Hans Fangohr

List of Publications by Year
in descending order

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149 papers	3,960 citations	109321 35 h-index	144013 57 g-index
152 all docs	152 docs citations	152 times ranked	4156 citing authors

#	Article	IF	Citations
1	Ubermag: Toward More Effective Micromagnetic Workflows. IEEE Transactions on Magnetics, 2022, 58, 1-5.	2.1	42
2	Jupyter in Computational Science. Computing in Science and Engineering, 2021, 23, 5-6.	1.2	6
3	Using Jupyter for Reproducible Scientific Workflows. Computing in Science and Engineering, 2021, 23, 36-46.	1.2	42
4	3D diffractive imaging of nanoparticle ensembles using an x-ray laser. Optica, 2021, 8, 15.	9.3	48
5	Skyrmion States in Disk Geometry. Physical Review Applied, 2021, 16, .	3.8	3
6	Shock Damage Analysis in Serial Femtosecond Crystallography Data Collected at MHz X-ray Free-Electron Lasers. Crystals, 2020, 10, 1145.	2.2	5
7	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Ï€</mml:mi></mml:math> -anisotropy: A nanocarbon route to hard magnetism. Physical Review B, 2020, 101, .	3.2	15
8	Real-space imaging of confined magnetic skyrmion tubes. Nature Communications, 2020, 11, 1726.	12.8	103
9	Automatic Feedback Provision in Teaching Computational Science. Lecture Notes in Computer Science, 2020, , 608-621.	1.3	4
10	Membrane protein megahertz crystallography at the European XFEL. Nature Communications, 2019, 10, 5021.	12.8	47
11	The Karabo distributed control system. Journal of Synchrotron Radiation, 2019, 26, 1448-1461.	2.4	23
12	Stable and manipulable Bloch point. Scientific Reports, 2019, 9, 7959.	3.3	13
13	Nanoscale magnetic skyrmions and target states in confined geometries. Physical Review B, 2019, 99, .	3.2	44
14	Do Images of Biskyrmions Show Typeâ€‖ Bubbles?. Advanced Materials, 2019, 31, e1806598.	21.0	73
15	MHz data collection of a microcrystalline mixture of different jack bean proteins. Scientific Data, 2019, 6, 18.	5.3	5
16	Flat Bands, Indirect Gaps, and Unconventional Spin-Wave Behavior Induced by a Periodic Dzyaloshinskii-Moriya Interaction. Physical Review Letters, 2019, 122, 067204.	7.8	41
17	Evaluation of serial crystallographic structure determination within megahertz pulse trains. Structural Dynamics, 2019, 6, 064702.	2.3	26
18	Data analysis infrastructure for serial crystallography experiments at the EuXFEL. Acta Crystallographica Section A: Foundations and Advances, 2019, 75, e25-e25.	0.1	0

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19	Skyrmion states in thin confined polygonal nanostructures. Journal of Applied Physics, 2018, 123, .	2.5	26
20	Absorbing boundary layers for spin wave micromagnetics. Journal of Magnetism and Magnetic Materials, 2018, 450, 34-39.	2.3	39
21	Current-induced instability of domain walls in cylindrical nanowires. Journal of Physics Condensed Matter, 2018, 30, 015801.	1.8	2
22	Enhanced spin wave propagation in magnonic rings by bias field modulation. AIP Advances, 2018, 8, 056006.	1.3	3
23	Proposal for a micromagnetic standard problem for materials with Dzyaloshinskiiâ€“Moriya interaction. New Journal of Physics, 2018, 20, 113015.	2.9	35
24	Megahertz serial crystallography. Nature Communications, 2018, 9, 4025.	12.8	147
25	Dynamics of Magnetic Skyrmion Clusters Driven by Spin-Polarized Current With a Spatially Varied Polarization. IEEE Magnetics Letters, 2018, 9, 1-5.	1.1	6
26	Megahertz data collection from protein microcrystals at an X-ray free-electron laser. Nature Communications, 2018, 9, 3487.	12.8	89
27	Fidimag â€“ A Finite Difference Atomistic and Micromagnetic Simulation Package. Journal of Open Research Software, 2018, 6, 22.	5.9	38
28	Dynamics of skyrmionic states in confined helimagnetic nanostructures. Physical Review B, 2017, 95, .	3.2	61
29	User interfaces for computational science: A domain specific language for OOMMF embedded in Python. AIP Advances, 2017, 7, .	1.3	35
30	Phase diagrams of vortex matter with multi-scale inter-vortex interactions in layered superconductors. Journal of Physics Condensed Matter, 2017, 29, 035602.	1.8	7
31	Micromagnetic simulations of spin-torque driven magnetization dynamics with spatially resolved spin transport and magnetization texture. Physical Review B, 2017, 96, .	3.2	2
32	Identification of Curie temperature distributions in magnetic particulate systems. Journal Physics D: Applied Physics, 2017, 50, 35LT01.	2.8	10
33	Magnonic analog of relativistic Zitterbewegung in an antiferromagnetic spin chain. Physical Review B, 2017, 96, .	3.2	9
34	Thermal stability and topological protection of skyrmions in nanotracks. Scientific Reports, 2017, 7, 4060.	3.3	116
35	Proposal of a micromagnetic standard problem for ferromagnetic resonance simulations. Journal of Magnetism and Magnetic Materials, 2017, 421, 428-439.	2.3	48
36	Methodology for indentifying the Curie temperature distributions of magnetic granular systems. , 2017, , .		0

