Jos Lorenzana

List of Publications by Citations

147 papers	2,937 citations	32 h-index	49 g-index
158 ext. papers	3,181 ext. citations	4.2 avg, IF	5.07 L-index

#	Paper	IF	Citations
147	Structural analysis of CuGeO3: Relation between nuclear structure and magnetic interaction. *Physical Review B*, **1996**, 54, 1105-1116	3.3	150
146	Phonon assisted multimagnon optical absorption and long lived two-magnon states in undoped lamellar copper oxides. *Physical Review Letters*, **1995**, 74, 1867-1870	7.4	129
145	Magnetic fluctuations of stripes in the high temperature cuprate superconductors. *Physical Review Letters*, **2005**, 94, 107006	7.4	95
144	Theory of phonon-assisted multimagnon optical absorption and bimagnon states in quantum antiferromagnets. *Physical Review B*, **1995**, 52, 9576-9589	3.3	87
143	Sensitivity of doping states in the copper oxides to electron-lattice coupling. *Physical Review Letters*, **1992**, 69, 965-968	7.4	87
142	Metallic mean-field stripes, incommensurability, and chemical potential in cuprates. *Physical Review Letters*, **2002**, 89, 136401	7.4	81
141	Competing orders in FeAs layers. *Physical Review Letters*, **2008**, 101, 186402	7.4	76
140	Time-dependent Gutzwiller approximation for the Hubbard model. *Physical Review Letters*, **2001**, 86, 2605-8	7.4	72
139	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	11.5	71
138	Infrared-active phonons of LaMnO3 and CaMnO3. *Physical Review B*, **1999**, 60, 11875-11878	3.3	70
137	Phase separation frustrated by the long-range Coulomb interaction. I. Theory. *Physical Review B*, **2001**, 64,	3.3	68
136	Proximity of iron pnictide superconductors to a quantum tricritical point. *Nature Communications*, **2011**, 2, 398	17.4	67
135	High-T(c) ferroelectricity emerging from magnetic degeneracy in cupric oxide. *Physical Review Letters*, **2011**, 106, 026401	7.4	62
134	Does the Heisenberg Model Describe the Multimagnon Spin Dynamics in Antiferromagnetic CuO Layers?. *Physical Review Letters*, **1999**, 83, 5122-5125	7.4	62
133	High-temperature charge density wave correlations in LaBaCuO without spin-charge locking. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 12430-12435	11.5	60
132	Doping dependence of spin excitations in the stripe phase of high-Tc superconductors. *Physical Review B*, **2006**, 73,	3.3	60
131	Sum rules and missing spectral weight in magnetic neutron scattering in the cuprates. *Physical Review B*, **2005**, 72,	3.3	58

130	Dynamics of metallic stripes in cuprates. *Physical Review Letters*, **2003**, 90, 066404	7.4	48
129	New phases in an extended Hubbard model explicitly including atomic polarizabilities. *Physical Review Letters*, **1995**, 75, 4658-4661	7.4	48
128	Dynamics of the one-dimensional Heisenberg model and optical absorption of spinons in cuprate antiferromagnetic chains. *Physical Review B*, **1997**, 55, R3358-R3361	3.3	47
127	Mesoscopic frustrated phase separation in electronic systems. *Europhysics Letters*, **2002**, 57, 704-710	1.6	47
126	Optical conductivity of La2-xSrxCuO4 and soft electronic modes. *Physical Review Letters*, **1993**, 70, 861-864	7.4	45
125	Universal scaling of the order-parameter distribution in strongly disordered superconductors. *Physical Review B*, **2013**, 87,	3.3	41
124	Stability of metallic stripes in the one-band extended Hubbard model. *Physical Review B*, **2004**, 69,	3.3	41
123	Doping states in the two-dimensional three-band Peierls-Hubbard model. *Physical Review B*, **1993**, 47, 12059-12088	3.3	40
122	Coulomb-frustrated phase separation phase diagram in systems with short-range negative compressibility. *Physical Review Letters*, **2008**, 100, 246402	7.4	39
121	Computation of stripes in cuprates within the LDA+U method. *Physical Review B*, **2004**, 70,	3.3	37
120	Magnetism and covalency in the two-dimensional three-band Peierls-Hubbard model. *Physical Review B*, **1993**, 47, 8065-8075	3.3	37
119	Superfluid density and phase relaxation in superconductors with strong disorder. *Physical Review Letters*, **2012**, 108, 207004	7.4	36
118	Silver route to cuprate analogs. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 1495-1500	11.5	34
117	Phase nucleation in curved space. *Nature Communications*, **2015**, 6, 6856	17.4	34
116	Time-dependent Gutzwiller theory of magnetic excitations in the Hubbard model. *Physical Review B* , **2004**, 69,	3.3	34
115	Optical excitation of phase modes in strongly disordered superconductors. *Physical Review B*, **2014**, 89,	3.3	30
114	Gutzwiller magnetic phase diagram of the cuprates. *Physical Review B*, **2010**, 81,	3.3	29
113	Phase separation frustrated by the long-range Coulomb interaction. II. Applications. *Physical Review B*, **2001**, 64,	3.3	29

