

Fumihiko Matsukura

List of Publications by Year in descending order

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92
papers

24,591
citations

57719

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docs citations

92
times ranked

12795
citing authors

#	ARTICLE	IF	CITATIONS
1	Zener Model Description of Ferromagnetism in Zinc-Blende Magnetic Semiconductors. <i>Science</i> , 2000, 287, 1019-1022.	6.0	7,340
2	A perpendicular-anisotropy CoFeB/MgO magnetic tunnel junction. <i>Nature Materials</i> , 2010, 9, 721-724.	13.3	3,020
3	Electrical spin injection in a ferromagnetic semiconductor heterostructure. <i>Nature</i> , 1999, 402, 790-792.	13.7	2,315
4	Electric-field control of ferromagnetism. <i>Nature</i> , 2000, 408, 944-946.	13.7	1,904
5	Hole-mediated ferromagnetism in tetrahedrally coordinated semiconductors. <i>Physical Review B</i> , 2001, 63, .	1.1	1,439
6	Tunnel magnetoresistance of 604% at 300K by suppression of Ta diffusion in CoFeB/MgO/CoFeB pseudo-spin-valves annealed at high temperature. <i>Applied Physics Letters</i> , 2008, 93, .	1.5	1,259
7	Control of magnetism by electric fields. <i>Nature Nanotechnology</i> , 2015, 10, 209-220.	15.6	741
8	Magnetization vector manipulation by electric fields. <i>Nature</i> , 2008, 455, 515-518.	13.7	602
9	Electrical Manipulation of Magnetization Reversal in a Ferromagnetic Semiconductor. <i>Science</i> , 2003, 301, 943-945.	6.0	588
10	Electric-field effects on thickness dependent magnetic anisotropy of sputtered MgO/Co ₄₀ Fe ₄₀ B ₂₀ /Ta structures. <i>Applied Physics Letters</i> , 2010, 96, .	1.5	443
11	Electric field-induced magnetization reversal in a perpendicular-anisotropy CoFeB-MgO magnetic tunnel junction. <i>Applied Physics Letters</i> , 2012, 101, .	1.5	341
12	Effect of electrode composition on the tunnel magnetoresistance of pseudo-spin-valve magnetic tunnel junction with a MgO tunnel barrier. <i>Applied Physics Letters</i> , 2007, 90, 212507.	1.5	293
13	Perpendicular-anisotropy CoFeB-MgO magnetic tunnel junctions with a MgO/CoFeB/Ta/CoFeB/MgO recording structure. <i>Applied Physics Letters</i> , 2012, 101, .	1.5	255
14	Properties of magnetic tunnel junctions with a MgO/CoFeB/Ta/CoFeB/MgO recording structure down to junction diameter of 11 nm. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	240
15	Experimental probing of the interplay between ferromagnetism and localization in (Ga,Mn)As. <i>Nature Physics</i> , 2010, 6, 22-25.	6.5	211
16	Effect of high annealing temperature on giant tunnel magnetoresistance ratio of CoFeB/MgO/CoFeB magnetic tunnel junctions. <i>Applied Physics Letters</i> , 2006, 89, 232510.	1.5	205
17	Epitaxy of (Ga, Mn)As, a new diluted magnetic semiconductor based on GaAs. <i>Journal of Crystal Growth</i> , 1997, 175-176, 1069-1074.	0.7	183
18	Spin-orbit torque induced magnetization switching in nano-scale Ta/CoFeB/MgO. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	167

