

# Lara Benfatto

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5310983/publications.pdf>

Version: 2024-02-01

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	Phase Fluctuations in a Strongly Disordered $s$ -Wave NbN Superconductor Close to the Metal-Insulator Transition. <i>Physical Review Letters</i> , 2011, 106, 047001.	2.9	160
2	Gate Tunable Infrared Phonon Anomalies in Bilayer Graphene. <i>Physical Review Letters</i> , 2009, 103, 116804.	2.9	127
3	Nonlinear optical effects and third-harmonic generation in superconductors: Cooper pairs versus Higgs mode contribution. <i>Physical Review B</i> , 2016, 93, .	1.1	109
4	Phase diagram of the strongly disordered $s$ -wave superconductor NbN close to the metal-insulator transition. <i>Physical Review B</i> , 2012, 85, .	1.1	108
5	Gap and pseudogap evolution within the charge-ordering scenario for superconducting cuprates. <i>European Physical Journal B</i> , 2000, 17, 95-102.	0.6	105
6	Fermi-Surface Shrinking and Interband Coupling in Iron-Based Pnictides. <i>Physical Review Letters</i> , 2009, 103, 046404.	2.9	103
7	Orbital-dependent Fermi surface shrinking as a fingerprint of nematicity in FeSe. <i>Physical Review B</i> , 2016, 94, .	1.1	100
8	Measurement of magnetic penetration depth and superconducting energy gap in very thin epitaxial NbN films. <i>Applied Physics Letters</i> , 2010, 96, 072509.	1.5	94
9	Broadening of the Berezinskii-Kosterlitz-Thouless superconducting transition by inhomogeneity and finite-size effects. <i>Physical Review B</i> , 2009, 80, .	1.1	82
10	Kosterlitz-Thouless Behavior in Layered Superconductors: The Role of the Vortex Core Energy. <i>Physical Review Letters</i> , 2007, 98, 117008.	2.9	72
11	Enhanced Cooper pairing versus suppressed phase coherence shaping the superconducting dome in coupled aluminum nanograins. <i>Physical Review B</i> , 2016, 93, .	1.1	70
12	Raman spectroscopy of graphene under ultrafast laser excitation. <i>Nature Communications</i> , 2018, 9, 308.	5.8	70
13	Nonrelativistic Dynamics of the Amplitude (Higgs) Mode in Superconductors. <i>Physical Review Letters</i> , 2015, 115, 157002.	2.9	65
14	Role of the Vortex-Core Energy on the Berezinskii-Kosterlitz-Thouless Transition in Thin Films of NbN. <i>Physical Review Letters</i> , 2011, 107, 217003.	2.9	64
15	Leggett modes in iron-based superconductors as a probe of time-reversal symmetry breaking. <i>Physical Review B</i> , 2013, 88, .	1.1	64
16	Structure-Dependent Fano Resonances in the Infrared Spectra of Phonons in Few-Layer Graphene. <i>Physical Review Letters</i> , 2012, 108, 156801.	2.9	59
17	Nature and Raman signatures of the Higgs amplitude mode in the coexisting superconducting and charge-density-wave state. <i>Physical Review B</i> , 2014, 90, .	1.1	57
18	Low-energy phase-only action in a superconductor: A comparison with the XY model. <i>Physical Review B</i> , 2004, 69, .	1.1	54

