Hyoung Joon Choi

List of Publications by Year in descending order

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102	10,012	76031	38517
papers	citations	42 h-index	99 g-index

107	107	107	13668
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Thickness dependence of work function, ionization energy, and electron affinity of Mo and W dichalcogenides from DFT and GW calculations. Physical Review B, 2021, 103, .	1.1	80
2	Quasiparticle band structures of bulk and few-layer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">PdSe</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> from first-principles <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 calculations. Physical Review B, 2021, 103, .	1.1	17
3	Single-Crystalline Metallic Films Induced by van der Waals Epitaxy on Black Phosphorus. Chemistry of Materials, 2021, 33, 3593-3601.	3.2	6
4	Anisotropic pseudospin tunneling in two-dimensional black phosphorus junctions. 2D Materials, 2021, 8, 035024.	2.0	5
5	Î³-GeSe: A New Hexagonal Polymorph from Group IVâ€“VI Monochalcogenides. Nano Letters, 2021, 21, 4305-4313.	4.5	52
6	Causal optimization method for imaginary-time Green's functions in interacting electron systems. Physical Review B, 2021, 104, .	1.1	2
7	Quasiparticle band structures, spontaneous polarization, and spin-splitting in noncentrosymmetric few-layer and bulk Î³-GeSe. Journal of Materials Chemistry C, 2021, 9, 9683-9691.	2.7	15
8	Dichotomy of Electron-Phonon Coupling in Graphene MoirÃ© Flat Bands. Physical Review Letters, 2021, 127, 167001.	2.9	35
9	Raman spectroscopic evidence of impurityâ€induced structural distortion in SmB₆. Journal of Raman Spectroscopy, 2019, 50, 1661-1671.	1.2	16
10	Stability, efficiency, and mechanism of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>n</mml:mi></mml:math> -type doping by hydrogen adatoms in two-dimensional transition metal dichalcogenides. Physical Review B, 2019, 100, .	1.1	12
11	Impact of Hâ€Doping on nâ€Type TMD Channels for Lowâ€Temperature Bandâ€Like Transport. Small, 2019, 15, e1901793.	5.2	11
12	Intrinsic band gap and electrically tunable flat bands in twisted double bilayer graphene. Physical Review B, 2019, 100, .	1.1	55
13	InnenrÃ¼cktitelbild: Intrinsic Correlation between Electronic Structure and Degradation: From Fewâ€Layer to Bulk Black Phosphorus (Angew. Chem. 12/2019). Angewandte Chemie, 2019, 131, 4107-4107.	1.6	3
14	Role of Electric Fields on Enhanced Electron Correlation in Surface-Doped FeSe. Physical Review Letters, 2019, 122, 046401.	2.9	7
15	Tunneling Properties of the Charge Carriers through Sub-2-nm-Thick Oxide in Ge/a - GeO2/Ge Structures Using the First-Principles Scattering-State Method. Physical Review Applied, 2019, 11, .	1.5	3
16	Intrinsic Correlation between Electronic Structure and Degradation: From Fewâ€Layer to Bulk Black Phosphorus. Angewandte Chemie, 2019, 131, 3794-3798.	1.6	6
17	Intrinsic Correlation between Electronic Structure and Degradation: From Fewâ€Layer to Bulk Black Phosphorus. Angewandte Chemie - International Edition, 2019, 58, 3754-3758.	7.2	26
18	Strong electron-phonon coupling, electron-hole asymmetry, and nonadiabaticity in magic-angle twisted bilayer graphene. Physical Review B, 2018, 98, .	1.1	116

