Vittorio Cataudella

List of Publications by Year
in descending order

156	3,430	147801	182427
papers	citations	31 h-index	51 g-index

156	156	156	4060
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A study of events with photoelectric emission in the DarkSide-50 liquid argon Time Projection Chamber. Astroparticle Physics, 2022, 140, 102704.	4.3	3
2	Sensitivity of future liquid argon dark matter search experiments to core-collapse supernova neutrinos. Journal of Cosmology and Astroparticle Physics, 2021, 2021, 043.	5.4	12
3	Ballistic transport through quantum point contacts of multiorbital oxides. Physical Review B, 2021, 103, .	3.2	2
4	Ground-state features and spectral properties of large polaron liquids from low to high charge densities. Physical Review B, 2021, 103, .	3.2	4
5	Quantum phase transition of many interacting spins coupled to a bosonic bath: Static and dynamical properties. Physical Review B, 2021, 104, .	3.2	5
6	Memetic algorithms for mapping <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e2012" altimg="si269.svg"><mml:mi>p</mml:mi></mml:math>-body interacting systems in effective quantum 2-body Hamiltonians. Applied Soft Computing Journal, 2021, 110, 107634.	7.2	9
7	Strain-induced topological phase transition at (111) SrTiO3 -based heterostructures. Physical Review Research, 2021, 3, .	3.6	7
8	Quantum phase transitions in the spin-boson model: Monte Carlo method versus variational approach Ã la Feynman. Physical Review B, 2020, 101, .	3.2	13
9	Strain and electric field control of the orbital and spin order in multiferroic $$hbox {BiMnO}_3$$. European Physical Journal Plus, 2020, 135, 1.	2.6	2
10	Design and construction of a new detector to measure ultra-low radioactive-isotope contamination of argon. Journal of Instrumentation, 2020, 15, P02024-P02024.	1.2	19
11	Dissipative dynamics of a driven qubit: Interplay between nonadiabatic dynamics and noise effects from the weak to strong coupling regime. Physical Review B, 2019, 100, .	3.2	6
12	On the Role of Local Many-Body Interactions on the Thermoelectric Properties of Fullerene Junctions. Entropy, 2019, 21, 754.	2.2	1
13	Evolution of topological superconductivity by orbital-selective confinement in oxide nanowires. Physical Review B, 2019, 100, .	3.2	17
14	Unveiling Signatures of Topological Phases in Open Kitaev Chains and Ladders. Nanomaterials, 2019, 9, 894.	4.1	17
15	Two-channel model for optical conductivity of high-mobility organic crystals. Europhysics Letters, 2019, 125, 47002.	2.0	3
16	Measurement of the ion fraction and mobility of ²¹⁸Po produced in ²²²Rn decays in liquid argon. Journal of Instrumentation, 2019, 14, P11018-P11018.	1.2	2
17	An evolutionary strategy for finding effective quantum 2-body Hamiltonians of p-body interacting systems. Quantum Machine Intelligence, 2019, 1, 113-122.	4.8	12
18	Optical signatures of exciton polarons from diagrammatic Monte Carlo. Physical Review B, 2018, 97, .	3.2	3

