Ernesto Medina

List of Publications by Year
in descending order

101	2,822	236925 25	175258 52
papers	citations	h-index	g-index

104	104	104	1827
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Radiation modulated spin coupling in a double-stranded DNA model. Journal of Physics Condensed Matter, 2022, 34, 135301.	1.8	2
2	A Chirality-Based Quantum Leap. ACS Nano, 2022, 16, 4989-5035.	14.6	74
3	Nanofluid Formulations Based on Two-Dimensional Nanoparticles, Their Performance, and Potential Application as Water-Based Drilling Fluids. ACS Omega, 2022, 7, 20457-20476.	3.5	17
4	Coherence preservation and electronâ€“phonon interaction in electron transfer in DNA. Journal of Chemical Physics, 2020, 153, 165102.	3.0	8
5	Mechanically modulated spin-orbit couplings in oligopeptides. Physical Review B, 2020, 102, .	3.2	14
6	Biomedical Science to Tackle the COVID-19 Pandemic: Current Status and Future Perspectives. Molecules, 2020, 25, 4620.	3.8	23
7	Spin-orbit interaction and spin selectivity for tunneling electron transfer in DNA. Physical Review B, 2020, 101, .	3.2	18
8	Conductance quantization in atomic-sized gold contacts using a low-cost mechanically controllable break junction setup. European Journal of Physics, 2020, 41, 065401.	0.6	2
9	Insight into the Origin of Chiral-Induced Spin Selectivity from a Symmetry Analysis of Electronic Transmission. Journal of Chemical Theory and Computation, 2020, 16, 2914-2929.	5.3	60
10	Intrinsic Rashba coupling due to hydrogen bonding in DNA. Journal of Chemical Physics, 2019, 151, 125102.	3.0	18
11	Proximity-induced exchange and spin-orbit effects in graphene on Ni and Co. Physical Review B, 2019, 99, .	3.2	13
12	Proximity-induced spin-orbit effects in graphene on Au. Physical Review B, 2019, 99, .	3.2	19
13	Dispatches from a world in turmoil. Nature, 2019, 576, 382-384.	27.8	2
14	Spin-orbit Coupling Modulation in DNA by Mechanical Deformations. Chimia, 2018, 72, 411.	0.6	24
15	Reduction of the bulk modulus with polydispersity in noncohesive granular solids. Physical Review E, 2018, 98, 022903.	2.1	7
16	Using torsion to manipulate spin currents. Europhysics Letters, 2017, 117, 47007.	2.0	3
17	Yachay's promise. Science, 2017, 357, 881-881.	12.6	3
18	Contact angle entropy and macroscopic friction in noncohesive two-dimensional granular packings. Physical Review E, 2017, 96, 012902.	2.1	4

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19	Measuring the Spinâ€Polarization Power of a Single Chiral Molecule. Small, 2017, 13, 1602519.	10.0	143
20	Rashba spin-orbit interaction enhanced by graphene in-plane deformations. Condensed Matter Physics, 2017, 20, 13702.	0.7	8
21	Gauge transformations and conserved quantities in classical and quantum mechanics. American Journal of Physics, 2016, 84, 616-625.	0.7	7
22	Ferromagnetic order induced on graphene by Ni/Co proximity effects. Physical Review B, 2016, 94, .	3.2	8
23	Extracting work from a single reservoir in the non-Markovian underdamped regime. Physical Review E, 2016, 94, 062111.	2.1	5
24	Effective spin-orbit couplings in an analytical tight-binding model of DNA: Spin filtering and chiral spin transport. Physical Review B, 2016, 93, .	3.2	72
25	Gauge transformations of spin-orbit interactions in graphene. European Physical Journal B, 2015, 88, 1.	1.5	4
26	Continuum model for chiral induced spin selectivity in helical molecules. Journal of Chemical Physics, 2015, 142, 194308.	3.0	90
27	Inelastic electron scattering from a helical potential: transverse polarization and the structure factor in the single scattering approximation. Journal of Physics Condensed Matter, 2014, 26, 015008.	1.8	28
28	Persistent charge and spin currents in the long-wavelength regime for graphene rings. Physical Review B, 2014, 89, .	3.2	33
29	Analysis and fabrication steps for a 3D-pyramidal high density coil electromagnetic micro-generator for energy harvesting applications. Sensors and Actuators A: Physical, 2014, 205, 103-110.	4.1	6
30	Charge- and spin-polarized currents in mesoscopic rings with Rashba spin-orbit interactions coupled to an electron reservoir. Physical Review B, 2014, 90, .	3.2	6
31	Equilibrium currents in a Corbino graphene ring. Condensed Matter Physics, 2014, 17, 33803.	0.7	4
32	Kinetic Energy Dependence of Spin Filtering of Electrons Transmitted through Organized Layers of DNA. Journal of Physical Chemistry C, 2013, 117, 22307-22313.	3.1	21
33	A thermodynamic counterpart of the Axelrod model of social influence: The one-dimensional case. Physica A: Statistical Mechanics and Its Applications, 2013, 392, 6561-6570.	2.6	4
34	Classical Yangâ€“Mills theory in condensed matter physics. European Journal of Physics, 2013, 34, 161-180.	0.6	20
35	Dispersive behavior and acoustic scaling in granular rocks. , 2013, , .		0
36	Spin polarization of entangled and mixed electron states in a beam splitter geometry coupled to an electron reservoir. Physical Review B, 2012, 86, .	3.2	1

