

Vittorio Cataudella

List of Publications by Year in descending order

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156
all docs

156
docs citations

156
times ranked

4060
citing authors

#	ARTICLE	IF	CITATIONS
1	Low-Mass Dark Matter Search with the DarkSide-50 Experiment. Physical Review Letters, 2018, 121, 081307.	7.8	259
2	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
3	Constraints on Sub-GeV Dark-Matter Electron Scattering from the DarkSide-50 Experiment. Physical Review Letters, 2018, 121, 111303.	7.8	179
4	Sharp Transition for Single Polarons in the One-Dimensional Su-Schrieffer-Heeger Model. Physical Review Letters, 2010, 105, 266605.	7.8	104
5	Charge Dynamics of Doped Holes in High T_c Cuprate Superconductors: A Clue from Optical Conductivity. Physical Review Letters, 2008, 100, 166401.	7.8	83
6	Simple estimates for vortex fluctuations in connection with high- T_c superconductors. Physica C: Superconductivity and Its Applications, 1990, 166, 442-450.	1.2	81
7	Phase diagram of the Bose-Hubbard model with T_3 symmetry. Physical Review B, 2006, 73, .	3.2	78
8	Evolution of magnetic phases and orbital occupation in T_3 symmetry.		

#	ARTICLE	IF	CITATIONS
19	Temperature Dependence of the Angle Resolved Photoemission Spectra in the Undoped Cuprates: Self-Consistent Approach to the t - J Holstein Model. Physical Review B, 2007, 80, 235402.	7.8	43
20	Multiple double-exchange mechanism by Mn^{3+} in manganite compounds. Physical Review B, 2010, 82, .	3.2	43
21	Validity of the Franck-Condon Principle in the Optical Spectroscopy: Optical Conductivity of the Fröhlich Polaron. Physical Review Letters, 2006, 96, 136405.	7.8	42
22	Variational approach for the Holstein molecular-crystal model. Physical Review B, 1999, 60, 15163-15172.	3.2	39
23	Tuning the metal-insulator transitions of Mn^{3+}		

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37	Normal state properties of an interacting large polaron gas. <i>European Physical Journal B</i> , 1999, 8, 339-351.	1.5	26
38	Crossover from Super- to Subdiffusive Motion and Memory Effects in Crystalline Organic Semiconductors. <i>Physical Review Letters</i> , 2015, 114, 086601.	7.8	26
39	Percolation and cluster Monte Carlo dynamics for spin models. <i>Physical Review E</i> , 1996, 54, 175-189.	2.1	25
40	Polaron formation for nonlocal electron-phonon coupling: A variational wave-function study. <i>Physical Review B</i> , 2004, 69, .	3.2	25
41	Internal vibrational structure of the three-dimensional large bipolaron. <i>European Physical Journal B</i> , 2000, 18, 67-75.	1.5	24
42	Electron-vibration effects on the thermoelectric efficiency of molecular junctions. <i>Physical Review B</i> , 2014, 90, .	3.2	24
43	Variational approach to the optimized phonon technique for electron-phonon problems. <i>Physical Review B</i> , 2004, 70, .	3.2	23
44	Fully frustrated XY model with next-nearest-neighbor interaction. <i>Physical Review B</i> , 2000, 62, R9287-R9290.	3.2	22
45	Spectral properties and infrared absorption in manganites. <i>Physical Review B</i> , 2001, 64, .	3.2	22
46	Glassy dynamics of Josephson arrays on a dice lattice. <i>Europhysics Letters</i> , 2003, 61, 341-347.	2.0	22
47	Finite driving rate and anisotropy effects in landslide modeling. <i>Physical Review E</i> , 2006, 73, 026123.	2.1	22
48	Probing nonlinear mechanical effects through electronic currents: The case of a nanomechanical resonator acting as an electronic transistor. <i>Physical Review B</i> , 2012, 86, .	3.2	22
49	Optical conductivity of polarons: Double phonon cloud concept verified by diagrammatic Monte Carlo simulations. <i>Physical Review B</i> , 2012, 85, .	3.2	22
50	Cluster formulation for frustrated spin models. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1993, 192, 167-174.	2.6	21
51	Nonlocal Composite Spin-Lattice Polarons in High Temperature Superconductors. <i>Physical Review Letters</i> , 2007, 99, 146405.	7.8	21
52	Asymptotic localization of plasmons in a periodic array of stripes. <i>Physical Review B</i> , 1988, 38, 1828-1834.	3.2	20
53	Plasmon Effects on Fröhlich Bipolaron Binding Energies. <i>Europhysics Letters</i> , 1992, 17, 709-714.	2.0	20
54	Percolation transition in systems with frustration. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1992, 183, 249-254.	2.6	20

