

Kevin Garello

List of Publications by Year in descending order

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52
papers

7,986
citations

218381
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all docs

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docs citations

52
times ranked

4563
citing authors

#	ARTICLE	IF	CITATIONS
1	Two-dimensional materials prospects for non-volatile spintronic memories. Nature, 2022, 606, 663-673.	13.7	116
2	Spin-orbit torque switching of magnetic tunnel junctions for memory applications. Journal of Magnetism and Magnetic Materials, 2022, 562, 169692.	1.0	32
3	Workload-Aware Electromigration Analysis in Emerging Spintronic Memory Arrays. IEEE Transactions on Device and Materials Reliability, 2021, 21, 258-266.	1.5	4
4	All-Electrical Control of Scaled Spin Logic Devices Based on Domain Wall Motion. IEEE Transactions on Electron Devices, 2021, 68, 2116-2122.	1.6	6
5	Interplay of Voltage Control of Magnetic Anisotropy, Spin-Transfer Torque, and Heat in the Spin-Orbit-Torque Switching of Three-Terminal Magnetic Tunnel Junctions. Physical Review Applied, 2021, 15, .	1.5	29
6	Nanoscale domain wall devices with magnetic tunnel junction read and write. Nature Electronics, 2021, 4, 392-398.	13.1	46
7	Voltage-Gate-Assisted Spin-Orbit-Torque Magnetic Random-Access Memory for High-Density and Low-Power Embedded Applications. Physical Review Applied, 2021, 15, .	1.5	43
8	Roadmap of Spin-Orbit Torques. IEEE Transactions on Magnetics, 2021, 57, 1-39.	1.2	225
9	Optimization of Tungsten \hat{I}^2 -Phase Window for Spin-Orbit-Torque Magnetic Random-Access Memory. Physical Review Applied, 2021, 16, .	1.5	18
10	Magnetic domain walls: from physics to devices. , 2021, , .		2
11	Physics based modeling of bimodal electromigration failure distributions and variation analysis for VLSI interconnects. , 2020, , .		3
12	Opportunities and challenges for spintronics in the microelectronics industry. Nature Electronics, 2020, 3, 446-459.	13.1	471
13	Deterministic and Field-Free Voltage-Controlled MRAM for High Performance and Low Power Applications. , 2020, , .		11
14	Field-free switching of magnetic tunnel junctions driven by spin-orbit torques at sub-ns timescales. Applied Physics Letters, 2020, 116, .	1.5	43
15	Single-shot dynamics of spin-orbit torque and spin transfer torque switching in three-terminal magnetic tunnel junctions. Nature Nanotechnology, 2020, 15, 111-117.	15.6	167
16	Study of precessional switching speed control in voltage-controlled perpendicular magnetic tunnel junction. AIP Advances, 2020, 10, .	0.6	4
17	SOT-MRAM Based Analog in-Memory Computing for DNN Inference. , 2020, , .		28
18	X-ray spectroscopy of current-induced spin-orbit torques and spin accumulation in Pt/transition-metal bilayers. Physical Review B, 2019, 100, .	1.1	3

