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Coordinación de Planeación, Evaluación y
Simplificación de la Gestión Institucional
Reporte individual



RUBEN GERARDO BARRERA Y PEREZ

Datos Generales

Nombre: RUBEN GERARDO BARRERA Y PEREZ

Máximo nivel de estudios: DOCTORADO

Antigüedad académica en la UNAM: 52 años

Nombramientos

Vigente: INVESTIGADOR EMERITO TC Definitivo
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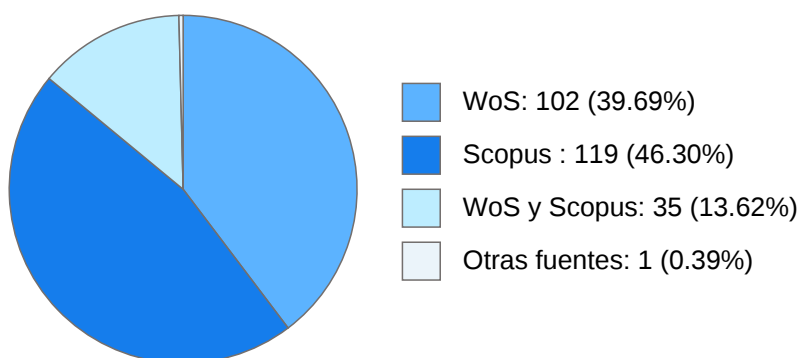
Estímulos, programas, premios y reconocimientos

SNI Emérito 2011 - VIGENTE
SNI III - 2010
PRIDE D 2008
PASPA Estancias Sabáticas 2007 - 2008
PUN Investigación en ciencias exactas 2003

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DOCUMENTOS EN REVISTAS

Histórico de Documentos



#	Título	Autores	Revista	Año
1	Analysis of the radiative corrections and dynamic extensions to the local field in the effective refractive index of particle suspensions	OMAR WILFRIDO VAZQUEZ ESTRADA AUGUSTO GARCIA VALENZUELA ANAYS ACEVEDO BARRERA et al.	JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER	2025
2	Full dynamic corrections to the Maxwell Garnett mixing formula and corresponding extensions beyond the dipolar approximation	AUGUSTO GARCIA VALENZUELA ANAYS ACEVEDO BARRERA OMAR WILFRIDO VAZQUEZ ESTRADA et al.	JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER	2023
3	Complete Dynamic Extensions to Maxwell Garnett's Mixing Formula and the Origin of Dependent Scattering in Nanofluids	AUGUSTO GARCIA VALENZUELA ANAYS ACEVEDO BARRERA ALEXANDER NAHMAD ROHEN et al.	International Conference On Metamaterials, Photonic Crystals And Plasmonics	2022
4	Enhancement of Light Absorption by Leaky Modes in a Random Plasmonic Metasurface	ALEJANDRO REYES CORONADO GIUSEPPE PIRRUCCIO JONATHAN ALEXIS URRUTIA ANGUIANO et al.	JOURNAL OF PHYSICAL CHEMISTRY C	2022

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5	Time-dependent forces between a swift electron and a small nanoparticle within the dipole approximation	JESUS CASTREJON FIGUEROA JOSE ANGEL CASTELLANOS REYES CARLOS ALBERTO MACIEL ESCUDERO et al.	PHYSICAL REVIEW B	2021
6	On the refraction and reflection properties of symmetric and asymmetric electromagnetic beams	RUBEN GERARDO BARRERA Y PEREZ Carlos Prieto Lopez	EUROPEAN JOURNAL OF PHYSICS	2020
7	Mie-Type Calculation of the Generalized Electromagnetic Nonlocal Conductivity Tensor for a Sphere and Its Equivalence to the T-Matrix Operator	EDAHÍ ANTONIO GUTIERREZ REYES RUBEN GERARDO BARRERA Y PEREZ AUGUSTO GARCIA VALENZUELA	MATHEMATICAL PROBLEMS IN ENGINEERING	2019
8	Internal reflectance from a disordered monolayer of small gold nanoparticles on a glass substrate: Theory vs. experiment	DIANA PINEDA VAZQUEZ ARTURO RODRIGUEZ GOMEZ ALEJANDRO REYES CORONADO et al.	INTERNATIONAL CONFERENCES & EXHIBITION ON NANOTECHNOLOGIES, ORGANIC ELECTRONICS & NANOMEDICINE, NANOTECHNOLOGY 2020, PT 1	2019
9	The Electron Bubble and the He 60 Fullerene: A First-Principles Approach	RUBEN SANTAMARIA ORTIZ JACQUES ANDRE CLAUDE SOULLARD SAINTRAIS RUBEN GERARDO BARRERA Y PEREZ	JOURNAL OF LOW TEMPERATURE PHYSICS	2019
10	Analytical modeling of optical reflectivity of random plasmonic nano-monolayers	ALEJANDRO REYES CORONADO OMAR WILFRIDO VAZQUEZ ESTRADA AUGUSTO GARCIA VALENZUELA et al.	OPTICS EXPRESS	2018
11	Optical Coherent Reflection from a Confined Colloidal Film: Modeling and Experiment	AUGUSTO GARCIA VALENZUELA RUBEN GERARDO BARRERA Y PEREZ Gesuri Morales-Luna	JOURNAL OF PHYSICAL CHEMISTRY B	2018
12	Reducing light-scattering losses in nanocolloids by increasing average inter-particle distance	AUGUSTO GARCIA VALENZUELA RUBEN GERARDO BARRERA Y PEREZ Marquez-Islas, Roberto	APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING	2017
13	Experimental Test of Reflectivity Formulas for Turbid Colloids: Beyond the Fresnel Reflection Amplitudes	AUGUSTO GARCIA VALENZUELA RUBEN GERARDO BARRERA Y PEREZ Morales-Luna G. et al.	JOURNAL OF PHYSICAL CHEMISTRY B	2016