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37	Local operation on identical particles systems. Journal of Physics: Conference Series, 2012, 338, 012015.	0.4	0
38	Chiral molecular films as electron polarizers and polarization modulators. Europhysics Letters, 2012, 99, 17006.	2.0	112
39	Spin superfluidity and spin-orbit gauge symmetry fixing. Europhysics Letters, 2012, 97, 67007.	2.0	12
40	Compression and shear-wave velocities in discrete particle simulations of quartz granular packings: Improved Hertz-Mindlin contact model. Geophysics, 2011, 76, E165-E174.	2.6	11
41	Mach-Zehnder interferometric device for spin filtering in a GaAs/AlGaAs electron gas. Journal of Applied Physics, 2011, 110, 114523.	2.5	2
42	Force fabric and macroscopic friction in two-dimensional granular materials. Physical Review E, 2010, 81, 022301.	2.1	5
43	Mesoscopic rings with spin-orbit interactions. European Journal of Physics, 2010, 31, 1267-1286.	0.6	42
44	A perfect spin filtering device through Machâ€“Zehnder interferometry in a GaAs/AlGaAs electron gas. Journal of Physics Condensed Matter, 2010, 22, 115303.	1.8	4
45	Grain Parameter Effects on Seismic Attributes I: Sorting. , 2009, , .		0
46	Chiral electron transport: Scattering through helical potentials. Journal of Chemical Physics, 2009, 131, 014707.	3.0	151
47	Thermodynamics of small electromagnetic generators: An experimental perspective. Journal of Physical Studies, 2009, 13, .	0.5	0
48	Strong-weak network anisotropy switching and hysteresis in three-dimensional granular materials. Physical Review E, 2008, 78, 021305.	2.1	6
49	Gauge symmetry breaking and topological quantization for the Pauli Hamiltonian. Europhysics Letters, 2008, 83, 47005.	2.0	21
50	Consistent hopping criterion in the Efros-Shklovskii regime. Physical Review B, 2007, 75, .	3.2	7
51	Two-electron-entanglement enhancement by an inelastic scattering process. Physical Review B, 2007, 76, .	3.2	3
52	Two-electron entanglement in quasi-one-dimensional systems: Role of resonances. Physical Review B, 2007, 75, .	3.2	7
53	Acoustic response of cemented granular sedimentary rocks: Molecular dynamics modeling. Physical Review E, 2007, 75, 061308.	2.1	5
54	Pre-factor Effect in the Efros-Shklovskii Variable Range Hopping Regime. AIP Conference Proceedings, 2006, , .	0.4	1

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55	Antiresonances as precursors of decoherence. Europhysics Letters, 2006, 73, 164-170.	2.0	22
56	Hysteresis effects studied by numerical simulations: Cyclic loading-unloading of a realistic sand model. Geophysics, 2006, 71, F13-F20.	2.6	52
57	Defect-induced increase in the phonon energy involved in the formation of Urbach tail in Cu-ternaries. Journal of Physics and Chemistry of Solids, 2005, 66, 1187-1191.	4.0	1
58	Metalâ€“insulator transition in one-dimensional lattices with chaotic energy sequences. Physics Letters, Section A: General, Atomic and Solid State Physics, 2005, 341, 101-106.	2.1	5
59	Preexponential factor in variable-range hopping conduction in CuInTe2. Solid State Communications, 2005, 136, 228-233.	1.9	9
60	Breaking processes in nickel nanocontacts: a statistical description. Applied Physics A: Materials Science and Processing, 2005, 81, 1545-1549.	2.3	17
61	Temperature dependence of the Urbach energy in ordered defect compounds Cu-III3-VI5 and Cu-III5-VI8. Journal of Physics and Chemistry of Solids, 2005, 66, 1865-1867.	4.0	9
62	Ballistic resistivity in aluminum nanocontacts. Physical Review B, 2005, 72, .	3.2	25
63	Interplay of entropic and memory effects in diffusion of methane in silicalite zeolites. Physical Review E, 2005, 72, 061111.	2.1	5
64	Entangled electronic state via an interacting quantum dot. Europhysics Letters, 2004, 66, 624-630.	2.0	3
65	Urbach tail, disorder, and localized modes in ternary semiconductors. Physical Review B, 2004, 69, .	3.2	40
66	P-wave velocityâ€“porosity relations and homogeneity lengths in a realistic deposition model of sedimentary rock. Waves in Random and Complex Media, 2004, 14, 129-142.	1.5	35
67	Molecular dynamics simulations of breaking metallic nanowires. International Journal of Nanotechnology, 2004, 1, 265.	0.2	2
68	A temperature-dependent pre-exponential factor in Efrosâ€“Shklovskii variable range hopping conduction in p-type CuInTe2. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 18, 292-293.	2.7	5
69	Simulation of Suspensions in Constricted Geometries by Dissipative Particle Dynamics. Molecular Simulation, 2003, 29, 443-449.	2.0	7
70	Ionic Shell and Subshell Structures in Aluminum and Gold Nanocontacts. Physical Review Letters, 2003, 91, 026802.	7.8	24
71	Molecular Dynamics Simulations for Metallic Nanosystems. Molecular Simulation, 2003, 29, 427-435.	2.0	1
72	Evidence of shell structures in Au nanowires at room temperature. Nanotechnology, 2003, 14, 113-116.	2.6	26