112	Inhomogeneous Gutzwiller approximation with random phase fluctuations for the Hubbard model. *Physical Review B*, **2003**, 67,	3.3	27
111	Frustrated phase separation in two-dimensional charged systems. *Physical Review B*, **2006**, 73,	3.3	26
110	Theory of antibound states in partially filled narrow band systems. *Physical Review Letters*, **2008**, 100, 016405	7.4	25
109	Polarons in the three-band Peierls-Hubbard model: An exact diagonalization study. *Physical Review B*, **1994**, 49, 505-513	3.3	25
108	Formation of Incommensurate Charge Density Waves in Cuprates. *Physical Review X*, **2019**, 9,	9.1	24
107	Checkerboard and stripe inhomogeneities in cuprates. *Physical Review B*, **2007**, 75,	3.3	21
106	Atomic screening and intersite Coulomb repulsion in strongly correlated systems. *Physical Review B* , **1995**, 52, 2484-2495	3.3	21
105	Quantum critical point and superconducting dome in the pressure phase diagram of o-TaS3. *Physical Review B*, **2013**, 88,	3.3	20
104	Charge instabilities and electron-phonon interaction in the Hubbard-Holstein model. *Physical Review B*, **2009**, 79,	3.3	20
103	Magnetization of La2SrxNiO4+(0?x?0.5): Spin-glass and memory effects. *Physical Review B*, **2006**, 73,	3.3	20
102	Viscoelasticity and metastability limit in supercooled liquids. *Physical Review Letters*, **2005**, 95, 115702	7.4	20
101	Electronic polymers and soft-matter-like broken symmetries in underdoped cuprates. *Nature Communications*, **2015**, 6, 7691	17.4	18
100	Fermi surface dichotomy in systems with fluctuating order. *Physical Review B*, **2009**, 79,	3.3	18
99	Dramatic enhancement of spin-spin coupling and quenching of magnetic dimensionality in compressed silver difluoride. *Chemical Communications*, **2018**, 54, 10252-10255	5.8	16
98	Linear-response dynamics from the time-dependent Gutzwiller approximation. *New Journal of Physics*, **2013**, 15, 053050	2.9	16
97	Real-Time Observation of Cuprates Structural Dynamics by Ultrafast Electron Crystallography. *Advances in Condensed Matter Physics*, **2010**, 2010, 1-27	1	16
96	Nematic phase without Heisenberg physics in FeAs planes. *Physical Review B*, **2011**, 84,	3.3	16
95	Spin canting as a result of the competition between stripes and spirals in cuprates. *Physical Review B*, **2011**, 83,	3.3	16

