

# Werner Scholz

## List of Publications by Year in descending order

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73  
papers

1,901  
citations

361413

20  
h-index

265206

42  
g-index

73  
all docs

73  
docs citations

73  
times ranked

1670  
citing authors

#	ARTICLE	IF	CITATIONS
1	Scalable parallel micromagnetic solvers for magnetic nanostructures. Computational Materials Science, 2003, 28, 366-383.	3.0	256
2	A path method for finding energy barriers and minimum energy paths in complex micromagnetic systems. Journal of Magnetism and Magnetic Materials, 2002, 250, 12-19.	2.3	132
3	Plasmonic near-field transducer for heat-assisted magnetic recording. Nanophotonics, 2014, 3, 141-155.	6.0	128
4	Vortex-state oscillations in soft magnetic cylindrical dots. Physical Review B, 2005, 71, .	3.2	121
5	Micromagnetic simulation of thermally activated switching in fine particles. Journal of Magnetism and Magnetic Materials, 2001, 233, 296-304.	2.3	119
6	Transition from single-domain to vortex state in soft magnetic cylindrical nanodots. Journal of Magnetism and Magnetic Materials, 2003, 266, 155-163.	2.3	117
7	Time resolved micromagnetics using a preconditioned time integration method. Journal of Magnetism and Magnetic Materials, 2002, 248, 298-311.	2.3	113
8	Micromagnetic simulation of domain wall motion in magnetic nano-wires. Journal of Magnetism and Magnetic Materials, 2002, 249, 181-186.	2.3	83
9	Domain wall motion in nanowires using moving grids (invited). Journal of Applied Physics, 2002, 91, 6914.	2.5	72
10	Micromagnetic modeling of head field rise time for high data-rate recording. IEEE Transactions on Magnetics, 2005, 41, 702-706.	2.1	36
11	Micromagnetic modeling of ferromagnetic resonance assisted switching. Journal of Applied Physics, 2008, 103, 07F539.	2.5	36
12	Coercivity and remanence in self-assembled FePt nanoparticle arrays. Journal of Applied Physics, 2003, 93, 7041-7043.	2.5	32
13	Fast boundary methods for magnetostatic interactions in micromagnetics. IEEE Transactions on Magnetics, 2003, 39, 2513-2515.	2.1	31
14	Micromagnetic simulation of antiferromagnetic/ferromagnetic structures. IEEE Transactions on Magnetics, 2002, 38, 2397-2399.	2.1	28
15	The effect of the cell size in Langevin micromagnetic simulations. Journal of Magnetism and Magnetic Materials, 2002, 242-245, 999-1001.	2.3	27
16	Micromagnetic simulation of magnetization reversal in small particles with surface anisotropy. Journal of Applied Physics, 2004, 95, 6807-6809.	2.5	27
17	Numerical and analytical study of fast precessional switching. Journal of Applied Physics, 2004, 95, 7055-7057.	2.5	24
18	Magnetization reversal in granular nanowires. IEEE Transactions on Magnetics, 2002, 38, 2580-2582.	2.1	22

