

Lior Klein

List of Publications by Year in descending order

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116
papers

3,651
citations

159585

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138484

58
g-index

119
all docs

119
docs citations

119
times ranked

3480
citing authors

#	ARTICLE	IF	CITATIONS
1	Structure, physical properties, and applications of SrRuO_3 thin films. Reviews of Modern Physics, 2012, 84, 253-298.	45.6	550
2	Anomalous Spin Scattering Effects in the Badly Metallic Itinerant Ferromagnet SrRuO_3 . Physical Review Letters, 1996, 77, 2774-2777.	7.8	278
3	Non-Fermi-Liquid Behavior of SrRuO_3 : Evidence from Infrared Conductivity. Physical Review Letters, 1998, 81, 2498-2501.	7.8	203
4	Peak effect and scaling of irreversible properties in untwinned Y-Ba-Cu-O crystals. Physical Review B, 1994, 49, 4403-4406.	3.2	194
5	Transport and magnetization in the badly metallic itinerant ferromagnet. Journal of Physics Condensed Matter, 1996, 8, 10111-10126.	1.8	177
6	Perpendicular magnetic anisotropy and strong magneto-optic properties of SrRuO_3 epitaxial films. Applied Physics Letters, 1995, 66, 2427-2429.	3.3	105
7	Possible non-Fermi-liquid behavior of CaRuO_3 . Physical Review B, 1999, 60, 1448-1451.	3.2	100
8	Carbon-Coated Core Shell Structured Copper and Nickel Nanoparticles Synthesized in an Ionic Liquid. Journal of Physical Chemistry B, 2006, 110, 17711-17714.	2.6	97
9	Domain Wall Resistivity in SrRuO_3 . Physical Review Letters, 2000, 84, 6090-6093.	7.8	84
10	Lorentz transmission electron microscope study of ferromagnetic domain walls in SrRuO_3 : Statics, dynamics, and crystal structure correlation. Journal of Applied Physics, 1999, 85, 4131-4140.	2.5	73
11	Giant planar Hall effect in colossal magnetoresistive $\text{La}_{0.84}\text{Sr}_{0.16}\text{MnO}_3$ thin films. Applied Physics Letters, 2004, 84, 2593-2595.	3.3	71
12	Evidence for line vortices in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_8$. Physical Review B, 1993, 48, 3523-3526.	3.2	67
13	Strain-tunable magnetism at oxide domain walls. Nature Physics, 2019, 15, 269-274.	16.7	65
14	Low-concentration series in general dimension. Journal of Statistical Physics, 1990, 58, 511-538.	1.2	63
15	Synthesis of ZnO and Zn Nanoparticles in Microwave Plasma and Their Deposition on Glass Slides. Langmuir, 2010, 26, 5976-5984.	3.5	62
16	Series expansions for the Ising spin glass in general dimension. Physical Review B, 1991, 43, 11249-11273.	3.2	54
17	Antisymmetric magnetoresistance of the SrTiO_3 . Physical Review B, 2009, 80, .	3.2	54
18	Testing the Berry phase model for extraordinary Hall effect in SrRuO_3 . Physical Review B, 2004, 70, .	3.2	50

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19	Anisotropic magnetoresistance in colossal magnetoresistive $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ thin films. Journal of Applied Physics, 2007, 102, 103901.	2.5	50
20	Magnetization jumps and irreversibility in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_8$. Physical Review B, 1996, 53, 11807-11816.	3.2	49
21	Extraordinary Hall effect in SrRuO_3 . Physical Review B, 2000, 61, R7842-R7845.	3.2	48
22	Scaling of the anomalous Hall effect in SrRuO_3 . Physical Review B, 2011, 84, .	3.2	47
23	Planar Hall-effect magnetic random access memory. Journal of Applied Physics, 2006, 99, 08R701.	2.5	46
24	Effect of electric field doping on the anisotropic magnetoresistance in doped manganites. Physical Review B, 2006, 74, .	3.2	44
25	Efficient Current-Induced Domain-Wall Displacement in SrRuO_3 . Physical Review Letters, 2007, 98, 247204.	7.8	43
26	Magnetoresistance tensor of $\text{La}_{0.8}\text{Sr}_{0.2}\text{MnO}_3$. Physical Review B, 2009, 79, .	3.2	42
27	Temperature-dependent local exchange splitting in SrRuO_3 . Physical Review B, 1999, 60, R6987-R6990.	3.2	39
28	Comment on "Exchange bias-like phenomenon in SrRuO_3 ". Applied Physics Letters, 2006, 89, 036101.	3.3	38
29	Magnetic resistivity in SrRuO_3 and the ferromagnetic phase transition. Physical Review B, 2001, 63, .	3.2	37
30	Crystal structure, magnetic properties, x-ray-photoemission-spectroscopy, and specific-heat measurements on Pr_2BaO_4 and PrBaO_3 . Physical Review B, 1992, 46, 9132-9141.	3.2	36
31	Magnetic and transport properties of epitaxial films of SrRuO_3 in the ultrathin limit. Physical Review B, 2009, 79, .	3.2	31
32	Planar Hall Effect Sensors With Subnanotesla Resolution. IEEE Magnetics Letters, 2013, 4, 6500104-6500104.	1.1	31
33	Large anisotropy in the paramagnetic susceptibility of SrRuO_3 films. Physical Review B, 2005, 71, .	3.2	30
34	Field-dependent anisotropic magnetoresistance and planar Hall effect in epitaxial magnetite thin films. Physical Review B, 2011, 84, .	3.2	30
35	A High-Resolution Planar Hall Effect Magnetometer for Ultra-Low Frequencies. IEEE Sensors Journal, 2016, 16, 3224-3230.	4.7	26
36	Diverging time scales for onset of irreversibility in high-temperature superconductors. Physica C: Superconductivity and Its Applications, 1994, 224, 213-220.	1.2	25

