



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



**PEDRO BOSCH GIRAL**

## Datos Generales

**Nombre:** PEDRO BOSCH GIRAL

**Máximo nivel de estudios:**

**Antigüedad académica en la UNAM:** 13 años

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## Nombramientos

**Último:** INVESTIGADOR TITULAR C TC Definitivo  
Instituto de Investigaciones en Materiales  
Desde 01-01-2008 (fecha inicial de registros en el  
SIIA) hasta 15-04-2015

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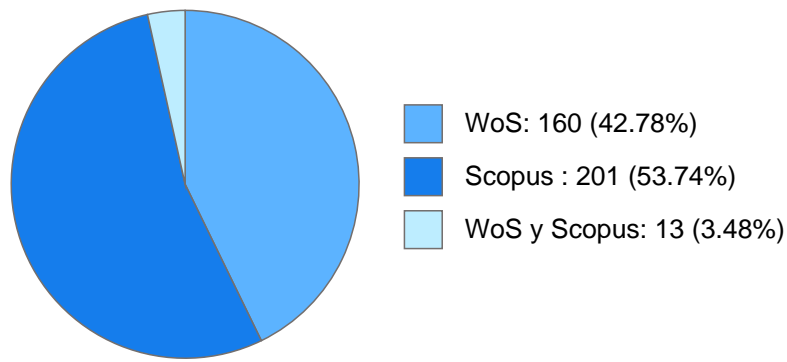
## Estímulos, programas, premios y reconocimientos

SNI III 2023  
SNI Emérito 2020 - 2022  
SNI III 2017 - 2019  
SNI Emérito 2016  
SNI III - 2015  
PRIDE D - 2015  
PASPA Estancias Sabáticas 2010

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**DOCUMENTOS EN REVISTAS**

**Histórico de Documentos**



#	Título	Autores	Revista	Año
1	Savoury Recipes and the Colour of the Tlatelcomila Human Bones	PEDRO BOSCH GIRAL Trujillo-Mederos A. Pijuan C. et al.	ARCHAEOOMETRY	2016
2	High-Performance Materials Based on Lithium-Containing Hydrotalcite-Bayerite Composites for Biogas Upgrade	PEDRO BOSCH GIRAL Torralba-Sanchez, Rosalia Lopez-Jurado, Dulce et al.	ENERGY & FUELS	2016
3	Structural and morphological evolutions of spent FCC catalyst pellets toward NaA zeolite	PEDRO BOSCH GIRAL Gonzalez, M. R. Pereyra, A. M. et al.	JOURNAL OF MATERIALS SCIENCE	2016
4	Stabilization of hemoglobin in double layered hydroxides to be used in carbon monoxide bio-oxidation I-synthesis and characterization	PEDRO BOSCH GIRAL Netzhualcoyotzi, Itai Galicia, Virginia et al.	CATALYSIS TODAY	2016
5	Defluoridation Performance Comparison of Nano-hydrotalcite/Hydroxyapatite Composite with Calcined Hydrotalcite and Hydroxyapatite	PEDRO BOSCH GIRAL Sani, Taju Adem, Mohammedali et al.	WATER AIR AND SOIL POLLUTION	2016
6	COMPARISON OF THE DEFLUORIDATION CAPACITY OF ZEOLITES FROM ETHIOPIA AND MEXICO	PEDRO BOSCH GIRAL Adem, Mohammedali Sani, Taju et al.	BULLETIN OF THE CHEMICAL SOCIETY OF ETHIOPIA	2015

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7	Bactericidal Performance of Chlorophyllin-Copper Hydrotalcite Compounds	PEDRO BOSCH GIRAL Rocha Oliveira, Gabriele Dias do Amaral, Laricy Janaina et al.	WATER AIR AND SOIL POLLUTION	2015
8	Removal of chromium(VI) using nano-hydrotalcite/SiO <sub>2</sub> composite	PEDRO BOSCH GIRAL Pérez E. Ayele L. et al.	Journal of Environmental Chemical Engineering	2015
9	Cooked Bones? Method and Practice for Identifying Bones Treated at Low Temperature	PEDRO BOSCH GIRAL OMAR NOVELO PERALTA Solari A. et al.	INTERNATIONAL JOURNAL OF OSTEOARCHAEOLOGY	2015
10	Preparation of layered double hydroxide/chlorophyll a hybrid nano-antennae: A key step	PEDRO BOSCH GIRAL Sommer Marquez, Alicia E. Lerner, Dan A. et al.	DALTON TRANSACTIONS	2014
11	Consolidating materials for the volcanic tuff in western Mexico	Nora Ariadna Perez ENRIQUE JAIME LIMA MUÑOZ PEDRO BOSCH GIRAL et al.	JOURNAL OF CULTURAL HERITAGE	2014
12	The oxidation of trichloroethylene over different mixed oxides derived from hydrotalcites	PEDRO BOSCH GIRAL Blanch-Raga, Neus Eduardo Palomares, A. et al.	APPLIED CATALYSIS B-ENVIRONMENTAL	2014
13	Cinnabar in Mesoamerica: Poisoning or mortuary ritual?	Alfonso Avila PEDRO BOSCH GIRAL Mansilla, Josefina et al.	JOURNAL OF ARCHAEOLOGICAL SCIENCE	2014
14	On porosity of archeological bones I - Textural characterization of pathological Spanish medieval human bones	PEDRO BOSCH GIRAL Moreno-Castilla, Carlos Zapata-Benabithé, Zulamita et al.	PALAEOGEOGRAPHY PALAEOCLIMATOLOGY PALAEOECOLOGY	2014
15	On porosity of archeological bones II. Textural characterization of Mesoamerican human bones	PEDRO BOSCH GIRAL Mansilla, Josefina Moreno-Castilla, Carlos et al.	PALAEOGEOGRAPHY PALAEOCLIMATOLOGY PALAEOECOLOGY	2014
16	On yellow and red pigmented bones found in Mayan burials of Jaina	JESUS ERASMO BATA QUINTERO Carlos Argaez PEDRO BOSCH GIRAL et al.	JOURNAL OF ARCHAEOLOGICAL SCIENCE	2013
17	Exploring and tuning the anchorage of chlorophyllin molecules on anionic clays	PEDRO BOSCH GIRAL Sommer, Alicia Romero, Aldo et al.	CATALYSIS TODAY	2013

