Lara Benfatto

List of Publications by Year
in descending order

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111 papers	3,373 citations	109264 35 h-index	168321 53 g-index
111 all docs	111 docs citations	111 times ranked	2953 citing authors

#	Article	IF	Citations
1	Generalized plasma waves in layered superconductors: A unified approach. Physical Review Research, 2022, 4, .	1.3	5
2	Resistivity anisotropy from the multiorbital Boltzmann equationÂin nematic FeSe. Physical Review B, 2022, 106, .	1.1	4
3	Third harmonic generation from collective modes in disordered superconductors. Physical Review B, 2021, 103, .	1.1	31
4	Non-linear Terahertz driving of plasma waves in layered cuprates. Nature Communications, 2021, 12, 752.	5.8	21
5	Uniformly Frustrated XY Model: Strengthening of the Vortex Lattice by Intrinsic Disorder. Condensed Matter, 2021, 6, 42.	0.8	3
6	Boltzmann electronic dc transport in multiorbital weakly disordered crystals. Physical Review B, 2021, 104, .	1.1	1
7	Destruction of superconductivity through phase fluctuations in ultrathin a -MoGe films. Physical Review B, 2020, 102, .	1.1	10
8	Interplay of spin waves and vortices in the two-dimensional XY model at small vortex-core energy. Physical Review B, 2020, 102, .	1.1	11
9	Raman Response in the Nematic Phase of FeSe. Physical Review Letters, 2020, 124, 197602.	2.9	11
10	Nonlinear <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>I</mml:mi><mml:mtext>â^'</mml:mtext><mml:mi>V</mml:mi> characteristics of two-dimensional superconductors: Berezinskii-Kosterlitz-Thouless physics versus inhomogeneity. Physical Review B, 2019, 100, .	1.1	23
11	Anisotropy of the dc conductivity due to orbital-selective spin fluctuations in the nematic phase of iron superconductors. Physical Review B, 2019, 99, .	1.1	6
12	Raman spectroscopy of graphene under ultrafast laser excitation. EPJ Web of Conferences, 2019, 205, 05003.	0.1	0
13	Giant effective charges and piezoelectricity in gapped graphene. 2D Materials, 2019, 6, 045015.	2.0	23
14	Theory of coherent-oscillations generation in terahertz pump-probe spectroscopy: From phonons to electronic collective modes. Physical Review B, 2019, 100, .	1.1	29
15	Leggett mode controlled by light pulses. Nature Physics, 2019, 15, 341-346.	6.5	51
16	Melting of the Vortex Lattice through Intermediate Hexatic Fluid in an <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mrow><mml:mi>a</mml:mi></mml:mrow><mml:mtext>â^'</mml:mtext><mml:mi>MoGe</mml:mi> Thin Film. Physical Review Letters, 2019, 122, 047001.	2.9	33
17	Scaling of the Fano Effect of the In-Plane Fe-As Phonon and the Superconducting Critical Temperature in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>Ba</mml:mi></mml:mrow><mml:mrow><mml:mn>1</mml:mn> mathvariant="normal">K</mml:mi></mml:mrow><mml:mrow><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:mrow> Physical Review Letters, 2019, 122, 217002.	2.9	1
18	Gap suppression at a Lifshitz transition in a multi-condensate superconductor. Nature Materials, 2019, 18, 948-954.	13.3	34