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19	Manufacturable 300mm platform solution for Field-Free Switching SOT-MRAM. , 2019, , .		29
20	Variation-Aware Physics-Based Electromigration Modeling and Experimental Calibration for VLSI Interconnects. , 2019, , .		7
21	Spin-Orbit Torque MRAM for ultrafast embedded memories: from fundamentals to large scale technology integration. , 2019, , .		25
22	Current-induced spin-orbit torques in ferromagnetic and antiferromagnetic systems. Reviews of Modern Physics, 2019, 91, .	16.4	899
23	Manufacturable 300mm platform solution for Field-Free Switching SOT-MRAM. , 2019, , .		26
24	Spin communication over 30 μ m long channels of chemical vapor deposited graphene on SiO ₂ . 2D Materials, 2019, 6, 034003.	2.0	36
25	Ultra-Fast Perpendicular Spin-Orbit Torque MRAM. IEEE Transactions on Magnetics, 2018, 54, 1-4.	1.2	134
26	Evidence of Magnetostrictive Effects on STT-MRAM Performance by Atomistic and Spin Modeling. , 2018, , .		4
27	Synthetic-Ferromagnet Pinning Layers Enabling Top-Pinned Magnetic Tunnel Junctions for High-Density Embedded Magnetic Random-Access Memory. Physical Review Applied, 2018, 10, .	1.5	15
28	Impact of operating temperature on the electrical and magnetic properties of the bottom-pinned perpendicular magnetic tunnel junctions. Applied Physics Letters, 2018, 113, .	1.5	4
29	SOT-MRAM 300MM Integration for Low Power and Ultrafast Embedded Memories. , 2018, , .		74
30	Spin-Wave Emission by Spin-Orbit-Torque Antennas. Physical Review Applied, 2018, 10, .	1.5	21
31	Interface-Enhanced Spin-Orbit Torques and Current-Induced Magnetization Switching of Pd/Co/Pd/Co/Pd/Co Layers. Physical Review Applied, 2017, 7, .	1.5	85
32	Spatially and time-resolved magnetization dynamics driven by spin-orbit torques. Nature Nanotechnology, 2017, 12, 980-986.	15.6	217
33	Solving the BEOL compatibility challenge of top-pinned magnetic tunnel junction stacks. , 2017, , .		18
34	Ultra-Fast and High-Reliability SOT-MRAM: From Cache Replacement to Normally-Off Computing. IEEE Transactions on Multi-Scale Computing Systems, 2016, 2, 49-60.	2.5	135
35	Spin-orbit torque driven chiral magnetization reversal in ultrathin nanostructures. Physical Review B, 2015, 92, .	1.1	68
36	Magnetoresistance of heavy and light metal/ferromagnet bilayers. Applied Physics Letters, 2015, 107, .	1.5	76

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37	Unidirectional spin Hall magnetoresistance in ferromagnet/normal metal bilayers. Nature Physics, 2015, 11, 570-575.	6.5	305
38	Interplay of spin-orbit torque and thermoelectric effects in ferromagnet/normal-metal bilayers. Physical Review B, 2014, 90, .	1.1	304
39	Ultrafast magnetization switching by spin-orbit torques. Applied Physics Letters, 2014, 105, .	1.5	379
40	Spin-orbit torque magnetization switching of a three-terminal perpendicular magnetic tunnel junction. Applied Physics Letters, 2014, 104, .	1.5	306
41	Fieldlike and antidamping spin-orbit torques in as-grown and annealed Ta/CoFeB/MgO layers. Physical Review B, 2014, 89, .	1.1	164
42	Symmetry and magnitude of spin-orbit torques in ferromagnetic heterostructures. Nature Nanotechnology, 2013, 8, 587-593.	15.6	955
43	Magnetization switching of an MgO/Co/Pt layer by in-plane current injection. Applied Physics Letters, 2012, 100, .	1.5	85
44	Perpendicular switching of a single ferromagnetic layer induced by in-plane current injection. Nature, 2011, 476, 189-193.	13.7	2,268
45	Magnetodielectric effect in trilayered Co65Fe35B20/PVDF/Co65Fe35B20 composite materials. Prediction and measurement for tunable microwave applications. Journal of Applied Physics, 2010, 107, 09E313.	1.1	7
46	Induced anisotropies in a ferromagnet coupled to a polycrystalline antiferromagnet. Physical Review B, 2010, 81, .	1.1	2
47	Temporal Coherence of MgO Based Magnetic Tunnel Junction Spin Torque Oscillators. Physical Review Letters, 2009, 102, 257202.	2.9	43
48	High permeability and high permittivity heterostructures for the miniaturization of Radiofrequency components. International Journal of Microwave and Wireless Technologies, 2009, 1, 455-460.	1.5	0
49	Magnetodielectric Thin Film Heterostructure With High Permeability and Permittivity. IEEE Transactions on Magnetics, 2009, 45, 4325-4328.	1.2	6
50	Actuation and Detection of a Nanoresonator by an Integrated Antiferro/Ferromagnetic Multilayer Stack. Procedia Chemistry, 2009, 1, 1407-1410.	0.7	0
51	Spin transfer precessional dynamics in Co60Fe20B20 nanocontacts. Journal of Applied Physics, 2008, 103, 053914.	1.1	7
52	Magnetization reversal in exchange-biased layered structures. Physical Review B, 2007, 76, .	1.1	20