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18	Cu mixed oxides based on hydrotalcite-like compounds for the oxidation of trichloroethylene	PEDRO BOSCH GIRAL Blanch-Raga, Neus Eduardo Palomares, A. et al.	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH	2013
19	Electrochemical behavior of (Zn, Mn)-Al nitrated hydrotalcites	HERIBERTO PFEIFFER PEREA MARIA ELENA DEL REFUGIO VILLAFUERTE Y CASTREJON PEDRO BOSCH GIRAL et al.	JOURNAL OF NEW MATERIALS FOR ELECTROCHEMICAL SYSTEMS	2012
20	On three-fold coordinated Si sites in mesoporous MCM-41 catalysts	PEDRO BOSCH GIRAL Aguilar-Pliego J. Zicovich-Wilson C. et al.	Open Catalysis Journal	2012
21	Changes in human bones boiled in seawater	PEDRO BOSCH GIRAL Trujillo-Mederos, Aioze Aleman, Inmaculada et al.	JOURNAL OF ARCHAEOLOGICAL SCIENCE	2012
22	CuNi/Al hydrotalcites synthesized in presence of microwave irradiation	PEDRO BOSCH GIRAL Ayala, Abraham Fetter, Geolar et al.	MATERIALS LETTERS	2011
23	Influence of Cation Nature on Stabilization of Gold Nanospecies in Mordenites	I. Tuzovskaya ENRIQUE JAIME LIMA MUÑOZ PEDRO BOSCH GIRAL et al.	JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY	2011
24	STRUCTURE, THERMAL STABILITY, AND CATALYTIC PERFORMANCE OF MgO-ZrO <sub>2</sub> COMPOSITES	T. Avalos Rendon J. Ortiz Landeros PEDRO BOSCH GIRAL et al.	JOURNAL OF STRUCTURAL CHEMISTRY	2011
25	Synthesis and characterization of amorphous aluminosilicates prepared by sol-gel to encapsulate organic dyes	PEDRO BOSCH GIRAL Martinez-Zapata, O. Mendez-Vivar, J. et al.	JOURNAL OF NON-CRYSTALLINE SOLIDS	2011
26	Boiled versus unboiled: a study on Neolithic and contemporary human bones	PEDRO BOSCH GIRAL Aleman, Inmaculada Moreno-Castilla, Carlos et al.	JOURNAL OF ARCHAEOLOGICAL SCIENCE	2011
27	The origin of black pigmentation in a sample of Mexican prehispanic human bones	Carlos Argaez JESUS ERASMO BATA QUINTERO PEDRO BOSCH GIRAL et al.	JOURNAL OF ARCHAEOLOGICAL SCIENCE	2011
28	Protein template effect on hydrotalcite morphology	PEDRO BOSCH GIRAL OMAR NOVELO PERALTA Sommer, Alicia E. et al.	POLYMERS FOR ADVANCED TECHNOLOGIES	2011
29	Twofold role of calcined hydrotalcites in the degradation of methyl parathion pesticide	MARIA ELENA DEL REFUGIO VILLAFUERTE Y CASTREJON ADRIANA TEJEDA CRUZ PEDRO BOSCH GIRAL et al.	BEILSTEIN JOURNAL OF NANOTECHNOLOGY	2011
30	Hydroxyapatite synthesis using microwave irradiation during the crystallization step	PEDRO BOSCH GIRAL Rivera, J. A. Fetter, G.	MATERIA-RIO DE JANEIRO	2010

