

Fumihiro Matsukura

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92
papers

21,850
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41
h-index

92
g-index

92
ext. papers

23,427
ext. citations

6
avg, IF

6.53
L-index

#	Paper	IF	Citations
92	Zener model description of ferromagnetism in zinc-blende magnetic semiconductors. <i>Science</i> , 2000 , 287, 1019-22	33.3	6810
91	A perpendicular-anisotropy CoFeB-MgO magnetic tunnel junction. <i>Nature Materials</i> , 2010 , 9, 721-4	27	2491
90	Electrical spin injection in a ferromagnetic semiconductor heterostructure. <i>Nature</i> , 1999 , 402, 790-792	50.4	2126
89	Electric-field control of ferromagnetism. <i>Nature</i> , 2000 , 408, 944-6	50.4	1697
88	Hole-mediated ferromagnetism in tetrahedrally coordinated semiconductors. <i>Physical Review B</i> , 2001 , 63,	3.3	1333
87	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, 082508	3.4	1061
86	Control of magnetism by electric fields. <i>Nature Nanotechnology</i> , 2015 , 10, 209-20	28.7	571
85	Magnetization vector manipulation by electric fields. <i>Nature</i> , 2008 , 455, 515-8	50.4	546
84	Electrical manipulation of magnetization reversal in a ferromagnetic semiconductor. <i>Science</i> , 2003 , 301, 943-5	33.3	542
83	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, 212503	3.4	383
82	Electric field-induced magnetization reversal in a perpendicular-anisotropy CoFeB-MgO magnetic tunnel junction. <i>Applied Physics Letters</i> , 2012 , 101, 122403	3.4	293
81	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	3.4	270
80	Perpendicular-anisotropy CoFeB-MgO magnetic tunnel junctions with a MgO/CoFeB/Ta/CoFeB/MgO recording structure. <i>Applied Physics Letters</i> , 2012 , 101, 022414	3.4	211
79	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, 062403	3.4	206
78	Experimental probing of the interplay between ferromagnetism and localization in (Ga, Mn)As. <i>Nature Physics</i> , 2010 , 6, 22-25	16.2	190
77	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	3.4	184
76	Epitaxy of (Ga, Mn)As, a new diluted magnetic semiconductor based on GaAs. <i>Journal of Crystal Growth</i> , 1997 , 175-176, 1069-1074	1.6	174

