

Hans-Benjamin Braun

List of Publications by Year in descending order

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44
papers

1,979
citations

331670

21
h-index

276875

41
g-index

45
all docs

45
docs citations

45
times ranked

1985
citing authors

#	ARTICLE	IF	CITATIONS
1	Real-space observation of emergent magnetic monopoles and associated Dirac strings in artificial kagome spin ice. <i>Nature Physics</i> , 2011, 7, 68-74.	16.7	348
2	Topological effects in nanomagnetism: from superparamagnetism to chiral quantum solitons. <i>Advances in Physics</i> , 2012, 61, 1-116.	14.4	331
3	Magnetic Correlations in Nanostructured Ferromagnets. <i>Physical Review Letters</i> , 2000, 85, 1990-1993.	7.8	171
4	Thermally Activated Magnetization Reversal in Elongated Ferromagnetic Particles. <i>Physical Review Letters</i> , 1993, 71, 3557-3560.	7.8	134
5	Skyrmion-Based Dynamic Magnonic Crystal. <i>Nano Letters</i> , 2015, 15, 4029-4036.	9.1	109
6	Berry's phase and quantum dynamics of ferromagnetic solitons. <i>Physical Review B</i> , 1996, 53, 3237-3255.	3.2	99
7	Fluctuations and instabilities of ferromagnetic domain-wall pairs in an external magnetic field. <i>Physical Review B</i> , 1994, 50, 16485-16500.	3.2	98
8	Kramers's rate theory, broken symmetries, and magnetization reversal (invited). <i>Journal of Applied Physics</i> , 1994, 76, 6310-6315.	2.5	60
9	Nucleation in ferromagnetic nanowires—magnetostatics and topology. <i>Journal of Applied Physics</i> , 1999, 85, 6172-6174.	2.5	56
10	Statistical mechanics of nonuniform magnetization reversal. <i>Physical Review B</i> , 1994, 50, 16501-16521.	3.2	50
11	Emergence of soliton chirality in a quantum antiferromagnet. <i>Nature Physics</i> , 2005, 1, 159-163.	16.7	48
12	Transition rates of a non-Markovian Brownian particle in a double well potential. <i>Journal of Chemical Physics</i> , 1988, 88, 7537-7549.	3.0	47
13	Nonuniform switching of single domain particles at finite temperatures. <i>Journal of Applied Physics</i> , 1994, 75, 4609-4616.	2.5	41
14	Macroscopic quantum tunneling of ferromagnetic domain walls. <i>Physical Review B</i> , 1997, 56, 8129-8137.	3.2	36
15	Dipolar energy states in clusters of perpendicular magnetic nanoislands. <i>Journal of Applied Physics</i> , 2009, 105, .	2.5	35
16	Monopole-Induced Emergent Electric Fields in Ferromagnetic Nanowires. <i>Physical Review Letters</i> , 2018, 121, 097202.	7.8	32
17	Nucleation of magnetization reversal via creation of pairs of Bloch walls. <i>Physical Review Letters</i> , 1990, 65, 787-789.	7.8	31
18	Chopping skyrmions from magnetic chiral domains with uniaxial stress in magnetic nanowire. <i>Applied Physics Letters</i> , 2017, 111, .	3.3	30

#	ARTICLE	IF	CITATIONS
19	Magnetic correlations in nanostructured metals and an extended random-anisotropy model. Journal of Applied Physics, 1999, 85, 5187-5189.	2.5	28
20	Dynamical confinement of twisted soliton pairs in biaxial ferromagnets. Physical Review Letters, 1993, 70, 3335-3338.	7.8	23
21	Magnetic Domain Formation in Itinerant Metamagnets. Physical Review Letters, 2006, 96, 196406.	7.8	21
22	Bloch states of a Bloch wall. Journal of Applied Physics, 1994, 76, 6177-6179.	2.5	16
23	Controlling vortex chirality in hexagonal building blocks of artificial spin ice. New Journal of Physics, 2013, 15, 125033.	2.9	16
24	CHIRALITY CORRELATION OF SPIN SOLITONS: BLOCH WALLS, SPIN- $\frac{1}{2}$ SOLITONS AND HOLES IN A 2D ANTIFERROMAGNETIC BACKGROUND. International Journal of Modern Physics B, 1996, 10, 219-234.	2.0	14
25	Dissipation and Quantum Propagation of Bloch Walls. Europhysics Letters, 1995, 31, 555-560.	2.0	13
26	Tunable terahertz oscillation arising from Bloch-point dynamics in chiral magnets. Physical Review Research, 2020, 2, .	3.6	13
27	Magnetic depth profiling of FM/AF/FM trilayers by PNR. Physica B: Condensed Matter, 2005, 356, 46-50.	2.7	12
28	Scaling behavior of thermally assisted magnetization reversal in nanomagnets. Journal of Applied Physics, 2006, 99, 08F908.	2.5	9
29	Chiral quantum spin solitons. Journal of Applied Physics, 1996, 79, 6107.	2.5	8
30	STOCHASTIC MAGNETIZATION DYNAMICS IN MAGNETIC NANOSTRUCTURES: FROM α -EEL-BROWN TO SOLITON-ANTISOLITON CREATION. , 2000, , .		8
31	General solution of the Landau-Lifshitz-Gilbert equations linearized around a Bloch wall. Physical Review B, 1991, 43, 5908-5914.	3.2	6
32	Löffler, Braun, and Wagner Reply.. Physical Review Letters, 2001, 87, .	7.8	5
33	Breather states in magnetic domain wall racetrack memory samples. Journal of Magnetism and Magnetic Materials, 2010, 322, 1381-1384.	2.3	5
34	Magnetization response in bulk nanostructured magnets. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 449-451, 407-413.	5.6	4
35	Nucleation rates for magnetization reversal in biaxial ferromagnets. IEEE Transactions on Magnetics, 1991, 27, 4787-4789.	2.1	3
36	Magnetization reversal in FM/AF/FM trilayers: dependence of AF thickness. Journal of Magnetism and Magnetic Materials, 2005, 286, 484-487.	2.3	3

#	ARTICLE	IF	CITATIONS
37	Chiral magnetization configurations in magnetic nanostructures in the presence of Dzyaloshinskii-Moriya interactions. Journal of Applied Physics, 2012, 111, 07C706.	2.5	3
38	Skyrmion lines, monopoles, and emergent electromagnetism in nanowires. , 2020, , 381-401.		3
39	Spin Parity Effects and Macroscopic Quantum Coherence of Bloch Walls. , 1995, , 319-345.		3
40	From micromagnetics to quantum spin chains: Quantization of breathers. Journal of Applied Physics, 1999, 85, 5648-5650.	2.5	2
41	Magnetism of nanostructured ferromagnets-experiments and theoretical model. Scripta Materialia, 2001, 44, 1425-1429.	5.2	2
42	Chiral quantum excitations in the anisotropic antiferromagnet CsCoBr ₃ . Journal of Magnetism and Magnetic Materials, 2007, 310, 1194-1196.	2.3	1
43	Quenching the fire in spin ice. Nature Physics, 2014, 10, 88-89.	16.7	1
44	Solitons in Real Space: Domain Walls, Vortices, Hedgehogs, and Skyrmions. Springer Series in Solid-state Sciences, 2018, , 1-40.	0.3	1