Nicholas Kioussis

List of Publications by Year
in descending order

114 papers	3,571 citations	117571 34 h-index	149623 56 g-index
114 all docs	114 docs citations	114 times ranked	4053 citing authors

#	Article	IF	Citations
1	Elastodynamically Induced Spin and Charge Pumping in Bulk Heavy Metals. Physical Review Letters, 2022, 128, .	2.9	3
2	Spin transfer torque in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Mn</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math>-based ferrimagnetic tunnel junctions from first principles. Physical Review B, 2021, 103, .	1.1	6
3	Novel Spinâ€“Orbit Torque Generation at Room Temperature in an Allâ€Oxide Epitaxial La_{0.7}Sr_{0.3}MnO₃/SrIrO₃ System. Advanced Materials, 2021, 33, e2008269.	11.1	32
4	Novel family of topological semimetals with butterflylike nodal lines. Physical Review B, 2021, 104, .	1.1	4
5	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
6	Glide symmetry protected higher-order topological insulators from semimetals with butterfly-like nodal lines. Npj Computational Materials, 2021, 7, .	3.5	3
7	Magnetoelastic and magnetostrictive properties of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>Co</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> Heusler compounds. Physical Review B, 2020, 102, .	1.1	11
8	Noncollinear magnetic modulation of Weyl nodes in ferrimagnetic Mn3Ga. Physical Review B, 2020, 102, .	1.1	6
9	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
10	Microscopic origin of spin-orbit torque in ferromagnetic heterostructures: A first-principles approach. Physical Review B, 2020, 101, .	1.1	19
11	Electric field modulation of magnetism in ferrimagnetic Heusler heterostructures. Physical Review B, 2020, 101, .	1.1	24
12	Termination-dependent topological surface states in nodal-loop semimetal <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>HfP</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> Physical Review Materials, 2020, 4, .	0.9	8
13	Ferroelectric-driven tunable magnetism in ultrathin platinum films. Physical Review Materials, 2020, 4, .	0.9	4
14	Predictive Materials Design of Magnetic Random-Access Memory Based on Nanoscale Atomic Structure and Element Distribution. Nano Letters, 2019, 19, 8621-8629.	4.5	22
15	Voltage-Controlled Magnetic Anisotropy in Heterostructures with Atomically Thin Heavy Metals. Physical Review Applied, 2019, 12, .	1.5	22
16	Transition levels of intrinsic defects in type-II InAs/InAs0.5Sb0.5 strained-layer superlattices. Applied Physics Letters, 2019, 115, .	1.5	3
17	Intrinsic ferromagnetism and topological properties in two-dimensional rhenium halides. Nanoscale, 2019, 11, 6101-6107.	2.8	31
18	Colossal electric field control of magnetic anisotropy at ferromagnetic interfaces induced by iridium overlayer. Physical Review B, 2019, 99, .	1.1	24