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14	The refractive index of non-absorbing nanofluids and applications	AUGUSTO GARCIA VALENZUELA CELIA ANGELINA SANCHEZ PEREZ RUBEN GERARDO BARRERA Y PEREZ et al.	OPTICS, PHOTONICS, AND DIGITAL TECHNOLOGIES FOR IMAGING APPLICATIONS VIII	2014
15	Extension of Fresnels formulas for turbid colloidal suspensions: A rigorous treatment	EDAHI ANTONIO GUTIERREZ REYES AUGUSTO GARCIA VALENZUELA RUBEN GERARDO BARRERA Y PEREZ	JOURNAL OF PHYSICAL CHEMISTRY B	2014
16	Negative refraction in anisotropic metamaterials	CARLOS PRIETO LOPEZ RUBEN GERARDO BARRERA Y PEREZ	PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS	2012
17	Overview of an effective-medium approach to the reflection and refraction of light at a turbid colloidal half-space	EDAHI ANTONIO GUTIERREZ REYES AUGUSTO GARCIA VALENZUELA RUBEN GERARDO BARRERA Y PEREZ	PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS	2012
18	Multiple-scattering model for the coherent reflection and transmission of light from a disordered monolayer of particles	AUGUSTO GARCIA VALENZUELA EDAHI ANTONIO GUTIERREZ REYES RUBEN GERARDO BARRERA Y PEREZ	JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION	2012
19	Nanoparticle movement: Plasmonic forces and physical constraints	RUBEN GERARDO BARRERA Y PEREZ Batson, P. E. Reyes-Coronado, A. et al.	Ultramicroscop y	2012
20	Nanoparticle Plasmonic Forces: Pulling and Pushing!	ALEJANDRO REYES CORONADO RUBEN GERARDO BARRERA Y PEREZ Batson, P.E. et al.	MICROSCOPY AND MICROANALYSIS	2012
21	Sizing colloidal particles from their contribution to the effective refractive index: Experimental results	CELIA ANGELINA SANCHEZ PEREZ AUGUSTO GARCIA VALENZUELA ROBERTO YSACC SATO BERRU et al.	4TH EUROPEAN SYMPOSIUM ON FIRE SAFETY SCIENCE	2011
22	Theoretical model for optical sensing of a random monolayer of particles	AUGUSTO GARCIA VALENZUELA CELIA ANGELINA SANCHEZ PEREZ EDAHI ANTONIO GUTIERREZ REYES et al.	Progress in Electromagneti cs Research Symposium	2011
23	Kinetics of the plasmon optical response of Au nanoparticles/TiO2 catalyst under O-2 and H-2 followed by differential diffuse reflectance spectroscopy	RUBEN GERARDO BARRERA Y PEREZ C. Louis Borensztein, Y. et al.	EUROPEAN PHYSICAL JOURNAL D	2011

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24	Plasmonic Nanobilliards: Controlling Nanoparticle Movement Using Forces Induced by Swift Electrons	A. Reyes Coronado RUBEN GERARDO BARRERA Y PEREZ Batson, P. E. et al.	NANO LETTERS	2011
25	Monitoring of the Plasmon Resonance of Gold Nanoparticles in Au/TiO ₂ Catalyst under Oxidative and Reducing Atmospheres	RUBEN GERARDO BARRERA Y PEREZ Borensztein, Y. Delannoy, L. et al.	JOURNAL OF PHYSICAL CHEMISTRY C	2010
26	On the definition of the Poynting vector: A non-local derivation	RUBEN GERARDO BARRERA Y PEREZ WOLF LUIS MOCHAN BACKAL AUGUSTO GARCIA VALENZUELA et al.	PHYSICA B-CONDENSED MATTER	2010
27	On the retrieval of particle size from the effective optical properties of colloids	AUGUSTO GARCIA VALENZUELA CELIA ANGELINA SANCHEZ PEREZ RUBEN GERARDO BARRERA Y PEREZ et al.	PHYSICA B-CONDENSED MATTER	2010
28	Augusto Garcia: Some remembrances	RUBEN GERARDO BARRERA Y PEREZ	AIP Conference Proceedings	2010
29	Electromagnetic forces on plasmonic nanoparticles induced by fast electron beams	RUBEN GERARDO BARRERA Y PEREZ Reyes-Coronado, Alejandro Batson, Philip E. et al.	PHYSICAL REVIEW B	2010
30	Analysis in color matching algorithms for polymeric film [Análisis de algoritmos empleados en los procesos de igualación del color para películas poliméricas]	ANA CAROLINA KEIMAN FREIRE RUBEN GERARDO BARRERA Y PEREZ	Informacion Tecnologica	2010
31	Recent advances on the effective optical properties of turbid colloids	RUBEN GERARDO BARRERA Y PEREZ EDAHI ANTONIO GUTIERREZ REYES AUGUSTO GARCIA VALENZUELA	AIP Conference Proceedings	2010
32	On the measurement of the effective refractive index of biological colloids	AUGUSTO GARCIA VALENZUELA CELIA ANGELINA SANCHEZ PEREZ ALEJANDRO REYES CORONADO et al.	Key Engineering Materials	2008
33	Rigorous theoretical framework for particle sizing in turbid colloids using light refraction	AUGUSTO GARCIA VALENZUELA RUBEN GERARDO BARRERA Y PEREZ EDAHI ANTONIO GUTIERREZ REYES	OPTICS EXPRESS	2008
34	Nonlocal nature of the electrodynamic response of colloidal systems	RUBEN GERARDO BARRERA Y PEREZ ALEJANDRO REYES CORONADO AUGUSTO GARCIA VALENZUELA	PHYSICAL REVIEW B	2007
35	Coherent optical reflectance from a monolayer of large particles adsorbed on a glass surface	AUGUSTO GARCIA VALENZUELA RUBEN GERARDO BARRERA Y PEREZ Peña-Gomar M.C. et al.	APPLIED OPTICS	2006
36	On the non-local character of the electromagnetic response of colloidal systems	RUBEN GERARDO BARRERA Y PEREZ ALEJANDRO REYES CORONADO AUGUSTO GARCIA VALENZUELA	Optics InfoBase Conference Papers	2006

