

François Montaigne

List of Publications by Year in descending order

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150
papers

4,771
citations

109137

35
h-index

106150

65
g-index

154
all docs

154
docs citations

154
times ranked

4215
citing authors

#	ARTICLE	IF	CITATIONS
1	Role of Metal-Oxide Interface in Determining the Spin Polarization of Magnetic Tunnel Junctions. Science, 1999, 286, 507-509.	6.0	566
2	Inverse Tunnel Magnetoresistance in Co/SrTiO ₃ /La _{0.7} Sr _{0.3} MnO ₃ : New Ideas on Spin-Polarized Tunneling. Physical Review Letters, 1999, 82, 4288-4291.	2.9	350
3	Interlayer Magnetic Coupling Interactions of Two Ferromagnetic Layers by Spin Polarized Tunneling. Physical Review Letters, 2002, 89, 107206.	2.9	222
4	Large magnetoresistance in tunnel junctions with an iron oxide electrode. Applied Physics Letters, 1999, 74, 4017-4019.	1.5	189
5	High tunnel magnetoresistance in epitaxial Fe/MgO/Fe tunnel junctions. Applied Physics Letters, 2003, 82, 4507-4509.	1.5	160
6	Two types of all-optical magnetization switching mechanisms using femtosecond laser pulses. Physical Review B, 2016, 94, .	1.1	134
7	Artificial Kagome Arrays of Nanomagnets: A Frozen Dipolar Spin Ice. Physical Review Letters, 2011, 106, 057209.	2.9	116
8	Giant spin-dependent thermoelectric effect in magnetic tunnel junctions. Nature Communications, 2012, 3, 744.	5.8	111
9	Hot-Electron-Induced Ultrafast Demagnetization in Co/Pt/MgO Multilayers. Physical Review Letters, 2016, 117, 147203.	2.9	101
10	Fragmentation of magnetism in artificial kagome dipolar spin ice. Nature Communications, 2016, 7, 11446.	5.8	99
11	Enhanced tunnel magnetoresistance at high bias voltage in double-barrier planar junctions. Applied Physics Letters, 1998, 73, 2829-2831.	1.5	91
12	Wide range and tunable linear magnetic tunnel junction sensor using two exchange pinned electrodes. Applied Physics Letters, 2009, 95, .	1.5	82
13	Spin tunnelling phenomena in single-crystal magnetic tunnel junction systems. Journal of Physics Condensed Matter, 2007, 19, 165201.	0.7	81
14	Magnetic anisotropy modified by electric field in V/Fe/MgO(001)/Fe epitaxial magnetic tunnel junction. Applied Physics Letters, 2013, 103, .	1.5	79
15	Interface domain wall and exchange bias phenomena in ferrimagnetic/ferrimagnetic bilayers. Physical Review B, 2003, 68, .	1.1	77
16	Element-Selective Nanosecond Magnetization Dynamics in Magnetic Heterostructures. Physical Review Letters, 2001, 86, 3646-3649.	2.9	76
17	Magnetoresistance and spin electronics. Journal of Magnetism and Magnetic Materials, 2002, 242-245, 68-76.	1.0	74
18	Evidence of a Symmetry-Dependent Metallic Barrier in Fully Epitaxial MgO Based Magnetic Tunnel Junctions. Physical Review Letters, 2007, 99, 187202.	2.9	66

