEZ GUSTAVO ALONSO HIRATA FLORES MIGUEL AVALOS BORJA et al.	Thin Solid Films	1997
133	Microstructural identification of SiNx films by real-time ellipsometry	GERARDO SOTO HERRERA ENRIQUE CUAUHTEMOC SAMANO TIRADO ROBERTO MACHORRO MEJIA et al.	Materials Research Society Symposium Proceedings	1997
134	Physical properties of Y2O3:Eu luminescent films grown by MOCVD and laser ablation	GUSTAVO ALONSO HIRATA FLORES MIGUEL AVALOS BORJA JESUS MARIA SIQUEIROS BELTRONES et al.	APPLIED SURFACE SCIENCE	1997
135	Sinterization of doping mullite with rare earths usin a silica rich residue from a geothermal power plant	MIGUEL AVALOS BORJA Valenzuela D. Diaz C.	Key Engineering Materials	1997
136	High-resolution transmission electron microscopy of structural changes at and near surfaces of ZnTe crystals	MIGUEL AVALOS BORJA Ning X.G. Ye H.Q.	JOURNAL OF APPLIED PHYSICS	1996
137	Electronic irradiation effect on Bi-Mo-O catalysts observed in a HRTEM study	MIGUEL AVALOS BORJA DONALD HOMERO GALVAN MARTINEZ Ning X.G.	Materials Research Society Symposium Proceedings	1996
138	Thin conductive gallium-doped zinc oxide grown by pulsed laser deposition	GUSTAVO ALONSO HIRATA FLORES MIGUEL AVALOS BORJA McKittrick J. et al.	J SOC INF DISPLAY	1996
139	Luminescent oxide thin films grown by pulsed laser deposition	GUSTAVO ALONSO HIRATA FLORES MIGUEL AVALOS BORJA McKittrick J. et al.	J SOC INF DISPLAY	1996
140	Effect of preparation parameters on the microporous structure of Ni/SiO2 catalysts	FELIPE FRANCISCO CASTILLON BARRAZA SERGIO FUENTES MOYADO MIGUEL AVALOS BORJA et al.	Materials Research Society Symposium Proceedings	1996
141	Microcrystals formed in proton bombarded poly(vinyl chloride) films	ESBAIDE ADEM CHAHIN MIGUEL AVALOS BORJA JORGE EDUARDO RICKARDS CAMPBELL et al.	RADIATION PHYSICS AND CHEMISTRY	1996
142	TEM and PEELS characterization of diamond films grown on Si substrates	MIGUEL AVALOS BORJA GUSTAVO ALONSO HIRATA FLORES OSCAR EDEL CONTRERAS LOPEZ et al.	DIAMOND AND RELATED MATERIALS	1996



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144	CO oxidation by Bi <sub>2</sub> MoO <sub>6</sub> -x(H) catalyst	DONALD HOMERO GALVAN MARTINEZ MIGUEL AVALOS BORJA LEONEL SUSANO COTA ARAIZA et al.	Materials Research Society Symposium Proceedings	1995
145	Effect of silver in YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7-x</sub> samples	DONALD HOMERO GALVAN MARTINEZ MIGUEL AVALOS BORJA MARIO HUMBERTO FARIAS SANCHEZ et al.	JOURNAL OF MATERIALS SCIENCE	1994
146	Microstructural characterization and catalytic activity of molybdenum disulfide catalysts	MIGUEL AVALOS BORJA Del Valle M. Cruz-Reyes J. et al.	American Chemical Society, Division of Petroleum Chemistry, Preprints	1994
147	Exfoliation of MoS <sub>2</sub> catalysts: structural and catalytic changes	MIGUEL AVALOS BORJA Del Valle M. Cruz J. et al.	Materials Research Society Symposium Proceedings	1994
148	Influence of phosphorus on the structure and the hydrodesulphurization and hydrodenitrogenation activity of W/Al <sub>2</sub> O <sub>3</sub> catalysts	MIGUEL AVALOS BORJA Reyes J.C. Cordero R.L. et al.	APPLIED CATALYSIS A-GENERAL	1994
149	High resolution electron microscopy characterization of sulfided palladium particles on amorphous SiO <sub>2</sub>	MIGUEL AVALOS BORJA Vázquez A. Yañez M.J. et al.	CATALYSIS LETTERS	1994
150	The structure characterization of MoS <sub>2</sub> and WS <sub>2</sub> catalysts by HREM	DWIGHT ROBERTO ACOSTA NAJARRO MIGUEL AVALOS BORJA Pedraza F. et al.	JOURNAL OF PHYSICS-COND ENSED MATTER	1993
151	High Resolution Electron Microscopy Characterization of the Poorly Crystalline Structure of Molybdenum Disulfide-Based Catalysts	MIGUEL AVALOS BORJA DWIGHT ROBERTO ACOSTA NAJARRO JORGE ISRAEL CRUZ MORALES et al.	STUD SURF SCI CATAL	1993
152	Structure and catalytic activity characterization of bismuth molybdate catalysts	DONALD HOMERO GALVAN MARTINEZ MIGUEL AVALOS BORJA LEONEL SUSANO COTA ARAIZA et al.	CATALYSIS LETTERS	1993
153	CO oxidation of Bi <sub>2</sub> MoO <sub>6</sub> catalysts	DONALD HOMERO GALVAN MARTINEZ MIGUEL AVALOS BORJA LEONEL SUSANO COTA ARAIZA et al.	JOURNAL OF PHYSICS-COND ENSED MATTER	1993





