



## **JOSE ISRAEL BETANCOURT REYES**

### **Datos Generales**

**Nombre:** JOSE ISRAEL BETANCOURT REYES

**Máximo nivel de estudios:** DOCTORADO

**Antigüedad académica en la UNAM:** 25 años

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### **Nombramientos**

**Vigente:** INVESTIGADOR TITULAR C TC Definitivo  
Instituto de Investigaciones en Materiales  
Desde 16-12-2016

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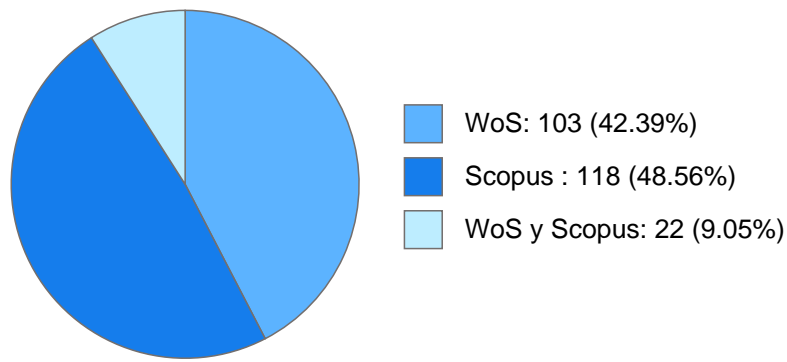
### **Estímulos, programas, premios y reconocimientos**

SNI III 2018 - 2024  
SNI II 2009 - 2017  
SNI I 2008  
PRIDE D 2016 - 2024  
PRIDE C - 2016  
PASPA Estancias Sabáticas 2014 - 2015

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**DOCUMENTOS EN REVISTAS**

**Histórico de Documentos**



#	Título	Autores	Revista	Año
1	Antimicrobial activity of CuFe <sub>2</sub> O <sub>4</sub> and CuFe <sub>2</sub> O <sub>4</sub> /ZnO: Squaring colorimetric and traditional microbiology assays with atomic force- and holotomography-microscopies	JOSE ISRAEL BETANCOURT REYES Martínez-Montelongo J.H. Hernandez-Rangel R. et al.	CERAMICS INTERNATIONAL	2025
2	Facet-dependent magnetic properties of magnetite nanoparticles coated with dodecyl amine and their biological effect in hepatocarcinoma cell line	YARELI ROJAS AGUIRRE HECTOR DOMINGUEZ CASTRO RUBEN MENDOZA CRUZ et al.	JOURNAL OF MATERIALS SCIENCE	2024
3	Aluminum enhances the oxidative damage of ZnO NMs in the human neuroblastoma SH-SY5Y cell line	JOSE ISRAEL BETANCOURT REYES Jimenez-Chavez A. Pedroza-Herrera G. et al.	Discover Nano	2024
4	Optimization of magnetic properties: Investigating the interaction of synthesis temperature, particle size, and monodomain formation in barium hexaferrite synthesized by the Pechini method	JOSE ISRAEL BETANCOURT REYES Urbano-Peña M.A. Salazar-Muñoz V.E. et al.	JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS	2024
5	Bismuth-based nanocomposites as potential materials for indoor air treatment	CARLOS ANTONIO PINEDA ARELLANO JOSE ISRAEL BETANCOURT REYES Martínez-Montelongo J.H. et al.	Chemosphere	2024

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6	Magnetic, electronic and optical properties of SrFe <sub>2-x</sub> Al <sub>x</sub> O <sub>19</sub> (x=0.5; 1; 1.5) solid solutions by first principles	JOSE ISRAEL BETANCOURT REYES ESPIRIDION MARTINEZ AGUILAR Hmok H.L.	CURRENT APPLIED PHYSICS	2023
7	Magnetic and electronic properties of KMn <sub>1-x</sub> M <sub>x</sub> Bi (M = Cu, Mg, Zn) solid solutions	ESPIRIDION MARTINEZ AGUILAR JOSE ISRAEL BETANCOURT REYES JESUS MARIA SIQUEIROS BELTRONES et al.	SOLID STATE COMMUNICATIO NS	2023
8	Effect of Alkyl Chain Length of Amines on the Micro-structural and Magnetic Properties of Stabilized Ni-NiO Nanoparticles	ESTHER RAMIREZ MENESES JOSE ISRAEL BETANCOURT REYES RUBEN MENDOZA CRUZ et al.	JOURNAL OF INORGANIC AND ORGANOMETALL IC POLYMERS AND MATERIALS	2023
9	Improved methanol electro-oxidation reaction on PdRh-PVP/C electrodes	ESTHER RAMIREZ MENESES AIDE MINERVA TORRES HUERTA JOSE ISRAEL BETANCOURT REYES et al.	INTERNATIONAL JOURNAL OF HYDROGEN ENERGY	2023
10	Magnetic Properties of Melt-Spun CoMnSi(B) Alloys	JOSE ISRAEL BETANCOURT REYES Rafael G. Suarez Aida Miranda et al.	JOURNAL OF SUPERCONDUCT IVITY AND NOVEL MAGNETISM	2023
11	Magnetic properties of Pd-Ag nanoalloys obtained by liquid-assisted mechanochemical pathway	VICTOR FABIAN RUIZ RUIZ JOSE ISRAEL BETANCOURT REYES REBECA DIAZ PARDO et al.	JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS	2022
12	Structural, magnetic and polar effects in R-doped ZnO (R = Co, Cr, Cu and V): Study of first principles	ESPIRIDION MARTINEZ AGUILAR OSCAR RAYMOND HERRERA JOSE ISRAEL BETANCOURT REYES et al.	MATERIALS CHEMISTRY AND PHYSICS	2022
13	The Influence of Boron on Microstructural Evolution, Mechanical and Magnetic Behavior of Amorphous Fe <sub>91-x</sub> (Zr-5-Nb-4)B-x Melt-Spun Alloys	JONATHAN ZAMORA MENDIETA JOSE ISRAEL BETANCOURT REYES JOSE ALEJANDRO GARCIA HINOJOSA	METALS	2022
14	Magnetic and magnetocaloric properties of a foam composite based on substituted La-manganite in a polyurethane matrix	JOSE ISRAEL BETANCOURT REYES V. E. Salazar-Munoz S. A. Palomares-Sanchez et al.	JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS	2021
15	Effect of Cr <sup>3+</sup> doped on electronic and magnetic properties of SrFe <sub>2</sub> O <sub>19</sub> by first-principles study	H'LINH HMOK JOSE ISRAEL BETANCOURT REYES ESPIRIDION MARTINEZ AGUILAR et al.	THEORETICAL CHEMISTRY ACCOUNTS	2021
16	Complementary atomic force microscopy and magnetic force microscopy study for the magnetic transition of cobalt clusters onto gold substrates	MARGARITA RIVERA HERNANDEZ JOSE ISRAEL BETANCOURT REYES Martinez-Vado F.I. et al.	REVISTA MEXICANA DE FISICA	2020