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31	A Combustion Method to Synthesize a Belite Cement Clinker	AIDA ZAPATA CRUZ PEDRO BOSCH GIRAL	JOURNAL OF THE AMERICAN CERAMIC SOCIETY	2010
32	Stabilization of the Tlaltecuhтли monolith pigments	PEDRO BOSCH GIRAL ENRIQUE JAIME LIMA MUÑOZ Barajas, Maria et al.	JOURNAL OF ARCHAEOLOGICAL SCIENCE	2010
33	NEW TEMPLATE EFFECT IN HYDROTALCITE SYNTHESIS. NODULAR VS. LAYERED MORPHOLOGIES	PEDRO BOSCH GIRAL Sommer, Alicia E. Fetter, Geolar et al.	CLAYS AND CLAY MINERALS	2010
34	Non-toxic hybrid pigments: Sequestering betanidin chromophores on inorganic matrices	PEDRO BOSCH GIRAL Lima, Enrique Loera, Sandra et al.	APPLIED CLAY SCIENCE	2009
35	Synthesis of silicalite-1 by dry-gel conversion method: factors affecting its crystal size and morphology	PEDRO BOSCH GIRAL Alfaro, Salvador Valenzuela, Miguel A.	JOURNAL OF POROUS MATERIALS	2009
36	Low temperature preparation of belitic cement clinker	AIDA ZAPATA CRUZ PEDRO BOSCH GIRAL	JOURNAL OF THE EUROPEAN CERAMIC SOCIETY	2009
37	New hydroxyapatite-hydrotalcite composites I. synthesis	L. Banos J. Guzman PEDRO BOSCH GIRAL et al.	JOURNAL OF POROUS MATERIALS	2009
38	New hydroxyapatite-hydrotalcite composites II. microwave irradiation effect on structure and texture	PEDRO BOSCH GIRAL Rivera, J. A. Fetter, G.	JOURNAL OF POROUS MATERIALS	2009
39	Nickel (II) sorption on porous ZnO prepared by solution combustion method	PEDRO BOSCH GIRAL S. Bulbulian Alvarado-Ibarra, Y. et al.	COLLOIDS AND SURFACES A-PHYSICOCHEMICAL AND ENGINEERING ASPECTS	2009
40	Effect of organic and inorganic consolidation agents on Tlaltecuhтли monolith	ENRIQUE JAIME LIMA MUÑOZ PEDRO BOSCH GIRAL Barajas, Maria et al.	JOURNAL OF ARCHAEOLOGICAL SCIENCE	2009
41	Trapping organic molecules in sol-gel aluminosilicate matrices	PEDRO BOSCH GIRAL Martinez-Zapata, O. Mendez-Vivar, J. et al.	JOURNAL OF NON-CRYSTALLINE SOLIDS	2009
42	Iba of zeolites exchanged with lithium for Co 2 retention	EDUARDO ANDRADE IBARRA CORINA SOLIS ROSALES JOSE ORTEGA CRUZ et al.	AIP Conference Proceedings	2009

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43	Mixed Mg(Al)O oxides synthesized by the combustion method and their recrystallization to hydrotalcites	PEDRO BOSCH GIRAL Davila, Virginia Lima, Enrique et al.	MICROPOROUS AND MESOPOROUS MATERIALS	2008
44	Cobalt sorption properties of MgO prepared by solution combustion	PEDRO BOSCH GIRAL S. Bulbulian Granados-Correa, F. et al.	APPLIED SURFACE SCIENCE	2008
45	Texture of nopal treated adobe: restoring Nuestra Senora del Pilar mission	PEDRO BOSCH GIRAL Martinez-Camacho, Fernanda Vazquez-Negrete, Javier et al.	JOURNAL OF ARCHAEOLOGICAL SCIENCE	2008
46	Cesium leaching from gamma-irradiated CsA and CsX zeolites	ILICH ARGEL IBARRA ALVARADO PEDRO BOSCH GIRAL Lima, Enrique et al.	JOURNAL OF HAZARDOUS MATERIALS	2008
47	Immobilization of cobalt in collapsed non-irradiated and $\gamma$ -irradiated X zeolites	PEDRO BOSCH GIRAL Bulbulian S. ENRIQUE JAIME LIMA MUÑOZ	APPLIED RADIATION AND ISOTOPES	2007
48	Nickel distribution in (Ni,Mg)/Al-layered double hydroxides	PEDRO BOSCH GIRAL Rivera J.A. Fetter G. et al.	APPLIED CATALYSIS A-GENERAL	2007
49	Carbonate phobic (Zn,Mn)-Al hydrotalcite-like compounds	HERIBERTO PFEIFFER PEREA PEDRO BOSCH GIRAL Sampieri A. et al.	SOLID STATE SCIENCES	2007
50	The influence of surfactants on the roughness of titania sol-gel films	SERGIO ARTURO CALIXTO CARRERA PEDRO BOSCH GIRAL Medina-Valtierra J. et al.	MATERIALS CHARACTERIZATION	2007
51	Thermal behavior and CO <sub>2</sub> absorption of Li <sub>2</sub> -xNa xZrO <sub>3</sub> solid solutions	HERIBERTO PFEIFFER PEREA PEDRO BOSCH GIRAL Vázquez C. et al.	CHEMISTRY OF MATERIALS	2007
52	Aging time effect on the synthesis of small crystal LTA zeolites in the absence of organic template	PEDRO BOSCH GIRAL Alfaro S. Rodríguez C. et al.	MATERIALS LETTERS	2007
53	Thermal alterations in archaeological bones	PEDRO BOSCH GIRAL Pijoan C.M. Mansilla J. et al.	Archaeometry	2007
54	Colored sodalite and A zeolites	ILICH ARGEL IBARRA ALVARADO ENRIQUE JAIME LIMA MUÑOZ PEDRO BOSCH GIRAL et al.	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH	2006
55	Microwave power effect on hydrotalcite synthesis	PEDRO BOSCH GIRAL Rivera J.A. Fetter G.	MICROPOROUS AND MESOPOROUS MATERIALS	2006
56	Metal corrosion in bones implanted with Zinalco - A SAXS and NMR study	PEDRO BOSCH GIRAL EDUARDO VILLARREAL RAMIREZ MARIA CRISTINA PIÑA BARBA et al.	J BIOMED MATER RES	2006