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19	Electric-field control of spin accumulation direction for spin-orbit torques. Nature Communications, 2019, 10, 248.	5.8	61
20	Prediction of manganese trihalides as two-dimensional Dirac half-metals. Physical Review B, 2018, 97, .	1.1	107
21	Strain-driven electric control of magnetization reversal at multiferroic interfaces. Physical Review B, 2018, 97, .	1.1	17
22	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
23	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
24	Epitaxial strain controlled magnetocrystalline anisotropy in ultrathin FeRh/MgO bilayers. AIP Advances, 2017, 7, 055914.	0.6	7
25	Molecular dynamics growth modeling of InAs_{1â^'x}Sb_x-based type-II superlattice. Optical Engineering, 2017, 56, 091609.	0.5	12
26	Spin-orbit torque-driven magnetization switching in 2D-topological insulator heterostructure. Europhysics Letters, 2017, 117, 37001.	0.7	4
27	Spin-transfer torque in multiferroic tunnel junctions with composite dielectric/ferroelectric barriers. Journal of Physics Condensed Matter, 2017, 29, 495302.	0.7	1
28	A pressure-induced topological phase with large Berry curvature in Pb _{1â^' x} Sn _x Te. Science Advances, 2017, 3, e1602510.	4.7	55
29	Electric field control of magnetization direction across the antiferromagnetic to ferromagnetic transition. Scientific Reports, 2017, 7, 5366.	1.6	21
30	Current-induced damping of nanosized quantum moments in the presence of spin-orbit interaction. Physical Review B, 2017, 95, .	1.1	6
31	Weyl node assisted conductivity switch in interfacial phase-change memory with van der Waals interfaces. Physical Review B, 2017, 96, .	1.1	16
32	Intrinsic damping phenomena from quantum to classical magnets: An ab initio study of Gilbert damping in a Pt/Co bilayer. Physical Review B, 2017, 96, .	1.1	15
33	Giant enhancement of the intrinsic spin Hall conductivity in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi></mml:math> -tungsten via substitutional doping. Physical Review B, 2017, 96, .	1.1	58
34	Atomic and electronic structure of CdTe/metal (Cu, Al, Pt) interfaces and their influence to the Schottky barrier. Journal of Applied Physics, 2016, 120, .	1.1	15
35	Electric-field-driven magnetization switching and nonlinear magnetoelasticity in Au/FeCo/MgO heterostructures. Scientific Reports, 2016, 6, 29815.	1.6	48
36	Enhanced voltage-controlled magnetic anisotropy in magnetic tunnel junctions with an MgO/PZT/MgO tunnel barrier. Applied Physics Letters, 2016, 108, .	1.5	32

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37	Revealing the hidden structural phases of FeRh. Physical Review B, 2016, 94, .	1.1	29
38	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
39	Oscillatory magnetic anisotropy and spin-reorientation induced by heavy-metal cap in Cu/FeCo/ M () Tj ETQq1 1 0.784314 rgBT /Overlo	1.1	6
40	Ferromagnetic Damping/Anti-damping in a Periodic 2D Helical Surface; A Nonequilibrium Keldysh Green Function Approach. Spin, 2016, 06, 1640009.	0.6	1
41	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
42	GdN thin film: Chern insulating state on square lattice. Physical Review B, 2015, 92, .	1.1	14
43	Giant voltage modulation of magnetic anisotropy in strained heavy metal/magnet/insulator heterostructures. Physical Review B, 2015, 92, .	1.1	79
44	Anisotropic lattice thermal conductivity in chiral tellurium from first principles. Applied Physics Letters, 2015, 107, .	1.5	38
45	Two-dimensional topological insulators with tunable band gaps: Single-layer HgTe and HgSe. Scientific Reports, 2015, 5, 14115.	1.6	50
46	Thermally stable voltage-controlled perpendicular magnetic anisotropy in Mo|CoFeB|MgO structures. Applied Physics Letters, 2015, 107, .	1.5	47
47	Dual Control of Giant Field-like Spin Torque in Spin Filter Tunnel Junctions. Scientific Reports, 2015, 5, 11341.	1.6	5
48	Ferroelectric control of spin-transfer torque in multiferroic tunnel junctions. Physical Review B, 2015, 91, .	1.1	10
49	Strain control magnetocrystalline anisotropy of Ta/FeCo/MgO heterostructures. Journal of Applied Physics, 2015, 117, .	1.1	18
50	Bias-dependence of the tunneling electroresistance and magnetoresistance in multiferroic tunnel junctions. Applied Physics Letters, 2014, 105, .	1.5	21
51	Predicted topological phase transition in the SmS Kondo insulator under pressure. Physical Review B, 2014, 89, .	1.1	29
52	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
53	Novel Family of Chiral-Based Topological Insulators: Elemental Tellurium under Strain. Physical Review Letters, 2013, 110, 176401.	2.9	133
54	Non-orthogonal tight-binding model for tellurium and selenium. Philosophical Magazine, 2013, 93, 3216-3230.	0.7	11

