

# Patrick Bruno

## List of Publications by Year in descending order

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123  
papers

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citations

24978

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123  
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123  
docs citations

123  
times ranked

7992  
citing authors

#	ARTICLE	IF	CITATIONS
1	Tight-binding approach to the orbital magnetic moment and magnetocrystalline anisotropy of transition-metal monolayers. <i>Physical Review B</i> , 1989, 39, 865-868.	1.1	1,187
2	Oscillatory coupling between ferromagnetic layers separated by a nonmagnetic metal spacer. <i>Physical Review Letters</i> , 1991, 67, 1602-1605.	2.9	1,024
3	Theory of interlayer magnetic coupling. <i>Physical Review B</i> , 1995, 52, 411-439.	1.1	794
4	Giant Spin Splitting through Surface Alloying. <i>Physical Review Letters</i> , 2007, 98, 186807.	2.9	732
5	Ruderman-Kittel theory of oscillatory interlayer exchange coupling. <i>Physical Review B</i> , 1992, 46, 261-270.	1.1	539
6	Magnetic anisotropy in metallic ultrathin films and related experiments on cobalt films (invited). <i>Journal of Applied Physics</i> , 1988, 64, 5736-5741.	1.1	475
7	Magnetization reversal in ultrathin ferromagnetic films with perpendicular anisotropy: Domain observations. <i>Physical Review Letters</i> , 1990, 65, 2054-2057.	2.9	314
8	Exchange interactions in III-V and group-IV diluted magnetic semiconductors. <i>Physical Review B</i> , 2004, 69, .	1.1	283
9	First-principles calculation of the intersublattice exchange interactions and Curie temperatures of the full Heusler alloys $\text{Ni}_2\text{MnX}$ ( $X=\text{Ga, In, Sn, Sb}$ ). <i>Physical Review B</i> , 2004, 70, .	1.1	263
10	Exchange interactions and temperature dependence of magnetization in half-metallic Heusler alloys. <i>Physical Review B</i> , 2005, 72, .	1.1	256
11	Hysteresis properties of ultrathin ferromagnetic films. <i>Journal of Applied Physics</i> , 1990, 68, 5759-5766.	1.1	224
12	Interlayer exchange coupling: a unified physical picture. <i>Journal of Magnetism and Magnetic Materials</i> , 1993, 121, 248-252.	1.0	193
13	Role of conduction electrons in mediating exchange interactions in Mn-based Heusler alloys. <i>Physical Review B</i> , 2008, 77, .	1.1	185
14	Impossibility of Spontaneously Rotating Time Crystals: A No-Go Theorem. <i>Physical Review Letters</i> , 2013, 111, 070402.	2.9	182
15	Dipolar magnetic surface anisotropy in ferromagnetic thin films with interfacial roughness. <i>Journal of Applied Physics</i> , 1988, 64, 3153-3156.	1.1	172
16	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.	1.6	170
17	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, .	1.1	170
18	Surface States of Cobalt Nanoislands on Cu(111). <i>Physical Review Letters</i> , 2003, 90, 236801.	2.9	153