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37	Radiation-transfer calculations for the diffuse reflectance from pigmented coatings	EDUARDO NAHMAD ACHAR RUBEN GERARDO BARRERA Y PEREZ Curiel F.	Piers 2005 - Progress In Electromagnetics Research Symposium, Proceedings	2005
38	Optical characterization of a turbid colloid by light reflection around the critical angle	AUGUSTO GARCIA VALENZUELA CELIA ANGELINA SANCHEZ PEREZ ALEJANDRO REYES CORONADO et al.	AIP Conference Proceedings	2005
39	Measurement of low optical absorption in highly scattering media using the thermal lens effect	AUGUSTO GARCIA VALENZUELA RUBEN GERARDO BARRERA Y PEREZ Olivares J.A. et al.	J PHYS IV	2005
40	Measurement of the effective refractive index of a turbid colloidal suspension using light refraction	ALEJANDRO REYES CORONADO AUGUSTO GARCIA VALENZUELA CELIA ANGELINA SANCHEZ PEREZ et al.	NEW JOURNAL OF PHYSICS	2005
41	Coherent reflection of light from a turbid suspension of particles in an internal-reflection configuration: Theory versus experiment	AUGUSTO GARCIA VALENZUELA RUBEN GERARDO BARRERA Y PEREZ CELIA ANGELINA SANCHEZ PEREZ et al.	OPTICS EXPRESS	2005
42	A model of the angular distribution of light scattered by multilayered media	RUBEN GERARDO BARRERA Y PEREZ Da Silva A. Andraud C. et al.	JOURNAL OF MODERN OPTICS	2004
43	Optical properties of an eccentrically located pigment within an air bubble	RUBEN GERARDO BARRERA Y PEREZ Auger J.-C. Stout B.	PROGRESS IN ORGANIC COATINGS	2004
44	Optical reflectance of a composite medium with a sparse concentration of large spherical inclusions	AUGUSTO GARCIA VALENZUELA RUBEN GERARDO BARRERA Y PEREZ	PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS	2003
45	Scattering efficiency of clusters composed by aggregated spheres	RUBEN GERARDO BARRERA Y PEREZ Auger J.-C. Stout B.	JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER	2003
46	Electromagnetic response of a random half-space of Mie scatterers within the effective-field approximation and the determination of the effective optical coefficients	AUGUSTO GARCIA VALENZUELA RUBEN GERARDO BARRERA Y PEREZ	JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER	2003
47	Optical properties of metal nanoparticles with arbitrary shapes	ANA CECILIA NOGUEZ GARRIDO RUBEN GERARDO BARRERA Y PEREZ Sosa I.O.	JOURNAL OF PHYSICAL CHEMISTRY B	2003

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48	Coherent reflectance in a system of random Mie scatterers and its relation to the effective-medium approach	RUBEN GERARDO BARRERA Y PEREZ AUGUSTO GARCIA VALENZUELA	JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION	2003
49	Effective electric and magnetic susceptibility of dilute systems of dielectric and metallic Mie particles	AUGUSTO GARCIA VALENZUELA RUBEN GERARDO BARRERA Y PEREZ	PHYSICA B-CONDENSED MATTER	2003
50	Visible spectral dependence of the scattering and absorption coefficients of pigmented coatings from inversion of diffuse reflectance spectra	RUBEN GERARDO BARRERA Y PEREZ Curiel F. Vargas W.E.	APPLIED OPTICS	2002
51	Light scattering by isolated nanoparticles with arbitrary shapes	ANA CECILIA NOGUEZ GARRIDO RUBEN GERARDO BARRERA Y PEREZ Sosa I.O.	Materials Research Society Symposium Proceedings	2002
52	Scattering properties of rutile pigments located eccentrically within microvoids	RUBEN GERARDO BARRERA Y PEREZ Auger J.-C. Stout B. et al.	JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER	2001
53	'Superluminal' transmission of light pulses through optically opaque barriers	VICTOR MANUEL ROMERO ROCHIN RUBEN GERARDO BARRERA Y PEREZ Duarte-Zamorano R.P. et al.	PHYS REV E	2001
54	Calculation of electron-energy-loss spectra of composites and self-similar structures	CARLOS IGNACIO MENDOZA RUIZ RUBEN GERARDO BARRERA Y PEREZ Sosa I.O.	PHYSICAL REVIEW B	2001
55	Temperature evolution of the spectral peak in high-temperature superconductors	RUBEN GERARDO BARRERA Y PEREZ Sosa I.O. Mendoza C.I.	PHYSICAL REVIEW B	2001
56	Optical characterization of a spheroidal nanoparticle on a substrate	RUBEN GERARDO BARRERA Y PEREZ Roman-Velazquez Carlos E. Noguez Cecilia	Materials Research Society Symposium Proceedings	2000
57	Multipolar plasma resonances in supported alkali-metal nanoparticles	RUBEN GERARDO BARRERA Y PEREZ CARLOS ENRIQUE ROMAN VELAZQUEZ ANA CECILIA NOGUEZ GARRIDO et al.	PHYSICA B-CONDENSED MATTER	2000

