

Patrick Bruno

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122
papers

11,512
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106
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123
ext. papers

12,164
ext. citations

4.1
avg, IF

6.48
L-index

#	Paper	IF	Citations
122	Tight-binding approach to the orbital magnetic moment and magnetocrystalline anisotropy of transition-metal monolayers. <i>Physical Review B</i> , 1989 , 39, 865-868	3.3	1032
121	Oscillatory coupling between ferromagnetic layers separated by a nonmagnetic metal spacer. <i>Physical Review Letters</i> , 1991 , 67, 1602-1605	7.4	952
120	Theory of interlayer magnetic coupling. <i>Physical Review B</i> , 1995 , 52, 411-439	3.3	723
119	Giant spin splitting through surface alloying. <i>Physical Review Letters</i> , 2007 , 98, 186807	7.4	639
118	Ruderman-Kittel theory of oscillatory interlayer exchange coupling. <i>Physical Review B</i> , 1992 , 46, 261-270	3.3	508
117	Magnetic anisotropy in metallic ultrathin films and related experiments on cobalt films (invited). <i>Journal of Applied Physics</i> , 1988 , 64, 5736-5741	2.5	453
116	Magnetization reversal in ultrathin ferromagnetic films with perpendicular anisotropy: Domain observations. <i>Physical Review Letters</i> , 1990 , 65, 2054-2057	7.4	296
115	Exchange interactions in III-V and group-IV diluted magnetic semiconductors. <i>Physical Review B</i> , 2004 , 69,	3.3	248
114	First-principles calculation of the intersublattice exchange interactions and Curie temperatures of the full Heusler alloys Ni ₂ MnX (X=Ga,In,Sn,Sb). <i>Physical Review B</i> , 2004 , 70,	3.3	229
113	Exchange interactions and temperature dependence of magnetization in half-metallic Heusler alloys. <i>Physical Review B</i> , 2005 , 72,	3.3	222
112	Hysteresis properties of ultrathin ferromagnetic films. <i>Journal of Applied Physics</i> , 1990 , 68, 5759-5766	2.5	206
111	Interlayer exchange coupling: a unified physical picture. <i>Journal of Magnetism and Magnetic Materials</i> , 1993 , 121, 248-252	2.8	179
110	Role of conduction electrons in mediating exchange interactions in Mn-based Heusler alloys. <i>Physical Review B</i> , 2008 , 77,	3.3	167
109	Magnetic surface anisotropy of cobalt and surface roughness effects within Neel's model. <i>Journal of Physics F: Metal Physics</i> , 1988 , 18, 1291-1298		165
108	Dipolar magnetic surface anisotropy in ferromagnetic thin films with interfacial roughness. <i>Journal of Applied Physics</i> , 1988 , 64, 3153-3156	2.5	162
107	Surface states of cobalt nanoislands on Cu ₁₁₁ . <i>Physical Review Letters</i> , 2003 , 90, 236801	7.4	145
106	Oscillations of Interlayer Exchange Coupling vs. Ferromagnetic-Layers Thickness. <i>Europhysics Letters</i> , 1993 , 23, 615-620	1.6	138