#	Article	IF	Citations
19	Disordered XY model: Effective medium theory and beyond. Physical Review B, 2019, 99, .	1.1	8
20	Two-dimensional Rashba metals: Unconventional low-temperature transport properties. Journal of Physics and Chemistry of Solids, 2019, 128, 152-160.	1.9	5
21	Superconductivity in tin selenide under pressure. Physical Review Materials, 2019, 3, .	0.9	10
22	Higgs-mode radiance and charge-density-wave order in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>2</mml:mn><mml:mi>H</mml:mi><mml:mo>â€’</mml:m Physical Review B, 2018, 97, .	1.1	66
23	Competition between electron pairing and phase coherence in superconducting interfaces. Nature Communications, 2018, 9, 407.	5.8	40
24	Raman spectroscopy of graphene under ultrafast laser excitation. Nature Communications, 2018, 9, 308.	5.8	70
25	Polarization dependence of the third-harmonic generation in multiband superconductors. Physical Review B, 2018, 97, .	1.1	37
26	Orbital mismatch boosting nematic instability in iron-based superconductors. Physical Review B, 2018, 97, .	1.1	27
27	The BKT Universality Class in the Presence of Correlated Disorder. Condensed Matter, 2018, 3, 8.	0.8	12
28	Nematic pairing from orbital-selective spin fluctuations in FeSe. Npj Quantum Materials, 2018, 3, .	1.8	46
29	Application of the Mattis-Bardeen theory in strongly disordered superconductors. Physical Review B, 2017, 96, .	1.1	26
30	Real-Time Observation of Phonon-Mediated <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Ïƒ</mml:mi><mml:mtext>â^'</mml:mtext><mml:mi>Ï€</mml:mi></mml:mrow></mml:math> Interband Scattering in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MgB</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></ Physical Review Letters, 2017, 119, 097002.	2.9	16
31	Optical signatures of the superconducting Goldstone mode in granular aluminum: Experiments and theory. Physical Review B, 2017, 96, .	1.1	29
32	Broadening of the Berezinskii-Kosterlitz-Thouless transition by correlated disorder. Physical Review B, 2017, 96, .	1.1	23
33	Phonon anomalies in Graphene induced by highly excited charge carriers. , 2017, , .		0
34	Signature of the Leggett mode in the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>A</mml:mi><mml:mrow><mml:mn>1</mml:mn><mml:mi> response: From<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mtext>MgB</mml:mtext><mml:mn>2</mml:mn></mml:msub iron-based superconductors. Physical Review B, 2016, 94, .	1.1	41
35	Effective two-dimensional thickness for the Berezinskii-Kosterlitz-Thouless-like transition in a highly underdoped<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>La</mml:mi><mml:mrow><mml:mn>2</mml:mn></ Physical Review B, 2016, 93, .	1.1	42
36	Enhanced Cooper pairing versus suppressed phase coherence shaping the superconducting dome in coupled aluminum nanograins. Physical Review B, 2016, 93, .	1.1	70

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37	Unconventional dc Transport in Rashba Electron Gases. Physical Review Letters, 2016, 116, 166602.	2.9	33
38	Nonlinear optical effects and third-harmonic generation in superconductors: Cooper pairs versus Higgs mode contribution. Physical Review B, 2016, 93, .	1.1	109
39	Current Correlations in Strongly Disordered Superconductors. Journal of Superconductivity and Novel Magnetism, 2016, 29, 577-580.	0.8	1
40	Orbital-dependent Fermi surface shrinking as a fingerprint of nematicity in FeSe. Physical Review B, 2016, 94, .	1.1	100
41	Amplitude, density, and current correlations of strongly disordered superconductors. Physical Review B, 2015, 92, .	1.1	11
42	Nonrelativistic Dynamics of the Amplitude (Higgs) Mode in Superconductors. Physical Review Letters, 2015, 115, 157002.	2.9	65
43	Slowing down of vortex motion at the Berezinskii-Kosterlitz-Thouless transition in ultrathin NbN films. Physical Review B, 2015, 91, .	1.1	15
44	Infrared phonon activity and Fano interference in multilayer graphenes. Physica Scripta, 2014, T162, 014018.	1.2	0
45	Nature and Raman signatures of the Higgs amplitude mode in the coexisting superconducting and charge-density-wave state. Physical Review B, 2014, 90, .	1.1	57
46	Massless Dirac cones in graphene: Experiments and theory. Annalen Der Physik, 2014, 526, 387-394.	0.9	7
47	Anisotropy of the superconducting fluctuations in multiband superconductors: the case of LiFeAs. Superconductor Science and Technology, 2014, 27, 124009.	1.8	3
48	Optical excitation of phase modes in strongly disordered superconductors. Physical Review B, 2014, 89, .	1.1	41
49	Universal scaling of the order-parameter distribution in strongly disordered superconductors. Physical Review B, 2013, 87, .	1.1	54
50	Berezinskiiâ€“Kosterlitzâ€“Thouless Transition within the Sine-Gordon Approach: The Role of the Vortex-Core Energy. , 2013, , 161-199.		4
51	Leggett modes in iron-based superconductors as a probe of time-reversal symmetry breaking. Physical Review B, 2013, 88, .	1.1	64
52	Enhancement of the finite-frequency superfluid response in the pseudogap regime of strongly disordered superconducting films. Scientific Reports, 2013, 3, 1357.	1.6	42
53	Robustness of the Berezinskii-Kosterlitz-Thouless transition in ultrathin NbN films near the superconductor-insulator transition. Physical Review B, 2013, 87, .	1.1	41
54	Current-current Fermi-liquid corrections to the superconducting fluctuations on conductivity and diamagnetism. Physical Review B, 2012, 85, .	1.1	10

