

Przemysław Piekarczyk

List of Publications by Year in descending order

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92
papers

1,514
citations

361045

20
h-index

377514

34
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93
all docs

93
docs citations

93
times ranked

2058
citing authors

#	ARTICLE	IF	CITATIONS
1	Charge ordering mechanism in silver difluoride. <i>Physical Review B</i> , 2022, 105, .	1.1	4
2	Thin layer vs. nanoparticles: Effect of SnO ₂ addition to PtRhNi nanoframes for ethanol oxidation reaction. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 14823-14835.	3.8	8
3	Thin layer vs. nanoparticles: Effect of SnO ₂ addition to PtRhNi nanoframes for ethanol oxidation reaction. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 14823-14835.	3.8	8
4	Trimeron-phonon coupling in magnetite. <i>Physical Review B</i> , 2021, 103, .	1.1	8
5	Ab initio determination of Raman spectra of Mg ₂ SiO ₄ and Ca ₂ MgSi ₂ O ₇ showing mixed modes related to LO/TO splitting. <i>Journal of Raman Spectroscopy</i> , 2021, 52, 1346-1359.	1.2	6
6	Lattice Dynamics and Structural Phase Transitions in Eu ₂ O ₃ . <i>Inorganic Chemistry</i> , 2021, 60, 9571-9579.	1.9	24
7	Electronic and dynamical properties of CeRh ₂ : Role of layers and expected orbital order. <i>Physical Review B</i> , 2021, 104, .	1.1	19
8	Ab initio studies for characterization and identification of nanocrystalline copper pyrophosphate confined in mesoporous silica. <i>Nanotechnology</i> , 2021, 32, 415701.	1.3	6
9	Chiral phonons in the honeycomb sublattice of layered CoSn-like compounds. <i>Physical Review B</i> , 2021, 104, .	1.1	17
10	Phonon confinement and interface lattice dynamics of ultrathin high- <i>k</i> rare earth sesquioxide films: the case of Eu ₂ O ₃ on YSZ(001). <i>Nanoscale Advances</i> , 2021, 4, 19-25.	2.2	2
11	Origin of the monoclinic distortion and its impact on the electronic properties in KO ₂ . <i>Physical Review B</i> , 2020, 102, .	1.1	19
12	Effects of Pair-Hopping Coupling on Properties of Multi-Band Iron-Based Superconductors. <i>Frontiers in Physics</i> , 2020, 8, .	1.0	5
13	Lattice dynamics of endotaxial silicide nanowires. <i>Physical Review B</i> , 2020, 102, .	1.1	2
14	Probing the chirality of one-dimensional Majorana edge states around a two-dimensional nanoflake in a superconductor. <i>Physical Review B</i> , 2020, 102, .	1.1	5
15	Discovery of the soft electronic modes of the trimeron order in magnetite. <i>Nature Physics</i> , 2020, 16, 541-545.	6.5	26
16	Superconductivity of KFe ₂ As ₂ Under Pressure: Ab Initio Study of Tetragonal and Collapsed Tetragonal Phases. <i>Journal of Superconductivity and Novel Magnetism</i> , 2020, 33, 2347-2354.	0.8	3
17	Lattice dynamics and polarization-dependent phonon damping in \hat{I}_{\pm} -phase FeSi ₂ nanostructures. <i>Physical Review B</i> , 2020, 101, .	1.1	4
18	First-principles study of the nontrivial topological phase in chains of 3d transition metals. <i>Physical Review B</i> , 2020, 101, .	1.1	7

