In Chung

List of Publications by Year
in descending order

66 papers	6,349 citations	126708 33 h-index	95083 68 g-index
88 all docs	88 docs citations	88 times ranked	7042 citing authors

#	Article	IF	Citations
1	All-solid-state dye-sensitized solar cells with high efficiency. Nature, 2012, 485, 486-489.	13.7	1,608
2	CsSnI₃: Semiconductor or Metal? High Electrical Conductivity and Strong Near-Infrared Photoluminescence from a Single Material. High Hole Mobility and Phase-Transitions. Journal of the American Chemical Society, 2012, 134, 8579-8587.	6.6	894
3	Metal Chalcogenides: A Rich Source of Nonlinear Optical Materials. Chemistry of Materials, 2014, 26, 849-869.	3.2	569
4	Polycrystalline SnSe with a thermoelectric figure of merit greater than the single crystal. Nature Materials, 2021, 20, 1378-1384.	13.3	340
5	Chalcogenide Chemistry in Ionic Liquids: Nonlinear Optical Wave-Mixing Properties of the Double-Cubane Compound [Sb₇S₈Br₂](AlCl₄)₃. Journal of the American Chemical Society, 2009, 131, 9896-9897.	6.6	239
6	Surface Oxide Removal for Polycrystalline SnSe Reveals Near-Single-Crystal Thermoelectric Performance. Joule, 2019, 3, 719-731.	11.7	168
7	Defect Engineering for High-Performance n-Type PbSe Thermoelectrics. Journal of the American Chemical Society, 2018, 140, 9282-9290.	6.6	123
8	Synthesis in Ionic Liquids: [Bi2Te2Br](AlCl4), a Direct Gap Semiconductor with a Cationic Framework. Journal of the American Chemical Society, 2010, 132, 14760-14762.	6.6	116
9	Enhanced thermoelectric properties of p-type nanostructured PbTeâ€“MTe (M = Cd, Hg) materials. Energy and Environmental Science, 2013, 6, 1529.	15.6	115
10	Helical Polymer 1/â^ž[P2Se62-]:â€‰ Strong Second Harmonic Generation Response and Phase-Change Properties of Its K and Rb Salts. Journal of the American Chemical Society, 2007, 129, 14996-15006.	6.6	114
11	New Metal Chalcogenides Ba₄CuGa₅Q₁₂ (Q = S, Se) Displaying Strong Infrared Nonlinear Optical Response. Chemistry of Materials, 2013, 25, 2427-2433.	3.2	110
12	Enhancing p-Type Thermoelectric Performances of Polycrystalline SnSe via Tuning Phase Transition Temperature. Journal of the American Chemical Society, 2017, 139, 10887-10896.	6.6	110
13	High-Performance n-Type PbSeâ€“Cu₂Se Thermoelectrics through Conduction Band Engineering and Phonon Softening. Journal of the American Chemical Society, 2018, 140, 15535-15545.	6.6	103
14	A Polar and Chiral Indium Telluride Featuring Supertetrahedral T2 Clusters and Nonlinear Optical Second Harmonic Generation. Chemistry of Materials, 2009, 21, 12-14.	3.2	102
15	Flexible Polar Nanowires of Cs₅BiP₄Se₁₂ from Weak Interactions between Coordination Complexes: Strong Nonlinear Optical Second Harmonic Generation. Journal of the American Chemical Society, 2009, 131, 2647-2656.	6.6	94
16	Strongly Nonlinear Optical Glass Fibers from Noncentrosymmetric Phase-Change Chalcogenide Materials. Journal of the American Chemical Society, 2010, 132, 384-389.	6.6	85
17	Extraordinary Off-Stoichiometric Bismuth Telluride for Enhanced n-Type Thermoelectric Power Factor. Journal of the American Chemical Society, 2016, 138, 14458-14468.	6.6	85
18	Macromolecular Nanoplatelet of Aurivillius-type Layered Perovskite Oxide, Bi4Ti3O12. Chemistry of Materials, 2001, 13, 2759-2761.	3.2	83

