# Sebastien Couet

## List of Publications by Year in Descending Order



| | | | |
|---|---|---|---|
| 73 papers | 856 citations | 15 h-index | 24 g-index |
| 89 ext. papers | 1,147 ext. citations | 4.9 avg, IF | 3.96 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 73 | Optimization of Tungsten β-Phase Window for Spin-Orbit-Torque Magnetic Random-Access Memory. *Physical Review Applied*, **2021**, 16, | 4.3 | 6 |
| 72 | Impact of ambient temperature on the switching of voltage-controlled perpendicular magnetic tunnel junction. *Applied Physics Letters*, **2021**, 118, 122404 | 3.4 | 4 |
| 71 | MgGa2O4 as alternative barrier for perpendicular MRAM junctions and VCMA. *Applied Physics Letters*, **2021**, 118, 172402 | 3.4 | 2 |
| 70 | All-Electrical Control of Scaled Spin Logic Devices Based on Domain Wall Motion. *IEEE Transactions on Electron Devices*, **2021**, 68, 2116-2122 | 2.9 | 2 |
| 69 | 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, | 4.3 | 7 |
| 68 | Nanoscale domain wall devices with magnetic tunnel junction read and write. *Nature Electronics*, **2021**, 4, 392-398 | 28.4 | 9 |
| 67 | Voltage-Gate-Assisted Spin-Orbit-Torque Magnetic Random-Access Memory for High-Density and Low-Power Embedded Applications. *Physical Review Applied*, **2021**, 15, | 4.3 | 6 |
| 66 | Investigation of Microwave Loss Induced by Oxide Regrowth in High-Q Niobium Resonators. *Physical Review Applied*, **2021**, 16, | 4.3 | 15 |
| 65 | Effect of nitrogen doping on the structure of metastable β-W on SiO2. *Thin Solid Films*, **2021**, 732, 138795 | 2.2 | 0 |
| 64 | A Systematic Assessment of W-Doped CoFeB Single Free Layers for Low Power STT-MRAM Applications. *Electronics (Switzerland)*, **2021**, 10, 2384 | 2.6 | 0 |
| 63 | Back hopping in spin transfer torque switching of perpendicularly magnetized tunnel junctions. *Physical Review B*, **2020**, 102, | 3.3 | 7 |
| 62 | Single-shot dynamics of spin-orbit torque and spin transfer torque switching in three-terminal magnetic tunnel junctions. *Nature Nanotechnology*, **2020**, 15, 111-117 | 28.7 | 78 |
| 61 | The influence of phonon softening on the superconducting critical temperature of Sn nanostructures. *Scientific Reports*, **2020**, 10, 5729 | 4.9 | 6 |
| 60 | Study of precessional switching speed control in voltage-controlled perpendicular magnetic tunnel junction. *AIP Advances*, **2020**, 10, 035123 | 1.5 | 2 |
| 59 | All-electrical control of scaled spin logic devices based on domain wall motion **2020**, | | 1 |
| 58 | SOT-MRAM Based Analog in-Memory Computing for DNN Inference **2020**, | | 11 |
| 57 | Electronic voltage control of magnetic anisotropy at room temperature in high-κ SrTiO3/Co/Pt trilayer. *Physical Review Materials*, **2020**, 4, | 3.2 | 2 |

