Thiti Bovornratanaraks

List of Publications by Year
in descending order

95	1,316	430754	434063
papers	citations	18 h-index	31 g-index

96	96	96	966
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Oxygen defect enriched (NH4)2V10O25Â·8H2O nanosheets for superior aqueous zincâ€ion batteries. Nano Energy, 2021, 84, 105876.	8.2	172
2	Observation of the incommensurate barium-IV structure in strontium phase V. Physical Review B, 2000, 61, 3135-3138.	1.1	95
3	Two Birds with One Stone: Boosting Zinc-Ion Insertion/Extraction Kinetics and Suppressing Vanadium Dissolution of V₂O₅ via La³⁺ Incorporation Enable Advanced Zinc-Ion Batteries. ACS Applied Materials & Interfaces, 2021, 13, 38416-38424.	4.0	70
4	Low temperature preparation of oxygen-deficient tin dioxide nanocrystals and a role of oxygen vacancy in photocatalytic activity improvement. Journal of Colloid and Interface Science, 2018, 512, 105-114.	5.0	59
5	Observation of a Simple-Cubic Phase of GaAs with a 16-Atom Basis (SC16). Physical Review Letters, 1998, 80, 5564-5567.	2.9	58
6	Phase stabilities and vibrational analysis of hydrogenated diamondized bilayer graphenes: A first principles investigation. Carbon, 2019, 146, 468-475.	5.4	43
7	Near-room-temperature superconductivity of Mg/Ca substituted metal hexahydride under pressure. Journal of Alloys and Compounds, 2020, 849, 156434.	2.8	38
8	Revealing the impacts of oxygen defects on Zn2+ storage performance in V2O5. Materials Today Energy, 2021, 21, 100824.	2.5	29
9	High-pressure phases induce H-vacancy diffusion kinetics in TM-doped MgH2: Ab initio study for hydrogen storage improvement. International Journal of Hydrogen Energy, 2019, 44, 21948-21954.	3.8	26
10	Superconductivity of superhydride CeH₁₀ under high pressure. Materials Research Express, 2020, 7, 086001.	0.8	26
11	Complex monoclinic superstructure in Sr-IV. Physical Review B, 2006, 73, .	1.1	25
12	Revealing an unusual transparent phase of superhard iron tetraboride under high pressure. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17050-17053.	3.3	23
13	The ideal commensurate value of Sc and the superconducting phase under high pressure. Journal of Applied Physics, 2018, 124, 225901.	1.1	23
14	Experimental study of thin film Fe2O3/TiO2 for photocatalytic Rhodamine B degradation. Inorganic Chemistry Communication, 2021, 128, 108585.	1.8	22
15	Structures and Transitions in Strontium.. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 1998, 7, 236-238.	0.1	22
16	Structural prediction of host-guest structure in lithium at high pressure. Scientific Reports, 2018, 8, 5278.	1.6	21
17	Boosting Zn²⁺ Diffusion via Tunnel-Type Hydrogen Vanadium Bronze for High-Performance Zinc Ion Batteries. ACS Applied Materials & Interfaces, 2022, 14, 7909-7916.	4.0	21
18	Structural Phase Transitions, Electronic Properties, and Hardness of RuB₄ under High Pressure in Comparison with FeB₄ and OsB₄. Journal of Physical Chemistry C, 2020, 124, 14804-14810.	1.5	20

