Piotr Spiewak

List of Publications by Year
in descending order

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42 papers	713 citations	516561 16 h-index	580701 25 g-index
43 all docs	43 docs citations	43 times ranked	830 citing authors

#	Article	IF	Citations
1	Emergence of â^'s, â^'pâ€“d band inversion in zincblende gold iodide topological insulator and its thermoelectric properties. Journal of Physics Condensed Matter, 2021, 33, 155402.	0.7	5
2	Ag-based Thermal Interface Materials for GaN-on-Si Assembly Chips in Power Applications. , 2021, , .		3
3	Type-II GeAs/GaSe heterostructure as suitable candidate for solar power conversion efficiency. Solar Energy, 2021, 223, 87-99.	2.9	19
4	Hydrogen evolution reaction electrocatalysis trends of confined gallium phosphide with substitutional defects. International Journal of Hydrogen Energy, 2020, 45, 23928-23936.	3.8	10
5	O-assisted and pristine Au-Pt(100) surfaces: A platform for adsorption and decomposition of H2O. International Journal of Hydrogen Energy, 2020, 45, 18666-18675.	3.8	6
6	Thermal transport properties of boron nitride based materials: A review. Renewable and Sustainable Energy Reviews, 2020, 120, 109622.	8.2	84
7	Pressure-induced first order phase transition in bulk GeSe. Journal of Applied Physics, 2020, 127, .	1.1	12
8	Halogenation of SiGe monolayers: robust changes in electronic and thermal transport. Physical Chemistry Chemical Physics, 2019, 21, 19488-19498.	1.3	16
9	Anisotropy of thermal conductivity in In2Se3 nanostructures. Applied Surface Science, 2019, 494, 867-870.	3.1	15
10	Titanium-related color centers in diamond: a density functional theory prediction. Journal of Materials Chemistry C, 2018, 6, 5261-5268.	2.7	26
11	Hydrophobic Properties of Al₂O₃ Doped with Rareâ€Earth Metals: Ab Initio Modeling Studies. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700895.	0.8	4
12	Structural stability, dynamical stability, thermoelectric properties, and elastic properties of GeTe at high pressure. Physical Review B, 2018, 97, .	1.1	42
13	Understanding the behavior of electronic and phonon transports in germanium based two dimensional chalcogenides. Journal of Applied Physics, 2018, 124, .	1.1	22
14	Quantum behavior of hydrogen-vacancy complexes in diamond. Physical Review B, 2018, 98, .	1.1	15
15	Clustering of hydrogen, phosphorus, and vacancies in diamond: A density functional theory analysis. Physical Review B, 2018, 98, .	1.1	22
16	Hydrogen passivation of vacancies in diamond: Electronic structure and stability from ab initio calculations. MRS Advances, 2017, 2, 309-314.	0.5	7
17	Impacts of thermal stress and doping on intrinsic point defect properties and clustering during single crystal silicon and germanium growth from a melt. Journal of Crystal Growth, 2017, 474, 96-103.	0.7	2
18	Electronic structure of substitutionally doped diamond: Spin-polarized, hybrid density functional theory analysis. Diamond and Related Materials, 2017, 75, 146-151.	1.8	30

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19	Atomic-scale computational design of hydrophobic RE surface-doped Al2O3 and TiO2. Physical Chemistry Chemical Physics, 2017, 19, 21119-21126.	1.3	7
20	Electronic Structure and Transport Properties of Doped Lead Chalcogenides from First Principles. MRS Advances, 2016, 1, 4003-4010.	0.5	1
21	Electronic Structure and N-Type Doping in Diamond from First Principles. MRS Advances, 2016, 1, 1093-1098.	0.5	20
22	Decomposition of activated CO2 species on Ni(110): Role of surface diffusion in the reaction mechanism. Catalysis Communications, 2016, 74, 65-70.	1.6	25
23	Reviewâ€"Properties of Intrinsic Point Defects in Si and Ge Assessed by Density Functional Theory. ECS Journal of Solid State Science and Technology, 2016, 5, P3176-P3195.	0.9	16
24	Microdefects Modeling in Germanium Single Crystals. , 2016, , 101-111.		0
25	Plasticity of hexagonal systems: Split slip modes and inverse Peierls relation in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î±</mml:mi></mml:math>-Ti. Physical Review B, 2014, 89, .	1.1	35
26	Ab-initio molecular dynamics simulation of Î´-Bi3YO6. Solid State Ionics, 2013, 245-246, 43-48.	1.3	7
27	Formation and migration energies of the vacancy in Si calculated using the HSE06 range-separated hybrid functional. Physical Review B, 2013, 88, .	1.1	35
28	Ab-initio Simulation of Formation and Diffusion Energies of Intrinsic Point Defects in Ge. ECS Transactions, 2009, 16, 659-667.	0.3	1
29	On intrinsic point defect cluster formation during Czochralski crystal growth. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1906-1911.	0.8	11
30	Experimental and theoretical study of the thermal solubility of the vacancy in germanium. Physica B: Condensed Matter, 2009, 404, 4529-4532.	1.3	12
31	On the characterisation of grown-in defects in Czochralski-grown Si and Ge. Journal of Materials Science: Materials in Electronics, 2008, 19, 24-31.	1.1	6
32	Ab-initio simulation of self-interstitial in germanium. Materials Science in Semiconductor Processing, 2008, 11, 328-331.	1.9	17
33	First principles calculations of the formation energy and deep levels associated with the neutral and charged vacancy in germanium. Journal of Applied Physics, 2008, 103, .	1.1	25
34	A Comparison of Intrinsic Point Defect Properties in Si and Ge. Materials Research Society Symposia Proceedings, 2008, 1070, 1.	0.1	1
35	Simulation of Vacancy Cluster Formation and Binding Energies in Single Crystal Germanium. Materials Research Society Symposia Proceedings, 2007, 994, 1.	0.1	2
36	Ab Initio Analysis of Point Defects in Plane-Stressed Si or Ge Crystals. ECS Transactions, 2007, 11, 375-391.	0.3	10

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37	On the solubility and diffusivity of the intrinsic point defects in germanium. Journal of Applied Physics, 2007, 101, 036103.	1.1	74
38	Ab initio calculation of the formation energy of charged vacancies in germanium. Physica B: Condensed Matter, 2007, 401-402, 205-209.	1.3	21
39	Molecular dynamics simulation of intrinsic point defects in germanium. Journal of Crystal Growth, 2007, 303, 12-17.	0.7	15
40	Simulation of point defect diffusion in germanium. Physica B: Condensed Matter, 2006, 376-377, 257-261.	1.3	11
41	Simulation of intrinsic point defect properties and vacancy clustering during Czochralski germanium crystal growth. Materials Science in Semiconductor Processing, 2006, 9, 465-470.	1.9	6
42	Recent Progress in Understanding of Lattice Defects in Czochralski-Grown Germanium: Catching-up with Silicon. Solid State Phenomena, 2005, 108-109, 683-690.	0.3	14