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73	Thickness Induced Structural Transition in Suspended fcc Metal Nanofilms. Physical Review Letters, 2002, 88, 096103.	7.8	61
74	Electronâ€“phonon interaction and electronic decoherence in molecular conductors. Chemical Physics, 2002, 281, 257-278.	1.9	66
75	Viscosity minimum in bimodal concentrated suspensions under shear. European Physical Journal E, 2002, 9, 327-334.	1.6	4
76	From Favorable Atomic Configurations to Supershell Structures: A New Interpretation of Conductance Histograms. Physical Review Letters, 2001, 86, 5574-5577.	7.8	49
77	Temperature dependence of the optical energy gap and Urbachâ€™s energy of CuIn5Se8. Journal of Applied Physics, 2001, 90, 4423-4428.	2.5	66
78	Non-ergodicity and fluctuations in mesoscopic insulators: The replica cooperon and diffuson. Europhysics Letters, 2001, 54, 647-653.	2.0	2
79	Simulations and experiments of aluminum conductance histograms. Nanotechnology, 2001, 12, 118-120.	2.6	16
80	Effect of structural disorder on the Urbach energy in Cu ternaries. Physical Review B, 2001, 64, .	3.2	89
81	Three-dimensional rotational Langevin dynamics and the Lebwohl-Lasher model. Physical Review E, 2001, 63, 042701.	2.1	8
82	Analytical results for random line networks applications to fracture networks and disordered fiber composites. Physica A: Statistical Mechanics and Its Applications, 2000, 282, 35-49.	2.6	2
83	Level broadening and quantum interference effects in insulators. Physical Review B, 2000, 61, 5850-5853.	3.2	3
84	Spectral statistics and dynamics of LÃ©vy matrices. Physical Review E, 1999, 60, 3580-3588.	2.1	12
85	Directed paths on hierarchical lattices with random sign weights. Physical Review E, 1998, 58, 4246-4253.	2.1	4
86	Geometrical and Transport Properties of Disordered Fibre Networks: Analytical Results. Modern Physics Letters B, 1997, 11, 867-875.	1.9	1
87	Critical path analysis of conductance fluid invasion and rupture. Physica A: Statistical Mechanics and Its Applications, 1996, 232, 21-26.	2.6	1
88	Magnetoconductance anisotropy and interference effects in variable-range hopping. Physical Review B, 1996, 53, 7663-7672.	3.2	11
89	Conductance distributions in random resistor networks. Self-averaging and disorder lengths. Journal of Statistical Physics, 1994, 75, 135-151.	1.2	15
90	Rupture of Random Fuse Networks: Ductile to Brittle Crossover. Materials Research Society Symposia Proceedings, 1994, 367, 131.	0.1	0

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91	Nonuniversality and analytical continuation in moments of directed polymers on hierarchical lattices. Journal of Statistical Physics, 1993, 71, 967-980.	1.2	27
92	Quantum interference effects for strongly localized electrons. Physical Review B, 1992, 46, 9984-10006.	3.2	91
93	Limit distributions in random resistor networks. Physica A: Statistical Mechanics and Its Applications, 1992, 191, 410-414.	2.6	2
94	Quantum Interference Phenomena in Strong Localization. , 1992, , 145-156.		0
95	Directed waves in random media. Physical Review Letters, 1991, 66, 2176-2176.	7.8	9
96	Spin-orbit scattering and magnetoconductance of strongly localized electrons. Physical Review Letters, 1991, 66, 3187-3190.	7.8	42
97	Exact-enumeration approach to tunneling in disordered systems. Physical Review B, 1990, 42, 4559-4562.	3.2	13
98	Magnetic-field effects on strongly localized electrons. Physical Review Letters, 1990, 64, 1816-1819.	7.8	55
99	Interference of Directed Paths in Disordered Systems. Physical Review Letters, 1989, 62, 941-944.	7.8	101
100	Burgers equation with correlated noise: Renormalization-group analysis and applications to directed polymers and interface growth. Physical Review A, 1989, 39, 3053-3075.	2.5	616
101	Low-temperature ultrasonic attenuation by strongly dispersive transverse-acoustic phonons inÎ±-quartz. Physical Review B, 1987, 36, 3422-3426.	3.2	2