

Catherine Stampfl

List of Publications by Year in descending order

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papers

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docs citations

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times ranked

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#	ARTICLE	IF	CITATIONS
1	Density-functional calculations for III-V nitrides using the local-density approximation and the generalized gradient approximation. <i>Physical Review B</i> , 1999, 59, 5521-5535.	1.1	641
2	Electronic structure and physical properties of early transition metal mononitrides: Density-functional theory LDA, GGA, and screened-exchange LDA FLAPW calculations. <i>Physical Review B</i> , 2001, 63, .	1.1	454
3	Phonon- Versus Electron-Mediated Desorption and Oxidation of CO on Ru(0001). <i>Science</i> , 1999, 285, 1042-1045.	6.0	443
4	Energetics and electronic structure of stacking faults in AlN, GaN, and InN. <i>Physical Review B</i> , 1998, 57, R15052-R15055.	1.1	298
5	Thermodynamic stability and structure of copper oxide surfaces: A first-principles investigation. <i>Physical Review B</i> , 2007, 75, .	1.1	275
6	Oxygen adsorption on Ag(111): A density-functional theory investigation. <i>Physical Review B</i> , 2002, 65, .	1.1	256
7	Converged properties of clean metal surfaces by all-electron first-principles calculations. <i>Surface Science</i> , 2006, 600, 703-715.	0.8	252
8	Oxygen adsorption and stability of surface oxides on Cu(111): A first-principles investigation. <i>Physical Review B</i> , 2006, 73, .	1.1	248
9	Water adsorption on the stoichiometric and reduced CeO ₂ (111) surface: a first-principles investigation. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 9188.	1.3	229
10	Theoretical investigation of native defects, impurities, and complexes in aluminum nitride. <i>Physical Review B</i> , 2002, 65, .	1.1	225
11	Structure and Stability of a High-Coverage(1 $\bar{1}$ –1)Oxygen Phase on Ru(0001). <i>Physical Review Letters</i> , 1996, 77, 3371-3374.	2.9	220
12	Role of Embedded Clustering in Dilute Magnetic Semiconductors: Cr Doped GaN. <i>Physical Review Letters</i> , 2005, 95, 256404.	2.9	212
13	Native defects and impurities in InN: First-principles studies using the local-density approximation and self-interaction and relaxation-corrected pseudopotentials. <i>Physical Review B</i> , 2000, 61, R7846-R7849.	1.1	209
14	Robotics, Smart Wearable Technologies, and Autonomous Intelligent Systems for Healthcare During the COVID-19 Pandemic: An Analysis of the State of the Art and Future Vision. <i>Advanced Intelligent Systems</i> , 2020, 2, 2000071.	3.3	204
15	Theory of doping and defects in III-V nitrides. <i>Journal of Crystal Growth</i> , 1998, 189-190, 505-510.	0.7	202
16	Catalysis and corrosion: the theoretical surface-science context. <i>Surface Science</i> , 2002, 500, 368-394.	0.8	197
17	First-Principles Theory of Surface Thermodynamics and Kinetics. <i>Physical Review Letters</i> , 1999, 83, 2993-2996.	2.9	181
18	Why is a Noble Metal Catalytically Active? The Role of the O-Ag Interaction in the Function of Silver as an Oxidation Catalyst. <i>Physical Review Letters</i> , 2003, 90, 256102.	2.9	178

