Claudia RÃ¶dl

List of Publications by Year
in descending order

32 papers	2,343 citations	236925 25 h-index	414414 32 g-index
33 all docs	33 docs citations	33 times ranked	3037 citing authors

#	Article	IF	Citations
1	Quasiparticle band structures of the antiferromagnetic transition-metal oxides MnO, FeO, CoO, and NiO. Physical Review B, 2009, 79, .	3.2	243
2	Direct-bandgap emission from hexagonal Ge and SiGe alloys. Nature, 2020, 580, 205-209.	27.8	231
3	Branch-point energies and band discontinuities of III-nitrides and III-/II-oxides from quasiparticle band-structure calculations. Applied Physics Letters, 2009, 94, .	3.3	177
4	First-Principles Optical Spectra for<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>F</mml:mi></mml:math>Centers in MgO. Physical Review Letters, 2012, 108, 126404.	7.8	157
5	Tin dioxide from first principles: Quasiparticle electronic states and optical properties. Physical Review B, 2011, 83, .	3.2	145
6	Optical and energy-loss spectra of MgO, ZnO, and CdO from<i>ab initio</i>many-body calculations. Physical Review B, 2009, 80, .	3.2	142
7	Efficient<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="script">O</mml:mi><mml:mrow><mml:mo>(</mml:mo><mml:mrow><mml:msup><mml:mi>N</mml:mi><mml:mn>2</m to solve the Bethe-Salpeter equation for excitonic bound states. Physical Review B, 2008, 78, .	3.2	117
8	Crystalline and magnetic anisotropy of the 3<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>d</mml:mi></mml:math>-transition metal monoxides MnO, FeO, CoO, and NiO. Physical Review B, 2012, 86, .	3.2	97
9	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">Li</mml:mi><mml:mi mathvariant="normal">Nb</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math>ground- and excited-state properties from first-principles calculations. Physical Review B, 2008, 77, .	3.2	86
10	<i>Ab initio</i>theory of excitons and optical properties for spin-polarized systems: Application to antiferromagnetic MnO. Physical Review B, 2008, 77, .	3.2	79
11	Bandâ€structure and opticalâ€transition parameters of wurtzite MgO, ZnO, and CdO from quasiparticle calculations. Physica Status Solidi (B): Basic Research, 2009, 246, 2150-2153.	1.5	68
12	Energetic stability and magnetic properties of MnO in the rocksalt, wurtzite, and zinc-blende structures: Influence of exchange and correlation. Physical Review B, 2010, 82, .	3.2	62
13	Band discontinuities at Si-TCO interfaces from quasiparticle calculations: Comparison of two alignment approaches. Physical Review B, 2012, 85, .	3.2	62
14	Optical Absorption in Degenerately Doped Semiconductors: Mott Transition or Mahan Excitons?. Physical Review Letters, 2011, 107, 236405.	7.8	61
15	Electronic and optical properties of Mg_{<i>x</i>}Zn_{1â^’<i>x</i>}O and Cd_{<i>x</i>}Zn_{1â^’<i>x</i>}O from<i>ab initio</i>calculations. New Journal of Physics, 2011, 13, 085012.	2.9	60
16	Optical and energy-loss spectra of the antiferromagnetic transition metal oxides MnO, FeO, CoO, and NiO including quasiparticle and excitonic effects. Physical Review B, 2012, 86, .	3.2	59
17	Strain influence on valence-band ordering and excitons in ZnO: Anab initiostudy. Applied Physics Letters, 2007, 91, 241915.	3.3	55
18	Wurtzite silicon as a potential absorber in photovoltaics: Tailoring the optical absorption by applying strain. Physical Review B, 2015, 92, .	3.2	54

#	Article	IF	Citations
19	<i>Ab initio</i>description of heterostructural alloys: Thermodynamic and structural properties of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Mg</mml:mtext></mml:mrow><mml:mi>x</mml:mi></mml:msub xmlns:mml="http://www.w3.org/1998/Math/MathM. Physical Review B, 2010, 81, .	3.2	49
20	Band lineup between silicon and transparent conducting oxides. Applied Physics Letters, 2010, 97, .	3.3	48
21	Quasiparticle excitations in the photoemission spectrum of CuO from first principles: A<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>G</mml:mi><mml:mi>W</mml:mi></mml:mrow></mml:m Physical Review B, 2015, 91, .	3.2	48
22	Interplay of excitonic effects and van Hove singularities in optical spectra: CaO and AlN polymorphs. Physical Review B, 2011, 84, .	3.2	46
23	Accurate electronic and optical properties of hexagonal germanium for optoelectronic applications. Physical Review Materials, 2019, 3, .	2.4	41
24	Photoemission spectra and effective masses of nâ€•and pâ€•type oxide semiconductors from first principles: ZnO, CdO, SnO_2, MnO, and NiO. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 74-81.	1.8	40
25	Ab-Initio Studies of Electronic and Spectroscopic Properties of MgO, ZnO and CdO. Journal of the Korean Physical Society, 2008, 53, 2811-2815.	0.7	26
26	The ground state of two-dimensional silicon. 2D Materials, 2018, 5, 035010.	4.4	25
27	Stable Ordered Phases of Cuprous Iodide with Complexes of Copper Vacancies. Chemistry of Materials, 2019, 31, 7877-7882.	6.7	17
28	Efficient strain-induced light emission in lonsdaleite germanium. Physical Review Materials, 2021, 5, .	2.4	16
29	Influence of Strong Electron Correlation on Magnetism in Transition-Metal Doped Si Nanocrystals. Journal of Chemical Theory and Computation, 2010, 6, 353-358.	5.3	11
30	Low-energy electronic excitations and band-gap renormalization in CuO. Physical Review B, 2017, 95, .	3.2	7
31	Layered CuI: a path to 2D p-type transparent conducting materials. Journal of Materials Chemistry C, 2021, 9, 11284-11291.	5.5	7
32	From pseudo-direct hexagonal germanium to direct silicon-germanium alloys. Physical Review Materials, 2021, 5, .	2.4	7