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37	The Dependence of the Electronic Conductivity of Carbon Molecular Sieve Electrodes on Their Charging States. Journal of Physical Chemistry B, 2006, 110, 7443-7448.	2.6	25
38	Large magnetoresistance of single-crystal films of ferromagnetic SrRuO ₃ . Journal of Magnetism and Magnetic Materials, 1998, 188, 319-325.	2.3	24
39	Flux flop in Y-Ba-Cu-O crystals irradiated with 5.3-GeV Pb ions. Physical Review B, 1993, 47, 12349-12352.	3.2	23
40	Relaxation of transport properties in electron-doped SrTiO ₃ . Applied Physics Letters, 2007, 91, 151104.	3.3	23
41	Planar Hall effect sensors with shape-induced effective single domain behavior. Journal of Applied Physics, 2012, 111, 07E519.	2.5	23
42	Thermally activated recovery of electrical conductivity in $\text{LaAlO}_3/\text{SrTiO}_3$. Physical Review B, 2013, 87, .	3.2	18
43	Planar Hall effect in epitaxial thin films of magnetite. Journal of Applied Physics, 2007, 101, 09J507.	2.5	17
44	Planar Hall Effect Magnetometer With 5 pT Resolution. , 2019, 3, 1-4.		17
45	Angular dependence of domain wall resistivity in SrRuO ₃ films. Physical Review B, 2003, 67, .	3.2	15
46	Anisotropic magnetoresistance and planar Hall effect in epitaxial films of La _{0.7} Ca _{0.3} MnO ₃ . Journal of Applied Physics, 2009, 106, 023916.	2.5	15
47	Is CaRuO ₃ a non-Fermi liquid metal?. Physica B: Condensed Matter, 1999, 259-261, 431-432.	2.7	14
48	Paramagnetic anisotropic magnetoresistance in thin films of SrRuO ₃ . Journal of Applied Physics, 2004, 95, 6681-6683.	2.5	14
49	Flux-reorientation in irradiated YBa ₂ Cu ₃ O ₇ and Bi ₂ Sr ₂ CaCu ₂ O ₈ crystals. Physica C: Superconductivity and Its Applications, 1993, 209, 251-254.	1.2	13
50	Symmetry of the magneto-optic response of the Sagnac interferometer. Journal of Applied Physics, 1996, 79, 6186.	2.5	13
51	Towards a six-state magnetic memory element. Applied Physics Letters, 2016, 108, .	3.3	13
52	Flux pinning by columnar defects in high-temperature superconducting crystals. Journal of Alloys and Compounds, 1993, 195, 407-410.	5.5	12
53	Comment on "Spin-Glass Behavior of Mechanically Milled Crystalline GdAl ₂ ". Physical Review Letters, 1995, 74, 618-618.	7.8	12
54	Suppression of the superconducting critical current of Nb in bilayers of Nb ⁺ SrRuO ₃ . Journal of Applied Physics, 2005, 97, 10J120.	2.5	12