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37	Ground state skyrmion and helical states in confined FeGe nanostructures. , 2017, , .		0
38	Exchange-mediated, nonlinear, out-of-plane magnetic field dependence of the ferromagnetic vortex gyrotropic mode frequency driven by core deformation. Physical Review B, 2016, 94, .	3.2	7
39	Hysteresis of nanocylinders with Dzyaloshinskii-Moriya interaction. Applied Physics Letters, 2016, 109, .	3.3	21
40	Skyrmions in thin films with easy-plane magnetocrystalline anisotropy. Applied Physics Letters, 2016, 108, .	3.3	35
41	Nmag micromagnetic simulation tool. , 2016, , .		4
42	Computation of the magnetostatic interaction between linearly magnetized polyhedrons. Journal of Magnetism and Magnetic Materials, 2016, 412, 132-137.	2.3	2
43	Topologically stable magnetization states on a spherical shell: Curvature-stabilized skyrmions. Physical Review B, 2016, 94, .	3.2	81
44	Resonance-Based Detection of Magnetic Nanoparticles and Microbeads Using Nanopatterned Ferromagnets. Physical Review Applied, 2016, 6, .	3.8	18
45	Frequency-based nanoparticle sensing over large field ranges using the ferromagnetic resonances of a magnetic nanodisc. Nanotechnology, 2016, 27, 455502.	2.6	8
46	Resonant translational, breathing, and twisting modes of transverse magnetic domain walls pinned at notches. Physical Review B, 2016, 93, .	3.2	11
47	Virtual Micromagnetics: A Framework for Accessible and Reproducible Micromagnetic Simulation. Journal of Open Research Software, 2016, 4, .	5.9	0
48	Driving magnetic skyrmions with microwave fields. Physical Review B, 2015, 92, .	3.2	84
49	Phenomenological description of the nonlocal magnetization relaxation in magnonics, spintronics, and domain-wall dynamics. Physical Review B, 2015, 92, .	3.2	28
50	Ground state search, hysteretic behaviour and reversal mechanism of skyrmionic textures in confined helimagnetic nanostructures. Scientific Reports, 2015, 5, 17137.	3.3	165
51	Skyrmion-skyrmion and skyrmion-edge repulsions in skyrmion-based racetrack memory. Scientific Reports, 2015, 5, 7643.	3.3	360
52	Magnon-Driven Domain-Wall Motion with the Dzyaloshinskii-Moriya Interaction. Physical Review Letters, 2015, 114, 087203.	7.8	74
53	Anharmonic Infrared Spectroscopy through the Fourier Transform of Time Correlation Function Formalism in O<scp>NETEP</scp>. Journal of Chemical Theory and Computation, 2015, 11, 3321-3332.	5.3	20
54	Microwave-induced dynamic switching of magnetic skyrmion cores in nanodots. Applied Physics Letters, 2015, 106, .	3.3	43

