

Laszlo Szunyogh

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.

132
papers

3,203
citations

29
h-index

53
g-index

140
ext. papers

3,567
ext. citations

3.8
avg, IF

4.93
L-index

#	Paper	IF	Citations
132	Proper and improper chiral magnetic interactions. <i>Physical Review B</i> , 2021 , 103,	3.3	1
131	Spin-orbit coupling induced splitting of Yu-Shiba-Rusinov states in antiferromagnetic dimers. <i>Nature Communications</i> , 2021 , 12, 2040	17.4	9
130	Element-Specific Magnetization Damping in Ferrimagnetic DyCo5 Alloys Revealed by Ultrafast X-ray Measurements. <i>Physica Status Solidi - Rapid Research Letters</i> , 2021 , 15, 2100047	2.5	3
129	Exceptional sign changes of the nonlocal spin Seebeck effect in antiferromagnetic hematite. <i>Physical Review B</i> , 2021 , 103,	3.3	5
128	High-resolution tunneling spin transport characteristics of topologically distinct magnetic skyrmionic textures from theoretical calculations. <i>Journal of Magnetism and Magnetic Materials</i> , 2021 , 519, 167440	2.8	1
127	L10-ordered (Fe _{100-x} Cr _x)Pt thin films: Phase formation, morphology, and spin structure. <i>Physical Review B</i> , 2020 , 102,	3.3	3
126	Noncollinear antiferromagnetic states in Ru-based Heusler compounds induced by biquadratic coupling. <i>Physical Review Materials</i> , 2020 , 4,	3.2	4
125	Spin reorientation transition in an ultrathin Fe film on W(110) induced by Dzyaloshinsky-Moriya interactions. <i>Physical Review B</i> , 2020 , 102,	3.3	1
124	Exchange interactions from a nonorthogonal basis set: From bulk ferromagnets to the magnetism in low-dimensional graphene systems. <i>Physical Review B</i> , 2019 , 99,	3.3	2
123	Metadynamics study of the temperature dependence of magnetic anisotropy and spin-reorientation transitions in ultrathin films. <i>Physical Review B</i> , 2019 , 100,	3.3	1
122	Inducing skyrmions in ultrathin Fe films by hydrogen exposure. <i>Nature Communications</i> , 2018 , 9, 1571	17.4	27
121	Screened KKR. <i>Springer Proceedings in Physics</i> , 2018 , 381-386	0.2	
120	Theory of high-resolution tunneling spin transport on a magnetic skyrmion. <i>Physical Review B</i> , 2018 , 97,	3.3	2
119	A multiscale model of the effect of Ir thickness on the static and dynamic properties of Fe/Ir/Fe films. <i>Scientific Reports</i> , 2018 , 8, 3879	4.9	
118	Toward tailoring Majorana bound states in artificially constructed magnetic atom chains on elemental superconductors. <i>Science Advances</i> , 2018 , 4, eaar5251	14.3	134
117	Magnetic excitations in non-collinear antiferromagnetic Weyl semimetal Mn ₃ Sn. <i>Npj Quantum Materials</i> , 2018 , 3,	5	22
116	Site-Resolved Contributions to the Magnetic-Anisotropy Energy and Complex Spin Structure of Fe/MgO Sandwiches. <i>Physical Review Applied</i> , 2018 , 9,	4.3	5

