A-A Haghighirad

List of Publications by Year
in descending order

72 papers	15,646 citations	87888 38 h-index	82547 72 g-index
73 all docs	73 docs citations	73 times ranked	15184 citing authors

#	Article	IF	Citations
1	A mixed-cation lead mixed-halide perovskite absorber for tandem solar cells. Science, 2016, 351, 151-155.	12.6	2,514
2	Lead-free organicâ€“inorganic tin halide perovskites for photovoltaic applications. Energy and Environmental Science, 2014, 7, 3061-3068.	30.8	2,086
3	Inorganic caesium lead iodide perovskite solar cells. Journal of Materials Chemistry A, 2015, 3, 19688-19695.	10.3	1,419
4	Bandgapâ€Tunable Cesium Lead Halide Perovskites with High Thermal Stability for Efficient Solar Cells. Advanced Energy Materials, 2016, 6, 1502458.	19.5	1,265
5	Lead-Free Halide Double Perovskites via Heterovalent Substitution of Noble Metals. Journal of Physical Chemistry Letters, 2016, 7, 1254-1259.	4.6	761
6	Cs₂InAgCl₆: A New Lead-Free Halide Double Perovskite with Direct Band Gap. Journal of Physical Chemistry Letters, 2017, 8, 772-778.	4.6	752
7	Enhanced optoelectronic quality of perovskite thin films with hypophosphorous acid for planar heterojunction solar cells. Nature Communications, 2015, 6, 10030.	12.8	620
8	Enhanced UV-light stability of planar heterojunction perovskite solar cells with caesium bromide interface modification. Energy and Environmental Science, 2016, 9, 490-498.	30.8	535
9	Band Gaps of the Lead-Free Halide Double Perovskites Cs₂BiAgCl₆ and Cs₂BiAgBr₆ from Theory and Experiment. Journal of Physical Chemistry Letters, 2016, 7, 2579-2585.	4.6	529
10	Cubic or Orthorhombic? Revealing the Crystal Structure of Metastable Black-Phase CsPbI₃ by Theory and Experiment. ACS Energy Letters, 2018, 3, 1787-1794.	17.4	455
11	Charge-Carrier Dynamics in 2D Hybrid Metalâ€“Halide Perovskites. Nano Letters, 2016, 16, 7001-7007.	9.1	428
12	Monoclinic crystal structure of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Î±</mml:mi><mml:mo>â^'</mml:mo><mml:msub><mml: the zigzag antiferromagnetic ground state. Physical Review B, 2015, 92, .	3.2	386
13	Perovskite Crystals for Tunable White Light Emission. Chemistry of Materials, 2015, 27, 8066-8075.	6.7	362
14	Record Openâ€Circuit Voltage Wideâ€Bandgap Perovskite Solar Cells Utilizing 2D/3D Perovskite Heterostructure. Advanced Energy Materials, 2019, 9, 1803699.	19.5	325
15	Emergence of the nematic electronic state in FeSe. Physical Review B, 2015, 91, .	3.2	302
16	Tailoring metal halide perovskites through metal substitution: influence on photovoltaic and material properties. Energy and Environmental Science, 2017, 10, 236-246.	30.8	230
17	Impact of the Halide Cage on the Electronic Properties of Fully Inorganic Cesium Lead Halide Perovskites. ACS Energy Letters, 2017, 2, 1621-1627.	17.4	215
18	Mechanism for rapid growth of organicâ€“inorganic halide perovskite crystals. Nature Communications, 2016, 7, 13303.	12.8	191