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19	Unidirectional Thermal Effects in Current-Induced Domain Wall Motion. <i>Physical Review Letters</i> , 2012, 109, 106601.	2.9	60
20	Epitaxial MgO layer for low-resistance and coupling-free magnetic tunnel junctions. <i>Applied Physics Letters</i> , 2002, 81, 1035-1037.	1.5	56
21	Spin-Polarized Electron Tunneling in $\text{FeCo}/\text{MgO}/\text{FeCo}$ Tunnel Junctions. <i>Physical Review Letters</i> , 2002, 88, 176602.	2.9	56
22	Electrical characterization of all-optical helicity-dependent switching in ferromagnetic Hall crosses. <i>Applied Physics Letters</i> , 2016, 108, .	1.5	52
23	Influence of misfit dislocations on the magnetoresistance of MgO-based epitaxial magnetic tunnel junctions. <i>Physical Review B</i> , 2010, 82, .	1.1	51
24	High bias voltage effect on spin-dependent conductivity and shot noise in carbon-doped $\text{Fe}(001)\hat{\wedge}\text{MgO}(001)\hat{\wedge}\text{Fe}(001)$ magnetic tunnel junctions. <i>Applied Physics Letters</i> , 2007, 91, 132504.	1.5	49
25	Tunnel barrier parameters and magnetoresistance in the parabolic band model. <i>Physical Review B</i> , 2001, 64, .	1.1	46
26	$\text{Fe}\hat{\wedge}\text{MgO}$ interface engineering for high-output-voltage device applications. <i>Applied Physics Letters</i> , 2006, 88, 062512.	1.5	45
27	Development of magnetoresistive sensors based on planar Hall effect for applications to microcompass. <i>Sensors and Actuators A: Physical</i> , 2000, 81, 324-327.	2.0	44
28	Static and dynamic aspects of spin tunnelling in crystalline magnetic tunnel junctions. <i>Journal of Physics Condensed Matter</i> , 2006, 18, 941-956.	0.7	44
29	Unipolar and Bipolar High-Magnetic-Field Sensors Based on Surface Acoustic Wave Resonators. <i>Physical Review Applied</i> , 2017, 8, .	1.5	43
30	Magnetoresistive effects in perpendicularly magnetized Tb-Co alloy based thin films and spin valves. <i>Journal of Applied Physics</i> , 2012, 111, .	1.1	42
31	Chiral nature of magnetic monopoles in artificial spin ice. <i>New Journal of Physics</i> , 2013, 15, 035026.	1.2	40
32	Interface bonding versus strain-induced magnetic anisotropy in epitaxial Fe/semiconductor structures. <i>Physical Review B</i> , 2003, 67, .	1.1	39
33	Long-Range Phase Coherence in Double-Barrier Magnetic Tunnel Junctions with a Large Thick Metallic Quantum Well. <i>Physical Review Letters</i> , 2015, 115, 157204.	2.9	37
34	On the quality of molecular-beam epitaxy grown $\text{Fe}\hat{\wedge}\text{MgO}$ and $\text{Co}\hat{\wedge}\text{MgO}(001)$ interfaces. <i>Journal of Applied Physics</i> , 2006, 99, 08D301.	1.1	36
35	Measurement of the Dynamical Dipolar Coupling in a Pair of Magnetic Nanodisks Using a Ferromagnetic Resonance Force Microscope. <i>Physical Review Letters</i> , 2012, 109, 247602.	2.9	36
36	Localized states in advanced dielectrics from the vantage of spin- and symmetry-polarized tunnelling across MgO. <i>Nature Communications</i> , 2014, 5, 4547.	5.8	36

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37	Reversal mechanism, switching field distribution, and dipolar frustrations in Co/Pt bit pattern media based on auto-assembled anodic alumina hexagonal nanobump arrays. <i>Physical Review B</i> , 2014, 89, .	1.1	36
38	Nonuniversality of artificial frustrated spin systems. <i>Physical Review B</i> , 2014, 90, .	1.1	35
39	Review of recent results on spin polarized tunneling and magnetic switching by spin injection. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2001, 84, 1-9.	1.7	34
40	Kinetic pathways to the magnetic charge crystal in artificial dipolar spin ice. <i>Physical Review B</i> , 2014, 90, .	1.1	34
41	A tunable magnetic metamaterial based on the dipolar four-state Potts model. <i>Nature Materials</i> , 2018, 17, 1076-1080.	13.3	34
42	Positive exchange-bias induced by interface domain wall quenching in GdFe ²⁺ TbFe films. <i>Physical Review B</i> , 2006, 73, .	1.1	33
43	Transitions of magnetic configuration at the interface of exchange-coupled bilayers: TbFe/GdFe as a model system. <i>Physical Review B</i> , 2003, 67, .	1.1	31
44	Seebeck nanoantennas for solar energy harvesting. <i>Applied Physics Letters</i> , 2014, 105, 093108.	1.5	31
45	Size distribution of magnetic charge domains in thermally activated but out-of-equilibrium artificial spin ice. <i>Scientific Reports</i> , 2014, 4, 5702.	1.6	29
46	Magnetic properties of postoxidized Pt ²⁺ Co ²⁺ Al layers with perpendicular anisotropy. <i>Applied Physics Letters</i> , 2007, 90, 192506.	1.5	28
47	Co/Ni multilayers for spintronics: High spin polarization and tunable magnetic anisotropy. <i>Physical Review Materials</i> , 2018, 2, .	0.9	28
48	Strongly suppressed 1/f noise and enhanced magnetoresistance in epitaxial Fe ²⁺ /MgO/Fe magnetic tunnel junctions. <i>Applied Physics Letters</i> , 2010, 96, .	1.5	26
49	Stochastic and complex depinning dynamics of magnetic domain walls. <i>Physical Review B</i> , 2011, 83, .	1.1	26
50	Tunable Localized Surface Plasmon Resonance and Broadband Visible Photoresponse of Cu Nanoparticles/ZnO Surfaces. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 40958-40965.	4.0	26
51	Probing the Anharmonicity of the Potential Well for a Magnetic Vortex Core in a Nanodot. <i>Physical Review Letters</i> , 2013, 111, 247601.	2.9	25
52	Seebeck nanoantennas for the detection and characterization of infrared radiation. <i>Optics Express</i> , 2014, 22, A1538.	1.7	25
53	Exchange-bias training effect in TbFe ²⁺ GdFe: Micromagnetic mechanism. <i>Physical Review B</i> , 2007, 76, .	1.1	24
54	MgO-Based Epitaxial Magnetic Tunnel Junctions Using Fe-V Electrodes. <i>IEEE Transactions on Magnetics</i> , 2009, 45, 3467-3471.	1.2	24