#	ARTICLE	IF	CITATIONS
19	Giant tunnel magnetoresistance and high annealing stability in CoFeB/MgO/CoFeB magnetic tunnel junctions with synthetic pinned layer. Applied Physics Letters, 2006, 89, 042506.	1.5	150
20	Junction size effect on switching current and thermal stability in CoFeB/MgO perpendicular magnetic tunnel junctions. Applied Physics Letters, 2011, 99, .	1.5	143
21	MgO barrier-perpendicular magnetic tunnel junctions with CoFe/Pd multilayers and ferromagnetic insertion layers. Applied Physics Letters, 2009, 95, .	1.5	130
22	Domain Structure in CoFeB Thin Films With Perpendicular Magnetic Anisotropy. IEEE Magnetics Letters, 2011, 2, 3000304-3000304.	0.6	124
23	Magnetotransport properties of metallic (Ga,Mn)As films with compressive and tensile strain. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 21, 1032-1036.	1.3	120
24	MgO/CoFeB/Ta/CoFeB/MgO Recording Structure in Magnetic Tunnel Junctions With Perpendicular Easy Axis. IEEE Transactions on Magnetics, 2013, 49, 4437-4440.	1.2	120
25	Dependence of magnetic anisotropy on MgO thickness and buffer layer in Co ₂₀ Fe ₆₀ B ₂₀ -MgO structure. Journal of Applied Physics, 2011, 109, .	1.1	109
26	Electric-field effects on magnetic anisotropy and damping constant in Ta/CoFeB/MgO investigated by ferromagnetic resonance. Applied Physics Letters, 2014, 105, .	1.5	106
27	Dependence of Tunnel Magnetoresistance in MgO Based Magnetic Tunnel Junctions on Ar Pressure during MgO Sputtering. Japanese Journal of Applied Physics, 2005, 44, L1442-L1445.	0.8	99
28	Three terminal magnetic tunnel junction utilizing the spin Hall effect of iridium-doped copper. Applied Physics Letters, 2013, 102, .	1.5	99
29	CoFeB Thickness Dependence of Thermal Stability Factor in CoFeB/MgO Perpendicular Magnetic Tunnel Junctions. IEEE Magnetics Letters, 2012, 3, 3000204-3000204.	0.6	92
30	Direct-current voltages in (Ga,Mn)As structures induced by ferromagnetic resonance. Nature Communications, 2013, 4, 2055.	5.8	87
31	Magnetization switching in a CoFeB/MgO magnetic tunnel junction by combining spin-transfer torque and electric field-effect. Applied Physics Letters, 2014, 104, .	1.5	87
32	Electric-field-induced magnetization switching in CoFeB/MgO magnetic tunnel junctions with high junction resistance. Applied Physics Letters, 2016, 108, .	1.5	84
33	Properties of Ga _{1-x} Mn _x As with high Mn composition (x>0.1). Applied Physics Letters, 2007, 90, 122503.	1.5	72
34	Curie temperature versus hole concentration in field-effect structures of $Ga_{1-x}Mn_xAs$. Physical Review B, 2010, 81, .	1.1	69
35	Critical role of W deposition condition on spin-orbit torque induced magnetization switching in nanoscale W/CoFeB/MgO. Applied Physics Letters, 2016, 109, .	1.5	69
36	Observation of boron diffusion in an annealed Ta/CoFeB/MgO magnetic tunnel junction with standing-wave hard x-ray photoemission. Applied Physics Letters, 2012, 101, .	1.5	64