115	Formation and stability of metastable skyrmionic spin structures with various topologies in an ultrathin film. <i>Physical Review B</i> , 2017 , 95,	3-3	49
114	Development of antiferromagnetic Heusler alloys for the replacement of iridium as a critically raw material. <i>Journal Physics D: Applied Physics</i> , 2017 , 50, 443001	3	29
113	Magnetization compensation and spin reorientation transition in ferrimagnetic DyCo5: Multiscale modeling and element-specific measurements. <i>Physical Review B</i> , 2017 , 96,	3-3	11
112	Spin-polarized scanning tunneling microscopy characteristics of skyrmionic spin structures exhibiting various topologies. <i>Physical Review B</i> , 2017 , 96,	3-3	8
111	Microscopic origin of ferro-antiferromagnetic transition upon non-magnetic substitution in Ru ₂ (Mn _{1-x} V _x)Ge full Heusler alloys. <i>Journal of Alloys and Compounds</i> , 2017 , 692, 178-182	5-7	5
110	Role of temperature-dependent spin model parameters in ultra-fast magnetization dynamics. <i>Journal of Physics Condensed Matter</i> , 2017 , 29, 314003	1.8	1
109	Enhancement of the spin transfer torque efficiency in magnetic STM junctions. <i>Physical Review B</i> , 2016 , 94,	3-3	5
108	Complex magnetic phase diagram and skyrmion lifetime in an ultrathin film from atomistic simulations. <i>Physical Review B</i> , 2016 , 93,	3-3	44
107	Skyrmions with Attractive Interactions in an Ultrathin Magnetic Film. <i>Physical Review Letters</i> , 2016 , 117, 157205	7-4	56
106	Magnetic phase diagram of an Fe monolayer on W(110) and Ta(110) surfaces based on ab initio calculations. <i>Physical Review B</i> , 2015 , 91,	3-3	14
105	Magnetic correlations beyond the Heisenberg model in an Fe monolayer on Rh(0 0 1). <i>Journal of Physics Condensed Matter</i> , 2015 , 27, 146003	1.8	2
104	Antiferromagnetism in Ru ₂ MnZ(Z=Sn,Sb,Ge,Si) full Heusler alloys: Effects of magnetic frustration and chemical disorder. <i>Physical Review B</i> , 2015 , 91,	3-3	24
103	Tensile strain-induced softening of iron at high temperature. <i>Scientific Reports</i> , 2015 , 5, 16654	4-9	7
102	Band bending at the surface of Bi ₂ Se ₃ studied from first principles. <i>New Journal of Physics</i> , 2015 , 17, 123011	2-9	14
101	First-principles study of spin-dependent thermoelectric properties of half-metallic Heusler thin films between platinum leads. <i>Physical Review B</i> , 2014 , 89,	3-3	45
100	Non-Collinear Magnetic Configurations at Finite Temperature in Thin Films. <i>IEEE Transactions on Magnetism</i> , 2014 , 50, 1-4	2	1
99	Langevin spin dynamics based on ab initio calculations: numerical schemes and applications. <i>Journal of Physics Condensed Matter</i> , 2014 , 26, 216003	1.8	8
98	Magnetic anisotropy and chirality of frustrated Cr nanostructures on Au(1 1 1). <i>Journal of Physics Condensed Matter</i> , 2014 , 26, 436001	1.8	2