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17	Development and Assessment of Nano-Technologies for Cancer Treatment: Cytotoxicity and Hyperthermia Laboratory Studies	JOSE ISRAEL BETANCOURT REYES Iliana E. Medina-Ramirez Maria Alejandra Diaz de Leon Olmos et al.	CANCER INVESTIGATION	2020
18	Synthesis and magnetocaloric properties of La <sub>0.67</sub> Ca <sub>0.29</sub> Sr <sub>0.04</sub> MnO <sub>3</sub> obtained from modified sol-gel Pechini method	JOSE ISRAEL BETANCOURT REYES TERESITA DE JESUS PEREZ JUACHE Salazar-Muñoz V.E. et al.	JOURNAL OF SOL-GEL SCIENCE AND TECHNOLOGY	2019
19	Effect of temperature on the magnetic properties of strontium hexaferrite synthesized by the Pechini method	JOSE ISRAEL BETANCOURT REYES TERESITA DE JESUS PEREZ JUACHE M. A. Urbano-Pena et al.	APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING	2019
20	Switching of coercivity process in MnBi alloys	JOSE ISRAEL BETANCOURT REYES IGNACIO ALEJANDRO FIGUEROA VARGAS Zamora J.	JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM	2018
21	Synthesis of Rh nanoparticles in alcohols: magnetic and electrocatalytic properties	JOSE ISRAEL BETANCOURT REYES AIDE MINERVA TORRES HUERTA E. Ramirez-Meneses et al.	JOURNAL OF MATERIALS SCIENCE	2018
22	Coercivity mechanism of rare-earth free MnBi hard magnetic alloys	JOSE ISRAEL BETANCOURT REYES IGNACIO ALEJANDRO FIGUEROA VARGAS Zamora J.	REVISTA MEXICANA DE FISICA	2018
23	Rare earth-free hard magnetic microwires	JOSE ISRAEL BETANCOURT REYES Zamora J. Jiménez A. et al.	SCRIPTA MATERIALIA	2018
24	Facile synthesis of rod-shaped bismuth sulfide@graphene oxide (Bi <sub>2</sub> S <sub>3</sub> @GO) composite	NIDIA GUADALUPE GARCIA PEÑA DAVID DIAZ JOSE ISRAEL BETANCOURT REYES et al.	MATERIALS CHEMISTRY AND PHYSICS	2018
25	Mechanochemically obtained Pd/Ag nanoalloys. Structural considerations and catalytic activity	VICTOR FABIAN RUIZ RUIZ RODRIGO GONZALEZ OLVERA REBECA DIAZ PARDO et al.	Materialia	2018
26	Correlation of Microstructure with Hard Magnetic Properties of Glass-Coated MnBi Microwires	JOSE ISRAEL BETANCOURT REYES Zamora J. Jiménez A. et al.	Mrs Advances	2018
27	Morphological and local magnetic properties of cobalt clusters electrodeposited onto indium tin oxide substrates	MARGARITA RIVERA HERNANDEZ JOSE ISRAEL BETANCOURT REYES Martinez-Vado, F. I. et al.	JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS	2017