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37	Current induced effective magnetic field and magnetization reversal in uniaxial anisotropy (Ga,Mn)As. Applied Physics Letters, 2010, 97, .	1.5	61
38	Origin of the collapse of tunnel magnetoresistance at high annealing temperature in CoFeB/MgO perpendicular magnetic tunnel junctions. Applied Physics Letters, 2011, 99, .	1.5	55
39	Magnetism of Co-doped ZnO epitaxially grown on a ZnO substrate. Physical Review B, 2012, 85, .	1.1	54
40	In-plane magnetic field dependence of electric field-induced magnetization switching. Applied Physics Letters, 2013, 103, .	1.5	53
41	Tunnel magnetoresistance in MgO-barrier magnetic tunnel junctions with bcc-CoFe(B) and fcc-CoFe free layers. Journal of Applied Physics, 2006, 99, 08A907.	1.1	52
42	Magnetization dynamics and its scattering mechanism in thin CoFeB films with interfacial anisotropy. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 3815-3820.	3.3	50
43	Simulation of magnetization switching by electric-field manipulation of magnetic anisotropy. Applied Physics Letters, 2010, 96, .	1.5	49
44	Tunnel magnetoresistance properties and film structures of double MgO barrier magnetic tunnel junctions. Applied Physics Letters, 2010, 96, .	1.5	49
45	Temperature-dependent properties of CoFeB/MgO thin films: Experiments versus simulations. Physical Review B, 2018, 98, .	1.1	46
46	Electric field-induced ferromagnetic resonance in a CoFeB/MgO magnetic tunnel junction under dc bias voltages. Applied Physics Letters, 2014, 105, .	1.5	44
47	Adiabatic spin-transfer-torque-induced domain wall creep in a magnetic metal. Nature Physics, 2016, 12, 333-336.	6.5	43
48	Electric double layer transistor with a (Ga,Mn)As channel. Applied Physics Letters, 2010, 96, .	1.5	40
49	Bias voltage dependence of the electron spin injection studied in a three-terminal device based on a (Ga,Mn)As ⁿ⁺ -GaAs Esaki diode. Applied Physics Letters, 2006, 89, 012103.	1.5	39
50	Size Dependence of Magnetic Properties of Nanoscale CoFeB/MgO Magnetic Tunnel Junctions with Perpendicular Magnetic Easy Axis Observed by Ferromagnetic Resonance. Applied Physics Express, 2013, 6, 063002.	1.1	38
51	Peculiar temperature dependence of electric-field effect on magnetic anisotropy in Co/Pd/MgO system. Applied Physics Letters, 2016, 109, .	1.5	34
52	DC voltages in Py and Py/Pt under ferromagnetic resonance. Applied Physics Express, 2014, 7, 013002.	1.1	31
53	CoFeB Thickness Dependence of Damping Constants for Single and Double CoFeB-MgO Interface Structures. IEEE Magnetics Letters, 2015, 6, 1-3.	0.6	31
54	Magnetotransport measurements of current induced effective fields in Ta/CoFeB/MgO. Applied Physics Letters, 2013, 103, .	1.5	30

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55	Magnetization reversal induced by in-plane current in Ta/CoFeB/MgO structures with perpendicular magnetic easy axis. <i>Journal of Applied Physics</i> , 2014, 115, 17C714.	1.1	30
56	Boron Composition Dependence of Magnetic Anisotropy and Tunnel Magnetoresistance in MgO/CoFe(B) Based Stack Structures. <i>IEEE Transactions on Magnetics</i> , 2012, 48, 3829-3832.	1.2	28
57	Magnetic properties of MgO-[Co/Pt] multilayers with a CoFeB insertion layer. <i>Journal of Applied Physics</i> , 2013, 113, .	1.1	28
58	Temperature dependence of energy barrier in CoFeB-MgO magnetic tunnel junctions with perpendicular easy axis. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	27
59	Effect of electric-field modulation of magnetic parameters on domain structure in MgO/CoFeB. <i>AIP Advances</i> , 2016, 6, .	0.6	27
60	Properties of Ga _{1-x} MnxAs with high χ (>0.1). <i>Journal of Applied Physics</i> , 2008, 103, .	1.1	20
61	Perpendicular-anisotropy CoFeB-MgO based magnetic tunnel junctions scaling down to 1X nm. , 2014, , .		20
62	Magnetic-field-angle dependence of coercivity in CoFeB/MgO magnetic tunnel junctions with perpendicular easy axis. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	18
63	Tunnel magnetoresistance properties and annealing stability in perpendicular anisotropy MgO-based magnetic tunnel junctions with different stack structures. <i>Journal of Applied Physics</i> , 2011, 109, .	1.1	16
64	Electric-field effect on spin-wave resonance in a nanoscale CoFeB/MgO magnetic tunnel junction. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	16
65	Electric-field induced nonlinear ferromagnetic resonance in a CoFeB/MgO magnetic tunnel junction. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	15
66	Magnetic anisotropy in (Ga,Mn)As probed by magnetotransport measurements. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2006, 3, 4086-4089.	0.8	14
67	Ferromagnetic resonance in nanoscale CoFeB/MgO magnetic tunnel junctions. <i>Journal of Applied Physics</i> , 2015, 117, 17B708.	1.1	14
68	Annealing temperature dependence of magnetic properties of CoFeB/MgO stacks on different buffer layers. <i>Japanese Journal of Applied Physics</i> , 2017, 56, 0802B2.	0.8	14
69	Domain wall creep in (Ga,Mn)As. <i>Applied Physics Letters</i> , 2010, 97, 032504.	1.5	13
70	Magnetization Reversal by Field and Current Pulses in Elliptic CoFeB/MgO Tunnel Junctions With Perpendicular Easy Axis. <i>IEEE Magnetics Letters</i> , 2016, 7, 1-4.	0.6	13
71	Electric-field effect on magnetic anisotropy in Pt/Co/Pd/MgO structures deposited on GaAs and Si substrates. <i>Applied Physics Express</i> , 2018, 11, 013003.	1.1	13
72	Magnetic domain-wall creep driven by field and current in Ta/CoFeB/MgO. <i>AIP Advances</i> , 2017, 7, .	0.6	10