94	Screening effects in Coulomb-frustrated phase separation. *Physical Review B*, **2007**, 75,	3.3	16
93	Stripes in cuprate superconductors: Excitations and dynamic dichotomy. *Physica C: Superconductivity and Its Applications*, **2012**, 481, 132-145	1.3	15
92	Gutzwiller magnetic phase diagram of the undoped t?U Hubbard model. *Physical Review B*, **2010**, 81,	3.3	15
91	Thermodynamics of volume-collapse transitions in cerium and related compounds. *Acta Materialia*, **2005**, 53, 5183-5188	8.4	15
90	Anomalous scaling and breakdown of conventional density functional theory methods for the description of Mott phenomena and stretched bonds. *Physical Review B*, **2016**, 94,	3.3	14
89	Exact exchange-correlation potential of an ionic Hubbard model with a free surface. *Scientific Reports*, **2013**, 3, 2172	4.9	14
88	Discovery of the soft electronic modes of the trimeron order in magnetite. *Nature Physics*, **2020**, 16, 541-545	19.2	13
87	Tuning order-by-disorder multiferroicity in CuO by doping. *Physical Review B*, **2014**, 90,	3.3	13
86	Probing the electron-phonon interaction in correlated systems with coherent lattice fluctuation spectroscopy. *Physical Review B*, **2015**, 92,	3.3	13
85	Calculation of incommensurability and spin excitations of diagonal stripes in underdoped lanthanum cuprates. *Physical Review B*, **2009**, 80,	3.3	13
84	Effect of mesoscopic inhomogeneities on local tunneling density of states in cuprates. *Physical Review B*, **2005**, 71,	3.3	13
83	Solving lattice density functionals close to the Mott regime. *Physical Review B*, **2014**, 89,	3.3	12
82	Time-dependent Gutzwiller theory of pairing fluctuations in the Hubbard model. *Physical Review B*, **2008**, 78,	3.3	12
81	Epitaxial engineering of flat silver fluoride cuprate analogs. *Physical Review Materials*, **2020**, 4,	3.2	12
80	Investigating pairing interactions with coherent charge fluctuation spectroscopy. *European Physical Journal: Special Topics*, **2013**, 222, 1223-1239	2.3	11
79	Raman phonon spectrum of the Dzyaloshinskii-Moriya helimagnet Ba2CuGe2O7. *Physical Review B*, **2015**, 91,	3.3	11
78	Polaron formation and local magnetic moments in cuprate superconductors. *Physical Review B*, **1994**, 50, 16094-16097	3.3	11
77	Charge-transfer polarons and excitons. *Physical Review B*, **1991**, 43, 11474-11477	3.3	11

76	Coherent generation of symmetry-forbidden phonons by light-induced electron-phonon interactions in magnetite. *Physical Review B*, **2017**, 96,	3.3	10
75	Population inversion and dynamical phase transitions in a driven superconductor. *Physical Review B*, **2018**, 98,	3.3	10
74	Density-functional theory with adaptive pair density: The Gutzwiller approximation as a density functional. *Physical Review B*, **2012**, 86,	3.3	9
73	Hidden ferronematic order in underdoped cuprates. *Physical Review B*, **2013**, 87,	3.3	9
72	Phonon renormalization from local and transitive electron-lattice couplings in strongly correlated systems. *Physical Review B*, **2010**, 81,	3.3	9
71	Infrared optical absorption spectra of CuO single crystals: Fermion-spinon band and dimensional crossover of the antiferromagnetic order. *Physical Review B*, **2009**, 80,	3.3	9
70	Instability due to long-range Coulomb interaction in a liquid of Feynman polarons. *Europhysics Letters*, **2001**, 53, 532-538	1.6	9
69	Critical behavior of Young's modulus for two-dimensional randomly holed metallized Mylar. *Physical Review B*, **1987**, 36, 3960-3962	3.3	9
68	Clocking the onset of bilayer coherence in a high-Tc cuprate. *Physical Review B*, **2017**, 95,	3.3	8
67	Ultrafast cooling and heating scenarios for the laser-induced phase transition in CuO. *Physical Review B*, **2016**, 94,	3.3	8
66	Dynamic and static correlation functions in the inhomogeneous-Hartree-Fock-state approach with random-phase-approximation fluctuations. *Physical Review B*, **1993**, 47, 13156-13163	3.3	8
65	Effects of Polaronic States in the Multiband Hubbard Model. *Europhysics Letters*, **1994**, 27, 617-622	1.6	8
64	Mapping the lattice dynamical anomaly of the order parameters across the Verwey transition in magnetite. *New Journal of Physics*, **2017**, 19, 103013	2.9	7
63	Dynamic properties of inhomogeneous states in cuprates (Review Article). *Low Temperature Physics* , **2006**, 32, 320-339	0.7	7
62	Induced charge in a Fr□lich polaron: Sum rule and spatial extent. *Physical Review B*, **2000**, 62, 4426-4430	3.3	7
61	Exact diagonalization results for multimagnon IR absorption in the cuprates. *Journal of Superconductivity and Novel Magnetism*, **1995**, 8, 567-570		7
60	LOCALIZED (POLARONIC) CHARGE-TRANSFER EXCITATIONS IN CuO2 LAYERS. *Modern Physics Letters B*, **1991**, 05, 1515-1523	1.6	7
59	Amplitude, density, and current correlations of strongly disordered superconductors. *Physical Review B*, **2015**, 92,	3.3	6