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55	Polaron features for long-range electron-phonon interaction. <i>Journal of Physics Condensed Matter</i> , 2004, 16, 1593-1601.	1.8	19
56	4e-condensation in a fully frustrated Josephson junction diamond chain. <i>Physical Review B</i> , 2006, 73, .	3.2	19
57	Design and construction of a new detector to measure ultra-low radioactive-isotope contamination of argon. <i>Journal of Instrumentation</i> , 2020, 15, P02024-P02024.	1.2	19
58	Polaron and bipolaron coexistence in high T _c superconductivity. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1995, 196, 359-364.	2.1	18
59	Optical conductivity of a doped Mott insulator: The interplay between correlation and electron-phonon interaction. <i>Physical Review B</i> , 2009, 80, .	3.2	18
60	Binding Energies, Effective Masses and Screenings Effects of Fröhlich Bipolarons. <i>Physica Scripta</i> , 1991, T39, 71-76.	2.5	17
61	Coexistence of large and small mass polarons. <i>Europhysics Letters</i> , 1998, 41, 309-314.	2.0	17
62	Coexistence of large and small polarons in manganites. <i>Physical Review B</i> , 2001, 63, .	3.2	17
63	Thermoelectric efficiency of molecular junctions. <i>Journal of Physics Condensed Matter</i> , 2016, 28, 373001.	1.8	17
64	Evolution of topological superconductivity by orbital-selective confinement in oxide nanowires. <i>Physical Review B</i> , 2019, 100, .	3.2	17
65	Unveiling Signatures of Topological Phases in Open Kitaev Chains and Ladders. <i>Nanomaterials</i> , 2019, 9, 894.	4.1	17
66	Vortex fluctuations in BSCCO and YBCO. <i>Physica C: Superconductivity and Its Applications</i> , 1996, 260, 41-51.	1.2	16
67	Spectral, optical, and transport properties of the adiabatic anisotropic Holstein model: Application to slightly doped organic semiconductors. <i>Physical Review B</i> , 2011, 83, .	3.2	16
68	Cryogenic Characterization of FBK RGB-HD SiPMs. <i>Journal of Instrumentation</i> , 2017, 12, P09030-P09030.	1.2	16
69	Invaded cluster dynamics for frustrated models. <i>Physical Review E</i> , 1998, 57, 88-93.	2.1	15
70	Effects of electron-phonon coupling near and within the insulating Mott phase. <i>Physical Review B</i> , 2005, 71, .	3.2	15
71	Effects of electron coupling to intramolecular and intermolecular vibrational modes on the transport properties of single-crystal organic semiconductors. <i>Physical Review B</i> , 2011, 84, .	3.2	15
72	Optical properties of an interacting large polaron gas. <i>European Physical Journal B</i> , 1999, 12, 17-22.	1.5	13

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73	Magnetic effects on nonlinear mechanical properties of a suspended carbon nanotube. <i>Physical Review B</i> , 2013, 87, .	3.2	13
74	Noise-assisted charge pump in elastically deformable molecular junctions. <i>Journal of Physics Condensed Matter</i> , 2014, 26, 365301.	1.8	13
75	Interplay of charge, spin, and lattice degrees of freedom in the spectral properties of the one-dimensional Hubbard-Holstein model. <i>Physical Review B</i> , 2014, 90, .	3.2	13
76	Quantum phase transitions in the spin-boson model: Monte Carlo method versus variational approach À la Feynman. <i>Physical Review B</i> , 2020, 101, .	3.2	13
77	Electronic transport within a quasi-two-dimensional model for rubrene single-crystal field effect transistors. <i>Physical Review B</i> , 2011, 84, .	3.2	12
78	Quantum interference effects in Bi ₂ Se ₃ topological insulator nanowires with variable cross-section lengths. <i>European Physical Journal B</i> , 2016, 89, 1.	1.5	12
79	An evolutionary strategy for finding effective quantum 2-body Hamiltonians of p-body interacting systems. <i>Quantum Machine Intelligence</i> , 2019, 1, 113-122.	4.8	12
80	Sensitivity of future liquid argon dark matter search experiments to core-collapse supernova neutrinos. <i>Journal of Cosmology and Astroparticle Physics</i> , 2021, 2021, 043.	5.4	12
81	Efficient cluster dynamics for the fully frustrated XY model. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1996, 233, 293-306.	2.6	11
82	Polaron and bipolaron formation in the Hubbard-Holstein model: Role of next-nearest-neighbor electron hopping. <i>Physical Review B</i> , 2001, 64, .	3.2	11
83	Comment on "Polarons in Carbon Nanotubes". <i>Physical Review Letters</i> , 2002, 89, 049701; discussion 049702.	7.8	11
84	Single-parameter charge pumping in carbon nanotube resonators at low frequency. <i>Europhysics Letters</i> , 2013, 103, 58001.	2.0	11
85	Interplay between electron-electron and electron-vibration interactions on the thermoelectric properties of molecular junctions. <i>New Journal of Physics</i> , 2015, 17, 083050.	2.9	11
86	AC conductivity of porous silicon: A fractal and surface transport mechanism?. <i>Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics</i> , 1996, 18, 1187-1196.	0.4	10
87	Electron-screening effects on the self-trapping of polarons. <i>Physical Review B</i> , 1996, 53, 13497-13502.	3.2	10
88	Infrared conductivity of a one-dimensional charge-ordered state: Quantum lattice effects. <i>Physical Review B</i> , 2003, 67, .	3.2	10
89	The electronics, trigger and data acquisition system for the liquid argon time projection chamber of the DarkSide-50 search for dark matter. <i>Journal of Instrumentation</i> , 2017, 12, P12011-P12011.	1.2	10
90	Polaron Theory in Wide and Narrow Electron Bands. <i>Physica Status Solidi (B): Basic Research</i> , 1997, 203, 411-426.	1.5	9