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58	Optical properties of a spheroid-substrate system	ANA CECILIA NOGUEZ GARRIDO RUBEN GERARDO BARRERA Y PEREZ Román-Velazquez C.E.	PHYS STATUS SOLIDI A	1999
59	Substrate-induced multipolar resonances in supported free-electron metal spheres	JAVIER NIETO GUTIERREZ RUBEN GERARDO BARRERA Y PEREZ Beitia C. et al.	PHYSICAL REVIEW B	1999
60	Energy loss of electrons traveling parallel to the interface of a semi-infinite granular composite	CARLOS IGNACIO MENDOZA RUIZ RUBEN GERARDO BARRERA Y PEREZ Fuchs R.	PHYSICAL REVIEW B	1998
61	Multipolar and disorder effects in the optical properties of granular composites	ANA CECILIA NOGUEZ GARRIDO RUBEN GERARDO BARRERA Y PEREZ	PHYSICAL REVIEW B	1998
62	Surface correlation effects on gloss	RUBEN GERARDO BARRERA Y PEREZ Alexander-Katz R.	JOURNAL OF POLYMER SCIENCE PART B-POLYMER PHYSICS	1998
63	Local-field effects at crystalline surfaces: Electron energy loss from ordered arrays of spheres	CARLOS IGNACIO MENDOZA RUIZ RUBEN GERARDO BARRERA Y PEREZ Fuchs R.	PHYS STATUS SOLIDI A	1998
64	Real-time investigation of potassium growth by surface differential reflectance spectroscopy	RUBEN GERARDO BARRERA Y PEREZ Borensztein Y. Beitia C.	PHYS STATUS SOLIDI A	1998
65	Electron energy-loss spectroscopy of inhomogeneous systems	CARLOS IGNACIO MENDOZA RUIZ RUBEN GERARDO BARRERA Y PEREZ Fuchs R. et al.	PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS	1997
66	Spectral representations of the electron energy loss in composite media	RUBEN GERARDO BARRERA Y PEREZ Fuchs R.	PHYSICAL REVIEW B	1996
67	Theory of electron energy loss in a random system of spheres	RUBEN GERARDO BARRERA Y PEREZ Fuchs R.	PHYSICAL REVIEW B	1995
68	Three-particle correlations in the optical properties of granular composites	RUBEN GERARDO BARRERA Y PEREZ CARLOS IGNACIO MENDOZA RUIZ	SOLAR ENERGY MATERIALS AND SOLAR CELLS	1994
69	Disorder effects on the effective dielectric response of a linear chain of polarizable spheres	ANA CECILIA NOGUEZ GARRIDO RUBEN GERARDO BARRERA Y PEREZ	PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS	1994

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70	Optical reflectance anisotropy of Ag and Au (110) single crystals	WOLF LUIS MOCHAN BACKAL RUBEN GERARDO BARRERA Y PEREZ Borensztein Y. et al.	PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS	1994
71	Preface	WOLF LUIS MOCHAN BACKAL RUBEN GERARDO BARRERA Y PEREZ	PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS	1994
72	Light scattering by injection molded particle filled polymers	RUBEN GERARDO BARRERA Y PEREZ Méndez E.R. Alexander-Katz R.	PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS	1994
73	Large anisotropy in the optical reflectance of Ag(110) single crystals: Experiment and theory	WOLF LUIS MOCHAN BACKAL RUBEN GERARDO BARRERA Y PEREZ Borensztein Y. et al.	PHYSICAL REVIEW LETTERS	1993
74	Effective dielectric response of a composite with aligned spheroidal inclusions	RUBEN GERARDO BARRERA Y PEREZ WOLF LUIS MOCHAN BACKAL Giraldo J.	PHYSICAL REVIEW B	1993
75	Wave behavior in anharmonic Penrose lattices	CHUMIN WANG CHEN ORACIO NAVARRO CHAVEZ RAFAEL ANGEL BARRIO PAREDES et al.	JOURNAL OF NON-CRYSTALLINE SOLIDS	1993
76	Optical anisotropies of Ag single crystals	WOLF LUIS MOCHAN BACKAL RUBEN GERARDO BARRERA Y PEREZ Borensztein Y. et al.	Thin Solid Films	1993
77	A new diagrammatic summation for the effective dielectric response of composites	RUBEN GERARDO BARRERA Y PEREZ ANA CECILIA NOGUEZ GARRIDO Anda E.V.	JOURNAL OF CHEMICAL PHYSICS	1992
78	Local-field effects on the reflectance anisotropy of Si(110):H	WOLF LUIS MOCHAN BACKAL RUBEN GERARDO BARRERA Y PEREZ Del Sole R.	PHYSICAL REVIEW B	1991
79	Optical properties of two-dimensional disordered systems on a substrate	RUBEN GERARDO BARRERA Y PEREZ MARCELO DEL CASTILLO MUSSOT GUILLERMO MONSIVAIS GALINDO et al.	PHYSICAL REVIEW B	1991
80	Effective dielectric response of polydispersed composites	RUBEN GERARDO BARRERA Y PEREZ WOLF LUIS MOCHAN BACKAL GUILLERMO MONSIVAIS GALINDO et al.	PHYSICAL REVIEW B	1990
81	Reflectance anisotropy of the (110) reconstructed surface of gold	WOLF LUIS MOCHAN BACKAL RUBEN GERARDO BARRERA Y PEREZ Wang S.	PHYSICAL REVIEW B	1990

