

Ernesto Medina

List of Publications by Year in descending order

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101
papers

2,822
citations

236925

25
h-index

175258

52
g-index

104
all docs

104
docs citations

104
times ranked

1827
citing authors

#	ARTICLE	IF	CITATIONS
1	Burgers equation with correlated noise: Renormalization-group analysis and applications to directed polymers and interface growth. <i>Physical Review A</i> , 1989, 39, 3053-3075.	2.5	616
2	Chiral electron transport: Scattering through helical potentials. <i>Journal of Chemical Physics</i> , 2009, 131, 014707.	3.0	151
3	Measuring the Spin-Polarization Power of a Single Chiral Molecule. <i>Small</i> , 2017, 13, 1602519.	10.0	143
4	Chiral molecular films as electron polarizers and polarization modulators. <i>Europhysics Letters</i> , 2012, 99, 17006.	2.0	112
5	Interference of Directed Paths in Disordered Systems. <i>Physical Review Letters</i> , 1989, 62, 941-944.	7.8	101
6	Quantum interference effects for strongly localized electrons. <i>Physical Review B</i> , 1992, 46, 9984-10006.	3.2	91
7	Continuum model for chiral induced spin selectivity in helical molecules. <i>Journal of Chemical Physics</i> , 2015, 142, 194308.	3.0	90
8	Effect of structural disorder on the Urbach energy in Cu ternaries. <i>Physical Review B</i> , 2001, 64, .	3.2	89
9	A Chirality-Based Quantum Leap. <i>ACS Nano</i> , 2022, 16, 4989-5035.	14.6	74
10	Effective spin-orbit couplings in an analytical tight-binding model of DNA: Spin filtering and chiral spin transport. <i>Physical Review B</i> , 2016, 93, .	3.2	72
11	Temperature dependence of the optical energy gap and Urbach's energy of CuIn_5Se_8 . <i>Journal of Applied Physics</i> , 2001, 90, 4423-4428.	2.5	66
12	Electron-phonon interaction and electronic decoherence in molecular conductors. <i>Chemical Physics</i> , 2002, 281, 257-278.	1.9	66
13	Thickness Induced Structural Transition in Suspended fcc Metal Nanofilms. <i>Physical Review Letters</i> , 2002, 88, 096103.	7.8	61
14	Insight into the Origin of Chiral-Induced Spin Selectivity from a Symmetry Analysis of Electronic Transmission. <i>Journal of Chemical Theory and Computation</i> , 2020, 16, 2914-2929.	5.3	60
15	Magnetic-field effects on strongly localized electrons. <i>Physical Review Letters</i> , 1990, 64, 1816-1819.	7.8	55
16	Hysteresis effects studied by numerical simulations: Cyclic loading-unloading of a realistic sand model. <i>Geophysics</i> , 2006, 71, F13-F20.	2.6	52
17	From Favorable Atomic Configurations to Supershell Structures: A New Interpretation of Conductance Histograms. <i>Physical Review Letters</i> , 2001, 86, 5574-5577.	7.8	49
18	Spin-orbit scattering and magnetoconductance of strongly localized electrons. <i>Physical Review Letters</i> , 1991, 66, 3187-3190.	7.8	42

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19	Mesoscopic rings with spin-orbit interactions. <i>European Journal of Physics</i> , 2010, 31, 1267-1286.	0.6	42
20	Urbach tail, disorder, and localized modes in ternary semiconductors. <i>Physical Review B</i> , 2004, 69, .	3.2	40
21	P-wave velocity porosity relations and homogeneity lengths in a realistic deposition model of sedimentary rock. <i>Waves in Random and Complex Media</i> , 2004, 14, 129-142.	1.5	35
22	Persistent charge and spin currents in the long-wavelength regime for graphene rings. <i>Physical Review B</i> , 2014, 89, .	3.2	33
23	Inelastic electron scattering from a helical potential: transverse polarization and the structure factor in the single scattering approximation. <i>Journal of Physics Condensed Matter</i> , 2014, 26, 015008.	1.8	28
24	Nonuniversality and analytical continuation in moments of directed polymers on hierarchical lattices. <i>Journal of Statistical Physics</i> , 1993, 71, 967-980.	1.2	27
25	Evidence of shell structures in Au nanowires at room temperature. <i>Nanotechnology</i> , 2003, 14, 113-116.	2.6	26
26	Ballistic resistivity in aluminum nanocontacts. <i>Physical Review B</i> , 2005, 72, .	3.2	25
27	Ionic Shell and Subshell Structures in Aluminum and Gold Nanocontacts. <i>Physical Review Letters</i> , 2003, 91, 026802.	7.8	24
28	Spin-orbit Coupling Modulation in DNA by Mechanical Deformations. <i>Chimia</i> , 2018, 72, 411.	0.6	24
29	Biomedical Science to Tackle the COVID-19 Pandemic: Current Status and Future Perspectives. <i>Molecules</i> , 2020, 25, 4620.	3.8	23
30	Antiresonances as precursors of decoherence. <i>Europhysics Letters</i> , 2006, 73, 164-170.	2.0	22
31	Gauge symmetry breaking and topological quantization for the Pauli Hamiltonian. <i>Europhysics Letters</i> , 2008, 83, 47005.	2.0	21
32	Kinetic Energy Dependence of Spin Filtering of Electrons Transmitted through Organized Layers of DNA. <i>Journal of Physical Chemistry C</i> , 2013, 117, 22307-22313.	3.1	21
33	Classical Yang-Mills theory in condensed matter physics. <i>European Journal of Physics</i> , 2013, 34, 161-180.	0.6	20
34	Proximity-induced spin-orbit effects in graphene on Au. <i>Physical Review B</i> , 2019, 99, .	3.2	19
35	Intrinsic Rashba coupling due to hydrogen bonding in DNA. <i>Journal of Chemical Physics</i> , 2019, 151, 125102.	3.0	18
36	Spin-orbit interaction and spin selectivity for tunneling electron transfer in DNA. <i>Physical Review B</i> , 2020, 101, .	3.2	18

