Alexander N Rudenko

List of Publications by Year
in descending order

78	3,387	186265 28	144013 57
papers	citations	h-index	g-index

78	78	78	4412
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Electronic properties of germanene on pristine and defective <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi>MoS</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub></mml:math> : A first-principles study. Physical Review B, 2022, 105, .	3.2	1
2	Electronic Tuning in WSe₂/Au via van der Waals Interface Twisting and Intercalation. ACS Nano, 2022, 16, 6541-6551.	14.6	17
3	Gating Orbital Memory with an Atomic Donor. Physical Review Letters, 2022, 128, 106801.	7.8	2
4	Coexisting charge density wave and ferromagnetic instabilities in monolayer InSe. Npj Computational Materials, 2022, 8, .	8.7	18
5	Real- and momentum-space description of the excitons in bulk and monolayer chromium tri-halides. Npj 2D Materials and Applications, 2022, 6, .	7.9	12
6	Dynamical correlations in single-layer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>CrI</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math> Physical Review B, 2022, 105, .	3.2	10
7	Electronic and optical properties of crystalline nitrogen versus black phosphorus: A comparative first-principles study. Physical Review B, 2022, 105, .	3.2	3
8	Orbital ordering and quasi-two-dimensional magnetism in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>A</mml:mi><mml:msub><mml:mi mathvariant="normal">MnF</mml:mi><mml:mn>4</mml:mn></mml:msub><mml:mo>Â</mml:mo><mml:mo>(</mml:mo><mml:mi>A</mml:mi> : A first-principles study. Physical Review B, 2022, 106, .	3.2	0
9	Role of charge doping and strain in the stabilization of in-plane ferromagnetism in monolayer VSe2 at room temperature. 2D Materials, 2021, 8, 035022.	4.4	24
10	Quantifying the interplay between fine structure and geometry of an individual molecule on a surface. Physical Review B, 2021, 103, .	3.2	25
11	High-Pressure Synthesis of Dirac Materials: Layered van der Waals Bonded <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow><mml:mi>BeN</mml:mi></mml:mrow><mml:mrow><mml:mn>4</mml:mn></mml:mrow></mml:msub></mml:math> Polymorph. Physical Review Letters, 2021, 126, 175501.	7.8	90
12	Lattice dynamics and topological surface phonon states in cuprous oxide <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Cu</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi mathvariant="normal">O</mml:mi></mml:mrow></mml:math>. Physical Review B, 2021, 103, .	3.2	12
13	Two-Dimensional Chromium Bismuthate: A Room-Temperature Ising Ferromagnet with Tunable Magneto-Optical Response. Physical Review Applied, 2021, 15, .	3.8	14
14	Dislocation structure and mobility in the layered semiconductor InSe: a first-principles study. 2D Materials, 2021, 8, 045028.	4.4	6
15	Environmental screening and ligand-field effects to magnetism in CrI3 monolayer. Npj Computational Materials, 2021, 7, .	8.7	19
16	Electronic structure of chromium trihalides beyond density functional theory. Physical Review B, 2021, 104, .	3.2	18
17	Importance of charge self-consistency in first-principles description of strongly correlated systems. Npj Computational Materials, 2021, 7, .	8.7	13
18	Effect of Mechanical Strain on the Optical Properties of Nodalâ€Line Semimetal ZrSiS. Advanced Electronic Materials, 2020, 6, 1900860.	5.1	12