#	ARTICLE	IF	CITATIONS
19	Solution-Processed Cesium Hexabromopalladate(IV), Cs₂PdBr₆, for Optoelectronic Applications. Journal of the American Chemical Society, 2017, 139, 6030-6033.	13.7	189
20	Atmospheric Influence upon Crystallization and Electronic Disorder and Its Impact on the Photophysical Properties of Organicâ€“Inorganic Perovskite Solar Cells. ACS Nano, 2015, 9, 2311-2320.	14.6	173
21	Unraveling the Exciton Binding Energy and the Dielectric Constant in Single-Crystal Methylammonium Lead Triiodide Perovskite. Journal of Physical Chemistry Letters, 2017, 8, 1851-1855.	4.6	152
22	Dichotomy between the Hole and Electron Behavior in Multiband Superconductor FeSe Probed by Ultrahigh Magnetic Fields. Physical Review Letters, 2015, 115, 027006.	7.8	111
23	Facile Synthesis of Stable and Highly Luminescent Methylammonium Lead Halide Nanocrystals for Efficient Light Emitting Devices. Journal of the American Chemical Society, 2019, 141, 1269-1279.	13.7	108
24	Near room temperature dielectric transition in the perovskite formate framework [(CH3)2NH2][Mg(HCOO)3]. Physical Chemistry Chemical Physics, 2012, 14, 8498.	2.8	106
25	Suppression of orbital ordering by chemical pressure in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">FeSe</mml:mi><mml:mrow><mml:mn>1</mml:mn><mml:mo>â^’</mml:mo><mml:mi>x</m[illegible]l:mi></[illegible]ml:mrow [illegible] mathvariant="normal">S</mml:mi><mml:mi>x</mml:mi></mml:msub></mml:math>. Physical Review B, 2015, 92, .	3.2	98
26	Evidence for unidirectional nematic bond ordering in FeSe. Physical Review B, 2016, 94, .	3.2	94
27	The mechanism of toluene-assisted crystallization of organicâ€“inorganic perovskites for highly efficient solar cells. Journal of Materials Chemistry A, 2016, 4, 4464-4471.	10.3	86
28	Route to Stable Lead-Free Double Perovskites with the Electronic Structure of CH₃NH₃PbI₃: A Case for Mixed-Cation [Cs/CH₃NH₃/CH(NH₂)₂]₂InBiBr₆. Journal of Physical Chemistry Letters, 2017, 8, 3917-3924.	4.6	82
29	First-order structural transition in the multiferroic perovskite-like formate [(CH3)2NH2][Mn(HCOO)3]. CrystEngComm, 2014, 16, 3558.	2.6	80
30	Direct Observation of Twisted Surface skyrmions in Bulk Crystals. Physical Review Letters, 2018, 120, 227202.	7.8	69
31	Suppression of electronic correlations by chemical pressure from FeSe to FeS. Physical Review B, 2017, 96, .	3.2	68
32	Electronic anisotropies revealed by detwinned angle-resolved photo-emission spectroscopy measurements of FeSe. New Journal of Physics, 2017, 19, 103021.	2.9	65
33	Evolution of the low-temperature Fermi surface of superconducting FeSe1â^’xSx across a nematic phase transition. Npj Quantum Materials, 2019, 4, .	5.2	62
34	Formation of Hubbard-like bands as a fingerprint of strong electron-electron interactions in FeSe. Physical Review B, 2017, 95, .	3.2	59
35	Growth modes and quantum confinement in ultrathin vapour-deposited MAPbI₃ films. Nanoscale, 2019, 11, 14276-14284.	5.6	51
36	Band hybridization at the semimetal-semiconductor transition of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Ta</mml:mi><mml:mn [illegible] /mml:m[illegible]></mml:[illegible] enabled by mirror-symmetry breaking. Physical Review Research, 2020, 2, .	2.6	48

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37	Spontaneous enhancement of the stable power conversion efficiency in perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 670-682.	10.3	47
38	Quenched nematic criticality and two superconducting domes in an iron-based superconductor. Nature Physics, 2020, 16, 89-94.	16.7	46
39	Scaling of the superconducting gap with orbital character in FeSe. Physical Review B, 2018, 98, .	3.2	38
40	Stable Phases of the Cs2CuCl4â˜’xBrxMixed Systems. Crystal Growth and Design, 2010, 10, 4456-4462.	3.0	33
41	Distinct magnetic regimes through site-selective atom substitution in the frustrated quantum antiferromagnet Cs<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>CuCl<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow /><mml:mrow><mml:mn>4</mml:mn><mml:mo>â˜’	3.2	27
42	Suppression of superconductivity and enhanced critical field anisotropy in thin flakes of FeSe. Npj Quantum Materials, 2020, 5, .	5.2	26
43	Anomalous high-magnetic field electronic state of the nematic superconductors <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>FeSe</mml:mi><mml:mrow><mml:mn>1</m mathvariant="normal">S</mml:mi><mml:mi>x</mml:mi></mml:msub></mml:mrow></mml:math>. Physical Review Research, 2020, 2, .	3.6	26
44	Calorimetric evidence of nodal gaps in the nematic superconductor FeSe. Physical Review B, 2019, 99, .	3.2	25
45	Strongly enhanced temperature dependence of the chemical potential in FeSe. Physical Review B, 2017, 95, .	3.2	24
46	Shifts and Splittings of the Hole Bands in the Nematic Phase of FeSe. Journal of the Physical Society of Japan, 2017, 86, 053703.	1.6	23
47	Strain tuning of nematicity and superconductivity in single crystals of FeSe. Physical Review B, 2021, 103, .	3.2	23
48	Revealing the single electron pocket of FeSe in a single orthorhombic domain. Physical Review B, 2020, 101, .	3.2	22
49	Unconventional magnetism on a honeycomb lattice in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Î±</mml:mi><mml:mo>â˜’</mml:mo><mml:msub><mm by muon spin rotation. Physical Review B, 2016, 94, .	3.2	21
50	In₂O₃:H-Based Hole-Transport-Layer-Free Tin/Lead Perovskite Solar Cells for Efficient Four-Terminal All-Perovskite Tandem Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 46488-46498.	8.0	20
51	Vortex-lattice melting and paramagnetic depairing in the nematic superconductor FeSe. Physical Review Research, 2020, 2, .	3.6	15
52	Paramagnon dispersion in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi></mml:math> -FeSe observed by Fe <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>L</mml:mi></mml:math> -edge resonant inelastic x-ray scattering. Physical Review B, 2019, 99, .	3.2	14
53	Synthesis, structural and physical properties of Î´â€™-FeSe1 -x. European Physical Journal B, 2010, 77, 101-107.	1.5	13
54	Powder synthesis and crystal growth of Y2V2O7 under high pressure and its physical properties. Journal of Crystal Growth, 2008, 310, 2277-2283.	1.5	11

