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	Few-cycle optical field breakdown and damage of gallium oxide and gallium nitride. APL Materials, 2022, 10, .	2.2	3
2	Ultrafast hole transfer from monolayer ReS2 to thin-film F8ZnPc. Applied Physics Letters, 2021, 118, .	1.5	6
3	Mid-infrared interference coatings with excess optical loss below 10â€‰â€‰ppm. Optica, 2021, 8, 686.	4.8	29
4	Ultrafast dynamics of gallium vacancy charge states in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Î²</mml:mi><mml:mtext>â^'</mml:mtext><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review Research, 2021, 3, .	1.3	6
5	Properties of orthorhombic Ga2O3 alloyed with In2O3 and Al2O3. Applied Physics Letters, 2021, 119, .	1.5	11
6	Mg doping and diffusion in (010) Î²-Ga2O3 films grown by plasma-assisted molecular beam epitaxy. Journal of Applied Physics, 2021, 130, .	1.1	10
7	First-principles calculations of hyperfine interaction, binding energy, and quadrupole coupling for shallow donors in silicon. Npj Computational Materials, 2020, 6, .	3.5	17
8	First-principles surface energies for monoclinic Ga2O3 and Al2O3 and consequences for cracking of (AlxGa1â^'x)2O3. APL Materials, 2020, 8, .	2.2	53
9	Intra- and inter-conduction band optical absorption processes in Î²-Ga2O3. Applied Physics Letters, 2020, 117, 072103.	1.5	10
10	Orientation-dependent band offsets between (AlxGa1â^'x)2O3 and Ga2O3. Applied Physics Letters, 2020, 117, .	1.5	24
11	Orthorhombic alloys of Ga2O3 and Al2O3. Applied Physics Letters, 2020, 116, .	1.5	10
12	First-principles study of transport in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>WO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review B, 2020, 101, .	1.1	2
13	Effect of Titanium Induced Chemical Inhomogeneity on Crystal Structure, Electronic Structure, and Optical Properties of Wide Band Gap Ga₂O₃. Crystal Growth and Design, 2020, 20, 1422-1433.	1.4	21
14	First-Principles Calculations 1. Springer Series in Materials Science, 2020, , 309-328.	0.4	0
15	Phonon- and charged-impurity-assisted indirect free-carrier absorption in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">Ga</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review B, 2019, 100, .	1.1	11
16	First-principles study of electron-phonon interactions and transport in anatase <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi>TiO</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2019, 100, .	1.1	10
17	Deep acceptors and their diffusion in Ga2O3. APL Materials, 2019, 7, .	2.2	143
18	Limitations of In2O3 as a transparent conducting oxide. Applied Physics Letters, 2019, 115, .	1.5	14

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19	Hydrogen-Induced Degradation of NaMnO₂. Chemistry of Materials, 2019, 31, 5224-5228.	3.2	10
20	Ab initio study of enhanced thermal conductivity in ordered AlGaO3 alloys. Applied Physics Letters, 2019, 115, .	1.5	24
21	First-principles study of direct and indirect optical absorption in BaSnO3. Applied Physics Letters, 2018, 112, 062106.	1.5	14
22	Carrier-induced absorption as a mechanism for electrochromism in tungsten trioxide. MRS Communications, 2018, 8, 926-931.	0.8	9
23	Structural and electronic properties of Ga2O3-Al2O3 alloys. Applied Physics Letters, 2018, 112, .	1.5	198
24	Ab initio study of hydrogenic effective mass impurities in Si nanowires. Journal of Physics Condensed Matter, 2017, 29, 095303.	0.7	1
25	Controlling n-Type Doping in MoO₃. Chemistry of Materials, 2017, 29, 2563-2567.	3.2	74
26	Fundamental limits on the electron mobility ofÎ²-Ga₂O₃. Journal of Physics Condensed Matter, 2017, 29, 234001.	0.7	99
27	Lack of quantum confinement in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Ga</mml:mi><mml:mn>2</mml:mn></mml:mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math> nanolayers. Physical Review B, 2017, 96, .	1.1	36
28	Sub-band-gap absorption in Ga2O3. Applied Physics Letters, 2017, 111, .	1.5	44
29	Electronic and protonic conduction in LaFeO₃. Journal of Materials Chemistry A, 2017, 5, 15367-15379.	5.2	48
30	Hydrogen intercalation in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml Physical Review B, 2016, 94, .	1.1	15
31	Doping of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Ga</mml:mi><mml:mn>2</mml:mn></mml:mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math> with transition metals. Physical Review B, 2016, 94, .	1.1	61
32	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mrow><mml:mo>(</mml:mo> for transparent electronics. Physical Review B, 2015, 92, .	1.1	130
33	Free-carrier absorption in transparent conducting oxides: Phonon and impurity scattering in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SnO</mml:mi><mml:mn>2</mml:mn></mml:msub></mml Physical Review B, 2015, 92, .	1.1	34
34	Impact of electric-field dependent dielectric constants on two-dimensional electron gases in complex oxides. Applied Physics Letters, 2015, 107, .	1.5	10
35	Exciton-dominated Dielectric Function of Atomically Thin MoS2 Films. Scientific Reports, 2015, 5, 16996.	1.6	155
36	Brillouin zone and band structure of Î²â€Ga₂O₃. Physica Status Solidi (B): Basic Research, 2015, 252, 828-832.	0.7	242