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55	Coherent Resonant Tunneling through Double Metallic Quantum Well States. Nano Letters, 2019, 19, 3019-3026.	4.5	22
56	Mechanism of chirality reversal for planar interface domain walls in exchange-coupled hard/soft magnetic bilayers. Physical Review B, 2008, 78, .	1.1	21
57	Influence of lateral domains and interface domain walls on exchange-bias phenomena in GbFe/TdFe bilayers. Physical Review B, 2006, 74, .	1.1	20
58	360° domain wall generation in the soft layer of magnetic tunnel junctions. Applied Physics Letters, 2008, 92, .	1.5	20
59	Spin-orbit coupling effect by minority interface resonance states in single-crystal magnetic tunnel junctions. Physical Review B, 2012, 86, .	1.1	20
60	Magnetic domain wall propagation in a submicron spin-valve stripe: Influence of the pinned layer. Applied Physics Letters, 2008, 92, .	1.5	19
61	Impact of electron-electron interactions induced by disorder at interfaces on spin-dependent tunneling in Co-Fe-B/MgO/Co-Fe-B magnetic tunnel junctions. Physical Review B, 2010, 82, .	1.1	19
62	Magnetization reversal in exchange-coupled GdFe/TbFe studied by x-ray magnetic circular dichroism. Physical Review B, 2004, 70, .	1.1	18
63	Asymmetric magnetization reversal in dipolarly coupled spin valve structures with perpendicular magnetic anisotropy. Physical Review B, 2012, 85, .	1.1	18
64	Real time atomic force microscopy imaging during nanogap formation by electromigration. Nanotechnology, 2012, 23, 365302.	1.3	18
65	Local Structure and Point-Defect-Dependent Area-Selective Atomic Layer Deposition Approach for Facile Synthesis of p-Cu ₂ O/n-ZnO Segmented Nanojunctions. ACS Applied Materials & Interfaces, 2018, 10, 37671-37678.	4.0	17
66	Using antiferromagnetic/ferromagnetic bilayers as detection layers in magnetic tunnel junctions. Applied Physics Letters, 2003, 83, 4372-4374.	1.5	16
67	Angular magnetic field sensor for automotive applications based on magnetic tunnel junctions using a current loop layout configuration. Sensors and Actuators A: Physical, 2008, 144, 263-266.	2.0	16
68	Generation and manipulation of domain walls using a thermal gradient in a ferrimagnetic TbCo wire. Applied Physics Letters, 2015, 106, .	1.5	16
69	Spin filtering effects in monocrystalline Fe/MgO/Fe magnetic tunnel junctions. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2006, 126, 112-119.	1.7	15
70	Low-resistance magnetic tunnel junctions with an MgO~Al ₂ O ₃ composite tunnel barrier: Asymmetric transport characteristics and free electron modeling of a self-limited oxidation bilayer. Physical Review B, 2006, 73, .	1.1	15
71	An Original Supramolecular Helicate from a Bipyridine-Bipyrazine Ligand Strand and Nill by Self-Assembly. European Journal of Inorganic Chemistry, 2006, 2006, 133-136.	1.0	14
72	Angle dependence of the interface magnetic configuration in a model antiferromagnetically coupled ferrimagnetic/ferrimagnetic bilayer GdFe/TbFe. Physical Review B, 2009, 80, .	1.1	13

