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	Thermal transport properties of boron nitride based materials: A review. Renewable and Sustainable Energy Reviews, 2020, 120, 109622.	8.2	84
2	On the solubility and diffusivity of the intrinsic point defects in germanium. Journal of Applied Physics, 2007, 101, 036103.	1.1	74
3	Structural stability, dynamical stability, thermoelectric properties, and elastic properties of GeTe at high pressure. Physical Review B, 2018, 97, .	1.1	42
4	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
5	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
6	Electronic structure of substitutionally doped diamond: Spin-polarized, hybrid density functional theory analysis. Diamond and Related Materials, 2017, 75, 146-151.	1.8	30
7	Titanium-related color centers in diamond: a density functional theory prediction. Journal of Materials Chemistry C, 2018, 6, 5261-5268.	2.7	26
8	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
9	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
10	Understanding the behavior of electronic and phonon transports in germanium based two dimensional chalcogenides. Journal of Applied Physics, 2018, 124, .	1.1	22
11	Clustering of hydrogen, phosphorus, and vacancies in diamond: A density functional theory analysis. Physical Review B, 2018, 98, .	1.1	22
12	Ab initio calculation of the formation energy of charged vacancies in germanium. Physica B: Condensed Matter, 2007, 401-402, 205-209.	1.3	21
13	Electronic Structure and N-Type Doping in Diamond from First Principles. MRS Advances, 2016, 1, 1093-1098.	0.5	20
14	Type-II GeAs/GaSe heterostructure as suitable candidate for solar power conversion efficiency. Solar Energy, 2021, 223, 87-99.	2.9	19
15	Ab-initio simulation of self-interstitial in germanium. Materials Science in Semiconductor Processing, 2008, 11, 328-331.	1.9	17
16	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
17	Halogenation of SiGe monolayers: robust changes in electronic and thermal transport. Physical Chemistry Chemical Physics, 2019, 21, 19488-19498.	1.3	16
18	Molecular dynamics simulation of intrinsic point defects in germanium. Journal of Crystal Growth, 2007, 303, 12-17.	0.7	15

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19	Quantum behavior of hydrogen-vacancy complexes in diamond. Physical Review B, 2018, 98, .	1.1	15
20	Anisotropy of thermal conductivity in In2Se3 nanostructures. Applied Surface Science, 2019, 494, 867-870.	3.1	15
21	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
22	Experimental and theoretical study of the thermal solubility of the vacancy in germanium. Physica B: Condensed Matter, 2009, 404, 4529-4532.	1.3	12
23	Pressure-induced first order phase transition in bulk GeSe. Journal of Applied Physics, 2020, 127, .	1.1	12
24	Simulation of point defect diffusion in germanium. Physica B: Condensed Matter, 2006, 376-377, 257-261.	1.3	11
25	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
26	Ab Initio Analysis of Point Defects in Plane-Stressed Si or Ge Crystals. ECS Transactions, 2007, 11, 375-391.	0.3	10
27	Hydrogen evolution reaction electrocatalysis trends of confined gallium phosphide with substitutional defects. International Journal of Hydrogen Energy, 2020, 45, 23928-23936.	3.8	10
28	Ab-initio molecular dynamics simulation of Î´-Bi3YO6. Solid State Ionics, 2013, 245-246, 43-48.	1.3	7
29	Hydrogen passivation of vacancies in diamond: Electronic structure and stability from ab initio calculations. MRS Advances, 2017, 2, 309-314.	0.5	7
30	Atomic-scale computational design of hydrophobic RE surface-doped Al2O3 and TiO2. Physical Chemistry Chemical Physics, 2017, 19, 21119-21126.	1.3	7
31	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
32	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
33	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
34	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
35	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
36	Ag-based Thermal Interface Materials for GaN-on-Si Assembly Chips in Power Applications. , 2021, , .		3

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37	Simulation of Vacancy Cluster Formation and Binding Energies in Single Crystal Germanium. Materials Research Society Symposia Proceedings, 2007, 994, 1.	0.1	2
38	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
39	A Comparison of Intrinsic Point Defect Properties in Si and Ge. Materials Research Society Symposia Proceedings, 2008, 1070, 1.	0.1	1
40	Ab-initio Simulation of Formation and Diffusion Energies of Intrinsic Point Defects in Ge. ECS Transactions, 2009, 16, 659-667.	0.3	1
41	Electronic Structure and Transport Properties of Doped Lead Chalcogenides from First Principles. MRS Advances, 2016, 1, 4003-4010.	0.5	1
42	Microdefects Modeling in Germanium Single Crystals. , 2016, , 101-111.		0