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37	Nature and evolution of the band-edge states in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> From monolayer to bulk. Physical Review B, 2014, 90, .	1.1	138
38	First-principles study of the mobility of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">SrTiO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review B, 2014, 90, .	1.1	45
39	First-principles study of van der Waals interactions in MoS₂and MoO₃. Journal of Physics Condensed Matter, 2014, 26, 305502.	0.7	45
40	High-voltage field effect transistors with wide-bandgap Î²-Ga2O3 nanomembranes. Applied Physics Letters, 2014, 104, .	1.5	288
41	Elastic Constants and Pressure-Induced Effects in MoS₂. Journal of Physical Chemistry C, 2014, 118, 12073-12076.	1.5	60
42	Interplay between lattice dynamics and superconductivity in Nb<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>Sn thin films. Physical Review B, 2013, 88, .	1.1	7
43	Effects of strain on band structure and effective masses in MoS<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2012, 86, .	1.1	405
44	Multilayer transition-metal dichalcogenide channel Thin-Film Transistors. , 2012, , .		4
45	Fundamental limits on optical transparency of transparent conducting oxides: Free-carrier absorption in SnO2. Applied Physics Letters, 2012, 100, .	1.5	93
46	Free-Standing Si and Ge, and Ge/Si Core-Shell Semiconductor Nanowires. Acta Physica Polonica A, 2012, 122, 294-298.	0.2	3
47	Convergence of quasiparticle band structures of Si and Ge nanowires in the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="italic">GW</mml:mi></mml:mrow></mml:math>approximation and the validity of scissor shifts. Physical Review B, 2011, 83, .	1.1	20
48	Hydrogenated cation vacancies in semiconducting oxides. Journal of Physics Condensed Matter, 2011, 23, 334212.	0.7	237
49	Vibrational properties of graphene fluoride and graphane. Applied Physics Letters, 2011, 98, .	1.5	68
50	Electronic and dynamical properties of Si/Ge core-shell nanowires. Physical Review B, 2010, 82, .	1.1	14
51	First-principles investigation of graphene fluoride and graphane. Physical Review B, 2010, 82, .	1.1	397
52	Phonons in Ge nanowires. Applied Physics Letters, 2009, 95, 122110.	1.5	12
53	Phonon Band Structure of Si Nanowires: A Stability Analysis. Nano Letters, 2009, 9, 107-111.	4.5	58
54	First-principles study of doped Si and Ge nanowires. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 2169-2171.	1.3	7

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55	Dynamics of scattering on a classical two-dimensional artificial atom. Physical Review E, 2007, 75, 036606.	0.8	1
56	Properties of B and P doped Ge nanowires. Applied Physics Letters, 2007, 90, 263103.	1.5	35
57	Formation and Segregation Energies of B and P Doped and BP Codoped Silicon Nanowires. Nano Letters, 2006, 6, 2781-2784.	4.5	97