Jonathan Leliaert

List of Publications by Year
in descending order

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41 papers	3,275 citations	516710 16 h-index	289244 40 g-index
43 all docs	43 docs citations	43 times ranked	3367 citing authors

#	Article	IF	Citations
1	The design and verification of MuMax3. AIP Advances, 2014, 4, .	1.3	2,358
2	Dynamical Magnetic Response of Iron Oxide Nanoparticles Inside Live Cells. ACS Nano, 2018, 12, 2741-2752.	14.6	131
3	The role of temperature and drive current in skyrmion dynamics. Nature Electronics, 2020, 3, 30-36.	26.0	98
4	Fast micromagnetic simulations on GPUâ€"recent advances made with $mathsf{mumax}^3$. Journal Physics D: Applied Physics, 2018, 51, 123002.	2.8	96
5	Adaptively time stepping the stochastic Landau-Lifshitz-Gilbert equation at nonzero temperature: Implementation and validation in MuMax3. AIP Advances, 2017, 7, .	1.3	76
6	Current-driven domain wall mobility in polycrystalline Permalloy nanowires: A numerical study. Journal of Applied Physics, 2014, 115, .	2.5	58
7	Tomorrowâ€™s micromagnetic simulations. Journal of Applied Physics, 2019, 125, .	2.5	53
8	A numerical approach to incorporate intrinsic material defects in micromagnetic simulations. Journal of Applied Physics, 2014, 115, .	2.5	35
9	Balanced Magnetic Logic Gates in a Kagome Spin Ice. Physical Review Applied, 2018, 9, .	3.8	26
10	Multi-color magnetic nanoparticle imaging using magnetorelaxometry. Physics in Medicine and Biology, 2017, 62, 3139-3157.	3.0	24
11	Vinamax: a macrospin simulation tool for magnetic nanoparticles. Medical and Biological Engineering and Computing, 2015, 53, 309-317.	2.8	23
12	Influence of material defects on current-driven vortex domain wall mobility. Physical Review B, 2014, 89, .	3.2	22
13	Magnetic nanoparticles in theranostic applications. Journal of Applied Physics, 2022, 131, .	2.5	19
14	Regarding the NÃ©el relaxation time constant in magnetorelaxometry. Journal of Applied Physics, 2014, 116, .	2.5	18
15	The effect of the magnetic nanoparticleâ€™s size dependence of the relaxation time constant on the specific loss power of magnetic nanoparticle hyperthermia. Journal of Magnetism and Magnetic Materials, 2017, 426, 206-210.	2.3	18
16	Modelling compensated antiferromagnetic interfaces with MuMax³. Journal Physics D: Applied Physics, 2017, 50, 425002.	2.8	17
17	Thermal effects on transverse domain wall dynamics in magnetic nanowires. Applied Physics Letters, 2015, 106, .	3.3	16
18	Coupling of the skyrmion velocity to its breathing mode in periodically notched nanotracks. Journal Physics D: Applied Physics, 2019, 52, 024003.	2.8	16

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19	Confined magnetoelastic waves in thin waveguides. Physical Review B, 2021, 103, .	3.2	15
20	Thermal magnetic noise spectra of nanoparticle ensembles. Applied Physics Letters, 2015, 107, .	3.3	14
21	Interpreting the magnetorelaxometry signal of suspended magnetic nanoparticles with Kaczmarzâ€™ algorithm. Journal Physics D: Applied Physics, 2017, 50, 195002.	2.8	14
22	Quantitative model selection for enhanced magnetic nanoparticle imaging in magnetorelaxometry. Medical Physics, 2015, 42, 6853-6862.	3.0	13
23	Creep turns linear in narrow ferromagnetic nanostrips. Scientific Reports, 2016, 6, 20472.	3.3	11
24	Finite difference magnetoelastic simulator. Open Research Europe, 0, 1, 35.	2.0	10
25	Effect of boundary-induced chirality on magnetic textures in thin films. Physical Review B, 2018, 98, .	3.2	9
26	Advanced analysis of magnetic nanoflower measurements to leverage their use in biomedicine. Nanoscale Advances, 2021, 3, 1633-1645.	4.6	9
27	Electric-field-driven dynamics of magnetic domain walls in magnetic nanowires patterned on ferroelectric domains. New Journal of Physics, 2016, 18, 033027.	2.9	8
28	Design of Intense Nanoscale Stray Fields and Gradients at Magnetic Nanorod Interfaces. ACS Applied Materials & Interfaces, 2019, 11, 4678-4685.	8.0	8
29	Simultaneous Coercivity and Size Determination of Magnetic Nanoparticles. Sensors, 2020, 20, 3882.	3.8	8
30	The complementarity and similarity of magnetorelaxometry and thermal magnetic noise spectroscopy for magnetic nanoparticle characterization. Journal Physics D: Applied Physics, 2017, 50, 085004.	2.8	7
31	Toward 2D and 3D imaging of magnetic nanoparticles using EPR measurements. Medical Physics, 2015, 42, 5007-5014.	3.0	6
32	Noise Power Properties of Magnetic Nanoparticles as Measured in Thermal Noise Magnetometry. IEEE Access, 2021, 9, 111505-111517.	4.2	6
33	Nonzero Skyrmion Hall Effect in Topologically Trivial Structures. Physical Review Applied, 2022, 17, .	3.8	6
34	Unraveling Nanostructured Spin Textures in Bulk Magnets. Small Science, 2021, 1, 2000003.	9.9	5
35	Individual particle heating of interacting magnetic nanoparticles at nonzero temperature. Nanoscale, 2021, 13, 14734-14744.	5.6	5
36	Direct observation of temperature dependent vortex dynamics in a La0.7Sr0.3MnO3 micromagnet. Physical Review Research, 2020, 2, .	3.6	3

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37	Field-driven chiral bubble dynamics analysed by a semi-analytical approach. Journal Physics D: Applied Physics, 2017, 50, 495007.	2.8	2
38	Magnetic measurement methods to probe nanoparticleâ€“matrix interactions. ChemistrySelect, 2023, 8, 1273-1303.	1.5	2
39	Nanomagnetic Self-Organizing Logic Gates. Physical Review Applied, 2021, 16, .	3.8	1
40	Commensurate vortex-core switching in magnetic nanodisks at gigahertz frequencies. Physical Review B, 2022, 105, .	3.2	1
41	Sensor fusion of electron paramagnetic resonance and magnetorelaxometry data for quantitative magnetic nanoparticle imaging. Journal Physics D: Applied Physics, 2017, 50, 085008.	2.8	0