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55	Strain-induced topological insulator phase transition in HgSe. Physical Review B, 2013, 87, .	1.1	33
56	Crucial role of interfacial alloying on spin-transfer torque in magnetic tunnel junctions. Physical Review B, 2012, 85, .	1.1	7
57	Thermodynamic and stoichiometric stability of the Cd-terminated CdTe (111) surface. Physical Review B, 2012, 85, .	1.1	9
58	AbÂInitio Studies of the Unreconstructed Polar CdTe (111) Surface. Journal of Electronic Materials, 2012, 41, 2745-2753.	1.0	13
59	Aviramâ€“Ratner rectifying mechanism for DNA base-pair sequencing through graphene nanogaps. Nanotechnology, 2012, 23, 135202.	1.3	13
60	Room-temperature high on/off ratio in suspended graphene nanoribbon field-effect transistors. Nanotechnology, 2011, 22, 265201.	1.3	64
61	â€œSeamlessâ€•Graphene Interconnects for the Prospect of All-Carbon Spin-Polarized Field-Effect Transistors. Journal of Physical Chemistry C, 2011, 115, 2874-2879.	1.5	14
62	Atomistic-continuum modeling of dislocation interaction with Y2O3 particles in iron. Journal of Nuclear Materials, 2011, 417, 1098-1101.	1.3	12
63	Effect of disorder on spin-transfer torque in magnetic tunnel junctions. Journal of Applied Physics, 2011, 109, 07C920.	1.1	4
64	Approaching the intrinsic band gap in suspended high-mobility graphene nanoribbons. Physical Review B, 2011, 84, .	1.1	36
65	Strain-field effects on the formation and migration energies of self interstitials in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Î±</mml:mi><mml:mtext>-Fe</mml:mtext></mml:mrow></mml:math>from first principles. Physical Review B, 2010, 81, .	1.1	50
66	Influence of asymmetry on bias behavior of spin torque. Physical Review B, 2010, 81, .	1.1	47
67	Electric-field control of magnetism in graphene quantum dots:Ab initiocalculations. Physical Review B, 2010, 82, 201411.	1.1	42
68	The crucial role of chemistry on mobile properties of dislocation. Philosophical Magazine, 2010, 90, 3757-3765.	0.7	0
69	Spin-transfer torque in magnetic tunnel junctions. Physical Review B, 2009, 79, .	1.1	81
70	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
71	Lubricant effect of copper nanoclusters on the dislocation core inÎ±â˜Fe. Physical Review B, 2008, 77, .	1.1	12
72	An improved QM/MM approach for metals. Modelling and Simulation in Materials Science and Engineering, 2007, 15, 275-284.	0.8	52

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73	Enhancing spin-transfer torque through the proximity of quantum well states. Physical Review B, 2007, 76, .	1.1	32
74	Anomalous Bias Dependence of Spin Torque in Magnetic Tunnel Junctions. Physical Review Letters, 2006, 97, 237205.	2.9	254
75	Electronic structure calculations of an oxygen vacancy inKH2PO4. Physical Review B, 2005, 72, .	1.1	50
76	Zero-temperature phase diagram for strongly correlated nanochains. Journal of Applied Physics, 2004, 95, 7198-7200.	1.1	0
77	On stress assisted dislocation constriction and cross-slip. International Journal of Plasticity, 2004, 20, 447-458.	4.1	20
78	Multiscale modelling of nanomechanics and micromechanics: an overview. Philosophical Magazine, 2003, 83, 3475-3528.	0.7	145
79	A nonplanar Peierlsâ€“Nabarro model and its application to dislocation cross-slip. Philosophical Magazine, 2003, 83, 3539-3548.	0.7	21
80	Layer intermixing during metal/metal oxide adsorption: Ti/sapphire(0001). Physical Review B, 2002, 66, .	1.1	59
81	Dislocation constriction and cross-slip: Anab initiostudy. Physical Review B, 2002, 66, .	1.1	23
82	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
83	Topology of Electronic Charge Density and Energetics of Planar Faults in fcc Metals. Physical Review Letters, 2002, 88, 125501.	2.9	89
84	Hydrogen-Enhanced Local Plasticity in Aluminum: AnAb InitioStudy. Physical Review Letters, 2001, 87, 095501.	2.9	135
85	Ab initio studies of magnetism in strongly correlated electron systems. Physica B: Condensed Matter, 2001, 296, 210-215.	1.3	2
86	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
87	Phase diagram of the one-dimensional periodic Anderson model. Journal of Applied Physics, 2001, 89, 7180-7182.	1.1	0
88	Development of magnetism in strongly correlated cerium systems:â€ƒNon-Kondo mechanism for moment collapse. Physical Review B, 2000, 62, 11533-11537.	1.1	4
89	Generalized-stacking-fault energy surface and dislocation properties of aluminum. Physical Review B, 2000, 62, 3099-3108.	1.1	277
90	Competition of exchange and crystal field interactions in cerium monopnictides and monochalcogenides. Journal of Applied Physics, 2000, 87, 5143-5145.	1.1	1