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57	Iodine sorption by microwave irradiated hydrotalcites	PEDRO BOSCH GIRAL Paredes S.P. Fetter G. et al.	J NUCL MATER	2006
58	II. Cesium leaching in CsA and CsX zeolites: Use of blocking agents to inhibit the cesium cation mobility	ILICH ARGEL IBARRA ALVARADO ENRIQUE JAIME LIMA MUÑOZ PEDRO BOSCH GIRAL et al.	JOURNAL OF PHYSICAL CHEMISTRY B	2006
59	Chemical sorption of carbon dioxide (CO <sub>2</sub> ) on lithium oxide (Li <sub>2</sub> O)	PEDRO BOSCH GIRAL HERIBERTO PFEIFFER PEREA HUGO ARMANDO MOSQUEDA ALTAMIRANO et al.	CHEMISTRY OF MATERIALS	2006
60	Lithium-sodium metazirconate solid solutions, L <sub>2</sub> -xNa xZrO <sub>3</sub> (0 = x = 2): A hierarchical architecture	HERIBERTO PFEIFFER PEREA PEDRO BOSCH GIRAL ENRIQUE JAIME LIMA MUÑOZ	CHEMISTRY OF MATERIALS	2006
61	Sol-gel synthesis of hydrotalcite - Like compounds	PEDRO BOSCH GIRAL Paredes S.P. Fetter G. et al.	JOURNAL OF MATERIALS SCIENCE	2006
62	Phosphating alumina: A way to tailor its surface properties	PEDRO BOSCH GIRAL Valente J.S. Falcón S. et al.	MICROPOROUS AND MESOPOROUS MATERIALS	2006
63	Cr(VI) immobilization in mixed (Mg, Al) oxides	HERIBERTO PFEIFFER PEREA ENRIQUE JAIME LIMA MUÑOZ PEDRO BOSCH GIRAL et al.	MICROPOROUS AND MESOPOROUS MATERIALS	2006
64	Characterization of dental fillings found in skulls from individuals buried in San Jeronimos Church, New Spain: historical and archaeological evidences.	PEDRO BOSCH GIRAL Mansilla J. Romero C. et al.	Journal of the history of dentistry	2006
65	Cobalt sorption in silica-pillared clays	PEDRO BOSCH GIRAL Sampieri A. Fetter G. et al.	Langmuir	2006
66	Combustion treatment of Co <sup>2+</sup> and Cs <sup>+</sup> exchanged zeolites	PEDRO BOSCH GIRAL Rodríguez-Trejo R. Bulbulian S.	J NUCL MATER	2006
67	Passivation of the calcite surface with phenylmalonate and benzylmalonate ions	PEDRO BOSCH GIRAL Salinas-Nolasco M.F. Méndez-Vivar J. et al.	JOURNAL OF COLLOID AND INTERFACE SCIENCE	2005
68	Thermal stability and high-temperature carbon dioxide sorption on hexa-lithium zirconate (Li <sub>6</sub> Zr <sub>2</sub> O <sub>7</sub> )	HERIBERTO PFEIFFER PEREA PEDRO BOSCH GIRAL	CHEMISTRY OF MATERIALS	2005
69	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

