Manuel Ignacio Marques

List of Publications by Year
in descending order

100	1,382	471509 17	361022 35
papers	citations	h-index	g-index

100	100	100	1273
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Scattering Forces from the Curl of the Spin Angular Momentum of a Light Field. Physical Review Letters, 2009, 102, 113602.	7.8	279
2	Conductance quantization in nanowires formed between micro and macroscopic metallic electrodes. Physical Review B, 1997, 55, 5416-5424.	3.2	178
3	Intramolecular coupling as a mechanism for a liquid-liquid phase transition. Physical Review E, 2003, 67, 011103.	2.1	105
4	Possible Mechanism for Cold Denaturation of Proteins at High Pressure. Physical Review Letters, 2003, 91, 138103.	7.8	95
5	Optical Torques on Upconverting Particles for Intracellular Microrheometry. Nano Letters, 2016, 16, 8005-8014.	9.1	70
6	Giant Enhanced Diffusion of Gold Nanoparticles in Optical Vortex Fields. Nano Letters, 2009, 9, 3527-3531.	9.1	54
7	On the existence of two states in liquid water: impact on biological and nanoscopic systems. International Journal of Nanotechnology, 2016, 13, 667.	0.2	38
8	Optical Forces at the Nanoscale: Size and Electrostatic Effects. Nano Letters, 2018, 18, 602-609.	9.1	35
9	The capillarity of nanometric water menisci confined inside closed-geometry viral cages. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 5475-5480.	7.1	28
10	Beam configuration proposal to verify that scattering forces come from the orbital part of the Poynting vector. Optics Letters, 2014, 39, 5122.	3.3	22
11	Quantum paraelectric behavior ofSrTiO3: Relevance of the structural phase transition temperature. Physical Review B, 2005, 72, .	3.2	21
12	Unveiling Molecular Changes in Water by Small Luminescent Nanoparticles. Small, 2017, 13, 1700968.	10.0	20
13	Nanojet Trapping of a Single Subâ€10Ânm Upconverting Nanoparticle in the Full Liquid Water Temperature Range. Small, 2021, 17, e2006764.	10.0	20
14	Light control of silver nanoparticleâ€™s diffusion. Optics Express, 2011, 19, 11471.	3.4	19
15	Self-averaging of random and thermally disordered diluted Ising systems. Physical Review E, 1999, 60, 2394-2397.	2.1	18
16	MarquÃ©s and SÃ¡enz Reply:. Physical Review Letters, 2013, 111, 059302.	7.8	18
17	Dielectric anomalous response of water at 60ÂÂºC. Philosophical Magazine, 2015, 95, 683-690.	1.6	18
18	Universality class of thermally diluted Ising systems at criticality. Physical Review E, 2000, 62, 191-196.	2.1	16

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19	First-principles study of instantaneous and averaged local potential inBaTiO3. Physical Review B, 2005, 71, .	3.2	15
20	Scattering forces and electromagnetic momentum density in crossed circularly polarized standing waves. Optics Letters, 2012, 37, 2787.	3.3	15
21	Plasmonic Nanoparticle Chain in a Light Field: A Resonant Optical Sail. Nano Letters, 2011, 11, 4597-4600.	9.1	13
22	Emergence of collective dynamics of gold nanoparticles in an optical vortex lattice. Physical Review E, 2018, 98, .	2.1	13
23	Modeling of a pressure sensor based on an array of wedge emitters. Applied Surface Science, 1999, 146, 239-244.	6.1	12
24	Composition dependence of the transition temperature in mixed ferroelectric-ferroelectric systems. Physical Review B, 2000, 62, 8561-8563.	3.2	12
25	Multipole Engineering of Attractiveâ^'Repulsive and Bending Optical Forces. Advanced Photonics Research, 2021, 2, 2100082.	3.6	12
26	THERMALLY DILUTED ISING SYSTEMS. Fractals, 2003, 11, 53-65.	3.7	11
27	Electric field induced phase transition in first order ferroelectrics with large zero point energy. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 115-122.	2.6	11
28	Optical image contrast enhancement in near-field optics induced by water condensation. Ultramicroscopy, 2013, 135, 50-55.	1.9	11
29	Experimental and theoretical characterization of integrated field emission nanotips. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 654.	1.6	10
30	Numerical approach to phase transitions in nanoscopic layered systems. Nanotechnology, 2001, 12, 143-146.	2.6	10
31	Paraelectric Response of Water in the RangeÂ0â€“100Â°C. Ferroelectrics, 2014, 466, 166-180.	0.6	10
32	Microscopic model for the formation of nanodomains in relaxor materials. Physical Review B, 2010, 81, .	3.2	9
33	Magneto-optical Stern-Gerlach forces and nonreciprocal torques on small particles. Physical Review Research, 2019, 1, .	3.6	9
34	Mechanism for proteins destabilization at low temperatures. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 1487-1490.	1.8	8
35	Irrelevance of canonical or grand canonical constraints near a random fixed point in largeLsystems. Physical Review E, 2002, 65, 057104.	2.1	7
36	Monte Carlo simulation of quantum effects in ferroelectric phase transitions with increasing zero point energy. Physica A: Statistical Mechanics and Its Applications, 2002, 312, 181-186.	2.6	7