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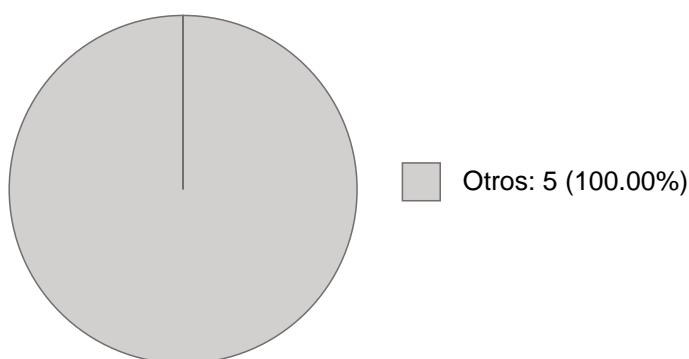


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154	High resolution tem studies of gold and palladium nano-particles	SAMUEL TEHUACANERO NUÑEZ MIGUEL AVALOS BORJA Yacamán M.J. et al.	Acta Metallurgica Et Materialia	1992
155	Hydrodesulfurization catalysts prepared by two methods analyzed by transmission electron microscopy	MIGUEL AVALOS BORJA MARIO HUMBERTO FARIAS SANCHEZ Cruz-Reyes J. et al.	JOURNAL OF CATALYSIS	1992
156	Electron Microscopy of Metallic Nano Particles using High- and Medium-Resolution Techniques	MIGUEL AVALOS BORJA José-Yacamán M.	CATALYSIS REVIEWS-SCIEN CE AND ENGINEERING	1992
157	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
158	Thermal decay of Lennard-Jones clusters	IGNACIO LUIS GARZON SOSA MIGUEL AVALOS BORJA	Z PHYS D ATOM MOL CL	1989
159	Catalytic activity of hydrodesulfurization catalysts prepared by two methods	MIGUEL AVALOS BORJA MARIO HUMBERTO FARIAS SANCHEZ Cruz-Reyes J.	CATALYSIS LETTERS	1989
160	Influence of Preparation on the Morphology and Microstructure of Cobalt-Molybdenum Sulphides	MIGUEL AVALOS BORJA LEONEL SUSANO COTA ARAIZA Pedraza F. et al.	STUD SURF SCI CATAL	1989
161	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
162	Phenomenological model of melting in Lennard-Jones clusters	MIGUEL AVALOS BORJA Garzan I.L. Blaisten-Barojas E.	PHYSICAL REVIEW B	1989
163	Determination of the specific activity for methylcyclohexane dehydrogenation of different surface orientations of palladium-supported catalysts	MIGUEL AVALOS BORJA Corma A. Martin M.A. et al.	Journal Of Molecular Catalysis	1988
164	Scanning auger microscopy analysis of 90 k y-ba-cu-o superconductors	LEONEL SUSANO COTA ARAIZA ELIGIO ALBERTO OROZCO MENDOZA JAVIER FUENTES MAYA et al.	JOURNAL OF MATERIALS RESEARCH	1988
165	Solvent-free oxidation of 1-phenylethanol catalysed by gold nanoparticles supported on carbon powder materials	MIGUEL AVALOS BORJA Carabineiro S.A.C. Ribeiro A.P.C. et al.	CATALYSIS TODAY	

**LIBROS Y CAPITULOS CON ISBN**

**Obras con registro ISBN**



#	Título	Autores	Alcance	Año	ISBN
1	Dynamics and mechanism of carbon filament formation during methane reforming on supported nickel catalysts	MIGUEL AVALOS BORJA Leung S.L. Wei J. et al.	Conferenc e Paper	2019	9781510888883
2	Dynamics and mechanism of carbon filament formation during methane reforming on supported nickel catalysts	MIGUEL AVALOS BORJA Leung S.L. Wei J. et al.	Conferenc e Paper	2018	9781510876163
3	Identification of diagenetic calcium arsenates using synchrotron-based micro X-ray diffraction	MIGUEL AVALOS BORJA MARIO VILLALOBOS PEÑALOSA Castillo F. et al.	Conferenc e Paper	2014	9781138001411
4	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
5	Aqueous deposition of metals on MWCNT to be used as electrocatalyst for PEM fuel cells	SERGIO ALBERTO GAMBOA SANCHEZ MIGUEL AVALOS BORJA GABRIEL ALONSO NUÑEZ et al.	Conferenc e Paper	2005	0791842096