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70	Multi-fractal imaging and structural investigation of silica hydrogels and aerogels	ABEL MORENO CARCAMO PEDRO BOSCH GIRAL Vinogradova E. et al.	Silicon Chemistry	2005
71	Synthesis and spectroscopic study of mixed metal clusters using methacrylate and acrylate ligands	PEDRO BOSCH GIRAL Méndez-Vivar J. Lara V.H.	JOURNAL OF NON-CRYSTALLI NE SOLIDS	2005
72	Adsorption of crude oil on Na <sup>+</sup> -montmorillonite	DWIGHT ROBERTO ACOSTA NAJARRO PEDRO BOSCH GIRAL Cosultchi A. et al.	ENERGY & FUELS	2005
73	Characterization of enamel with variable caries risk	MARIA DEL PILAR GUTIERREZ AMADOR MARIA CRISTINA PIÑA BARBA PEDRO BOSCH GIRAL et al.	ARCHIVES OF ORAL BIOLOGY	2005
74	Structural evolution of phosphated alumina during sol - Gel synthesis	PEDRO BOSCH GIRAL Valente J. Lara V. et al.	JOURNAL OF PHYSICAL CHEMISTRY B	2005
75	Influence of the preparation method on the properties of Fe-ZSM-5 for the selective catalytic reduction of NO by n-decane	PEDRO BOSCH GIRAL Guzmán-Vargas A. Delahay G. et al.	CATALYSIS TODAY	2005
76	Fractal dimension and cobalt leaching in CoX and CoA zeolites	ENRIQUE JAIME LIMA MUÑOZ PEDRO BOSCH GIRAL Lara V.H. et al.	CHEMISTRY OF MATERIALS	2004
77	Passivation of the calcite surface with malonate ion	PEDRO BOSCH GIRAL Salinas-Nolasco M.F. Méndez-Vivar J. et al.	JOURNAL OF COLLOID AND INTERFACE SCIENCE	2004
78	Hysteresis in the melting kinetics of Bi nanoparticles	PEDRO BOSCH GIRAL Haro-Poniatowski E. Serna R. et al.	Thin Solid Films	2004
79	Radial distribution function studies of Al <sub>2</sub> O <sub>3</sub> -La <sub>2</sub> O <sub>3</sub> binary oxides prepared by sol-gel	PEDRO BOSCH GIRAL Barrera A. Viniegra M. et al.	CATALYSIS COMMUNICATIO NS	2004
80	Vitrification of CsA and CsX zeolites	ENRIQUE JAIME LIMA MUÑOZ PEDRO BOSCH GIRAL Ibarra A. et al.	STUD SURF SCI CATAL	2004
81	Safe trapping of Cs in heat-treated zeolite matrices	PEDRO BOSCH GIRAL Caputo D. Liguori B. et al.	J NUCL MATER	2004
82	Adsorption of petroleum organic compounds on natural Wyoming montmorillonite	PEDRO BOSCH GIRAL Cosultchi A. Lara V.H.	COLLOIDS AND SURFACES A-PHYSCOCHE MICAL AND ENGINEERING ASPECTS	2004
83	Washing effect on the synthesis of silica-pillared clays	PEDRO BOSCH GIRAL Sampieri A. Fetter G. et al.	JOURNAL OF POROUS MATERIALS	2004



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84	I. cesium leaching in CsA and CsX zeolites	ENRIQUE JAIME LIMA MUÑOZ ILICH ARGEL IBARRA ALVARADO PEDRO BOSCH GIRAL et al.	JOURNAL OF PHYSICAL CHEMISTRY B	2004
85	Simultaneous polymerization of Mg and Zr alkoxides	ROBERTO MENDOZA SERNA PEDRO BOSCH GIRAL Méndez-Vivar J. et al.	Key Engineering Materials	2004
86	Characterization of novel Mn <sub>3</sub> O <sub>4</sub> catalysts synthesized through a microwave irradiation assisted-route	PEDRO BOSCH GIRAL Zapata B. Valenzuela M.A. et al.	Journal of Metastable and Nanocrystalline Materials	2004
87	Bone response to 316L-SS and zinalco implants	MARIA CRISTINA PIÑA BARBA PEDRO BOSCH GIRAL EDUARDO VILLARREAL RAMIREZ et al.	MICROSCOPY AND MICROANALYSIS	2003
88	Effect of microwave irradiation time on the synthesis of zirconia-pillared clays	VIOLETA MIREYA RODRIGUEZ DEL VILLAR PEDRO SALAS CASTILLO PEDRO BOSCH GIRAL et al.	MATERIALS LETTERS	2003
89	Determination of neutron absorbed doses in lithium aluminates	PEDRO BOSCH GIRAL Loya A.D. Carrera L.M. et al.	APPLIED RADIATION AND ISOTOPES	2003
90	Small-angle X-ray scattering study of oil- and deposit-asphaltene solutions	PEDRO BOSCH GIRAL Cosultchi A. Lara V.H.	COLLOID AND POLYMER SCIENCE	2003
91	Zr alkoxide chain effect on the sol-gel synthesis of lithium metazirconate	HERIBERTO PFEIFFER PEREA PEDRO BOSCH GIRAL Bulbulian S.	MATERIALS CHEMISTRY AND PHYSICS	2003
92	Preparation and characterization of porous SiO <sub>2</sub> -Al <sub>2</sub> O <sub>3</sub> -ZrO <sub>2</sub> prepared by the sol-gel process	ROBERTO MENDOZA SERNA EDUARDO LOYO ARNAUD PEDRO BOSCH GIRAL et al.	JOURNAL OF POROUS MATERIALS	2003
93	Radiation-induced morphological changes in polyamide fibers	PEDRO BOSCH GIRAL VICTOR MANUEL CASTAÑO MENESES Menchaca C. et al.	INTERNATIONAL JOURNAL OF POLYMERIC MATERIALS AND POLYMERIC BIOMATERIALS	2002
94	The structure of two manganese hexacyanomethylates(II): Mn <sub>2</sub> [Fe(CN) <sub>6</sub> ].8H <sub>2</sub> O and Mn <sub>2</sub> [Os(CN) <sub>6</sub> ].8H <sub>2</sub> O	PEDRO BOSCH GIRAL Gómez A. Lara V.H. et al.	POWDER DIFFRACTION	2002
95	Contribution of organic and mineral compounds to the formation of solid deposits inside petroleum wells	PEDRO BOSCH GIRAL Cosultchi A. Garciafigueroa E. et al.	Fuel	2002

