Jos Lorenzana

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Trimeron-phonon coupling in magnetite. *Physical Review B*, **2021**, 103,	3.3	1
146	Multiple-magnon excitations shape the spin spectrum of cuprate parent compounds. *Physical Review B*, **2021**, 103,	3.3	1
145	Separation-Controlled Redox Reactions. *Angewandte Chemie*, **2021**, 133, 14011-14014	3.6	
144	Separation-Controlled Redox Reactions. *Angewandte Chemie - International Edition*, **2021**, 60, 13892-13895	3.4	0
143	Fate of doped carriers in silver fluoride cuprate analogs. *Physical Review Materials*, **2021**, 5,	3.2	3
142	Discovery of the soft electronic modes of the trimeron order in magnetite. *Nature Physics*, **2020**, 16, 541-545	19.2	13
141	Nonlinear dynamics of driven superconductors with dissipation. *Physical Review B*, **2020**, 101,	3.3	2
140	Energy domain versus time domain precursor fluctuations above the Verwey transition in magnetite. *Physical Review B*, **2020**, 101,	3.3	1
139	Epitaxial engineering of flat silver fluoride cuprate analogs. *Physical Review Materials*, **2020**, 4,	3.2	12
138	Protected superconductivity at the boundaries of charge-density-wave domains. *New Journal of Physics*, **2020**, 22, 073025	2.9	1
137	Doping-dependent competition between superconductivity and polycrystalline charge density waves. *SciPost Physics*, **2020**, 8,	6.1	5
136	Nonequilibrium dynamics from BCS to the bosonic limit. *Physical Review B*, **2020**, 102,	3.3	1
135	Gigantic work function in layered AgF. *Physical Chemistry Chemical Physics*, **2020**, 22, 21809-21815	3.6	6
134	Formation of Incommensurate Charge Density Waves in Cuprates. *Physical Review X*, **2019**, 9,	9.1	24
133	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
132	Fate of dynamical phases of a BCS superconductor beyond the dissipationless regime. *Physical Review B*, **2019**, 99,	3.3	3
131	Thermal properties of vortices on curved surfaces. *Physical Review E*, **2018**, 97, 012117	2.4	3

130	Dramatic enhancement of spin-spin coupling and quenching of magnetic dimensionality in compressed silver difluoride. *Chemical Communications*, **2018**, 54, 10252-10255	5.8	16
129	Light scattering from the critical modes of the Verwey transition in magnetite. *Physical Review B*, **2018**, 98,	3.3	3
128	Population inversion and dynamical phase transitions in a driven superconductor. *Physical Review B*, **2018**, 98,	3.3	10
127	Clocking the onset of bilayer coherence in a high-Tc cuprate. *Physical Review B*, **2017**, 95,	3.3	8
126	Coherent generation of symmetry-forbidden phonons by light-induced electron-phonon interactions in magnetite. *Physical Review B*, **2017**, 96,	3.3	10
125	Electronic bands and optical conductivity of the Dzyaloshinsky-Moriya multiferroic Ba2CuGe2O7. *Physical Review B*, **2017**, 96,	3.3	3
124	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
123	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
122	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
121	Ultrafast cooling and heating scenarios for the laser-induced phase transition in CuO. *Physical Review B*, **2016**, 94,	3.3	8
120	Current Correlations in Strongly Disordered Superconductors. *Journal of Superconductivity and Novel Magnetism*, **2016**, 29, 577-580	1.5	1
119	Short range smectic order driving long range nematic order: example of cuprates. *Scientific Reports*, **2016**, 6, 19678	4.9	2
118	Gutzwiller charge phase diagram of cuprates, including electron–phonon coupling effects. *New Journal of Physics*, **2015**, 17, 023074	2.9	1
117	Phase nucleation in curved space. *Nature Communications*, **2015**, 6, 6856	17.4	34
116	Electronic polymers and soft-matter-like broken symmetries in underdoped cuprates. *Nature Communications*, **2015**, 6, 7691	17.4	18
115	Raman phonon spectrum of the Dzyaloshinskii-Moriya helimagnet Ba2CuGe2O7. *Physical Review B*, **2015**, 91,	3.3	11
114	Probing the electron-phonon interaction in correlated systems with coherent lattice fluctuation spectroscopy. *Physical Review B*, **2015**, 92,	3.3	13
113	Amplitude, density, and current correlations of strongly disordered superconductors. *Physical Review B*, **2015**, 92,	3.3	6

