Julie Grollier

List of Publications by Year
in descending order

47 papers	7,183 citations	159358 30 h-index	223531 46 g-index
48 all docs	48 docs citations	48 times ranked	5957 citing authors

#	Article	IF	Citations
1	A ferroelectric memristor. Nature Materials, 2012, 11, 860-864.	13.3	983
2	Neuromorphic computing with nanoscale spintronic oscillators. Nature, 2017, 547, 428-431.	13.7	893
3	Spin-torque building blocks. Nature Materials, 2014, 13, 11-20.	13.3	539
4	Neuromorphic spintronics. Nature Electronics, 2020, 3, 360-370.	13.1	516
5	Learning through ferroelectric domain dynamics in solid-state synapses. Nature Communications, 2017, 8, 14736.	5.8	437
6	Physics for neuromorphic computing. Nature Reviews Physics, 2020, 2, 499-510.	11.9	422
7	Vowel recognition with four coupled spin-torque nano-oscillators. Nature, 2018, 563, 230-234.	13.7	356
8	Switching a spin valve back and forth by current-induced domain wall motion. Applied Physics Letters, 2003, 83, 509-511.	1.5	346
9	Large microwave generation from current-driven magnetic vortex oscillators in magnetic tunnel junctions. Nature Communications, 2010, 1, 8.	5.8	336
10	Spintronic Nanodevices for Bioinspired Computing. Proceedings of the IEEE, 2016, 104, 2024-2039.	16.4	336
11	2022 roadmap on neuromorphic computing and engineering. Neuromorphic Computing and Engineering, 2022, 2, 022501.	2.8	217
12	A magnetic synapse: multilevel spin-torque memristor with perpendicular anisotropy. Scientific Reports, 2016, 6, 31510.	1.6	186
13	Vertical-current-induced domain-wall motion in MgO-based magnetic tunnel junctions with low current densities. Nature Physics, 2011, 7, 626-630.	6.5	156
14	Skyrmion Gas Manipulation for Probabilistic Computing. Physical Review Applied, 2018, 9, .	1.5	148
15	Neural-like computing with populations of superparamagnetic basis functions. Nature Communications, 2018, 9, 1533.	5.8	139
16	Low-Energy Truly Random Number Generation with Superparamagnetic Tunnel Junctions for Unconventional Computing. Physical Review Applied, 2017, 8, .	1.5	106
17	Efficient Synchronization of Dipolarly Coupled Vortex-Based Spin Transfer Nano-Oscillators. Scientific Reports, 2015, 5, 17039.	1.6	97
18	Commensurability and chaos in magnetic vortex oscillations. Nature Physics, 2012, 8, 682-687.	6.5	91

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19	Mutual synchronization of spin torque nano-oscillators through a long-range and tunable electrical coupling scheme. Nature Communications, 2017, 8, 15825.	5.8	85
20	Reservoir computing with the frequency, phase, and amplitude of spin-torque nano-oscillators. Applied Physics Letters, 2019, 114, .	1.5	81
21	Field dependence of spin-transfer-induced vortex dynamics in the nonlinear regime. Physical Review B, 2012, 86, .	1.1	79
22	Response to noise of a vortex based spin transfer nano-oscillator. Physical Review B, 2014, 89, .	1.1	74
23	High emission power and Q factor in spin torque vortex oscillator consisting of FeB free layer. Applied Physics Express, 2014, 7, 063009.	1.1	58
24	A Nanotechnology-Ready Computing Scheme based on a Weakly Coupled Oscillator Network. Scientific Reports, 2017, 7, 44772.	1.6	53
25	Scaling up electrically synchronized spin torque oscillator networks. Scientific Reports, 2018, 8, 13475.	1.6	49
26	Quantum neuromorphic computing. Applied Physics Letters, 2020, 117, .	1.5	49
27	Noise-Enhanced Synchronization of Stochastic Magnetic Oscillators. Physical Review Applied, 2014, 2, .	1.5	48
28	Role of non-linear data processing on speech recognition task in the framework of reservoir computing. Scientific Reports, 2020, 10, 328.	1.6	48
29	Temporal Pattern Recognition with Delayed-Feedback Spin-Torque Nano-Oscillators. Physical Review Applied, 2019, 12, .	1.5	45
30	Controlling the phase locking of stochastic magnetic bits for ultra-low power computation. Scientific Reports, 2016, 6, 30535.	1.6	32
31	Using Memristors for Robust Local Learning of Hardware Restricted Boltzmann Machines. Scientific Reports, 2019, 9, 1851.	1.6	21
32	Radio-Frequency Multiply-and-Accumulate Operations with Spintronic Synapses. Physical Review Applied, 2021, 15, .	1.5	21
33	Hardware realization of the multiply and accumulate operation on radio-frequency signals with magnetic tunnel junctions. Neuromorphic Computing and Engineering, 2021, 1, 011001.	2.8	19
34	Binding events through the mutual synchronization of spintronic nano-neurons. Nature Communications, 2022, 13, 883.	5.8	18
35	Forecasting the outcome of spintronic experiments with Neural Ordinary Differential Equations. Nature Communications, 2022, 13, 1016.	5.8	17
36	Neuromorphic computing through time-multiplexing with a spin-torque nano-oscillator. , 2017, IEDM 2017, .		16

#	Article	IF	Citations
37	Nano-oscillator-based classification with a machine learning-compatible architecture. Journal of Applied Physics, 2018, 124, .	1.1	10
38	Designing Large Arrays of Interacting Spin-Torque Nano-Oscillators for Microwave Information Processing. Physical Review Applied, 2020, 13, .	1.5	9
39	Hidden phases with neuromorphic responses and highly enhanced piezoelectricity in an antiferroelectric prototype. Physical Review B, 2022, 105, .	1.1	8
40	Tunable Stochasticity in an Artificial Spin Network. Advanced Materials, 2021, 33, e2008135.	11.1	7
41	Training Dynamical Binary Neural Networks with Equilibrium Propagation. , 2021, , .		6
42	Beyond the gyrotropic motion: Dynamic C-state in vortex spin torque oscillators. Applied Physics Letters, 2021, 118, .	1.5	5
43	Influence of flicker noise and nonlinearity on the frequency spectrum of spin torque nano-oscillators. Scientific Reports, 2020, 10, 13116.	1.6	4
44	Mesoscopic magnetic systems: From fundamental properties to devices. Applied Physics Letters, 2021, 119, 080401.	1.5	4
45	Chaos in spin-torque oscillator with feedback circuit. Physical Review Research, 2021, 3, .	1.3	4
46	Overcoming device unreliability with continuous learning in a population coding based computing system. Journal of Applied Physics, 2018, 124, 152111.	1.1	2
47	Flicker and random telegraph noise between gyrotropic and dynamic C-state of a vortex based spin torque nano oscillator. AIP Advances, 2021, 11, 035042.	0.6	1