Houlong L Zhuang

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1089672/publications.pdf

Version: 2024-02-01

64	5,476	147801	118850
papers	citations	31 h-index	62 g-index

67	67	67	8133
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Sudoku-inspired high-Shannon-entropy alloys. Acta Materialia, 2022, 225, 117556.	7.9	5
2	Scalable nanomanufacturing of holey graphene via chemical etching: an investigation into process mechanisms. Nanoscale, 2022, 14, 4762-4769.	5.6	4
3	Understanding the mechanism of shockwave induced graphite-to-diamond phase transition. Materialia, 2022, 24, 101487.	2.7	0
4	A percolation theory for designing corrosion-resistant alloys. Nature Materials, 2021, 20, 789-793.	27.5	48
5	A Tribute to Emily A. Carter. Journal of Physical Chemistry A, 2021, 125, 1669-1670.	2.5	0
6	A Tribute to Emily A. Carter. Journal of Physical Chemistry C, 2021, 125, 4331-4332.	3.1	0
7	Ultrahighâ€Rate and Longâ€Life Zincâ€“Metal Anodes Enabled by Selfâ€Accelerated Cation Migration. Advanced Energy Materials, 2021, 11, 2100982.	19.5	131
8	Topological transformations in hyperuniform pentagonal two-dimensional materials induced by Stone-Wales defects. Physical Review B, 2021, 103, .	3.2	7
9	Nearly hyperuniform, nonhyperuniform, and antihyperuniform density fluctuations in two-dimensional transition metal dichalcogenides with defects. Physical Review B, 2021, 103, .	3.2	12
10	From evidence to new high-entropy alloys. Nature Computational Science, 2021, 1, 458-459.	8.0	4
11	Stoneâ€“Wales defects preserve hyperuniformity in amorphous two-dimensional networks. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	28
12	Spin qubit based on the nitrogen-vacancy center analog in a diamond-like compound C3BN. Journal of Applied Physics, 2021, 130, .	2.5	2
13	Highâ€Throughput Computational Characterization of 2D Compositionally Complex Transitionâ€Metal Chalcogenide Alloys. Advanced Theory and Simulations, 2020, 3, 2000195.	2.8	11
14	The joint automated repository for various integrated simulations (JARVIS) for data-driven materials design. Npj Computational Materials, 2020, 6, .	8.7	181
15	Electrical and thermal transport properties of medium-entropy Si Ge Sn alloys. Acta Materialia, 2020, 199, 443-452.	7.9	13
16	Quantum Materials for Energy-Efficient Computing. Jom, 2020, 72, 3147-3148.	1.9	0
17	Roomâ€Temperature Synthesis of 2D Janus Crystals and their Heterostructures. Advanced Materials, 2020, 32, e2006320.	21.0	138
18	Synthesis of heteroepitaxial BP and related Al-B-Sb-As-P films via CVD of Al(BH4)3 and MH3 (M=P, As, Sb) at temperatures below 600 Â°C. Semiconductor Science and Technology, 2020, 35, 085034.	2.0	2

#	Article	IF	Citations
19	Synthesis of a Smart Hybrid MXene with Switchable Conductivity for Temperature Sensing. ACS Applied Nano Materials, 2020, 3, 4069-4076.	5.0	26
20	Phase Transition across Anisotropic NbS 3 and Direct Gap Semiconductor TiS 3 at Nominal Titanium Alloying Limit. Advanced Materials, 2020, 32, 2000018.	21.0	16
21	Anomalous Behavior of 2D Janus Excitonic Layers under Extreme Pressures. Advanced Materials, 2020, 32, e2002401.	21.0	36
22	Disordered hyperuniformity in two-dimensional amorphous silica. Science Advances, 2020, 6, eaba0826.	10.3	35
23	Toward obtaining 2D and 3D and 1D PtPN with pentagonal pattern. Journal of Materials Science, 2019, 54, 14029-14037.	3.7	4
24	Synthesis and Fundamental Studies of Si-Compatible (Si)GeSn and GeSn Mid-IR Systems with Ultrahigh Sn Contents. Chemistry of Materials, 2019, 31, 9831-9842.	6.7	26
25	Single-layer ferromagnetic and piezoelectric CoAsS with pentagonal structure. APL Materials, 2019, 7, .	5.1	14
26	Ab initio playing of pentagonal puzzles. Electronic Structure, 2019, 1, 015004.	2.8	7
27	Dimension engineering of single-layer PtN 2 with the Cairo tessellation. Journal of Applied Physics, 2019, 125, 204302.	2.5	4
28	Computational prediction and characterization of two-dimensional pentagonal arsenopyrite FeAsS. Computational Materials Science, 2019, 166, 105-110.	3.0	9
29	Machine-learning phase prediction of high-entropy alloys. Acta Materialia, 2019, 169, 225-236.	7.9	297
30	Semiconducting SiGeSn high-entropy alloy: A density functional theory study. Journal of Applied Physics, 2019, 126, 225703.	2.5	12
31	From pentagonal geometries to two-dimensional materials. Computational Materials Science, 2019, 159, 448-453.	3.0	24
32	A â€œcation-anion regulationâ€•synergistic anode host for dendrite-free lithium metal batteries. Science Advances, 2018, 4, eaar4410.	10.3	241
33	Stable Lithium Electrodeposition at Ultraâ€High Current Densities Enabled by 3D PMF/Li Composite Anode. Advanced Energy Materials, 2018, 8, 1703360.	19.5	194
34	Machine learning for phase selection in multi-principal element alloys. Computational Materials Science, 2018, 150, 230-235.	3.0	174
35	Single-layer antiferromagnetic semiconductor <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>CoS</mml:mi><mml:mn>2</mml:mn></mml:msub></m with pentagonal structure. Physical Review B, 2018, 98, .	3.2	29
36	Electrochemical surface passivation of LiCoO2 particles at ultrahigh voltage and its applications in lithium-based batteries. Nature Communications, 2018, 9, 4918.	12.8	260

