

Peter Zahn

List of Publications by Year in descending order

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74
papers

2,075
citations

279798

23
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44
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76
all docs

76
docs citations

76
times ranked

2671
citing authors

#	ARTICLE	IF	CITATIONS
1	Microscopic origin of magnetoresistance. <i>Materials Today</i> , 2006, 9, 46-54.	14.2	146
2	First-principle calculations of the Berry curvature of Bloch states for charge and spin transport of electrons. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 213202.	1.8	137
3	Extrinsic Spin Hall Effect from First Principles. <i>Physical Review Letters</i> , 2010, 104, 186403.	7.8	125
4	Electronic structure and transport anisotropy of Bi ₂ Te ₃ and Sb ₃ Te ₃ . <i>Physical Review B</i> , 2005, 72, 045111.	3.2	124
5	Physical Methods for Cleaning and Disinfection of Surfaces. <i>Food Engineering Reviews</i> , 2011, 3, 171-188.	5.9	103
6	Seeing the Fermi Surface in Real Space by Nanoscale Electron Focusing. <i>Science</i> , 2009, 323, 1190-1193.	12.6	96
7	Spin Hall angle versus spin diffusion length: Tailored by impurities. <i>Physical Review B</i> , 2010, 81, .	3.2	90
8	Switching Magnetization by 180° with an Electric Field. <i>Physical Review Letters</i> , 2012, 108, 197206.	7.8	81
9	Influence of the interface structure on the bias dependence of tunneling magnetoresistance. <i>Physical Review B</i> , 2005, 72, .	3.2	77
10	Influence of strain on anisotropic thermoelectric transport in Bi ₂ Te ₃ and Sb ₃ Te ₃ . <i>Physical Review B</i> , 2005, 72, .	3.2	75
11	Heat and charge transport properties of MgB ₂ . <i>Physica C: Superconductivity and Its Applications</i> , 2001, 363, 6-12.	1.2	66
12	Interface structure and bias dependence of Fe _{1-x} MgO _x /Fe tunnel junctions: Ab initio calculations. <i>Physical Review B</i> , 2006, 73, .	3.2	59
13	Spin polarization on Fermi surfaces of metals by the KKR method. <i>Physical Review B</i> , 2009, 80, .	3.2	59
14	Thermoelectric properties of porous silicon. <i>Applied Physics A: Materials Science and Processing</i> , 2012, 107, 789-794.	2.3	57
15	Thermoelectric transport in Bi ₂ Te ₃ and Sb ₃ Te ₃ . <i>Physical Review B</i> , 2005, 72, .	3.2	56
16	Local Ion Irradiation-Induced Resistive Threshold and Memory Switching in Nb ₂ O ₅ /NbO _x Films. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 17474-17480.	8.0	50
17	Effect of strain on the thermoelectric properties of silicon: an ab initio study. <i>Journal of Physics Condensed Matter</i> , 2011, 23, 295502.	1.8	46
18	Theory of real space imaging of Fermi surface parts. <i>Physical Review B</i> , 2011, 83, .	3.2	36