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19	Beyond the Born-Markov approximation: Dissipative dynamics of a single qubit. Physical Review B, 2018, 98, .	3.2	9
20	Electron-phonon coupling in the undoped cuprate YBa2Cu3O6 estimated from Raman and optical conductivity spectra. Physical Review B, 2018, 98, .	3.2	8
21	Constraints on Sub-GeV Dark-Matterâ€“Electron Scattering from the DarkSide-50 Experiment. Physical Review Letters, 2018, 121, 111303.	7.8	179
22	DarkSide-20k: A 20 tonne two-phase LAr TPC for direct dark matter detection at LNGS. European Physical Journal Plus, 2018, 133, 1.	2.6	247
23	Low-Mass Dark Matter Search with the DarkSide-50 Experiment. Physical Review Letters, 2018, 121, 081307.	7.8	259
24	Simulation of argon response and light detection in the DarkSide-50 dual phase TPC. Journal of Instrumentation, 2017, 12, P10015-P10015.	1.2	31
25	Directional modulation of electron-ion pairs recombination in liquid argon. Journal of Instrumentation, 2017, 12, P12002-P12002.	1.2	9
26	Plasmons in topological insulator cylindrical nanowires. Physical Review B, 2017, 95, .	3.2	7
27	The electronics, trigger and data acquisition system for the liquid argon time projection chamber of the DarkSide-50 search for dark matter. Journal of Instrumentation, 2017, 12, P12011-P12011.	1.2	10
28	Cryogenic Characterization of FBK RGB-HD SiPMs. Journal of Instrumentation, 2017, 12, P09030-P09030.	1.2	16
29	Charge and heat transport in soft nanosystems in the presence of time-dependent perturbations. Beilstein Journal of Nanotechnology, 2016, 7, 439-464.	2.8	4
30	Thermoelectric efficiency of molecular junctions. Journal of Physics Condensed Matter, 2016, 28, 373001.	1.8	17
31	Quantum interference effects in Bi2Se3 topological insulator nanowires with variable cross-section lengths. European Physical Journal B, 2016, 89, 1.	1.5	12
32	Crossover from Super- to Subdiffusive Motion and Memory Effects in Crystalline Organic Semiconductors. Physical Review Letters, 2015, 114, 086601.	7.8	26
33	Mobility of Holstein Polaron at Finite Temperature: An Unbiased Approach. Physical Review Letters, 2015, 114, 146401.	7.8	50
34	Interplay between electronâ€“electron and electronâ€“vibration interactions on the thermoelectric properties of molecular junctions. New Journal of Physics, 2015, 17, 083050.	2.9	11
35	Electron-vibration effects on the thermoelectric efficiency of molecular junctions. Physical Review B, 2014, 90, .	3.2	24
36	Alternative representation of the Kubo formula for the optical conductivity: A shortcut to transport properties. Physical Review B, 2014, 90, .	3.2	9

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37	Ubiquitous long-range antiferromagnetic coupling across the interface between superconducting and ferromagnetic oxides. Nature Communications, 2014, 5, 5626.	12.8	30
38	Witnessing the formation and relaxation of dressed quasi-particles in a strongly correlated electron system. Nature Communications, 2014, 5, 5112.	12.8	58
39	Noise-assisted charge pump in elastically deformable molecular junctions. Journal of Physics Condensed Matter, 2014, 26, 365301.	1.8	13
40	The Effects of Different Electron-Phonon Couplings on the Spectral and Transport Properties of Small Molecule Single-Crystal Organic Semiconductors. Electronics (Switzerland), 2014, 3, 165-189.	3.1	6
41	Interplay of charge, spin, and lattice degrees of freedom in the spectral properties of the one-dimensional Hubbard-Holstein model. Physical Review B, 2014, 90, .	3.2	13
42	Magnetic effects on nonlinear mechanical properties of a suspended carbon nanotube. Physical Review B, 2013, 87, .	3.2	13
43	Single-parameter charge pumping in carbon nanotube resonators at low frequency. Europhysics Letters, 2013, 103, 58001.	2.0	11
44	Bipolaron formation in organic semiconductors at the interface with dielectric gates. Europhysics Letters, 2012, 98, 47004.	2.0	3
45	Probing nonlinear mechanical effects through electronic currents: The case of a nanomechanical resonator acting as an electronic transistor. Physical Review B, 2012, 86, .	3.2	22
46	Optical conductivity of polarons: Double phonon cloudconcept verified by diagrammatic Monte Carlo simulations. Physical Review B, 2012, 85, .	3.2	22
47	Quantum Dynamics of the Hubbard-Holstein Model in Equilibrium and Nonequilibrium: Application to Pump-Probe Phenomena. Physical Review Letters, 2012, 109, 176402.	7.8	61
48	Interplay between electron-phonon coupling and disorder strength on the transport properties of organic semiconductors. Physical Review B, 2012, 85, .	3.2	8
49	Bond Stretching Phonon Softening of Underdoped Copper-Oxide Superconductors. Journal of Superconductivity and Novel Magnetism, 2012, 25, 1303-1306.	1.8	2
50	Transport properties and optical conductivity of the adiabatic Su-Schrieffer-Heeger model: A showcase study for rubrene-based field effect transistors. Physical Review B, 2011, 83, .	3.2	31
51	Electronic transport within a quasi-two-dimensional model for rubrene single-crystal field effect transistors. Physical Review B, 2011, 84, .	3.2	12
52	Effects of electron coupling to intramolecular and intermolecular vibrational modes on the transport properties of single-crystal organic semiconductors. Physical Review B, 2011, 84, .	3.2	15
53	Publisherâ€™s Note: Transport properties and optical conductivity of the adiabatic Su-Schrieffer-Heeger model: A showcase study for rubrene-based field effect transistors [Phys. Rev. B83, 165203 (2011)]. Physical Review B, 2011, 83, .	3.2	1
54	Spectral, optical, and transport properties of the adiabatic anisotropic Holstein model: Application to slightly doped organic semiconductors. Physical Review B, 2011, 83, .	3.2	16