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28	Structure and magnetic properties of amorphous Fe-(Zr,Nb)-B melt spun alloys	JOSE ISRAEL BETANCOURT REYES Zamora, J.	JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS	2017
29	Morphological and magnetic properties of sol-gel synthesized meso and macroporous spheres of barium hexaferrite (BaFe <sub>12</sub> O <sub>19</sub> )	JOSE REYES GASGA JOSE ISRAEL BETANCOURT REYES Torres-Cadenas, S. et al.	JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS	2017
30	Magnetic ordering in 45 nm-diameter multisegmented FeGa/Cu nanowires: single nanowires and arrays	JOSE ISRAEL BETANCOURT REYES Ortega, E. Reddy, S.M. et al.	JOURNAL OF MATERIALS CHEMISTRY C	2017
31	Magnetocaloric response of submicron (LaAg)MnO <sub>3</sub> manganite obtained by Pechini method	JOSE ISRAEL BETANCOURT REYES Amano, M. E. Arellano-Jimenez, M. J. et al.	JOURNAL OF SOL-GEL SCIENCE AND TECHNOLOGY	2016
32	Hard magnetic properties of nanosized Sr(Fe,Al) <sub>12</sub> O <sub>19</sub> hexaferrites obtained by Pechini method	JOSE ISRAEL BETANCOURT REYES Barrera, V.	JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS	2016
33	Magnetic properties and magnetocaloric response of mixed valence La <sub>2/3</sub> Ba <sub>1/3</sub> Mn <sub>1-x</sub> Fe <sub>x</sub> O <sub>3</sub> manganites	JOSE ISRAEL BETANCOURT REYES Lopez Maldonado, L. Elizalde Galindo, J. T.	JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS	2016
34	Hard Magnetic Nanocomposites Based on Ferrimagnetic Oxides	JOSE ISRAEL BETANCOURT REYES Barrera, V. Elizalde-Galindo, J. T.	JOURNAL OF SUPERCONDUCT IVITY AND NOVEL MAGNETISM	2016
35	High-resolution analytical imaging and electron holography of magnetite particles in amyloid cores of Alzheimer's disease	MARIA JOSEFINA ARELLANO JIMENEZ JOSE ISRAEL BETANCOURT REYES Plascencia-Villa G. et al.	SCIENTIFIC REPORTS	2016
36	Magnetic Properties of Metal - Polymer Composites for Ac Applications at High Frequencies	JOSE ISRAEL BETANCOURT REYES Alejandro Verduzco, Jorge Ernesto Borja, Carlos et al.	Journal Of The Mexican Chemical Society	2016
37	Fine tuning of magnetite nanoparticle size distribution using dissymmetric potential pulses in the presence of biocompatible surfactants and the electrochemical characterization of the nanoparticles	JOSE ISRAEL BETANCOURT REYES RodriguezLopez, A. CruzRivera, H. et al.	MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS	2015

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38	Superparamagnetic response of zinc ferrite incrustated nanoparticles	JOSE ISRAEL BETANCOURT REYES LopezMaldonado, K. L. de la Presa, P. et al.	JOURNAL OF ALLOYS AND COMPOUNDS	2015
39	Mapping the magnetic and crystal structure in cobalt nanowires	JOSE ISRAEL BETANCOURT REYES Cantu-Valle J. Sanchez J.E. et al.	JOURNAL OF APPLIED PHYSICS	2015
40	Magnetocaloric effect in as-cast Gd <sub>1-x</sub> Y <sub>x</sub> alloys with x = 0.0, 0.1, 0.2, 0.3, 0.4	JOSE ISRAEL BETANCOURT REYES Lara Perez, E. S. Hernandez Paz, J. F. et al.	JOURNAL OF APPLIED PHYSICS	2014
41	Synthesis and electrochemical characterization of Ni nanoparticles by hydrazine reduction using hydroxyethyl cellulose as capping agent	JOSE ISRAEL BETANCOURT REYES Ramirez-Meneses, E. Torres-Huerta, A. M. et al.	ELECTROCHIMICA ACTA	2014
42	Mixed-valence La <sub>0.80</sub> (Ag <sub>1-x</sub> Sr <sub>x</sub> ) <sub>0.20</sub> MnO <sub>3</sub> manganites with magnetocaloric effect	M. E. Amano JOSE ISRAEL BETANCOURT REYES LAZARO HUERTA ARCOS et al.	JOURNAL OF MATERIALS SCIENCE	2014
43	Structural analysis and magnetic properties of solid solutions of Co-Cr system obtained by mechanical alloying	JOSE ISRAEL BETANCOURT REYES GABRIEL JORGE TORRES VILLASEÑOR Betancourt-Cantera, J. A. et al.	JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS	2014
44	Easy Synthesis of High-Purity BiFeO <sub>3</sub> Nanoparticles: New Insights Derived from the Structural, Optical, and Magnetic Characterization	Jose Luis Ortiz Quinonez DAVID DIAZ Inti Zumeta Dube et al.	INORGANIC CHEMISTRY	2013
45	Magnetic Properties of Mixed Valence La(AgSr)MnO <sub>3</sub> Manganites Obtained by Solid-State Reaction Method	M. E. Amano JOSE ISRAEL BETANCOURT REYES LAZARO HUERTA ARCOS	JOURNAL OF THE AMERICAN CERAMIC SOCIETY	2013
46	Magnetic properties of mixed valence La <sub>2/3</sub> Sr <sub>1/3</sub> Mn <sub>1-x</sub> T <sub>x</sub> O <sub>3</sub> (T = Fe,Cr) manganites obtained by Pechini method	JOSE ISRAEL BETANCOURT REYES ALFREDO MORALES HERNANDEZ	JOURNAL OF CHEMICAL SCIENCES	2013
47	Magnetization dynamics and magnetoimpedance effect of novel Fe-B-Si-M (M = Ta, Y) amorphous wires	S. Baez JOSE ISRAEL BETANCOURT REYES RAUL ALEJANDRO VALENZUELA MONJARAS et al.	SENSOR LETTERS	2013
48	Low-field magnetization process and complex permeability of FeCoBSiTa wires coated with hard magnetic CoNi layer	S. Baez Pimiento JOSE ISRAEL BETANCOURT REYES Hernandez-Rojas, M. E. et al.	BULLETIN OF MATERIALS SCIENCE	2013
49	M-type hexaferrites with enhanced coercivity	V. Barrera JOSE ISRAEL BETANCOURT REYES	IEEE TRANSACTIONS ON MAGNETICS	2013
50	Effect of germanium on the microstructure and the magnetic properties of Fe-B-Si amorphous alloys	D. C. Estevez JOSE ISRAEL BETANCOURT REYES	JOURNAL OF NON-CRYSTALLINE SOLIDS	2012