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19	Molecular Germanium Selenophosphate Salts: Phase-Change Properties and Strong Second Harmonic Generation. Journal of the American Chemical Society, 2012, 134, 20733-20744.	6.6	74
20	Exceptionally High Average Power Factor and Thermoelectric Figure of Merit in n-type PbSe by the Dual Incorporation of Cu and Te. Journal of the American Chemical Society, 2020, 142, 15172-15186.	6.6	72
21	Air-Stable Direct Bandgap Perovskite Semiconductors: All-Inorganic Tin-Based Heteroleptic Halides A_xSnCl_yI_z (A = Cs, Rb). Chemistry of Materials, 2018, 30, 4847-4856.	3.2	65
22	Na2Ge2Se5: A highly nonlinear optical material. Journal of Solid State Chemistry, 2012, 195, 161-165.	1.4	58
23	Unprecedentedly high indoor performance (efficiency > 34 %) of perovskite photovoltaics with controlled bromine doping. Nano Energy, 2020, 75, 104984.	8.2	55
24	First-principles prediction of an enhanced optical second-harmonic susceptibility of low-dimensional alkali-metal chalcogenides. Physical Review B, 2009, 79, .	1.1	54
25	Cu Intercalation and Br Doping to Thermoelectric SnSe₂ Lead to Ultrahigh Electron Mobility and Temperatureâ€Independent Power Factor. Advanced Functional Materials, 2020, 30, 1908405.	7.8	53
26	APSe6(A = K, Rb, and Cs):Â Polymeric Selenophosphates with Reversible Phase-Change Properties. Inorganic Chemistry, 2004, 43, 2762-2764.	1.9	48
27	High Thermoelectric Performance in n-Type Polycrystalline SnSe via Dual Incorporation of Cl and PbSe and Dense Nanostructures. ACS Applied Materials & Interfaces, 2019, 11, 21645-21654.	4.0	47
28	Ultrahigh Power Factor and Electron Mobility in n-Type Bi₂Te₃â€“x%Cu Stabilized under Excess Te Condition. ACS Applied Materials & Interfaces, 2019, 11, 30999-31008.	4.0	45
29	High-Power-Density Skutterudite-Based Thermoelectric Modules with Ultralow Contact Resistivity Using Feâ€“Ni Metallization Layers. ACS Applied Energy Materials, 2018, 1, 1603-1611.	2.5	44
30	Strongly Nonlinear Optical Chalcogenide Thin Films of APSe₆ (A=K, Rb) from Spinâ€Coating. Angewandte Chemie - International Edition, 2011, 50, 10867-10870.	7.2	43
31	Crystal Growth and Characterization of the X-ray and Î³-ray Detector Material Cs₂Hg₆S₇. Crystal Growth and Design, 2012, 12, 3250-3256.	1.4	42
32	Nanoscale defect structures advancing high performance n-type PbSe thermoelectrics. Coordination Chemistry Reviews, 2020, 421, 213437.	9.5	41
33	Low valent phosphorus in the molecular anions [P5Se12]5â€“ and Î²-[P6Se12]4â€“: phase change behavior and near infrared second harmonic generation. Chemical Communications, 2007, , 4998.	2.2	38
34	Semiconducting [(Bi₄Te₄Br₂)(Al₂Cl_{6â€“x}Br_x)]Cl₂ and [Bi₂Se₂Br](AlCl₄): Cationic Chalcogenide Frameworks from Lewis Acidic Ionic Liquids. Inorganic Chemistry, 2013, 52, 5657-5659.	1.9	31
35	Towards efficient and stable perovskite solar cells employing non-hygroscopic F4-TCNQ doped TFB as the hole-transporting material. Nanoscale, 2019, 11, 19586-19594.	2.8	26
36	Unusual n-type thermoelectric properties of Bi2Te3 doped with divalent alkali earth metals. Journal of Solid State Chemistry, 2019, 269, 396-400.	1.4	25