105	Twisted exchange interaction between localized spins embedded in a one- or two-dimensional electron gas with Rashba spin-orbit coupling. <i>Physical Review B</i> , 2004 , 69,	3.3	133
104	Magnetic anisotropy and magnetization dynamics of individual atoms and clusters of Fe and Co on Pt(111). <i>Physical Review Letters</i> , 2009 , 102, 257203	7.4	132
103	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
102	Impossibility of spontaneously rotating time crystals: a no-go theorem. <i>Physical Review Letters</i> , 2013 , 111, 070402	7.4	125
101	Pressure dependence of the Curie temperature in Ni ₂ MnSn Heusler alloy: A first-principles study. <i>Physical Review B</i> , 2005 , 71,	3.3	120
100	Spin-wave theory of two-dimensional ferromagnets in the presence of dipolar interactions and magnetocrystalline anisotropy. <i>Physical Review B</i> , 1991 , 43, 6015-6021	3.3	119
99	Absence of spontaneous magnetic order at nonzero temperature in one- and two-dimensional Heisenberg and XY systems with long-range interactions. <i>Physical Review Letters</i> , 2001 , 87, 137203	7.4	113
98	Spin polarization of the L-gap surface states on Au(111). <i>Physical Review B</i> , 2003 , 68,	3.3	112
97	Spin-orbit coupling in the L-gap surface states of Au(111): spin-resolved photoemission experiments and first-principles calculations. <i>Journal of Physics Condensed Matter</i> , 2004 , 16, 7581-7597	1.8	107
96	Theory of intrinsic and thermally induced interlayer magnetic coupling between ferromagnetic films separated by an insulating layer. <i>Physical Review B</i> , 1994 , 49, 13231-13234	3.3	107
95	Oxygen-induced symmetrization and structural coherency in Fe/MgO/Fe(001) magnetic tunnel junctions. <i>Physical Review Letters</i> , 2005 , 95, 176101	7.4	102
94	Exchange interactions, spin waves, and transition temperatures in itinerant magnets. <i>Philosophical Magazine</i> , 2006 , 86, 1713-1752	1.6	101
93	Exchange coupling in transition metal monoxides: Electronic structure calculations. <i>Physical Review B</i> , 2009 , 80,	3.3	94
92	Oscillatory curie temperature of two-dimensional ferromagnets. <i>Physical Review Letters</i> , 2000 , 85, 5424-7.4	7.4	94
91	Spin-orbit split two-dimensional electron gas with tunable Rashba and Fermi energy. <i>Physical Review B</i> , 2008 , 77,	3.3	93
90	On-site Coulomb interaction and the magnetism of (GaMn)N and (GaMn)As. <i>Physical Review B</i> , 2004 , 69,	3.3	91
89	Exchange interactions and Curie temperature in (Ga,Mn)As. <i>Physical Review B</i> , 2002 , 66,	3.3	91
88	First-principles study of exchange interactions and Curie temperatures of half-metallic ferrimagnetic full Heusler alloys Mn ₂ VZ (Z = Al, Ge). <i>Journal of Physics Condensed Matter</i> , 2005 , 17, 995-1001	1.8	90

87	Theory of interlayer exchange interactions in magnetic multilayers. <i>Journal of Physics Condensed Matter</i> , 1999 , 11, 9403-9419	1.8	89
86	Ab initio theory of perpendicular magnetotransport in metallic multilayers. <i>Physical Review B</i> , 2000 , 62, 15084-15095	3.3	85
85	Quantum interference and long-range adsorbate-adsorbate interactions. <i>Physical Review B</i> , 2003 , 68,	3.3	84
84	Spin-orbit splitting in an anisotropic two-dimensional electron gas. <i>Physical Review B</i> , 2007 , 76,	3.3	83
83	Comment on "Quantum time crystals". <i>Physical Review Letters</i> , 2013 , 110, 118901	7.4	82
82	Spin coherence in a two-dimensional electron gas with Rashba spin-orbit interaction. <i>Physical Review B</i> , 2002 , 65,	3.3	82
81	Anomalous Hall effect in a two-dimensional electron gas with spin-orbit interaction. <i>Physical Review B</i> , 2005 , 71,	3.3	81
80	Size-dependent surface states of strained cobalt nanoislands on Cu(111). <i>Physical Review Letters</i> , 2007 , 99, 246102	7.4	77
79	Energies and lifetimes of magnons in complex ferromagnets: a first-principle study of Heusler alloys. <i>Physical Review Letters</i> , 2009 , 102, 247206	7.4	69
78	Green's function technique for studying electron flow in two-dimensional mesoscopic samples. <i>Physical Review B</i> , 2005 , 72,	3.3	68
77	Electronic structure, exchange interactions, and Curie temperature in diluted III-V magnetic semiconductors: (GaCr)As, (GaMn)As, (GaFe)As. <i>Physical Review B</i> , 2003 , 67,	3.3	66
76	Magneto-optical-Kerr-effect study of spin-polarized quantum-well states in a Au overlayer on a Co(0001) ultrathin film. <i>Physical Review B</i> , 1995 , 51, 5586-5589	3.3	66
75	Magnetic aftereffect in ultrathin ferromagnetic films. <i>Physical Review B</i> , 1989 , 40, 7399-7402	3.3	66
74	Ferromagnetism in diluted magnetic semiconductors: A comparison between ab initio mean-field, RPA, and Monte Carlo treatments. <i>Physical Review B</i> , 2003 , 68,	3.3	65
73	Absence of zero-bias anomaly in spin-polarized vacuum tunneling in Co(0001). <i>Physical Review Letters</i> , 2003 , 90, 116603	7.4	65
72	Magnetic nanostructures stabilized by surface-state electrons. <i>Physical Review B</i> , 2004 , 70,	3.3	58
71	Kondo effect in single atom contacts: the importance of the atomic geometry. <i>Physical Review Letters</i> , 2008 , 101, 216802	7.4	57
70	Stability of ferromagnetism in the half-metallic pnictides and similar compounds: a first-principles study. <i>Journal of Physics Condensed Matter</i> , 2005 , 17, 3915-30	1.8	57