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37	Poling effect on distribution of quenched random fields in a uniaxial relaxor ferroelectric. Europhysics Letters, 2005, 71, 124-130.	2.0	7
38	Arrested Dimerâ€™s Diffusion by Self-Induced Back-Action Optical Forces. ACS Photonics, 2016, 3, 1286-1293.	6.6	7
39	Light Induced Inverse-Square Law Interactions between Nanoparticles: â€œMock Gravityâ€•at the Nanoscale. Physical Review Letters, 2019, 123, 143201.	7.8	7
40	Revisiting the Beating Mercury Heart Systems:Â Steps in the Voltage Figures Due to Nanocontacts. Journal of Physical Chemistry B, 1997, 101, 2333-2338.	2.6	6
41	Evolution of the universality class in slightly diluted (1>p>0.8) Ising systems. Physica A: Statistical Mechanics and Its Applications, 2000, 284, 187-194.	2.6	6
42	Design of field emission based magnetic sensors. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 1068.	1.6	6
43	Relationship between fragility, diffusive directions and energy barriers in a supercooled liquid. Physica A: Statistical Mechanics and Its Applications, 2005, 345, 395-403.	2.6	6
44	Effect of long-range spatial correlations on the lifetime statistics of an emitter in a two-dimensional disordered lattice. Physical Review A, 2014, 89, .	2.5	6
45	Transition temperature dependence in perovskite ceramics as a function of grain size. Ferroelectrics, Letters Section, 1999, 25, 103-107.	1.0	5
46	Proposed high-pressure calorimetric experiment to probe theoretical predictions on the liquid-liquid critical point hypothesis. Physical Review E, 2007, 76, 021503.	2.1	5
47	Monte Carlo Simulation of First Order Phase Transitions. Ferroelectrics, 2010, 401, 3-8.	0.6	5
48	Low energy argon ion irradiation surface effects on triglycine sulfate. Applied Surface Science, 2013, 280, 858-861.	6.1	5
49	Magneto-optical binding in the near field. Scientific Reports, 2021, 11, 20820.	3.3	5
50	Time evolution of nanocontact structure between macroscopic metallic wires leading to nanowire formation. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1997, 15, 548.	1.6	4
51	Field emission magnetic sensors based on focusing devices. Solid-State Electronics, 2001, 45, 977-986.	1.4	4
52	Composition Dependence of the Critical Temperature in Mixed Ferroâ€“Paraelectric Solid Solutions. Japanese Journal of Applied Physics, 2006, 45, 5892-5893.	1.5	4
53	MC simulations of water meniscus in nanocontainers: explaining the collapse of viral particles due to capillary forces. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 2128-2132.	0.8	4
54	Analysis of a field-emission magnetic sensor with compensated electron-beam deviation. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 788.	1.6	3

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55	Extended scaling functions for Ising systems with dimensionality 1â©½dâ©½4. Physica A: Statistical Mechanics and Its Applications, 1999, 267, 165-172.	2.6	3
56	Attenuation of the depolarizing field in a thin film model relaxor. Physica A: Statistical Mechanics and Its Applications, 2011, 390, 3955-3961.	2.6	3
57	Scattering forces and electromagnetic momentum density in crossed circularly polarized standing waves: erratum. Optics Letters, 2012, 37, 4470.	3.3	3
58	Modulated flipping torque, spin-induced radiation pressure, and chiral sorting exerted by guided light. Optics Express, 2021, 29, 16969.	3.4	3
59	Metallic Nanowires: Conductance Statistics, Stability, IV Curves, and Magnetism. , 1997, , 171-190.		3
60	Relationship between fragility, diffusive directions and energy barriers in a supercooled liquid. Physica A: Statistical Mechanics and Its Applications, 2005, 345, 395-403.	2.6	2
61	Test of cold denaturation mechanism for proteins as a function of water's structure. Physica A: Statistical Mechanics and Its Applications, 2007, 375, 37-43.	2.6	2
62	Thermodynamic behavior of a water model with a liquidâ€“liquid critical point. Physica A: Statistical Mechanics and Its Applications, 2007, 386, 708-712.	2.6	2
63	Dynamics of a small particle in a fluctuating random light field. Optics Letters, 2016, 41, 796.	3.3	2
64	A proposal to measure Belinfanteâ€™s curl of the spin optical force based on the Kerker conditions. European Physical Journal Plus, 2021, 136, 1.	2.6	2
65	Scattering forces and electromagnetic momentum density in crossed circularly polarized standing waves. Optics Letters, 2012, 37, 2787-9.	3.3	2
66	Monte Carlo simulations of grain size effects on the transition temperature of Ising systems: Comparison with mean field approximation in ferroelectrics. Ferroelectrics, 2000, 241, 35-41.	0.6	1
67	Relaxor-based thin film memories and the depolarizing field problem. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 1962-1967.	1.8	1
68	Monte Carlo study of the competition between long-range and short-range correlated disorder in a second-order phase transition. Physical Review E, 2009, 79, 052103.	2.1	1
69	CHARACTERISTIC TEMPERATURES OF FIRST-ORDER FERROELECTRIC PHASE TRANSITION: EFFECTIVE FIELD APPROACH. Journal of Advanced Dielectrics, 2012, 02, 1241007.	2.4	1
70	Identification of water content in nanocavities. Nanoscale Research Letters, 2013, 8, 171.	5.7	1
71	Crossover from superdiffusive to diffusive dynamics in fluctuating light fields. Physical Review A, 2016, 93, .	2.5	1
72	The effective field approach applied to ferroelectric phase transitions. Ferroelectrics, 2020, 569, 50-61.	0.6	1