#	ARTICLE	IF	CITATIONS
19	Universal scaling of the order-parameter distribution in strongly disordered superconductors. Physical Review B, 2013, 87, .	1.1	54
20	Effective medium theory for superconducting layers: A systematic analysis including space correlation effects. Physical Review B, 2011, 84, .	1.1	52
21	Leggett mode controlled by light pulses. Nature Physics, 2019, 15, 341-346.	6.5	51
22	Phase fluctuations, dissipation, and superfluid stiffness in d-wave superconductors. Physical Review B, 2001, 63, .	1.1	50
23	Skyrmions in a Doped Antiferromagnet. Physical Review Letters, 2011, 106, 227206.	2.9	48
24	Nematic pairing from orbital-selective spin fluctuations in FeSe. Npj Quantum Materials, 2018, 3, .	1.8	46
25	Higgs-mode radiance and charge-density-wave order in $\text{La}_{1-x}\text{F}_{2x}\text{O}_{7-\delta}$ . Physical Review B, 2018, 97, .	1.1	42
26	Spectroscopic and thermodynamic properties in a four-band model for pnictides. Physical Review B, 2009, 80, .	1.1	42
27	Enhancement of the finite-frequency superfluid response in the pseudogap regime of strongly disordered superconducting films. Scientific Reports, 2013, 3, 1357.	1.6	42
28	Effective two-dimensional thickness for the Berezinskii-Kosterlitz-Thouless-like transition in a highly underdoped $\text{La}_{1-x}\text{F}_{2x}\text{O}_{7-\delta}$ . Physical Review B, 2016, 93, .	1.1	42
29	Superfluid Density and Phase Relaxation in Superconductors with Strong Disorder. Physical Review Letters, 2012, 108, 207004.	2.9	41
30	Robustness of the Berezinskii-Kosterlitz-Thouless transition in ultrathin NbN films near the superconductor-insulator transition. Physical Review B, 2013, 87, .	1.1	41
31	Optical excitation of phase modes in strongly disordered superconductors. Physical Review B, 2014, 89, .	1.1	41
32	Signature of the Leggett mode in the $\text{MgB}_2$ response: From $\text{MgB}_2$ iron-based superconductors. Physical Review B, 2016, 94, .	1.1	41
33	Competition between electron pairing and phase coherence in superconducting interfaces. Nature Communications, 2018, 9, 407.	5.8	40
34	Polarization dependence of the third-harmonic generation in multiband superconductors. Physical Review B, 2018, 97, .	1.1	37
35	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
36	Charged-phonon theory and Fano effect in the optical spectroscopy of bilayer graphene. Physical Review B, 2012, 86, .	1.1	35

#	ARTICLE	IF	CITATIONS
37	Theory of fluctuation conductivity from interband pairing in pnictide superconductors. Physical Review B, 2009, 79, .	1.1	34
38	Gap suppression at a Lifshitz transition in a multi-condensate superconductor. Nature Materials, 2019, 18, 948-954.	13.3	34
39	Ward identity and optical conductivity sum rule in the density wave state. Physical Review B, 2005, 71, .	1.1	33
40	Unconventional dc Transport in Rashba Electron Gases. Physical Review Letters, 2016, 116, 166602.	2.9	33
41	Melting of the Vortex Lattice through Intermediate Hexatic Fluid in an $\text{MoGe}_2$ Thin Film. Physical Review Letters, 2019, 122, 047001.	2.9	33
42	Phonon switching and combined Fano-Rice effect in optical spectra of bilayer graphene. Physical Review B, 2010, 82, .	1.1	31
43	Unconventional Hall Effect in Pnictides from Interband Interactions. Physical Review Letters, 2012, 109, 096402.	2.9	31
44	Third harmonic generation from collective modes in disordered superconductors. Physical Review B, 2021, 103, .	1.1	31
45	Extended Drude model and role of interband transitions in the midinfrared spectra of pnictides. Physical Review B, 2011, 83, .	1.1	29
46	Optical signatures of the superconducting Goldstone mode in granular aluminum: Experiments and theory. Physical Review B, 2017, 96, .	1.1	29
47	Theory of coherent-oscillations generation in terahertz pump-probe spectroscopy: From phonons to electronic collective modes. Physical Review B, 2019, 100, .	1.1	29
48	Effects of the Fermi-surface shrinking on the optical sum rule in pnictides. Physical Review B, 2011, 83, .	1.1	28
49	Orbital mismatch boosting nematic instability in iron-based superconductors. Physical Review B, 2018, 97, .	1.1	27
50	Application of the Mattis-Bardeen theory in strongly disordered superconductors. Physical Review B, 2017, 96, .	1.1	26
51	Coherence length in superconductors from weak to strong coupling. Physical Review B, 2002, 66, .	1.1	25
52	Spectroscopic signatures of massless gap opening in graphene. Physical Review B, 2008, 78, .	1.1	25
53	Doping dependence of the vortex-core energy in bilayer films of cuprates. Physical Review B, 2008, 77, .	1.1	24
54	Broadening of the Berezinskii-Kosterlitz-Thouless transition by correlated disorder. Physical Review B, 2017, 96, .	1.1	23