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55	Computing the demagnetizing tensor for finite difference micromagnetic simulations via numerical integration. Journal of Magnetism and Magnetic Materials, 2015, 381, 440-445.	2.3	7
56	Sensing magnetic nanoparticles using nano-confined ferromagnetic resonances in a magnonic crystal. Applied Physics Letters, 2015, 106, .	3.3	44
57	Magnetic skyrmions motion driven by propagating spin waves. , 2015, , .		0
58	Simulation of the phase diagram of magnetic vortices in two-dimensional superconductors: evidence for vortex chain formation. Journal of Physics Condensed Matter, 2014, 26, 115702.	1.8	7
59	Better Design Decisions Through Operational Modeling During the Early Design Phases. Journal of Aerospace Information Systems, 2014, 11, 195-210.	1.4	3
60	Dynamic control of spin wave spectra using spin-polarized currents. Applied Physics Letters, 2014, 105, 112405.	3.3	8
61	Magneto-Electric Control of Surface Anisotropy and Nucleation Modes in L1<inline-formula><tex-math> $_{0}$</tex-math></inline-formula>-CoPt Thin Films. IEEE Magnetics Letters, 2014, 5, 1-4.	1.1	2
62	Designing a Spin-Seebeck Diode. Physical Review Letters, 2014, 112, 047203.	7.8	51
63	Honeycomb, square, and kagome vortex lattices in superconducting systems with multiscale intervortex interactions. Physical Review B, 2014, 90, .	3.2	15
64	Proposal for a Standard Micromagnetic Problem: Spin Wave Dispersion in a Magnonic Waveguide. IEEE Transactions on Magnetics, 2013, 49, 524-529.	2.1	73
65	Role of boundaries in micromagnetic calculations of magnonic spectra of arrays of magnetic nanoelements. Physical Review B, 2013, 87, .	3.2	11
66	Hierarchical structure formation in layered superconducting systems with multi-scale inter-vortex interactions. Journal of Physics Condensed Matter, 2013, 25, 415702.	1.8	19
67	Effect of hole shape on spin-wave band structure in one-dimensional magnonic antidot waveguide. Journal of Applied Physics, 2013, 114, .	2.5	33
68	Multiscale micromagnetism of Co-Pd multilayers. Journal of Applied Physics, 2012, 111, 07C724.	2.5	4
69	Complex agent interactions in operational simulations for aerospace design. , 2012, , .		1
70	Effect of rounded corners on the magnetic properties of pyramidal-shaped shell structures. Journal of Applied Physics, 2012, 111, 07D127.	2.5	2
71	Calculation of high-frequency permeability of magnonic metamaterials beyond the macrospin approximation. Physical Review B, 2012, 86, .	3.2	26
72	Effect of magnetization pinning on the spectrum of spin waves in magnonic antidot waveguides. Physical Review B, 2012, 86, .	3.2	48

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73	Electric field driven domain wall transfer in hybrid structures. , 2012, , .		0
74	Ultrahard magnetic nanostructures. Journal of Applied Physics, 2012, 111, 07E345.	2.5	13
75	Domain wall motion in perpendicular anisotropy nanowires with edge roughness. Journal of Physics Condensed Matter, 2012, 24, 024219.	1.8	15
76	A Generic Unifying Ontology for Civil Unmanned Aerial Vehicle Missions. , 2012, , .		7
77	Phase diagram of vortex matter of type-II superconductors. Physical Review B, 2011, 83, .	3.2	17
78	Micromagnetic simulations of magnetoelectric materials. Journal of Applied Physics, 2011, 109, .	2.5	4
79	Enhanced spin transfer torque effect for transverse domain walls in cylindrical nanowires. Physical Review B, 2011, 84, .	3.2	20
80	Electrodeposition and magnetic properties of three-dimensional bulk and shell nickel mesostructures. Thin Solid Films, 2011, 519, 8320-8325.	1.8	20
81	Joule heating in nanowires. Physical Review B, 2011, 84, .	3.2	101
82	Fieldâ€Tuneable Diamagnetism in Ferromagneticâ€“Superconducting Coreâ€“Shell Structures. Advanced Functional Materials, 2011, 21, 1874-1880.	14.9	2
83	Vortex dynamics for low-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î</mml:mi></mml:math>type-II superconductors. Physical Review B, 2011, 84, .	3.2	14
84	Three-dimensional ferromagnetic architectures with multiple metastable states. Applied Physics Letters, 2011, 98, .	3.3	8
85	Fabrication and simulation of nanostructures for domain wall magnetoresistance studies on nickel. Journal of Magnetism and Magnetic Materials, 2010, 322, 1467-1470.	2.3	8
86	Micromagnetic studies of three-dimensional pyramidal shell structures. New Journal of Physics, 2010, 12, 113048.	2.9	15
87	Magnetoresistance in a lithography defined single constrained domain wall spin-valve. Applied Physics Letters, 2010, 97, 262501.	3.3	9
88	Nonequilibrium dynamics in type-II superconductors with inhomogeneous vortex pinning. Physica C: Superconductivity and Its Applications, 2009, 469, 2008-2011.	1.2	0
89	Magnetic switching modes for exchange spring systems with competing anisotropies. Journal of Magnetism and Magnetic Materials, 2009, 321, 2499-2507.	2.3	7
90	Compression of boundary element matrix in micromagnetic simulations. Journal of Applied Physics, 2009, 105, .	2.5	16