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55	Electron-lattice and strain effects in manganite heterostructures: The case of a single interface. Physical Review B, 2011, 83, .	3.2	6
56	Stochastic dynamics for a single vibrational mode in molecular junctions. Physical Review B, 2011, 83, .	3.2	31
57	Interface polaron formation in organic field-effect transistors. Physical Review B, 2010, 82, .	3.2	3
58	Behavior of quantum entropies in polaronic systems. Physical Review B, 2010, 82, .	3.2	1
59	Interplay between charge-lattice interaction and strong electron correlations in cuprates: Phonon anomaly and spectral kinks. Europhysics Letters, 2010, 91, 47007.	2.0	8
60	Sharp Transition for Single Polarons in the One-Dimensional Su-Schrieffer-Heeger Model. Physical Review Letters, 2010, 105, 266605.	7.8	104
61	Multiple double-exchange mechanism by<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msup><mml:mrow><mml:mtext>Mn</mml:mtext></mml:mrow><mml:mrow><mml:mn>2</mml:mn> in manganite compounds. Physical Review B, 2010, 82, .	3.2	43
62	Optical conductivity of a doped Mott insulator: The interplay between correlation and electron-phonon interaction. Physical Review B, 2009, 80, .	3.2	18
63	Evolution of magnetic phases and orbital occupation in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"		

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73	Phase separation and disorder in half metallic ferromagnetic manganite thin films: A theoretical study looking forward low noise nano-devices. Progress in Solid State Chemistry, 2007, 35, 387-396.	7.2	2
74	Rashba quantum wire: exact solution and ballistic transport. Journal of Physics Condensed Matter, 2007, 19, 186227.	1.8	43
75	Temperature Dependence of the Angle Resolved Photoemission Spectra in the Undoped Cuprates: Self-Consistent Approach to the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>t</mml:mi><mml:mtext mathvariant="normal">â^'</mml:mtext><mml:mi>J</mml:mi></mml:math>Holstein Model. Physical Review Letters, 2007, 99, 226402.	7.8	43
76	Single Polaron Properties in Different Electron Phonon Models. Springer Series in Materials Science, 2007, , 149-189.	0.6	4
77	Validity of the Franck-Condon Principle in the Optical Spectroscopy: Optical Conductivity of the FrÃ¶hlich Polaron. Physical Review Letters, 2006, 96, 136405.	7.8	42
78	A cellular automaton for the factor of safety field in landslides modeling. Geophysical Research Letters, 2006, 33, n/a-n/a.	4.0	32
79	Ballistic transport in one-dimensional loops with Rashba and Dresselhaus spin-orbit coupling. Physical Review B, 2006, 73, .	3.2	35
80	Direct observation of spectroscopic inhomogeneities on La0.7Sr0.3MnO3thin films by scanning tunnelling spectroscopy. Journal of Physics Condensed Matter, 2006, 18, 8195-8204.	1.8	8
81	Phase diagram of the Bose-Hubbard model withT3symmetry. Physical Review B, 2006, 73, .	3.2	78
82	Finite driving rate and anisotropy effects in landslide modeling. Physical Review E, 2006, 73, 026123.	2.1	22
83	4e-condensation in a fully frustrated Josephson junction diamond chain. Physical Review B, 2006, 73, .	3.2	19
84	Signatures of polaron formation in systems with local and non-local electron-phonon couplings. European Physical Journal B, 2005, 44, 415-421.	1.5	6
85	Intrinsic Electric Transport in CMR Thin-Films. Journal of Superconductivity and Novel Magnetism, 2005, 18, 719-722.	0.5	5
86	Effects of electron-phonon coupling range on the polaron formation. Physical Review B, 2005, 71, .	3.2	8
87	Static and dynamic polaron features in a coherent-state basis. Physical Review B, 2005, 72, .	3.2	32
88	Rashba effect in quantum networks. Physical Review B, 2005, 72, .	3.2	49
89	Effects of electron-phonon coupling near and within the insulating Mott phase. Physical Review B, 2005, 71, .	3.2	15
90	Transport properties in manganite thin films. Physical Review B, 2005, 71, .	3.2	49

