

JosÃ© Lorenzana

List of Publications by Year in descending order

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157
papers

3,385
citations

117619

34
h-index

175241

52
g-index

158
all docs

158
docs citations

158
times ranked

2543
citing authors

#	ARTICLE	IF	CITATIONS
1	Charge-transfer and excitations in AgF_2 . <i>Physical Review Research</i> , 2022, 4, .	3.6	7
2	Charge doping to flat AgF_2 monolayers in a chemical capacitor setup. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 15705-15717.	2.8	3
3	Theory of superconductivity mediated by Rashba coupling in incipient ferroelectrics. <i>Physical Review B</i> , 2022, 105, .	3.2	12
4	Adiabatic transition from a BCS superconductor to a Fermi liquid and phase dynamics. <i>Physical Review B</i> , 2022, 105, .	3.2	2
5	Trimeron-phonon coupling in magnetite. <i>Physical Review B</i> , 2021, 103, .	3.2	8
6	Multiple-magnon excitations shape the spin spectrum of cuprate parent compounds. <i>Physical Review B</i> , 2021, 103, .	3.2	10
7	Separation of Controlled Redox Reactions. <i>Angewandte Chemie</i> , 2021, 133, 14011-14014.	2.0	0
8	Separation of Controlled Redox Reactions. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 13892-13895.	13.8	3
9	Fate of doped carriers in silver fluoride cuprate analogs. <i>Physical Review Materials</i> , 2021, 5, .	2.4	6
10	Emergent parametric resonances and time-crystal phases in driven Bardeen-Cooper-Schrieffer systems. <i>Physical Review Research</i> , 2021, 3, .	3.6	19
11	Nonequilibrium dynamics from BCS to the bosonic limit. <i>Physical Review B</i> , 2020, 102, .	3.2	8
12	Gigantic work function in layered AgF_2 . <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 21809-21815.	2.8	7
13	Discovery of the soft electronic modes of the trimeron order in magnetite. <i>Nature Physics</i> , 2020, 16, 541-545.	16.7	26
14	Nonlinear dynamics of driven superconductors with dissipation. <i>Physical Review B</i> , 2020, 101, .	3.2	9
15	Energy domain versus time domain precursor fluctuations above the Verwey transition in magnetite. <i>Physical Review B</i> , 2020, 101, .	3.2	3
16	Epitaxial engineering of flat silver fluoride cuprate analogs. <i>Physical Review Materials</i> , 2020, 4, .	2.4	17
17	Doping-dependent competition between superconductivity and polycrystalline charge density waves. <i>SciPost Physics</i> , 2020, 8, .	4.9	11
18	Protected superconductivity at the boundaries of charge-density-wave domains. <i>New Journal of Physics</i> , 2020, 22, 073025.	2.9	11

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19	High-TC Superconducting Kinetic Inductance Detectors for Terahertz Imaging. , 2019, , .		0
20	Formation of Incommensurate Charge Density Waves in Cuprates. Physical Review X, 2019, 9, .	8.9	34
21	Silver route to cuprate analogs. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 1495-1500.	7.1	47
22	Fate of dynamical phases of a BCS superconductor beyond the dissipationless regime. Physical Review B, 2019, 99, .	3.2	13
23	Thermal properties of vortices on curved surfaces. Physical Review E, 2018, 97, 012117.	2.1	3
24	Light scattering from the critical modes of the Verwey transition in magnetite. Physical Review B, 2018, 98, .	3.2	7
25	Population inversion and dynamical phase transitions in a driven superconductor. Physical Review B, 2018, 98, .	3.2	17
26	Dramatic enhancement of spin-spin coupling and quenching of magnetic dimensionality in compressed silver difluoride. Chemical Communications, 2018, 54, 10252-10255.	4.1	17
27	Clocking the onset of bilayer coherence in a high- T_c cuprate. Physical Review B, 2017, 95, .		
28	Strong parameter renormalization from optimum lattice model orbitals. Physical Review B, 2017, 95, .	3.2	0
29	Coherent generation of symmetry-forbidden phonons by light-induced electron-phonon interactions in magnetite. Physical Review B, 2017, 96, .	3.2	14
30	Electronic bands and optical conductivity of the Dzyaloshinsky-Moriya multiferroic Ba_2O_7 . Physical Review B, 2017, 96, .	3.2	5
31	Mapping the lattice dynamical anomaly of the order parameters across the Verwey transition in magnetite. New Journal of Physics, 2017, 19, 103013.	2.9	10
32	High-temperature charge density wave correlations in $\text{La}_{1.875}\text{Ba}_{0.125}\text{CuO}_4$ without spin-charge locking. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 12430-12435.	7.1	75
33	Short range smectic order driving long range nematic order: example of cuprates. Scientific Reports, 2016, 6, 19678.	3.3	2
34	Anomalous scaling and breakdown of conventional density functional theory methods for the description of Mott phenomena and stretched bonds. Physical Review B, 2016, 94, .	3.2	21
35	Ultrafast cooling and heating scenarios for the laser-induced phase transition in CuO. Physical Review B, 2016, 94, .	3.2	10
36	Current Correlations in Strongly Disordered Superconductors. Journal of Superconductivity and Novel Magnetism, 2016, 29, 577-580.	1.8	1