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37	Anomalous Lattice Dynamics of EuSi_2 : Role of Interfaces Unveiled. Physical Review Letters, 2016, 117, 276101.	2.9	29
38	Lattice dynamics of neodymium: Influence of correlations. Physical Review B, 2016, 94, .	1.1	11
39	Transient optical properties of semiconductors under femtosecond x-ray irradiation. Physical Review B, 2016, 93, .	1.1	14
40	Lattice Dynamics of EuO: Evidence for Giant Spin-Phonon Coupling. Physical Review Letters, 2016, 116, 185501.	2.9	26
41	Effect of spin-orbit and on-site Coulomb interactions on the electronic structure and lattice dynamics of uranium monocarbide. Physical Review B, 2016, 94, .	1.1	18
42	Influence of isolated and clustered defects on electronic and dielectric properties of wadsleyite. Physical Review B, 2015, 91, .	1.1	7
43	Phonons in Ultrathin Oxide Films: 2D to 3D Transition in FeO on Pt(111). Physical Review Letters, 2015, 115, 186102.	2.9	22
44	Effect of ferromagnetic ordering on phonons in KCo_2Se_2 . Journal of Physics Condensed Matter, 2015, 27, 415403.	0.7	3
45	Dynamics and stability of icosahedral FePt nanoparticles. Physical Chemistry Chemical Physics, 2015, 17, 28096-28102.	1.3	6
46	Lattice dynamics of the heavy-fermion compound URu_2Si_2 . Physical Review B, 2015, 91, .	1.1	11
47	Dynamical properties of ordered FePt alloys. Journal of Alloys and Compounds, 2015, 651, 528-536.	2.8	20
48	Short-Range Correlations in Magnetite above the Verwey Temperature. Physical Review X, 2014, 4, .	2.8	36
49	Structures of Late Transition Metal Monoxides from Jahn-Teller Instabilities in the Rock Salt Lattice. Physical Review Letters, 2014, 113, 025505.	2.9	22
50	Thermodynamic properties and phase stability of wadsleyite II. Physics and Chemistry of Minerals, 2013, 40, 251-257.	0.3	2
51	Anharmonicity due to Electron-Phonon Coupling in Magnetite. Physical Review Letters, 2013, 110, 207204.	2.9	42
52	Lattice dynamics of the rare-earth element samarium. Physical Review B, 2013, 88, .	1.1	2
53	Strong effects of cation vacancies on the electronic and dynamical properties of FeO. Physical Review B, 2013, 87, .	1.1	23
54	Nuclear inelastic scattering studies of lattice dynamics in magnetite with a first- and second-order Verwey transition. Physical Review B, 2012, 85, .	1.1	19

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55	Structural phase transition in LiFeSi ₂ O ₆ from ab initio calculations. Journal of Physics Condensed Matter, 2012, 24, 195401.	0.7	4
56	Mechanism of the phase transitions in MnAs. Physical Review B, 2011, 83, .	1.1	27
57	Equivalence of the Boson Peak in Glasses to the Transverse Acoustic van Hove Singularity in Crystals. Physical Review Letters, 2011, 106, 225501.	2.9	234
58	Comparative ab initio study of lattice dynamics and thermodynamics of Fe ₂ SiO ₄ - and Mg ₂ SiO ₄ -spinel. Journal of Physics Condensed Matter, 2011, 23, 105401.	0.7	11
59	Low temperature thermodynamical properties of ErCu ₂ Si ₂ . Journal of Magnetism and Magnetic Materials, 2010, 322, 12-18.	1.0	4
60	Electronic and optical properties of the $Mg_{1-x}Fe_xSi_2$ from band insulator to Mott insulator. Physical Review B, 2010, 82, .	1.1	4
61	DFT study of structure stability and elasticity of wadsleyite II. Journal of Physics Condensed Matter, 2010, 22, 145402.	0.7	6
62	Structure and elastic properties of Mg(OH) ₂ from density functional theory. Journal of Physics Condensed Matter, 2010, 22, 445403.	0.7	17
63	Vibrational Properties of Li_{\pm} and Li_f -Phase Fe-Cr Alloy. Physical Review Letters, 2010, 104, 155503.	2.9	29
64	Phonon Mechanism of the Magnetostructural Phase Transition in MnAs. Physical Review Letters, 2010, 104, 147205.	2.9	25
65	Magnetic properties of Nd ₃ Ag ₄ Ge ₄ . Intermetallics, 2010, 18, 1211-1215.	1.8	1
66	Comparative Study of the Electronic Structures of Fe ₃ O ₄ and Fe ₂ SiO ₄ . Acta Physica Polonica A, 2010, 118, 307-312.	0.2	6
67	Crystal structure, hydrogen bonds, and lattice dynamics in kanemite from first-principles calculations. Physical Review B, 2009, 79, .	1.1	3
68	Effects of Coulomb interaction on the electronic structure and lattice dynamics of the Mott insulator $Fe_{1-x}Co_xSi_2$. Physical Review B, 2009, 79, .	1.1	16
69	Lattice dynamics of Eu from nuclear inelastic scattering and first-principles calculations. Physical Review B, 2008, 78, .	1.1	8
70	Order parameters in the Verwey phase transition. Journal of Physics: Conference Series, 2007, 92, 012164.	0.3	3
71	Multiple magnetic phase transitions in Tb ₃ Cu ₄ Si ₄ . Journal of Physics Condensed Matter, 2007, 19, 246225.	0.7	12
72	Magnetically induced dynamical stability of a Fe monolayer on W(110). Physical Review B, 2007, 76, .	1.1	11