112	Spin excitations of ferronematic order in underdoped cuprate superconductors. *Scientific Reports*, **2014**, 4, 5319	4.9	2
111	Solving lattice density functionals close to the Mott regime. *Physical Review B*, **2014**, 89,	3.3	12
110	Infrared phonon spectrum of the tetragonal helimagnet Ba2CuGe2O7. *Physical Review B*, **2014**, 90,	3.3	5
109	Tuning order-by-disorder multiferroicity in CuO by doping. *Physical Review B*, **2014**, 90,	3.3	13
108	Optical excitation of phase modes in strongly disordered superconductors. *Physical Review B*, **2014**, 89,	3.3	30
107	Time-Dependent Gutzwiller Approximation: Interplay with Phonons. *Journal of Superconductivity and Novel Magnetism*, **2014**, 27, 929-931	1.5	5
106	Investigating pairing interactions with coherent charge fluctuation spectroscopy. *European Physical Journal: Special Topics*, **2013**, 222, 1223-1239	2.3	11
105	Universal scaling of the order-parameter distribution in strongly disordered superconductors. *Physical Review B*, **2013**, 87,	3.3	41
104	Quantum critical point and superconducting dome in the pressure phase diagram of o-TaS3. *Physical Review B*, **2013**, 88,	3.3	20
103	Stripes with Spin Canting in the Three-Band Hubbard Model. *Journal of Superconductivity and Novel Magnetism*, **2013**, 26, 49-52	1.5	1
102	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
101	Exact exchange-correlation potential of an ionic Hubbard model with a free surface. *Scientific Reports*, **2013**, 3, 2172	4.9	14
100	Linear-response dynamics from the time-dependent Gutzwiller approximation. *New Journal of Physics*, **2013**, 15, 053050	2.9	16
99	Hidden ferronematic order in underdoped cuprates. *Physical Review B*, **2013**, 87,	3.3	9
98	Nanosession: Multiferroics - High Transition Temperatures **2013**, 347-355		
97	Density-functional theory with adaptive pair density: The Gutzwiller approximation as a density functional. *Physical Review B*, **2012**, 86,	3.3	9
96	Stripes in cuprate superconductors: Excitations and dynamic dichotomy. *Physica C: Superconductivity and Its Applications*, **2012**, 481, 132-145	1.3	15
95	Superfluid density and phase relaxation in superconductors with strong disorder. *Physical Review Letters*, **2012**, 108, 207004	7.4	36