58	Particle-particle response function as a probe for electronic correlations in the p Hubbard model. *Physical Review B*, **2010**, 82,	3.3	6
57	Influence of correlations on transitive electron-phonon couplings in cuprate superconductors. *Physical Review B*, **2011**, 83,	3.3	6
56	Universality classes for Coulomb frustrated phase separation. *Physica B: Condensed Matter*, **2009**, 404, 499-502	2.8	6
55	Model of quasiparticles coupled to a frequency-dependent charge-density-wave order parameter in cuprate superconductors. *Physical Review Letters*, **2009**, 103, 217005	7.4	6
54	Coarse grained models in Coulomb frustrated phase separation. *Journal of Physics Condensed Matter*, **2008**, 20, 434229	1.8	6
53	Effective electron electron and electron phonon interactions in the Hubbard Holstein model. *Nuclear Physics B*, **2006**, 744, 277-294	2.8	6
52	Gigantic work function in layered AgF. *Physical Chemistry Chemical Physics*, **2020**, 22, 21809-21815	3.6	6
51	Infrared phonon spectrum of the tetragonal helimagnet Ba2CuGe2O7. *Physical Review B*, **2014**, 90,	3.3	5
50	Time-Dependent Gutzwiller Approximation: Interplay with Phonons. *Journal of Superconductivity and Novel Magnetism*, **2014**, 27, 929-931	1.5	5
49	Quantum Lifshitz Point in the Infinite-Dimensional Hubbard Model. *Physical Review Letters*, **2007**, 98,	7.4	5
48	Optical properties of Zhang-Rice states. *Journal of Low Temperature Physics*, **1995**, 99, 299-304	1.3	5
47	Doping-dependent competition between superconductivity and polycrystalline charge density waves. *SciPost Physics*, **2020**, 8,	6.1	5
46	Vertex functions, spectral weights, and anisotropy in phonon-assisted multimagnon optical absorption. *Physical Review B*, **1998**, 58, 13574-13579	3.3	4
45	New Phases in an Extended Hubbard Model Explicitly Including Atomic Probabilities. *Physical Review Letters*, **1996**, 76, 2826-2826	7.4	4
44	Excitonic pairing in electron-doped Cu-O layers. *Physical Review B*, **1990**, 42, 936-938	3.3	4
43	Fate of dynamical phases of a BCS superconductor beyond the dissipationless regime. *Physical Review B*, **2019**, 99,	3.3	3
42	Thermal properties of vortices on curved surfaces. *Physical Review E*, **2018**, 97, 012117	2.4	3
41	Electronic bands and optical conductivity of the Dzyaloshinsky-Moriya multiferroic Ba2CuGe2O7. *Physical Review B*, **2017**, 96,	3.3	3

40	Stability of ferromagnetism within the time-dependent Gutzwiller approximation for the Hubbard model. *Physica Status Solidi (B): Basic Research*, **2011**, 248, 339-351	1.3	3
39	Competing phases in the cuprates: Charge vs spin order. *Journal of Physics and Chemistry of Solids*, **2011**, 72, 333-336	3.9	3
38	Giovannetti et al. Reply:. *Physical Review Letters*, **2011**, 107,	7.4	3
37	Gutzwiller + RPA Theory for Magnetic Fluctuations from Stripes in Cuprates. *Journal of Superconductivity and Novel Magnetism*, **2007**, 20, 619-622	1.5	3
36	Electronic and structural phase separation in strongly correlated sytems. *Journal of Physics A*, **2003**, 36, 9165-9185		3
35	Optical absorption of CuO3 antiferromagnetic chains at finite temperatures. *Physical Review B*, **2000**, 62, 1218-1223	3.3	3
34	Mid infrared excitations in cuprates. *Physica B: Condensed Matter*, **1995**, 206-207, 675-677	2.8	3
33	Fate of doped carriers in silver fluoride cuprate analogs. *Physical Review Materials*, **2021**, 5,	3.2	3
32	Light scattering from the critical modes of the Verwey transition in magnetite. *Physical Review B*, **2018**, 98,	3.3	3
31	Spin excitations of ferronematic order in underdoped cuprate superconductors. *Scientific Reports*, **2014**, 4, 5319	4.9	2
30	Nonlinear dynamics of driven superconductors with dissipation. *Physical Review B*, **2020**, 101,	3.3	2
29	Dynamical charge and spin density wave scattering in cuprate superconductors. *New Journal of Physics*, **2010**, 12, 105010	2.9	2
28	Diagonal stripes in the spin glass phase of cuprates. *Physica C: Superconductivity and Its Applications*, **2010**, 470, S245-S246	1.3	2
27	Charge inhomogeneity coexisting with large Fermi surfaces. *Physica C: Superconductivity and Its Applications*, **2007**, 460-462, 1176-1177	1.3	2
26	Short range smectic order driving long range nematic order: example of cuprates. *Scientific Reports*, **2016**, 6, 19678	4.9	2
25	Gutzwiller charge phase diagram of cuprates, including electron–phonon coupling effects. *New Journal of Physics*, **2015**, 17, 023074	2.9	1
24	Energy domain versus time domain precursor fluctuations above the Verwey transition in magnetite. *Physical Review B*, **2020**, 101,	3.3	1
23	Current Correlations in Strongly Disordered Superconductors. *Journal of Superconductivity and Novel Magnetism*, **2016**, 29, 577-580	1.5	1