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37	[P6Se12]4-: A Phosphorus-Rich Selenophosphate with Low-Valent P Centers. Inorganic Chemistry, 2006, 45, 2785-2787.	1.9	24
38	Largeâ€Diameter Carbon Nanotube Transparent Conductor Overcoming Performanceâ€“Yield Tradeoff. Advanced Functional Materials, 2022, 32, 2103397.	7.8	24
39	K_4GeP_4Se_12: a case for phase-change nonlinear optical chalcogenide. Optics Letters, 2013, 38, 1316.	1.7	23
40	ZnTe Alloying Effect on Enhanced Thermoelectric Properties of p-Type PbTe. ACS Applied Materials & Interfaces, 2017, 9, 3766-3773.	4.0	23
41	High-Performance Quantum Dot Thin-Film Transistors with Environmentally Benign Surface Functionalization and Robust Defect Passivation. ACS Applied Materials & Interfaces, 2018, 10, 3739-3749.	4.0	23
42	Rb₄Sn₅P₄Se₂₀: A Semimetallic Selenophosphate. Angewandte Chemie - International Edition, 2011, 50, 8834-8838.	7.2	22
43	Self-emitting blue and red EuOX (X = F, Cl, Br, I) materials: band structure, charge transfer energy, and emission energy. Physical Chemistry Chemical Physics, 2019, 21, 1737-1749.	1.3	22
44	Genetic Manipulation of M13 Bacteriophage for Enhancing the Efficiency of Virusâ€Inoculated Perovskite Solar Cells with a Certified Efficiency of 22.3%. Advanced Energy Materials, 2021, 11, 2101221.	10.2	20
45	Neutron Diffraction and X-ray Absorption Spectroscopic Analyses for Lithiated Aurivillius-Type Layered Perovskite Oxide, Li2Bi4Ti3O12. Journal of Physical Chemistry B, 2001, 105, 7908-7912.	1.2	19
46	Exceptionally low thermal conductivity realized in the chalcopyrite CuFeS2 via atomic-level lattice engineering. Nano Energy, 2022, 94, 106941.	8.2	19
47	The Tellurophosphate K4P8Te4: Phase-Change Properties, Exfoliation, Photoluminescence in Solution and Nanospheres. Journal of the American Chemical Society, 2009, 131, 16303-16312.	6.6	17
48	Stabilization of Sn²⁺ in K₁₀Sn₃(P₂Se₆)₄ and Cs₂SnP₂Se₆ Derived from a Basic Flux. Inorganic Chemistry, 2011, 50, 412-414.	1.9	17
49	Electronic Band Engineering via MI₃ (M = Sb, Bi) Doping Remarkably Enhances the Air Stability of Perovskite CsSnI₃. ACS Applied Energy Materials, 2020, 3, 10477-10484.	2.5	17
50	[P₃Se₇]^{3â^'}: A Phosphorus-Rich Square-Ring Selenophosphate. Inorganic Chemistry, 2010, 49, 3092-3094.	1.9	16
51	Electrical characteristics and detailed interfacial structures of Ag/Ni metallization on polycrystalline thermoelectric SnSe. Journal of Materials Science and Technology, 2019, 35, 711-718.	5.6	15
52	Indene-C₆₀ Bisadduct Electron-Transporting Material with the High LUMO Level Enhances Open-Circuit Voltage and Efficiency of Tin-Based Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 5581-5588.	2.5	15
53	Ag/Ni Metallization Bilayer: A Functional Layer for Highly Efficient Polycrystalline SnSe Thermoelectric Modules. Journal of Electronic Materials, 2017, 46, 848-855.	1.0	14
54	Study on thermal conductivity and electrical resistivity of Al-Cu alloys obtained by Boltzmann transport equation and first-principles simulation: Semi-empirical approach. Journal of Alloys and Compounds, 2017, 727, 1237-1242.	2.8	13

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55	Bulk Metamaterials Exhibiting Chemically Tunable Hyperbolic Responses. Journal of the American Chemical Society, 2021, 143, 20725-20734.	6.6	13
56	Thermoelectric transport properties of Pb doped SnSe alloys (PbxSn1-xSe): DFT-BTE simulations. Journal of Solid State Chemistry, 2019, 270, 413-418.	1.4	11
57	A Facile and Effective Ozone Exposure Method for Wettability and Energy-Level Tuning of Hole-Transporting Layers in Lead-Free Tin Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 42935-42943.	4.0	10
58	Cs4P2Se10: A new compound discovered with the application of solid-state and high temperature NMR. Journal of Solid State Chemistry, 2007, 180, 2877-2884.	1.4	9
59	Highly Luminous N^{3â€“}-Substituted Li₂MSiO_{4â^'Î´}N_{2/3Î´}:Eu²⁺ (M = Ca, Sr, and Ba) for White NUV Light-Emitting Diodes. ACS Omega, 2019, 4, 8431-8440.	1.6	9
60	Thermoelectric properties of nano-bulk bismuth telluride prepared with spark plasma sintered nano-plates. Current Applied Physics, 2019, 19, 97-101.	1.1	8
61	A highly efficient and transparent luminescent solar concentrator based on a nanosized metal cluster luminophore anchored on polymers. Journal of Materials Chemistry C, 2022, 10, 4402-4410.	2.7	8
62	Transformation of Dionâ€“Jacobson-type layered oxyfluorides into new anion-deficient pyrochlore-type oxides, ASrNb2O6.5 (A = Li and Na). Journal of Materials Chemistry, 2002, 12, 1001-1004.	6.7	5
63	r-BN: A fine hyperbolic dispersion modulator for bulk metamaterials consisting of heterostructured nanohybrids of h-BN and graphene. Journal of Solid State Chemistry, 2022, 309, 122937.	1.4	2
64	Genetic Manipulation of M13 Bacteriophage for Enhancing the Efficiency of Virusâ€Inoculated Perovskite Solar Cells with a Certified Efficiency of 22.3% (Adv. Energy Mater. 38/2021). Advanced Energy Materials, 2021, 11, 2170150.	10.2	1
65	APSe6 (A: K, Rb, and Cs): Polymeric Selenophosphates with Reversible Phase-Change Properties.. ChemInform, 2004, 35, no.	0.1	0
66	First-principles study of electronic transport coefficients of point-defective metallic species: aluminum and its bimetallic alloys. Modelling and Simulation in Materials Science and Engineering, 2019, 27, 035009.	0.8	0