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37	Raman phonon spectrum of the Dzyaloshinskii-Moriya helimagnet Ba ₂ CuGe ₂ O ₇ . Physical Review B, 2015, 91, .	3.2	11
38	Probing the electron-phonon interaction in correlated systems with coherent lattice fluctuation spectroscopy. Physical Review B, 2015, 92, .	3.2	16
39	Amplitude, density, and current correlations of strongly disordered superconductors. Physical Review B, 2015, 92, .	3.2	11
40	Gutzwiller charge phase diagram of cuprates, including electron-phonon coupling effects. New Journal of Physics, 2015, 17, 023074.	2.9	3
41	Phase nucleation in curved space. Nature Communications, 2015, 6, 6856.	12.8	41
42	Electronic polymers and soft-matter-like broken symmetries in underdoped cuprates. Nature Communications, 2015, 6, 7691.	12.8	23
43	Spin excitations of ferronematic order in underdoped cuprate superconductors. Scientific Reports, 2015, 4, 5319.	3.3	2
44	Self-organized electronic superlattices in layered materials. Physical Review B, 2014, 90, .	3.2	0
45	Time-Dependent Gutzwiller Approximation: Interplay with Phonons. Journal of Superconductivity and Novel Magnetism, 2014, 27, 929-931.	1.8	5
46	Solving lattice density functionals close to the Mott regime. Physical Review B, 2014, 89, .	3.2	13
47	Infrared phonon spectrum of the tetragonal helimagnet Ba ₂ CuGe ₂ O ₇ . Physical Review B, 2014, 90, .	3.2	5
48	Tuning order-by-disorder multiferroicity in CuO by doping. Physical Review B, 2014, 90, .	3.2	17
49	Optical excitation of phase modes in strongly disordered superconductors. Physical Review B, 2014, 89, .	3.2	41
50	Investigating pairing interactions with coherent charge fluctuation spectroscopy. European Physical Journal: Special Topics, 2013, 222, 1223-1239.	2.6	13
51	Universal scaling of the order-parameter distribution in strongly disordered superconductors. Physical Review B, 2013, 87, .	3.2	54
52	Quantum critical point and superconducting dome in the pressure phase diagram of TaS_3 . Physical Review B, 2013, 88, .	3.2	23
53	Stripes with Spin Canting in the Three-Band Hubbard Model. Journal of Superconductivity and Novel Magnetism, 2013, 26, 49-52.	1.8	1
54	Coupling of a high-energy excitation to superconducting quasiparticles in a cuprate from coherent charge fluctuation spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 4539-4544.	7.1	86