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55	Interplay between sheet resistance increase and magnetotransport properties in LaAlO ₃ /SrTiO ₃ . Physical Review B, 2012, 86, .	3.2	12
56	Thickness dependence of elliptical planar Hall effect magnetometers. Applied Physics Letters, 2020, 117, 262403.	3.3	12
57	Negative deviations from Matthiessen's rule for SrRuO ₃ and CaRuO ₃ . Europhysics Letters, 2001, 55, 532-538.	2.0	10
58	Angular Dependence of the Magnetoresistance of the SrTiO ₃ /LaAlO ₃ Interface. IEEE Transactions on Magnetics, 2010, 46, 1630-1632.	2.1	10
59	Scaling of the paramagnetic anomalous Hall effect in SrRuO ₃ . Physical Review B, 2012, 86, .	3.2	10
60	Shape-induced bi-stable magnetic states in submicrometer structures of permalloy films. Journal of Applied Physics, 2012, 111, .	2.5	9
61	Detection of Low-Frequency Magnetic Fields Down to Sub-pT Resolution With Planar-Hall Effect Sensors. , 2021, 5, 1-4.		9
62	Determination of the resistivity anisotropy of SrRuO ₃ by measuring the planar Hall effect. Physical Review B, 2007, 75, .	3.2	8
63	Current-induced magnetic instability in SrRuO ₃ . Journal of Applied Physics, 2008, 103, 07E741.	2.5	8
64	Angular dependence of the Hall effect of La _{0.8} Sr _{0.2} MnO ₃ . Physical Review B, 2013, 87, .	3.2	8
65	Low-temperature anisotropic magnetoresistance and planar Hall effect in SrRuO ₃ . Physical Review B, 2013, 87, .	3.2	8
66	Out of plane anisotropic magnetoresistance and planar Hall effect in epitaxial film of La _{0.8} Sr _{0.2} MnO ₃ . Journal of Applied Physics, 2014, 115, 053709.	2.5	8
67	Planar Hall Effect (PHE) Magnetometers. Smart Sensors, Measurement and Instrumentation, 2017, , 201-224.	0.6	8
68	Klein et al. Reply. Physical Review Letters, 2000, 84, 2280-2280.	7.8	7
69	Uniaxial magnetocrystalline anisotropy in CaRuO ₃ . Physical Review B, 2006, 73, .	3.2	7
70	Deposition of Air-Stable Zinc Nanoparticles on Glass Slides by the Solvent-Assisted Deposition in Plasma (SADIP) Method. Journal of Physical Chemistry C, 2009, 113, 14097-14101.	3.1	7
71	Indication for macroscopic quantum tunneling below 10 K in nanostructures of SrRuO ₃ . Physical Review B, 2012, 86, .	3.2	7
72	Intermixing of ordinary and anomalous Hall effect in SrRuO ₃ . Physical Review B, 2015, 92, .	3.2	7

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73	Magnetic thermal stability of permalloy microstructures with shape-induced bi-axial anisotropy. Journal of Applied Physics, 2016, 119, .	2.5	7
74	Switching of multi-state magnetic structures via domain wall propagation triggered by spin-orbit torques. Scientific Reports, 2019, 9, 20368.	3.3	7
75	Two Orders of Magnitude Boost in the Detection Limit of Droplet-Based Micro-Magnetofluidics with Planar Hall Effect Sensors. ACS Omega, 2020, 5, 20609-20617.	3.5	7
76	Dilute spin glass at zero temperature in general dimension. Physical Review B, 1989, 40, 4824-4832.	3.2	6
77	Four-band model for oxygen holes in copper oxide superconductors. I. Quasiparticles. Physical Review B, 1992, 45, 9915-9925.	3.2	6
78	Angular dependence of the magnetization curves and interlayer Josephson coupling in Bi ₂ Sr ₂ CaCu ₂ O ₈ . Physica A: Statistical Mechanics and Its Applications, 1993, 200, 413-419.	2.6	6
79	Field induced resistivity anisotropy in SrRuO ₃ films. Journal of Applied Physics, 2009, 105, 07B106.	2.5	6
80	The extraordinary Hall effect of SrRuO ₃ in the ultrathin limit. Journal of Applied Physics, 2009, 105, 07E906.	2.5	6
81	Low temperature magnetic force microscope study of magnetization reversal in patterned nanoislands of SrRuO ₃ . Journal of Applied Physics, 2012, 111, 07B901.	2.5	6
82	Magnetization switching of multi-state magnetic structures with current-induced torques. Scientific Reports, 2018, 8, 15160.	3.3	6
83	Phase diagram of the dilute Ising spin glass in general spatial dimension. Physical Review B, 1994, 49, 8830-8841.	3.2	5
84	Thickness dependence of the resistivity tensor in epitaxial magnetite thin films. Journal of Applied Physics, 2013, 114, 043701.	2.5	5
85	Crossover and multicriticality due to the Dzyaloshinsky-Moriya interaction. Physical Review B, 1991, 44, 856-858.	3.2	4
86	Unidirectional pinning in irradiated Bi ₂ Sr ₂ CaCu ₂ O ₈ (invited). Journal of Applied Physics, 1994, 75, 6322-6327.	2.5	4
87	Extraordinary Hall effect in SrRuO ₃ . Physica B: Condensed Matter, 2000, 281-282, 608-609.	2.7	4
88	Domain-wall resistivity in SrRuO ₃ : the influence of domain walls spacing. Journal of Magnetism and Magnetic Materials, 2001, 226-230, 780-781.	2.3	4
89	Can fractional power-law conductivity explain the deviations from Matthiessen's rule in SrRuO ₃ ?. Physica B: Condensed Matter, 2002, 312-313, 793-794.	2.7	4
90	Coating dielectric substrates by plasma-reduction of metallic ions in solvents. Surface and Coatings Technology, 2010, 204, 1347-1352.	4.8	4