97	Spin-correlations and magnetic structure in an Fe monolayer on 5d transition metal surfaces. <i>Journal of Physics Condensed Matter</i> , 2014 , 26, 186001	1.8	14
96	Effects of composition and chemical disorder on the magnetocrystalline anisotropy of Fe x Pt 1x alloys. <i>Europhysics Letters</i> , 2013 , 102, 57004	1.6	8
95	Exchange bias driven by Dzyaloshinskii-Moriya interactions. <i>Physical Review Letters</i> , 2013 , 111, 217202	7.4	42
94	Interatomic exchange interactions for finite-temperature magnetism and nonequilibrium spin dynamics. <i>Physical Review Letters</i> , 2013 , 111, 127204	7.4	60
93	Effect of stacking faults on the magnetocrystalline anisotropy of hcp Co: a first-principles study. <i>Journal of Physics Condensed Matter</i> , 2013 , 25, 296006	1.8	8
92	Relativistic and thermal effects on the magnon spectrum of a ferromagnetic monolayer. <i>Journal of Physics Condensed Matter</i> , 2013 , 25, 506002	1.8	7
91	The effect of a Pt impurity layer on the magnetocrystalline anisotropy of hexagonal close-packed Co: a first-principles study. <i>Journal of Physics Condensed Matter</i> , 2012 , 24, 406001	1.8	1
90	Theoretical study of magnetic domain walls through a cobalt nanocontact. <i>Physical Review B</i> , 2012 , 86,	3.3	5
89	Simulation of spin-polarized scanning tunneling spectroscopy on complex magnetic surfaces: Case of a Cr monolayer on Ag(111). <i>Physical Review B</i> , 2012 , 85,	3.3	13
88	Orbital-dependent electron tunneling within the atom superposition approach: Theory and application to W(110). <i>Physical Review B</i> , 2012 , 86,	3.3	19
87	Simulation of spin-polarized scanning tunneling microscopy on complex magnetic surfaces: Case of a Cr monolayer on Ag(111). <i>Physical Review B</i> , 2011 , 84,	3.3	16
86	Magnetic anisotropy of FePt: Effect of lattice distortion and chemical disorder. <i>Applied Physics Letters</i> , 2011 , 99, 132501	3.4	21
85	Theoretical study of the role of the tip in enhancing the sensitivity of differential conductance tunneling spectroscopy on magnetic surfaces. <i>Physical Review B</i> , 2011 , 83,	3.3	17
84	Route towards finding large magnetic anisotropy in nanocomposites: Application to a W1xRex/Fe multilayer. <i>Physical Review B</i> , 2011 , 84,	3.3	8
83	Monte Carlo study on magnetic nanoparticles from first principle. <i>Journal of Physics: Conference Series</i> , 2010 , 200, 072103	0.3	
82	Anisotropy of exchange interactions between impurities on Cu(110) surface. <i>Journal of Physics: Conference Series</i> , 2010 , 200, 032067	0.3	3
81	Spin polarization on Fermi surfaces of metals by the KKR method. <i>Physical Review B</i> , 2009 , 80,	3.3	52
80	Magnetic ordering in Fe/Co sandwiches on Cu(100). <i>Journal of Physics Condensed Matter</i> , 2009 , 21, 265004	4.8	2

79	Chiral asymmetry of the spin-wave spectra in ultrathin magnetic films. <i>Physical Review Letters</i> , 2009 , 102, 207204	7.4	109
78	Surface-Induced Magnetic Anisotropy of Impurities. <i>IEEE Transactions on Magnetics</i> , 2008 , 44, 2772-2775		0
77	Noble metal capping effects on the spin-reorientation transitions of Co/Ru(0001). <i>New Journal of Physics</i> , 2008 , 10, 073024	2.9	29
76	Magnetic pattern formation on the nanoscale due to relativistic exchange interactions. <i>Physica B: Condensed Matter</i> , 2008 , 403, 402-404	2.8	16
75	Temperature dependent magneto-crystalline anisotropy of thin films: A relativistic disordered local moment approach. <i>Journal of Magnetism and Magnetic Materials</i> , 2007 , 316, e371-e373	2.8	2
74	Magnetic properties of a Cr trimer on Au(111) surface. <i>Journal of Magnetism and Magnetic Materials</i> , 2007 , 316, 118-121	2.8	8
73	On calculating the magnetic state of nanostructures. <i>Progress in Materials Science</i> , 2007 , 52, 371-387	42.2	16
72	Imaging spin-reorientation transitions in consecutive atomic Co layers on Ru(0001). <i>Physical Review Letters</i> , 2006 , 96, 147202	7.4	61
71	Theory of electric transport through Fe/V/Fe trilayers including the effect of impurities. <i>Physica Status Solidi (B): Basic Research</i> , 2005 , 242, 271-277	1.3	4
70	Magnetic properties of quantum corrals from first-principles calculations. <i>Journal of Physics Condensed Matter</i> , 2005 , 17, S1037-S1048	1.8	4
69	Ab initio study of canted magnetism of finite atomic chains at surfaces. <i>Journal of Physics Condensed Matter</i> , 2004 , 16, S5833-S5840	1.8	8
68	Long-range chemical order effects upon the magnetic anisotropy of FePt alloys from an ab initio electronic structure theory. <i>Journal of Physics Condensed Matter</i> , 2004 , 16, S5623-S5631	1.8	65
67	CPP transport in Fe/Cr/Fe trilayers with mn impurities: an ab initio study. <i>Phase Transitions</i> , 2004 , 77, 191-200	1.3	2
66	Temperature dependent magnetic anisotropy in metallic magnets from an ab initio electronic structure theory: L1(0)-ordered FePt. <i>Physical Review Letters</i> , 2004 , 93, 257204	7.4	147
65	Interlayer exchange coupling and giant magnetoresistance. <i>Journal of Physics Condensed Matter</i> , 2003 , 15, S479-S494	1.8	6
64	Ab Initio Study of Electric Transport and Interlayer Exchange Coupling in Fe-Si-Fe Systems. <i>Phase Transitions</i> , 2003 , 76, 523-532	1.3	3
63	On the calculation of the magnetoresistance of tunnel junctions with parallel paths of conduction. <i>Philosophical Magazine</i> , 2003 , 83, 1255-1286	1.6	13
62	Perpendicular transport in Fe/InP/Fe heterostructures. <i>Journal of Magnetism and Magnetic Materials</i> , 2002 , 240, 180-182	2.8	3