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82	A diagrammatic approach to the optical properties of composites	RUBEN GERARDO BARRERA Y PEREZ WOLF LUIS MOCHAN BACKAL Monsivals G. et al.	PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS	1989
83	Renormalized polarizability in the Maxwell Garnett theory	RUBEN GERARDO BARRERA Y PEREZ GUILLERMO MONSIVAIS GALINDO WOLF LUIS MOCHAN BACKAL et al.	PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS	1989
84	Effects of the dispersion of sizes in the dielectric response of composites	RUBEN GERARDO BARRERA Y PEREZ MARCELO DEL CASTILLO MUSSOT GUILLERMO MONSIVAIS GALINDO et al.	PHYSICAL REVIEW B	1989
85	Diagrammatic approach to the effective dielectric response of composites	RUBEN GERARDO BARRERA Y PEREZ Monsivis G. Mochan W.L. et al.	PHYSICAL REVIEW B	1989
86	Surface plasmon effects on the optical reflectivity of adsorbed molecular multilayers	MARCELO DEL CASTILLO MUSSOT RUBEN GERARDO BARRERA Y PEREZ WOLF LUIS MOCHAN BACKAL et al.	SOLID STATE COMMUNICATIO NS	1989
87	Electromagnetic field near rough surfaces of spatially dispersive systems	RUBEN GERARDO BARRERA Y PEREZ Wang S. Mochan W.L.	PHYSICAL REVIEW B	1989
88	Renormalized polarizability in the Maxwell Garnett theory	RUBEN GERARDO BARRERA Y PEREZ GUILLERMO MONSIVAIS GALINDO Mochán W.L.	PHYSICAL REVIEW B	1988
89	Electron-hole pair excitation in multilayered conducting heterostructures	MARCELO DEL CASTILLO MUSSOT RUBEN GERARDO BARRERA Y PEREZ Giraldo J. et al.	PHYSICAL REVIEW B	1988
90	Effect of plasma waves on the optical properties of metal-insulator superlattices	MARCELO DEL CASTILLO MUSSOT RUBEN GERARDO BARRERA Y PEREZ Mochan W.L.	PHYSICAL REVIEW B	1987
91	Electronic structure of a two-dimensional Penrose lattice: Single- and two-component systems	RUBEN GERARDO BARRERA Y PEREZ Aguilera-Granja F. Meja-Lira F. et al.	PHYSICAL REVIEW B	1987
92	Local-field effect on the surface conductivity of adsorbed overlayers	RUBEN GERARDO BARRERA Y PEREZ Mochan W.L.	PHYSICAL REVIEW LETTERS	1986
93	Reflectance of a rough insulating overlayer on a metal with a nonlocal optical response	RUBEN GERARDO BARRERA Y PEREZ Mochán W.L. Fuchs R.	PHYSICAL REVIEW B	1986
94	Erratum: Intrinsic surface-induced optical anisotropies of cubic crystals: Local-field effect (Physical Review Letters (1985) 55, 25, (2829))	WOLF LUIS MOCHAN BACKAL RUBEN GERARDO BARRERA Y PEREZ	PHYSICAL REVIEW LETTERS	1985