| | | | |
|---|---|---|---|
| 56 | JSWof 5.5 MA/cm2 and RA of 5.2-□□Ωm2 STT-MRAM Technology for LLC Application. *IEEE Transactions on Electron Devices*, **2020**, 67, 3618-3625 | 2.9 | 6 |
| 55 | Ferroelectric Control of Magnetism in Ultrathin HfOCoPt Layers. *ACS Applied Materials & Interfaces*, **2019**, 11, 34385-34393 | 9.5 | 6 |
| 54 | Manufacturable 300mm platform solution for Field-Free Switching SOT-MRAM **2019**, | | 9 |
| 53 | Offset fields in perpendicularly magnetized tunnel junctions. *Journal Physics D: Applied Physics*, **2019**, 52, 274001 | 3 | 7 |
| 52 | Structural and Magnetic Properties of Mn3Ge Grown on a Thin Polycrystalline MgO Seed Layer. *Physica Status Solidi - Rapid Research Letters*, **2019**, 13, 1800681 | 2.5 | 1 |
| 51 | In situ study of the □Sn to □Sn phase transition in low-dimensional systems: Phonon behavior and thermodynamic properties. *Physical Review B*, **2019**, 100, | 3.3 | 8 |
| 50 | Manufacturable 300mm platform solution for Field-Free Switching SOT-MRAM **2019**, | | 12 |
| 49 | Pinhole Defect Characterization and Fault Modeling for STT-MRAM Testing **2019**, | | 7 |
| 48 | Experimental observation of electron-phonon coupling enhancement in Sn nanowires caused by phonon confinement effects. *Physical Review B*, **2019**, 99, | 3.3 | 7 |
| 47 | Effect of Tantalum Spacer Thickness and Deposition Conditions on the Properties of MgO/CoFeB/Ta/CoFeB/MgO Free Layers. *IEEE Magnetics Letters*, **2019**, 10, 1-4 | 1.6 | 9 |
| 46 | The magneto-optical Kerr effect for efficient characterization of thermal stability in dense arrays of p-MTJs. *AIP Advances*, **2019**, 9, 125236 | 1.5 | 2 |
| 45 | Gilbert damping of high anisotropy Co/Pt multilayers. *Journal Physics D: Applied Physics*, **2018**, 51, 135003 | 3 | 7 |
| 44 | Material Developments and Domain Wall-Based Nanosecond-Scale Switching Process in Perpendicularly Magnetized STT-MRAM Cells. *IEEE Transactions on Magnetics*, **2018**, 54, 1-9 | 2 | 14 |
| 43 | Fabrication of magnetic tunnel junctions connected through a continuous free layer to enable spin logic devices. *Japanese Journal of Applied Physics*, **2018**, 57, 04FN01 | 1.4 | 8 |
| 42 | Deposition and patterning of magnetic atom trap lattices in FePt films with periods down to 200 nm. *Journal of Applied Physics*, **2018**, 124, 044902 | 2.5 | 2 |
| 41 | Top-Pinned STT-MRAM Devices With High Thermal Stability Hybrid Free Layers for High-Density Memory Applications. *IEEE Transactions on Magnetics*, **2018**, 54, 1-5 | 2 | 4 |
| 40 | Scaled spintronic logic device based on domain wall motion in magnetically interconnected tunnel junctions **2018**, | | 5 |
| 39 | Impact of self-heating on reliability predictions in STT-MRAM **2018**, | | 3 |

| | | | |
|---|---|---|---|
| 38 | Evidence of Magnetostrictive Effects on STT-MRAM Performance by Atomistic and Spin Modeling **2018**, | | 3 |
| 37 | **2018**, | | 17 |
| 36 | Synthetic-Ferromagnet Pinning Layers Enabling Top-Pinned Magnetic Tunnel Junctions for High-Density Embedded Magnetic Random-Access Memory. *Physical Review Applied*, **2018**, 10, | 4.3 | 6 |
| 35 | Impact of operating temperature on the electrical and magnetic properties of the bottom-pinned perpendicular magnetic tunnel junctions. *Applied Physics Letters*, **2018**, 113, 142405 | 3.4 | 4 |
| 34 | SOT-MRAM 300MM Integration for Low Power and Ultrafast Embedded Memories **2018**, | | 38 |
| 33 | Seed layer impact on structural and magnetic properties of [Co/Ni] multilayers with perpendicular magnetic anisotropy. *Journal of Applied Physics*, **2017**, 121, 043905 | 2.5 | 14 |
| 32 | Control of Interlayer Exchange Coupling and Its Impact on Spin Torque Switching of Hybrid Free Layers With Perpendicular Magnetic Anisotropy. *IEEE Transactions on Magnetics*, **2017**, 53, 1-5 | 2 | 5 |
| 31 | Annealing stability of magnetic tunnel junctions based on dual MgO free layers and [Co/Ni] based thin synthetic antiferromagnet fixed system. *Journal of Applied Physics*, **2017**, 121, 113904 | 2.5 | 10 |
| 30 | Impact of Ta and W-based spacers in double MgO STT-MRAM free layers on perpendicular anisotropy and damping. *Applied Physics Letters*, **2017**, 111, 152406 | 3.4 | 31 |
| 29 | Lattice dynamics in Sn nanoislands and cluster-assembled films. *Physical Review B*, **2017**, 95, | 3.3 | 5 |
| 28 | Perpendicular magnetic anisotropy of CoFeBTa bilayers on ALD HfO2. *AIP Advances*, **2017**, 7, 055933 | 1.5 | 6 |
| 27 | Top pinned magnetic tunnel junction stacks with high annealing tolerance for high density STT-MRAM applications **2017**, | | 4 |
| 26 | Impact of processing and stack optimization on the reliability of perpendicular STT-MRAM **2017**, | | 5 |
| 25 | Time-resolved spin-torque switching in MgO-based perpendicularly magnetized tunnel junctions. *Physical Review B*, **2016**, 93, | 3.3 | 40 |
| 24 | Oscillatory behavior of the tunnel magnetoresistance due to thickness variations in Ta\|CoFe\|MgO magnetic tunnel junctions: A first-principles study. *Physical Review B*, **2016**, 94, | 3.3 | 7 |
| 23 | Electric Polarity-Dependent Modification of the Fe/BaTiO3 Interface. *Advanced Materials Interfaces*, **2016**, 3, 1500433 | 4.6 | 1 |
| 22 | Evolution of perpendicular magnetized tunnel junctions upon annealing. *Applied Physics Letters*, **2016**, 108, 172409 | 3.4 | 11 |
| 21 | [Co/Ni]-CoFeB hybrid free layer stack materials for high density magnetic random access memory applications. *Applied Physics Letters*, **2016**, 108, 132405 | 3.4 | 26 |