94	Magnetic Structure of Electronic Inhomogeneities in Cuprates: Competition between Stripes and Spirals. *Acta Physica Polonica A*, **2012**, 121, 1019-1022	0.6	
93	High-T(c) ferroelectricity emerging from magnetic degeneracy in cupric oxide. *Physical Review Letters*, **2011**, 106, 026401	7.4	62
92	Proximity of iron pnictide superconductors to a quantum tricritical point. *Nature Communications*, **2011**, 2, 398	17.4	67
91	Dynamics of Electronic Inhomogeneities in Cuprates. *Journal of Superconductivity and Novel Magnetism*, **2011**, 24, 1177-1179	1.5	1
90	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
89	Influence of correlations on transitive electron-phonon couplings in cuprate superconductors. *Physical Review B*, **2011**, 83,	3.3	6
88	Competing phases in the cuprates: Charge vs spin order. *Journal of Physics and Chemistry of Solids*, **2011**, 72, 333-336	3.9	3
87	Nematic phase without Heisenberg physics in FeAs planes. *Physical Review B*, **2011**, 84,	3.3	16
86	Giovannetti et al. Reply:. *Physical Review Letters*, **2011**, 107,	7.4	3
85	Spin canting as a result of the competition between stripes and spirals in cuprates. *Physical Review B*, **2011**, 83,	3.3	16
84	Real-Time Observation of Cuprates Structural Dynamics by Ultrafast Electron Crystallography. *Advances in Condensed Matter Physics*, **2010**, 2010, 1-27	1	16
83	Particle-particle response function as a probe for electronic correlations in the p Hubbard model. *Physical Review B*, **2010**, 82,	3.3	6
82	Phonon renormalization from local and transitive electron-lattice couplings in strongly correlated systems. *Physical Review B*, **2010**, 81,	3.3	9
81	Dynamical charge and spin density wave scattering in cuprate superconductors. *New Journal of Physics*, **2010**, 12, 105010	2.9	2
80	Gutzwiller magnetic phase diagram of the undoped t Hubbard model. *Physical Review B*, **2010**, 81,	3.3	15
79	Gutzwiller magnetic phase diagram of the cuprates. *Physical Review B*, **2010**, 81,	3.3	29
78	Diagonal stripes in the spin glass phase of cuprates. *Physica C: Superconductivity and Its Applications*, **2010**, 470, S245-S246	1.3	2
77	Fermi surface dichotomy in systems with fluctuating order. *Physical Review B*, **2009**, 79,	3.3	18

76	Calculation of incommensurability and spin excitations of diagonal stripes in underdoped lanthanum cuprates. *Physical Review B*, **2009**, 80,	3.3	13
75	Charge instabilities and electron-phonon interaction in the Hubbard-Holstein model. *Physical Review B*, **2009**, 79,	3.3	20
74	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
73	Universality classes for Coulomb frustrated phase separation. *Physica B: Condensed Matter*, **2009**, 404, 499-502	2.8	6
72	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
71	Coarse grained models in Coulomb frustrated phase separation. *Journal of Physics Condensed Matter*, **2008**, 20, 434229	1.8	6
70	Coulomb-frustrated phase separation phase diagram in systems with short-range negative compressibility. *Physical Review Letters*, **2008**, 100, 246402	7.4	39
69	Theory of antibound states in partially filled narrow band systems. *Physical Review Letters*, **2008**, 100, 016405	7.4	25
68	Time-dependent Gutzwiller theory of pairing fluctuations in the Hubbard model. *Physical Review B*, **2008**, 78,	3.3	12
67	Competing orders in FeAs layers. *Physical Review Letters*, **2008**, 101, 186402	7.4	76
66	Unified description of charge and spin excitations of stripes in cuprates. *Physica C: Superconductivity and Its Applications*, **2007**, 460-462, 271-274	1.3	
65	Magnetic excitations in the stripe phase of the Hubbard model. *Physica C: Superconductivity and Its Applications*, **2007**, 460-462, 1165-1166	1.3	1
64	Charge inhomogeneity coexisting with large Fermi surfaces. *Physica C: Superconductivity and Its Applications*, **2007**, 460-462, 1176-1177	1.3	2
63	Gutzwiller + RPA Theory for Magnetic Fluctuations from Stripes in Cuprates. *Journal of Superconductivity and Novel Magnetism*, **2007**, 20, 619-622	1.5	3
62	Checkerboard and stripe inhomogeneities in cuprates. *Physical Review B*, **2007**, 75,	3.3	21
61	Quantum Lifshitz Point in the Infinite-Dimensional Hubbard Model. *Physical Review Letters*, **2007**, 98,	7.4	5
60	Elasticity and metastability limit in supercooled liquids: a lattice model. *Philosophical Magazine*, **2007**, 87, 441-448	1.6	
59	Screening effects in Coulomb-frustrated phase separation. *Physical Review B*, **2007**, 75,	3.3	16