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73	Damping constant in a free layer in nanoscale CoFeB/MgO magnetic tunnel junctions investigated by homodyne-detected ferromagnetic resonance. Applied Physics Express, 2017, 10, 013001.	1.1	9
74	Pulse-width and magnetic-field dependences of current-induced magnetization switching in a (Ga,Mn)As magnetic tunnel junction. Journal of Applied Physics, 2006, 99, 08C514.	1.1	8
75	Electrical Curie temperature modulation in (Ga,Mn)As field-effect transistors with Mn composition from 0.027 to 0.200. Journal of Applied Physics, 2008, 103, 07D139.	1.1	7
76	Temperature dependence of in-plane magnetic anisotropy and anisotropic magnetoresistance in (Ga,Mn)As codoped with Li. Applied Physics Letters, 2016, 108, .	1.5	7
77	Current-Induced Magnetization Switching of CoFeB/Ta/[Co/Pd (Pt)]-Multilayers in Magnetic Tunnel Junctions With Perpendicular Anisotropy. IEEE Transactions on Magnetics, 2016, 52, 1-4.	1.2	7
78	Current-induced magnetization switching in a nano-scale CoFeB-MgO magnetic tunnel junction under in-plane magnetic field. AIP Advances, 2017, 7, 055927.	0.6	7
79	Spin injection with three terminal device based on (Ga,Mn)As/n+-GaAs tunnel junction. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 4164-4167.	0.8	5
80	Effect of GaAs Intermediary Layer Thickness on the Properties of (Ga,Mn)As Tri-Layer Structures. Journal of Superconductivity and Novel Magnetism, 2006, 18, 345-347.	0.5	5
81	In-plane anisotropy of a nano-scaled magnetic tunnel junction with perpendicular magnetic easy axis. Japanese Journal of Applied Physics, 2015, 54, 04DM03.	0.8	5
82	Channel Thickness Dependence of the Magnetic Properties in \hat{A} (Ga,Mn)As FET Structures. Journal of Superconductivity and Novel Magnetism, 2007, 20, 409-411.	0.8	4
83	Inverse spin Hall effect in Pt/(Ga,Mn)As. Applied Physics Letters, 2015, 106, 222405.	1.5	4
84	Free- and reference-layer magnetization modes versus in-plane magnetic field in a magnetic tunnel junction with perpendicular magnetic easy axis. Physical Review B, 2016, 94, .	1.1	4
85	Chapter 5 Spintronic Properties of Ferromagnetic Semiconductors. Semiconductors and Semimetals, 2008, , 207-240.	0.4	3
86	Electric-field effect on magnetic moments in Co ultra-thin films deposited on Pt. Applied Physics Letters, 2021, 118, .	1.5	3
87	2-Mb SPRAM design: bi-directional current write and parallelizing-direction current read based on spin-transfer torque switching. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 3929-3933.	0.8	2
88	Temperature dependence of lattice parameter of (Ga,Mn)As on GaAs substrate. Japanese Journal of Applied Physics, 2015, 54, 098003.	0.8	2
89	Electric-field-induced magnetization switching in CoFeB/MgO magnetic tunnel junctions. Japanese Journal of Applied Physics, 2017, 56, 0802A3.	0.8	2
90	Properties of (Ga,Mn)As codoped with Li. Applied Physics Letters, 2014, 104, 222408.	1.5	1

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91	Magnetization dynamics and related phenomena in semiconductors with ferromagnetism. Journal of Semiconductors, 2019, 40, 081502.	2.0	1
92	ac susceptibility of (Ga,Mn)As probed by the anomalous Hall effect. Journal of Applied Physics, 2009, 105, 07C516.	1.1	0