75	Giant tunnel magnetoresistance and high annealing stability in CoFeB/MgO/CoFeB magnetic tunnel junctions with synthetic pinned layer. <i>Applied Physics Letters</i> , 2006 , 89, 042506	3-4	137
74	Spin-orbit torque induced magnetization switching in nano-scale Ta/CoFeB/MgO. <i>Applied Physics Letters</i> , 2015 , 107, 012401	3-4	131
73	MgO barrier-perpendicular magnetic tunnel junctions with CoFe/Pd multilayers and ferromagnetic insertion layers. <i>Applied Physics Letters</i> , 2009 , 95, 232516	3-4	124
72	Junction size effect on switching current and thermal stability in CoFeB/MgO perpendicular magnetic tunnel junctions. <i>Applied Physics Letters</i> , 2011 , 99, 042501	3-4	123
71	Magnetotransport properties of metallic (Ga,Mn)As films with compressive and tensile strain. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2004 , 21, 1032-1036	3	111
70	Dependence of magnetic anisotropy on MgO thickness and buffer layer in Co ₂₀ Fe ₆₀ B ₂₀ -MgO structure. <i>Journal of Applied Physics</i> , 2011 , 109, 07C712	2.5	103
69	Domain Structure in CoFeB Thin Films With Perpendicular Magnetic Anisotropy. <i>IEEE Magnetics Letters</i> , 2011 , 2, 3000304-3000304	1.6	100
68	MgO/CoFeB/Ta/CoFeB/MgO Recording Structure in Magnetic Tunnel Junctions With Perpendicular Easy Axis. <i>IEEE Transactions on Magnetics</i> , 2013 , 49, 4437-4440	2	97
67	Electric-field effects on magnetic anisotropy and damping constant in Ta/CoFeB/MgO investigated by ferromagnetic resonance. <i>Applied Physics Letters</i> , 2014 , 105, 052415	3-4	89
66	Dependence of Tunnel Magnetoresistance in MgO Based Magnetic Tunnel Junctions on Ar Pressure during MgO Sputtering. <i>Japanese Journal of Applied Physics</i> , 2005 , 44, L1442-L1445	1.4	89
65	Three terminal magnetic tunnel junction utilizing the spin Hall effect of iridium-doped copper. <i>Applied Physics Letters</i> , 2013 , 102, 212408	3-4	85
64	CoFeB Thickness Dependence of Thermal Stability Factor in CoFeB/MgO Perpendicular Magnetic Tunnel Junctions. <i>IEEE Magnetics Letters</i> , 2012 , 3, 3000204-3000204	1.6	81
63	Direct-current voltages in (Ga,Mn)As structures induced by ferromagnetic resonance. <i>Nature Communications</i> , 2013 , 4, 2055	17.4	75
62	Magnetization switching in a CoFeB/MgO magnetic tunnel junction by combining spin-transfer torque and electric field-effect. <i>Applied Physics Letters</i> , 2014 , 104, 212406	3-4	72
61	Properties of Ga _{1-x} Mn _x As with high Mn composition (x>0.1). <i>Applied Physics Letters</i> , 2007 , 90, 122503	3-4	71
60	Curie temperature versus hole concentration in field-effect structures of Ga _{1-x} Mn _x As. <i>Physical Review B</i> , 2010 , 81,	3-3	61
59	Electric-field-induced magnetization switching in CoFeB/MgO magnetic tunnel junctions with high junction resistance. <i>Applied Physics Letters</i> , 2016 , 108, 192406	3-4	58
58	Observation of boron diffusion in an annealed Ta/CoFeB/MgO magnetic tunnel junction with standing-wave hard x-ray photoemission. <i>Applied Physics Letters</i> , 2012 , 101, 202402	3-4	56

57	Current induced effective magnetic field and magnetization reversal in uniaxial anisotropy (Ga,Mn)As. <i>Applied Physics Letters</i> , 2010 , 97, 222501	3-4	54
56	Critical role of W deposition condition on spin-orbit torque induced magnetization switching in nanoscale W/CoFeB/MgO. <i>Applied Physics Letters</i> , 2016 , 109, 192405	3-4	53
55	Origin of the collapse of tunnel magnetoresistance at high annealing temperature in CoFeB/MgO perpendicular magnetic tunnel junctions. <i>Applied Physics Letters</i> , 2011 , 99, 252507	3-4	50
54	Magnetism of Co-doped ZnO epitaxially grown on a ZnO substrate. <i>Physical Review B</i> , 2012 , 85,	3-3	49
53	Tunnel magnetoresistance in MgO-barrier magnetic tunnel junctions with bcc-CoFe(B) and fcc-CoFe free layers. <i>Journal of Applied Physics</i> , 2006 , 99, 08A907	2-5	48
52	Tunnel magnetoresistance properties and film structures of double MgO barrier magnetic tunnel junctions. <i>Applied Physics Letters</i> , 2010 , 96, 192507	3-4	47
51	In-plane magnetic field dependence of electric field-induced magnetization switching. <i>Applied Physics Letters</i> , 2013 , 103, 072408	3-4	41
50	Simulation of magnetization switching by electric-field manipulation of magnetic anisotropy. <i>Applied Physics Letters</i> , 2010 , 96, 192506	3-4	40
49	Electric double layer transistor with a (Ga,Mn)As channel. <i>Applied Physics Letters</i> , 2010 , 96, 022515	3-4	36
48	Magnetization dynamics and its scattering mechanism in thin CoFeB films with interfacial anisotropy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 3815-3820	11-5	35
47	Electric field-induced ferromagnetic resonance in a CoFeB/MgO magnetic tunnel junction under dc bias voltages. <i>Applied Physics Letters</i> , 2014 , 105, 242409	3-4	35
46	Bias voltage dependence of the electron spin injection studied in a three-terminal device based on a (Ga,Mn)As \bar{n} -GaAs Esaki diode. <i>Applied Physics Letters</i> , 2006 , 89, 012103	3-4	35
45	Size Dependence of Magnetic Properties of Nanoscale CoFeB/MgO Magnetic Tunnel Junctions with Perpendicular Magnetic Easy Axis Observed by Ferromagnetic Resonance. <i>Applied Physics Express</i> , 2013 , 6, 063002	2-4	34
44	Peculiar temperature dependence of electric-field effect on magnetic anisotropy in Co/Pd/MgO system. <i>Applied Physics Letters</i> , 2016 , 109, 082403	3-4	33
43	Adiabatic spin-transfer-torque-induced domain wall creep in a magnetic metal. <i>Nature Physics</i> , 2016 , 12, 333-336	16-2	32
42	DC voltages in Py and Py/Pt under ferromagnetic resonance. <i>Applied Physics Express</i> , 2014 , 7, 013002	2-4	29
41	Magnetotransport measurements of current induced effective fields in Ta/CoFeB/MgO. <i>Applied Physics Letters</i> , 2013 , 103, 262407	3-4	29
40	Temperature-dependent properties of CoFeB/MgO thin films: Experiments versus simulations. <i>Physical Review B</i> , 2018 , 98,	3-3	29

