

Hartwin Peelaers

List of Publications by Year in descending order

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57
papers

3,603
citations

201385

27
h-index

143772

57
g-index

60
all docs

60
docs citations

60
times ranked

4884
citing authors

#	ARTICLE	IF	CITATIONS
1	Effects of strain on band structure and effective masses in MoS ₂ . Physical Review B, 2012, 86, .	1.1	405
2	First-principles investigation of graphene fluoride and graphane. Physical Review B, 2010, 82, .	1.1	397
3	High-voltage field effect transistors with wide-bandgap $\text{In}^2\text{-Ga}_2\text{O}_3$ nanomembranes. Applied Physics Letters, 2014, 104, .	1.5	288
4	Brillouin zone and band structure of $\text{In}^2\text{-Ga}_2\text{O}_3$. Physica Status Solidi (B): Basic Research, 2015, 252, 828-832.	0.7	242
5	Hydrogenated cation vacancies in semiconducting oxides. Journal of Physics Condensed Matter, 2011, 23, 334212.	0.7	237
6	Structural and electronic properties of Ga ₂ O ₃ -Al ₂ O ₃ alloys. Applied Physics Letters, 2018, 112, .	1.5	198
7	Exciton-dominated Dielectric Function of Atomically Thin MoS ₂ Films. Scientific Reports, 2015, 5, 16996.	1.6	155
8	Deep acceptors and their diffusion in Ga ₂ O ₃ . APL Materials, 2019, 7, .	2.2	143
9	Nature and evolution of the band-edge states in MoS ₂ . From monolayer to bulk. Physical Review B, 2014, 90, .	1.1	138
10	MoS ₂ for transparent electronics. Physical Review B, 2015, 92, .	1.1	130
11	Fundamental limits on the electron mobility of $\text{In}^2\text{-Ga}_2\text{O}_3$. Journal of Physics Condensed Matter, 2017, 29, 234001.	0.7	99
12	Formation and Segregation Energies of B and P Doped and BP Codoped Silicon Nanowires. Nano Letters, 2006, 6, 2781-2784.	4.5	97
13	Fundamental limits on optical transparency of transparent conducting oxides: Free-carrier absorption in SnO ₂ . Applied Physics Letters, 2012, 100, .	1.5	93
14	Controlling n-Type Doping in MoO ₃ . Chemistry of Materials, 2017, 29, 2563-2567.	3.2	74
15	Vibrational properties of graphene fluoride and graphane. Applied Physics Letters, 2011, 98, .	1.5	68
16	Doping of Ga ₂ O ₃ with transition metals. Physical Review B, 2016, 94, .	1.1	61
17	Elastic Constants and Pressure-Induced Effects in MoS ₂ . Journal of Physical Chemistry C, 2014, 118, 12073-12076.	1.5	60
18	Phonon Band Structure of Si Nanowires: A Stability Analysis. Nano Letters, 2009, 9, 107-111.	4.5	58

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19	First-principles surface energies for monoclinic Ga ₂ O ₃ and Al ₂ O ₃ and consequences for cracking of (Al _x Ga _{1-x}) ₂ O ₃ . APL Materials, 2020, 8, .	2.2	53
20	Electronic and protonic conduction in LaFeO ₃ . Journal of Materials Chemistry A, 2017, 5, 15367-15379.	5.2	48
21	First-principles study of the mobility of SrTiO_3 . Physical Review B, 2014, 90, .	1.1	45
22	First-principles study of van der Waals interactions in MoS ₂ and MoO ₃ . Journal of Physics Condensed Matter, 2014, 26, 305502.	0.7	45
23	Sub-band-gap absorption in Ga ₂ O ₃ . Applied Physics Letters, 2017, 111, .	1.5	44
24	Lack of quantum confinement in Ga_2O_3 nanolayers. Physical Review B, 2017, 96, .	1.1	36
25	Properties of B and P doped Ge nanowires. Applied Physics Letters, 2007, 90, 263103.	1.5	35
26	Free-carrier absorption in transparent conducting oxides: Phonon and impurity scattering in SnO_2 . Physical Review B, 2015, 92, .	1.1	34
27	Mid-infrared interference coatings with excess optical loss below 10 ⁻⁶ ppm. Optica, 2021, 8, 686.	4.8	29
28	<i>Ab initio</i> study of enhanced thermal conductivity in ordered AlGaO ₃ alloys. Applied Physics Letters, 2019, 115, .	1.5	24
29	Orientation-dependent band offsets between (Al _x Ga _{1-x}) ₂ O ₃ and Ga ₂ O ₃ . Applied Physics Letters, 2020, 117, .	1.5	24
30	Effect of Titanium Induced Chemical Inhomogeneity on Crystal Structure, Electronic Structure, and Optical Properties of Wide Band Gap Ga ₂ O ₃ . Crystal Growth and Design, 2020, 20, 1422-1433.	1.4	21
31	Convergence of quasiparticle band structures of Si and Ge nanowires in the GW approximation and the validity of scissor shifts. Physical Review B, 2011, 83, .	1.1	20
32	First-principles calculations of hyperfine interaction, binding energy, and quadrupole coupling for shallow donors in silicon. Npj Computational Materials, 2020, 6, .	3.5	17
33	Hydrogen intercalation in MoS_2 . Physical Review B, 2016, 94, .	1.1	15
34	Electronic and dynamical properties of Si/Ge core-shell nanowires. Physical Review B, 2010, 82, .	1.1	14
35	First-principles study of direct and indirect optical absorption in BaSnO ₃ . Applied Physics Letters, 2018, 112, 062106.	1.5	14
36	Limitations of In ₂ O ₃ as a transparent conducting oxide. Applied Physics Letters, 2019, 115, .	1.5	14