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91	Ground state features of the Fröhlich model. European Physical Journal B, 2003, 36, 65-73.	1.5	9
92	Alternative representation of the Kubo formula for the optical conductivity: A shortcut to transport properties. Physical Review B, 2014, 90, .	3.2	9
93	Directional modulation of electron-ion pairs recombination in liquid argon. Journal of Instrumentation, 2017, 12, P12002-P12002.	1.2	9
94	Beyond the Born-Markov approximation: Dissipative dynamics of a single qubit. Physical Review B, 2018, 98, .	3.2	9
95	Memetic algorithms for mapping $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e2012" altimg="si269.svg"} \rangle$ $\langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -body interacting systems in effective quantum 2-body Hamiltonians. Applied Soft Computing Journal, 2021, 110, 107634.	7.2	9
96	Dynamical screening of excitons in a semiconductor electron-hole plasma. Journal of Physics Condensed Matter, 1994, 6, 9335-9348.	1.8	8
97	The boson-fermion model in the mean-field approximation. Physica C: Superconductivity and Its Applications, 1998, 303, 273-286.	1.2	8
98	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
99	Infrared absorption of the charge-ordering phase: Lattice effects. Physical Review B, 2003, 67, .	3.2	8
100	Effects of electron-phonon coupling range on the polaron formation. Physical Review B, 2005, 71, .	3.2	8
101	Direct observation of spectroscopic inhomogeneities on La _{0.7} Sr _{0.3} MnO ₃ thin films by scanning tunnelling spectroscopy. Journal of Physics Condensed Matter, 2006, 18, 8195-8204.	1.8	8
102	Interplay between charge-lattice interaction and strong electron correlations in cuprates: Phonon anomaly and spectral kinks. Europhysics Letters, 2010, 91, 47007.	2.0	8
103	Interplay between electron-phonon coupling and disorder strength on the transport properties of organic semiconductors. Physical Review B, 2012, 85, .	3.2	8
104	Electron-phonon coupling in the undoped cuprate YBa ₂ Cu ₃ O ₆ estimated from Raman and optical conductivity spectra. Physical Review B, 2018, 98, .	3.2	8
105	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
106	Plasmons in topological insulator cylindrical nanowires. Physical Review B, 2017, 95, .	3.2	7
107	Strain-induced topological phase transition at (111) SrTiO ₃ -based heterostructures. Physical Review Research, 2021, 3, .	3.6	7
108	Intersubband excitations in a periodic array of two-dimensional stripes. Physical Review B, 1988, 38, 7828-7831.	3.2	6