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55	Exact exchange-correlation potential of an ionic Hubbard model with a free surface. Scientific Reports, 2013, 3, 2172.	3.3	15
56	Linear-response dynamics from the time-dependent Gutzwiller approximation. New Journal of Physics, 2013, 15, 053050.	2.9	20
57	Publisher's Note: Hidden ferronematic order in underdoped cuprates [Phys. Rev. B, 035138 (2013)]. Physical Review B, 2013, 87, .	3.2	0
58	Hidden ferronematic order in underdoped cuprates. Physical Review B, 2013, 87, .	3.2	9
59	Density-functional theory with adaptive pair density: The Gutzwiller approximation as a density functional. Physical Review B, 2012, 86, .	3.2	10
60	Stripes in cuprate superconductors: Excitations and dynamic dichotomy. Physica C: Superconductivity and Its Applications, 2012, 481, 132-145.	1.2	17
61	Superfluid Density and Phase Relaxation in Superconductors with Strong Disorder. Physical Review Letters, 2012, 108, 207004.	7.8	41
62	Magnetic Structure of Electronic Inhomogeneities in Cuprates: Competition between Stripes and Spirals. Acta Physica Polonica A, 2012, 121, 1019-1022.	0.5	0
63	Influence of correlations on transitive electron-phonon couplings in cuprate superconductors. Physical Review B, 2011, 83, .	3.2	7
64	High- T_c Ferroelectricity Emerging from Magnetic Degeneracy in Cupric Oxide. Physical Review Letters, 2011, 106, 026401.	7.8	69
65	Proximity of iron pnictide superconductors to a quantum tricritical point. Nature Communications, 2011, 2, 398.	12.8	72
66	Dynamics of Electronic Inhomogeneities in Cuprates. Journal of Superconductivity and Novel Magnetism, 2011, 24, 1177-1179.	1.8	1
67	Stability of ferromagnetism within the time-dependent Gutzwiller approximation for the Hubbard model. Physica Status Solidi (B): Basic Research, 2011, 248, 339-351.	1.5	4
68	Competing phases in the cuprates: Charge vs spin order. Journal of Physics and Chemistry of Solids, 2011, 72, 333-336.	4.0	3
69	Nematic phase without Heisenberg physics in FeAs planes. Physical Review B, 2011, 84, .	3.2	17
70	Giovannetti Reply. Physical Review Letters, 2011, 107, .	7.8	3
71	Spin canting as a result of the competition between stripes and spirals in cuprates. Physical Review B, 2011, 83, .	3.2	16
72	Diagonal stripes in the spin glass phase of cuprates. Physica C: Superconductivity and Its Applications, 2010, 470, S245-S246.	1.2	2

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73	Real-Time Observation of Cuprates Structural Dynamics by Ultrafast Electron Crystallography. <i>Advances in Condensed Matter Physics</i> , 2010, 2010, 1-27.	1.1	18
74	Particle-particle response function as a probe for electronic correlations in the Hubbard model. <i>Physical Review B</i> , 2010, 82, .	3.2	7
75	Phonon renormalization from local and transitive electron-lattice couplings in strongly correlated systems. <i>Physical Review B</i> , 2010, 81, .	3.2	12
76	Dynamical charge and spin density wave scattering in cuprate superconductors. <i>New Journal of Physics</i> , 2010, 12, 105010.	2.9	2
77	Gutzwiller magnetic phase diagram of the undoped Hubbard model. <i>Physical Review B</i> , 2010, 81, .	3.2	15
78	Gutzwiller magnetic phase diagram of the cuprates. <i>Physical Review B</i> , 2010, 81, .	3.2	30
79	Fermi surface dichotomy in systems with fluctuating order. <i>Physical Review B</i> , 2009, 79, .	3.2	19
80	Calculation of incommensurability and spin excitations of diagonal stripes in underdoped lanthanum cuprates. <i>Physical Review B</i> , 2009, 80, .	3.2	13
81	Charge instabilities and electron-phonon interaction in the Hubbard-Holstein model. <i>Physical Review B</i> , 2009, 79, .	3.2	23
82	Publisher's Note: Infrared optical absorption spectra of CuO single crystals: Fermion-spinon band and dimensional crossover of the antiferromagnetic order [Phys. Rev. B 80 (R) (2009)]. <i>Physical Review B</i> , 2009, 80, .	3.2	1
83	Infrared optical absorption spectra of CuO single crystals: Fermion-spinon band and dimensional crossover of the antiferromagnetic order. <i>Physical Review B</i> , 2009, 80, .	3.2	9
84	Universality classes for Coulomb frustrated phase separation. <i>Physica B: Condensed Matter</i> , 2009, 404, 499-502.	2.7	7
85	Model of Quasiparticles Coupled to a Frequency-Dependent Charge-Density-Wave Order Parameter in Cuprate Superconductors. <i>Physical Review Letters</i> , 2009, 103, 217005.	7.8	6
86	Coarse grained models in Coulomb frustrated phase separation. <i>Journal of Physics Condensed Matter</i> , 2008, 20, 434229.	1.8	8
87	Coulomb-Frustrated Phase Separation Phase Diagram in Systems with Short-Range Negative Compressibility. <i>Physical Review Letters</i> , 2008, 100, 246402.	7.8	42
88	Theory of Antibound States in Partially Filled Narrow Band Systems. <i>Physical Review Letters</i> , 2008, 100, 016405.	7.8	29
89	Time-dependent Gutzwiller theory of pairing fluctuations in the Hubbard model. <i>Physical Review B</i> , 2008, 78, .	3.2	13
90	Competing Orders in FeAs Layers. <i>Physical Review Letters</i> , 2008, 101, 186402.	7.8	84