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91	Polaron features for long-range electronâ€“phonon interaction. Journal of Physics Condensed Matter, 2004, 16, 1593-1601.	1.8	19
92	Polaron formation for nonlocal electron-phonon coupling: A variational wave-function study. Physical Review B, 2004, 69, .	3.2	25
93	Variational approach to the optimized phonon technique for electron-phonon problems. Physical Review B, 2004, 70, .	3.2	23
94	Rashba-Effect-Induced Localization in Quantum Networks. Physical Review Letters, 2004, 93, 056802.	7.8	60
95	Spin polarization of electrons with Rashba double-refraction. Journal of Physics Condensed Matter, 2004, 16, 9143-9154.	1.8	52
96	Ground state features of the Frï¿½hlich model. European Physical Journal B, 2003, 36, 65-73.	1.5	9
97	Conductance of a large point contact with Rashba effect. European Physical Journal B, 2003, 36, 365-375.	1.5	35
98	Electron gas with polaronic effects: beyond the mean-field theory. Physica Status Solidi (B): Basic Research, 2003, 237, 173-185.	1.5	6
99	Lattice effects in manganites. Physica Status Solidi (B): Basic Research, 2003, 237, 215-236.	1.5	1
100	Modeling of strain effects in manganite films. Physical Review B, 2003, 68, .	3.2	49
101	Infrared conductivity of a one-dimensional charge-ordered state: Quantum lattice effects. Physical Review B, 2003, 67, .	3.2	10
102	Infrared absorption of the charge-ordering phase: Lattice effects. Physical Review B, 2003, 67, .	3.2	8
103	Glassy dynamics of Josephson arrays on a dice lattice. Europhysics Letters, 2003, 61, 341-347.	2.0	22
104	Effects of magnetic field and isotopic substitution upon the infrared absorption of manganites. Physical Review B, 2002, 66, .	3.2	6
105	Comment on â€œPolarons in Carbon Nanotubesâ€• Physical Review Letters, 2002, 89, 049701; discussion 049702.	7.8	11
106	CDW Instability and Infrared Absorption of an Interacting Large Polaron Gas. , 2002, , 175-182.		0
107	Crossover from large to small bipolarons. Journal of Physics Condensed Matter, 2001, 13, 1499-1515.	1.8	4
108	Polaron and bipolaron formation in the Hubbard-Holstein model: Role of next-nearest-neighbor electron hopping. Physical Review B, 2001, 64, .	3.2	11

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109	Spectral properties and infrared absorption in manganites. Physical Review B, 2001, 64, .	3.2	22
110	Coexistence of large and small polarons in manganites. Physical Review B, 2001, 63, .	3.2	17
111	How the next-nearest-neighbor interactions change the phase diagram of a fully frustrated XY model?. Physica B: Condensed Matter, 2000, 284-288, 431-432.	2.7	2
112	Internal vibrational structure of the three-dimensional large bipolaron. European Physical Journal B, 2000, 18, 67-75.	1.5	24
113	Fully frustratedXYmodel with next-nearest-neighbor interaction. Physical Review B, 2000, 62, R9287-R9290.	3.2	22
114	Polaron features of the one-dimensional Holstein molecular crystal model. Physical Review B, 2000, 62, 1496-1499.	3.2	32
115	COEXISTENCE OF CHARGES TRAPPED IN LOCAL LATTICE DISTORTIONS AND FREE CARRIERS IN CUPRATES. International Journal of Modern Physics B, 2000, 14, 3398-3405.	2.0	8
116	Cluster formulation of spin glasses and the frustrated percolation model: statics and dynamics. Journal of Physics A, 1999, 32, 4817-4832.	1.6	4
117	Variational approach for the Holstein molecular-crystal model. Physical Review B, 1999, 60, 15163-15172.	3.2	39
118	Coexistence of large and small polarons and relative optical infrared properties in perovskitic materials. Physica B: Condensed Matter, 1999, 265, 146-149.	2.7	1
119	Normal state properties of an interacting large polaron gas. European Physical Journal B, 1999, 8, 339-351.	1.5	26
120	Optical properties of an interacting large polaron gas. European Physical Journal B, 1999, 12, 17-22.	1.5	13
121	The bosonâ€“fermion model in the mean-field approximation. Physica C: Superconductivity and Its Applications, 1998, 303, 273-286.	1.2	8
122	Coexistence of large and small mass polarons. Europhysics Letters, 1998, 41, 309-314.	2.0	17
123	Invaded cluster dynamics for frustrated models. Physical Review E, 1998, 57, 88-93.	2.1	15
124	Effect of weak disorder in the fully frustrated XY model. Europhysics Letters, 1998, 44, 478-483.	2.0	5
125	Large polarons, bipolarons and Boson-Fermion model of superconductivity. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1997, 19, 1357-1362.	0.4	1
126	Polaron Theory in Wide and Narrow Electron Bands. Physica Status Solidi (B): Basic Research, 1997, 203, 411-426.	1.5	9