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95	Electromagnetic response of systems with spatial fluctuations. II. Applications	RUBEN GERARDO BARRERA Y PEREZ Mochn W.L.	PHYSICAL REVIEW B	1985
96	Intrinsic surface-induced optical anisotropies of cubic crystals: Local-field effect	RUBEN GERARDO BARRERA Y PEREZ Mochn W.L.	PHYSICAL REVIEW LETTERS	1985
97	Electromagnetic response of systems with spatial fluctuations. I. General formalism	RUBEN GERARDO BARRERA Y PEREZ Mochn W.L.	PHYSICAL REVIEW B	1985
98	Vector spherical harmonics and their application to magnetostatics	RUBEN GERARDO BARRERA Y PEREZ Estevez G.A. Giraldo J.	EUROPEAN JOURNAL OF PHYSICS	1985
99	An improvement to the comparison equation method for solving the Schrödinger equation	RUBEN GERARDO BARRERA Y PEREZ Giraldo J. Estévez G.A.	CHEMICAL PHYSICS LETTERS	1985
100	SURFACE LOCAL-FIELD EFFECT.	WOLF LUIS MOCHAN BACKAL RUBEN GERARDO BARRERA Y PEREZ	Journal De Physique. Colloque	1984
101	OPTICAL PROPERTIES OF ROUGH NON-LOCAL SURFACES.	RUBEN GERARDO BARRERA Y PEREZ WOLF LUIS MOCHAN BACKAL Fuchs R.	Journal De Physique. Colloque	1984
102	Single-ion and pair-interaction potentials near simple metal surfaces	RUBEN GERARDO BARRERA Y PEREZ Barnett R.N. Cleveland C.L. et al.	PHYSICAL REVIEW B	1983
103	Surface contribution to the optical properties of nonlocal systems	RUBEN GERARDO BARRERA Y PEREZ Mochn W.L. Fuchs R.	PHYSICAL REVIEW B	1983
104	Local-field effect in optical reflectance from adsorbed overlayers	RUBEN GERARDO BARRERA Y PEREZ Bagchi A. Fuchs R.	PHYSICAL REVIEW B	1982
105	Statistical interpretation of the local field inside dielectrics	RUBEN GERARDO BARRERA Y PEREZ Mello P.A.	AMERICAN JOURNAL OF PHYSICS	1982
106	Dynamical response of a dipole near the surface of a nonlocal metal	RUBEN GERARDO BARRERA Y PEREZ Fuchs R.	PHYSICAL REVIEW B	1981
107	Optical reflectance of nonlocal systems	RUBEN GERARDO BARRERA Y PEREZ Bagchi A.	PHYSICAL REVIEW B	1981
108	Optical properties of quasi-two-dimensional systems: Nonlocal effects	RUBEN GERARDO BARRERA Y PEREZ Mochán L.	PHYSICAL REVIEW B	1981
109	Classical local-field effect in reflectance from adsorbed overlayers	RUBEN GERARDO BARRERA Y PEREZ Bagchi A. Dasgupta B.B.	PHYSICAL REVIEW LETTERS	1980
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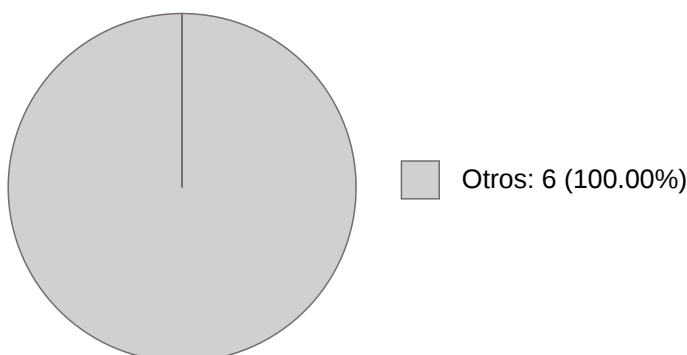
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111	Long-range order HF states in the deformable jellium model	RUBEN GERARDO BARRERA Y PEREZ MARCELA DOLORES GREYER GONZALEZ MANUEL DE LLANO DE LA GARZA	Journal Of Physics C: Solid State Physics	1979
112	Conductivity of a semi-infinite electron gas: Effective "optical" surface region	RUBEN GERARDO BARRERA Y PEREZ Bagchi A.	PHYSICAL REVIEW B	1979
113	Effect of refraction of p-polarized light on angle-resolved photoemission from surface states on metals	RUBEN GERARDO BARRERA Y PEREZ Bagchi A. Kar N.	PHYSICAL REVIEW LETTERS	1978
114	Point charge in a three-dielectric medium with planar interfaces	RUBEN GERARDO BARRERA Y PEREZ Guzmán O. Balaguer B.	AMERICAN JOURNAL OF PHYSICS	1978
115	Dielectric continuum theory of the electronic structure of interfaces	RUBEN GERARDO BARRERA Y PEREZ Duke C.B.	PHYSICAL REVIEW B	1976
116	Dielectric continuum theory of the Van der Waals interaction	RUBEN GERARDO BARRERA Y PEREZ Duke C.B.	PHYSICAL REVIEW B	1976
117	Contribution of collective excitations to the surface energy of metals	RUBEN GERARDO BARRERA Y PEREZ Gerlach E.	SOLID STATE COMMUNICATIONS	1974
118	On the van der waals energy of two half-spaces at small separations	RUBEN GERARDO BARRERA Y PEREZ Gerlach E.	CHEMICAL PHYSICS LETTERS	1974
119	Roton-limited mobility of ions in superfluid He4	RUBEN GERARDO BARRERA Y PEREZ Baym G.	PHYSICAL REVIEW A	1972
120	Mobility of the electron bubble in superfluid helium	RUBEN GERARDO BARRERA Y PEREZ Baym G. Pethick C.J.	PHYSICAL REVIEW LETTERS	1969

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LIBROS Y CAPITULOS CON ISBN

Obras con registro ISBN



#	Título	Autores	Alcance	Año	ISBN
1	Colloidal optics: From transparency to turbidity	RUBEN GERARDO BARRERA Y PEREZ AUGUSTO GARCIA VALENZUELA Gutiérrez-Reyes E.	Conferenc e Paper	2014	9781557528254
2	Feasibility of measuring the effective refractive index of blood from backscattered light near the critical angle	OMAR WILFRIDO VAZQUEZ ESTRADA ALEXANDER NAHMAD ROHEN AUGUSTO GARCIA VALENZUELA et al.	Conferenc e Paper	2014	9781557528254
3	A Mie type calculation of the nonlocal conductivity tensor of an isolated sphere: And its relation to the transition operator	EDAHÍ ANTONIO GUTIERREZ REYES RUBEN GERARDO BARRERA Y PEREZ AUGUSTO GARCIA VALENZUELA	Conferenc e Paper	2014	9781557528254
4	Insights into the problem of reflection from colloidal systems: An effective medium approach	RUBEN GERARDO BARRERA Y PEREZ ALEJANDRO REYES CORONADO AUGUSTO GARCIA VALENZUELA et al.	Conferenc e Paper	2007	1424412374