#	ARTICLE	IF	CITATIONS
55	Nonlinear characteristics of two-dimensional superconductors: Berezinskii-Kosterlitz-Thouless physics versus inhomogeneity. Physical Review B, 2019, 100, .	1.1	23
56	Giant effective charges and piezoelectricity in gapped graphene. 2D Materials, 2019, 6, 045015.	2.0	23
57	Signature of stripe pinning in optical conductivity. Physical Review B, 2003, 68, .	1.1	22
58	Optical-conductivity sum rule in cuprates and unconventional charge density waves: a short review. Low Temperature Physics, 2006, 32, 533-545.	0.2	22
59	Vertex renormalization in dc conductivity of doped chiral graphene. Physical Review B, 2009, 79, .	1.1	22
60	Non-linear Terahertz driving of plasma waves in layered cuprates. Nature Communications, 2021, 12, 752.	5.8	21
61	Magnetic susceptibility anisotropies in a two-dimensional quantum Heisenberg antiferromagnet with Dzyaloshinskii-Moriya interactions. Physical Review B, 2006, 73, .	1.1	20
62	Field dependence of the magnetic spectrum in anisotropic and Dzyaloshinskii-Moriya antiferromagnets. I. Theory. Physical Review B, 2006, 74, .	1.1	19
63	Sine-Gordon Description of Berezinskii-Kosterlitz-Thouless Vortices in Superconductors Immersed in an External Magnetic Field. Physical Review Letters, 2007, 99, 207002.	2.9	19
64	Effect of orbital currents on the restricted optical conductivity sum rule. European Physical Journal B, 2004, 39, 469-473.	0.6	17
65	One-magnon Raman scattering in La <sub>2</sub> CuO <sub>4</sub> : The origin of the field-induced mode. Physical Review B, 2005, 72, .	1.1	17
66	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
67	Real-Time Observation of Phonon-Mediated Interband Scattering in Physical Review Letters, 2017, 119, 097002.	2.9	16
68	Slowing down of vortex motion at the Berezinskii-Kosterlitz-Thouless transition in ultrathin NbN films. Physical Review B, 2015, 91, .	1.1	15
69	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
70	Robustness of the optical conductivity sum rule in bilayer graphene. Physical Review B, 2008, 77, .	1.1	13
71	Phase fluctuations in superconductors: From Galilean invariant to quantum XY models. Physical Review B, 2001, 64, .	1.1	12
72	Field dependence of the magnetic spectrum in anisotropic and Dzyaloshinskii-Moriya antiferromagnets. II. Raman spectroscopy. Physical Review B, 2006, 74, .	1.1	12

#	ARTICLE	IF	CITATIONS
73	The BKT Universality Class in the Presence of Correlated Disorder. Condensed Matter, 2018, 3, 8.	0.8	12
74	Negative hopping magnetoresistance and dimensional crossover in lightly doped cuprate superconductors. Physical Review B, 2007, 76, .	1.1	11
75	Amplitude, density, and current correlations of strongly disordered superconductors. Physical Review B, 2015, 92, .	1.1	11
76	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
77	Raman Response in the Nematic Phase of FeSe. Physical Review Letters, 2020, 124, 197602.	2.9	11
78	Temperature dependence of the conductivity sum rule in the normal state due to inelastic scattering. Physical Review B, 2006, 74, .	1.1	10
79	Current-current Fermi-liquid corrections to the superconducting fluctuations on conductivity and diamagnetism. Physical Review B, 2012, 85, .	1.1	10
80	Destruction of superconductivity through phase fluctuations in ultrathin a -MoGe films. Physical Review B, 2020, 102, .	1.1	10
81	Superconductivity in tin selenide under pressure. Physical Review Materials, 2019, 3, .	0.9	10
82	Disordered XY model: Effective medium theory and beyond. Physical Review B, 2019, 99, .	1.1	8
83	The pseudogap state in high- superconductors. Physica A: Statistical Mechanics and Its Applications, 2000, 280, 185-192.	1.2	7
84	Massless Dirac cones in graphene: Experiments and theory. Annalen Der Physik, 2014, 526, 387-394.	0.9	7
85	Scaling of the Fano Effect of the in-Plane Fe-As Phonon and the Superconducting Critical Temperature in $\text{BaFe}_2\text{As}_2$ . Physical Review Letters, 2019, 122, 217002.	2.9	7
86	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
87	Derivation of the generalized non-linear sigma model in the presence of the Dzyaloshinskii-Moriya interaction. Physica B: Condensed Matter, 2006, 378-380, 449-450.	1.3	5
88	Two-dimensional Rashba metals: Unconventional low-temperature transport properties. Journal of Physics and Chemistry of Solids, 2019, 128, 152-160.	1.9	5
89	Generalized plasma waves in layered superconductors: A unified approach. Physical Review Research, 2022, 4, .	1.3	5
90	Kosterlitz-Thouless vs. Ginzburg-Landau description of 2D superconducting fluctuations. European Physical Journal B, 2000, 13, 609-612.	0.6	4