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96	The role of 2-(methacryloyloxy) ethyl acetoacetate in the polymerization of hybrid multicomponent (Si, Ti, Zr) sols of hybrid multicomponent (Si, Ti, Zr) sols	PEDRO BOSCH GIRAL ROBERTO MENDOZA SERNA Méndez-Vivar J. et al.	JOURNAL OF SOL-GEL SCIENCE AND TECHNOLOGY	2002
97	Radiation damage and tritium release from Li-Zr-Si oxides	HERIBERTO PFEIFFER PEREA PEDRO BOSCH GIRAL Lopez B. et al.	SOLID STATE SCIENCES	2002
98	ZrO <sub>2</sub> and Cu/ZrO <sub>2</sub> sol-gel synthesis in presence of microwave irradiation	PEDRO BOSCH GIRAL Fetter G. López T.	JOURNAL OF SOL-GEL SCIENCE AND TECHNOLOGY	2002
99	AES and EDS microanalysis of a petroleum well tubing in cross-section	PEDRO BOSCH GIRAL Cosultchi A. Vargas J.R. et al.	MATERIALS LETTERS	2002
100	Formation of petroleum organic deposits on steel surfaces	PEDRO BOSCH GIRAL Cosultchi A. García-Bórquez A. et al.	SURFACE AND INTERFACE ANALYSIS	2002
101	Experimental design of Si-Ti-Zr polymers containing hybrid Si species, spectroscopic study and thermal evolution	PEDRO BOSCH GIRAL ROBERTO MENDOZA SERNA Mendez-Vivar J. et al.	JOURNAL OF POROUS MATERIALS	2002
102	Thermal stability of monometallic Co-hydroxalite	PEDRO BOSCH GIRAL Zapata B. Valenzuela M.A. et al.	MATERIALS LETTERS	2002
103	Comparison of the structural and acid-base properties of Ga- and Al-containing layered double hydroxides obtained by microwave irradiation and conventional ageing of synthesis gels	PEDRO BOSCH GIRAL Tichit D. Rolland A. et al.	J MATER CHEM	2002
104	Chemical vapor deposition of 6CuO-Cu <sub>2</sub> O films on fiberglass	PEDRO BOSCH GIRAL Medina-Valtierra J. Ramírez-Ortiz J. et al.	Thin Solid Films	2002
105	Preparation, characterization and photocatalytic activity of ZnO, Fe <sub>2</sub> O <sub>3</sub> and ZnFe <sub>2</sub> O <sub>4</sub>	PEDRO BOSCH GIRAL Valenzuela M.A. Jiménez-Becerrill J. et al.	JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY A-CHEMISTRY	2002
106	Vitrification of gamma irradiated 60Co <sup>2+</sup> zeolites	PEDRO BOSCH GIRAL Bulbulian S.	J NUCL MATER	2001
107	Petroleum solid adherence on tubing surface	PEDRO BOSCH GIRAL Cosultchi A. Garciafigueroa E. et al.	Fuel	2001
108	Detrital Mg(OH) <sub>2</sub> and Al(OH) <sub>3</sub> in microwaved hydroxalites	PEDRO BOSCH GIRAL Fetter G. Botello A. et al.	JOURNAL OF POROUS MATERIALS	2001