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19	Insights into the function of silver as an oxidation catalyst by ab initio atomistic thermodynamics. <i>Physical Review B</i> , 2003, 68, .	1.1	178
20	Adsorption of Xe Atoms on Metal Surfaces: New Insights from First-Principles Calculations. <i>Physical Review Letters</i> , 2003, 90, 066104.	2.9	168
21	First-principles investigation of quantum emission from hBN defects. <i>Nanoscale</i> , 2017, 9, 13575-13582.	2.8	167
22	Role of Subsurface Oxygen in Oxide Formation at Transition Metal Surfaces. <i>Physical Review Letters</i> , 2002, 89, 096103.	2.9	166
23	Surface core-level shifts of clean and oxygen-covered Ru(0001). <i>Physical Review B</i> , 2001, 63, .	1.1	163
24	Identification of stable and metastable adsorption sites of K adsorbed on Al(111). <i>Physical Review Letters</i> , 1992, 69, 1532-1535.	2.9	161
25	Theoretical study of O adlayers on Ru(0001). <i>Physical Review B</i> , 1996, 54, 2868-2872.	1.1	160
26	Stability and morphology of cerium oxide surfaces in an oxidizing environment: A first-principles investigation. <i>Journal of Chemical Physics</i> , 2009, 131, .	1.2	150
27	Doping of Al _x Ga _{1-x} N. <i>Applied Physics Letters</i> , 1998, 72, 459-461.	1.5	149
28	Subsurface oxygen and surface oxide formation at Ag(111): A density-functional theory investigation. <i>Physical Review B</i> , 2003, 67, .	1.1	135
29	Density functional study of oxygen on Cu(100) and Cu(110) surfaces. <i>Physical Review B</i> , 2010, 81, .	1.1	130
30	High-Fidelity Bilateral Teleoperation Systems and the Effect of Multimodal Haptics. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2007, 37, 1512-1528.	5.5	127
31	Cohesive properties of group-III nitrides: A comparative study of all-electron and pseudopotential calculations using the generalized gradient approximation. <i>Physical Review B</i> , 2002, 65, .	1.1	126
32	Superhard Nitride-Based Nanocomposites: Role of Interfaces and Effect of Impurities. <i>Physical Review Letters</i> , 2006, 97, 086102.	2.9	122
33	Anomalous Behavior of Ru for Catalytic Oxidation: A Theoretical Study of the Catalytic Reaction CO + 1/2 O ₂ → CO ₂ . <i>Physical Review Letters</i> , 1997, 78, 1500-1503.	2.9	121
34	Atomistic description of oxide formation on metal surfaces: the example of ruthenium. <i>Chemical Physics Letters</i> , 2002, 352, 311-317.	1.2	120
35	Metastable precursors during the oxidation of the Ru(0001) surface. <i>Physical Review B</i> , 2002, 65, .	1.1	119
36	First-principles investigations of the structure and stability of oxygen adsorption and surface oxide formation at Au(111). <i>Physical Review B</i> , 2007, 76, .	1.1	119

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37	A first-principles study of the effects of atom impurities, defects, strain, electric field and layer thickness on the electronic and magnetic properties of the C2N nanosheet. Carbon, 2020, 157, 371-384.	5.4	114
38	Native defect-induced multifarious magnetism in nonstoichiometric cuprous oxide: First-principles study of bulk and surface properties of Cu_{1-x}O . Physical Review B, 2009, 79, .	1.1	109
39	Surface processes and phase transitions from ab initio atomistic thermodynamics and statistical mechanics. Catalysis Today, 2005, 105, 17-35.	2.2	108
40	Magnetic Metastability in Tetrahedrally Bonded Magnetic III-Nitride Semiconductors. Physical Review Letters, 2006, 97, 016402.	2.9	105
41	Thermodynamic and spectroscopic properties of oxygen on silver under an oxygen atmosphere. Physical Chemistry Chemical Physics, 2015, 17, 9288-9312.	1.3	103
42	Properties of the gold oxides Au_2O_3 and Au_2O : First-principles investigation. Physical Review B, 2007, 75, .	1.1	101
43	Brønsted acid sites based on penta-coordinated aluminum species. Nature Communications, 2016, 7, 13820.	5.8	99
44	Metallic to insulating nature of Ta_xN_x : Role of Ta and N vacancies. Physical Review B, 2003, 67, .	1.1	98
45	Hydrogen adsorption capacity of adatoms on double carbon vacancies of graphene: A trend study from first principles. Physical Review B, 2013, 87, .	1.1	98
46	Stable and metastable structures of the multiphase tantalum nitride system. Physical Review B, 2005, 71, .	1.1	97
47	Xe adsorption on metal surfaces: First-principles investigations. Physical Review B, 2005, 72, .	1.1	94
48	Geometry and diameter dependence of the electronic and physical properties of GaN nanowires from first principles. Physical Review B, 2008, 77, .	1.1	88
49	The role of titanium nitride supports for single-atom platinum-based catalysts in fuel cell technology. Physical Chemistry Chemical Physics, 2012, 14, 16552.	1.3	88
50	Alloy Catalyst in a Reactive Environment: The Example of Ag-Cu Particles for Ethylene Epoxidation. Physical Review Letters, 2010, 104, 035503.	2.9	86
51	THEORY OF ALKALI-METAL ADSORPTION ON CLOSE-PACKED METAL SURFACES. Surface Review and Letters, 1995, 02, 317-343.	0.5	76
52	LEED structural analysis of $\text{Al}(111)\text{-K}(1\sqrt{3}\sqrt{3})\text{R}30^\circ$: Identification of stable and metastable adsorption sites. Physical Review B, 1994, 49, 4959-4972.	1.1	74
53	First-principles investigation of nonmetal doped single-layer BiOBr as a potential photocatalyst with a low recombination rate. Physical Chemistry Chemical Physics, 2020, 22, 15354-15364.	1.3	74
54	Insights into the Electronic Structure of the Oxygen Species Active in Alkene Epoxidation on Silver. ACS Catalysis, 2015, 5, 5846-5850.	5.5	71