61	Layer-resolved optical conductivity of multilayers. <i>Journal of Magnetism and Magnetic Materials</i> , 2002 , 240, 215-216	2.8	7
60	Magnetic properties of iron adatoms and small iron clusters on Ag(1 0 0). <i>Journal of Magnetism and Magnetic Materials</i> , 2002 , 240, 331-333	2.8	2
59	Spin-polarization in ccv Auger electron spectroscopy for transition metals. <i>Journal of Magnetism and Magnetic Materials</i> , 2002 , 240, 340-342	2.8	
58	Theory of metallic magnetism at finite temperatures in bulk materials and thin films. <i>Physica B: Condensed Matter</i> , 2002 , 318, 316-320	2.8	5
57	Onset of magnetic order in fcc-Fe films on Cu(100). <i>Physical Review Letters</i> , 2002 , 88, 147201	7.4	32
56	Magneto-optical properties of Co Pt multilayer systems. <i>Journal of Applied Physics</i> , 2002 , 91, 7291	2.5	3
55	An approximate calculation for transport in magnetic tunnel junctions in the presence of localized states. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 2002 , 82, 763-769		5
54	Ab initio study of CPP transport in Fe/Cr/Fe trilayers: influence of transition metal impurities. <i>Materials Research Society Symposia Proceedings</i> , 2002 , 746, 1		
53	Magnetic properties, interlayer exchange coupling and electric transport in Fe/Cr/Fe trilayers. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 2002 , 82, 85-104		5
52	Perpendicular electric transport in Fe/X/Fe model heterostructures. <i>Journal of Applied Physics</i> , 2002 , 91, 8777	2.5	4
51	Aspects of magnetotunnelling drawn from ab-initio-type calculations. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 2002 , 82, 1027-1045		5
50	Layer-Resolved Magneto-Optical Kerr Effect In Semi-Infinite Inhomogeneous Layered Systems. <i>Phase Transitions</i> , 2002 , 75, 167-184	1.3	10
49	A numerically improved computational scheme for the optical conductivity tensor in layered systems. <i>Journal of Physics Condensed Matter</i> , 2001 , 13, 1529-1538	1.8	12
48	Spin-resolved appearance potential spectroscopy investigations on Fe/Cu(001) overlayers. <i>Physical Review B</i> , 2000 , 61, 15241-15245	3.3	9
47	Reorientation transition in Cu(100)/Ni/Co. <i>Physical Review B</i> , 2000 , 62, 5305-5308	3.3	4
46	Theory of the fano resonance in the STM tunneling density of states due to a single kondo impurity. <i>Physical Review Letters</i> , 2000 , 85, 2557-60	7.4	249
45	Perpendicular magnetism in magnetic multilayer systems. <i>Computational Materials Science</i> , 2000 , 17, 414-437	3.2	47
44	Evaluation of the optical conductivity tensor in terms of contour integrations. <i>Journal of Physics Condensed Matter</i> , 1999 , 11, 10451-10458	1.8	20