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19	Thickness dependence of the tunneling current in the coherent limit of transport. Physical Review B, 2008, 77, .	3.2	34
20	Tunneling Magnetoresistance on the Subnanometer Scale. Physical Review Letters, 2007, 99, 066804.	7.8	27
21	Thermoelectric transport in strained Si and Si/Ge heterostructures. Journal of Physics Condensed Matter, 2012, 24, 275501.	1.8	27
22	Ab initio calculated electronic structure of metallic nanowires and nanotubes. Physical Review B, 2002, 66, .	3.2	24
23	Influence of interface oxidation on the TMR ratio of Fe/MgO/Fe tunnel junctions. Journal of Magnetism and Magnetic Materials, 2007, 316, 478-480.	2.3	24
24	Strong influence of complex band structure on tunneling electroresistance: A combined model and <i>ab initio</i> study. Physical Review B, 2010, 82, .	3.2	22
25	Fully relativistic <i>ab initio</i> treatment of spin-flip scattering caused by impurities. Physical Review B, 2010, 81, .	3.2	22
26	Theoretical calculations of mobility enhancement in strained silicon. Physical Review B, 2007, 75, .	3.2	21
27	Calculating the Berry curvature of Bloch electrons using the KKR method. Physical Review B, 2011, 84, .	3.2	21
28	Spin-filter effect in metallic nanowires. Physical Review B, 2002, 66, .	3.2	18
29	PERFECT ALLOYS FOR SPIN HALL CURRENT-INDUCED MAGNETIZATION SWITCHING. Spin, 2012, 02, 1250010.	1.3	18
30	Signature of the topological surface state in the thermoelectric properties of Bi_2Te_3 . Physical Review B, 2014, 89, .	3.2	18
31	Tunneling magnetoresistance with amorphous electrodes. Physical Review B, 2008, 77, .	3.2	17
32	Giant magnetoresistance in uranium intermetallics: <i>Ab initio</i> calculations for $\text{U}_2\text{Pd}_2\text{In}$ and $\text{U}_2\text{Pd}_2\text{Sn}$. Physical Review B, 1996, 54, 11985-11988.	3.2	16
33	Evaluation of conduction eigenchannels of an adatom probed by an STM tip. Physical Review B, 2011, 83, .	3.2	15
34	Evolution of Co/Cu multilayer conductivity during growth: <i>Ab initio</i> study. Physical Review B, 2002, 65, .	3.2	14
35	Finite-size effects in giant magnetoresistance: <i>Ab initio</i> calculation. Physical Review B, 2001, 64, .	3.2	13
36	<i>Ab initio</i> study of the magnetic structure of fcc Fe grown on a Cu(001) substrate. Physical Review B, 2004, 70, .	3.2	13

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37	Size effects and conductivity of ultrathin Cu films. <i>Thin Solid Films</i> , 2005, 473, 346-350.	1.8	13
38	Electronic structure, magnetism, and spin-dependent transport of CeMnNi ₄ . <i>Physical Review B</i> , 2006, 73, .	3.2	13
39	Bi ₂ Te ₃ : implications of the rhombohedral <i>k</i> -space texture on the evaluation of the in-plane/out-of-plane conductivity anisotropy. <i>Journal of Physics Condensed Matter</i> , 2011, 23, 505504.	1.8	13
40	Nanostructure, thermoelectric properties, and transport theory of V ₂ VI ₃ and V ₂ VI ₃ /V ₂ VI ₃ based superlattices and nanomaterials. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016, 213, 662-671.	1.8	13
41	c(2Å–2) interface alloys in Co/Cu multilayers: Influence on interlayer exchange coupling and giant magnetoresistance. <i>Physical Review B</i> , 2001, 63, .	3.2	12
42	Resistivity of hydrogen-loaded Fe/V and Mo/V (100) superlattices: The role of vanadium expansion. <i>Physical Review B</i> , 2004, 69, .	3.2	12
43	First-principles calculations of spin relaxation times of conduction electrons in Cu with nonmagnetic impurities. <i>Physical Review B</i> , 2008, 77, .	3.2	12
44	Mobility of conduction electrons in ultrathin Fe and Cu films on Si(111). <i>Physical Review B</i> , 2007, 75, .	3.2	11
45	Physical origin of the incommensurate spin spiral structure in Mn ₃ Si. <i>Journal of Applied Physics</i> , 2009, 105, .	2.5	11
46	Tailoring tunnel magnetoresistance by ultrathin Cr and Co interlayers: A first-principles investigation of Fe/MgO/Fe junctions. <i>Physical Review B</i> , 2010, 82, .	3.2	11
47	Lorenz Function of Bi ₂ Te ₃ /Sb ₂ Te ₃ Superlattices. <i>Journal of Electronic Materials</i> , 2013, 42, 1406-1410.	2.2	11
48	Ab initio calculation of the transmission coefficients from a superlattice electronic structure. <i>Physical Review B</i> , 2001, 63, .	3.2	10
49	Skew Scattering Mechanism by an Ab Initio Approach: Extrinsic Spin Hall Effect in Noble Metals. <i>Solid State Phenomena</i> , 0, 168-169, 27-30.	0.3	10
50	Impurity scattering and quantum confinement in giant magnetoresistive systems. <i>Physical Review B</i> , 2003, 68, .	3.2	9
51	Elastic and piezoresistive properties of nickel carbides from first principles. <i>Physical Review B</i> , 2017, 95, .	3.2	8
52	Impurity scattering and quantum confinement in giant magnetoresistance systems: A comparative ab initio study. <i>Physical Review B</i> , 2005, 72, .	3.2	6
53	Manifestation of quantum confinement in transport properties of ultrathin metallic films. <i>Thin Solid Films</i> , 2007, 515, 6921-6926.	1.8	6
54	Spin polarization in photoelectron spectroscopy from antiferromagnets: Cr films on Fe(110) from first principles. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2010, 182, 97-102.	1.7	6