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55	Evaluation of van der Waals density functionals for layered materials. <i>Physical Review Materials</i> , 2018, 2, .	0.9	71
56	Hardness analysis of cubic metal mononitrides from first principles. <i>Physical Review B</i> , 2012, 85, .	1.1	70
57	Structure and properties of TiN(111)-Si ₃ N ₄ -TiN(111) interfaces in superhard nanocomposites: First-principles investigations. <i>Physical Review B</i> , 2006, 74, .	1.1	69
58	Cooperation of Ni and CaO at Interface for CO ₂ Reforming of CH ₄ : A Combined Theoretical and Experimental Study. <i>ACS Catalysis</i> , 2019, 9, 10060-10069.	5.5	68
59	The DNA-binding Domain of the Hexameric Arginine Repressor. <i>Journal of Molecular Biology</i> , 1995, 254, 150-162.	2.0	67
60	A Dirac-semimetal two-dimensional BeN ₄ : Thickness-dependent electronic and optical properties. <i>Applied Physics Letters</i> , 2021, 118, .	1.5	64
61	Alkali-metal adsorption on Al(111) and Al(100). <i>Surface Science</i> , 1994, 307-309, 8-15.	0.8	62
62	Surface oxides of the oxygen-copper system: Precursors to the bulk oxide phase?. <i>Surface Science</i> , 2007, 601, 5809-5813.	0.8	60
63	Trends in adsorption of noble gases He, Ne, Ar, Kr, and Xe on Pd(111). <i>Physical Review B</i> , 2008, 77, .	1.1	59
64	Codoping of aluminum and gallium with nitrogen in ZnO: A comparative first-principles investigation. <i>Physical Review B</i> , 2009, 79, .	1.1	59
65	Density-functional theory study of the catalytic oxidation of CO over transition metal surfaces. <i>Surface Science</i> , 1999, 433-435, 119-126.	0.8	58
66	Mechanism and control of the metal-to-insulator transition in rocksalt tantalum nitride. <i>Physical Review B</i> , 2002, 65, .	1.1	57
67	Structural analysis of the two c(2 $\sqrt{2}$ \times 2) phases of Na adsorbed on Al(100). <i>Surface Science</i> , 1995, 330, 182-192.	0.8	55
68	Efficient Prediction of Structural and Electronic Properties of Hybrid 2D Materials Using Complementary DFT and Machine Learning Approaches. <i>Advanced Theory and Simulations</i> , 2019, 2, 1800128.	1.3	55
69	Magnetism of Co-doped ZnO epitaxially grown on a ZnO substrate. <i>Physical Review B</i> , 2012, 85, .	1.1	54
70	Sensing sulfur-containing gases using titanium and tin decorated zigzag graphene nanoribbons from first-principles. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 6925-6932.	1.3	54
71	Low-energy electron-diffraction analysis of the (1 \times 1) S adsorbate structure on the Pd(111) surface. <i>Surface Science</i> , 1994, 317, 84-98.	0.8	52
72	Theoretical analysis of the electronic structure of the stable and metastable c(2 $\sqrt{2}$ \times 2) phases of Na on Al(001): Comparison with angle-resolved ultraviolet photoemission spectra. <i>Physical Review B</i> , 1998, 57, 15251-15260.	1.1	52

