

Sebastien Couet

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73
papers

856
citations

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h-index

24
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89
ext. papers

1,147
ext. citations

4.9
avg. IF

3.96
L-index

#	Paper	IF	Citations
73	Single-shot dynamics of spin-orbit torque and spin transfer torque switching in three-terminal magnetic tunnel junctions. <i>Nature Nanotechnology</i> , 2020 , 15, 111-117	28.7	78
72	In situ GISAXS investigation of gold sputtering onto a polymer template. <i>Langmuir</i> , 2008 , 24, 4265-72	4	51
71	Time-resolved spin-torque switching in MgO-based perpendicularly magnetized tunnel junctions. <i>Physical Review B</i> , 2016 , 93,	3.3	40
70	SOT-MRAM 300MM Integration for Low Power and Ultrafast Embedded Memories 2018 ,		38
69	BEOL compatible high tunnel magneto resistance perpendicular magnetic tunnel junctions using a sacrificial Mg layer as CoFeB free layer cap. <i>Applied Physics Letters</i> , 2015 , 106, 262407	3.4	36
68	Stabilization of antiferromagnetic order in FeO nanolayers. <i>Physical Review Letters</i> , 2009 , 103, 097201	7.4	35
67	Impact of Ta and W-based spacers in double MgO STT-MRAM free layers on perpendicular anisotropy and damping. <i>Applied Physics Letters</i> , 2017 , 111, 152406	3.4	31
66	[Co/Ni]-CoFeB hybrid free layer stack materials for high density magnetic random access memory applications. <i>Applied Physics Letters</i> , 2016 , 108, 132405	3.4	26
65	Electric Field-Induced Oxidation of Ferromagnetic/Ferroelectric Interfaces. <i>Advanced Functional Materials</i> , 2014 , 24, 71-76	15.6	24
64	A compact UHV deposition system for in situ study of ultrathin films via hard x-ray scattering and spectroscopy. <i>Review of Scientific Instruments</i> , 2008 , 79, 093908	1.7	22
63	Noncollinear coupling of iron layers through native iron oxide spacers. <i>Physical Review B</i> , 2007 , 76,	3.3	21
62	How metallic Fe controls the composition of its native oxide. <i>Physical Review Letters</i> , 2008 , 101, 056101	7.4	17
61	Thin Co/Ni-based bottom pinned spin-transfer torque magnetic random access memory stacks with high annealing tolerance. <i>Applied Physics Letters</i> , 2016 , 108, 042402	3.4	17
60	2018 ,		17
59	Selective Doping of Block Copolymer Nanodomains by Sputter Deposition of Iron. <i>Macromolecules</i> , 2011 , 44, 1621-1627	5.5	15
58	Probing the magnetic state of Fe/FeO/Fe trilayers by multiple isotopic sensor layers. <i>Applied Physics Letters</i> , 2009 , 94, 162501	3.4	15
57	Investigation of Microwave Loss Induced by Oxide Regrowth in High-Q Niobium Resonators. <i>Physical Review Applied</i> , 2021 , 16,	4.3	15