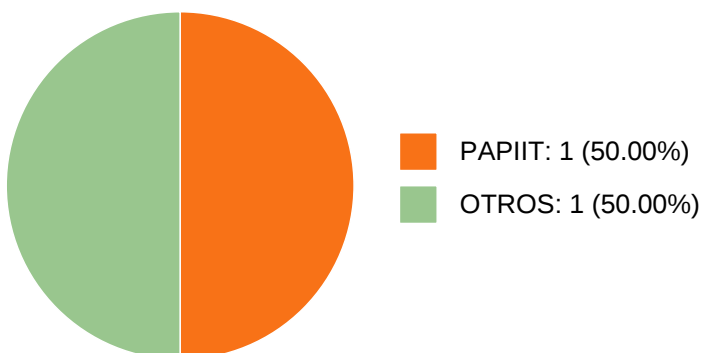
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5	Non-local effective medium for the electromagnetic response of colloidal systems: A T-matrix approach	RUBEN GERARDO BARRERA Y PEREZ ALEJANDRO REYES CORONADO AUGUSTO GARCIA VALENZUELA	Conferenc e Paper	2005	1933077077
6	Surface effects on the coherent reflection of light from a polydisperse colloid	AUGUSTO GARCIA VALENZUELA CELIA ANGELINA SANCHEZ PEREZ RUBEN GERARDO BARRERA Y PEREZ et al.	Conferenc e Paper	2005	1933077077

RUBEN GERARDO BARRERA Y PEREZ

PARTICIPACIÓN EN PROYECTOS

Histórico de participación en proyectos

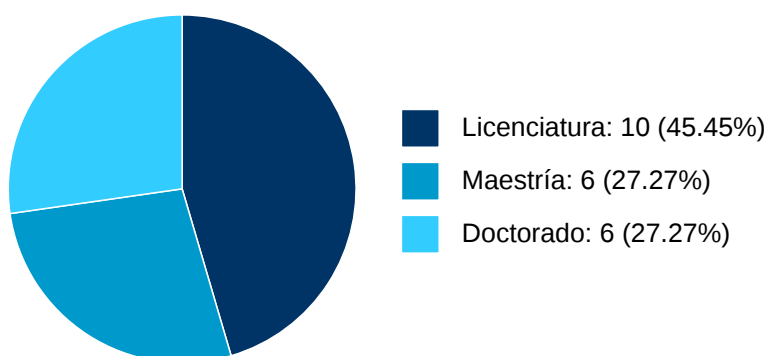


#	Nombre	Participantes	Fuente	Fecha inicio	Fecha fin
1	Flujo de energía en meta-materiales anisotrópicos	RUBEN GERARDO BARRERA Y PEREZ	Recursos PAPIIT	01-01-2017	31-12-2018
2	Analogías en la física de sistemas 2D rotados: de escala atómica a nanométrica.	RUBEN GERARDO BARRERA Y PEREZ	Recursos CONAHCyT	06-01-2021	18-08-2025

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PARTICIPACIÓN EN TESIS

Histórico de Colaboraciones en Tesis



#	Título del documento	Tipo de Tesis	Sinodales	Autores	Entidad	Año
1	Validando la ley de Stokes a escala molecular	Tesis de Maestría	RUBEN GERARDO BARRERA Y PEREZ,	RUBEN SANTAMARIA ORTIZ, Gutiérrez Varela, Oscar Javier,	Instituto de Física,	2019
2	Transporte de energía en metamateriales anisotrópicos	Tesis de Doctorado	RUBEN GERARDO BARRERA Y PEREZ,	AUGUSTO GARCIA VALENZUELA, Prieto López, Carlos,	Centro de Ciencias Aplicadas y Desarrollo Tecnológico, Instituto de Física,	2017
3	Transferencia de momento lineal de electrones relativistas a nanopartículas metálicas y dieléctricas	Tesis de Maestría	RUBEN GERARDO BARRERA Y PEREZ,	Castrejón Figueroa, Jesús,	Instituto de Física,	2017
4	Fuerzas de interacción entre un haz de electrones y nanopartículas metálicas	Tesis de Licenciatura	RUBEN GERARDO BARRERA Y PEREZ,	Castrejón Figueroa, Jesús,	Instituto de Física,	2015

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5	Reflectividad de coloides turbios : teoría-experimento	Tesis de Maestría	RUBEN GERARDO BARRERA Y PEREZ,	AUGUSTO GARCIA VALENZUELA, Morales Luna, Gesuri,	Centro de Ciencias Aplicadas y Desarrollo Tecnológico, Instituto de Física,	2015
6	Reflexión de la luz por un semiespacio de esferas desordenadas	Tesis de Doctorado	RUBEN GERARDO BARRERA Y PEREZ,	Gutiérrez Reyes, Edahi Antonio,	Instituto de Física,	2013
7	Óptica de transformación y metamateriales	Tesis de Licenciatura	RUBEN GERARDO BARRERA Y PEREZ,	Murillo Cortés, Ezequiel,	Instituto de Física,	2012
8	Refracción negativa en metamateriales anisotrópicos	Tesis de Maestría	RUBEN GERARDO BARRERA Y PEREZ,	EUGENIO LEY KOO, Prieto López, Carlos,	Facultad de Ciencias, Instituto de Física,	2012
9	Propiedades ópticas de polímeros aplicadas a pinturas decorativas	Tesis de Maestría	RUBEN GERARDO BARRERA Y PEREZ,	AUGUSTO GARCIA VALENZUELA, Keiman, Carolina,	Centro de Ciencias Aplicadas y Desarrollo Tecnológico, Instituto de Física,	2011
10	Disipación y transporte de energía en materiales con refracción negativa	Tesis de Licenciatura	RUBEN GERARDO BARRERA Y PEREZ,	Prieto López, Carlos,	Instituto de Física,	2009
11	Respuesta electromagnetica efectiva no local de sistemas coloidales turbios : teoria y experimento	Tesis de Doctorado	RUBEN GERARDO BARRERA Y PEREZ,	AUGUSTO GARCIA VALENZUELA, Reyes Coronado, Alejandro,		2007
12	Prediccion de propiedades opticas de peliculas inhomogeneas por medio de modelos de transferencia radiativa y su aplicacion en pinturas	Tesis de Doctorado	RUBEN GERARDO BARRERA Y PEREZ,	Curiel Villasana, Fernando Adolfo,		2004