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73	Formation and Structural Analysis of a Surface Alloy: Al(111)-(2 Å– 2)-Na. <i>Physical Review Letters</i> , 1995, 74, 1617-1620.	2.9	51
74	Stability, structure, and electronic properties of chemisorbed oxygen and thin surface oxides on Ir(111). <i>Physical Review B</i> , 2008, 78, .	1.1	51
75	Shape and surface structure of gold nanoparticles under oxidizing conditions. <i>Physical Review B</i> , 2008, 77, .	1.1	49
76	Control of C ₃ N ₄ and C ₄ N ₃ carbon nitride nanosheets™ electronic and magnetic properties through embedded atoms. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 2249-2261.	1.3	49
77	Strain, electric-field and functionalization induced widely tunable electronic properties in MoS ₂ /BC ₃ , /C ₃ N ₄ and /SC ₃ N ₄ van der Waals heterostructures. <i>Nanotechnology</i> , 2020, 31, 295202.	1.3	48
78	Effect of electric field and vertical strain on the electro-optical properties of the MoSi ₂ N ₄ bilayer: A first-principles calculation. <i>Journal of Applied Physics</i> , 2021, 129, .	1.1	48
79	Surface properties of the refractory metal-nitride semiconductor ScN: Screened-exchange LDA-FLAPW investigations. <i>Physical Review B</i> , 2002, 65, .	1.1	47
80	Neutral and charged embedded clusters of Mn in doped GaN from first principles. <i>Physical Review B</i> , 2007, 76, .	1.1	46
81	Role of oxygen in TiN(111)–Si ₃ N ₄ /TiN(111) interfaces: Implications for superhard nanocrystalline TiN–Si ₃ N ₄ nanocomposites. <i>Physical Review B</i> , 2006, 74, .	1.1	45
82	Mechanical properties of zirconia, doped and undoped yttria-stabilized cubic zirconia from first-principles. <i>Journal of Physics and Chemistry of Solids</i> , 2018, 122, 51-71.	1.9	45
83	Nitrogen vacancies in InN: Vacancy clustering and metallic bonding from first principles. <i>Physical Review B</i> , 2008, 77, .	1.1	43
84	First-principles investigation of Ag-Cu alloy surfaces in an oxidizing environment. <i>Physical Review B</i> , 2008, 77, .	1.1	43
85	Ab initio lattice dynamics and thermal expansion of Cu_2 . <i>Physical Review B</i> , 2009, 80, .	1.1	43
86	Band gap engineering of wurtzite and zinc-blende GaN/AlN superlattices from first principles. <i>Journal of Applied Physics</i> , 2010, 108, .	1.1	43
87	Magic numbers of nanoholes in graphene: Tunable magnetism and semiconductivity. <i>Physical Review B</i> , 2011, 84, .	1.1	43
88	Multiple CO ₂ capture in stable metal-doped graphene: a theoretical trend study. <i>RSC Advances</i> , 2015, 5, 50975-50982.	1.7	42
89	Half-Metallicity and Efficient Spin Injection in AlN/GaN–Cr(0001) Heterostructure. <i>Physical Review Letters</i> , 2005, 94, 146602.	2.9	41
90	Embedded clustering in Cr-doped AlN: Evidence for general behavior in dilute magnetic III-nitride semiconductors. <i>Journal of Applied Physics</i> , 2007, 101, 103917.	1.1	40