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73	Magnetoresistance in an amorphous exchange-coupled bilayer. Physical Review B, 2009, 79, .	1.1	13
74	Large area patterned magnetic films by depositing cobalt layers on nano-wrinkled polydimethylsiloxane templates. Applied Physics Letters, 2013, 103, 072404.	1.5	13
75	Enhanced magnetoresistance by monoatomic roughness in epitaxial Fe/MgO/Fe tunnel junctions. Physical Review B, 2015, 91, .	1.1	13
76	Probing a Device's Active Atoms. Advanced Materials, 2017, 29, 1606578.	11.1	13
77	Magnetic vortices in single crystalline Fe-V disks with four folds magnetic anisotropy. Applied Physics Letters, 2012, 100, 192406.	1.5	12
78	Platinum/AlN/Sapphire SAW resonator operating in GHz range for high temperature wireless SAW sensor. , 2013, , .		12
79	Thermally activated domain wall motion in [Co/Ni](111) superlattices with perpendicular magnetic anisotropy. Applied Physics Letters, 2015, 106, .	1.5	12
80	Magnetoresistive tunnel junctions deposited on laterally modulated substrates. Applied Physics Letters, 2000, 76, 3286-3288.	1.5	11
81	Tuning exchange-bias properties by thermal effects in a hard/soft bilayer. Applied Physics Letters, 2007, 91, 022505.	1.5	11
82	Local Magnetic Anisotropy Induced by a Nano-Modulated Substrate and Application to Two-Dimensional Magnetic Sensors. Applied Physics Express, 2010, 3, 073002.	1.1	11
83	Phase diagram in exchange-coupled CoTb/[Co/Pt] multilayer-based magnetic tunnel junctions. Physical Review B, 2015, 92, .	1.1	11
84	Extraordinary Hall effect based magnetic logic applications. Applied Physics Letters, 2015, 106, .	1.5	11
85	Reproducible formation of single magnetic bubbles in an array of patterned dots. Journal Physics D: Applied Physics, 2016, 49, 245002.	1.3	11
86	Tunneling Spintronics across MgO Driven by Double Oxygen Vacancies. Advanced Electronic Materials, 2017, 3, 1600390.	2.6	11
87	Antiferromagnetic coupling by spin polarized tunneling. Journal of Applied Physics, 2003, 93, 7519-7521.	1.1	10
88	Interlayer magnetic coupling in Fe/MgO junctions characterized by vector magnetization measurements combined with polarized neutron reflectometry. Physical Review B, 2008, 78, .	1.1	10
89	Study of InAlAs/InGaAs self-switching diodes for energy harvesting applications. Japanese Journal of Applied Physics, 2016, 55, 014304.	0.8	10
90	Hot-electron three-terminal devices based on magnetic tunnel junction stacks. Physical Review B, 2002, 66, .	1.1	9

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91	Capacitance variation of an assembly of clusters in the Coulomb blockade regime. Journal of Applied Physics, 2004, 95, 1265-1268.	1.1	9
92	Properties of spin-valve structures deposited on step-bunched vicinal surfaces. Journal of Magnetism and Magnetic Materials, 1999, 198-199, 15-17.	1.0	8
93	Chirality reversal of the interface domain wall in a hard/soft magnetic bilayer. Physical Review B, 2004, 69, .	1.1	8
94	Magnetic tunnel junctions with a zinc oxide-cobalt oxide composite tunnel barrier. Applied Physics Letters, 2005, 86, 112505.	1.5	8
95	Influence of an interface domain wall on spin-valve giant magnetoresistance. Applied Physics Letters, 2008, 93, 222503.	1.5	8
96	Interfacial trapping for hot electron injection in silicon. Applied Physics Letters, 2013, 103, 022407.	1.5	8
97	Low-height sputter-deposited magnesium oxide tunnel barriers: experimental report and free electron modeling. European Physical Journal B, 2004, 40, 19-23.	0.6	7
98	Development of a magnetic tunnel transistor based on a double tunnel junction. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 1097-1099.	1.0	7
99	Optimization of planar interdigitated electrode array for bioimpedance spectroscopy restriction of the number of electrodes. , 2011, , .		7
100	Interfaces anisotropy in single crystal V/Fe/V trilayer. Journal of Magnetism and Magnetic Materials, 2014, 372, 233-235.	1.0	7
101	Statistical study of domain-wall depinning induced by magnetic field and current in an epitaxial Co/Ni-based spin-valve wire. Physical Review B, 2018, 98, .	1.1	7
102	Encoding Information on the Excited State of a Molecular Spin Chain. Advanced Functional Materials, 2021, 31, 2009467.	7.8	7
103	Tunable Stochasticity in an Artificial Spin Network. Advanced Materials, 2021, 33, e2008135.	11.1	7
104	Hot-electron transport in 3-terminal devices based on magnetic tunnel junctions. Europhysics Letters, 2002, 60, 896-902.	0.7	6
105	Study of magnetic configurations in exchange-coupled bilayers by polarized neutron reflectometry. Applied Physics A: Materials Science and Processing, 2002, 74, s631-s633.	1.1	6
106	Intrinsic thermally compensated field sensor based on single magnetic tunnel junctions. Applied Physics Letters, 2004, 84, 1204-1206.	1.5	6
107	Terahertz harvesting with shape-optimized InAlAs/InGaAs self-switching nanodiodes. AIP Advances, 2015, 5, .	0.6	6
108	Effect of spin transfer torque on domain wall motion regimes in [Co/Ni] superlattice wires. Physical Review B, 2017, 95, .	1.1	6