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55	Correlating transmission and local electronic structure in planar junctions: A tool for analyzing transport calculations. <i>Physical Review B</i> , 2011, 83, .	3.2	5
56	<i>Ab initio</i> description of the thermoelectric properties of heterostructures in the diffusive limit of transport. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016, 213, 672-683.	1.8	5
57	Electrical Characterization of Germanium Nanowires Using a Symmetric Hall Bar Configuration: Size and Shape Dependence. <i>Nanomaterials</i> , 2021, 11, 2917.	4.1	5
58	Short-period oscillations in photoemission from thin films of Cr(100). <i>Physical Review B</i> , 2005, 72, .	3.2	4
59	A combined experimental and theoretical study of 1,4-bis(phenylethynyl)-2,5-bis(ethoxy)benzene adsorption on Au(111). <i>Surface Science</i> , 2021, 712, 121877.	1.9	4
60	Reliable prediction of giant magnetoresistance characteristics. <i>Physical Review B</i> , 2002, 65, .	3.2	3
61	Spintronics: Transport Phenomena in Magnetic Nanostructures. <i>Springer Series in Materials Science</i> , 2007, , 59-89.	0.6	3
62	Adjusting the forming step for resistive switching in Nb ₂ O ₅ by ion irradiation. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2015, 33, 01A105.	1.2	3
63	Tailoring TMR Ratios by Ultrathin Magnetic Interlayers: A First-principles Investigation of Fe/MgO/Fe. <i>Materials Research Society Symposia Proceedings</i> , 2009, 1183, 61.	0.1	2
64	Influence of vanadium spin-polarization on the dissolution of hydrogen in vanadium. <i>Physical Review B</i> , 2009, 79, .	3.2	2
65	Sensitivity of PS/CoPd Janus particles to an external magnetic field. <i>RSC Advances</i> , 2021, 11, 17051-17057.	3.6	2
66	Landauer conductance of tunnel junctions: strong impact from boundary conditions. <i>Philosophical Magazine</i> , 2004, 84, 2949-2960.	1.6	1
67	Resistive switching in thermally oxidized titanium films. , 2013, , .		1
68	Describing chain-like assembly of ethoxygroup-functionalized organic molecules on Au(111) using high-throughput simulations. <i>Scientific Reports</i> , 2021, 11, 14649.	3.3	1
69	About noncollinear magnetic structures in FCC-Fe on Cu(100). <i>Journal of Magnetism and Magnetic Materials</i> , 2005, 290-291, 408-410.	2.3	0
70	How Many Fe layers Cause TMR?. <i>Materials Research Society Symposia Proceedings</i> , 2006, 941, 1.	0.1	0
71	Which states contribute to the tunneling current for large barrier thicknesses?. <i>Materials Research Society Symposia Proceedings</i> , 2006, 941, 1.	0.1	0
72	Anomalies in transition metal conductivity: Strong evidence for Fermi-velocity dominance. <i>Physical Review B</i> , 2008, 77, .	3.2	0

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73	Complex Band Structures of Spintronics Materials. Lecture Notes in Computational Science and Engineering, 2009, , 317-320.	0.3	0
74	Ab Initio Description of Thermoelectric Properties Based on the Boltzmann Theory. , 2015, , 187-221.		0