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91	Structure and stability of transition metal nitride interfaces from first-principles: AlN/VN, AlN/TiN, and VN/TiN. Applied Surface Science, 2012, 258, 5638-5645.	3.1	40
92	First principles study of 3d transition metal doped Cu_3N monolayers. Journal of Magnetism and Magnetic Materials, 2012, 324, 3138-3143.	1.1	40
93	Hybrid functional calculations of point defects and hydrogen in SrZrO_3 . Physical Review B, 2014, 89, .	1.1	40
94	Exploiting the Novel Electronic and Magnetic Structure of C_3N via Functionalization and Conformation. Advanced Electronic Materials, 2019, 5, 1900459.	2.6	40
95	Band-gap control of graphenelike borocarbonitride gC_xN_y bilayers by electrical gating. Physical Review B, 2020, 102, .	1.1	40
96	Nitrogen adsorption and thin surface nitrides on Cu(111) from first-principles. Surface Science, 2007, 601, 4775-4785.	0.8	39
97	Resolving Deactivation Pathways of Co Porphyrin-Based Electrocatalysts for CO_2 Reduction in Aqueous Medium. ACS Catalysis, 2021, 11, 3715-3729.	5.5	39
98	Energy barriers and chemical properties in the coadsorption of carbon monoxide and oxygen on Ru(0001). Physical Review B, 2002, 65, .	1.1	38
99	Spatial distribution and magnetism in poly-Cr-doped GaN from first principles. Physical Review B, 2007, 75, .	1.1	38
100	Morphology of copper nanoparticles in a nitrogen atmosphere: A first-principles investigation. Physical Review B, 2008, 77, .	1.1	38
101	Multiferroic crossover in perovskite oxides. Physical Review B, 2016, 93, .	1.1	38
102	Embedding of atoms into the nanopore sites of the C_6N_8 porous carbon nitride monolayers with tunable electronic properties. Physical Chemistry Chemical Physics, 2020, 22, 6418-6433.	1.3	38
103	The Electronic, Optical, and Thermoelectric Properties of Monolayer PbTe and the Tunability of the Electronic Structure by External Fields and Defects. Physica Status Solidi (B): Basic Research, 2020, 257, 2000182.	0.7	38
104	Machine learning the band gap properties of kesterite I_2V_4 quaternary compounds for photovoltaics applications. Physical Review Materials, 2018, 2, .	0.9	38
105	Doping of $\text{Al}_x\text{Ga}_{1-x}\text{N}$ alloys. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1999, 59, 253-257.	1.7	37
106	Theory of Adsorption on Metal Substrates. Handbook of Surface Science, 2000, , 285-356.	0.3	37
107	Ag-Cu alloy surfaces in an oxidizing environment: A first-principles study. Surface Science, 2009, 603, 1467-1475.	0.8	37
108	Built-in electric fields and valence band offsets in InN/GaN(0001) superlattices: First-principles investigations. Journal of Applied Physics, 2011, 109, .	1.1	36

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109	Unravelling the effects of layered supports on Ru nanoparticles for enhancing N ₂ reduction in photocatalytic ammonia synthesis. Applied Catalysis B: Environmental, 2019, 259, 118026.	10.8	36
110	Acidity enhanced [Al]MCM-41 via ultrasonic irradiation for the Beckmann rearrangement of cyclohexanone oxime to ϵ -caprolactam. Journal of Catalysis, 2018, 358, 71-79.	3.1	35
111	Boron-Doped g-C ₆ N ₆ Layer as a Metal-Free Photoelectrocatalyst for N ₂ Reduction Reaction. Journal of Physical Chemistry C, 2019, 123, 28739-28743.	1.5	35
112	Vacancies and interstitials in indium nitride: Vacancy clustering and molecular bondlike formation from first principles. Physical Review B, 2009, 79, .	1.1	34
113	Defect complexes and cluster doping of InN: First-principles investigations. Physical Review B, 2009, 79, .	1.1	34
114	A First-Principles Study of C ₃ N Nanostructures: Control and Engineering of the Electronic and Magnetic Properties of Nanosheets, Tubes and Ribbons. ChemPhysChem, 2020, 21, 164-174.	1.0	34
115	Dirac half-metallicity of Thin PdCl ₃ Nanosheets: Investigation of the Effects of External Fields, Surface Adsorption and Defect Engineering on the Electronic and Magnetic Properties. Scientific Reports, 2020, 10, 213.	1.6	33
116	Theoretical identification of a (2 \times 2) composite double layer ordered surface alloy of Na on Al(111). Surface Science, 1994, 319, L23-L28.	0.8	32
117	Atomic and electronic structure of single and multiple vacancies in GaN nanowires from first-principles. Physical Review B, 2009, 79, .	1.1	32
118	Environment-dependent nanomorphology of TiN: the influence of surface vacancies. Nanoscale, 2012, 4, 5183.	2.8	32
119	Two-dimensional Janus semiconductor BiTeCl and BiTeBr monolayers: a first-principles study on their tunable electronic properties via an electric field and mechanical strain. Physical Chemistry Chemical Physics, 2021, 23, 15216-15223.	1.3	32
120	A first-principles density functional study of chlorophenol adsorption on Cu ₂ O(110):CuO. Journal of Chemical Physics, 2009, 130, 184505.	1.2	30
121	Cu/ZnO(0001) under oxidating and reducing conditions: A first-principles survey of surface structures. Physical Review B, 2011, 84, .	1.1	30
122	Real Time Determination of the Electronic Structure of Unstable Reaction Intermediates during Au ₂ O ₃ Reduction. Journal of Physical Chemistry Letters, 2014, 5, 80-84.	2.1	30
123	Strongly enhanced acidity and activity of amorphous silica-alumina by formation of pentacoordinated AlV species. Journal of Catalysis, 2019, 372, 1-7.	3.1	30
124	Doping of AlGaN Alloys. MRS Internet Journal of Nitride Semiconductor Research, 1999, 4, 890-901.	1.0	29
125	Reaction intermediates of methanol synthesis and the water-gas-shift reaction on the ZnO(0001) surface. Surface Science, 2010, 604, 1742-1751.	0.8	29
126	Oxygen adsorption on the (1 \times 1) and (2 \times 1) reconstructed C(111) surfaces: a density functional theory study. Journal of Physics Condensed Matter, 2010, 22, 265007.	0.7	29