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91	The effects of geometry on magnetic response of elliptical PHE sensors. Journal of Applied Physics, 2010, 107, 09E716.	2.5	4
92	Current-induced magnetization reversal in SrRuO ₃ . Physical Review B, 2012, 86, .	3.2	4
93	Composed planar Hall effect sensors with dual-mode operation. AIP Advances, 2016, 6, .	1.3	4
94	Four-band model for oxygen holes in copper oxide superconductors. II. Phase diagram. Physical Review B, 1992, 45, 9926-9931.	3.2	3
95	Magnetic and Crystalline Microstructure of SrRuO ₃ Thin Films. Materials Research Society Symposia Proceedings, 1997, 474, 223.	0.1	3
96	Magnetoresistance scaling in BaRuO ₃ . Physica B: Condensed Matter, 2002, 312-313, 795-796.	2.7	3
97	Characterization of the magnetic anisotropy in thin films of La _{1-x} Sr _x MnO ₃ using the planar Hall effect. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 3336-3338.	0.8	3
98	Thermally assisted current-induced magnetization reversal in SrRuO ₃ . Physical Review B, 2013, 87, .	3.2	3
99	Monitoring superparamagnetic Langevin behavior of individual SrRuO ₃ nanostructures. Physical Review B, 2014, 89, .	3.2	3
100	Current-induced nonuniform enhancement of sheet resistance in Ar ⁺ -irradiated SrTiO ₃ . Physical Review B, 2017, 95, .	3.2	3
101	A four-state magnetic tunnel junction switchable with spin-orbit torques. Applied Physics Letters, 2020, 117, .	3.3	3
102	Stabilization of exponential number of discrete remanent states with localized spin-orbit torques. Applied Physics Letters, 2020, 116, .	3.3	3
103	Measurements of nanomagnetic bead relaxation dynamics using planar Hall effect magnetometer. Journal of Applied Physics, 2021, 129, 124506.	2.5	3
104	Irreversible properties of micrometer-thick, superconducting MoGe/Ge multilayers as a function of anisotropy. Physical Review B, 1995, 51, 6796-6799.	3.2	2
105	Low-temperature magnetoresistance in untwinned CaRuO ₃ films. Physica B: Condensed Matter, 2006, 378-380, 490-491.	2.7	2
106	Testing dependence of anomalous Hall effect on resistivity in SrRuO ₃ by its increase with electron irradiation. Physical Review B, 2013, 88, .	3.2	2
107	Field tuning of domain-wall type and chirality in SrRuO ₃ . Physical Review B, 2017, 95, .	3.2	2
108	A percolation model for the role of quenching temperature in doped-high temperature superconductors. Physica A: Statistical Mechanics and Its Applications, 1991, 179, 62-68.	2.6	1

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109	Effects of irradiation on magnetization curves in high temperature superconductors. Applied Superconductivity, 1993, 1, 323-331.	0.5	1
110	Fluxâ€flop in high temperature superconducting crystals with columnar defects. Journal of Applied Physics, 1993, 73, 5862-5864.	2.5	1
111	Local measurements of magnetization reversal in thin films of SrRuO3. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 3440-3442.	0.8	1
112	A Low Noise Low Offset Readout Circuit for Magnetic-Random-Access-Memory. IEEE Transactions on Circuits and Systems I: Regular Papers, 2018, 65, 1224-1233.	5.4	1
113	Low temperature divergence in the AHE and AMR of ultra-thin Pt/Co/Pt trilayers. Journal of Magnetism and Magnetic Materials, 2019, 485, 314-319.	2.3	1
114	Magnetic and Crystallographic Microstructure of SrRuO3 Studied by Lorentz Transmission Electron Microscopy. Microscopy and Microanalysis, 1997, 3, 521-522.	0.4	0
115	Spin accumulation contribution to domain wall resistivity in SrRuO3. Journal of Magnetism and Magnetic Materials, 2004, 272-276, E1435-E1436.	2.3	0
116	Two Orders of Magnitude Improvement in the Detection Limit of Droplet-Based Micro-Magnetofluidics with Planar Hall Effect Sensors. Engineering Proceedings, 2021, 6, .	0.4	0