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91	Proposal for a standard problem for micromagnetic simulations including spin-transfer torque. Journal of Applied Physics, 2009, 105, .	2.5	38
92	Parallel execution and scriptability in micromagnetic simulations. Journal of Applied Physics, 2009, 105, 07D527.	2.5	5
93	A new approach to (quasi) periodic boundary conditions in micromagnetics: The macrogeometry. Journal of Applied Physics, 2009, 105, .	2.5	40
94	Morphology of flows and buoyant bubbles in the Virgo cluster. Monthly Notices of the Royal Astronomical Society, 2008, 384, 1377-1386.	4.4	15
95	Numerical studies of demagnetizing effects in triangular ring arrays. Journal of Applied Physics, 2008, 103, 07D932.	2.5	3
96	Spin-polarized currents in exchange spring systems. Journal of Applied Physics, 2008, 103, .	2.5	4
97	Peak Effect in the Critical Current of Type II Superconductors with Strong Magnetic Vortex Pinning. Physical Review Letters, 2008, 101, 147002.	7.8	14
98	Current driven dynamics of domain walls constrained in ferromagnetic nanopillars. Physical Review B, 2008, 78, .	3.2	26
99	Numerical investigation of domain walls in constrained geometries. Journal of Applied Physics, 2008, 103, 07D926.	2.5	4
100	Managing Large Volumes of Distributed Scientific Data. Lecture Notes in Computer Science, 2008, , 339-348.	1.3	2
101	Apparent negative mobility of vortex matter due to inhomogeneous pinning. Physical Review B, 2007, 75, .	3.2	6
102	Spin-flop transition driven by exchange springs in ErFe2âˆ•YFe2 multilayers. Journal of Applied Physics, 2007, 101, 09K511.	2.5	3
103	Three hydrolases and a transferase: Comparative analysis of active-site dynamics via the BioSimGrid database. Journal of Molecular Graphics and Modelling, 2007, 25, 896-902.	2.4	7
104	Geometrical multilayers: Coercivity in magnetic 3-D nanostructures. Journal of Magnetism and Magnetic Materials, 2007, 310, e846-e848.	2.3	2
105	Micromagnetic modelling of ferromagnetic cones. Journal of Magnetism and Magnetic Materials, 2007, 312, 234-238.	2.3	8
106	Long range ordering in self-assembled Ni arrays on patterned Si. Journal of Magnetism and Magnetic Materials, 2007, 316, e78-e81.	2.3	6
107	Micromagnetic Modelling of the Dynamics of Exchange Springs in Multi-Layer Systems. IEEE Transactions on Magnetics, 2007, 43, 2887-2889.	2.1	6
108	Analysis of Magnetoresistance in Arrays of Connected Nano-Rings. IEEE Transactions on Magnetics, 2007, 43, 2881-2883.	2.1	11

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109	A Systematic Approach to Multiphysics Extensions of Finite-Element-Based Micromagnetic Simulations: Nmag. IEEE Transactions on Magnetics, 2007, 43, 2896-2898.	2.1	247
110	Buoyant Bubbles in the Virgo Cluster. Globular Clusters - Guides To Galaxies, 2007, , 234-236.	0.1	0
111	Heating Rate Profiles in Galaxy Clusters. , 2007, , 251-256.		0
112	BioSimGrid: Grid-enabled biomolecular simulation data storage and analysis. Future Generation Computer Systems, 2006, 22, 657-664.	7.5	29
113	Quality Assurance for Biomolecular Simulations. Journal of Chemical Theory and Computation, 2006, 2, 1477-1481.	5.3	17
114	Normal modes of carbon nanotubes: similarities and differences with their continuum counterpart. Journal of Physics: Conference Series, 2006, 26, 131-134.	0.4	10
115	In-plane anisotropy of coercive field in permalloy square ring arrays. Journal of Applied Physics, 2006, 99, 08Q508.	2.5	3
116	Heating rate profiles in galaxy clusters. Monthly Notices of the Royal Astronomical Society, 2006, 367, 1121-1131.	4.4	26
117	Effect of the long-range adsorbate interactions on the atomic self-assembly on metal surfaces. Surface Science, 2006, 600, 58-61.	1.9	21
118	Anisotropy of Magnetization Reversal and Magnetoresistance in Square Arrays of Permalloy Nano-Rings. IEEE Transactions on Magnetics, 2006, 42, 2948-2950.	2.1	3
119	Magnetic anisotropy in the cubic Laves REFe2intermetallic compounds. Journal of Physics Condensed Matter, 2006, 18, 459-478.	1.8	29
120	Magnetic anisotropy terms in [110] MBE-grown REFe2films involving the strain term Îµxy. Journal of Physics Condensed Matter, 2006, 18, 5861-5871.	1.8	12
121	Metastable behavior of vortex matter in the electronic transport processes of homogenous superconductors. Physical Review B, 2006, 73, .	3.2	5
122	Self-organization of Ce adatoms onAg(111): A kinetic Monte Carlo study. Physical Review B, 2006, 74, .	3.2	28
123	Micromagnetic simulation of the magnetic exchange spring system DyFe2âˆ•YFe2. Journal of Applied Physics, 2006, 99, 08B904.	2.5	15
124	Exchange spring driven spin flop transition in ErFe2âˆ•YFe2 multilayers. Applied Physics Letters, 2006, 89, 132511.	3.3	11
125	Oscillatory thickness dependence of the coercive field in magnetic three-dimensional antidot arrays. Applied Physics Letters, 2006, 88, 062511.	3.3	21
126	Anisotropy of Magnetization Reversal and Magnetoresistance in Square Arrays of Permalloy Nano-Rings. , 2006, , .		0