#	Article	IF	Citations
19	Enthalpy stabilization of superconductivity in an alloying S-P-H system: First-principles cluster expansion study under high pressure. Computational Materials Science, 2021, 190, 110282.	1.4	20
20	Groundâ€“state structure of semiconducting and superconducting phases in xenon carbides at high pressure. Scientific Reports, 2019, 9, 2459.	1.6	19
21	Formation of Lightweight Ternary Polyhydrides and Their Hydrogen Storage Mechanism. Journal of Physical Chemistry C, 2021, 125, 1723-1730.	1.5	19
22	Raman spectroscopy on hydrogenated graphene under high pressure. Carbon, 2020, 156, 549-557.	5.4	18
23	Structural, electronic, optical and mechanical properties of InP alloyed with Zn, Si, Sn and S under pressure: First-principles calculation. Journal of Alloys and Compounds, 2017, 700, 98-105.	2.8	17
24	Pressure-induced structural stability of alkali trihydrides and H2-desorption occurrence: Ab initio study for hydrogen storage improvement. International Journal of Hydrogen Energy, 2020, 45, 25065-25074.	3.8	17
25	The High-Pressure Superconducting Phase of Arsenic. Scientific Reports, 2018, 8, 3026.	1.6	16
26	Organic Molecule Orientations and Rashbaâ€“Dresselhaus Effect in Î±-Formamidinium Lead Iodide. Journal of Physical Chemistry C, 2019, 123, 16508-16515.	1.5	16
27	Structural and mechanical properties of GaAs under pressure up to 200 GPa. Solid State Communications, 2014, 195, 26-30.	0.9	15
28	Superhard Semiconducting Phase of Osmium Tetraboride Stabilizing at 11 GPa. Journal of Physical Chemistry C, 2016, 120, 23165-23171.	1.5	14
29	High pressure structural phase transitions in Sr fromab initiocalculations. Physical Review B, 2008, 77, .	1.1	13
30	High pressure orthorhombic structure of CuInSe₂. Journal of Physics Condensed Matter, 2010, 22, 355801.	0.7	13
31	Ab initio calculation of high pressure phases and electronic properties of CuInSe2. Solid State Communications, 2012, 152, 775-778.	0.9	13
32	Theoretical study of carbon dioxide adsorption and diffusion in MIL-127(Fe) metal organic framework. Chemical Physics, 2017, 491, 118-125.	0.9	13
33	Phase stability and elastic properties of CuGaSe2 under high pressure. Solid State Communications, 2015, 218, 1-5.	0.9	12
34	High pressure-induced distortion in face-centered cubic phase of thallium. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 11143-11147.	3.3	12
35	The crucial role of density functional nonlocality and on-axis CH3NH3 rotation induced I2 formation in hybrid organic-inorganic CH3NH3PbI3 cubic perovskite. Scientific Reports, 2018, 8, 13161.	1.6	12
36	Roles of nitrogen substitution and surface reconstruction in stabilizing nonpassivated single-layer diamond. Physical Review B, 2020, 102, .	1.1	12

#	Article	IF	Citations
37	Stabilization and electronic topological transition of hydrogen-rich metal Li5MoH11 under high pressures from first-principles predictions. Scientific Reports, 2021, 11, 4079.	1.6	12
38	Theoretical predictions for low-temperature phases, softening of phonons and elastic stiffnesses, and electronic properties of sodium peroxide under high pressure. RSC Advances, 2019, 9, 30964-30975.	1.7	11
39	Route to high-$$T_{c}$$ superconductivity of $$hbox {BC}_{{7}}$$ via strong bonding of boronâ€“carbon compound at high pressure. Scientific Reports, 2020, 10, 18090.	1.6	11
40	Dynamical stabilization and H-vacancy diffusion kinetics of lightweight complex hydrides: Ab initio study for hydrogen storage improvement. International Journal of Hydrogen Energy, 2021, 46, 22591-22598.	3.8	11
41	Roles of optical phonons and logarithmic profile of electron-phonon coupling integration in superconducting Sc0.5Y0.5H6 superhydride under pressures. Journal of Alloys and Compounds, 2022, 901, 163524.	2.8	11
42	TM dopant-induced H-vacancy diffusion kinetics of sodium-lithium alanates: Ab initio study for hydrogen storage improvement. International Journal of Hydrogen Energy, 2022, 47, 18763-18771.	3.8	11
43	Existence of the Î²-tin structure in Sr: First evidence from computational approach. AIP Advances, 2015, 5, .	0.6	10
44	Role of spin-orbit coupling in the alloying behavior of multilayer Bi1â^'xSbx solid solutions revealed by a first-principles cluster expansion. Physical Review B, 2020, 101, .	1.1	10
45	High-temperature superconductor of sodalite-like clathrate hafnium hexahydride. Scientific Reports, 2021, 11, 16403.	1.6	9
46	Stable structures and electronic properties of 6-atom noble metal clusters using density functional theory. Journal of Nanoparticle Research, 2012, 14, 1.	0.8	8
47	Pressureâ€Induced Formation of Quaternary Compound and Inâ^'N Distribution in InGaAsN Zincblende from Ab Initio Calculation. ChemistryOpen, 2019, 8, 393-398.	0.9	8
48	Bain Deformation Mechanism and Lifshitz Transition in Magnesium under High Pressure. Physica Status Solidi (B): Basic Research, 2021, 258, 2000279.	0.7	8
49	Structural, thermodynamic, electronic, and magnetic properties of superconducting FeSeâ€“CsCl type: Ab initio searching technique with van der Waals corrections. Materials Chemistry and Physics, 2021, 267, 124708.	2.0	8
50	Modifying Electronic and Elastic Properties of 2-Dimensional [110] Diamond by Nitrogen Substitution. Journal of Carbon Research, 2021, 7, 8.	1.4	8
51	EFFECT OF NANO PARTICLE SIZES ON HIGH PRESSURE RAMAN SCATTERING IN NANOCRYSTALLINE CERIUM DIOXIDE. Modern Physics Letters B, 2011, 25, 2399-2405.	1.0	6
52	The effects of Na on high pressure phases of CuIn_{0.5}Ga_{0.5}Se₂fromab initiocalculation. Journal of Physics Condensed Matter, 2012, 24, 095802.	0.7	6
53	Phase stability and superconductivity of strontium under pressure. Applied Physics Letters, 2012, 101, 052604.	1.5	6
54	Effect of thermally excited lattice vibrations on the thermodynamic stability of tungsten ditellurides WTe2 under high pressure: A first-principles investigation. Computational Materials Science, 2021, 186, 110024.	1.4	6