#	Article	IF	Citations
19	Antiferromagnetâ€Based Spintronic Functionality by Controlling Isospin Domains in a Layered Perovskite Iridate. Advanced Materials, 2018, 30, e1805564.	11.1	20
20	Interband Transitions in Monolayer and Few-Layer WSe₂ Probed Using Photoexcited Charge Collection Spectroscopy. ACS Applied Materials & Interfaces, 2018, 10, 20213-20218.	4.0	8
21	Work Function Tuning in Two-Dimensional MoS2 Field-Effect-Transistors with Graphene and Titanium Source-Drain Contacts. Scientific Reports, 2017, 7, 45546.	1.6	33
22	Dirac-semimetal phase diagram of two-dimensional black phosphorus. 2D Materials, 2017, 4, 025071.	2.0	24
23	Orbital angular momentum analysis for giant spin splitting in solids and nanostructures. Scientific Reports, 2017, 7, 2024.	1.6	25
24	Two-Dimensional Dirac Fermions Protected by Space-Time Inversion Symmetry in Black Phosphorus. Physical Review Letters, 2017, 119, 226801.	2.9	72
25	Homogeneous 2D MoTe₂ pâ€“n Junctions and CMOS Inverters formed by Atomicâ€Layerâ€Depositionâ€Induced Doping. Advanced Materials, 2017, 29, 1701798.	11.1	117
26	Switching Magnetism and Superconductivity with Spin-Polarized Current in Iron-Based Superconductor. Physical Review Letters, 2017, 119, 227001.	2.9	20
27	First-principles calculation of stress tensor in the LSDA+U formalism. Physical Review B, 2016, 94, .	1.1	0
28	Band-gap opening in graphene: A reverse-engineering approach. Physical Review B, 2015, 92, .	1.1	28
29	Direct Momentum-Resolved Observation of One-Dimensional Confinement of Externally Doped Electrons within a Single Subnanometer-Scale Wire. Nano Letters, 2015, 15, 281-288.	4.5	20
30	Enhanced device performances of WSe₂â€“MoS₂ van der Waals junction pâ€“n diode by fluoropolymer encapsulation. Journal of Materials Chemistry C, 2015, 3, 2751-2758.	2.7	74
31	Metal Semiconductor Field-Effect Transistor with MoS₂/Conducting NiO_x van der Waals Schottky Interface for Intrinsic High Mobility and Photoswitching Speed. ACS Nano, 2015, 9, 8312-8320.	7.3	82
32	Observation of tunable band gap and anisotropic Dirac semimetal state in black phosphorus. Science, 2015, 349, 723-726.	6.0	749
33	Wafer-scale single-domain-like graphene by defect-selective atomic layer deposition of hexagonal ZnO. Nanoscale, 2015, 7, 17702-17709.	2.8	19
34	Emergence of Two-Dimensional Massless Dirac Fermions, Chiral Pseudospins, and Berryâ€™s Phase in Potassium Doped Few-Layer Black Phosphorus. Nano Letters, 2015, 15, 7788-7793.	4.5	98
35	Electronic structure of C and N co-doped TiO2: A combined hard x-ray photoemission spectroscopy and density functional theory study. Applied Physics Letters, 2014, 105, .	1.5	11
36	Antiferromagnetic exchange interactions among dopant electrons in Si nanowires. Physical Review B, 2014, 90, .	1.1	1

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37	Graphene Versus Ohmic Metal as Sourceâ€Drain Electrode for MoS₂ Nanosheet Transistor Channel. Small, 2014, 10, 2356-2361.	5.2	89
38	The Role of Atomic Hydrogen in Ge/Si Coreâ€“Shell Nanowires. Journal of Physical Chemistry C, 2014, 118, 20710-20715.	1.5	2
39	Nanosheet thickness-modulated MoS₂dielectric property evidenced by field-effect transistor performance. Nanoscale, 2013, 5, 548-551.	2.8	83
40	Minimal single-particle Hamiltonian for charge carriers in epitaxial graphene on 4H-SiC(0001): Broken-symmetry states at Dirac points. Solid State Communications, 2013, 175-176, 83-89.	0.9	5
41	Publisher's Note: Graphyne: Hexagonal network of carbon with versatile Dirac cones [Phys. Rev. B86, 115435 (2012)]. Physical Review B, 2013, 87, .	1.1	2
42	First-principles study of perpendicular magnetic anisotropy in CoFe/MgO and CoFe/Mg<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>B<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>O<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mml:	1.1	37
43	Tunneling properties versus electronic structures in Si/SiO<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>/Si junctions from first principles. Physical Review B, 2013, 88, .	1.1	21
44	Chiral Orbital-Angular Momentum in the Surface States of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Bi</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi>Se</mml:mi><mml:mn Physical Review Letters, 2012, 108, 046805.	2.9	127
45	Role of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>d</mml:mi></mml:math>orbitals in the Rashba-type spin splitting for noble-metal surfaces. Physical Review B, 2012, 86, .	1.1	25
46	Effect of Diffused B During Annealing on the Electronic Structure of the MgO Barrier in CoFeB/MgO/CoFeB Magnetic Tunnel Junctions. Applied Physics Express, 2012, 5, 033001.	1.1	7
47	Rhombohedralâ€“orthorhombic morphotropic phase boundary in BiFeO3-based multiferroics: first-principles prediction. Journal of Materials Chemistry, 2012, 22, 1667-1672.	6.7	51
48	Quantitative Currentâ€“Voltage Characteristics in Molecular Junctions from First Principles. Nano Letters, 2012, 12, 6250-6254.	4.5	72
49	Anomalous Behaviors of Visible Luminescence from Graphene Quantum Dots: Interplay between Size and Shape. ACS Nano, 2012, 6, 8203-8208.	7.3	563
50	Graphyne: Hexagonal network of carbon with versatile Dirac cones. Physical Review B, 2012, 86, .	1.1	307
51	Microscopic and electronic roles of B in CoFeB-based magnetic tunnel junctions. Journal of Materials Chemistry, 2011, 21, 14967.	6.7	11
52	Nanometer-Scale Loop Currents and Induced Magnetic Dipoles in Carbon Nanotubes with Defects. Nano Letters, 2011, 11, 1418-1422.	4.5	6
53	Thermopower of Amineâ^'Gold-Linked Aromatic Molecular Junctions from First Principles. ACS Nano, 2011, 5, 551-557.	7.3	87
54	Fermi surfaces and quantum oscillations in the underdoped high-Tcsuperconductors YBa2Cu3O6.5and YBa2Cu4O8. Physical Review B, 2011, 84, .	1.1	7