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73	Publisher's Note: Magnetically induced dynamical stability of a Fe monolayer on W(110) [Phys. Rev. B76, 205427 (2007)]. Physical Review B, 2007, 76, .	1.1	1
74	Probing the Coulomb interaction of PuCoGa5 by phonon spectroscopy. Journal of Alloys and Compounds, 2007, 444-445, 104-108.	2.8	3
75	Origin of the Verwey transition in magnetite: Group theory, electronic structure, and lattice dynamics study. Physical Review B, 2007, 76, .	1.1	93
76	Correlation effects in PuCoGa5 superconductor. Physica C: Superconductivity and Its Applications, 2007, 460-462, 655-656.	0.6	1
77	Investigation into the evolution of the structure of $K_{1-x}Li_xTa_{1-y}Nb_yO_3$ single crystals under variations in temperature. Crystallography Reports, 2007, 52, 440-446.	0.1	3
78	Mechanism of the Verwey Transition in Magnetite. Physical Review Letters, 2006, 97, 156402.	2.9	111
79	Influence of local Coulomb interactions on lattice dynamics in superconductor. Physica B: Condensed Matter, 2006, 378-380, 1029-1030.	1.3	0
80	Probing the Coulomb Interaction of the Unconventional Superconductor PuCoGa5 by Phonon Spectroscopy. Physical Review Letters, 2006, 96, 237003.	2.9	30
81	Influence of local electron interactions on phonon spectrum in iron. Physical Review B, 2006, 74, .	1.1	13
82	First-principles study of phonon modes in PuCoGa5 superconductor. Physical Review B, 2005, 72, .	1.1	39
83	Dynamic charge transfer and spin-phonon interaction in high-Tc superconductors. Physical Review B, 2005, 72, .	1.1	23
84	Role of phonons in the mechanism of high-temperature superconductivity. Physica C: Superconductivity and Its Applications, 2004, 408-410, 292-295.	0.6	3
85	Spin-phonon effects in the two-band Hubbard model. Physica C: Superconductivity and Its Applications, 2004, 408-410, 334-335.	0.6	1
86	Quasiharmonic approach to a second-order phase transition. Physical Review B, 2004, 70, .	1.1	17
87	High-pressure and thermal properties of ${}^3\text{Mg}_2\text{SiO}_4$ from first-principles calculations. Journal of Chemical Physics, 2002, 117, 3340-3344.	1.2	37
88	Lattice dynamics of Mg_2SiO_4 . Journal of Molecular Structure, 2001, 596, 3-6.	1.8	13
89	Phonon-induced hole-hole effective interactions in the cuprates. Physical Review B, 2001, 63, .	1.1	2
90	Bismuth cubic superconductors: polaronic and superconducting properties of the Rice-Sneddon model. Physica C: Superconductivity and Its Applications, 2000, 329, 121-129.	0.6	7

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91	Electron-phonon interaction in the cuprates: Breathing versus buckling mode. Physical Review B, 1999, 59, 14697-14701.	1.1	17
92	A role of multiple scattering in the interaction of low energy ions with a cold Au surface covered by a film of condensed xenon. Vacuum, 1995, 46, 609-611.	1.6	0