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51	Pulsed laser deposition and characterization of $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$	SANDRA ELIZABETH RODIL POSADA JOSE ISRAEL BETANCOURT REYES Calderon, S. et al.	MATERIALS SCIENCE IN SEMICONDUCTOR OR PROCESSING	2012
52	Magnetization dynamics and ferromagnetic resonance behavior of melt spun FeBSiGe amorphous alloys	D. C. Estevez JOSE ISRAEL BETANCOURT REYES MARIA HERLINDA MONTIEL SANCHEZ	JOURNAL OF APPLIED PHYSICS	2012
53	Magnetic domain structure and magnetization reversal in amorphous microwires with circular anisotropy: A micromagnetic approach	JOSE ISRAEL BETANCOURT REYES Hrkac, G. Schrefl, T.	JOURNAL OF APPLIED PHYSICS	2011
54	Superparamagnetic nickel nanoparticles obtained by an organometallic approach	JOSE ISRAEL BETANCOURT REYES FRANCISCO MORALES LEAL M. E. Hernandez Rojas et al.	JOURNAL OF NANOPARTICLE RESEARCH	2011
55	Micromagnetic study of magnetic domain structure and magnetization reversal in amorphous wires with circular anisotropy	JOSE ISRAEL BETANCOURT REYES Hrkac, G. Schrefl, T.	JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS	2011
56	Amorphization of Co-base alloy by mechanical alloying	GABRIEL JORGE TORRES VILLASEÑOR JOSE ISRAEL BETANCOURT REYES Bolarin-Miro, A. M. et al.	JOURNAL OF NON-CRYSTALLINE SOLIDS	2011
57	Study of Microstructure and Magnetic Properties of SrM Hexaferrites with Neodymium Oxide	JOSE ISRAEL BETANCOURT REYES Perez-Juache, T. J. Palomares-Sanchez, S. A. et al.	JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM	2011
58	Magnetization Dynamics of Amorphous Ribbons and Wires Studied by Inductance Spectroscopy	JOSE ISRAEL BETANCOURT REYES	Materials	2011
59	Magnetic properties and microstructural homogeneity in NdFeAl bulk metallic glasses	RAUL ORTEGA ZEMPOALTECA RAUL ALEJANDRO VALENZUELA MONJARAS JOSE ISRAEL BETANCOURT REYES	Physica Status Solidi C-Current Topics in Solid State Physics	2011
60	Exchange coupled nanocomposite hard magnetic alloys	JOSE ISRAEL BETANCOURT REYES Davies H.A.	MATERIALS SCIENCE AND TECHNOLOGY	2010
61	Synthesis and characterization of bulk composite Fe-Si-B alloys with small concentration of Nb and Mo	S. Baez JOSE ISRAEL BETANCOURT REYES IGNACIO ALEJANDRO FIGUEROA VARGAS	ACTA METALLURGICA SINICA-ENGLISH LETTERS	2010

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62	Magnetic properties of bulk composite FeBSiM (M=Cr,Zr) alloys with high microhardness	JOSE ISRAEL BETANCOURT REYES IGNACIO ALEJANDRO FIGUEROA VARGAS Báez S. et al.	Materials Research Society Symposium Proceedings	2010
63	Microstructure variations and their effect on the magnetic properties of a single die-cast Nd60Fe30Al10 alloy rod	RAUL ORTEGA ZEMPOALTECA JOSE ISRAEL BETANCOURT REYES RAUL ALEJANDRO VALENZUELA MONJARAS	JOURNAL OF ALLOYS AND COMPOUNDS	2010
64	Short crack propagation model applied to shot peened aluminium alloys	JOSE ISRAEL BETANCOURT REYES Solis J. Oseguera J.	Advanced Materials Research	2009
65	Structural and magnetic properties of La(0.72)(Ca(1-x)Sr(x))(0.28) MnO(3) (x=0 to 1) manganites	J. H. Olivares JOSE ISRAEL BETANCOURT REYES FRANCISCO MORALES LEAL et al.	JOURNAL OF MATERIALS RESEARCH	2009
66	Magnetic properties of B-rich (Fe, Co)-Nb-B amorphous alloys	JOSE ISRAEL BETANCOURT REYES R. Landa	JOURNAL OF ALLOYS AND COMPOUNDS	2009
67	Thermomagnetic transitions and coercivity mechanism in bulk composite Nd60Fe30Al10 alloys	RAUL ORTEGA ZEMPOALTECA JOSE ISRAEL BETANCOURT REYES RAUL ALEJANDRO VALENZUELA MONJARAS	JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS	2009
68	Influence of Ta, Y substitutions on the thermal stability, microhardness and magnetic properties of melt spun Fe-B-Si amorphous alloys	JOSE ISRAEL BETANCOURT REYES S. Baez	JOURNAL OF NON-CRYSTALLINE SOLIDS	2009
69	Characterization of magnetic materials by low-field microwave absorption techniques	RAUL ALEJANDRO VALENZUELA MONJARAS GUSTAVO ALVAREZ ARTEAGA MARIA HERLINDA MONTIEL SANCHEZ et al.	JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS	2008
70	Coercivity enhancement in boron-enriched stoichiometric REFeB melt-spun alloys	JOSE ISRAEL BETANCOURT REYES G. Cruz Arcos Schrefl, T. et al.	ACTA MATERIALIA	2008
71	Micromagnetic simulation of domain wall dynamics in Permalloy nanotubes at high frequencies	JOSE ISRAEL BETANCOURT REYES Hrkac G. Schrefl T.	JOURNAL OF APPLIED PHYSICS	2008
72	Boron enriched RE2Fe14B-base melt spun alloys with intrinsic coercivities over 1000 kA/m	JOSE ISRAEL BETANCOURT REYES Schrefl T. Davies H.A.	IEEE TRANSACTIONS ON MAGNETICS	2008
73	Magnetic properties and low frequency magnetoimpedance of novel amorphous CoFeTaBCr ribbons	JOSE ISRAEL BETANCOURT REYES JAIME FABIAN VAZQUEZ DE LA ROSA	JOURNAL OF NON-CRYSTALLINE SOLIDS	2007