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127	Finite size effect on the structural and magnetic properties of MnAs/GaAs(001) patterned microstructures thin films. Scientific Reports, 2017, 7, 16970.	1.6	3
128	Artifacts in magnetic force microscopy under in-plane applied magnetic field: Magnetic bubble as a case study. Journal of Magnetism and Magnetic Materials, 2020, 500, 166296.	1.0	3
129	Weak Stripe Angle Determination by Quantitative x-ray Magnetic Microscopy. Physical Review Applied, 2020, 14, .	1.5	3
130	To which extent is the influence of each electrode of a magnetic tunnel junction separable?. Journal of Applied Physics, 2002, 91, 7020.	1.1	2
131	Energy levels of interacting curved nanomagnets in a frustrated geometry: increasing accuracy when using finite difference methods. Journal of Physics Condensed Matter, 2013, 25, 296001.	0.7	2
132	Indirect localization of a magnetic domain wall mediated by quasi walls. Scientific Reports, 2015, 5, 9815.	1.6	2
133	Reversible response of a magnetic surface acoustic wave device with perpendicular magnetization. Journal Physics D: Applied Physics, 2020, 53, 305002.	1.3	2
134	Magnetoresistive properties of cobalt thin films grown by plasma-assisted atomic layer deposition. Journal Physics D: Applied Physics, 2021, 54, 105002.	1.3	2
135	Engineering of spin filtering in double epitaxial tunnel junctions. Journal of Applied Physics, 2006, 99, 08A903.	1.1	1
136	Towards spectroscopy of a few silicon nanocrystals embedded in silica. Physica E: Low-Dimensional Systems and Nanostructures, 2009, 41, 998-1001.	1.3	1
137	Time scales of bias voltage effects in FE/MgO-based magnetic tunnel junctions with voltage-dependent perpendicular anisotropy. Journal of Magnetism and Magnetic Materials, 2015, 396, 333-337.	1.0	1
138	Torque magnetometry of perpendicular anisotropy exchange-spring heterostructures. Journal of Applied Physics, 2016, 120, 013903.	1.1	1
139	Towards Thermal Reading of Magnetic States in Hall Crosses. Physical Review Applied, 2018, 9, .	1.5	1
140	Inverse Magnetoresistance In Manganite/SrTiO3/Co Tunnel Junctions. Materials Research Society Symposia Proceedings, 1999, 574, 293.	0.1	0
141	Hot electron transport in 3-terminal devices based on magnetic tunnel junctions. , 0, , .		0
142	Switching processes of a controlled domain wall in an exchange biased ferrimagnetic bilayer. , 0, , .		0
143	Dependence of Neel "orange-peel" coupling on magnetization reversal process. , 0, , .		0
144	Study of exchange bias field variation in ferrimagnetic/ferrimagnetic bilayer system. , 0, , .		0

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145	Study of exchange bias field variation in ferrimagnetic/ferrimagnetic bilayer system. , 0, , .		0
146	Inverse TMR in the Fe/MgO/Fe(001) Epitaxial System. , 2006, , .		0
147	Laser powered magnetic-random access memory. , 2015, , .		0
148	Thermally activated domain wall motion in [Co/Ni](111) superlattices with perpendicular magnetic anisotropy. , 2015, , .		0
149	Artificial frustrated spin systems. , 2015, , .		0
150	Four states magnetic dots: a design selection by micromagnetic modeling. , 2016, , .		0