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55	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>4</mml:mn><mml:mi>d</mml:mi><mml:mtext mathvariant="normal">â^'</mml:mtext><mml:mn>5</mml:mn><mml:mi>p</mml:mi></mml:math>Orbital Mixing and Asymmetric In<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>4</mml:mn><mml:mi>d</mml:mi><mml:mo>â€“</mml:mo><mml:mi mathvariant="normal">O</mml:mi></mml:math><mml:math xmlns:mml="http://www.w3.org/1998/Math/	2.9	35
56	Field-induced recovery of massless Dirac fermions in epitaxial graphene on SiC. Carbon, 2011, 49, 2300-2305.	5.4	9
57	Electronic structure of detwinned BaFe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow /><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>As<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow /><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>	1.1	56
58	Low-velocity anisotropic Dirac fermions on the side surface of topological insulators. Physical Review B, 2011, 84, .	1.1	41
59	Effects of interfacial suboxides and dangling bonds on tunneling current through nanometer-thick SiO<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>layers. Physical Review B, 2011, 84, .	1.1	7
60	Time-resolved energy transduction in a quantum capacitor. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 13973-13977.	3.3	5
61	In-plane strain control of the magnetic remanence and cation-charge redistribution inCoFe2O4thin film grown on a piezoelectric substrate. Physical Review B, 2010, 81, .	1.1	47
62	Variations of ferroelectric off-centering distortion and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>3</mml:mn><mml:mi>d</mml:mi><mml:mtext>â^'</mml:mtext><mml:mn>4</mml:mn><mml:mi mixing in La-doped<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>BiFeO</mml:mtext></mml:mrow><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2010, 82, .	1.1	74
63	Single-Impurity Scattering and Carrier Mobility in Doped Ge/Si Coreâ^'Shell Nanowires. Nano Letters, 2010, 10, 2207-2210.	4.5	25
64	Conductance and Geometry of Pyridine-Linked Single-Molecule Junctions. Journal of the American Chemical Society, 2010, 132, 6817-6821.	6.6	186
65	Chalcogen-Height Dependent Magnetic Interactions and Magnetic Order Switching in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>FeSe</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:msub><mml:mi>Te</mml:mi> Physical Review Letters, 2010, 104, 057003.	2.9	131
66	Dominant role of local-moment interactions in the magnetic ordering of iron pnictide superconductors: A comparative study of arsenides and antimonides from first principles. Physical Review B, 2009, 80, .	1.1	13
67	High-resolution angle-resolved photoemission studies of quasiparticle dynamics in graphite. Physical Review B, 2009, 79, .	1.1	14
68	Prediction of superconducting properties of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>CaB</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:ms anisotropic Eliashberg theory. Physical Review B, 2009, 80, .	1.1	35
69	First-principles calculation of atomic force in the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>LSDA</mml:mtext><mml:mo>+</mml:mo><mml:mi>U</mml:mi></mml:mrow></mml:ma Physical Review B, 2009, 80, .	1.1	7
70	Mechanically controlled binary conductance switching of a single-molecule junction. Nature Nanotechnology, 2009, 4, 230-234.	15.6	609
71	Length Dependence of Conductance in Aromatic Single-Molecule Junctions. Nano Letters, 2009, 9, 3949-3953.	4.5	151
72	Anisotropic Eliashberg theory for superconductivity in compressed and doped<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>MgB</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:ms Physical Review B, 2009, 79, .	1.1	17