58	Dynamics of quantum antiferromagnets from phonon assisted multimagnon infrared absorption. *Physica B: Condensed Matter*, **2006**, 384, 181-183	2.8	
57	Magnetization of La2−xSrxNiO4+δ (0?x?0.5): Spin-glass and memory effects. *Physical Review B*, **2006**, 73,	3.3	20
56	Doping dependence of spin excitations in the stripe phase of high-Tc superconductors. *Physical Review B*, **2006**, 73,	3.3	60
55	Frustrated phase separation in two-dimensional charged systems. *Physical Review B*, **2006**, 73,	3.3	26
54	Effective electron–electron and electron–phonon interactions in the Hubbard–Holstein model. *Nuclear Physics B*, **2006**, 744, 277-294	2.8	6
53	Dynamic properties of inhomogeneous states in cuprates (Review Article). *Low Temperature Physics* , **2006**, 32, 320-339	0.7	7
52	Sum rules and missing spectral weight in magnetic neutron scattering in the cuprates. *Physical Review B*, **2005**, 72,	3.3	58
51	The unrestricted Gutzwiller+RPA approach and its application to stripes in cuprates. *Physica B: Condensed Matter*, **2005**, 359-361, 548-550	2.8	
50	Thermodynamics of volume-collapse transitions in cerium and related compounds. *Acta Materialia*, **2005**, 53, 5183-5188	8.4	15
49	Effect of mesoscopic inhomogeneities on local tunneling density of states in cuprates. *Physical Review B*, **2005**, 71,	3.3	13
48	Viscoelasticity and metastability limit in supercooled liquids. *Physical Review Letters*, **2005**, 95, 115702	7.4	20
47	Magnetic fluctuations of stripes in the high temperature cuprate superconductors. *Physical Review Letters*, **2005**, 94, 107006	7.4	95
46	Time-dependent Gutzwiller theory of magnetic excitations in the Hubbard model. *Physical Review B* , **2004**, 69,	3.3	34
45	Stability of metallic stripes in the one-band extended Hubbard model. *Physical Review B*, **2004**, 69,	3.3	41
44	Maximum size of self-organized inhomogeneities in electronic systems. *Journal of Magnetism and Magnetic Materials*, **2004**, 272-276, E1021-E1022	2.8	
43	Dynamical and static properties of stripes in cuprates. *Journal of Magnetism and Magnetic Materials*, **2004**, 272-276, 136-137	2.8	
42	Computation of stripes in cuprates within the LDA+U method. *Physical Review B*, **2004**, 70,	3.3	37
41	Electronic and structural phase separation in strongly correlated sytems. *Journal of Physics A*, **2003**, 36, 9165-9185		3

40	Dynamics of metallic stripes in cuprates. *Physical Review Letters*, **2003**, 90, 066404	7.4	48
39	Inhomogeneous Gutzwiller approximation with random phase fluctuations for the Hubbard model. *Physical Review B*, **2003**, 67,	3.3	27
38	Curie temperature and frustrated phase separation in manganites. *Physica B: Condensed Matter*, **2002**, 320, 56-59	2.8	1
37	Metallic mean-field stripes, incommensurability, and chemical potential in cuprates. *Physical Review Letters*, **2002**, 89, 136401	7.4	81
36	Mesoscopic frustrated phase separation in electronic systems. *Europhysics Letters*, **2002**, 57, 704-710	1.6	47
35	Instability due to long-range Coulomb interaction in a liquid of Feynman polarons. *Europhysics Letters*, **2001**, 53, 532-538	1.6	9
34	Phase separation frustrated by the long-range Coulomb interaction. II. Applications. *Physical Review B*, **2001**, 64,	3.3	29
33	Phase separation frustrated by the long-range Coulomb interaction. I. Theory. *Physical Review B*, **2001**, 64,	3.3	68
32	Time-dependent Gutzwiller approximation for the Hubbard model. *Physical Review Letters*, **2001**, 86, 2605-8	7.4	72
31	Optical absorption of CuO3 antiferromagnetic chains at finite temperatures. *Physical Review B*, **2000**, 62, 1218-1223	3.3	3
30	Induced charge in a Fr□lich polaron: Sum rule and spatial extent. *Physical Review B*, **2000**, 62, 4426-4430	3.3	7
29	Does the Heisenberg Model Describe the Multimagnon Spin Dynamics in Antiferromagnetic CuO Layers?. *Physical Review Letters*, **1999**, 83, 5122-5125	7.4	62
28	Infrared-active phonons of LaMnO3 and CaMnO3. *Physical Review B*, **1999**, 60, 11875-11878	3.3	70
27	Comment on □eometric Phase in Jahn-Teller Crystals□*Physical Review Letters*, **1998**, 81, 490-490	7.4	1
26	Vertex functions, spectral weights, and anisotropy in phonon-assisted multimagnon optical absorption. *Physical Review B*, **1998**, 58, 13574-13579	3.3	4
25	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
24	Two-magnon excitations in cuprates and nickelates. *Journal of Superconductivity and Novel Magnetism*, **1996**, 9, 389-392		
23	Structural analysis of CuGeO3: Relation between nuclear structure and magnetic interaction. *Physical Review B*, **1996**, 54, 1105-1116	3.3	150