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127	Playing with Dimensions: Rational Design for Heteroepitaxial p-n Junctions. Nano Letters, 2012, 12, 68-76.	4.5	29
128	Oxygen Vacancies in the Single Layer of Ti_2CO_2 MXene: Effects of Gating Voltage, Mechanical Strain, and Atomic Impurities. Physica Status Solidi (B): Basic Research, 2020, 257, 2000343.	0.7	29
129	Nature of Xenon adsorption on graphite: On-top versus hollow site preference. Physical Review B, 2007, 76, .	1.1	28
130	Active sites and mechanism of the direct conversion of methane and carbon dioxide to acetic acid over the zinc-modified H-ZSM-5 zeolite. Catalysis Science and Technology, 2019, 9, 6297-6307.	2.1	28
131	THEORETICAL EVIDENCE FOR UNUSUAL BONDING GEOMETRY AND PHASE TRANSITIONS OF Na ON Al(001). Surface Review and Letters, 1994, 01, 213-219.	0.5	27
132	Bridging the temperature and pressure gaps: close-packed transition metal surfaces in an oxygen environment. Journal of Physics Condensed Matter, 2008, 20, 184021.	0.7	27
133	Mitigation of CO poisoning on functionalized Pt-TiN surfaces. Physical Chemistry Chemical Physics, 2013, 15, 19450.	1.3	27
134	Structural and electronic properties of SrZrO_3 alloys. Physical Review B, 2015, 92, .	1.1	27
135	Design of shallow acceptors in ZnO through early transition metals codoped with N acceptors. Physical Review B, 2011, 83, .	1.1	26
136	Density-Functional Prediction of a Surface Magnetic Phase in SrTiO_3 Induced by Al Vacancies. Physical Review Letters, 2014, 113, 186401.	2.9	26
137	Hydrogen Adsorption on Nearly Zigzag-Edged Nanoribbons: A Density Functional Theory Study. Scientific Reports, 2017, 7, 15727.	1.6	26
138	Defects and Defect Reactions in Semiconductor Nitrides. Acta Physica Polonica A, 1999, 96, 613-627.	0.2	25
139	Phase diagram of O/Ru(0001) from first principles. Chemical Physics Letters, 2002, 361, 317-320.	1.2	23
140	Continuously tunable band gap in GaN/AlN (0001) superlattices via built-in electric field. Physical Review B, 2010, 81, .	1.1	23
141	Acceptor doping in the proton conductor SrZrO_3 . Physical Chemistry Chemical Physics, 2017, 19, 11485-11491.	1.3	23
142	Case Report: Utilizing AI and NLP to Assist with Healthcare and Rehabilitation During the COVID-19 Pandemic. Frontiers in Artificial Intelligence, 2021, 4, 613637.	2.0	23
143	Band-gap engineering, magnetic behavior and Dirac-semimetal character in the MoSi_2N_4 nanoribbon with armchair and zigzag edges. Journal Physics D: Applied Physics, 2022, 55, 035301.	1.3	23
144	First-principles study of the mechanism of ethylene epoxidation over Ag-Cu particles. Journal of Materials Chemistry, 2010, 20, 10521.	6.7	22

