

# Peter Zahn

## List of Publications by Year in descending order

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74  
papers

2,075  
citations

279798

23  
h-index

243625

44  
g-index

76  
all docs

76  
docs citations

76  
times ranked

2671  
citing authors

#	ARTICLE	IF	CITATIONS
1	Sensitivity of PS/CoPd Janus particles to an external magnetic field. RSC Advances, 2021, 11, 17051-17057.	3.6	2
2	Describing chain-like assembly of ethoxygroup-functionalized organic molecules on Au(111) using high-throughput simulations. Scientific Reports, 2021, 11, 14649.	3.3	1
3	A combined experimental and theoretical study of 1,4-bis(phenylethynyl)-2,5-bis(ethoxy)benzene adsorption on Au(111). Surface Science, 2021, 712, 121877.	1.9	4
4	Electrical Characterization of Germanium Nanowires Using a Symmetric Hall Bar Configuration: Size and Shape Dependence. Nanomaterials, 2021, 11, 2917.	4.1	5
5	Elastic and piezoresistive properties of nickel carbides from first principles. Physical Review B, 2017, 95, .	3.2	8
6	<i>Ab initio</i> description of the thermoelectric properties of heterostructures in the diffusive limit of transport. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 672-683.	1.8	5
7	Nanostructure, thermoelectric properties, and transport theory of $V_2V_3$ and $V_2V_3$ /IV based superlattices and nanomaterials. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 662-671.	1.8	13
8	Ab Initio Description of Thermoelectric Properties Based on the Boltzmann Theory. , 2015, , 187-221.		0
9	Adjusting the forming step for resistive switching in Nb2O5 by ion irradiation. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2015, 33, 01A105.	1.2	3
10	Signature of the topological surface state in the thermoelectric properties of $\text{Bi}_2\text{Te}_3$ and $\text{Te}_3\text{Bi}$ . Physical Review B, 2014, 89, .		18
11	Local Ion Irradiation-Induced Resistive Threshold and Memory Switching in $\text{Nb}_2\text{O}_5/\text{NbO}_x$ Films. ACS Applied Materials & Interfaces, 2014, 6, 17474-17480.	8.0	50
12	Lorenz Function of $\text{Bi}_2\text{Te}_3/\text{Sb}_2\text{Te}_3$ Superlattices. Journal of Electronic Materials, 2013, 42, 1406-1410.	2.2	11
13	Resistive switching in thermally oxidized titanium films. , 2013, , .		1
14	Thermoelectric transport in strained Si and Si/Ge heterostructures. Journal of Physics Condensed Matter, 2012, 24, 275501.	1.8	27
15	PERFECT ALLOYS FOR SPIN HALL CURRENT-INDUCED MAGNETIZATION SWITCHING. Spin, 2012, 02, 1250010. Thermoelectric transport in $\text{Bi}_2\text{Te}_3$	1.3	18
16	$\text{Te}_3\text{Bi}$	3.2	56
17	First-principle calculations of the Berry curvature of Bloch states for charge and spin transport of electrons. Journal of Physics Condensed Matter, 2012, 24, 213202.	1.8	137
18	Switching Magnetization by $180^\circ$ with an Electric Field. Physical Review Letters, 2012, 108, 197206.	7.8	81

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19	Thermoelectric properties of porous silicon. Applied Physics A: Materials Science and Processing, 2012, 107, 789-794.	2.3	57
20	Calculating the Berry curvature of Bloch electrons using the KKR method. Physical Review B, 2011, 84, .	3.2	21
21	Effect of strain on the thermoelectric properties of silicon: an <i>ab initio</i> study. Journal of Physics Condensed Matter, 2011, 23, 295502.	1.8	46
22	Electronic structure and transport anisotropy of Bi <sub>2</sub> Te <sub>3</sub> and Sb <sub>2</sub> Te <sub>3</sub> . Physical Review B, 2011, 83, .	3.2	124
23	Electronic structure and transport anisotropy of Bi <sub>2</sub> Te <sub>3</sub> and Sb <sub>2</sub> Te <sub>3</sub> . Physical Review B, 2011, 83, .	3.2	75
24	Physical Methods for Cleaning and Disinfection of Surfaces. Food Engineering Reviews, 2011, 3, 171-188.	5.9	103
25	Evaluation of conduction eigenchannels of an adatom probed by an STM tip. Physical Review B, 2011, 83, .	3.2	15
26	Theory of real space imaging of Fermi surface parts. Physical Review B, 2011, 83, .	3.2	36
27	Correlating transmission and local electronic structure in planar junctions: A tool for analyzing transport calculations. Physical Review B, 2011, 83, .	3.2	5
28	Bi <sub>2</sub> Te <sub>3</sub> : implications of the rhombohedral <i>k</i> -space texture on the evaluation of the in-plane/out-of-plane conductivity anisotropy. Journal of Physics Condensed Matter, 2011, 23, 505504.	1.8	13
29	Spin polarization in photoelectron spectroscopy from antiferromagnets: Cr films on Fe(110) from first principles. Journal of Electron Spectroscopy and Related Phenomena, 2010, 182, 97-102.	1.7	6
30	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
31	Extrinsic Spin Hall Effect from First Principles. Physical Review Letters, 2010, 104, 186403.	7.8	125
32	Fully relativistic <i>ab initio</i> treatment of spin-flip scattering caused by impurities. Physical Review B, 2010, 81, .	3.2	22
33	Tailoring tunnel magnetoresistance by ultrathin Cr and Co interlayers: A first-principles investigation of Fe/MgO/Fe junctions. Physical Review B, 2010, 82, .	3.2	11
34	Spin Hall angle versus spin diffusion length: Tailored by impurities. Physical Review B, 2010, 81, .	3.2	90
35	Spin polarization on Fermi surfaces of metals by the KKR method. Physical Review B, 2009, 80, .	3.2	59
36	Tailoring TMR Ratios by Ultrathin Magnetic Interlayers: A First-principles Investigation of Fe/MgO/Fe. Materials Research Society Symposia Proceedings, 2009, 1183, 61.	0.1	2