#	ARTICLE	IF	CITATIONS
19	Reversible magnetization processes and energy density product in Sm <sup>2+</sup> /CoFe and Sm <sup>2+</sup> /Co/Co bilayers. Journal of Applied Physics, 2003, 93, 6489-6491.	2.5	22
20	Micromagnetic modelling and magnetization processes. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 641-646.	2.3	21
21	TEM-analysis of Sm(Co,Fe,Cu,Zr) <sub>z</sub> magnets for high-temperature applications. Journal of Magnetism and Magnetic Materials, 2002, 242-245, 1353-1355.	2.3	20
22	Effect of Write Current Waveform on Magnetization and Head-Field Dynamics of Perpendicular Recording Heads. IEEE Transactions on Magnetics, 2006, 42, 2264-2266.	2.1	18
23	Fast switching of small magnetic particles. Journal of Magnetism and Magnetic Materials, 2002, 242-245, 426-429.	2.3	17
24	Magnetostatic spin waves in nanoelements. Physica B: Condensed Matter, 2004, 343, 200-205.	2.7	17
25	Micromagnetic three-dimensional simulation of the pinning field in high temperature Sm(Co,Fe,Cu,Zr) <sub>z</sub> magnets. Journal of Applied Physics, 2002, 91, 8492.	2.5	16
26	Micromagnetic simulation of domain wall pinning and domain wall motion. Computational Materials Science, 2002, 25, 540-546.	3.0	16
27	Reduction in Switching Field for a Granular Perpendicular Medium Using Microwave Assisted Magnetic Recording. IEEE Transactions on Magnetics, 2008, 44, 3392-3395.	2.1	16
28	Cluster size and exchange dispersion in perpendicular magnetic media. Journal of Applied Physics, 2011, 109, 123907.	2.5	16
29	Micromagnetic simulation of the pinning and depinning process in permanent magnets. IEEE Transactions on Magnetics, 2003, 39, 2920-2922.	2.1	15
30	Micromagnetic Simulation of head-field and write bubble dynamics in perpendicular recording. IEEE Transactions on Magnetics, 2005, 41, 2839-2844.	2.1	15
31	Mesh refinement in FE-micromagnetics for multi-domain Nd <sub>2</sub> Fe <sub>14</sub> B particles. Journal of Magnetism and Magnetic Materials, 1999, 196-197, 933-934.	2.3	14
32	Media Roughness and Head-Media Spacing in Heat-Assisted Magnetic Recording. IEEE Transactions on Magnetics, 2014, 50, 132-136.	2.1	14
33	Eddy currents in pulsed field measurements. Journal of Magnetism and Magnetic Materials, 2002, 242-245, 911-914.	2.3	13
34	Micromagnetic simulation of structure-property relations in hard and soft magnets. Computational Materials Science, 2000, 18, 1-6.	3.0	12
35	Energy barriers in magnetic random access memory elements. IEEE Transactions on Magnetics, 2003, 39, 2839-2841.	2.1	12
36	Numerical micromagnetic simulation of Fe/Pt nanoparticles with multiple easy axes. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 1524-1525.	2.3	12

#	ARTICLE	IF	CITATIONS
37	Ultrafast switching of magnetic nanoelements using a rotating field. Journal of Applied Physics, 2002, 91, 7974.	2.5	11
38	Thermal magnetization noise in submicrometer spin valve sensors. Journal of Applied Physics, 2003, 93, 8576-8578.	2.5	11
39	Modeling and limits of advanced HT-magnets. IEEE Transactions on Magnetics, 2000, 36, 3394-3398.	2.1	10
40	Micromagnetic simulation of the magnetic switching behaviour of mesoscopic and nanoscopic structures. Computational Materials Science, 2002, 24, 163-174.	3.0	10
41	Micromagnetic Simulation of Switching Events. , 2001, , 623-635.		10
42	Domain structures and domain wall pinning in arrays of elliptical NiFe nanoelements. Journal of Applied Physics, 2002, 91, 7047.	2.5	9
43	Micromagnetic calculations of bias field and coercivity of compensated ferromagnetic antiferromagnetic bilayers. Journal of Applied Physics, 2003, 93, 8618-8620.	2.5	9
44	Magnetic Configurations and Phase Diagrams of Sub-100-nm NiFe Nanorings. IEEE Transactions on Magnetics, 2007, 43, 2884-2886.	2.1	9
45	Hysteresis and switching dynamics of patterned magnetic elements. Physica B: Condensed Matter, 2000, 275, 55-58.	2.7	8
46	Finite element simulation of discrete media with granular structure. IEEE Transactions on Magnetics, 2002, 38, 1967-1969.	2.1	8
47	Effect of thermal fluctuation field on the noise performance of a perpendicular recording system. Journal of Applied Physics, 2006, 99, 08E706.	2.5	8
48	Langevin micromagnetics of recording media using subgrain discretization. IEEE Transactions on Magnetics, 2000, 36, 3189-3191.	2.1	7
49	Computational micromagnetics. Journal of Magnetism and Magnetic Materials, 2001, 226-230, 1213-1219.	2.3	7
50	Dynamic micromagnetic simulation of the configurational anisotropy of nanoelements. IEEE Transactions on Magnetics, 2001, 37, 2058-2060.	2.1	7
51	Thermally activated magnetization rotation in small nanoparticles. IEEE Transactions on Magnetics, 2003, 39, 2507-2509.	2.1	7
52	Nonuniform Thermal Reversal in Single-Domain Patterned Media. IEEE Transactions on Magnetics, 2004, 40, 2507-2509.	2.1	7
53	Role of Media Parameters in Switching Granular Perpendicular Media Using Microwave Assisted Magnetic Recording. IEEE Transactions on Magnetics, 2009, 45, 889-892.	2.1	7
54	Micromagnetic simulation of magnetization reversal in rotational magnetic fields. Physica B: Condensed Matter, 2001, 306, 112-116.	2.7	6