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74	Magnetic properties of melt-spun FeMnAlB alloys	JOSE ISRAEL BETANCOURT REYES Nava F.	JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS	2007
75	CoFe-based amorphous alloy with high relaxation frequency	JOSE ISRAEL BETANCOURT REYES JAIME FABIAN VAZQUEZ DE LA ROSA	JOURNAL OF APPLIED PHYSICS	2007
76	Magnetic properties of B-rich nanocomposite $\alpha$ -(Fe,Co)/(NdPr) <sub>2</sub> Fe <sub>14</sub> B alloys	JOSE ISRAEL BETANCOURT REYES Davies H.A.	PHYSICA B-CONDENSED MATTER	2006
77	Electric and magnetic properties of Fe-Ni powders-polymeric matrix composites	JOSE ISRAEL BETANCOURT REYES Verduzco J.A. Ortiz N. et al.	MATERIALS LETTERS	2006
78	Deconvolution of ferromagnetic resonance in devitrification process of Co-based amorphous alloys	MARIA HERLINDA MONTIEL SANCHEZ JOSE ISRAEL BETANCOURT REYES Alvarez G. et al.	PHYSICA B-CONDENSED MATTER	2006
79	Magnetic Properties of B-Rich Nano-Composite REyTM 90-y-xNbxB10 Alloys	JOSE ISRAEL BETANCOURT REYES Davies H.A.	J IRON STEEL RES INT	2006
80	Correlations between low-field microwave absorption and magnetoimpedance in Co-based amorphous ribbons	MARIA HERLINDA MONTIEL SANCHEZ JOSE ISRAEL BETANCOURT REYES Alvarez G. et al.	APPLIED PHYSICS LETTERS	2005
81	Characterization of soft ferromagnetic materials by inductance spectroscopy and magnetoimpedance	MARIA HERLINDA MONTIEL SANCHEZ JOSE ISRAEL BETANCOURT REYES Valenzuela R. et al.	JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS	2005
82	Low-frequency magnetization processes in chemically etched Co-based amorphous ribbons	JOSE ISRAEL BETANCOURT REYES Martinez L.A. Valenzuela R.	JOURNAL OF APPLIED PHYSICS	2005
83	Enhanced coercivity in B-rich nanocomposite $\alpha$ -Fe (NdPr) <sub>2</sub> Fe <sub>14</sub> BFe <sub>3</sub> B hard magnetic alloys	JOSE ISRAEL BETANCOURT REYES Davies H.A.	APPLIED PHYSICS LETTERS	2005
84	Characterization of stress-annealed amorphous CoFeBSi ribbons by GMI and inductance spectroscopy	JOSE ISRAEL BETANCOURT REYES Sánchez M.L. Hernando B. et al.	JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS	2005
85	Effect of B, Si and Cr on the mechanical properties of Fe-based amorphous metallic ribbons	IGNACIO ALEJANDRO FIGUEROA VARGAS JOSE ISRAEL BETANCOURT REYES GABRIEL ANGEL LARA RODRIGUEZ et al.	JOURNAL OF NON-CRYSTALLINE SOLIDS	2005

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86	Frequency evolution of the magnetoimpedance effect in stress annealed Co-rich amorphous ribbons	JOSE ISRAEL BETANCOURT REYES Sánchez M.L. Valenzuela R. et al.	APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING	2005
87	Individual hydrotreating of FCC feed components	JOSE ISRAEL BETANCOURT REYES Ancheyta J. Morales P. et al.	ENERGY & FUELS	2004
88	Enhanced magnetic properties in Zr-containing rare earth-rich Didymium (Nd/Pr)-based nanocrystalline hard magnetic alloys	JOSE ISRAEL BETANCOURT REYES Davies H.A.	JOURNAL OF ALLOYS AND COMPOUNDS	2004
89	Low frequency magnetoimpedance for Co-based amorphous microwires	JOSE ISRAEL BETANCOURT REYES Valenzuela R.	JOURNAL OF NON-CRYSTALLINE SOLIDS	2003
90	Enhanced coercivity in REFeAl-based bulk amorphous alloys	JOSE ISRAEL BETANCOURT REYES Valenzuela R.	JOURNAL OF APPLIED PHYSICS	2003
91	Domain model for the magnetoimpedance of metallic ferromagnetic wires	JOSE ISRAEL BETANCOURT REYES Valenzuela R. Vazquez M.	JOURNAL OF APPLIED PHYSICS	2003
92	The effect of torsion and tensile stress on the circumferential permeability of CoFeBSi amorphous wires	JOSE ISRAEL BETANCOURT REYES Valenzuela R.	Digests Of The Intermag Conference	2003
93	The Effect of Torsion Stress on the Circumferential Permeability of CoFeBSi Amorphous Wires	JOSE ISRAEL BETANCOURT REYES RAUL VALENZUELA WONG	IEEE TRANSACTIONS ON MAGNETICS	2003
94	The Role of Cluster Formation on the Magnetic Properties of ND-Fe-Al-based Magnetic Alloys	JOSE ISRAEL BETANCOURT REYES RAUL VALENZUELA WONG	Materials Research Society Symposium Proceedings	2003
95	Mechanical properties of amorphous Fe-based melt spun ribbons with Cr additions	JOSE ISRAEL BETANCOURT REYES Verduzco J.A. Saavedra F. et al.	JOURNAL OF NON-CRYSTALLINE SOLIDS	2003
96	Influence of Zr and Nb dopant additions on the microstructure and magnetic properties of nanocomposite RE <sub>2</sub> (Fe,Co) <sub>14</sub> B/a(Fe,Co) (RE = Nd-Pr) alloys	JOSE ISRAEL BETANCOURT REYES Davies H.A.	JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS	2003
97	Effect of helical-induced anisotropy on the magnetoinductance response of Co-based amorphous wires	JOSE ISRAEL BETANCOURT REYES RAUL VALENZUELA WONG	APPLIED PHYSICS LETTERS	2003

