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	2022 roadmap on neuromorphic computing and engineering. Neuromorphic Computing and Engineering, 2022, 2, 022501.	2.8	217
2	Binding events through the mutual synchronization of spintronic nano-neurons. Nature Communications, 2022, 13, 883.	5.8	18
3	Forecasting the outcome of spintronic experiments with Neural Ordinary Differential Equations. Nature Communications, 2022, 13, 1016.	5.8	17
4	Hidden phases with neuromorphic responses and highly enhanced piezoelectricity in an antiferroelectric prototype. Physical Review B, 2022, 105, .	1.1	8
5	Beyond the gyrotropic motion: Dynamic C-state in vortex spin torque oscillators. Applied Physics Letters, 2021, 118, .	1.5	5
6	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
7	Tunable Stochasticity in an Artificial Spin Network. Advanced Materials, 2021, 33, e2008135.	11.1	7
8	Radio-Frequency Multiply-and-Accumulate Operations with Spintronic Synapses. Physical Review Applied, 2021, 15, .	1.5	21
9	Training Dynamical Binary Neural Networks with Equilibrium Propagation. , 2021, , .		6
10	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
11	Mesoscopic magnetic systems: From fundamental properties to devices. Applied Physics Letters, 2021, 119, 080401.	1.5	4
12	Chaos in spin-torque oscillator with feedback circuit. Physical Review Research, 2021, 3, .	1.3	4
13	Quantum neuromorphic computing. Applied Physics Letters, 2020, 117, .	1.5	49
14	Physics for neuromorphic computing. Nature Reviews Physics, 2020, 2, 499-510.	11.9	422
15	Influence of flicker noise and nonlinearity on the frequency spectrum of spin torque nano-oscillators. Scientific Reports, 2020, 10, 13116.	1.6	4
16	Neuromorphic spintronics. Nature Electronics, 2020, 3, 360-370.	13.1	516
17	Designing Large Arrays of Interacting Spin-Torque Nano-Oscillators for Microwave Information Processing. Physical Review Applied, 2020, 13, .	1.5	9
18	Role of non-linear data processing on speech recognition task in the framework of reservoir computing. Scientific Reports, 2020, 10, 328.	1.6	48

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19	Temporal Pattern Recognition with Delayed-Feedback Spin-Torque Nano-Oscillators. Physical Review Applied, 2019, 12, .	1.5	45
20	Using Memristors for Robust Local Learning of Hardware Restricted Boltzmann Machines. Scientific Reports, 2019, 9, 1851.	1.6	21
21	Reservoir computing with the frequency, phase, and amplitude of spin-torque nano-oscillators. Applied Physics Letters, 2019, 114, .	1.5	81
22	Neural-like computing with populations of superparamagnetic basis functions. Nature Communications, 2018, 9, 1533.	5.8	139
23	Nano-oscillator-based classification with a machine learning-compatible architecture. Journal of Applied Physics, 2018, 124, .	1.1	10
24	Overcoming device unreliability with continuous learning in a population coding based computing system. Journal of Applied Physics, 2018, 124, 152111.	1.1	2
25	Vowel recognition with four coupled spin-torque nano-oscillators. Nature, 2018, 563, 230-234.	13.7	356
26	Scaling up electrically synchronized spin torque oscillator networks. Scientific Reports, 2018, 8, 13475.	1.6	49
27	Skyrmion Gas Manipulation for Probabilistic Computing. Physical Review Applied, 2018, 9, .	1.5	148
28	A Nanotechnology-Ready Computing Scheme based on a Weakly Coupled Oscillator Network. Scientific Reports, 2017, 7, 44772.	1.6	53
29	Mutual synchronization of spin torque nano-oscillators through a long-range and tunable electrical coupling scheme. Nature Communications, 2017, 8, 15825.	5.8	85
30	Learning through ferroelectric domain dynamics in solid-state synapses. Nature Communications, 2017, 8, 14736.	5.8	437
31	Neuromorphic computing with nanoscale spintronic oscillators. Nature, 2017, 547, 428-431.	13.7	893
32	Low-Energy Truly Random Number Generation with Superparamagnetic Tunnel Junctions for Unconventional Computing. Physical Review Applied, 2017, 8, .	1.5	106
33	Neuromorphic computing through time-multiplexing with a spin-torque nano-oscillator. , 2017, IEDM 2017, .		16
34	A magnetic synapse: multilevel spin-torque memristor with perpendicular anisotropy. Scientific Reports, 2016, 6, 31510.	1.6	186
35	Spintronic Nanodevices for Bioinspired Computing. Proceedings of the IEEE, 2016, 104, 2024-2039.	16.4	336
36	Controlling the phase locking of stochastic magnetic bits for ultra-low power computation. Scientific Reports, 2016, 6, 30535.	1.6	32

#	Article	IF	Citations
37	Efficient Synchronization of Dipolarly Coupled Vortex-Based Spin Transfer Nano-Oscillators. Scientific Reports, 2015, 5, 17039.	1.6	97
38	Noise-Enhanced Synchronization of Stochastic Magnetic Oscillators. Physical Review Applied, 2014, 2, .	1.5	48
39	Spin-torque building blocks. Nature Materials, 2014, 13, 11-20.	13.3	539
40	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
41	Response to noise of a vortex based spin transfer nano-oscillator. Physical Review B, 2014, 89, .	1.1	74
42	Field dependence of spin-transfer-induced vortex dynamics in the nonlinear regime. Physical Review B, 2012, 86, .	1.1	79
43	A ferroelectric memristor. Nature Materials, 2012, 11, 860-864.	13.3	983
44	Commensurability and chaos in magnetic vortex oscillations. Nature Physics, 2012, 8, 682-687.	6.5	91
45	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
46	Large microwave generation from current-driven magnetic vortex oscillators in magnetic tunnel junctions. Nature Communications, 2010, 1, 8.	5.8	336
47	Switching a spin valve back and forth by current-induced domain wall motion. Applied Physics Letters, 2003, 83, 509-511.	1.5	346