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37	Physical origin of the incommensurate spin spiral structure in Mn <sub>3</sub> Si. Journal of Applied Physics, 2009, 105, .	2.5	11
38	Influence of vanadium spin-polarization on the dissolution of hydrogen in vanadium. Physical Review B, 2009, 79, .	3.2	2
39	Seeing the Fermi Surface in Real Space by Nanoscale Electron Focusing. Science, 2009, 323, 1190-1193.	12.6	96
40	Complex Band Structures of Spintronics Materials. Lecture Notes in Computational Science and Engineering, 2009, , 317-320.	0.3	0
41	Tunneling magnetoresistance with amorphous electrodes. Physical Review B, 2008, 77, .	3.2	17
42	Thickness dependence of the tunneling current in the coherent limit of transport. Physical Review B, 2008, 77, .	3.2	34
43	Anomalies in transition metal conductivity: Strong evidence for Fermi-velocity dominance. Physical Review B, 2008, 77, .	3.2	0
44	First-principles calculations of spin relaxation times of conduction electrons in Cu with nonmagnetic impurities. Physical Review B, 2008, 77, .	3.2	12
45	Mobility of conduction electrons in ultrathin Fe and Cu films on Si(111). Physical Review B, 2007, 75, .	3.2	11
46	Theoretical calculations of mobility enhancement in strained silicon. Physical Review B, 2007, 75, .	3.2	21
47	Tunneling Magnetoresistance on the Subnanometer Scale. Physical Review Letters, 2007, 99, 066804.	7.8	27
48	Spintronics: Transport Phenomena in Magnetic Nanostructures. Springer Series in Materials Science, 2007, , 59-89.	0.6	3
49	Manifestation of quantum confinement in transport properties of ultrathin metallic films. Thin Solid Films, 2007, 515, 6921-6926.	1.8	6
50	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
51	Interface structure and bias dependence of Fe <sup>2+</sup> •MgO <sup>2+</sup> •Fe tunnel junctions: Ab initio calculations. Physical Review B, 2006, 73, .	3.2	59
52	How Many Fe layers Cause TMR?. Materials Research Society Symposia Proceedings, 2006, 941, 1.	0.1	0
53	Microscopic origin of magnetoresistance. Materials Today, 2006, 9, 46-54.	14.2	146
54	Which states contribute to the tunneling current for large barrier thicknesses?. Materials Research Society Symposia Proceedings, 2006, 941, 1.	0.1	0

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55	Electronic structure, magnetism, and spin-dependent transport of CeMnNi <sub>4</sub> . Physical Review B, 2006, 73, .	3.2	13
56	Size effects and conductivity of ultrathin Cu films. Thin Solid Films, 2005, 473, 346-350.	1.8	13
57	About noncollinear magnetic structures in FCC-Fe on Cu(100). Journal of Magnetism and Magnetic Materials, 2005, 290-291, 408-410.	2.3	0
58	Influence of the interface structure on the bias dependence of tunneling magnetoresistance. Physical Review B, 2005, 72, .	3.2	77
59	Short-period oscillations in photoemission from thin films of Cr(100). Physical Review B, 2005, 72, .	3.2	4
60	Impurity scattering and quantum confinement in giant magnetoresistance systems: A comparative ab initio study. Physical Review B, 2005, 72, .	3.2	6
61	Ab initio study of the magnetic structure of fcc Fe grown on a Cu(001) substrate. Physical Review B, 2004, 70, .	3.2	13
62	Resistivity of hydrogen-loaded Fe/V and Mo/V (100) superlattices: The role of vanadium expansion. Physical Review B, 2004, 69, .	3.2	12
63	Landauer conductance of tunnel junctions: strong impact from boundary conditions. Philosophical Magazine, 2004, 84, 2949-2960.	1.6	1
64	Impurity scattering and quantum confinement in giant magnetoresistive systems. Physical Review B, 2003, 68, .	3.2	9
65	Spin-filter effect in metallic nanowires. Physical Review B, 2002, 66, .	3.2	18
66	Evolution of Co/Cu multilayer conductivity during growth: An ab initio study. Physical Review B, 2002, 65, .	3.2	14
67	Reliable prediction of giant magnetoresistance characteristics. Physical Review B, 2002, 65, .	3.2	3
68	Ab initio calculated electronic structure of metallic nanowires and nanotubes. Physical Review B, 2002, 66, .	3.2	24
69	Heat and charge transport properties of MgB <sub>2</sub> . Physica C: Superconductivity and Its Applications, 2001, 363, 6-12.	1.2	66
70	Ab initio calculation of the transmission coefficients from a superlattice electronic structure. Physical Review B, 2001, 63, .	3.2	10
71	Finite-size effects in giant magnetoresistance: An ab initio calculation. Physical Review B, 2001, 64, .	3.2	13
72	c(2 $\sqrt{2}$ ) interface alloys in Co/Cu multilayers: Influence on interlayer exchange coupling and giant magnetoresistance. Physical Review B, 2001, 63, .	3.2	12

#	ARTICLE	IF	CITATIONS
73	Giant magnetoresistance in uranium intermetallics: Ab initio calculations for $U_2Pd_2In$ and $U_2Pd_2Sn$ . <i>Physical Review B</i> , 1996, 54, 11985-11988.	3.2	16
74	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