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98	Resonant and nonresonant phenomena in measurements of ferromagnetic resonance in $\text{Co}_{66}\text{Fe}_{4}\text{B}_{12}\text{Si}_{13}\text{Nb}_{4}\text{Cu}_{1}$ amorphous ribbons	MARIA HERLINDA MONTIEL SANCHEZ JOSE ISRAEL BETANCOURT REYES Alvarez G. et al.	Intermag 2003 - Program Of The 2003 IEEE International Magnetics Conference	2003
99	The effect of torsion and tensile stress on the circumferential permeability of $\text{CoFeBSi}$ amorphous wires	JOSE ISRAEL BETANCOURT REYES RAUL VALENZUELA WONG	Intermag 2003 - Program Of The 2003 IEEE International Magnetics Conference	2003
100	Catalyst deactivation during hydroprocessing of Maya heavy crude oil. (II) Effect of temperature during time-on-stream	JOSE ISRAEL BETANCOURT REYES Ancheyta J. Centeno G. et al.	ENERGY & FUELS	2003
101	Influence of the torsion stress on the circumferential magnetization curves of $\text{CoFeBSi}$ amorphous wires	JOSE ISRAEL BETANCOURT REYES Valenzuela R.	APPLIED PHYSICS LETTERS	2002
102	Nanocrystalline hard magnetic alloys	JOSE ISRAEL BETANCOURT REYES	REVISTA MEXICANA DE FISICA	2002
103	Giant magnetoimpedance, skin depth, and domain wall dynamics	RAUL VALENZUELA WONG JOSE ISRAEL BETANCOURT REYES	IEEE TRANSACTIONS ON MAGNETICS	2002
104	Catalyst deactivation during hydroprocessing of Maya heavy crude oil. I. Evaluation at constant operating conditions	JOSE ISRAEL BETANCOURT REYES Ancheyta J. Centeno G. et al.	ENERGY & FUELS	2002
105	Giant magnetoimpedance, skin depth and domain wall dynamics	RAUL VALENZUELA WONG JOSE ISRAEL BETANCOURT REYES	Digests Of The Intermag Conference	2002
106	Magnetic properties of bulk amorphous $\text{RE}_{60}\text{Fe}_{(30-x)}\text{Al}_{10}\text{T}_x$ ( $x = 0-5$ . RE = Nd-Pr, T = B, Cu, Zr) alloys	JOSE ISRAEL BETANCOURT REYES RAUL VALENZUELA WONG	Digests Of The Intermag Conference	2002
107	Hydroprocessing of Maya heavy crude oil in two reaction stages	JOSE ISRAEL BETANCOURT REYES Ancheyta J. Marroquín G. et al.	APPLIED CATALYSIS A-GENERAL	2002
108	Giant magnetoimpedance in Co-based microwires at low frequencies (100 Hz-13 MHz)	JOSE ISRAEL BETANCOURT REYES Valenzuela R. Vazquez M.	JOURNAL OF APPLIED PHYSICS	2002