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91	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
92	The Peierls-Nabarro model revisited. Philosophical Magazine Letters, 2000, 80, 675-682.	0.5	62
93	Disorder effects in the one-dimensional Anderson lattice model. Journal of Applied Physics, 1999, 85, 5330-5331.	1.1	0
94	Antiferromagnetism of the half-filled Anderson lattice in one dimension. Physical Review B, 1999, 60, 13355-13360.	1.1	3
95	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
96	First-principles studies of the â˜5 tilt grain boundary inNi3Al. Physical Review B, 1999, 59, 891-898.	1.1	42
97	Ab initio study of anisotropic magnetism in uranium compounds. Journal of Applied Physics, 1999, 85, 6226-6228.	1.1	15
98	Size and dimensionality effect in single-impurity Anderson model. Journal of Applied Physics, 1998, 83, 6429-6431.	1.1	0
99	Electronic effects of oxygen and vanadium impurities in TiAl. Journal of Physics Condensed Matter, 1997, 9, 9829-9843.	0.7	17
100	Ab Initio Electronic Structure Calculations of the Î£ 5 (210) [001] Tilt Grain Boundary in Ni3Al. Materials Research Society Symposia Proceedings, 1997, 472, 21.	0.1	1
101	Electronic structure and elastic properties of theNi3X(X=Mn, Al, Ga, Si, Ge) intermetallics. Physical Review B, 1996, 54, 14413-14422.	1.1	65
102	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
103	First-principles determination of the effects of boron and sulfur on the ideal cleavage fracture inNi3Al. Physical Review B, 1996, 54, 3074-3078.	1.1	27
104	Structural and magnetic properties of fcc Pt/Fe(111) multilayers. Journal of Applied Physics, 1996, 79, 4783.	1.1	10
105	Hybridization-induced magnetism in correlated cerium systems. Journal of Applied Physics, 1996, 79, 6420.	1.1	6
106	Impurity effects on atomic bonding inNi3Al. Physical Review B, 1995, 52, 14421-14430.	1.1	52
107	Magnetic instability with increasing hybridization in cerium compounds. Physical Review B, 1991, 44, 10003-10013.	1.1	39
108	Giant-magnetic clusters and susceptibility enhancement in Pd-Ni alloys. Physical Review Letters, 1991, 67, 366-369.	2.9	5

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109	Theory of magnetization and exchangeâ€enhanced susceptibility of Pdâ€Ni alloys. Journal of Applied Physics, 1990, 67, 4579-4581.	1.1	1
110	Resonant band-electronâ€“f-electron scattering theory for highly correlated actinide systems. Physical Review B, 1988, 38, 2639-2648.	1.1	18
111	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
112	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
113	Mechanism for the occurrence of paramagnetic planes within magnetically ordered cerium systems. Physical Review B, 1988, 38, 9132-9144.	1.1	19
114	Anisotropy of critical correlations in moderately delocalized cerium and actinide systems. Physical Review B, 1986, 34, 3261-3271.	1.1	28