22	New Phases in an Extended Hubbard Model Explicitly Including Atomic Probabilities. *Physical Review Letters*, **1996**, 76, 2826-2826	7.4	4
21	Exact diagonalization results for multimagnon IR absorption in the cuprates. *Journal of Superconductivity and Novel Magnetism*, **1995**, 8, 567-570		7
20	Optical properties of Zhang-Rice states. *Journal of Low Temperature Physics*, **1995**, 99, 299-304	1.3	5
19	Mid infrared excitations in cuprates. *Physica B: Condensed Matter*, **1995**, 206-207, 675-677	2.8	3
18	Atomic screening and intersite Coulomb repulsion in strongly correlated systems. *Physical Review B* , **1995**, 52, 2484-2495	3.3	21
17	New phases in an extended Hubbard model explicitly including atomic polarizabilities. *Physical Review Letters*, **1995**, 75, 4658-4661	7.4	48
16	Theory of phonon-assisted multimagnon optical absorption and bimagnon states in quantum antiferromagnets. *Physical Review B*, **1995**, 52, 9576-9589	3.3	87
15	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
14	Effects of Polaronic States in the Multiband Hubbard Model. *Europhysics Letters*, **1994**, 27, 617-622	1.6	8
13	Polarons in the three-band Peierls-Hubbard model: An exact diagonalization study. *Physical Review B*, **1994**, 49, 505-513	3.3	25
12	Polaron formation and local magnetic moments in cuprate superconductors. *Physical Review B*, **1994**, 50, 16094-16097	3.3	11
11	Optical properties of cuprates. *Physica C: Superconductivity and Its Applications*, **1994**, 235-240, 1079-1080	1.3	
10	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	
9	Doping states in the two-dimensional three-band Peierls-Hubbard model. *Physical Review B*, **1993**, 47, 12059-12088	3.3	40
8	Optical conductivity of La2-xSrxCuO4 and soft electronic modes. *Physical Review Letters*, **1993**, 70, 861-864	7.4	45
7	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
6	Magnetism and covalency in the two-dimensional three-band Peierls-Hubbard model. *Physical Review B*, **1993**, 47, 8065-8075	3.3	37
5	Sensitivity of doping states in the copper oxides to electron-lattice coupling. *Physical Review Letters*, **1992**, 69, 965-968	7.4	87

4	Charge-transfer polarons and excitons. *Physical Review B*, **1991**, 43, 11474-11477	3.3	11
3	LOCALIZED (POLARONIC) CHARGE-TRANSFER EXCITATIONS IN CuO2 LAYERS. *Modern Physics Letters B*, **1991**, 05, 1515-1523	1.6	7
2	Excitonic pairing in electron-doped Cu-O layers. *Physical Review B*, **1990**, 42, 936-938	3.3	4
1	Critical behavior of Young's modulus for two-dimensional randomly holed metallized Mylar. *Physical Review B*, **1987**, 36, 3960-3962	3.3	9