#	ARTICLE	IF	CITATIONS
19	Oscillations of Interlayer Exchange Coupling vs. Ferromagnetic-Layers Thickness. Europhysics Letters, 1993, 23, 615-620.	0.7	147
20	Magnetic Anisotropy and Magnetization Dynamics of Individual Atoms and Clusters of Fe and Co on Pt(111). Physical Review Letters, 2009, 102, 257203.	2.9	143
21	Spin-wave theory of two-dimensional ferromagnets in the presence of dipolar interactions and magnetocrystalline anisotropy. Physical Review B, 1991, 43, 6015-6021.	1.1	139
22	First-Principles Calculation of the Anomalous Perpendicular Anisotropy in a Co Monolayer on Au(111). Physical Review Letters, 1996, 77, 1805-1808.	2.9	134
23	Absence of Spontaneous Magnetic Order at Nonzero Temperature in One- and Two-Dimensional Heisenberg and XY Systems with Long-Range Interactions. Physical Review Letters, 2001, 87, 137203.	2.9	134
24	Pressure dependence of the Curie temperature in Ni <sub>2</sub> MnSn Heusler alloy: A first-principles study. Physical Review B, 2005, 71, .	1.1	134
25	Exchange interactions, spin waves, and transition temperatures in itinerant magnets. Philosophical Magazine, 2006, 86, 1713-1752.	0.7	127
26	Spin polarization of the L-gap surface states on Au(111). Physical Review B, 2003, 68, .	1.1	124
27	Spin-orbit coupling in the L-gap surface states of Au(111): spin-resolved photoemission experiments and first-principles calculations. Journal of Physics Condensed Matter, 2004, 16, 7581-7597.	0.7	118
28	Theory of intrinsic and thermally induced interlayer magnetic coupling between ferromagnetic films separated by an insulating layer. Physical Review B, 1994, 49, 13231-13234.	1.1	110
29	Oscillatory Curie Temperature of Two-Dimensional Ferromagnets. Physical Review Letters, 2000, 85, 5424-5427.	2.9	109
30	Exchange coupling in transition metal monoxides: Electronic structure calculations. Physical Review B, 2009, 80, .	1.1	107
31	Oxygen-Induced Symmetrization and Structural Coherency in Fe/MgO/Fe(001) Magnetic Tunnel Junctions. Physical Review Letters, 2005, 95, 176101.	2.9	106
32	Theory of interlayer exchange interactions in magnetic multilayers. Journal of Physics Condensed Matter, 1999, 11, 9403-9419.	0.7	103
33	Comment on "Quantum Time Crystals". Physical Review Letters, 2013, 110, 118901.	2.9	100
34	First-principles study of exchange interactions and Curie temperatures of half-metallic ferrimagnetic full Heusler alloys Mn <sub>2</sub> VZ (Z = Al, Ge). Journal of Physics Condensed Matter, 2005, 17, 995-1001.	0.7	99
35	Spin-orbit split two-dimensional electron gas with tunable Rashba and Fermi energy. Physical Review B, 2008, 77, .	1.1	99
36	Exchange interactions and Curie temperature in (Ga,Mn)As. Physical Review B, 2002, 66, .	1.1	97

#	ARTICLE	IF	CITATIONS
37	On-site Coulomb interaction and the magnetism of (GaMn)N and (GaMn)As. Physical Review B, 2004, 69, .	1.1	96
38	Ab initio theory of perpendicular magnetotransport in metallic multilayers. Physical Review B, 2000, 62, 15084-15095.	1.1	94
39	Spin-orbit splitting in an anisotropic two-dimensional electron gas. Physical Review B, 2007, 76, .	1.1	91
40	Quantum interference and long-range adsorbate-adsorbate interactions. Physical Review B, 2003, 68, .	1.1	88
41	Anomalous Hall effect in a two-dimensional electron gas with spin-orbit interaction. Physical Review B, 2005, 71, .	1.1	88
42	Spin coherence in a two-dimensional electron gas with Rashba spin-orbit interaction. Physical Review B, 2002, 65, .	1.1	87
43	Size-Dependent Surface States of Strained Cobalt Nanoislands on Cu(111). Physical Review Letters, 2007, 99, 246102.	2.9	82
44	Energies and Lifetimes of Magnons in Complex Ferromagnets: A First-Principle Study of Heusler Alloys. Physical Review Letters, 2009, 102, 247206.	2.9	79
45	Green's function technique for studying electron flow in two-dimensional mesoscopic samples. Physical Review B, 2005, 72, .	1.1	78
46	Electronic structure, exchange interactions, and Curie temperature in diluted III-V magnetic semiconductors: (GaCr)As, (GaMn)As, (GaFe)As. Physical Review B, 2003, 67, .	1.1	70
47	Ferromagnetism in diluted magnetic semiconductors: a comparison between ab initio mean-field, RPA, and Monte Carlo treatments. Physical Review B, 2003, 68, .	1.1	70
48	Stability of ferromagnetism in the half-metallic pnictides and similar compounds: a first-principles study. Journal of Physics Condensed Matter, 2005, 17, 3915-3930.	0.7	69
49	Magnetic aftereffect in ultrathin ferromagnetic films. Physical Review B, 1989, 40, 7399-7402.	1.1	68
50	Magneto-optical-Kerr-effect study of spin-polarized quantum-well states in a Au overlayer on a Co(0001) ultrathin film. Physical Review B, 1995, 51, 5586-5589.	1.1	68
51	Absence of Zero-Bias Anomaly in Spin-Polarized Vacuum Tunneling in Co(0001). Physical Review Letters, 2003, 90, 116603.	2.9	68
52	Berry phase of magnons in textured ferromagnets. Physical Review B, 2005, 72, .	1.1	62
53	Magnetic nanostructures stabilized by surface-state electrons. Physical Review B, 2004, 70, .	1.1	61
54	Kondo Effect in Single Atom Contacts: The Importance of the Atomic Geometry. Physical Review Letters, 2008, 101, 216802.	2.9	60