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91	Checkerboard and stripe inhomogeneities in cuprates. <i>Physical Review B</i> , 2007, 75, .	3.2	23
92	Quantum Lifshitz Point in the Infinite-Dimensional Hubbard Model. <i>Physical Review Letters</i> , 2007, 98, .	7.8	5
93	Elasticity and metastability limit in supercooled liquids: a lattice model. <i>Philosophical Magazine</i> , 2007, 87, 441-448.	1.6	1
94	Screening effects in Coulomb-frustrated phase separation. <i>Physical Review B</i> , 2007, 75, .	3.2	17
95	Unified description of charge and spin excitations of stripes in cuprates. <i>Physica C: Superconductivity and Its Applications</i> , 2007, 460-462, 271-274.	1.2	0
96	Magnetic excitations in the stripe phase of the Hubbard model. <i>Physica C: Superconductivity and Its Applications</i> , 2007, 460-462, 1165-1166.	1.2	1
97	Charge inhomogeneity coexisting with large Fermi surfaces. <i>Physica C: Superconductivity and Its Applications</i> , 2007, 460-462, 1176-1177.	1.2	2
98	Gutzwiller+RPA Theory for Magnetic Fluctuations from Stripes in Cuprates. <i>Journal of Superconductivity and Novel Magnetism</i> , 2007, 20, 619-622.	1.8	3
99	Doping dependence of spin excitations in the stripe phase of high-Tc superconductors. <i>Physical Review B</i> , 2006, 73, .	3.2	62
100	Frustrated phase separation in two-dimensional charged systems. <i>Physical Review B</i> , 2006, 73, .	3.2	30
101	Effective electron-electron and electron-phonon interactions in the Hubbard-Holstein model. <i>Nuclear Physics B</i> , 2006, 744, 277-294.	2.5	7
102	Dynamic properties of inhomogeneous states in cuprates (Review Article). <i>Low Temperature Physics</i> , 2006, 32, 320-339.	0.6	7
103	Dynamics of quantum antiferromagnets from phonon assisted multimagnon infrared absorption. <i>Physica B: Condensed Matter</i> , 2006, 384, 181-183.	2.7	0
104	Magnetization of $\text{La}_{2-x}\text{Sr}_x\text{NiO}_4$ ($0 \leq x \leq 0.5$): Spin-glass and memory effects. <i>Physical Review B</i> , 2006, 73, 3.2	3.2	21
105	The unrestricted Gutzwiller+RPA approach and its application to stripes in cuprates. <i>Physica B: Condensed Matter</i> , 2005, 359-361, 548-550.	2.7	0
106	Thermodynamics of volume-collapse transitions in cerium and related compounds. <i>Acta Materialia</i> , 2005, 53, 5183-5188.	7.9	19
107	Effect of mesoscopic inhomogeneities on local tunneling density of states in cuprates. <i>Physical Review B</i> , 2005, 71, .	3.2	13
108	Viscoelasticity and Metastability Limit in Supercooled Liquids. <i>Physical Review Letters</i> , 2005, 95, 115702.	7.8	24