69	Magnetism and structure on the atomic scale: Small cobalt clusters in Cu(001). <i>Physical Review B</i> , 2004 , 70,	3-3	55
68	Ab initio study of mirages and magnetic interactions in quantum corrals. <i>Physical Review Letters</i> , 2005 , 94, 187201	7-4	53
67	Oscillatory Magneto-Optical Effect in a Au (001) Film Deposited on Fe: Experimental Confirmation of a Spin-Polarized Quantum Size Effect. <i>Physical Review Letters</i> , 1998 , 80, 5200-5203	7-4	52
66	Interlayer exchange coupling: The effect of substitutional disorder. <i>Physical Review Letters</i> , 1996 , 76, 4254-4257	7-4	52
65	Equilibrium spin currents and the magnetoelectric effect in magnetic nanostructures. <i>Physical Review B</i> , 2005 , 72,	3-3	51
64	Bilayer growth of nanoscale Co islands on Cu(111). <i>Physical Review B</i> , 2008 , 77,	3-3	50
63	Self-aligning atomic strings in surface-supported biomolecular gratings. <i>Physical Review B</i> , 2008 , 78,	3-3	49
62	Berry phase of magnons in textured ferromagnets. <i>Physical Review B</i> , 2005 , 72,	3-3	49
61	X-ray magnetic circular dichroism measurements in Ni up to 200 GPa: resistant ferromagnetism. <i>Physical Review Letters</i> , 2011 , 107, 237202	7-4	48
60	Spin wave dispersion on the nanometer scale. <i>Physical Review Letters</i> , 2008 , 101, 167201	7-4	43
59	Adatom self-organization induced by quantum confinement of surface electrons. <i>Physical Review Letters</i> , 2006 , 97, 186403	7-4	43
58	Inverse magnetoresistance in the simple spin-valve system Fe _{1-x} V _x /Au/Co. <i>Physical Review B</i> , 1995 , 51, 12821-12824	3-3	43
57	Magneto-optical Kerr effect in a paramagnetic overlayer on a ferromagnetic substrate: A spin-polarized quantum size effect. <i>Physical Review B</i> , 1996 , 53, 9214-9220	3-3	43
56	Magnetic properties of fcc Ni-based transition metal alloys. <i>Physical Review B</i> , 2008 , 77,	3-3	41
55	Comment on "Space-time crystals of trapped ions". <i>Physical Review Letters</i> , 2013 , 111, 029301	7-4	40
54	Direct evidence for the effect of quantum confinement of surface-state electrons on atomic diffusion. <i>Physical Review Letters</i> , 2008 , 101, 226601	7-4	40
53	Controlling the spin polarization of nanostructures on magnetic substrates. <i>Physical Review Letters</i> , 2006 , 96, 127204	7-4	39
52	Quantum geometric phase in Majorana's stellar representation: mapping onto a many-body Aharonov-Bohm phase. <i>Physical Review Letters</i> , 2012 , 108, 240402	7-4	38