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127	On the boson-fermion model of superconductivity. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1996, 18, 1307-1315.	0.4	2
128	AC conductivity of porous silicon: A fractal and surface transport mechanism?. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1996, 18, 1187-1196.	0.4	10
129	Vortex fluctuations in BSCCO and YBCO. Physica C: Superconductivity and Its Applications, 1996, 260, 41-51.	1.2	16
130	Efficient cluster dynamics for the fully frustrated XY model. Physica A: Statistical Mechanics and Its Applications, 1996, 233, 293-306.	2.6	11
131	Plasmapolaron selfenergy and effective mass in uniaxial polar crystals. Physica Status Solidi (B): Basic Research, 1996, 197, 381-397.	1.5	1
132	Electron-screening effects on the self-trapping of polarons. Physical Review B, 1996, 53, 13497-13502.	3.2	10
133	Percolation and cluster Monte Carlo dynamics for spin models. Physical Review E, 1996, 54, 175-189.	2.1	25
134	Linear screening effects on large bipolarons. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1995, 17, 143-154.	0.4	2
135	Polaron and bipolaron coexistence in high Tc superconductivity. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 196, 359-364.	2.1	18
136	Dynamical screening of excitons in a semiconductor electron-hole plasma. Journal of Physics Condensed Matter, 1994, 6, 9335-9348.	1.8	8
137	Generalized percolation models for frustrated spin systems. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1994, 16, 1259-1264.	0.4	6
138	Polaron and bipolaron coexistence in high Tc superconductivity. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 196, 359-364.	2.1	0
139	Critical clusters and efficient dynamics for frustrated spin models. Physical Review Letters, 1994, 72, 1541-1544.	7.8	34
140	Cluster formulation for frustrated spin models. Physica A: Statistical Mechanics and Its Applications, 1993, 192, 167-174.	2.6	21
141	Two-dimensional vortices in layered superconductors. Physica C: Superconductivity and Its Applications, 1993, 207, 193-202.	1.2	5
142	Mobility of biplasmapolarons and high-T c superconductivity. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1993, 15, 1035-1039.	0.4	4
143	Phonon-plasmon cooperative effects in the dilute large-bipolaron gas: A possible mechanism for high-Tcsuperconductivity. Physical Review B, 1993, 48, 12966-12978.	3.2	31
144	Plasmon Effects on FrÃ¶hlich Bipolaron Binding Energies. Europhysics Letters, 1992, 17, 709-714.	2.0	20

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145	Percolation transition in systems with frustation. Physica A: Statistical Mechanics and Its Applications, 1992, 183, 249-254.	2.6	20
146	Binding Energies, Effective Masses and Screenings Effects of FrÃ¶hlich Bipolarons. Physica Scripta, 1991, T39, 71-76.	2.5	17
147	Simple estimates for vortex fluctuations in connection with high-Tc superconductors. Physica C: Superconductivity and Its Applications, 1990, 166, 442-450.	1.2	81
148	Renormalisation equations for the two-dimensional Coulomb gas: inclusion of the single-particle charge distribution and comparison with Monte Carlo simulations. Journal of Physics Condensed Matter, 1990, 2, 2345-2354.	1.8	7
149	Comment on the one band Hubbard model for the superconducting Cu oxides. Physica Scripta, 1989, 40, 122-123.	2.5	1
150	Intersubband excitations in a periodic array of two-dimensional stripes. Physical Review B, 1988, 38, 7828-7831.	3.2	6
151	Asymptotic localization of plasmons in a periodic array of stripes. Physical Review B, 1988, 38, 1828-1834.	3.2	20
152	The effect of a phenomenological relaxation time on the magnetoplasmons in a two-dimensional inhomogeneous electron gas. Physica Scripta, 1988, 38, 753-757.	2.5	0
153	Magnetoplasmons in a two-dimensional electron gas: Strip geometry. Physical Review B, 1987, 35, 7443-7449.	3.2	31
154	Edge plasmons on a non planar surface. Solid State Communications, 1986, 58, 857-860.	1.9	2
155	Electrostatic edge modes for a hyperbolic dielectric wedge:Analytical solutions. Solid State Communications, 1986, 59, 267-270.	1.9	3
156	On the analytical structure of the Lindhard dielectric function. Physics Letters, Section A: General, Atomic and Solid State Physics, 1982, 92, 359-362.	2.1	3