39	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	2.5	28
38	CoFeB Thickness Dependence of Damping Constants for Single and Double CoFeB-MgO Interface Structures. <i>IEEE Magnetics Letters</i> , 2015 , 6, 1-3	1.6	27
37	Magnetic properties of MgO-[Co/Pt] multilayers with a CoFeB insertion layer. <i>Journal of Applied Physics</i> , 2013 , 113, 17C721	2.5	27
36	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	2	26
35	Effect of electric-field modulation of magnetic parameters on domain structure in MgO/CoFeB. <i>AIP Advances</i> , 2016 , 6, 075017	1.5	24
34	Temperature dependence of energy barrier in CoFeB-MgO magnetic tunnel junctions with perpendicular easy axis. <i>Applied Physics Letters</i> , 2015 , 107, 152405	3.4	20
33	Properties of Ga _{1-x} Mn _x As with high x (>0.1). <i>Journal of Applied Physics</i> , 2008 , 103, 07D136	2.5	19
32	Perpendicular-anisotropy CoFeB-MgO based magnetic tunnel junctions scaling down to 1X nm 2014 ,		18
31	Magnetic-field-angle dependence of coercivity in CoFeB/MgO magnetic tunnel junctions with perpendicular easy axis. <i>Applied Physics Letters</i> , 2017 , 111, 132407	3.4	16
30	Electric-field effect on spin-wave resonance in a nanoscale CoFeB/MgO magnetic tunnel junction. <i>Applied Physics Letters</i> , 2017 , 111, 072403	3.4	14
29	Ferromagnetic resonance in nanoscale CoFeB/MgO magnetic tunnel junctions. <i>Journal of Applied Physics</i> , 2015 , 117, 17B708	2.5	13
28	Domain wall creep in (Ga,Mn)As. <i>Applied Physics Letters</i> , 2010 , 97, 032504	3.4	13
27	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, 07C711	2.5	13
26	Electric-field induced nonlinear ferromagnetic resonance in a CoFeB/MgO magnetic tunnel junction. <i>Applied Physics Letters</i> , 2015 , 107, 132404	3.4	12
25	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		12
24	Annealing temperature dependence of magnetic properties of CoFeB/MgO stacks on different buffer layers. <i>Japanese Journal of Applied Physics</i> , 2017 , 56, 0802B2	1.4	11
23	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	2.4	11
22	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	1.6	11