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109	Tritium recovery from nanostructured LiAlO <sub>2</sub>	JESUS ANGEL ARENAS ALATORRE PEDRO BOSCH GIRAL Carrera L.M. et al.	J NUCL MATER	2001
110	Textural analysis of sulphated ZrO <sub>2</sub> -SiO <sub>2</sub> Sol-Gel catalytic supports by N <sub>2</sub> sorption and X-ray diffraction	PEDRO BOSCH GIRAL Salmenes J. Lara V.H. et al.	ADSORPTION SCIENCE & TECHNOLOGY	2001
111	Pd/Al <sub>2</sub> O <sub>3</sub> -La <sub>2</sub> O <sub>3</sub> catalysts prepared by sol-gel: Characterization and catalytic activity in the NO reduction by H <sub>2</sub>	PEDRO BOSCH GIRAL SERGIO FUENTES MOYADO Barrera A. et al.	APPLIED CATALYSIS B-ENVIRONMEN TAL	2001
112	A catalytic application of Cu <sub>2</sub> O and CuO films deposited over fiberglass	PEDRO BOSCH GIRAL Ramírez-Ortiz J. Ogura T. et al.	APPLIED SURFACE SCIENCE	2001
113	Co(II)-Co(III) hydrotalcite-like compounds	PEDRO BOSCH GIRAL JUAN MANUEL NAVARRETE TEJERO Zapata B. et al.	INT J INORG MATER	2001
114	Solvent effect on the sol-gel synthesis of lithium aluminate	PEDRO BOSCH GIRAL Valenzuela M.A. Téllez L. et al.	MATERIALS LETTERS	2001
115	Effect of sulfation methods on TiO <sub>2</sub> -SiO <sub>2</sub> sol-gel catalyst acidity	PEDRO BOSCH GIRAL JUAN MANUEL NAVARRETE TEJERO López T. et al.	APPLIED CATALYSIS A-GENERAL	2000
116	Ce-Al-pillared clays: Synthesis, characterization, and catalytic performance	PEDRO SALAS CASTILLO PEDRO BOSCH GIRAL Fetter G. et al.	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH	2000
117	Sol-gel synthesis of Li <sub>2</sub> ZrSi <sub>6</sub> O <sub>15</sub> powders	HERIBERTO PFEIFFER PEREA PEDRO BOSCH GIRAL Bulbulian S.	J MATER CHEM	2000
118	Surface areas of nitrated hydrotalcites	PEDRO BOSCH GIRAL Fetter G. Olguín M.T. et al.	JOURNAL OF POROUS MATERIALS	2000
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139	Microwave Irradiation Effect on Hydrotalcite Synthesis	PEDRO BOSCH GIRAL Fetter G. Hernández F. et al.	JOURNAL OF POROUS MATERIALS	1997
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171	Spectroscopic study of borate and lithium-doped borate glasses prepared by the sol-gel process	PEDRO BOSCH GIRAL Lopez T. Asomoza M. et al.	J MATER SYNTH PROCES	1994
172	Pore size controlled Pt/SiO <sub>2</sub> catalysts	PEDRO BOSCH GIRAL Lopez T. Moran M. et al.	REACT KINET CATAL L	1994
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196	Non-conventional preparation of Ru/SiO <sub>2</sub> catalysts	PEDRO BOSCH GIRAL López T. Gómez R.	REACT KINET CATAL L	1990
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198	On the effects of cation substitution in Sb-Sn-M-O (M = Fe, Cu) oxidation type catalysts	PEDRO BOSCH GIRAL Montoya A. Schifter I. et al.	Journal Of Molecular Catalysis	1989



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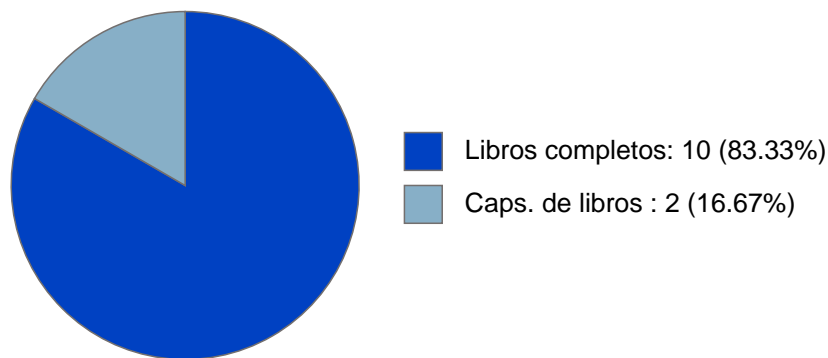
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**PEDRO BOSCH GIRAL**

**LIBROS Y CAPITULOS CON ISBN**

**Obras con registro ISBN**



#	Título	Autores	Alcance	Año	ISBN
1	Al pie del Templo Mayor de Tenochtitlan	LUIS ALBERTO BARBA PINGARRON RAUL BARRERA RODRIGUEZ FRANCISCO ALONSO SOLIS MARIN et al.	Libro Completo	2019	9786077243366
2	Al pie del Templo Mayor de Tenochtitlan Tomo I	FRANCISCO ALONSO SOLIS MARIN PEDRO BOSCH GIRAL ANDREA ALEJANDRA CABALLERO OCHOA	Libro Completo	2019	9786077243380
3	Radiaciones	PEDRO BOSCH GIRAL	Libro Completo	2015	9786078379194
4	Narrar la ciencia	ANA MARIA SANCHEZ MORA AQUILES NEGRETE YANKELEVICH RODOLFO MATA SANDOVAL et al.	Libro Completo	2014	978607026063 6
5	Narrar la ciencia	ANA MARIA SANCHEZ MORA AQUILES NEGRETE YANKELEVICH RODOLFO MATA SANDOVAL et al.	Libro Completo	2014	9786070260667
6	El carbono	PEDRO BOSCH GIRAL	Libro Completo	2013	9786071616357



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7	El carbono	PEDRO BOSCH GIRAL	Libro Completo	2013	9786071616975
8	Fuego en el alma y en la vida infierno	PEDRO BOSCH GIRAL	Libro Completo	2012	9786071610553
9	Zoelitas naturales, características, propiedades y usos	PEDRO BOSCH GIRAL	Libro Completo	2011	9786070228407
10	Difracción y fluorescencia de rayos x	PEDRO BOSCH GIRAL	Libro Completo	2010	9786077616634
11	Microwave Effect on Clay Pillaring	PEDRO BOSCH GIRAL	Capítulo de un Libro	2010	9781441966704
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**PARTICIPACIÓN EN PROYECTOS**

