

Nicholas Kioussis

List of Publications by Year in descending order

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114
papers

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citations

117571

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114
all docs

114
docs citations

114
times ranked

4053
citing authors

#	ARTICLE	IF	CITATIONS
1	Generalized-stacking-fault energy surface and dislocation properties of aluminum. Physical Review B, 2000, 62, 3099-3108.	1.1	277
2	Anomalous Bias Dependence of Spin Torque in Magnetic Tunnel Junctions. Physical Review Letters, 2006, 97, 237205.	2.9	254
3	Multiscale modelling of nanomechanics and micromechanics: an overview. Philosophical Magazine, 2003, 83, 3475-3528.	0.7	145
4	Hydrogen-Enhanced Local Plasticity in Aluminum: An Ab Initio Study. Physical Review Letters, 2001, 87, 095501.	2.9	135
5	Novel Family of Chiral-Based Topological Insulators: Elemental Tellurium under Strain. Physical Review Letters, 2013, 110, 176401.	2.9	133
6	Prediction of manganese trihalides as two-dimensional Dirac half-metals. Physical Review B, 2018, 97, .	1.1	107
7	Enhancement of voltage-controlled magnetic anisotropy through precise control of Mg insertion thickness at CoFeB/MgO interface. Applied Physics Letters, 2017, 110, .	1.5	92
8	Topology of Electronic Charge Density and Energetics of Planar Faults in fcc Metals. Physical Review Letters, 2002, 88, 125501.	2.9	89
9	Tight-binding study of stacking fault energies and the Rice criterion of ductility in the fcc metals. Physical Review B, 2000, 61, 4894-4897.	1.1	85
10	Spin-transfer torque in magnetic tunnel junctions. Physical Review B, 2009, 79, .	1.1	81
11	Giant voltage modulation of magnetic anisotropy in strained heavy metal/magnet/insulator heterostructures. Physical Review B, 2015, 92, .	1.1	79
12	Electronic structure and elastic properties of the Ni ₃ X (X=Mn, Al, Ga, Si, Ge) intermetallics. Physical Review B, 1996, 54, 14413-14422.	1.1	65
13	Room-temperature high on/off ratio in suspended graphene nanoribbon field-effect transistors. Nanotechnology, 2011, 22, 265201.	1.3	64
14	The Peierls-Nabarro model revisited. Philosophical Magazine Letters, 2000, 80, 675-682.	0.5	62
15	Electric-field control of spin accumulation direction for spin-orbit torques. Nature Communications, 2019, 10, 248.	5.8	61
16	Layer intermixing during metal/metal oxide adsorption: Ti/sapphire(0001). Physical Review B, 2002, 66, .	1.1	59
17	Giant enhancement of the intrinsic spin Hall conductivity in WTe_2 tungsten via substitutional doping. Physical Review B, 2017, 96, .	1.1	58
18	A pressure-induced topological phase with large Berry curvature in Pb _{1-x} Te. Science Advances, 2017, 3, e1602510.	4.7	55

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19	Impurity effects on atomic bonding in Ni ₃ Al. Physical Review B, 1995, 52, 14421-14430.	1.1	52
20	An improved QM/MM approach for metals. Modelling and Simulation in Materials Science and Engineering, 2007, 15, 275-284.	0.8	52
21	Electronic structure calculations of an oxygen vacancy in KH ₂ PO ₄ . Physical Review B, 2005, 72, .	1.1	50
22	Strain-field effects on the formation and migration energies of self interstitials in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle \pm \langle \text{mml:mi} \rangle \langle \text{mml:mtext} \rangle \text{-Fe} \langle \text{mml:mtext} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle$ from first principles. Physical Review B, 2010, 81, .	1.1	50
23	Two-dimensional topological insulators with tunable band gaps: Single-layer HgTe and HgSe. Scientific Reports, 2015, 5, 14115.	1.6	50
24	Electric-field-driven magnetization switching and nonlinear magnetoelasticity in Au/FeCo/MgO heterostructures. Scientific Reports, 2016, 6, 29815.	1.6	48
25	Influence of asymmetry on bias behavior of spin torque. Physical Review B, 2010, 81, .	1.1	47
26	Thermally stable voltage-controlled perpendicular magnetic anisotropy in Mo CoFeB MgO structures. Applied Physics Letters, 2015, 107, .	1.5	47
27	Two-dimensional Dirac spin-gapless semiconductors with tunable perpendicular magnetic anisotropy and a robust quantum anomalous Hall effect. Materials Horizons, 2020, 7, 2071-2077.	6.4	45
28	Antidamping spin-orbit torque driven by spin-flip reflection mechanism on the surface of a topological insulator: A time-dependent nonequilibrium Green function approach. Physical Review B, 2016, 93, .	1.1	43
29	First-principles studies of the $\sim 5^\circ$ tilt grain boundary in Ni ₃ Al. Physical Review B, 1999, 59, 891-898.	1.1	42
30	Electric-field control of magnetism in graphene quantum dots: Ab initio calculations. Physical Review B, 2010, 82, 201411.	1.1	42
31	Electric field control and effect of Pd capping on magnetocrystalline anisotropy in FePd thin films: A first-principles study. Physical Review B, 2014, 89, .	1.1	41
32	Magnetic instability with increasing hybridization in cerium compounds. Physical Review B, 1991, 44, 10003-10013.	1.1	39
33	Anisotropic lattice thermal conductivity in chiral tellurium from first principles. Applied Physics Letters, 2015, 107, .	1.5	38
34	First-principles study of the angular dependence of the spin-orbit torque in Pt/Co and Pd/Co bilayers. Physical Review B, 2018, 97, .	1.1	38
35	Approaching the intrinsic band gap in suspended high-mobility graphene nanoribbons. Physical Review B, 2011, 84, .	1.1	36
36	Strain-induced topological insulator phase transition in HgSe. Physical Review B, 2013, 87, .	1.1	33