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73	Microrheometric upconversion-based techniques for intracellular viscosity measurements. , 2017, , .		1
74	Analysis of the dynamics of electric dipoles in fluctuating electromagnetic fields. , 2018, , .		1
75	Active Motion Induced by Random Electromagnetic Fields. ACS Photonics, 2022, 9, 1008-1014.	6.6	1
76	Circular Dichroism in Magneto-Optical Forces. Optics Express, 0, , .	3.4	1
77	Surface and Size Effects in TGS, NaNO2, and DKDP Nanocrystals. Materials Research Society Symposia Proceedings, 2000, 655, 42.	0.1	0
78	Dynamic scaling in diluted systems: Deactivation through thermal dilution. Physical Review E, 2001, 63, 056114.	2.1	0
79	Equation of State for Ising Lattices. Ferroelectrics, 2005, 314, 73-78.	0.6	0
80	Behavior of the Local Mode's Potential in BaTiO3Studied by Effective Hamiltonian Numerical Simulations. Ferroelectrics, 2006, 337, 51-57.	0.6	0
81	Monte Carlo Study of the Composition Dependence of the Curie Temperature in Mixed Ising Systems. Ferroelectrics, 2006, 337, 19-23.	0.6	0
82	Dilution Effects on the Transition Temperature of Ising Monolayers. Ferroelectrics, Letters Section, 2006, 33, 107-111.	1.0	0
83	Effective Field Approach to Metallic Superconductors. Ferroelectrics, 2007, 354, 115-119.	0.6	0
84	Is it realistic to assume the same cosmic equation of state prior to and after atom formation?. AIP Conference Proceedings, 2007, , .	0.4	0
85	Composition Dependence of the Transition Temperature for Non-Stochiometric Ferroelectric Lithium Niobate. Ferroelectrics, 2008, 369, 53-57.	0.6	0
86	Monte Carlo Determination of Dâˆ— for Ising Strips. Ferroelectrics, Letters Section, 2008, 35, 62-65.	1.0	0
87	Redistribution of Random Nanoregions in Polarized Relaxor Ferroelectrics. Ferroelectrics, 2008, 369, 179-184.	0.6	0
88	Evolution of the Critical Behavior in Pure and Deuterated Ferroelectric Crystals of the TGS Family. Ferroelectrics, 2008, 369, 65-68.	0.6	0
89	Quantum paraelectrics revisited under effective field approach. , 2009, , .		0
90	A microscopic model for charge disordered relaxor systems. , 2009, , .		0

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91	Ferroelectric to Quantum Paraelectric Crossover in Mixed Crystals of Isotopic Strontium Titanate. Ferroelectrics, 2012, 427, 91-97.	0.6	0
92	Monte Carlo Study of Ising Critical Isotherms. Ferroelectrics, 2012, 426, 166-170.	0.6	0
93	Effect of the Depolarizing Field in a Model Relaxor. Ferroelectrics, 2012, 427, 52-55.	0.6	0
94	Non-conservative scattering forces on small particles. , 2013, , .		0
95	Effect of condensed water on scanning near-field optical microscope measurement. Physica Scripta, 2013, T157, 014060.	2.5	0
96	Simulation of the disorder effects in ferroelectric phase transitions using two-dimensional statistical models. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 14, 1600094.	0.8	0
97	On the change of paraelectric behavior of water at Tâ€‰=â€‰T*â€‰=â€‰60â€‰Â°C as a polar liquid. Ferroelectrics, 2018, 533, 108-114.	0.6	0
98	Control of the electromagnetic drag using fluctuating light fields. Physical Review A, 2018, 97, .	2.5	0
99	Scattering forces on magneto-dielectric particles and the electromagnetic momentum density. Advanced Electromagnetics, 2013, 2, 26.	1.0	0
100	Scaling and Critical Behavior of Phase Transitions in Ising Strips and Nanotubes. Ferroelectrics, 2002, 268, 221-226.	0.6	0