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55	Unconventional Hall Effect in Pnictides from Interband Interactions. Physical Review Letters, 2012, 109, 096402.	2.9	31
56	Phase diagram of the strongly disordered<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>s</mml:mi></mml:math>-wave superconductor NbN close to the metal-insulator transition. Physical Review B, 2012, 85, .	1.1	108
57	Evolution of Kosterlitz-Thouless-Berezinskii (BKT) Transition in Ultra-Thin NbN Films. Journal of Physics: Conference Series, 2012, 400, 022078.	0.3	1
58	Pseudogap state in strongly disordered conventional superconductor, NbN. Journal of Physics: Conference Series, 2012, 400, 022044.	0.3	0
59	Magnetoresistance studies of homogenously disordered 3-dimensional NbN thin films. Journal of Physics: Conference Series, 2012, 391, 012086.	0.3	0
60	Charged-phonon theory and Fano effect in the optical spectroscopy of bilayer graphene. Physical Review B, 2012, 86, .	1.1	35
61	Structure-Dependent Fano Resonances in the Infrared Spectra of Phonons in Few-Layer Graphene. Physical Review Letters, 2012, 108, 156801.	2.9	59
62	Superfluid Density and Phase Relaxation in Superconductors with Strong Disorder. Physical Review Letters, 2012, 108, 207004.	2.9	41
63	Spectral Properties of Optical Phonons in Bilayer Graphene. Carbon Nanostructures, 2012, , 27-32.	0.1	0
64	Phase Fluctuations in a Strongly Disordered<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>s</mml:mi></mml:math>-Wave NbN Superconductor Close to the Metal-Insulator Transition. Physical Review Letters, 2011, 106, 047001.	2.9	160
65	Effect of Phase Fluctuations on the Superconducting Properties of Strongly Disordered 3D NbN Thin Films. Journal of Physics: Conference Series, 2011, 273, 012071.	0.3	1
66	Fermi-surface Shrinking, Interband Coupling and Multiple Gaps in Iron-based Pnictides. Journal of Superconductivity and Novel Magnetism, 2011, 24, 229-233.	0.8	1
67	Role of the Vortex-Core Energy on the Berezinskii-Kosterlitz-Thouless Transition in Thin Films of NbN. Physical Review Letters, 2011, 107, 217003.	2.9	64
68	Skyrmions in a Doped Antiferromagnet. Physical Review Letters, 2011, 106, 227206.	2.9	48
69	Effects of the Fermi-surface shrinking on the optical sum rule in pnictides. Physical Review B, 2011, 83, .	1.1	28
70	Extended Drude model and role of interband transitions in the midinfrared spectra of pnictides. Physical Review B, 2011, 83, .	1.1	29
71	Effective medium theory for superconducting layers: A systematic analysis including space correlation effects. Physical Review B, 2011, 84, .	1.1	52
72	Fermi surface shrinking, band shifts and interband coupling in iron-based pnictides. Physica C: Superconductivity and Its Applications, 2010, 470, S508-S510.	0.6	3

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73	Phonon switching and combined Fano-Rice effect in optical spectra of bilayer graphene. Physical Review B, 2010, 82, .	1.1	31
74	Measurement of magnetic penetration depth and superconducting energy gap in very thin epitaxial NbN films. Applied Physics Letters, 2010, 96, 072509.	1.5	94
75	Broadening of the Berezinskii-Kosterlitz-Thouless superconducting transition by inhomogeneity and finite-size effects. Physical Review B, 2009, 80, .	1.1	82
76	Theory of fluctuation conductivity from interband pairing in pnictide superconductors. Physical Review B, 2009, 79, .	1.1	34
77	Vertex renormalization in dc conductivity of doped chiral graphene. Physical Review B, 2009, 79, .	1.1	22
78	Fermi-Surface Shrinking and Interband Coupling in Iron-Based Pnictides. Physical Review Letters, 2009, 103, 046404.	2.9	103
79	Spectroscopic and thermodynamic properties in a four-band model for pnictides. Physical Review B, 2009, 80, .	1.1	42
80	Gate Tunable Infrared Phonon Anomalies in Bilayer Graphene. Physical Review Letters, 2009, 103, 116804.	2.9	127
81	Robustness of the optical conductivity sum rule in bilayer graphene. Physical Review B, 2008, 77, .	1.1	13
82	Doping dependence of the vortex-core energy in bilayer films of cuprates. Physical Review B, 2008, 77, .	1.1	24
83	Spectroscopic signatures of massless gap opening in graphene. Physical Review B, 2008, 78, .	1.1	25
84	Multiple gaps and superfluid density from interband pairing in a four-band model of the iron oxypnictides. Physical Review B, 2008, 78, .	1.1	36
85	Impurity susceptibility and the fate of spin-flop transitions in lightly dopedLa2CuO4. Physical Review B, 2007, 75, .	1.1	3
86	Negative hopping magnetoresistance and dimensional crossover in lightly doped cuprate superconductors. Physical Review B, 2007, 76, .	1.1	11
87	Kosterlitz-Thouless Behavior in Layered Superconductors: The Role of the Vortex Core Energy. Physical Review Letters, 2007, 98, 117008.	2.9	72
88	Sine-Gordon Description of Beresinskii-Kosterlitz-Thouless Vortices in Superconductors Immersed in an External Magnetic Field. Physical Review Letters, 2007, 99, 207002.	2.9	19
89	Temperature dependence of the conductivity sum rule in the normal state due to inelastic scattering. Physical Review B, 2006, 74, .	1.1	10
90	Derivation of the generalized non-linear sigma model in the presence of the Dzyaloshinskiiâ€“Moriya interaction. Physica B: Condensed Matter, 2006, 378-380, 449-450.	1.3	5