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55	Bilayer growth of nanoscale Co islands on Cu(111). Physical Review B, 2008, 77, .	1.1	59
56	Ab Initio Study of Mirages and Magnetic Interactions in Quantum Corrals. Physical Review Letters, 2005, 94, 187201.	2.9	58
57	Equilibrium spin currents and the magnetoelectric effect in magnetic nanostructures. Physical Review B, 2005, 72, .	1.1	58
58	Magnetism and structure on the atomic scale: Small cobalt clusters in Cu(001). Physical Review B, 2004, 70, .	1.1	57
59	X-Ray Magnetic Circular Dichroism Measurements in Ni up to 200 GPa: Resistant Ferromagnetism. Physical Review Letters, 2011, 107, 237202.	2.9	56
60	Oscillatory Magneto-Optical Effect in a Au (001) Film Deposited on Fe: Experimental Confirmation of a Spin-Polarized Quantum Size Effect. Physical Review Letters, 1998, 80, 5200-5203.	2.9	54
61	Interlayer Exchange Coupling: The Effect of Substitutional Disorder. Physical Review Letters, 1996, 76, 4254-4257.	2.9	53
62	Self-aligning atomic strings in surface-supported biomolecular gratings. Physical Review B, 2008, 78, .	1.1	52
63	Magneto-optical Kerr effect in a paramagnetic overlayer on a ferromagnetic substrate: A spin-polarized quantum size effect. Physical Review B, 1996, 53, 9214-9220.	1.1	50
64	Quantum Geometric Phase in Majorana's Stellar Representation: Mapping onto a Many-Body Aharonov-Bohm Phase. Physical Review Letters, 2012, 108, 240402.	2.9	48
65	Comment on "Space-Time Crystals of Trapped Ions". Physical Review Letters, 2013, 111, 029301.	2.9	48
66	Inverse magnetoresistance in the simple spin-valve system Fe <sub>1-x</sub> V <sub>x</sub> /Au/Co. Physical Review B, 1995, 51, 12821-12824.	1.1	47
67	Adatom Self-Organization Induced by Quantum Confinement of Surface Electrons. Physical Review Letters, 2006, 97, 186403.	2.9	47
68	Direct Evidence for the Effect of Quantum Confinement of Surface-State Electrons on Atomic Diffusion. Physical Review Letters, 2008, 101, 226601.	2.9	47
69	Magnetic properties of fcc Ni-based transition metal alloys. Physical Review B, 2008, 77, .	1.1	46
70	Spin Wave Dispersion on the Nanometer Scale. Physical Review Letters, 2008, 101, 167201.	2.9	45
71	Controlling the Spin Polarization of Nanostructures on Magnetic Substrates. Physical Review Letters, 2006, 96, 127204.	2.9	42
72	Melting of Two-Dimensional Adatom Superlattices Stabilized by Long-Range Electronic Interactions. Physical Review Letters, 2009, 102, 246102.	2.9	41