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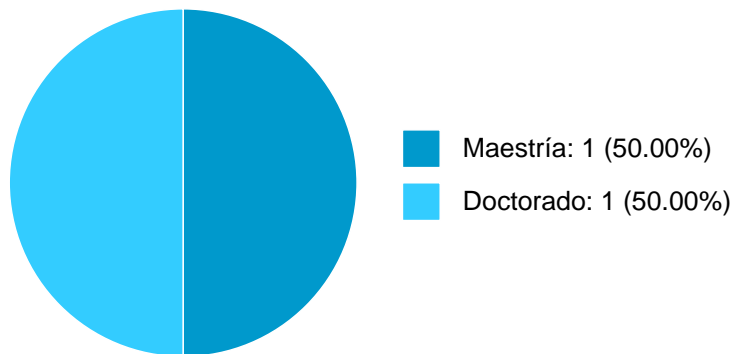
**PARTICIPACIÓN EN PROYECTOS**

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

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## PARTICIPACIÓN EN TESIS

### Histórico de Colaboraciones en Tesis



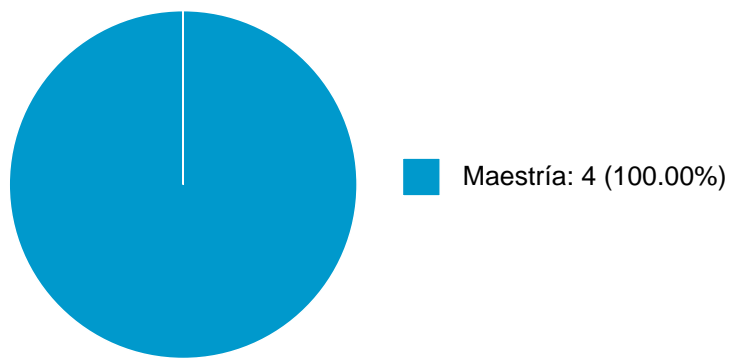
#	Título del documento	Tipo de Tesis	Sinodales	Autores	Entidad	Año
1	Estudio de los mecanismos de deformación de nanopartículas de oro embebidas en sílice, producida por irradiación con iones	Tesis de Doctorado	JESUS ANGEL ARENAS ALATORRE,	MIGUEL AVALOS BORJA, ALICIA MARIA OLIVER Y GUTIERREZ, et al.	Centro de Nanociencias y Nanotecnología en la UNAM, Instituto de Física,	2011
2	Aplicación de la microscopía de electrones retrodispersados en la ciencia de materiales	Tesis de Maestría	MIGUEL AVALOS BORJA,	López de la Torre, Laura Lizeth,		2001



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## DOCENCIA IMPARTIDA

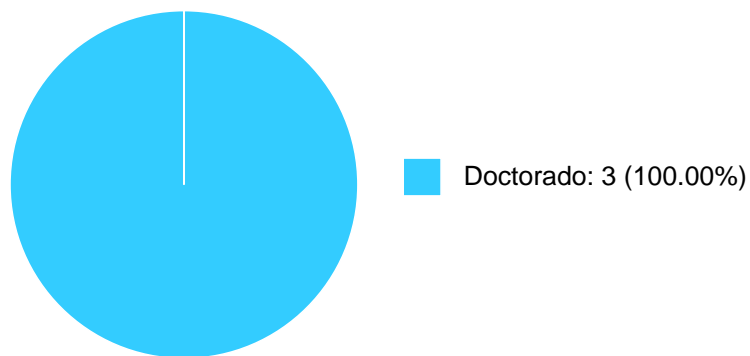
### Histórico de docencia



#	Nivel titulación	Asignatura	Entidad	Alumnos	Semestre
1	Maestría	TEMAS SELECTOS DE CARACTERIZACION DE MATERIALES (OPTATIVA)	Instituto de Investigaciones en Materiales	2	2010-1
2	Maestría	CRISTALOGRAFIA	Instituto de Investigaciones en Materiales	1	2010-1
3	Maestría	TEMAS SELECTOS DE CARACTERIZACION DE MATERIALES (OPTATIVA)	Instituto de Investigaciones en Materiales	3	2008-2
4	Maestría	CRISTALOGRAFIA	Instituto de Investigaciones en Materiales	1	2008-2

## TUTORIAS EN POSGRADO

### Histórico de tutorías en posgrado



#	Entidad	Nivel	Plan de estudios	Año	Semestre
1	Instituto de Investigaciones en Materiales	Doctorado	Doctorado en Ciencias e Ingeniería de Materiales	2011	2011-2
2	Instituto de Investigaciones en Materiales	Doctorado	Doctorado en Ciencias e Ingeniería de Materiales	2010	2010-2
3	Instituto de Investigaciones en Materiales	Doctorado	Doctorado en Ciencias e Ingeniería de Materiales	2010	2011-1



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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	2008-2024
2	Nombramientos, datos generales, estímulos, premios y reconocimientos	DGAPA	RUPA	2008-2024
3	Producción Académica	CH	Humanindex	2008-2021
4	Producción Académica	CIC	SCIC	2000-2017
5	Proyectos	DGPO	SISEPRO	2018-2022
6	Tesis	DGB	TESIUNAM	2008-2023
7	Tutorías en Posgrado	CGEP	SIIPosgrado	2008-2021

### Externos

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