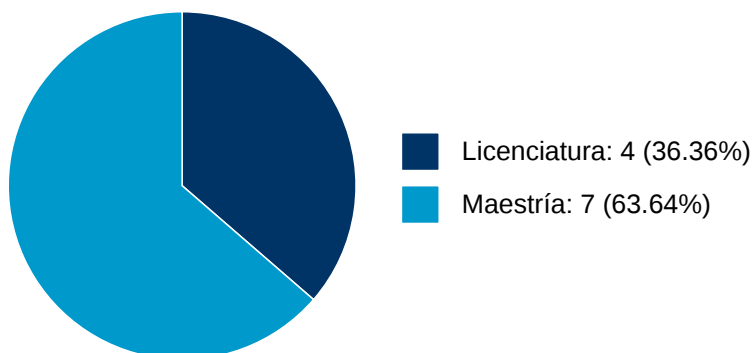
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13	Propiedades ópticas de nanopartículas con formas arbitrarias	Tesis de Maestría	RUBEN GERARDO BARRERA Y PEREZ,	ANA CECILIA NOGUEZ GARRIDO, Sosa Perez, Ivan Orencio,	2003
14	Caracterización estadística de superficies rugosas por medios físicos	Tesis de Licenciatura	RUBEN GERARDO BARRERA Y PEREZ,	Reyes Coronado, Alejandro,	2001
15	Dispersión de luz por una burbuja sonoluminiscente	Tesis de Licenciatura	RUBEN GERARDO BARRERA Y PEREZ,	Alexander Katz Romero, Alfredo Jacobo,	1998
16	Propiedades ópticas de sistemas inhomogéneos de baja dimensionalidad	Tesis de Doctorado	RUBEN GERARDO BARRERA Y PEREZ,	Noguez Garrido, Ana Cecilia,	1995
17	Correlación de tres y cuatro partículas en las propiedades ópticas de medios compuestos	Tesis de Licenciatura	RUBEN GERARDO BARRERA Y PEREZ,	Mendoza Ruiz, Carlos Ignacio,	1992
18	La respuesta dieléctrica de medios compuestos : un nuevo enfoque	Tesis de Licenciatura	RUBEN GERARDO BARRERA Y PEREZ,	Noguez Garrido, Ana Cecilia,	1990
19	Propiedades electromagnéticas de heteroestructuras laminadas	Tesis de Licenciatura	RUBEN GERARDO BARRERA Y PEREZ,	Klein-Kreisler , Martin,	1987
20	Influencia de la superficie en las propiedades ópticas de sistemas no locales y cristalinos	Tesis de Doctorado	RUBEN GERARDO BARRERA Y PEREZ,	Mochan Backal, Luis,	1983
21	Soluciones no triviales a la ecuación de Hartree-Fock en sistemas de fermiones con interacciones repulsivas	Tesis de Licenciatura	RUBEN GERARDO BARRERA Y PEREZ,	D'Grether Gonzalez, Marcela,	1977
22	Análisis estadístico del espectro de niveles electrónicos en partículas metálicas pequeñas	Tesis de Licenciatura	RUBEN GERARDO BARRERA Y PEREZ,	Rojas Rojas, María de Lourdes,	1976

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DOCENCIA IMPARTIDA

Histórico de docencia



#	Nivel titulación	Asignatura	Entidad	Alumnos	Semestre
1	Maestría	SEMINARIO DE INVESTIGACION I-394266	Instituto de Ciencias Aplicadas y Tecnología	1	2017-1
2	Maestría	SEMINARIO DE INVESTIGACION II-394292	Instituto de Ciencias Aplicadas y Tecnología	1	2017-1
3	Licenciatura	ELECTROMAGNETISMO II	Facultad de Ciencias	14	2015-2
4	Licenciatura	ELECTROMAGNETISMO II	Facultad de Ciencias	39	2014-2
5	Maestría	SEMINARIO DE INVESTIGACION I	Instituto de Física	1	2014-2
6	Maestría	SEMINARIO DE INVESTIGACION II	Instituto de Física	1	2014-2
7	Licenciatura	ELECTROMAGNETISMO I	Facultad de Ciencias	33	2013-2
8	Licenciatura	ELECTROMAGNETISMO II	Facultad de Ciencias	19	2012-1
9	Maestría	SEMINARIO DE INVESTIGACION II	Instituto de Física	1	2011-1
10	Maestría	ELECTRODINAMICA CLASICA	Instituto de Física	20	2010-2
11	Maestría	SEMINARIO DE INVESTIGACION I	Instituto de Física	1	2010-2



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



RUBEN GERARDO BARRERA Y PEREZ

PATENTES

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

RUBEN GERARDO BARRERA Y PEREZ

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FUENTES DE INFORMACIÓN

Internos

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

Externos

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