| | | | |
|---|---|---|---|
| 20 | Thin Co/Ni-based bottom pinned spin-transfer torque magnetic random access memory stacks with high annealing tolerance. *Applied Physics Letters*, **2016**, 108, 042402 | 3.4 | 17 |
| 19 | Perpendicular magnetic anisotropy of CoPt bilayers on ALD HfO2. *Journal of Applied Physics*, **2016**, 120, 163903 | 2.5 | 7 |
| 18 | Ferromagnetic resonance study of composite Co/Ni - FeCoB free layers with perpendicular anisotropy. *Applied Physics Letters*, **2016**, 109, 142408 | 3.4 | 8 |
| 17 | Oxygen Scavenging by Ta Spacers in Double-MgO Free Layers for Perpendicular Spin-Transfer Torque Magnetic Random-Access Memory. *IEEE Magnetics Letters*, **2016**, 7, 1-4 | 1.6 | 9 |
| 16 | Dynamical properties of ordered FePt alloys. *Journal of Alloys and Compounds*, **2015**, 651, 528-536 | 5.7 | 14 |
| 15 | BEOL compatible high tunnel magneto resistance perpendicular magnetic tunnel junctions using a sacrificial Mg layer as CoFeB free layer cap. *Applied Physics Letters*, **2015**, 106, 262407 | 3.4 | 36 |
| 14 | Electric Field-Induced Oxidation of Ferromagnetic/Ferroelectric Interfaces. *Advanced Functional Materials*, **2014**, 24, 71-76 | 15.6 | 24 |
| 13 | Interplay between lattice dynamics and superconductivity in Nb3Sn thin films. *Physical Review B*, **2013**, 88, | 3.3 | 5 |
| 12 | The magnetic structure of exchange coupled FePt/FePt3 thin films. *Journal of Applied Physics*, **2013**, 113, 013909 | 2.5 | 8 |
| 11 | Probing the magnetization inside a superconducting Nb film by nuclear resonant scattering. *Applied Physics Letters*, **2011**, 99, 092508 | 3.4 | |
| 10 | Selective Doping of Block Copolymer Nanodomains by Sputter Deposition of Iron. *Macromolecules*, **2011**, 44, 1621-1627 | 5.5 | 15 |
| 9 | Anisotropic lattice dynamics of FePt L10 thin films. *Physical Review B*, **2010**, 82, | 3.3 | 11 |
| 8 | Morphology of the interfaces between transition metals and their native oxides: Role of interdiffusion processes. *Physical Review B*, **2009**, 79, | 3.3 | 1 |
| 7 | The magnetic structure of coupled Fe/FeO multilayers revealed by nuclear resonant and neutron scattering methods. *New Journal of Physics*, **2009**, 11, 013038 | 2.9 | 14 |
| 6 | Probing the magnetic state of Fe/FeO/Fe trilayers by multiple isotopic sensor layers. *Applied Physics Letters*, **2009**, 94, 162501 | 3.4 | 15 |
| 5 | Stabilization of antiferromagnetic order in FeO nanolayers. *Physical Review Letters*, **2009**, 103, 097201 | 7.4 | 35 |
| 4 | How metallic Fe controls the composition of its native oxide. *Physical Review Letters*, **2008**, 101, 056101 | 7.4 | 17 |
| 3 | In situ GISAXS investigation of gold sputtering onto a polymer template. *Langmuir*, **2008**, 24, 4265-72 | 4 | 51 |

| | | | |
|---|---|---|---|
| 2 | A compact UHV deposition system for in situ study of ultrathin films via hard x-ray scattering and spectroscopy. *Review of Scientific Instruments*, **2008**, 79, 093908 | 1.7 | 22 |
| 1 | Noncollinear coupling of iron layers through native iron oxide spacers. *Physical Review B*, **2007**, 76, | 3.3 | 21 |