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91	Optical-conductivity sum rule in cuprates and unconventional charge density waves: a short review. Low Temperature Physics, 2006, 32, 533-545.	0.2	22
92	Magnetic susceptibility anisotropies in a two-dimensional quantum Heisenberg antiferromagnet with Dzyaloshinskii-Moriya interactions. Physical Review B, 2006, 73, .	1.1	20
93	Field dependence of the magnetic spectrum in anisotropic and Dzyaloshinskii-Moriya antiferromagnets. II. Raman spectroscopy. Physical Review B, 2006, 74, .	1.1	12
94	Field dependence of the magnetic spectrum in anisotropic and Dzyaloshinskii-Moriya antiferromagnets. I. Theory. Physical Review B, 2006, 74, .	1.1	19
95	Dissipative dynamics of topological defects in frustrated Heisenberg spin systems. Physical Review B, 2005, 71, .	1.1	2
96	One-magnon Raman scattering inLa2CuO4: The origin of the field-induced mode. Physical Review B, 2005, 72, .	1.1	17
97	Ward identity and optical conductivity sum rule in thed-density wave state. Physical Review B, 2005, 71, .	1.1	33
98	Dynamics of Topological Defects in a Spiral: A Scenario for the Spin-Glass Phase of Cuprates. Physical Review Letters, 2004, 92, 137202.	2.9	16
99	Effect of orbital currents on the restricted optical conductivity sum rule. European Physical Journal B, 2004, 39, 469-473.	0.6	17
100	Optical response for a discrete stripe. Physica C: Superconductivity and Its Applications, 2004, 408-410, 453-454.	0.6	0
101	Low-energy phase-only action in a superconductor: A comparison with theXYmodel. Physical Review B, 2004, 69, .	1.1	54
102	Signature of stripe pinning in optical conductivity. Physical Review B, 2003, 68, .	1.1	22
103	Coherence length in superconductors from weak to strong coupling. Physical Review B, 2002, 66, .	1.1	25
104	Title is missing!. Journal of Superconductivity and Novel Magnetism, 2002, 15, 517-521.	0.5	1
105	Phase fluctuations, dissipation, and superfluid stiffness ind-wave superconductors. Physical Review B, 2001, 63, .	1.1	50
106	Phase fluctuations in superconductors: From Galilean invariant to quantumXYmodels. Physical Review B, 2001, 64, .	1.1	12
107	The physics of the stripe quantum critical point in the superconducting cuprates. Physica C: Superconductivity and Its Applications, 2000, 341-348, 1715-1718.	0.6	14
108	The pseudogap state in high- superconductors. Physica A: Statistical Mechanics and Its Applications, 2000, 280, 185-192.	1.2	7

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109	Kosterlitz-Thouless vs. Ginzburg-Landau description of 2D superconducting fluctuations. European Physical Journal B, 2000, 13, 609-612.	0.6	4
110	GAP AND PSEUDOGAP EVOLUTION IN UNDERDOPED CUPRATES. International Journal of Modern Physics B, 2000, 14, 3006-3011.	1.0	1
111	Gap and pseudogap evolution within the charge-ordering scenario for superconducting cuprates. European Physical Journal B, 2000, 17, 95-102.	0.6	105