#	ARTICLE	IF	CITATIONS
91	Berezinskiiâ€“Kosterlitzâ€“Thouless Transition within the Sine-Gordon Approach: The Role of the Vortex-Core Energy. , 2013, , 161-199.		4
92	Resistivity anisotropy from the multiorbital Boltzmann equation in nematic FeSe. Physical Review B, 2022, 106, .	1.1	4
93	Impurity susceptibility and the fate of spin-flop transitions in lightly doped La <sub>2</sub> CuO <sub>4</sub> . Physical Review B, 2007, 75, .	1.1	3
94	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
95	Anisotropy of the superconducting fluctuations in multiband superconductors: the case of LiFeAs. Superconductor Science and Technology, 2014, 27, 124009.	1.8	3
96	Uniformly Frustrated XY Model: Strengthening of the Vortex Lattice by Intrinsic Disorder. Condensed Matter, 2021, 6, 42.	0.8	3
97	Dissipative dynamics of topological defects in frustrated Heisenberg spin systems. Physical Review B, 2005, 71, .	1.1	2
98	GAP AND PSEUDOGAP EVOLUTION IN UNDERDOPED CUPRATES. International Journal of Modern Physics B, 2000, 14, 3006-3011.	1.0	1
99	Title is missing!. Journal of Superconductivity and Novel Magnetism, 2002, 15, 517-521.	0.5	1
100	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
101	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
102	Evolution of Kosterlitz-Thouless-Berezinskii (BKT) Transition in Ultra-Thin NbN Films. Journal of Physics: Conference Series, 2012, 400, 022078.	0.3	1
103	Current Correlations in Strongly Disordered Superconductors. Journal of Superconductivity and Novel Magnetism, 2016, 29, 577-580.	0.8	1
104	Boltzmann electronic dc transport in multiorbital weakly disordered crystals. Physical Review B, 2021, 104, .	1.1	1
105	Optical response for a discrete stripe. Physica C: Superconductivity and Its Applications, 2004, 408-410, 453-454.	0.6	0
106	Pseudogap state in strongly disordered conventional superconductor, NbN. Journal of Physics: Conference Series, 2012, 400, 022044.	0.3	0
107	Magnetoresistance studies of homogeneously disordered 3-dimensional NbN thin films. Journal of Physics: Conference Series, 2012, 391, 012086.	0.3	0
108	Infrared phonon activity and Fano interference in multilayer graphenes. Physica Scripta, 2014, T162, 014018.	1.2	0

#	ARTICLE	IF	CITATIONS
109	Phonon anomalies in Graphene induced by highly excited charge carriers. , 2017, , .		0
110	Raman spectroscopy of graphene under ultrafast laser excitation. EPJ Web of Conferences, 2019, 205, 05003.	0.1	0
111	Spectral Properties of Optical Phonons in Bilayer Graphene. Carbon Nanostructures, 2012, , 27-32.	0.1	0