51	End electronic states in Cu chains on Cu(111): Ab initio calculations. <i>Physical Review B</i> , 2005 , 72,	3-3	38
50	Effect of atomic relaxations on magnetic properties of adatoms and small clusters. <i>Physical Review B</i> , 2003 , 68,	3-3	37
49	Melting of two-dimensional adatom superlattices stabilized by long-range electronic interactions. <i>Physical Review Letters</i> , 2009 , 102, 246102	7-4	34
48	Self-organized long-period adatom strings on stepped metal surfaces: Scanning tunneling microscopy, ab initio calculations, and kinetic Monte Carlo simulations. <i>Physical Review B</i> , 2007 , 76,	3-3	34
47	Electron confinement in hexagonal vacancy islands: Theory and experiment. <i>Physical Review B</i> , 2006 , 74,	3-3	34
46	Theory of two-electron photoemission from surfaces. <i>Solid State Communications</i> , 2000 , 113, 665-669	1-6	34
45	Exchange interactions in ZnMeO (Me=Mn,Fe,Co,Ni): Calculations using the frozen-magnon technique. <i>Physical Review B</i> , 2006 , 73,	3-3	33
44	Magnetism and structure of atomic-size nanocontacts. <i>Physical Review B</i> , 2004 , 70,	3-3	33
43	Curie temperatures of fcc and bcc nickel and permalloy: Supercell and Green's function methods. <i>Physical Review B</i> , 2008 , 77,	3-3	32
42	Anomalous Hall effect due to spin chirality in the Kagomé lattice. <i>Physical Review B</i> , 2006 , 74,	3-3	31
41	Berry phase, topology, and degeneracies in quantum nanomagnets. <i>Physical Review Letters</i> , 2006 , 96, 117208	7-4	30
40	Range dependence of interlayer exchange coupling. <i>Physical Review B</i> , 1998 , 58, 5588-5593	3-3	29
39	Magnetic scanning tunneling microscopy with a two-terminal nonmagnetic tip: Quantitative results. <i>Physical Review B</i> , 2001 , 63,	3-3	28
38	Atomic-scale self-organization of Fe nanostripes on stepped Cu(111) surfaces: Molecular dynamics and kinetic Monte Carlo simulations. <i>Physical Review B</i> , 2008 , 77,	3-3	26
37	Disorder effects in diluted ferromagnetic semiconductors. <i>Physical Review B</i> , 2003 , 68,	3-3	26
36	Vibrations of small cobalt clusters on low-index surfaces of copper: Tight-binding simulations. <i>Physical Review B</i> , 2008 , 78,	3-3	25
35	Self-organization of Ce adatoms on Ag(111): A kinetic Monte Carlo study. <i>Physical Review B</i> , 2006 , 74,	3-3	25
34	Effect of the Mn clustering in (GaMn)N on the magnetic transition temperature. <i>Physical Review B</i> , 2005 , 71,	3-3	24