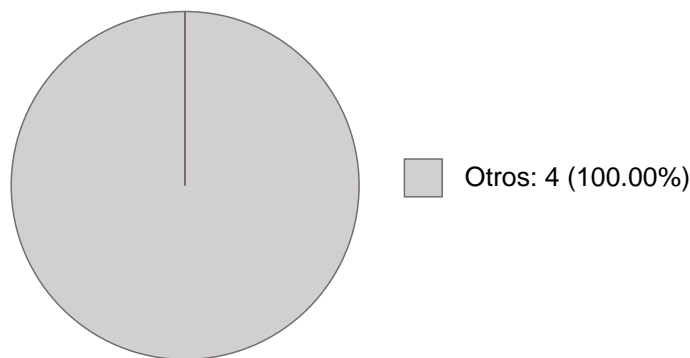
## JOSE ISRAEL BETANCOURT REYES

109	Effect of the grain size on the magnetic properties of nanophase REFeB alloys	JOSE ISRAEL BETANCOURT REYES Davies H.A.	JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS	2002
110	Coercivity mechanism in nanophase (Nd-Pr)-Fe-B melt spun alloys	JOSE ISRAEL BETANCOURT REYES Davies H.A.	PHYSICA B-CONDENSED MATTER	2002
111	Effects of torsion stress on the domain wall unpinning AC field in amorphous FeCoBSi wires	JOSE ISRAEL BETANCOURT REYES Garduno M. Valenzuela R.	PHYSICA B-CONDENSED MATTER	2002
112	Magnetoimpedance and magnetization processes in amorphous wires under torsion	JOSE ISRAEL BETANCOURT REYES Garduo M. García K.L. et al.	JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS	2002
113	High coercivity Zr and Co substituted (Nd-Pr)-Fe-B nanophase hard magnetic alloys	JOSE ISRAEL BETANCOURT REYES Davies H.A.	IEEE TRANSACTIONS ON MAGNETICS	2001
114	Nanophase (Nd/Pr) <sub>2</sub> Fe <sub>14</sub> B/a-Fe alloys: Attractive materials for isotropic magnets with enhanced properties	JOSE ISRAEL BETANCOURT REYES Davies H.A. Harland C.L.	SCRIPTA MATERIALIA	2001
115	Magnetic properties of nanocrystalline didymium (Nd-Pr)-Fe-B alloys	JOSE ISRAEL BETANCOURT REYES Davies H.A.	JOURNAL OF APPLIED PHYSICS	1999
116	Praseodymium and neodymium-based nanocrystalline hard magnetic alloys	JOSE ISRAEL BETANCOURT REYES Davies H.A. Harland C.L. et al.	Materials Research Society Symposium Proceedings	1999
117	Magnetization Dynamics of Pinned Domain Walls in Partially Crystallized Ribbons	JOSE ISRAEL BETANCOURT REYES Valenzuela R.	IEEE TRANSACTIONS ON MAGNETICS	1997
118	Nanocrystallization studies in Co-rich amorphous alloys	JOSE ISRAEL BETANCOURT REYES SERGIO ABURTO CASTAÑEDA VIVIANNE MARQUINA FABREGA et al.	JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS	1995

**JOSE ISRAEL BETANCOURT REYES**

**LIBROS Y CAPITULOS CON ISBN**

**Obras con registro ISBN**

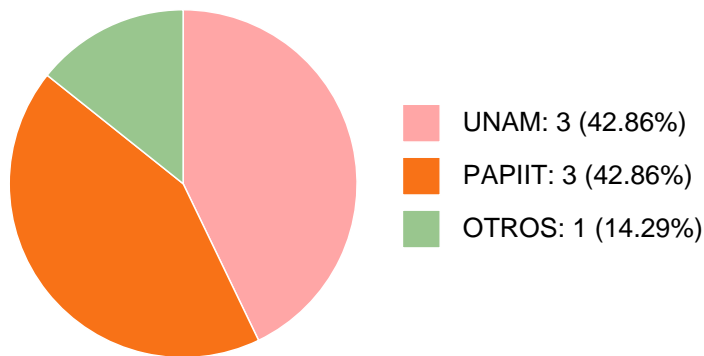


#	Título	Autores	Alcance	Año	ISBN
1	Magnetic properties of B-rich nanocomposite REy(TM)90-y-xMxB10 (RE=Nd+Pr, TM=Fe, Fe+Co, M=Nb, Ta, y=8,10, x=0-4) alloys	JOSE ISRAEL BETANCOURT REYES Davies H.A. Ahmad I.	Conferenc e Paper	2006	1424414792
2	Effect of metal-to-glass ratio on the low field microwave absorption at 9.4 GHz of glass-coated CoFeBSi microwires	MARIA HERLINDA MONTIEL SANCHEZ JOSE ISRAEL BETANCOURT REYES Alvarez G. et al.	Conferenc e Paper	2006	1424414792
3	Magnetic properties of bulk amorphous RE60Fe(30-x)Al10 Tx (x = 0-5, RE = Nd-Pr, T = B, Cu, Zr) alloys	JOSE ISRAEL BETANCOURT REYES RAUL VALENZUELA WONG Fidler J. et al.	Conferenc e Paper	2002	0780373650
4	Giant magnetoimpedance, skin depth and domain wall dynamics	RAUL VALENZUELA WONG JOSE ISRAEL BETANCOURT REYES Fidler J. et al.	Conferenc e Paper	2002	0780373650

**JOSE ISRAEL BETANCOURT REYES**

**PARTICIPACIÓN EN PROYECTOS**

**Histórico de participación en proyectos**



#	Nombre	Participantes	Fuente	Fecha inicio	Fecha fin
1	Jefatura materiales metálicos y cerámicos	JOSE ISRAEL BETANCOURT REYES	Presupuesto de la UNAM asignado a la Dependencia	01-01-2018	31-12-2018
2	Materiales magnéticos iii.	JOSE ISRAEL BETANCOURT REYES	Presupuesto de la UNAM asignado a la Dependencia	01-01-2018	31-12-2021
3	Síntesis, caracterización y aplicaciones de aleaciones magnéticas de manganeso	JOSE ISRAEL BETANCOURT REYES	Recursos PAPIIT	01-01-2016	31-12-2018
4	Síntesis, estructura, propiedades magnéticas y aplicaciones de nanopartículas de metales nobles.	JOSE ISRAEL BETANCOURT REYES	Recursos PAPIIT	01-01-2019	31-12-2021
5	Desarrollo de Nanomateriales Magnéticos con propiedades óptimas para aplicaciones biomédicas.	JOSE ISRAEL BETANCOURT REYES	Recursos CONAHCyT	26-10-2020	26-10-2024
6	Materiales magnéticos iii.	JOSE ISRAEL BETANCOURT REYES	Presupuesto de la UNAM asignado a la Dependencia	01-01-2022	31-12-2024