#	Article	IF	Citations
37	Enabling Stable Lithium Metal Anode via 3D Inorganic Skeleton with Superlithiophilic Interphase. Advanced Energy Materials, 2018, 8, 1802350.	19.5	147
38	Ultimate Control over Hydrogen Bond Formation and Reaction Rates for Scalable Synthesis of Highly Crystalline vdW MOF Nanosheets with Large Aspect Ratio. Advanced Materials, 2018, 30, e1802497.	21.0	30
39	Abnormal band bowing effects in phase instability crossover region of GaSe1-xTe x nanomaterials. Nature Communications, 2018, 9, 1927.	12.8	20
40	High-throughput functionalization of single-layer electride Ca2N. Materials Research Express, 2018, 5, 076306.	1.6	2
41	Can an element form a two-dimensional nanosheet of type 15 pentagons?. Computational Materials Science, 2018, 154, 37-40.	3.0	34
42	Orbital-free density functional theory characterization of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msup><mml:mi>Î²</mml:mi><mml:mo>â€²</mml:mo></mml:msup><mml:mi mathvariant="normal">M</mml:mi><mml:msub><mml:mi mathvariant="normal">g</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi mathvariant="normal">A</mml:mi><mml:msub><mml:mi mathvariant="normal">I</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math> Samso	2.4	3
43	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>PtP</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> : An example of exploring the hidden Cairo tessellation in the pyrite structure for discovering novel two-dimensional materials. Physical Review Materials, 2018, 2, .	2.4	14
44	Regulating Li deposition at artificial solid electrolyte interphases. Journal of Materials Chemistry A, 2017, 5, 3483-3492.	10.3	258
45	Doping-controlled phase transitions in single-layer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> Physical Review B, 2017, 96, .	3.2	63
46	A Density Functional +UAssessment of Oxygen Evolution Reaction Mechanisms on Î²-NiOOH. ACS Catalysis, 2017, 7, 5329-5339.	11.2	110
47	Petascale Orbital-Free Density Functional Theory Enabled by Small-Box Algorithms. Journal of Chemical Theory and Computation, 2016, 12, 2950-2963.	5.3	41
48	Surface Energy as a Descriptor of Catalytic Activity. Journal of Physical Chemistry C, 2016, 120, 23698-23706.	3.1	83
49	Interface orbital engineering of large-gap topological states: Decorating gold on a Si(111) surface. Physical Review B, 2016, 93, .	3.2	32
50	Strong anisotropy and magnetostriction in the two-dimensional Stoner ferromagnet<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Fe</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math> Physical Review B, 2016, 93, .	3.2	299
51	Elastic and Thermodynamic Properties of Complex Mg-Al Intermetallic Compounds via Orbital-Free Density Functional Theory. Physical Review Applied, 2016, 5, .	3.8	30
52	Stability and magnetism of strongly correlated single-layer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>VS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> Physical Review B, 2016, 93, .	3.2	176
53	Firstâ€Principles Study on the 1T Phase of GaX (X=S, Se) Monolayers. ChemistrySelect, 2016, 1, 5779-5783.	1.5	1
54	Density functional theory study of bulk and single-layer magnetic semiconductor <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>CrPS</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:math> Physical Review B, 2016, 94, .	3.2	53

#	Article	IF	Citations
55	Enhanced Liâ€“S Batteries Using Amine-Functionalized Carbon Nanotubes in the Cathode. ACS Nano, 2016, 10, 1050-1059.	14.6	289
56	Computational Screening of 2D Materials for Photocatalysis. Journal of Physical Chemistry Letters, 2015, 6, 1087-1098.	4.6	641
57	Ab Initio Prediction of Piezoelectricity in Two-Dimensional Materials. ACS Nano, 2015, 9, 9885-9891.	14.6	445
58	Hybrid cathode architectures for lithium batteries based on TiS₂ and sulfur. Journal of Materials Chemistry A, 2015, 3, 19857-19866.	10.3	119
59	Computational prediction and characterization of single-layer CrS₂. Applied Physics Letters, 2014, 104, 022116.	3.3	108
60	Tethered Molecular Sorbents: Enabling Metalâ€Sulfur Battery Cathodes. Advanced Energy Materials, 2014, 4, 1400390.	19.5	67
61	Computational Discovery, Characterization, and Design of Single-Layer Materials. Jom, 2014, 66, 366-374.	1.9	41
62	Computational identification of single-layer CdO for electronic and optical applications. Applied Physics Letters, 2013, 103, .	3.3	52
63	Accuracy of exchange-correlation functionals and effect of solvation on the surface energy of copper. Physical Review B, 2013, 87, .	3.2	211
64	Electronic structures of single-layer boron pnictides. Applied Physics Letters, 2012, 101, .	3.3	114