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73	End electronic states in Cu chains on Cu(111): Ab initio calculations. Physical Review B, 2005, 72, .	1.1	39
74	Curie temperatures of fcc and bcc nickel and permalloy: Supercell and Green's function methods. Physical Review B, 2008, 77, .	1.1	39
75	Self-organized long-period adatom strings on stepped metal surfaces: Scanning tunneling microscopy, ab initio calculations, and kinetic Monte Carlo simulations. Physical Review B, 2007, 76, .	1.1	38
76	Effect of atomic relaxations on magnetic properties of adatoms and small clusters. Physical Review B, 2003, 68, .	1.1	37
77	Theory of two-electron photoemission from surfaces. Solid State Communications, 2000, 113, 665-669.	0.9	36
78	Berry Phase, Topology, and Degeneracies in Quantum Nanomagnets. Physical Review Letters, 2006, 96, 117208.	2.9	36
79	Electron confinement in hexagonal vacancy islands: Theory and experiment. Physical Review B, 2006, 74, .	1.1	36
80	Magnetism and structure of atomic-size nanocontacts. Physical Review B, 2004, 70, .	1.1	34
81	Exchange interactions in ZnMeO (Me=Mn, Fe, Co, Ni): Calculations using the frozen-magnon technique. Physical Review B, 2006, 73, .	1.1	34
82	Anomalous Hall effect due to spin chirality in the Kagomé lattice. Physical Review B, 2006, 74, .	1.1	33
83	Range dependence of interlayer exchange coupling. Physical Review B, 1998, 58, 5588-5593.	1.1	32
84	Topological Hall effect studied in simple models. Physical Review B, 2006, 74, .	1.1	29
85	Magnetic scanning tunneling microscopy with a two-terminal nonmagnetic tip: Quantitative results. Physical Review B, 2001, 63, .	1.1	28
86	Disorder effects in diluted ferromagnetic semiconductors. Physical Review B, 2003, 68, .	1.1	28
87	Self-organization of Ce adatoms on Ag(111): A kinetic Monte Carlo study. Physical Review B, 2006, 74, .	1.1	28
88	Atomic-scale self-organization of Fe nanostripes on stepped Cu(111) surfaces: Molecular dynamics and kinetic Monte Carlo simulations. Physical Review B, 2008, 77, .	1.1	28
89	Electron transport in magnetic multilayers: Effect of disorder. Physical Review B, 2002, 65, .	1.1	27
90	Vibrations of small cobalt clusters on low-index surfaces of copper: Tight-binding simulations. Physical Review B, 2008, 78, .	1.1	26