21	Damping constant in a free layer in nanoscale CoFeB/MgO magnetic tunnel junctions investigated by homodyne-detected ferromagnetic resonance. <i>Applied Physics Express</i> , 2017 , 10, 013001	2.4	7
20	Pulse-width and magnetic-field dependences of current-induced magnetization switching in a (Ga,Mn)As magnetic tunnel junction. <i>Journal of Applied Physics</i> , 2006 , 99, 08G514	2.5	7
19	Electrical Curie temperature modulation in (Ga,Mn)As field-effect transistors with Mn composition from 0.027 to 0.200. <i>Journal of Applied Physics</i> , 2008 , 103, 07D139	2.5	6
18	Magnetic domain-wall creep driven by field and current in Ta/CoFeB/MgO. <i>AIP Advances</i> , 2017 , 7, 055918.5	1.5	5
17	Temperature dependence of in-plane magnetic anisotropy and anisotropic magnetoresistance in (Ga,Mn)As codoped with Li. <i>Applied Physics Letters</i> , 2016 , 108, 112404	3.4	5
16	Current-Induced Magnetization Switching of CoFeB/Ta/[Co/Pd (Pt)]-Multilayers in Magnetic Tunnel Junctions With Perpendicular Anisotropy. <i>IEEE Transactions on Magnetics</i> , 2016 , 52, 1-4	2	5
15	Current-induced magnetization switching in a nano-scale CoFeB-MgO magnetic tunnel junction under in-plane magnetic field. <i>AIP Advances</i> , 2017 , 7, 055927	1.5	5
14	Spin injection with three terminal device based on (Ga,Mn)As/n+-GaAs tunnel junction. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2006 , 3, 4164-4167		5
13	Effect of GaAs Intermediary Layer Thickness on the Properties of (Ga,Mn)As Tri-Layer Structures. <i>Journal of Superconductivity and Novel Magnetism</i> , 2006 , 18, 345-347		5
12	In-plane anisotropy of a nano-scaled magnetic tunnel junction with perpendicular magnetic easy axis. <i>Japanese Journal of Applied Physics</i> , 2015 , 54, 04DM03	1.4	4
11	Inverse spin Hall effect in Pt/(Ga,Mn)As. <i>Applied Physics Letters</i> , 2015 , 106, 222405	3.4	4
10	Free- and reference-layer magnetization modes versus in-plane magnetic field in a magnetic tunnel junction with perpendicular magnetic easy axis. <i>Physical Review B</i> , 2016 , 94,	3.3	4
9	Chapter 5 Spintronic Properties of Ferromagnetic Semiconductors. <i>Semiconductors and Semimetals</i> , 2008 , 207-240	0.6	3
8	Channel Thickness Dependence of the Magnetic Properties in (Ga,Mn)As FET Structures. <i>Journal of Superconductivity and Novel Magnetism</i> , 2007 , 20, 409-411	1.5	3
7	Temperature dependence of lattice parameter of (Ga,Mn)As on GaAs substrate. <i>Japanese Journal of Applied Physics</i> , 2015 , 54, 098003	1.4	2
6	2-Mb SPRAM design: bi-directional current write and parallelizing-direction current read based on spin-transfer torque switching. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2007 , 204, 3929-3933	1.6	2
5	Electric-field-induced magnetization switching in CoFeB/MgO magnetic tunnel junctions. <i>Japanese Journal of Applied Physics</i> , 2017 , 56, 0802A3	1.4	1
4	Properties of (Ga,Mn)As codoped with Li. <i>Applied Physics Letters</i> , 2014 , 104, 222408	3.4	1

- 3 Electric-field effect on magnetic moments in Co ultra-thin films deposited on Pt. *Applied Physics Letters*, **2021**, 118, 152405 3.4 1
- 2 Magnetization dynamics and related phenomena in semiconductors with ferromagnetism. *Journal of Semiconductors*, **2019**, 40, 081502 2.3
- 1 ac susceptibility of (Ga,Mn)As probed by the anomalous Hall effect. *Journal of Applied Physics*, **2009**, 105, 07C516 2.5