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37	Breaking processes in nickel nanocontacts: a statistical description. Applied Physics A: Materials Science and Processing, 2005, 81, 1545-1549.	2.3	17
38	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
39	Simulations and experiments of aluminum conductance histograms. Nanotechnology, 2001, 12, 118-120.	2.6	16
40	Conductance distributions in random resistor networks. Self-averaging and disorder lengths. Journal of Statistical Physics, 1994, 75, 135-151.	1.2	15
41	Mechanically modulated spin-orbit couplings in oligopeptides. Physical Review B, 2020, 102, .	3.2	14
42	Exact-enumeration approach to tunneling in disordered systems. Physical Review B, 1990, 42, 4559-4562.	3.2	13
43	Proximity-induced exchange and spin-orbit effects in graphene on Ni and Co. Physical Review B, 2019, 99, .	3.2	13
44	Spectral statistics and dynamics of L�vy matrices. Physical Review E, 1999, 60, 3580-3588.	2.1	12
45	Spin superfluidity and spin-orbit gauge symmetry fixing. Europhysics Letters, 2012, 97, 67007.	2.0	12
46	Magnetoconductance anisotropy and interference effects in variable-range hopping. Physical Review B, 1996, 53, 7663-7672.	3.2	11
47	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
48	Directed waves in random media. Physical Review Letters, 1991, 66, 2176-2176.	7.8	9
49	Preexponential factor in variable-range hopping conduction in CuInTe2. Solid State Communications, 2005, 136, 228-233.	1.9	9
50	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
51	Three-dimensional rotational Langevin dynamics and the Lebwohl-Lasher model. Physical Review E, 2001, 63, 042701.	2.1	8
52	Ferromagnetic order induced on graphene by Ni/Co proximity effects. Physical Review B, 2016, 94, .	3.2	8
53	Coherence preservation and electron-phonon interaction in electron transfer in DNA. Journal of Chemical Physics, 2020, 153, 165102.	3.0	8
54	Rashba spin-orbit interaction enhanced by graphene in-plane deformations. Condensed Matter Physics, 2017, 20, 13702.	0.7	8

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55	Simulation of Suspensions in Constricted Geometries by Dissipative Particle Dynamics. <i>Molecular Simulation</i> , 2003, 29, 443-449.	2.0	7
56	Consistent hopping criterion in the Efros-Shklovskii regime. <i>Physical Review B</i> , 2007, 75, .	3.2	7
57	Two-electron entanglement in quasi-one-dimensional systems: Role of resonances. <i>Physical Review B</i> , 2007, 75, .	3.2	7
58	Gauge transformations and conserved quantities in classical and quantum mechanics. <i>American Journal of Physics</i> , 2016, 84, 616-625.	0.7	7
59	Reduction of the bulk modulus with polydispersity in noncohesive granular solids. <i>Physical Review E</i> , 2018, 98, 022903.	2.1	7
60	Strong-weak network anisotropy switching and hysteresis in three-dimensional granular materials. <i>Physical Review E</i> , 2008, 78, 021305.	2.1	6
61	Analysis and fabrication steps for a 3D-pyramidal high density coil electromagnetic micro-generator for energy harvesting applications. <i>Sensors and Actuators A: Physical</i> , 2014, 205, 103-110.	4.1	6
62	Charge- and spin-polarized currents in mesoscopic rings with Rashba spin-orbit interactions coupled to an electron reservoir. <i>Physical Review B</i> , 2014, 90, .	3.2	6
63	A temperature-dependent pre-exponential factor in Efrosâ€™Shklovskii variable range hopping conduction in p-type CuInTe_2 . <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2003, 18, 292-293.	2.7	5
64	Metalâ€™insulator transition in one-dimensional lattices with chaotic energy sequences. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2005, 341, 101-106.	2.1	5
65	Interplay of entropic and memory effects in diffusion of methane in silicalite zeolites. <i>Physical Review E</i> , 2005, 72, 061111.	2.1	5
66	Acoustic response of cemented granular sedimentary rocks: Molecular dynamics modeling. <i>Physical Review E</i> , 2007, 75, 061308.	2.1	5
67	Force fabric and macroscopic friction in two-dimensional granular materials. <i>Physical Review E</i> , 2010, 81, 022301.	2.1	5
68	Extracting work from a single reservoir in the non-Markovian underdamped regime. <i>Physical Review E</i> , 2016, 94, 062111.	2.1	5
69	Directed paths on hierarchical lattices with random sign weights. <i>Physical Review E</i> , 1998, 58, 4246-4253.	2.1	4
70	Viscosity minimum in bimodal concentrated suspensions under shear. <i>European Physical Journal E</i> , 2002, 9, 327-334.	1.6	4
71	A perfect spin filtering device through Machâ€™Zehnder interferometry in a GaAs/AlGaAs electron gas. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 115303.	1.8	4
72	A thermodynamic counterpart of the Axelrod model of social influence: The one-dimensional case. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2013, 392, 6561-6570.	2.6	4