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



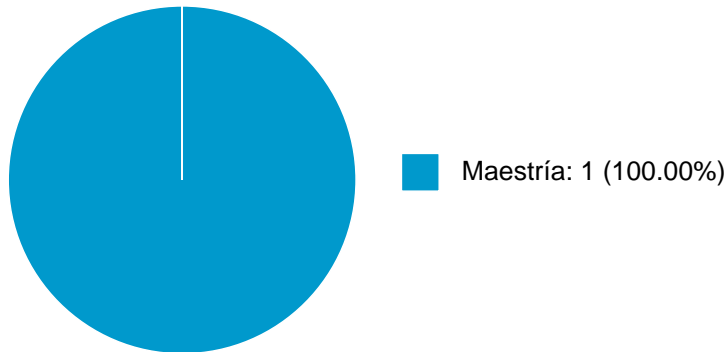
**JOSE ISRAEL BETANCOURT REYES**

7	Aleaciones de Heusler nanoestructuradas con efecto magnetocalórico: procesamiento, caracterización y aplicaciones	JOSE ISRAEL BETANCOURT REYES	Recursos PAPIIT	01-01-2023	31-12-2024
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**JOSE ISRAEL BETANCOURT REYES**

**PARTICIPACIÓN EN TESIS**

**Histórico de Colaboraciones en Tesis**



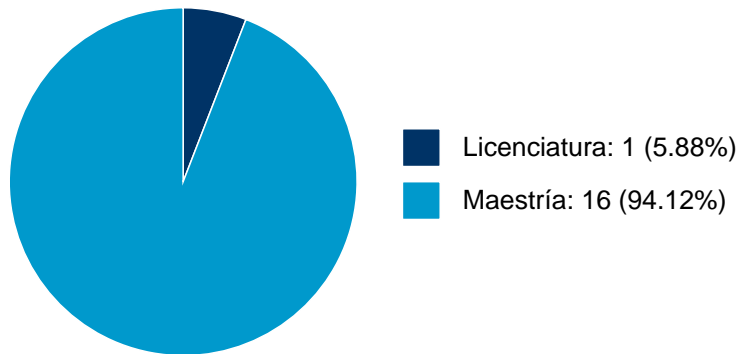
#	Título del documento	Tipo de Tesis	Sinodales	Autores	Entidad	Año
1	Procesamiento, microestructura y propiedades magnéticas de aleaciones base Fe y Co	Tesis de Maestría	JOSE ISRAEL BETANCOURT REYES,	Miranda Cordero, Aida Guadalupe,	Instituto de Investigaciones en Materiales,	2021



**JOSE ISRAEL BETANCOURT REYES**

**DOCENCIA IMPARTIDA**

**Histórico de docencia**



#	Nivel titulación	Asignatura	Entidad	Alumnos	Semestre
1	Maestría	FUNDAMENTOS DE MATEMÁTICAS PARA MATERIALES	Instituto de Investigaciones en Materiales	4	2024-2
2	Maestría	FUNDAMENTOS DE MATEMÁTICAS PARA MATERIALES	Instituto de Investigaciones en Materiales	1	2024-1
3	Maestría	FUNDAMENTOS DE MATEMÁTICAS PARA MATERIALES	Instituto de Investigaciones en Materiales	3	2023-2
4	Maestría	FUNDAMENTOS DE MATEMÁTICAS PARA MATERIALES	Instituto de Investigaciones en Materiales	2	2023-1
5	Maestría	FUNDAMENTOS DE MATEMÁTICAS PARA MATERIALES	Instituto de Investigaciones en Materiales	2	2022-2
6	Maestría	FUNDAMENTOS DE MATEMÁTICAS PARA MATERIALES	Instituto de Investigaciones en Materiales	3	2022-1
7	Maestría	FUNDAMENTOS DE MATEMÁTICAS PARA MATERIALES	Instituto de Investigaciones en Materiales	2	2020-2

**JOSE ISRAEL BETANCOURT REYES**

8	Maestría	FUNDAMENTOS DE MATEMÁTICAS PARA MATERIALES	Instituto de Investigaciones en Materiales	1	2020-1
9	Maestría	FUNDAMENTOS DE MATEMATICAS PARA MATERIALES	Instituto de Investigaciones en Materiales	7	2018-1
10	Maestría	FUNDAMENTOS DE MATEMÁTICAS PARA MATERIALES	Instituto de Investigaciones en Materiales	1	2017-2
11	Maestría	MATEMATICAS APLICADAS A MATERIALES	Instituto de Investigaciones en Materiales	8	2014-2
12	Maestría	SEMINARIO DE INVESTIGACION II	Instituto de Investigaciones en Materiales	1	2014-1
13	Maestría	PROPIEDADES MAGNETICAS DE MATERIALES	Instituto de Investigaciones en Materiales	1	2013-2
14	Maestría	SEMINARIO DE INVESTIGACION I	Instituto de Investigaciones en Materiales	1	2013-2
15	Licenciatura	INTRODUC. A LA FISICA DE MATERIALES	Facultad de Ciencias	14	2013-2
16	Maestría	MATEMATICAS APLICADAS A MATERIALES	Instituto de Investigaciones en Materiales	9	2011-2
17	Maestría	MATEMATICAS APLICADAS A MATERIALES I	Instituto de Investigaciones en Materiales	8	2010-1



**JOSE ISRAEL BETANCOURT REYES**

**PATENTES**

#	Título	Inventores	Sección	Año
1	PROCESO PARA LA OBTENCION DE SUPERIMANES NANOCOMPOSITOS CON DOS FASES MAGNETICAS Y GEOMETRIAS COMPLEJAS.	JOSE ISRAEL BETANCOURT REYES, ISMELI ALFONSO LOPEZ, IGNACIO ALEJANDRO FIGUEROA VARGAS,	ELECTRICITYPERFORMING OPERATIONS; TRANSPORTING	2019

**JOSE ISRAEL BETANCOURT REYES**

**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