

Vittorio Cataudella

List of Publications by Year in descending order

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156
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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-Matterâ€™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. European Physical Journal B, 1999, 8, 339-351.	1.5	26
38	Crossover from Super- to Subdiffusive Motion and Memory Effects in Crystalline Organic Semiconductors. Physical Review Letters, 2015, 114, 086601.	7.8	26
39	Percolation and cluster Monte Carlo dynamics for spin models. Physical Review E, 1996, 54, 175-189.	2.1	25
40	Polaron formation for nonlocal electron-phonon coupling: A variational wave-function study. Physical Review B, 2004, 69, .	3.2	25
41	Internal vibrational structure of the three-dimensional large bipolaron. European Physical Journal B, 2000, 18, 67-75.	1.5	24
42	Electron-vibration effects on the thermoelectric efficiency of molecular junctions. Physical Review B, 2014, 90, .	3.2	24
43	Variational approach to the optimized phonon technique for electron-phonon problems. Physical Review B, 2004, 70, .	3.2	23
44	Fully frustrated XY model with next-nearest-neighbor interaction. Physical Review B, 2000, 62, R9287-R9290.	3.2	22
45	Spectral properties and infrared absorption in manganites. Physical Review B, 2001, 64, .	3.2	22
46	Glassy dynamics of Josephson arrays on a dice lattice. Europhysics Letters, 2003, 61, 341-347.	2.0	22
47	Finite driving rate and anisotropy effects in landslide modeling. Physical Review E, 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. Physical Review B, 2012, 86, .	3.2	22
49	Optical conductivity of polarons: Double phonon cloud concept verified by diagrammatic Monte Carlo simulations. Physical Review B, 2012, 85, .	3.2	22
50	Cluster formulation for frustrated spin models. Physica A: Statistical Mechanics and Its Applications, 1993, 192, 167-174.	2.6	21
51	Nonlocal Composite Spin-Lattice Polarons in High Temperature Superconductors. Physical Review Letters, 2007, 99, 146405.	7.8	21
52	Asymptotic localization of plasmons in a periodic array of stripes. Physical Review B, 1988, 38, 1828-1834.	3.2	20
53	Plasmon Effects on Fröhlich Bipolaron Binding Energies. Europhysics Letters, 1992, 17, 709-714.	2.0	20
54	Percolation transition in systems with frustration. Physica A: Statistical Mechanics and Its Applications, 1992, 183, 249-254.	2.6	20

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55	Polaron features for long-range electron-phonon interaction. Journal of Physics Condensed Matter, 2004, 16, 1593-1601.	1.8	19
56	4e-condensation in a fully frustrated Josephson junction diamond chain. Physical Review B, 2006, 73, .	3.2	19
57	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
58	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
59	Optical conductivity of a doped Mott insulator: The interplay between correlation and electron-phonon interaction. Physical Review B, 2009, 80, .	3.2	18
60	Binding Energies, Effective Masses and Screenings Effects of Fröhlich Bipolarons. Physica Scripta, 1991, T39, 71-76.	2.5	17
61	Coexistence of large and small mass polarons. Europhysics Letters, 1998, 41, 309-314.	2.0	17
62	Coexistence of large and small polarons in manganites. Physical Review B, 2001, 63, .	3.2	17
63	Thermoelectric efficiency of molecular junctions. Journal of Physics Condensed Matter, 2016, 28, 373001.	1.8	17
64	Evolution of topological superconductivity by orbital-selective confinement in oxide nanowires. Physical Review B, 2019, 100, .	3.2	17
65	Unveiling Signatures of Topological Phases in Open Kitaev Chains and Ladders. Nanomaterials, 2019, 9, 894.	4.1	17
66	Vortex fluctuations in BSCCO and YBCO. Physica C: Superconductivity and Its Applications, 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. Physical Review B, 2011, 83, .	3.2	16
68	Cryogenic Characterization of FBK RGB-HD SiPMs. Journal of Instrumentation, 2017, 12, P09030-P09030.	1.2	16
69	Invaded cluster dynamics for frustrated models. Physical Review E, 1998, 57, 88-93.	2.1	15
70	Effects of electron-phonon coupling near and within the insulating Mott phase. Physical Review B, 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. Physical Review B, 2011, 84, .	3.2	15
72	Optical properties of an interacting large polaron gas. European Physical Journal B, 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