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73	Gauge transformations of spin-orbit interactions in graphene. <i>European Physical Journal B</i> , 2015, 88, 1.	1.5	4
74	Contact angle entropy and macroscopic friction in noncohesive two-dimensional granular packings. <i>Physical Review E</i> , 2017, 96, 012902.	2.1	4
75	Equilibrium currents in a Corbino graphene ring. <i>Condensed Matter Physics</i> , 2014, 17, 33803.	0.7	4
76	Level broadening and quantum interference effects in insulators. <i>Physical Review B</i> , 2000, 61, 5850-5853.	3.2	3
77	Entangled electronic state via an interacting quantum dot. <i>Europhysics Letters</i> , 2004, 66, 624-630.	2.0	3
78	Two-electron-entanglement enhancement by an inelastic scattering process. <i>Physical Review B</i> , 2007, 76, .	3.2	3
79	Using torsion to manipulate spin currents. <i>Europhysics Letters</i> , 2017, 117, 47007.	2.0	3
80	Yachay's promise. <i>Science</i> , 2017, 357, 881-881.	12.6	3
81	Low-temperature ultrasonic attenuation by strongly dispersive transverse-acoustic phonons in α -quartz. <i>Physical Review B</i> , 1987, 36, 3422-3426.	3.2	2
82	Limit distributions in random resistor networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1992, 191, 410-414.	2.6	2
83	Analytical results for random line networks applications to fracture networks and disordered fiber composites. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2000, 282, 35-49.	2.6	2
84	Non-ergodicity and fluctuations in mesoscopic insulators: The replica cooperon and diffuson. <i>Europhysics Letters</i> , 2001, 54, 647-653.	2.0	2
85	Molecular dynamics simulations of breaking metallic nanowires. <i>International Journal of Nanotechnology</i> , 2004, 1, 265.	0.2	2
86	Mach-Zehnder interferometric device for spin filtering in a GaAs/AlGaAs electron gas. <i>Journal of Applied Physics</i> , 2011, 110, 114523.	2.5	2
87	Dispatches from a world in turmoil. <i>Nature</i> , 2019, 576, 382-384.	27.8	2
88	Conductance quantization in atomic-sized gold contacts using a low-cost mechanically controllable break junction setup. <i>European Journal of Physics</i> , 2020, 41, 065401.	0.6	2
89	Radiation modulated spin coupling in a double-stranded DNA model. <i>Journal of Physics Condensed Matter</i> , 2022, 34, 135301.	1.8	2
90	Critical path analysis of conductance fluid invasion and rupture. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1996, 232, 21-26.	2.6	1

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91	Geometrical and Transport Properties of Disordered Fibre Networks: Analytical Results. Modern Physics Letters B, 1997, 11, 867-875.	1.9	1
92	Molecular Dynamics Simulations for Metallic Nanosystems. Molecular Simulation, 2003, 29, 427-435.	2.0	1
93	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
94	Pre-factor Effect in the Efros-Shklovskii Variable Range Hopping Regime. AIP Conference Proceedings, 2006, , .	0.4	1
95	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
96	Rupture of Random Fuse Networks: Ductile to Brittle Crossover. Materials Research Society Symposia Proceedings, 1994, 367, 131.	0.1	0
97	Grain Parameter Effects on Seismic Attributes I: Sorting. , 2009, , .		0
98	Local operation on identical particles systems. Journal of Physics: Conference Series, 2012, 338, 012015.	0.4	0
99	Dispersive behavior and acoustic scaling in granular rocks. , 2013, , .		0
100	Thermodynamics of small electromagnetic generators: An experimental perspective. Journal of Physical Studies, 2009, 13, .	0.5	0
101	Quantum Interference Phenomena in Strong Localization. , 1992, , 145-156.		0