

Kevin Garello

List of Publications by Year in descending order

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52
papers

7,986
citations

218381

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301761

39
g-index

52
all docs

52
docs citations

52
times ranked

4563
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Perpendicular switching of a single ferromagnetic layer induced by in-plane current injection. Nature, 2011, 476, 189-193. | 13.7 | 2,268 |
| 2 | Symmetry and magnitude of spin-orbit torques in ferromagnetic heterostructures. Nature Nanotechnology, 2013, 8, 587-593. | 15.6 | 955 |
| 3 | Current-induced spin-orbit torques in ferromagnetic and antiferromagnetic systems. Reviews of Modern Physics, 2019, 91, . | 16.4 | 899 |
| 4 | Opportunities and challenges for spintronics in the microelectronics industry. Nature Electronics, 2020, 3, 446-459. | 13.1 | 471 |
| 5 | Ultrafast magnetization switching by spin-orbit torques. Applied Physics Letters, 2014, 105, . | 1.5 | 379 |
| 6 | Spin-orbit torque magnetization switching of a three-terminal perpendicular magnetic tunnel junction. Applied Physics Letters, 2014, 104, . | 1.5 | 306 |
| 7 | Unidirectional spin Hall magnetoresistance in ferromagnet/normal metal bilayers. Nature Physics, 2015, 11, 570-575. | 6.5 | 305 |
| 8 | Interplay of spin-orbit torque and thermoelectric effects in ferromagnet/normal-metal bilayers. Physical Review B, 2014, 90, . | 1.1 | 304 |
| 9 | Roadmap of Spin-Orbit Torques. IEEE Transactions on Magnetics, 2021, 57, 1-39. | 1.2 | 225 |
| 10 | Spatially and time-resolved magnetization dynamics driven by spin-orbit torques. Nature Nanotechnology, 2017, 12, 980-986. | 15.6 | 217 |
| 11 | 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 |
| 12 | Fieldlike and antidamping spin-orbit torques in as-grown and annealed Ta/CoFeB/MgO layers. Physical Review B, 2014, 89, . | 1.1 | 164 |
| 13 | 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 |
| 14 | Ultra-Fast Perpendicular Spin-Orbit Torque MRAM. IEEE Transactions on Magnetics, 2018, 54, 1-4. | 1.2 | 134 |
| 15 | Two-dimensional materials prospects for non-volatile spintronic memories. Nature, 2022, 606, 663-673. | 13.7 | 116 |
| 16 | Magnetization switching of an MgO/Co/Pt layer by in-plane current injection. Applied Physics Letters, 2012, 100, . | 1.5 | 85 |
| 17 | Interface-Enhanced Spin-Orbit Torques and Current-Induced Magnetization Switching of Pd/Co/Pt Layers. Physical Review Applied, 2017, 7, . | 1.5 | 85 |
| 18 | Magnetoresistance of heavy and light metal/ferromagnet bilayers. Applied Physics Letters, 2015, 107, . | 1.5 | 76 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 19 | SOT-MRAM 300MM Integration for Low Power and Ultrafast Embedded Memories. , 2018, , . | | 74 |
| 20 | Spin-orbit torque driven chiral magnetization reversal in ultrathin nanostructures. Physical Review B, 2015, 92, . | 1.1 | 68 |
| 21 | Nanoscale domain wall devices with magnetic tunnel junction read and write. Nature Electronics, 2021, 4, 392-398. | 13.1 | 46 |
| 22 | Temporal Coherence of MgO Based Magnetic Tunnel Junction Spin Torque Oscillators. Physical Review Letters, 2009, 102, 257202. | 2.9 | 43 |
| 23 | Field-free switching of magnetic tunnel junctions driven by spin-orbit torques at sub-ns timescales. Applied Physics Letters, 2020, 116, . | 1.5 | 43 |
| 24 | 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 |
| 25 | Spin communication over 30 μm long channels of chemical vapor deposited graphene on SiO ₂ . 2D Materials, 2019, 6, 034003. | 2.0 | 36 |
| 26 | Spin-orbit torque switching of magnetic tunnel junctions for memory applications. Journal of Magnetism and Magnetic Materials, 2022, 562, 169692. | 1.0 | 32 |
| 27 | Manufacturable 300mm platform solution for Field-Free Switching SOT-MRAM. , 2019, , . | | 29 |
| 28 | 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 |
| 29 | SOT-MRAM Based Analog in-Memory Computing for DNN Inference. , 2020, , . | | 28 |
| 30 | Manufacturable 300mm platform solution for Field-Free Switching SOT-MRAM. , 2019, , . | | 26 |
| 31 | Spin-Orbit Torque MRAM for ultrafast embedded memories: from fundamentals to large scale technology integration. , 2019, , . | | 25 |
| 32 | Spin-Wave Emission by Spin-Orbit-Torque Antennas. Physical Review Applied, 2018, 10, . | 1.5 | 21 |
| 33 | Magnetization reversal in exchange-biased layered structures. Physical Review B, 2007, 76, . | 1.1 | 20 |
| 34 | Solving the BEOL compatibility challenge of top-pinned magnetic tunnel junction stacks. , 2017, , . | | 18 |
| 35 | Optimization of Tungsten I^2 -Phase Window for Spin-Orbit-Torque Magnetic Random-Access Memory. Physical Review Applied, 2021, 16, . | 1.5 | 18 |
| 36 | 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 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 37 | X-ray spectroscopy of current-induced spin-orbit torques and spin accumulation in Pt/Co bilayers. Physical Review B, 2019, 100, . | 1.1 | 3 |
| 38 | Deterministic and Field-Free Voltage-Controlled MRAM for High Performance and Low Power Applications. , 2020, , . | | 11 |
| 39 | Spin transfer precessional dynamics in Co60Fe20B20 nanocontacts. Journal of Applied Physics, 2008, 103, 053914. | 1.1 | 7 |
| 40 | 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 |
| 41 | Variation-Aware Physics-Based Electromigration Modeling and Experimental Calibration for VLSI Interconnects. , 2019, , . | | 7 |
| 42 | Magnetodielectric Thin Film Heterostructure With High Permeability and Permittivity. IEEE Transactions on Magnetics, 2009, 45, 4325-4328. | 1.2 | 6 |
| 43 | 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 |
| 44 | Evidence of Magnetostrictive Effects on STT-MRAM Performance by Atomistic and Spin Modeling. , 2018, , . | | 4 |
| 45 | 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 |
| 46 | Study of precessional switching speed control in voltage-controlled perpendicular magnetic tunnel junction. AIP Advances, 2020, 10, . | 0.6 | 4 |
| 47 | Workload-Aware Electromigration Analysis in Emerging Spintronic Memory Arrays. IEEE Transactions on Device and Materials Reliability, 2021, 21, 258-266. | 1.5 | 4 |
| 48 | Physics based modeling of bimodal electromigration failure distributions and variation analysis for VLSI interconnects. , 2020, , . | | 3 |
| 49 | Induced anisotropies in a ferromagnet coupled to a polycrystalline antiferromagnet. Physical Review B, 2010, 81, . | 1.1 | 2 |
| 50 | Magnetic domain walls: from physics to devices. , 2021, , . | | 2 |
| 51 | 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 |
| 52 | Actuation and Detection of a Nanoresonator by an Integrated Antiferro/Ferromagnetic Multilayer Stack. Procedia Chemistry, 2009, 1, 1407-1410. | 0.7 | 0 |