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55	Signatures of a Quantum Griffiths Phase Close to an Electronic Nematic Quantum Phase Transition. Physical Review Letters, 2021, 127, 246402.	7.8	11
56	Dynamics of collective modes in an unconventional charge density wave system BaNi2As2. Communications Physics, 2022, 5, .	5.3	11
57	Robust Perpendicular Skyrmions and Their Surface Confinement. Nano Letters, 2020, 20, 1428-1432.	9.1	10
58	Dominant In-Plane Symmetric Elastoresistance in CsFe2As2. Physical Review Letters, 2020, 125, 187001.	7.8	10
59	Electronic correlations in the van der Waals 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></mm revealed by its charge dynamics. Physical Review B, 2020, 102, .	3.2	10
60	Possible strong electron-lattice interaction and giant magneto-elastic effects in Fe-pnictides. Europhysics Letters, 2009, 87, 17007.	2.0	9
61	Crystal Growth of A ₂V ₂O ₇ (A = Y, Er, and Dy) Pyrochlores using High Pressure. Crystal Growth and Design, 2008, 8, 1961-1965.	3.0	8
62	Physical Properties of Single-Crystalline Ba8Ni3.5Ge42.1â–¡0.4. Journal of Electronic Materials, 2010, 39, 1386-1389.	2.2	8
63	Emerging symmetric strain response and weakening nematic fluctuations in strongly hole-doped iron-based superconductors. Nature Communications, 2021, 12, 4824.	12.8	8
64	Raman scattering study of lattice and magnetic excitations in CrAs. Physical Review B, 2019, 100, .	3.2	7
65	Applications for ultimate spatial resolution in LASER based Î¼ - ARPES: A FeSe case study. AIP Conference Proceedings, 2019, , .	0.4	6
66	Step-Flow Growth of Bi₂Te₃ Nanobelts. Crystal Growth and Design, 2016, 16, 6961-6966.	3.0	5
67	Publisher's Note: Emergence of the nematic electronic state in FeSe [Phys. Rev. B91, 155106 (2015)]. Physical Review B, 2015, 91, .	3.2	3
68	Correction to Step-Flow Growth of Bi₂Te₃ Nanobelts. Crystal Growth and Design, 2017, 17, 1438-1438.	3.0	3
69	Band engineering of Dirac cones in iron chalcogenides. Physical Review B, 2020, 102, .	3.2	3
70	Combined experimental and theoretical studies of pressure effects in La2Sb. Physica Status Solidi (B): Basic Research, 2017, 254, 1600168.	1.5	2
71	Structural Variations and Magnetic Properties of the Quantum Antiferromagnets <inline-formula> <tex-math notation="TeX">${m Cs}_{2}{m CuCl}_{4-x}{m Br}_{x}$ </tex-math></inline-formula>. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	1
72	Spontaneous Enhancement of the Power Output in Surface-Passivated Triple-Cation Perovskite Solar Cells. , 2020, , .		0