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19	Orbital response of single-layer antimony to external magnetic field. Physical Review B, 2020, 102, .	3.2	0
20	Two-dimensional chromium pnictides <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Cr</mml:mi><mml:mi>X</mml:mi><mml:mo>Â</mml:mo><mml:mo>(: Half-metallic ferromagnets with high Curie temperature. Physical Review B, 2020, 102, .	3.2	44
21	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mtext>Germanium</mml:mtext><mml:mo>/</mml:mo><mml:msub><m : Competition between the growth of germanene and intercalation. Physical Review B, 2020, 102, .	3.2	9
22	Electron-phonon interaction and zero-field charge carrier transport in the nodal-line semimetal ZrSiS. Physical Review B, 2020, 101, .	3.2	8
23	Electronic correlations in nodal-line semimetals. Nature Physics, 2020, 16, 636-641.	16.7	86
24	Image potential states of germanene. 2D Materials, 2020, 7, 035021.	4.4	25
25	Orbitally-resolved ferromagnetism of monolayer CrI₃. 2D Materials, 2020, 7, 025036.	4.4	68
26	Control of magnetic interactions between surface adatoms via orbital repopulation. 2D Materials, 2020, 7, 045007.	4.4	4
27	Interplay between in-plane and flexural phonons in electronic transport of two-dimensional semiconductors. Physical Review B, 2019, 100, .	3.2	11
28	Strong Electron-Phonon Coupling and its Influence on the Transport and Optical Properties of Hole-Doped Single-Layer InSe. Physical Review Letters, 2019, 123, 176401.	7.8	37
29	Charge puddles in germanene. Applied Physics Letters, 2019, 114, 041601.	3.3	11
30	Lateral Spin Valve Based on the Two-Dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mrow><mml:mi>Cr</mml:mi><mml:mi mathvariant="normal">N</mml:mi></mml:mrow></mml:math> / <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mrow><mml:mrow><mml:mi mathvariant="normal">P</mml:mi></mml:mrow	3.8	37
31	Electron-phonon properties, structural stability, and superconductivity of doped antimonene. Physical Review B, 2019, 99, .	3.2	27
32	Anisotropic Two-Dimensional Screening at the Surface of Black Phosphorus. Physical Review Letters, 2019, 123, 216403.	7.8	21
33	Ab initio study of the electron-phonon coupling at the Cr(001) surface. Physical Review B, 2018, 97, .	3.2	2
34	Bandgap opening in hydrogenated germanene. Applied Physics Letters, 2018, 112, .	3.3	26
35	Anisotropic ultraviolet-plasmon dispersion in black phosphorus. Nanoscale, 2018, 10, 21918-21927.	5.6	18
36	Gate-tunable infrared plasmons in electron-doped single-layer antimony. Physical Review B, 2018, 98, .	3.2	8

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37	Nanoskyrmion engineering with sp -electron materials: Sn monolayer on a SiC(0001) surface. Physical Review B, 2018, 98, .	3.2	7
38	Excitonic instability and unconventional pairing in the nodal-line materials ZrSiS and ZrSiSe. Physical Review B, 2018, 98, .	3.2	16
39	An orbitally derived single-atom magnetic memory. Nature Communications, 2018, 9, 3904.	12.8	34
40	Plasmon spectrum of single-layer antimonene. Physical Review B, 2018, 98, .	3.2	9
41	Excitonic Instability and Pseudogap Formation in Nodal Line Semimetal ZrSiS. Physical Review Letters, 2018, 120, 216401.	7.8	40
42	Non-Heisenberg covalent magnetism in iron oxide clusters. Physical Review Materials, 2018, 2, .	2.4	6
43	Tunable half-metallicity and edge magnetism of H-saturated InSe nanoribbons. Physical Review Materials, 2018, 2, .	2.4	11
44	Electronic properties of single-layer antimony: Tight-binding model, spin-orbit coupling, and the strength of effective Coulomb interactions. Physical Review B, 2017, 95, .	3.2	33
45	Effect of flexural phonons on the hole states in single-layer black phosphorus. Physical Review B, 2017, 95, .	3.2	4
46	Probing Single Vacancies in Black Phosphorus at the Atomic Level. Nano Letters, 2017, 17, 3607-3612.	9.1	109
47	Coulomb interactions and screening effects in few-layer black phosphorus: a tight-binding consideration beyond the long-wavelength limit. 2D Materials, 2017, 4, 025064.	4.4	28
48	Effect of long-range structural corrugations on magnetotransport properties of phosphorene in tilted magnetic field. Physical Review B, 2017, 96, .	3.2	10
49	Exchange interactions in transition metal oxides: the role of oxygen spin polarization. Journal of Physics Condensed Matter, 2017, 29, 335801.	1.8	30
50	Observing Imperfection in Atomic Interfaces for van der Waals Heterostructures. Nano Letters, 2017, 17, 5222-5228.	9.1	53
51	Exchange and Dzyaloshinskii-Moriya interactions in magnetic properties of graphene derivatives: <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi mathvariant="normal">C</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi mathvariant="normal">F</mml:mi></mml:mrow></mml:math> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi mathvariant="n	3.2	56
52	Intrinsic Charge Carrier Mobility in Single-Layer Black Phosphorus. Physical Review Letters, 2016, 116, 246401.	7.8	132
53	Structural and Electronic Properties of Germanene on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review Letters, 2016, 116, 256804.	7.8	329
54	Polaronic effects in monolayer black phosphorus on polar substrates. Physical Review B, 2016, 93, .	3.2	41