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37	Enhancing spin-transfer torque through the proximity of quantum well states. <i>Physical Review B</i> , 2007, 76, .	1.1	32
38	Enhanced voltage-controlled magnetic anisotropy in magnetic tunnel junctions with an MgO/PZT/MgO tunnel barrier. <i>Applied Physics Letters</i> , 2016, 108, .	1.5	32
39	Novel Spin-Orbit Torque Generation at Room Temperature in an Oxide Epitaxial $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3/\text{SrIrO}_3$ System. <i>Advanced Materials</i> , 2021, 33, e2008269.	11.1	32
40	Intrinsic ferromagnetism and topological properties in two-dimensional rhenium halides. <i>Nanoscale</i> , 2019, 11, 6101-6107.	2.8	31
41	Predicted topological phase transition in the SmS Kondo insulator under pressure. <i>Physical Review B</i> , 2014, 89, .	1.1	29
42	Revealing the hidden structural phases of FeRh. <i>Physical Review B</i> , 2016, 94, .	1.1	29
43	Anisotropy of critical correlations in moderately delocalized cerium and actinide systems. <i>Physical Review B</i> , 1986, 34, 3261-3271.	1.1	28
44	First-principles determination of the effects of boron and sulfur on the ideal cleavage fracture in Ni ₃ Al. <i>Physical Review B</i> , 1996, 54, 3074-3078.	1.1	27
45	Colossal electric field control of magnetic anisotropy at ferromagnetic interfaces induced by iridium overlayer. <i>Physical Review B</i> , 2019, 99, .	1.1	24
46	Electric field modulation of magnetism in ferrimagnetic Heusler heterostructures. <i>Physical Review B</i> , 2020, 101, .	1.1	24
47	Dislocation constriction and cross-slip: An ab initio study. <i>Physical Review B</i> , 2002, 66, .	1.1	23
48	Predictive Materials Design of Magnetic Random-Access Memory Based on Nanoscale Atomic Structure and Element Distribution. <i>Nano Letters</i> , 2019, 19, 8621-8629.	4.5	22
49	Voltage-Controlled Magnetic Anisotropy in Heterostructures with Atomically Thin Heavy Metals. <i>Physical Review Applied</i> , 2019, 12, .	1.5	22
50	A nonplanar Peierls-Nabarro model and its application to dislocation cross-slip. <i>Philosophical Magazine</i> , 2003, 83, 3539-3548.	0.7	21
51	Bias-dependence of the tunneling electroresistance and magnetoresistance in multiferroic tunnel junctions. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	21
52	Electric field control of magnetization direction across the antiferromagnetic to ferromagnetic transition. <i>Scientific Reports</i> , 2017, 7, 5366.	1.6	21
53	On stress assisted dislocation constriction and cross-slip. <i>International Journal of Plasticity</i> , 2004, 20, 447-458.	4.1	20
54	Mechanism for the occurrence of paramagnetic planes within magnetically ordered cerium systems. <i>Physical Review B</i> , 1988, 38, 9132-9144.	1.1	19