33	Electron transport in magnetic multilayers: Effect of disorder. <i>Physical Review B</i> , 2002 , 65,	3-3	24
32	Atomic relaxations and magnetic states in a single-atom tunneling junction. <i>Physical Review B</i> , 2006 , 73,	3-3	22
31	Structure and quantum effects in atomic-sized contacts. <i>Physical Review B</i> , 2004 , 69,	3-3	22
30	RPA-CPA theory for magnetism in disordered Heisenberg binary systems with long-range exchange integrals. <i>Physical Review B</i> , 2002 , 66,	3-3	22
29	Topological Hall effect studied in simple models. <i>Physical Review B</i> , 2006 , 74,	3-3	21
28	Chiral two-dimensional electron gas in a periodic magnetic field: Persistent current and quantized anomalous Hall effect. <i>Physical Review B</i> , 2008 , 78,	3-3	20
27	Electronic confinement on stepped Cu(111) surfaces: Ab initio study. <i>Physical Review B</i> , 2007 , 75,	3-3	20
26	Surface electronic states in Co nanoclusters on Au(111): Scanning tunneling spectroscopy measurements and ab initio calculations. <i>Physical Review B</i> , 2007 , 75,	3-3	19
25	Indirect exchange interaction between two quantum dots in an Aharonov-Bohm ring. <i>Physical Review B</i> , 2004 , 69,	3-3	19
24	Nonquantized dirac monopoles and strings in the berry phase of anisotropic spin systems. <i>Physical Review Letters</i> , 2004 , 93, 247202	7-4	19
23	Quantization of the electron wave vector in nanostructures: Counting k-states. <i>Physical Review B</i> , 2007 , 75,	3-3	17
22	Effect of quantum confinement of surface electrons on adatom-adatom interactions. <i>New Journal of Physics</i> , 2007 , 9, 388-388	2-9	16
21	Exchange interactions and Néel temperature of a Fe monolayer on W(001): A first-principles study. <i>Physical Review B</i> , 2006 , 73,	3-3	15
20	Structure and magnetism of cobalt at high pressure and low temperature. <i>Physical Review B</i> , 2016 , 94,	3-3	14
19	Interplay between magnetism and structure in atomic-size Pd contacts: Ab initio studies. <i>Physical Review B</i> , 2008 , 77,	3-3	14
18	Noncollinear magnetic ordering in compressed FePd ₃ ordered alloy: A first principles study. <i>Physical Review B</i> , 2012 , 86,	3-3	13
17	Ab initio study of interaction between magnetic adatoms on metal surfaces. <i>Physical Review B</i> , 2003 , 68,	3-3	13
16	The energies and life times of magnons in bulk iron and one-monolayer Fe film. <i>Journal of Magnetism and Magnetic Materials</i> , 2010 , 322, 1396-1398	2-8	12

15	Manipulating magnetism and conductance of an adatom-molecule junction on a metal surface: An ab initio study. <i>Physical Review B</i> , 2008 , 78,	3.3	11
14	Theory of magneto-optical effect in ultrathin ferromagnetic layers. <i>Journal of Magnetism and Magnetic Materials</i> , 1995 , 140-144, 651-652	2.8	11
13	Multiple-scattering theoretical approach to scanning tunneling microscopy. <i>Physical Review B</i> , 2008 , 77,	3.3	10
12	Jacques Friedel and the physics of metals and alloys. <i>Comptes Rendus Physique</i> , 2016 , 17, 276-290	1.4	9
11	Effect of antiferromagnetic layers on the spin-dependent transport in magnetic tunnel junctions. <i>Physical Review B</i> , 2006 , 74,	3.3	8
10	Pressure-induced structural and magnetic phase transitions in ordered and disordered equiatomic FeCo. <i>Physical Review B</i> , 2013 , 88,	3.3	7
9	Bias voltage dependence of the magnetoresistance in ballistic vacuum tunneling: Theory and application to planar Co(0001) junctions. <i>Physical Review B</i> , 2003 , 68,	3.3	7
8	Effect of exchange interaction on the spin-polarized bound states on metal surfaces: Ab initio study. <i>Physical Review B</i> , 2008 , 78,	3.3	5
7	Inelastic scattering effects and the Hall resistance in a four-probe ring. <i>Physical Review B</i> , 2006 , 73,	3.3	5
6	Publisher's Note: Nonquantized Dirac Monopoles and Strings in the Berry Phase of Anisotropic Spin Systems [Phys. Rev. Lett. 93, 247202 (2004)]. <i>Physical Review Letters</i> , 2005 , 94,	7.4	5
5	Large spin effects in Coulomb blockade of FeMgOBe tunnel junctions. <i>Physical Review B</i> , 2005 , 72,	3.3	5
4	Spin motion of photoelectrons. <i>Physical Review B</i> , 2003 , 68,	3.3	4
3	Interplay of electronic, magnetic and structural properties of surface-supported clusters. <i>European Physical Journal D</i> , 2007 , 45, 547-551	1.3	2
2	Vacuum fluctuations and spin current in mesoscopic structures with collinear magnetic order. <i>Physical Review B</i> , 2007 , 75,	3.3	2
1	Ab-Initio Study of Diluted Magnetic Semiconductors 2005 , 277-293		1