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127	Exploiting Real-Time 3d Visualisation to Enthuse Students: A Case Study of Using Visual Python in Engineering. Lecture Notes in Computer Science, 2006, , 139-146.	1.3	1
128	Grid computing and biomolecular simulation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2005, 363, 2017-2035.	3.4	18
129	Ordered sub-micron magnetic dot arrays using self-assembly template method. Journal of Magnetism and Magnetic Materials, 2005, 286, 1-4.	2.3	15
130	The stability of buoyant bubbles in the atmospheres of galaxy clusters. Monthly Notices of the Royal Astronomical Society, 2005, 359, 493-503.	4.4	37
131	The effects of thermal conduction on the intracluster medium of the Virgo cluster. Monthly Notices of the Royal Astronomical Society, 2005, 364, 13-28.	4.4	32
132	Shape-induced anisotropy in antidot arrays from self-assembled templates. IEEE Transactions on Magnetics, 2005, 41, 3598-3600.	2.1	4
133	Self-assembly routes towards creating superconducting and magnetic arrays. Journal of Low Temperature Physics, 2005, 139, 339-349.	1.4	4
134	Self-assembly Routes towards Creating Superconducting and Magnetic Arrays. Journal of Low Temperature Physics, 2005, 139, 339-349.	1.4	3
135	Shape induced anisotropy in hybrid anti-dot arrays from guided self-assembly templates. , 2005, , .		0
136	Micromagnetic simulation studies of ferromagnetic part spheres. Journal of Applied Physics, 2005, 97, 10E305.	2.5	22
137	Oscillatory thickness dependence of the coercive field in three-dimensional anti-dot arrays from self-assembly. Journal of Applied Physics, 2005, 97, 10J701.	2.5	6
138	A Comparison of C, MATLAB, and Python as Teaching Languages in Engineering. Lecture Notes in Computer Science, 2004, , 1210-1217.	1.3	53
139	Micromagnetic simulation of ferromagnetic part-spherical particles. Journal of Applied Physics, 2004, 95, 7037-7039.	2.5	15
140	Coercivity of 3D nanoscale magnetic arrays from self-assembly template methods. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 1621-1622.	2.3	17
141	Driving force for commensurate vortex domain formation in periodic pinning arrays. Physica C: Superconductivity and Its Applications, 2004, 404, 50-55.	1.2	0
142	BioSimGrid: towards a worldwide repository for biomolecular simulations. Organic and Biomolecular Chemistry, 2004, 2, 3219.	2.8	42
143	Symmetry Locking and Commensurate Vortex Domain Formation in Periodic Pinning Arrays. Physical Review Letters, 2003, 90, 237001.	7.8	67
144	Vortex matter in layered superconductors without Josephson coupling: Numerical simulations within a mean-field approach. Physical Review B, 2003, 67, .	3.2	21

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145	Vortex dynamics in two-dimensional systems at high driving forces. Physical Review B, 2001, 64, .	3.2	75
146	Critical transverse forces in weakly pinned driven vortex systems. Physical Review B, 2001, 63, .	3.2	22
147	Efficient Methods for Handling Long-Range Forces in Particleâ€“Particle Simulations. Journal of Computational Physics, 2000, 162, 372-384.	3.8	23
148	Monte Carlo simulation of layered high-temperature superconductors. Physica C: Superconductivity and Its Applications, 2000, 341-348, 1303-1304.	1.2	0
149	Parallel execution and scriptability in micromagnetic simulations. , 0, .		1