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145	A first-principles study of ultrathin nanofilms of MgO-supported TiN. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 2462.	1.3	22
146	A new LEED investigation of the Cu(110)-(2 Å ⁻¹ × 3)N structure. <i>Surface Science</i> , 1997, 381, L589-L593.	0.8	21
147	van der Waals Forces Control the Internal Chemical Structure of Monolayers within the Lamellar Materials CuInP ₂ S ₆ and CuBiP ₂ Se ₆ . <i>Journal of Physical Chemistry C</i> , 2018, 122, 22675-22687.	1.5	21
148	First-principles design of bifunctional oxygen reduction and evolution catalysts through bimetallic centers in metal-organic frameworks. <i>Catalysis Science and Technology</i> , 2018, 8, 3666-3674.	2.1	21
149	Composition-structure-function correlation of Ca/Zn/AlO _x catalysts for the ketonization of acetic acid. <i>Catalysis Today</i> , 2020, 351, 58-67.	2.2	21
150	Exceptional in-plane and interfacial thermal transport in graphene/2D-SiC van der Waals heterostructures. <i>Scientific Reports</i> , 2020, 10, 22050.	1.6	21
151	Density of Configurational States from First-Principles Calculations: The Phase Diagram of Al-Na Surface Alloys. <i>ChemPhysChem</i> , 2005, 6, 1923-1928.	1.0	20
152	Microscopic origin of n -type behavior in Si-doped AlN. <i>Physical Review B</i> , 2013, 88, .	1.1	20
153	Benylation of Arenes with Benzyl Chloride over H-Beta Zeolite: Effects from Acidity and Shape-Selectivity. <i>Journal of Physical Chemistry C</i> , 2017, 121, 15248-15255.	1.5	20
154	High mobility in $\hat{1}\pm$ -phosphorene isostructures with low deformation potential. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 2276-2282.	1.3	20
155	Transition metal-doped $\hat{1}\pm$ -borophene as potential oxygen and hydrogen evolution electrocatalyst: A density functional theory study. <i>Catalysis Communications</i> , 2020, 144, 106090.	1.6	20
156	Semiconducting Chalcogenide Alloys Based on the (Ge, Sn, Pb) (S, Se, Te) Formula with Outstanding Properties: A First-Principles Calculation Study. <i>ACS Omega</i> , 2021, 6, 9433-9441.	1.6	20
157	Superior tunable photocatalytic properties for water splitting in two dimensional GeC/SiC van der Waals heterobilayers. <i>Scientific Reports</i> , 2021, 11, 17739.	1.6	20
158	The structure of Al(111)-K ⁺ ($\hat{a}\hat{3}\hat{3}$)R30 ^o determined by LEED: stable and metastable adsorption sites. <i>Surface Science</i> , 1993, 287-288, 418-422.	0.8	19
159	Catalytic arene alkylation over H-Beta zeolite: Influence of zeolite shape selectivity and reactant nucleophilicity. <i>Journal of Catalysis</i> , 2019, 380, 9-20.	3.1	19
160	Modeling and Emulating a Physiotherapist's Role in Robot-Assisted Rehabilitation. <i>Advanced Intelligent Systems</i> , 2020, 2, 1900181.	3.3	19
161	Puckered Penta-like PdPX (X = O, S, Te) Semiconducting Nanosheets: First-Principles Study of the Mechanical, Electro-Optical, and Photocatalytic Properties. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 21577-21584.	4.0	19
162	Challenges in predictive calculations of processes at surfaces: surface thermodynamics and catalytic reactions. <i>Applied Physics A: Materials Science and Processing</i> , 1999, 69, 471-480.	1.1	18

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