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109	Magnetic Fluctuations of Stripes in the High Temperature Cuprate Superconductors. Physical Review Letters, 2005, 94, 107006.	7.8	100
110	Sum rules and missing spectral weight in magnetic neutron scattering in the cuprates. Physical Review B, 2005, 72, .	3.2	70
111	Time-dependent Gutzwiller theory of magnetic excitations in the Hubbard model. Physical Review B, 2004, 69, .	3.2	35
112	Stability of metallic stripes in the one-band extended Hubbard model. Physical Review B, 2004, 69, .	3.2	41
113	Maximum size of self-organized inhomogeneities in electronic systems. Journal of Magnetism and Magnetic Materials, 2004, 272-276, E1021-E1022.	2.3	0
114	Dynamical and static properties of stripes in cuprates. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 136-137.	2.3	0
115	Computation of stripes in cuprates within theLDA+Umethod. Physical Review B, 2004, 70, .	3.2	44
116	Dynamics of Metallic Stripes in Cuprates. Physical Review Letters, 2003, 90, 066404.	7.8	50
117	Inhomogeneous Gutzwiller approximation with random phase fluctuations for the Hubbard model. Physical Review B, 2003, 67, .	3.2	29
118	Electronic and structural phase separation in strongly correlated systems. Journal of Physics A, 2003, 36, 9165-9185.	1.6	3
119	Metallic Mean-Field Stripes, Incommensurability, and Chemical Potential in Cuprates. Physical Review Letters, 2002, 89, 136401.	7.8	84
120	Mesoscopic frustrated phase separation in electronic systems. Europhysics Letters, 2002, 57, 704-710.	2.0	50
121	Curie temperature and frustrated phase separation in manganites. Physica B: Condensed Matter, 2002, 320, 56-59.	2.7	2
122	Time-Dependent Gutzwiller Approximation for the Hubbard Model. Physical Review Letters, 2001, 86, 2605-2608.	7.8	77
123	Instability due to long-range Coulomb interaction in a liquid of Feynman polarons. Europhysics Letters, 2001, 53, 532-538.	2.0	10
124	Phase separation frustrated by the long-range Coulomb interaction. II. Applications. Physical Review B, 2001, 64, .	3.2	36
125	Phase separation frustrated by the long-range Coulomb interaction. I. Theory. Physical Review B, 2001, 64, .	3.2	72
126	Optical absorption ofCuO ₃ antiferromagnetic chains at finite temperatures. Physical Review B, 2000, 62, 1218-1223.	3.2	3