22	Stripes with Spin Canting in the Three-Band Hubbard Model. *Journal of Superconductivity and Novel Magnetism*, **2013**, 26, 49-52	1.5	1
21	Dynamics of Electronic Inhomogeneities in Cuprates. *Journal of Superconductivity and Novel Magnetism*, **2011**, 24, 1177-1179	1.5	1
20	Magnetic excitations in the stripe phase of the Hubbard model. *Physica C: Superconductivity and Its Applications*, **2007**, 460-462, 1165-1166	1.3	1
19	Curie temperature and frustrated phase separation in manganites. *Physica B: Condensed Matter*, **2002**, 320, 56-59	2.8	1
18	Comment on Geometric Phase in Jahn-Teller Crystals *Physical Review Letters*, **1998**, 81, 490-490	7.4	1
17	Protected superconductivity at the boundaries of charge-density-wave domains. *New Journal of Physics*, **2020**, 22, 073025	2.9	1
16	Nonequilibrium dynamics from BCS to the bosonic limit. *Physical Review B*, **2020**, 102,	3.3	1
15	Trimeron-phonon coupling in magnetite. *Physical Review B*, **2021**, 103,	3.3	1
14	Multiple-magnon excitations shape the spin spectrum of cuprate parent compounds. *Physical Review B*, **2021**, 103,	3.3	1
13	Separation-Controlled Redox Reactions. *Angewandte Chemie - International Edition*, **2021**, 60, 13892-13895	15.4	0
12	Nanosession: Multiferroics - High Transition Temperatures **2013**, 347-355		
11	Unified description of charge and spin excitations of stripes in cuprates. *Physica C: Superconductivity and Its Applications*, **2007**, 460-462, 271-274	1.3	
10	Dynamics of quantum antiferromagnets from phonon assisted multimagnon infrared absorption. *Physica B: Condensed Matter*, **2006**, 384, 181-183	2.8	
9	Elasticity and metastability limit in supercooled liquids: a lattice model. *Philosophical Magazine*, **2007**, 87, 441-448	1.6	
8	Maximum size of self-organized inhomogeneities in electronic systems. *Journal of Magnetism and Magnetic Materials*, **2004**, 272-276, E1021-E1022	2.8	
7	Dynamical and static properties of stripes in cuprates. *Journal of Magnetism and Magnetic Materials*, **2004**, 272-276, 136-137	2.8	
6	The unrestricted Gutzwiller+RPA approach and its application to stripes in cuprates. *Physica B: Condensed Matter*, **2005**, 359-361, 548-550	2.8	
5	Two-magnon excitations in cuprates and nickelates. *Journal of Superconductivity and Novel Magnetism*, **1996**, 9, 389-392		

4	Optical properties of cuprates. *Physica C: Superconductivity and Its Applications*, **1994**, 235-240, 1079-1080	1.3
3	Phenomenological model of electrons coupled to paramagnons: How to understand photoemission experiments. *Physica C: Superconductivity and Its Applications*, **1994**, 235-240, 2307-2308	1.3
2	Magnetic Structure of Electronic Inhomogeneities in Cuprates: Competition between Stripes and Spirals. *Acta Physica Polonica A*, **2012**, 121, 1019-1022	0.6
1	Separation-Controlled Redox Reactions. *Angewandte Chemie*, **2021**, 133, 14011-14014	3.6