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91	RPA-CPA theory for magnetism in disordered Heisenberg binary systems with long-range exchange integrals. Physical Review B, 2002, 66, .	1.1	25
92	Effect of the Mn clustering in (GaMn)N on the magnetic transition temperature. Physical Review B, 2005, 71, .	1.1	24
93	Atomic relaxations and magnetic states in a single-atom tunneling junction. Physical Review B, 2006, 73, .	1.1	24
94	Structure and quantum effects in atomic-sized contacts. Physical Review B, 2004, 69, .	1.1	23
95	Nonquantized Dirac Monopoles and Strings in the Berry Phase of Anisotropic Spin Systems. Physical Review Letters, 2004, 93, 247202.	2.9	22
96	Chiral two-dimensional electron gas in a periodic magnetic field: Persistent current and quantized anomalous Hall effect. Physical Review B, 2008, 78, .	1.1	22
97	Indirect exchange interaction between two quantum dots in an Aharonov-Bohm ring. Physical Review B, 2004, 69, .	1.1	21
98	Electronic confinement on stepped Cu(111) surfaces: Ab initio study. Physical Review B, 2007, 75, .	1.1	21
99	Quantization of the electron wave vector in nanostructures: Counting $k$ -states. Physical Review B, 2007, 75, .	1.1	19
100	Surface electronic states in Co nanoclusters on Au(111): Scanning tunneling spectroscopy measurements and ab initio calculations. Physical Review B, 2007, 75, .	1.1	19
101	Noncollinear magnetic ordering in compressed FePd $\langle \mathbf{m} \rangle$ ordered alloy: A first principles study. Physical Review B, 2012, 86, .	1.1	19
102	Structure and magnetism of cobalt at high pressure and low temperature. Physical Review B, 2016, 94, .	1.1	18
103	Exchange interactions and Néel temperature of a Fe monolayer on W(001): A first-principles study. Physical Review B, 2006, 73, .	1.1	17
104	Effect of quantum confinement of surface electrons on adatom-adatom interactions. New Journal of Physics, 2007, 9, 388-388.	1.2	17
105	Interplay between magnetism and structure in atomic-size Pd contacts: Ab initio studies. Physical Review B, 2008, 77, .	1.1	16
106	Jacques Friedel and the physics of metals and alloys. Comptes Rendus Physique, 2016, 17, 276-290.	0.3	16
107	Ab initio study of interaction between magnetic adatoms on metal surfaces. Physical Review B, 2003, 68, .	1.1	15
108	The energies and life times of magnons in bulk iron and one-monolayer Fe film. Journal of Magnetism and Magnetic Materials, 2010, 322, 1396-1398.	1.0	12

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109	Theory of magneto-optical effect in ultrathin ferromagnetic layers. Journal of Magnetism and Magnetic Materials, 1995, 140-144, 651-652.	1.0	11
110	Manipulating magnetism and conductance of an adatom-molecule junction on a metal surface: An <i>ab initio</i> study. Physical Review B, 2008, 78, .	1.1	11
111	Multiple-scattering theoretical approach to scanning tunneling microscopy. Physical Review B, 2008, 77, .	1.1	10
112	Effect of antiferromagnetic layers on the spin-dependent transport in magnetic tunnel junctions. Physical Review B, 2006, 74, .	1.1	8
113	Bias voltage dependence of the magnetoresistance in ballistic vacuum tunneling: Theory and application to planar Co(0001) junctions. Physical Review B, 2003, 68, .	1.1	7
114	Inelastic scattering effects and the Hall resistance in a four-probe ring. Physical Review B, 2006, 73, .	1.1	7
115	Pressure-induced structural and magnetic phase transitions in ordered and disordered equiatomic FeCo. Physical Review B, 2013, 88, .	1.1	7
116	Spin motion of photoelectrons. Physical Review B, 2003, 68, .	1.1	5
117	Publisher's Note: Nonquantized Dirac Monopoles and Strings in the Berry Phase of Anisotropic Spin Systems [Phys. Rev. Lett. 93, 247202 (2004)]. Physical Review Letters, 2005, 94, .	2.9	5
118	Large spin effects in Coulomb blockade of Fe/MgO/Fe tunnel junctions. Physical Review B, 2005, 72, .	1.1	5
119	Effect of exchange interaction on the spin-polarized bound states on metal surfaces: <i>Ab initio</i> study. Physical Review B, 2008, 78, .	1.1	5
120	Vacuum fluctuations and spin current in mesoscopic structures with collinear magnetic order. Physical Review B, 2007, 75, .	1.1	2
121	Interplay of electronic, magnetic and structural properties of surface-supported clusters. European Physical Journal D, 2007, 45, 547-551.	0.6	2
122	Ab-Initio Study of Diluted Magnetic Semiconductors. , 2005, , 277-293.		1
123	Twisted exchange interaction between localized spins in presence of Rashba spin-orbit coupling. AIP Conference Proceedings, 2005, , .	0.3	1