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55	Microscopic origin of spin-orbit torque in ferromagnetic heterostructures: A first-principles approach. <i>Physical Review B</i> , 2020, 101, .	1.1	19
56	Resonant band-electron-f-electron scattering theory for highly correlated actinide systems. <i>Physical Review B</i> , 1988, 38, 2639-2648.	1.1	18
57	Strain control magnetocrystalline anisotropy of Ta/FeCo/MgO heterostructures. <i>Journal of Applied Physics</i> , 2015, 117, .	1.1	18
58	Electronic effects of oxygen and vanadium impurities in TiAl. <i>Journal of Physics Condensed Matter</i> , 1997, 9, 9829-9843.	0.7	17
59	Strain-driven electric control of magnetization reversal at multiferroic interfaces. <i>Physical Review B</i> , 2018, 97, .	1.1	17
60	Weyl node assisted conductivity switch in interfacial phase-change memory with van der Waals interfaces. <i>Physical Review B</i> , 2017, 96, .	1.1	16
61	Ab initio study of anisotropic magnetism in uranium compounds. <i>Journal of Applied Physics</i> , 1999, 85, 6226-6228.	1.1	15
62	Atomic and electronic structure of CdTe/metal (Cu, Al, Pt) interfaces and their influence to the Schottky barrier. <i>Journal of Applied Physics</i> , 2016, 120, .	1.1	15
63	Intrinsic damping phenomena from quantum to classical magnets: An <i>ab initio</i> study of Gilbert damping in a Pt/Co bilayer. <i>Physical Review B</i> , 2017, 96, .	1.1	15
64	Seamless Graphene Interconnects for the Prospect of All-Carbon Spin-Polarized Field-Effect Transistors. <i>Journal of Physical Chemistry C</i> , 2011, 115, 2874-2879.	1.5	14
65	GdN thin film: Chern insulating state on square lattice. <i>Physical Review B</i> , 2015, 92, .	1.1	14
66	Ab Initio Studies of the Unreconstructed Polar CdTe (111) Surface. <i>Journal of Electronic Materials</i> , 2012, 41, 2745-2753.	1.0	13
67	Aviram-Ratner rectifying mechanism for DNA base-pair sequencing through graphene nanogaps. <i>Nanotechnology</i> , 2012, 23, 135202.	1.3	13
68	Lubricant effect of copper nanoclusters on the dislocation core in \pm Fe. <i>Physical Review B</i> , 2008, 77, .	1.1	12
69	Atomistic-continuum modeling of dislocation interaction with Y2O3 particles in iron. <i>Journal of Nuclear Materials</i> , 2011, 417, 1098-1101.	1.3	12
70	Molecular dynamics growth modeling of InAs _{1-x} Sb _x -based type-II superlattice. <i>Optical Engineering</i> , 2017, 56, 091609.	0.5	12
71	Non-orthogonal tight-binding model for tellurium and selenium. <i>Philosophical Magazine</i> , 2013, 93, 3216-3230.	0.7	11
72	Magnetoelastic and magnetostrictive properties of Co_2MnSi Heusler compounds. <i>Physical Review B</i> , 2020, 102, .		

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73	Structural and magnetic properties of fcc Pt/Fe(111) multilayers. Journal of Applied Physics, 1996, 79, 4783.	1.1	10
74	Ferroelectric control of spin-transfer torque in multiferroic tunnel junctions. Physical Review B, 2015, 91, .	1.1	10
75	Thermodynamic and stoichiometric stability of the Cd-terminated CdTe (111) surface. Physical Review B, 2012, 85, .	1.1	9
76	Termination-dependent topological surface states in nodal-loop semimetal HfP_2 . Physical Review Materials, 2020, 4, .	0.9	8
77	New evidence of the displacive feature of the ferroelectric transition in KDP-type crystals. Journal of Physics Condensed Matter, 2002, 14, L89-L93.	0.7	7
78	Crucial role of interfacial alloying on spin-transfer torque in magnetic tunnel junctions. Physical Review B, 2012, 85, .	1.1	7
79	Epitaxial strain controlled magnetocrystalline anisotropy in ultrathin FeRh/MgO bilayers. AIP Advances, 2017, 7, 055914.	0.6	7
80	Effects of multilayer relaxation and surface roughness on the electronic properties of Pd/W(110) and Pd/W(001). Chemical Physics Letters, 1996, 258, 228-232.	1.2	6
81	Hybridization-induced magnetism in correlated cerium systems. Journal of Applied Physics, 1996, 79, 6420.	1.1	6
82	Oscillatory magnetic anisotropy and spin-reorientation induced by heavy-metal cap in Cu/FeCo/MgO tunnel junctions. Physical Review B, 2017, 95, .	1.1	6
83	Current-induced damping of nanosized quantum moments in the presence of spin-orbit interaction. Physical Review B, 2017, 95, .	1.1	6
84	Noncollinear magnetic modulation of Weyl nodes in ferrimagnetic Mn ₃ Ga. Physical Review B, 2020, 102, .	1.1	6
85	Spin transfer torque in Mn_3Ga -based ferrimagnetic tunnel junctions from first principles. Physical Review B, 2021, 103, .	1.1	6
86	Giant-magnetic clusters and susceptibility enhancement in Pd-Ni alloys. Physical Review Letters, 1991, 67, 366-369.	2.9	5
87	Dual Control of Giant Field-like Spin Torque in Spin Filter Tunnel Junctions. Scientific Reports, 2015, 5, 11341.	1.6	5
88	Development of magnetism in strongly correlated cerium systems: Non-Kondo mechanism for moment collapse. Physical Review B, 2000, 62, 11533-11537.	1.1	4
89	Effect of the local environment on the mobility of dislocations in refractory bcc metals: Concurrent multiscale approach. Physical Review B, 2008, 78, .	1.1	4
90	Effect of disorder on spin-transfer torque in magnetic tunnel junctions. Journal of Applied Physics, 2011, 109, 07C920.	1.1	4