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109	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
110	Effects of magnetic field and isotopic substitution upon the infrared absorption of manganites. Physical Review B, 2002, 66, .	3.2	6
111	Electron gas with polaronic effects: beyond the mean-field theory. Physica Status Solidi (B): Basic Research, 2003, 237, 173-185.	1.5	6
112	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
113	A model of volcanic magma transport by fracturing stress mechanisms. Geophysical Research Letters, 2008, 35, .	4.0	6
114	Electron-lattice and strain effects in manganite heterostructures: The case of a single interface. Physical Review B, 2011, 83, .	3.2	6
115	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
116	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
117	Two-dimensional vortices in layered superconductors. Physica C: Superconductivity and Its Applications, 1993, 207, 193-202.	1.2	5
118	Effect of weak disorder in the fully frustrated XY model. Europhysics Letters, 1998, 44, 478-483.	2.0	5
119	Intrinsic Electric Transport in CMR Thin-Films. Journal of Superconductivity and Novel Magnetism, 2005, 18, 719-722.	0.5	5
120	Evidences of the Charge- t^2 Lattice Interaction in Undoped Cuprates. Journal of Superconductivity and Novel Magnetism, 2009, 22, 17-20.	1.8	5
121	Quantum phase transition of many interacting spins coupled to a bosonic bath: Static and dynamical properties. Physical Review B, 2021, 104, .	3.2	5
122	Mobility of bipolarons 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
123	Cluster formulation of spin glasses and the frustrated percolation model: statics and dynamics. Journal of Physics A, 1999, 32, 4817-4832.	1.6	4
124	Crossover from large to small bipolarons. Journal of Physics Condensed Matter, 2001, 13, 1499-1515.	1.8	4
125	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
126	Ground-state features and spectral properties of large polaron liquids from low to high charge densities. Physical Review B, 2021, 103, .	3.2	4

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127	Single Polaron Properties in Different Electron Phonon Models. Springer Series in Materials Science, 2007, , 149-189.	0.6	4
128	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
129	Electrostatic edge modes for a hyperbolic dielectric wedge:Analytical solutions. Solid State Communications, 1986, 59, 267-270.	1.9	3
130	Interface polaron formation in organic field-effect transistors. Physical Review B, 2010, 82, .	3.2	3
131	Bipolaron formation in organic semiconductors at the interface with dielectric gates. Europhysics Letters, 2012, 98, 47004.	2.0	3
132	Optical signatures of exciton polarons from diagrammatic Monte Carlo. Physical Review B, 2018, 97, .	3.2	3
133	Two-channel model for optical conductivity of high-mobility organic crystals. Europhysics Letters, 2019, 125, 47002.	2.0	3
134	A study of events with photoelectric emission in the DarkSide-50 liquid argon Time Projection Chamber. Astroparticle Physics, 2022, 140, 102704.	4.3	3
135	Edge plasmons on a non planar surface. Solid State Communications, 1986, 58, 857-860.	1.9	2
136	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
137	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
138	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
139	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
140	Bond Stretching Phonon Softening of Underdoped Copper-Oxide Superconductors. Journal of Superconductivity and Novel Magnetism, 2012, 25, 1303-1306.	1.8	2
141	Measurement of the ion fraction and mobility of ^{218}Po produced in ^{222}Rn decays in liquid argon. Journal of Instrumentation, 2019, 14, P11018-P11018.	1.2	2
142	Strain and electric field control of the orbital and spin order in multiferroic BiMnO_3 . European Physical Journal Plus, 2020, 135, 1.	2.6	2
143	Ballistic transport through quantum point contacts of multiorbital oxides. Physical Review B, 2021, 103, .	3.2	2
144	Comment on the one band Hubbard model for the superconducting Cu oxides. Physica Scripta, 1989, 40, 122-123.	2.5	1

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145	Plasmapolaron selfenergy and effective mass in uniaxial polar crystals. Physica Status Solidi (B): Basic Research, 1996, 197, 381-397.	1.5	1
146	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
147	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
148	Lattice effects in manganites. Physica Status Solidi (B): Basic Research, 2003, 237, 215-236.	1.5	1
149	Low-temperature magnetic and transport anisotropy in manganite thin films. Journal of Physics Condensed Matter, 2009, 21, 456002.	1.8	1
150	Behavior of quantum entropies in polaronic systems. Physical Review B, 2010, 82, .	3.2	1
151	Publisher'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
152	On the Role of Local Many-Body Interactions on the Thermoelectric Properties of Fullerene Junctions. Entropy, 2019, 21, 754.	2.2	1
153	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
154	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
155	CDW Instability and Infrared Absorption of an Interacting Large Polaron Gas. , 2002, , 175-182.		0
156	Publisher's Note: Temperature Dependence of the Angle Resolved Photoemission Spectra in the Undoped Cuprates: Self-Consistent Approach to the $\langle \mathbf{t} \rangle$ Holstein Model [Phys. Rev. Lett. 99, 226402 (2007)]. Physical Review Letters, 2008, 100, .	7.8	0