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55	Sm(Co,Fe,Cu,Zr)/sub z/ magnets for high-temperature applications: microstructural and micromagnetic analysis. IEEE Transactions on Magnetics, 2002, 38, 2943-2945.	2.1	6
56	Micromagnetic analysis of fast precessional switching. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 510-513.	2.3	6
57	Fast Magnetization Switching With Circularly Polarized Fields and Short Pulses. IEEE Transactions on Magnetics, 2008, 44, 3134-3136.	2.1	6
58	Micromagnetic simulations of magnetization reversal in Co/Ni multilayers. Physica B: Condensed Matter, 2001, 306, 38-43.	2.7	5
59	Nucleation in polycrystalline thin films using a preconditioned finite element method. Journal of Applied Physics, 2002, 91, 7977.	2.5	5
60	Finite Element Micromagnetics. Lecture Notes in Computational Science and Engineering, 2003, , 165-181.	0.3	5
61	Micromagnetic simulation of domain wall pinning in Sm(Co,Fe,Cu,Zr) <sub>z</sub> magnets. Journal of Magnetism and Magnetic Materials, 2002, 242-245, 1356-1358.	2.3	4
62	Thermally induced magnetization reversal in antiferromagnetically coupled media. Journal of Applied Physics, 2003, 93, 7405-7407.	2.5	4
63	Micromagnetic Simulation of Thermal Effects in Magnetic Nanostructures. Materials Research Society Symposia Proceedings, 2002, 746, 1.	0.1	3
64	Fast switching behaviour of nanoscopic NiFe- and Co-elements. Computational Materials Science, 2002, 25, 554-561.	3.0	3
65	Thermal fluctuations in magnetic sensor elements. Sensors and Actuators A: Physical, 2003, 106, 134-136.	4.1	3
66	Implementation of a high performance parallel finite element micromagnetics package. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 693-694.	2.3	2
67	The Role of Media Damping in a Perpendicular Recording System. IEEE Transactions on Magnetics, 2008, 44, 207-210.	2.1	2
68	Vortex state formation and stability in single and double layer nanorings and nanodisks. Journal of Applied Physics, 2013, 113, 17B905.	2.5	2
69	Heat assisted magnetic recording performance and integration challenges. Proceedings of SPIE, 2014, , .	0.8	2
70	Fast Switching of Mesoscopic Magnets. , 2003, , 1-27.		2
71	Computational Aspects of Micromagnetics. , 2006, , 383-433.		0
72	Far-field head-media optical interaction in heat-assisted magnetic recording. Applied Optics, 2016, 55, 1241.	2.1	0

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73	MICROMAGNETIC SIMULATIONS AND APPLICATIONS. , 2002, , .		0