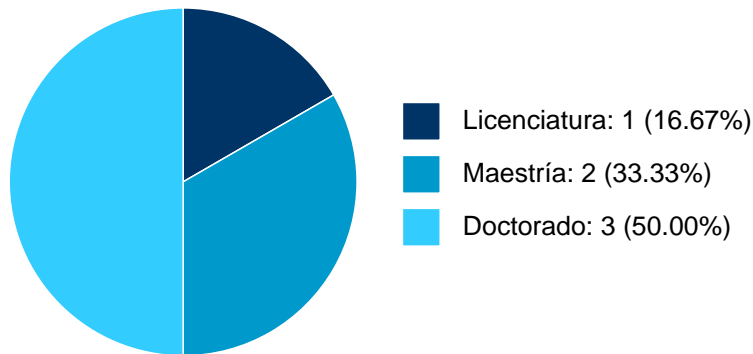
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**PARTICIPACIÓN EN TESIS**

**Histórico de Colaboraciones en Tesis**

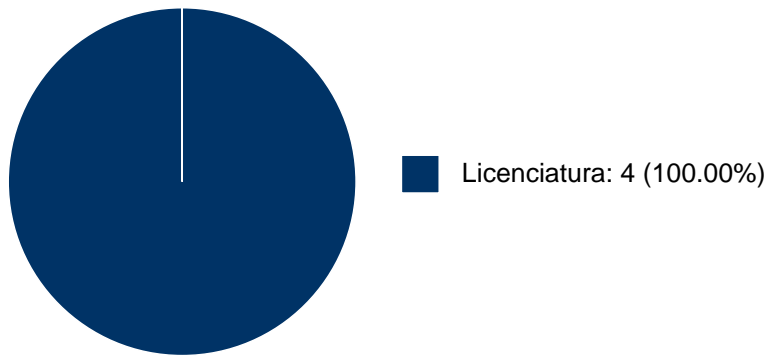


#	Título del documento	Tipo de Tesis	Sinodales	Autores	Entidad	Año
1	Viabilidad del proceso de rehidroxilación como método de datación en cerámicas cocidas, prehispánicas y coloniales, de la actual región de Aguascalientes	Tesis de Maestría	JORGE BALMASEDA ERA,	PEDRO BOSCH GIRAL, GUSTAVO TAVIZON ALVARADO, et al.	Facultad de Química, Instituto de Investigaciones en Materiales,	2015
2	Materiales compuestos, su caracterización y su utilización en la retención de iones F y Cl	Tesis de Licenciatura	PEDRO BOSCH GIRAL,	Ávila Ramírez, Alfonso,	Instituto de Investigaciones en Materiales,	2015
3	Retención de gases en zeolitas	Tesis de Doctorado	PEDRO BOSCH GIRAL,	Loera Serna, Sandra,	Instituto de Investigaciones en Materiales,	2010
4	Preparación a baja temperatura del clínker del cemento belítico	Tesis de Doctorado	PEDRO BOSCH GIRAL,	Zapata de Camino, Aída,	Instituto de Investigaciones en Materiales,	2009
5	Zeolitas tratadas para la retención de CO <sub>2</sub> y CS <sub>2</sub>	Tesis de Doctorado	PEDRO BOSCH GIRAL,	Rodriguez Trejo, Rosa,		2007
6	Comportamiento de zeolitas y arcillas en presencia de soluciones radiactivas	Tesis de Maestría	PEDRO BOSCH GIRAL,	Carrera García, Luz Maria,		1991

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**DOCENCIA IMPARTIDA**

**Histórico de docencia**



#	Nivel titulación	Asignatura	Entidad	Alumnos	Semestre
1	Licenciatura	INTROD. SISTEMAS QUIMICOS Y BIOLOG.	Facultad de Ciencias	11	2013-2
2	Licenciatura	INTROD. SISTEMAS QUIMICOS Y BIOLOG.	Facultad de Ciencias	15	2012-2
3	Licenciatura	INTROD. SISTEMAS QUIMICOS Y BIOLOG.	Facultad de Ciencias	6	2011-2
4	Licenciatura	INTROD. SISTEMAS QUIMICOS Y BIOLOG.	Facultad de Ciencias	15	2009-1

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**PATENTES**

#	Título	Inventores	Sección	Año
1	NUEVOS MATERIALES COMPUESTOS DE HIDROXIAPATITA-HIDROALCITA Y SUS PROCEDIMIENTOS DE SINTESIS.	PEDRO BOSCH GIRAL,	CHEMISTRY; METALLURGYPERFORMING OPERATIONS; TRANSPORTING	2015
2	NUEVOS MATERIALES COMPUESTOS DE HIDROXIAPATITA-HIDROALCITA Y SUS PROCEDIMIENTOS DE SINTESIS.	PEDRO BOSCH GIRAL,	CHEMISTRY; METALLURGYPERFORMING OPERATIONS; TRANSPORTING	2018
3	NUEVOS MATERIALES COMPUESTOS DE HIDROXIAPATITA-HIDROALCITA Y SUS PROCEDIMIENTOS DE SINTESIS.	PEDRO BOSCH GIRAL,	CHEMISTRY; METALLURGYPERFORMING OPERATIONS; TRANSPORTING	2018



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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