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91	Spin-orbit torque-driven magnetization switching in 2D-topological insulator heterostructure. Europhysics Letters, 2017, 117, 37001.	0.7	4
92	Novel family of topological semimetals with butterflylike nodal lines. Physical Review B, 2021, 104, .	1.1	4
93	Ferroelectric-driven tunable magnetism in ultrathin platinum films. Physical Review Materials, 2020, 4, .	0.9	4
94	Theory of the magnetization and exchange-enhanced susceptibility of alloys. I. Zero-temperature susceptibility of paramagnetic alloys in the random-phase approximation. Physical Review B, 1988, 37, 3611-3625.	1.1	3
95	Theory of the magnetization and exchange-enhanced susceptibility of alloys. II. Zero-temperature magnetization and susceptibility in the presence of moments. Physical Review B, 1988, 37, 3626-3636.	1.1	3
96	Antiferromagnetism of the half-filled Anderson lattice in one dimension. Physical Review B, 1999, 60, 13355-13360.	1.1	3
97	Magnetic crossover in the one-dimensional Hubbard model in the presence of a magnetic field. Journal of Physics Condensed Matter, 2001, 13, 6759-6772.	0.7	3
98	Transition levels of intrinsic defects in type-II InAs/InAs _{0.5} Sb _{0.5} strained-layer superlattices. Applied Physics Letters, 2019, 115, .	1.5	3
99	Glide symmetry protected higher-order topological insulators from semimetals with butterfly-like nodal lines. Npj Computational Materials, 2021, 7, .	3.5	3
100	Elastodynamically Induced Spin and Charge Pumping in Bulk Heavy Metals. Physical Review Letters, 2022, 128, .	2.9	3
101	Ab initio studies of magnetism in strongly correlated electron systems. Physica B: Condensed Matter, 2001, 296, 210-215.	1.3	2
102	Theory of magnetization and exchange-enhanced susceptibility of Pd-Ni alloys. Journal of Applied Physics, 1990, 67, 4579-4581.	1.1	1
103	Ab Initio Electronic Structure Calculations of the $\sqrt{5} \times \sqrt{5}$ [001] Tilt Grain Boundary in Ni ₃ Al. Materials Research Society Symposia Proceedings, 1997, 472, 21.	0.1	1
104	Competition of exchange and crystal field interactions in cerium monopnictides and monochalcogenides. Journal of Applied Physics, 2000, 87, 5143-5145.	1.1	1
105	Ferromagnetic Damping/Anti-damping in a Periodic 2D Helical Surface; A Nonequilibrium Keldysh Green Function Approach. Spin, 2016, 06, 1640009.	0.6	1
106	Ab initio prediction of giant magnetostriction and spin-reorientation in strained Au/FeCo/MgO heterostructure. Journal of Magnetism and Magnetic Materials, 2016, 400, 262-265.	1.0	1
107	Spin-transfer torque in multiferroic tunnel junctions with composite dielectric/ferroelectric barriers. Journal of Physics Condensed Matter, 2017, 29, 495302.	0.7	1
108	Ta cap-induced stabilization of interfacial ferromagnetism and enhanced magnetoelectricity in ultrathin FeRh films. Journal of Magnetism and Magnetic Materials, 2021, 539, 168414.	1.0	1

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109	Size and dimensionality effect in single-impurity Anderson model. Journal of Applied Physics, 1998, 83, 6429-6431.	1.1	0
110	Disorder effects in the one-dimensional Anderson lattice model. Journal of Applied Physics, 1999, 85, 5330-5331.	1.1	0
111	Precursor of non-Fermi liquid behaviour in the one-dimensional periodic Anderson model with disorder. Philosophical Magazine Letters, 1999, 79, 595-602.	0.5	0
112	Phase diagram of the one-dimensional periodic Anderson model. Journal of Applied Physics, 2001, 89, 7180-7182.	1.1	0
113	Zero-temperature phase diagram for strongly correlated nanochains. Journal of Applied Physics, 2004, 95, 7198-7200.	1.1	0
114	The crucial role of chemistry on mobile properties of dislocation. Philosophical Magazine, 2010, 90, 3757-3765.	0.7	0