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37	Phonons in Ge nanowires. Applied Physics Letters, 2009, 95, 122110.	1.5	12
38	Phonon- and charged-impurity-assisted indirect free-carrier absorption in Ga_2O_3 . Physical Review B, 2019, 100, .	1.1	11
39	Properties of orthorhombic Ga_2O_3 alloyed with In_2O_3 and Al_2O_3 . Applied Physics Letters, 2021, 119, .	1.5	11
40	Impact of electric-field dependent dielectric constants on two-dimensional electron gases in complex oxides. Applied Physics Letters, 2015, 107, .	1.5	10
41	First-principles study of electron-phonon interactions and transport in anatase TiO_2 . Physical Review B, 2019, 100, .	1.5	10
42	Hydrogen-Induced Degradation of NaMnO_2 . Chemistry of Materials, 2019, 31, 5224-5228.	3.2	10
43	Intra- and inter-conduction band optical absorption processes in $\hat{\Gamma}^2$ - Ga_2O_3 . Applied Physics Letters, 2020, 117, 072103.	1.5	10
44	Orthorhombic alloys of Ga_2O_3 and Al_2O_3 . Applied Physics Letters, 2020, 116, .	1.5	10
45	Mg doping and diffusion in (010) $\hat{\Gamma}^2$ - Ga_2O_3 films grown by plasma-assisted molecular beam epitaxy. Journal of Applied Physics, 2021, 130, .	1.1	10
46	Carrier-induced absorption as a mechanism for electrochromism in tungsten trioxide. MRS Communications, 2018, 8, 926-931.	0.8	9
47	First-principles study of doped Si and Ge nanowires. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 2169-2171.	1.3	7
48	Interplay between lattice dynamics and superconductivity in Nb_3Sn thin films. Physical Review B, 2013, 88, .	1.1	7
49	Ultrafast hole transfer from monolayer ReS_2 to thin-film F_8ZnPc . Applied Physics Letters, 2021, 118, .	1.5	6
50	Ultrafast dynamics of gallium vacancy charge states in Ga_2O_3 . Physical Review Research, 2021, 3, .	1.3	6
51	Multilayer transition-metal dichalcogenide channel Thin-Film Transistors. , 2012, , .		4
52	Free-Standing Si and Ge, and Ge/Si Core-Shell Semiconductor Nanowires. Acta Physica Polonica A, 2012, 122, 294-298.	0.2	3
53	Few-cycle optical field breakdown and damage of gallium oxide and gallium nitride. APL Materials, 2022, 10, .	2.2	3
54	First-principles study of transport in WO_3 . Physical Review B, 2020, 101, .	1.3	2

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55	Dynamics of scattering on a classical two-dimensional artificial atom. <i>Physical Review E</i> , 2007, 75, 036606.	0.8	1
56	<i>Ab initio</i> study of hydrogenic effective mass impurities in Si nanowires. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 095303.	0.7	1
57	First-Principles Calculations 1. Springer Series in Materials Science, 2020, , 309-328.	0.4	0