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55	Toward a realistic description of multilayer black phosphorus: From<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 to large-scale tight-binding simulations. Physical Review B, 2015, 92, .	3.2	187
56	Chemical modifications and stability of phosphorene with impurities: a first principles study. Physical Chemistry Chemical Physics, 2015, 17, 15209-15217.	2.8	78
57	Transport and optical properties of single- and bilayer black phosphorus with defects. Physical Review B, 2015, 91, .	3.2	103
58	Germanene: the germanium analogue of graphene. Journal of Physics Condensed Matter, 2015, 27, 443002.	1.8	304
59	Single 3dtransition metal atoms on multi-layer graphene systems: electronic configurations, bonding mechanisms and role of the substrate. New Journal of Physics, 2014, 16, 062001.	2.9	23
60	Multiscale Modeling of Water in Mg-MOF-74: From Electronic Structure Calculations to Adsorption Isotherms. Journal of Physical Chemistry C, 2014, 118, 16218-16227.	3.1	29
61	Quasiparticle band structure and tight-binding model for single- and bilayer black phosphorus. Physical Review B, 2014, 89, .	3.2	577
62	Influence of magnetic order on phonon spectra of multiferroic orthorhombic YMnO3. Solid State Communications, 2013, 164, 16-21.	1.9	9
63	Correlation effects in insulating surface nanostructures. Physical Review B, 2013, 88, .	3.2	16
64	Exchange interactions and frustrated magnetism in single-side hydrogenated and fluorinated graphene. Physical Review B, 2013, 88, .	3.2	77
65	Adsorption of cobalt on graphene: Electron correlation effects from a quantum chemical perspective. Physical Review B, 2012, 86, .	3.2	71
66	Graphene adhesion on mica: Role of surface morphology. Physical Review B, 2011, 83, .	3.2	59
67	Interfacial interactions between local defects in amorphous 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>and supported graphene. Physical Review B, 2011, 84, .	3.2	38
68	Simulation of the electronic structure of simple oxides BeO and SiO2 and complex oxides Be2SiO4 and Be2Si x Ge1 â^' x O4 with the phenacite structure. Journal of Experimental and Theoretical Physics, 2011, 112, 877-883.	0.9	0
69	Orbital-selective conductance of Co adatom on the Pt(111) surface. Physical Review B, 2011, 84, .	3.2	3
70	Simulation of vibrational spectra of SiO2 nanoclusters. Physics of the Solid State, 2010, 52, 1276-1278.	0.6	0
71	Structural features and atomic dynamics in Si/SiO2 superlattices: First-principles calculations. Physics of the Solid State, 2010, 52, 2409-2414.	0.6	1
72	Renormalized spectral function for Co adatom on the Pt(111) surface. Physical Review B, 2010, 82, .	3.2	11

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73	Adsorption of diatomic halogen molecules on graphene: A van der Waals density functional study. Physical Review B, 2010, 82, .	3.2	66
74	Weak ferromagnetism in Mn nanochains on the CuN surface. Physical Review B, 2009, 79, .	3.2	47
75	Ab initio calculations of the vibrational spectra of 1/1 approximant of i-AlCuFe quasicrystal. Physics of the Solid State, 2008, 50, 1326-1332.	0.6	2
76	Calculation of vibrational spectra of an icosahedral quasicrystal AlCuFe. Crystallography Reports, 2007, 52, 1025-1029.	0.6	0
77	Simulation of the lattice dynamics of an Al-Cu-Fe icosahedral quasicrystal. Physics of the Solid State, 2007, 49, 356-359.	0.6	0
78	The origin of localized vibrations in KI: Cl and KI: H crystals. Physics of the Solid State, 2007, 49, 454-459.	0.6	0