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73	Origin of Anomalous Electronic Structures of Epitaxial Graphene on Silicon Carbide. Physical Review Letters, 2008, 100, 176802.	2.9	347
74	Electronic Energy Levels of Weakly Coupled Nanostructures:<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi mathvariant="normal">C</mml:mi><mml:mn>60</mml:mn></mml:msub></mml:math>-Metal Interfaces. Physical Review Letters, 2008, 101, 026804.	2.9	102
75	Contact dependence of the conductance of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi mathvariant="normal">H</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>molecular junctions from first principles. Physical Review B, 2008, 77, .	1.1	12
76	Low-energy structures of K atoms in expandedK3C60monolayers:Ab initiopseudopotential density-functional calculations. Physical Review B, 2008, 77, .	1.1	3
77	Enhanced spin-density wave in LaFeSbO from first principles. Physical Review B, 2008, 78, .	1.1	10
78	Effect of Linear Density of States on the Quasiparticle Dynamics and Small Electron-Phonon Coupling in Graphite. Physical Review Letters, 2008, 100, 016802.	2.9	29
79	Strong Orbital-Dependentd-Band Hybridization and Fermi-Surface Reconstruction in MetallicCa2â^'xSrxRuO4. Physical Review Letters, 2007, 98, 226401.	2.9	32
80	First-principles scattering-state approach for nonlinear electrical transport in nanostructures. Physical Review B, 2007, 76, .	1.1	53
81	Amineâ^'Gold Linked Single-Molecule Circuits:â€‰ Experiment and Theory. Nano Letters, 2007, 7, 3477-3482.	4.5	447
82	Anisotropic Eliashberg theory and the two-band model for the superconducting properties ofMgB2. Physical Review B, 2006, 73, .	1.1	27
83	Electrical Switching in Metallic Carbon Nanotubes. Physical Review Letters, 2005, 95, 216602.	2.9	88
84	Orientation-DependentC60Electronic Structures Revealed by Photoemission Spectroscopy. Physical Review Letters, 2004, 93, 197601.	2.9	33
85	Reply to â€œComment on â€˜First-principles calculation of the superconducting transition inMgB2within the anisotropic Eliashberg formalismâ€™ â€. Physical Review B, 2004, 69, .	1.1	19
86	Identifying Defects in Nanoscale Materials. Physical Review Letters, 2004, 93, 196803.	2.9	78
87	Anisotropic Eliashberg theory of MgB2: Tc, isotope effects, superconducting energy gaps, quasiparticles, and specific heat. Physica C: Superconductivity and Its Applications, 2003, 385, 66-74.	0.6	85
88	Band Structure and Fermi Surface of Electron-Doped C60 Monolayers. Science, 2003, 300, 303-307.	6.0	102
89	First-principles calculation of the superconducting transition inMgB2within the anisotropic Eliashberg formalism. Physical Review B, 2002, 66, .	1.1	323
90	The origin of the anomalous superconducting properties of MgB2. Nature, 2002, 418, 758-760.	13.7	867

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91	Structural Deformation and Intertube Conductance of Crossed Carbon Nanotube Junctions. Physical Review Letters, 2001, 86, 688-691.	2.9	98
92	Defects, Quasibound States, and Quantum Conductance in Metallic Carbon Nanotubes. Physical Review Letters, 2000, 84, 2917-2920.	2.9	522
93	Crossed Nanotube Junctions. Science, 2000, 288, 494-497.	6.0	1,135
94	Exact solutions to the tight-binding model for the conductance of carbon nanotubes. Solid State Communications, 1999, 111, 385-390.	0.9	27
95	Ab initiopseudopotential method for the calculation of conductance in quantum wires. Physical Review B, 1999, 59, 2267-2275.	1.1	231
96	Possible explanation for the conductance of a single quantum unit in metallic carbon nanotubes. Physical Review B, 1999, 60, R14009-R14011.	1.1	42
97	Broken symmetry and pseudogaps in ropes of carbon nanotubes. Physical Review B, 1999, 60, 7899-7904.	1.1	67
98	Broken symmetry and pseudogaps in ropes of carbon nanotubes. Nature, 1998, 391, 466-468.	13.7	348
99	Going beyond the mean-field approximations of alloys and alloy superlattices: a few puzzles solved?. Journal of the Optical Society of America B: Optical Physics, 1996, 13, 1210.	0.9	14
100	Percolation of carriers through low potential channels in thickAlxGa1â^'xAs (x<0.35) barriers. Physical Review B, 1996, 54, 14580-14588.	1.1	26
101	Anomalous real space charge transfer through thick barriers in asymmetric double quantum wells: AlxGa1â^'xAs as a percolating barrier. Solid State Communications, 1996, 100, 231-235.	0.9	2
102	Thick AlxGa1â^'xAs: An intrinsically percolating barrier owing to its microscopic structural inhomogeneity. Applied Physics Letters, 1996, 69, 2513-2515.	1.5	2