#	Article	IF	Citations
55	The minimal supercells approach for ab-initio calculation in 2D alloying transition metal dichalcoginides with special quasi-random structure. Materials Research Express, 2020, 7, 086502.	0.8	6
56	Thermodynamic stability and superconductivity of tantalum carbides from first-principles cluster expansion and isotropic Eliashberg theory. Computational Materials Science, 2022, 202, 111004.	1.4	6
57	Ab initio study of structural phase transformations and band gap of chalcopyrite phase in AgInTe2 under high pressure. Solid State Communications, 2015, 220, 25-30.	0.9	5
58	Ab initio study of electronic density of state and photoabsorption of Ga1â^'xMnxAs under pressure. Solid State Communications, 2015, 202, 19-23.	0.9	5
59	Preferred oriented cation configurations in high pressure phases IV and V of methylammonium lead iodide perovskite. Scientific Reports, 2020, 10, 21138.	1.6	5
60	Nature of electronic topological transition and superconductivity in bismuth under high pressure from ab initio random structure searching. Computational Materials Science, 2021, 200, 110806.	1.4	5
61	The effect of morphology and confinement on the high-pressure phase transition in ZnO nanostructure. Journal of Applied Physics, 2015, 117, .	1.1	4
62	Role of relativity in high-pressure phase transitions of thallium. Scientific Reports, 2017, 7, 42983.	1.6	4
63	Theoretical aspects in structural distortion and the electronic properties of lithium peroxide under high pressure. Physical Chemistry Chemical Physics, 2018, 20, 9488-9497.	1.3	4
64	Effect of substitution on the superconducting phase of transition metal dichalcogenide Nb(Se$$_{x}$$S$$_{1-x}$$)$$_{2}$$ van der Waals layered structure. Scientific Reports, 2021, 11, 15215.	1.6	4
65	Presence and absence of intrinsic magnetism in graphitic carbon nitrides designed through Câ€“Nâ€“H building blocks. Scientific Reports, 2022, 12, 2343.	1.6	4
66	Ni-induced photoabsorption and hydrogen desorption on the Liâ€“Mg hydrides using ab initio calculation. Solid State Communications, 2022, 347, 114736.	0.9	4
67	High pressure structural studies of AgInTe₂. Journal of Physics: Conference Series, 2010, 215, 012008.	0.3	3
68	The hcp to fcc transformation path of scandium trihydride under high pressure. Journal of Physics Condensed Matter, 2014, 26, 025405.	0.7	3
69	Strong influence of off-site symmetry positions of hydrogen atoms in ScH3 hcp phases. Solid State Communications, 2016, 225, 48-55.	0.9	3
70	Experimental Study on Flexible Bismuth Telluride Thin Films Deposited by DC Sputtering at Different Powers. Journal of Electronic Materials, 2019, 48, 3490-3496.	1.0	3
71	Effect of atomic configuration and spinâ€“orbit coupling on thermodynamic stability and electronic bandgap of monolayer 2H-Mo_{1â^'x}W_xS₂ solid solutions. Physical Chemistry Chemical Physics, 2021, 23, 13535-13543.	1.3	3
72	Fe-doped effects on phase transition and electronic structure of CeO2 under compressed conditions from ab initio calculations. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	1.1	3