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127	Induced charge in a Fröhlich polaron: Sum rule and spatial extent. <i>Physical Review B</i> , 2000, 62, 4426-4430.	3.2	8
128	Does the Heisenberg Model Describe the Multimagnon Spin Dynamics in Antiferromagnetic CuO Layers?. <i>Physical Review Letters</i> , 1999, 83, 5122-5125.	7.8	66
129	Infrared-active phonons of LaMnO ₃ and CaMnO ₃ . <i>Physical Review B</i> , 1999, 60, 11875-11878.	3.2	79
130	Comment on "Geometric Phase in Jahn-Teller Crystals". <i>Physical Review Letters</i> , 1998, 81, 490-490.	7.8	1
131	Vertex functions, spectral weights, and anisotropy in phonon-assisted multimagnon optical absorption. <i>Physical Review B</i> , 1998, 58, 13574-13579.	3.2	4
132	Dynamics of the one-dimensional Heisenberg model and optical absorption of spinons in cuprate antiferromagnetic chains. <i>Physical Review B</i> , 1997, 55, R3358-R3361.	3.2	48
133	Phonon-assisted IR spectroscopy of quantum antiferromagnets. , 1996, 2696, 160.		0
134	Two-magnon excitations in cuprates and nickelates. <i>Journal of Superconductivity and Novel Magnetism</i> , 1996, 9, 389-392.	0.5	0
135	Structural analysis of CuGeO ₃ : Relation between nuclear structure and magnetic interaction. <i>Physical Review B</i> , 1996, 54, 1105-1116.	3.2	155
136	New Phases in an Extended Hubbard Model Explicitly Including Atomic Probabilities. <i>Physical Review Letters</i> , 1996, 76, 2826-2826.	7.8	4
137	Exact diagonalization results for multimagnon IR absorption in the cuprates. <i>Journal of Superconductivity and Novel Magnetism</i> , 1995, 8, 567-570.	0.5	7
138	Optical properties of Zhang-Rice states. <i>Journal of Low Temperature Physics</i> , 1995, 99, 299-304.	1.4	5
139	Mid infrared excitations in cuprates. <i>Physica B: Condensed Matter</i> , 1995, 206-207, 675-677.	2.7	4
140	Atomic screening and intersite Coulomb repulsion in strongly correlated systems. <i>Physical Review B</i> , 1995, 52, 2484-2495.	3.2	24
141	New Phases in an Extended Hubbard Model Explicitly Including Atomic Polarizabilities. <i>Physical Review Letters</i> , 1995, 75, 4658-4661.	7.8	50
142	Theory of phonon-assisted multimagnon optical absorption and bimagnon states in quantum antiferromagnets. <i>Physical Review B</i> , 1995, 52, 9576-9589.	3.2	90
143	Phonon Assisted Multimagnon Optical Absorption and Long Lived Two-Magnon States in Undoped Lamellar Copper Oxides. <i>Physical Review Letters</i> , 1995, 74, 1867-1870.	7.8	137
144	Effects of Polaronic States in the Multiband Hubbard Model. <i>Europhysics Letters</i> , 1994, 27, 617-622.	2.0	9

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145	Polarons in the three-band Peierls-Hubbard model: An exact diagonalization study. Physical Review B, 1994, 49, 505-513.	3.2	27
146	Polaron formation and local magnetic moments in cuprate superconductors. Physical Review B, 1994, 50, 16094-16097.	3.2	11
147	Optical properties of cuprates. Physica C: Superconductivity and Its Applications, 1994, 235-240, 1079-1080.	1.2	0
148	Phenomenological model of electrons coupled to paramagnons: How to understand photoemission experiments. Physica C: Superconductivity and Its Applications, 1994, 235-240, 2307-2308.	1.2	0
149	Doping states in the two-dimensional three-band Peierls-Hubbard model. Physical Review B, 1993, 47, 12059-12088.	3.2	41
150	Optical conductivity of $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ and soft electronic modes. Physical Review Letters, 1993, 70, 861-864.	7.8	46
151	Dynamic and static correlation functions in the inhomogeneous-Hartree-Fock-state approach with random-phase-approximation fluctuations. Physical Review B, 1993, 47, 13156-13163.	3.2	8
152	Magnetism and covalency in the two-dimensional three-band Peierls-Hubbard model. Physical Review B, 1993, 47, 8065-8075.	3.2	38
153	Sensitivity of doping states in the copper oxides to electron-lattice coupling. Physical Review Letters, 1992, 69, 965-968.	7.8	90
154	Charge-transfer polarons and excitons. Physical Review B, 1991, 43, 11474-11477.	3.2	12
155	LOCALIZED (POLARONIC) CHARGE-TRANSFER EXCITATIONS IN CuO_2 LAYERS. Modern Physics Letters B, 1991, 05, 1515-1523.	1.9	8
156	Excitonic pairing in electron-doped Cu-O layers. Physical Review B, 1990, 42, 936-938.	3.2	4
157	Critical behavior of Young's modulus for two-dimensional randomly holed metallized Mylar. Physical Review B, 1987, 36, 3960-3962.	3.2	9