56	Seed layer impact on structural and magnetic properties of [Co/Ni] multilayers with perpendicular magnetic anisotropy. <i>Journal of Applied Physics</i> , 2017 , 121, 043905	2.5	14
55	Dynamical properties of ordered FePt alloys. <i>Journal of Alloys and Compounds</i> , 2015 , 651, 528-536	5.7	14
54	Material Developments and Domain Wall-Based Nanosecond-Scale Switching Process in Perpendicularly Magnetized STT-MRAM Cells. <i>IEEE Transactions on Magnetics</i> , 2018 , 54, 1-9	2	14
53	The magnetic structure of coupled Fe/FeO multilayers revealed by nuclear resonant and neutron scattering methods. <i>New Journal of Physics</i> , 2009 , 11, 013038	2.9	14
52	Manufacturable 300mm platform solution for Field-Free Switching SOT-MRAM 2019 ,		12
51	Anisotropic lattice dynamics of FePt L10 thin films. <i>Physical Review B</i> , 2010 , 82,	3.3	11
50	SOT-MRAM Based Analog in-Memory Computing for DNN Inference 2020 ,		11
49	Evolution of perpendicular magnetized tunnel junctions upon annealing. <i>Applied Physics Letters</i> , 2016 , 108, 172409	3.4	11
48	Annealing stability of magnetic tunnel junctions based on dual MgO free layers and [Co/Ni] based thin synthetic antiferromagnet fixed system. <i>Journal of Applied Physics</i> , 2017 , 121, 113904	2.5	10
47	Manufacturable 300mm platform solution for Field-Free Switching SOT-MRAM 2019 ,		9
46	Nanoscale domain wall devices with magnetic tunnel junction read and write. <i>Nature Electronics</i> , 2021 , 4, 392-398	28.4	9
45	Oxygen Scavenging by Ta Spacers in Double-MgO Free Layers for Perpendicular Spin-Transfer Torque Magnetic Random-Access Memory. <i>IEEE Magnetics Letters</i> , 2016 , 7, 1-4	1.6	9
44	Effect of Tantalum Spacer Thickness and Deposition Conditions on the Properties of MgO/CoFeB/Ta/CoFeB/MgO Free Layers. <i>IEEE Magnetics Letters</i> , 2019 , 10, 1-4	1.6	9
43	Fabrication of magnetic tunnel junctions connected through a continuous free layer to enable spin logic devices. <i>Japanese Journal of Applied Physics</i> , 2018 , 57, 04FN01	1.4	8
42	In situ study of the \mathbb{F}_n to \mathbb{F}_n phase transition in low-dimensional systems: Phonon behavior and thermodynamic properties. <i>Physical Review B</i> , 2019 , 100,	3.3	8
41	The magnetic structure of exchange coupled FePt/FePt ₃ thin films. <i>Journal of Applied Physics</i> , 2013 , 113, 013909	2.5	8
40	Ferromagnetic resonance study of composite Co/Ni - FeCoB free layers with perpendicular anisotropy. <i>Applied Physics Letters</i> , 2016 , 109, 142408	3.4	8
39	Offset fields in perpendicularly magnetized tunnel junctions. <i>Journal Physics D: Applied Physics</i> , 2019 , 52, 274001	3	7

38	Back hopping in spin transfer torque switching of perpendicularly magnetized tunnel junctions. <i>Physical Review B</i> , 2020 , 102,	3-3	7
37	Gilbert damping of high anisotropy Co/Pt multilayers. <i>Journal Physics D: Applied Physics</i> , 2018 , 51, 135003		7
36	Oscillatory behavior of the tunnel magnetoresistance due to thickness variations in Ta CoFe MgO magnetic tunnel junctions: A first-principles study. <i>Physical Review B</i> , 2016 , 94,	3-3	7
35	Pinhole Defect Characterization and Fault Modeling for STT-MRAM Testing 2019 ,		7
34	Interplay of Voltage Control of Magnetic Anisotropy, Spin-Transfer Torque, and Heat in the Spin-Orbit-Torque Switching of Three-Terminal Magnetic Tunnel Junctions. <i>Physical Review Applied</i> , 2021 , 15,	4-3	7
33	Perpendicular magnetic anisotropy of CoPt bilayers on ALD HfO ₂ . <i>Journal of Applied Physics</i> , 2016 , 120, 163903	2-5	7
32	Experimental observation of electron-phonon coupling enhancement in Sn nanowires caused by phonon confinement effects. <i>Physical Review B</i> , 2019 , 99,	3-3	7
31	Ferroelectric Control of Magnetism in Ultrathin HfOCoPt Layers. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 34385-34393	9-5	6
30	The influence of phonon softening on the superconducting critical temperature of Sn nanostructures. <i>Scientific Reports</i> , 2020 , 10, 5729	4-9	6
29	Perpendicular magnetic anisotropy of CoFeB/Ta bilayers on ALD HfO ₂ . <i>AIP Advances</i> , 2017 , 7, 055933	1-5	6
28	Optimization of Tungsten Phase Window for Spin-Orbit-Torque Magnetic Random-Access Memory. <i>Physical Review Applied</i> , 2021 , 16,	4-3	6
27	JSW of 5.5 MA/cm ² and RA of 5.2-Ωh ² STT-MRAM Technology for LLC Application. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 3618-3625	2-9	6
26	Voltage-Gate-Assisted Spin-Orbit-Torque Magnetic Random-Access Memory for High-Density and Low-Power Embedded Applications. <i>Physical Review Applied</i> , 2021 , 15,	4-3	6
25	Synthetic-Ferromagnet Pinning Layers Enabling Top-Pinned Magnetic Tunnel Junctions for High-Density Embedded Magnetic Random-Access Memory. <i>Physical Review Applied</i> , 2018 , 10,	4-3	6
24	Control of Interlayer Exchange Coupling and Its Impact on Spin-Torque Switching of Hybrid Free Layers With Perpendicular Magnetic Anisotropy. <i>IEEE Transactions on Magnetism</i> , 2017 , 53, 1-5	2	5
23	Lattice dynamics in Sn nanoislands and cluster-assembled films. <i>Physical Review B</i> , 2017 , 95,	3-3	5
22	Interplay between lattice dynamics and superconductivity in Nb ₃ Sn thin films. <i>Physical Review B</i> , 2013 , 88,	3-3	5
21	Impact of processing and stack optimization on the reliability of perpendicular STT-MRAM 2017 ,		5