43	Lattice Relaxation Driven Reorientation Transition in Ni _n /Cu(100). <i>Physical Review Letters</i> , 1999 , 82, 1289-1292	64
42	Magnetic properties of thin films of Co and of (CoPt) superstructures on Pt(100) and Pt(111). <i>Physical Review B</i> , 1999 , 60, 414-421	33 31
41	Disorder, ordering, and superstructures of (FePt) and (CoPt) on Pt substrates. <i>Physical Review B</i> , 1999 , 60, 11910-11913	33 16
40	Ab initio calculations of magnetotransport for magnetic multilayers. <i>Physical Review B</i> , 1999 , 60, 492-501	33 52
39	On tilted magnetization in thin films. <i>Journal of Magnetism and Magnetic Materials</i> , 1998 , 183, 283-291	2.8 12
38	Role of electronic structure in magnetic tunneling. <i>Journal of Magnetism and Magnetic Materials</i> , 1998 , 189, L131-L135	2.8 13
37	Spin-polarized X-ray emission spectroscopy of capped thin Co films on Cu(100). <i>Solid State Communications</i> , 1998 , 108, 343-348	1.6 1
36	Overlayer-dependent magnetic moment and anisotropy of a Co monolayer on Cu(100). <i>Physical Review B</i> , 1998 , 57, 8838-8841	33 25
35	Magnetic properties of ferromagnetic FeCu superlattices on Cu(100). <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1998 , 78, 591-595	3
34	Multiple reorientation transition of the magnetization of free surfaces of Fe on Ag(100). <i>Physical Review B</i> , 1998 , 58, 5539-5543	33 13
33	Superlattice symmetry in magnetic multilayer systems. <i>Physical Review B</i> , 1998 , 57, 7804-7813	33 9
32	Magnetic anisotropy of Fe _x Co _{1-x} multilayers on Cu(001): Reorientation transition of magnetic moments due to different interlayer coupling. <i>Physical Review B</i> , 1998 , 58, 6316-6320	33 21
31	Giant magnetoresistance of repeated multilayers of Cu ₃ Ni ₃ embedded in Cu(100). <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1998 , 78, 549-555	6
30	Spin-polarized X-ray emission spectroscopy for disordered semi-infinite systems. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1998 , 78, 513-517	
29	Concentration dependent spin-flip energies for alloyed surface magnets. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1998 , 78, 603-610	3
28	Theoretical investigations of spin-resolved appearance potential spectroscopy for Fe/Cu(001) overlayers. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1998 , 78, 497-501	
27	Layer- and component-resolved magnetic moments and anisotropy energies in (Fe _x Co _{1-x}) _n /Cu(100). <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1998 , 78, 597-602	2
26	Ab initio calculation of Heisenberg parameters in thin magnetic films. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1998 , 78, 617-622	12