#	Article	IF	Citations
73	Stabilizing superconductivity of ternary metal pentahydride $$hbox {CaCH}_{{5}}$$ via electronic topological transitions under high pressure from first principles evolutionary algorithm. Scientific Reports, 2022, 12, 6700.	1.6	3
74	Evidence of a medium-range ordered phase and mechanical instabilities in strontium under high pressure. Solid State Communications, 2012, 152, 1172-1175.	0.9	2
75	Effect of Pressure on the Stability and Electronic Structure of ZnO0.5S0.5 and ZnO0.5Se0.5. Journal of Electronic Materials, 2017, 46, 6856-6863.	1.0	2
76	A comparison of the mixing thermodynamics of the antifluorite-structured Mg2Si1â^'xGex, Mg2Sn1â^'xGex and Mg2Si1â^'xSnx alloys from first principles. Vacuum, 2021, 185, 110018.	1.6	2
77	Boosting photocurrent density of 1D TiO2 based photoanodes by bismuth vanadium oxide enhancement for photoelectrochemical cell application. Inorganic Chemistry Communication, 2021, 134, 109013.	1.8	2
78	EFFECT OF CHARGEâ€"PLASMON INTERACTION TO THE EFFECTIVE MASS OF A CHARGED PARTICLE IN SOLIDS. International Journal of Modern Physics B, 2004, 18, 1225-1234.	1.0	1
79	High-Pressure Phase Transition of ZnO Nanorods Using Density Functional Theory. Integrated Ferroelectrics, 2014, 156, 122-128.	0.3	1
80	Pressure effects on hydrogen atoms near the metal plane in the HCP phase of rare-earth metal trihydrides. Solid State Communications, 2016, 231-232, 48-52.	0.9	1
81	Effect of pressure on the structure stability, electronic structure and band gap engineering in Zn16O1S15. Computational Condensed Matter, 2018, 17, e00332.	0.9	1
82	Band topology resisted spin-state evolution of perovskite ACoO3 (A = Ca, Sr) under pressure. Computational Materials Science, 2021, , 111024.	1.4	1
83	Stability and electronic structure of magnesium hydride and magnesium deuteride under high pressure. Journal of Physics: Conference Series, 2021, 2145, 012026.	0.3	1
84	Effect of Pulse Electrodeposition Parameters on the Microstructure and Mechanical Properties of Niâ€"W/B Nanocomposite Coatings. Nanomaterials, 2022, 12, 1871.	1.9	1
85	Complex metal structures at high pressures. Acta Crystallographica Section A: Foundations and Advances, 2002, 58, c178-c178.	0.3	0
86	Publisher's Note: Complex monoclinic superstructure in Sr-IV [Phys. Rev. B73, 144112 (2006)]. Physical Review B, 2006, 73, .	1.1	0
87	Progress on the Development of XRF Imaging and Analysis at the Siam Photon Laboratory. , 2010, , .		0
88	Effect of formamidinium cation on electronic structure of formamidinium lead iodide. Journal of Physics: Conference Series, 2019, 1380, 012080.	0.3	0
89	Development of a Cold-Pressing Process for the Production of Brake Pads with Uniform Density. Key Engineering Materials, 2019, 824, 73-80.	0.4	0
90	Superconductivity in Materials under Extreme Conditions: An ab-initio Prediction from Density Functional Theory. , 0, , .		0

#	Article	IF	Citations
91	Structural predictions of superconducting phase in tungsten ditellurides WTe2 from first-principles evolutionary techniques under high pressure. Computational Materials Science, 2021, 200, 110795.	1.4	0
92	Data-driven analysis of the rotational energy landscapes of an organic cation in a substituted alloy perovskite. Materials Advances, 2021, 2, 2366-2372.	2.6	0
93	Structures and phase transitions of CuInSe2under high pressure. Acta Crystallographica Section A: Foundations and Advances, 2005, 61, c464-c464.	0.3	0
94	Phase transition in AgInTe2under high pressure. Acta Crystallographica Section A: Foundations and Advances, 2008, 64, C608-C609.	0.3	0
95	Effect of Slot and Chamfer Shape of Brake Pad on Mode Coupling. , 0, , .		0