20	Scaled spintronic logic device based on domain wall motion in magnetically interconnected tunnel junctions 2018 ,		5
19	Top-Pinned STT-MRAM Devices With High Thermal Stability Hybrid Free Layers for High-Density Memory Applications. <i>IEEE Transactions on Magnetics</i> , 2018 , 54, 1-5	2	4
18	Top pinned magnetic tunnel junction stacks with high annealing tolerance for high density STT-MRAM applications 2017 ,		4
17	Impact of ambient temperature on the switching of voltage-controlled perpendicular magnetic tunnel junction. <i>Applied Physics Letters</i> , 2021 , 118, 122404	3-4	4
16	Impact of operating temperature on the electrical and magnetic properties of the bottom-pinned perpendicular magnetic tunnel junctions. <i>Applied Physics Letters</i> , 2018 , 113, 142405	3-4	4
15	Impact of self-heating on reliability predictions in STT-MRAM 2018 ,		3
14	Evidence of Magnetostrictive Effects on STT-MRAM Performance by Atomistic and Spin Modeling 2018 ,		3
13	Study of precessional switching speed control in voltage-controlled perpendicular magnetic tunnel junction. <i>AIP Advances</i> , 2020 , 10, 035123	1.5	2
12	Deposition and patterning of magnetic atom trap lattices in FePt films with periods down to 200 nm. <i>Journal of Applied Physics</i> , 2018 , 124, 044902	2.5	2
11	Electronic voltage control of magnetic anisotropy at room temperature in high- κ BaTiO ₃ /Co/Pt trilayer. <i>Physical Review Materials</i> , 2020 , 4,	3.2	2
10	MgGa ₂ O ₄ as alternative barrier for perpendicular MRAM junctions and VCMA. <i>Applied Physics Letters</i> , 2021 , 118, 172402	3-4	2
9	All-Electrical Control of Scaled Spin Logic Devices Based on Domain Wall Motion. <i>IEEE Transactions on Electron Devices</i> , 2021 , 68, 2116-2122	2.9	2
8	The magneto-optical Kerr effect for efficient characterization of thermal stability in dense arrays of p-MTJs. <i>AIP Advances</i> , 2019 , 9, 125236	1.5	2
7	Structural and Magnetic Properties of Mn ₃ Ge Grown on a Thin Polycrystalline MgO Seed Layer. <i>Physica Status Solidi - Rapid Research Letters</i> , 2019 , 13, 1800681	2.5	1
6	Electric Polarity-Dependent Modification of the Fe/BaTiO ₃ Interface. <i>Advanced Materials Interfaces</i> , 2016 , 3, 1500433	4.6	1
5	Morphology of the interfaces between transition metals and their native oxides: Role of interdiffusion processes. <i>Physical Review B</i> , 2009 , 79,	3.3	1
4	All-electrical control of scaled spin logic devices based on domain wall motion 2020 ,		1
3	Effect of nitrogen doping on the structure of metastable DW on SiO ₂ . <i>Thin Solid Films</i> , 2021 , 732, 138795.2		0

- 2 A Systematic Assessment of W-Doped CoFeB Single Free Layers for Low Power STT-MRAM Applications. *Electronics (Switzerland)*, **2021**, 10, 2384 2.6 ○
- 1 Probing the magnetization inside a superconducting Nb film by nuclear resonant scattering. *Applied Physics Letters*, **2011**, 99, 092508 3-4