25	Magnetic structure and anisotropy in Fe/Cu(001) over- and interlayers with antiferromagnetic interlayer coupling. <i>Physical Review B</i> , 1997 , 55, 14392-14396	3.3	32
24	Oscillatory behavior of the magnetic anisotropy energy in Cu(100)/Co multilayer systems. <i>Physical Review B</i> , 1997 , 56, 14036-14044	3.3	43
23	Magnetic Anisotropy of an Impurity in a Semi-Infinite Host. <i>Physical Review Letters</i> , 1997 , 78, 3765-3768	7.4	14
22	Anomalous perpendicular magnetic anisotropy in a Co monolayer on Au(111). <i>Journal of Magnetism and Magnetic Materials</i> , 1997 , 165, 254-257	2.8	8
21	The TB-LMTO method and its relation to the screened KKR method. <i>International Journal of Quantum Chemistry</i> , 1997 , 63, 165-188	2.1	11
20	Ab-initio Determination of Magnetic Interface Coupling Constants for Magnetic Multilayers. <i>Journal De Physique, I</i> , 1997 , 7, 1299-1304		5
19	Fully relativistic spin-polarized description of interface exchange coupling for Fe multilayers in Au(100). <i>Journal of Magnetism and Magnetic Materials</i> , 1996 , 156, 255-256	2.8	1
18	'Band structure' and electrical conductivity of disordered layered systems. <i>Journal of Physics Condensed Matter</i> , 1996 , 8, 7677-7688	1.8	51
17	First-Principles Calculation of the Anomalous Perpendicular Anisotropy in a Co Monolayer on Au(111). <i>Physical Review Letters</i> , 1996 , 77, 1805-1808	7.4	127
16	Fully relativistic spin-polarized description of magnetic interface coupling: Fe multilayers in Au(100). <i>Physical Review B</i> , 1996 , 54, 6430-6436	3.3	24
15	Magnetic anisotropy in Fe/Cu(001) overlayers and interlayers: The high-moment ferromagnetic phase. <i>Physical Review B</i> , 1996 , 54, 9883-9890	3.3	52
14	Magnetic anisotropy of iron multilayers on Au(001): First-principles calculations in terms of the fully relativistic spin-polarized screened KKR method. <i>Physical Review B</i> , 1995 , 51, 9552-9559	3.3	181
13	Magnetism of 4d and 5d adlayers on Ag(001) and Au(001): Comparison between a nonrelativistic and a fully relativistic approach. <i>Physical Review B</i> , 1995 , 51, 12836-12839	3.3	37
12	Theory and convergence properties of the screened Korringa-Kohn-Rostoker method. <i>Physical Review B</i> , 1995 , 52, 8807-8812	3.3	277
11	The self-consistent fully relativistic SKKR Green function method: applications to the (100), (110) and (111) surfaces of Au and Pt. <i>Journal of Physics Condensed Matter</i> , 1994 , 6, 3301-3306	1.8	21
10	Self-consistent localized KKR scheme for surfaces and interfaces. <i>Physical Review B</i> , 1994 , 49, 2721-2729	3.3	184
9	Electronic and structural properties of Cu-Au alloys. <i>Physical Review B</i> , 1994 , 49, 13366-13372	3.3	24
8	Order-disorder phase transitions in YBa ₂ Cu ₃ O _{6+2c} : The asymmetric next-nearest-neighbour interaction model revised from a first-principles point of view. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1994 , 69, 683-696		2

7	Theoretical band-structure spectroscopy of Au_xPd_{1-x} alloys. <i>Physical Review B</i> , 1993 , 47, 10154-10157	3-3	18
6	Relativistic calculation of CCV and CVV Auger-electron spectra: Applications to $Ti_{0.5}Al_{0.5}N$ and Pd. <i>Physical Review B</i> , 1992 , 46, 2015-2023	3-3	14
5	Electronic structure of $YBa_2(Cu_{1-x}Ni_x)3O_7$ in terms of the real-space-scattering coherent-potential approximation. <i>Physical Review B</i> , 1991 , 43, 519-522	3-3	3
4	Effects of nonstoichiometry, ordering, and Bi substitution with Pb in $Bi_2Sr_2CaCu_2O_8$. <i>Physical Review B</i> , 1991 , 43, 13025-13031	3-3	
3	Ordering in high- T_c superconducting systems: Effective pair interactions in Y-Ba-Cu-O. <i>Physical Review B</i> , 1991 , 43, 3768-3770	3-3	13
2	Nonstoichiometry studies of the Y-Ba-Cu-O system in terms of a real-space scattering coherent-potential approximation. <i>Physical Review B</i> , 1990 , 41, 1973-1978	3-3	6
1	Calculation of the electronic structure of $YBa_2(Cu_{1-x}Zn_x)3O_7$ in terms of the real-space-scattering coherent-potential approximation. <i>Physical Review B</i> , 1990 , 42, 432-435	3-3	15