

Liang

List of Publications by Year in descending order

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papers

3,066
citations

236833

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docs citations

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4156
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#	ARTICLE	IF	CITATIONS
1	Epitaxial growth of wafer-scale molybdenum disulfide semiconductor single crystals on sapphire. <i>Nature Nanotechnology</i> , 2021, 16, 1201-1207.	15.6	339
2	Earth-Abundant Nontoxic Titanium(IV)-based Vacancy-Ordered Double Perovskite Halides with Tunable 1.0 to 1.8 eV Bandgaps for Photovoltaic Applications. <i>ACS Energy Letters</i> , 2018, 3, 297-304.	8.8	314
3	Toward Eco-friendly and Stable Perovskite Materials for Photovoltaics. <i>Joule</i> , 2018, 2, 1231-1241.	11.7	224
4	Lead-Free Mixed Tin and Germanium Perovskites for Photovoltaic Application. <i>Journal of the American Chemical Society</i> , 2017, 139, 8038-8043.	6.6	217
5	Recent Progress and Challenges in Graphene Nanoribbon Synthesis. <i>ChemPhysChem</i> , 2013, 14, 47-54.	1.0	203
6	Uniform nucleation and epitaxy of bilayer molybdenum disulfide on sapphire. <i>Nature</i> , 2022, 605, 69-75.	13.7	174
7	MnX (X = P, As) monolayers: a new type of two-dimensional intrinsic room temperature ferromagnetic half-metallic material with large magnetic anisotropy. <i>Nanoscale</i> , 2019, 11, 4204-4209.	2.8	136
8	Perovskite Chalcogenides with Optimal Bandgap and Desired Optical Absorption for Photovoltaic Devices. <i>Advanced Energy Materials</i> , 2017, 7, 1700216.	10.2	128
9	Two-Dimensional Single-Layer Organic-Inorganic Hybrid Perovskite Semiconductors. <i>Advanced Energy Materials</i> , 2017, 7, 1601731.	10.2	93
10	Zero-Dimensional Organic-Inorganic Perovskite Variant: Transition between Molecular and Solid Crystal. <i>Journal of the American Chemical Society</i> , 2018, 140, 10456-10463.	6.6	79
11	Eighteen functional monolayer metal oxides: wide bandgap semiconductors with superior oxidation resistance and ultrahigh carrier mobility. <i>Nanoscale Horizons</i> , 2019, 4, 592-600.	4.1	78
12	Rapid Discovery of Ferroelectric Photovoltaic Perovskites and Material Descriptors via Machine Learning. <i>Small Methods</i> , 2019, 3, 1900360.	4.6	76
13	Magnetic two-dimensional layered crystals meet with ferromagnetic semiconductors. <i>Informa-Materials</i> , 2020, 2, 639-655.	8.5	76
14	Tin and germanium based two-dimensional Ruddlesden-Popper hybrid perovskites for potential lead-free photovoltaic and photoelectronic applications. <i>Nanoscale</i> , 2018, 10, 11314-11319.	2.8	73
15	Mechanically Robust Tri-Wing Graphene Nanoribbons with Tunable Electronic and Magnetic Properties. <i>Nano Letters</i> , 2010, 10, 494-498.	4.5	71
16	Auxetic B_{4N} Monolayer: A Promising 2D Material with in-Plane Negative Poisson's Ratio and Large Anisotropic Mechanics. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 33231-33237.	4.0	67
17	Transition-Metal-Catalyzed Unzipping of Single-Walled Carbon Nanotubes into Narrow Graphene Nanoribbons at Low Temperature. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 8041-8045.	7.2	61
18	Boron and Nitrogen Doping Induced Half-Metallicity in Zigzag Triwing Graphene Nanoribbons. <i>Journal of Physical Chemistry C</i> , 2011, 115, 6195-6199.	1.5	60

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19	Strain-Induced Orientation-Selective Cutting of Graphene into Graphene Nanoribbons on Oxidation. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 1161-1164.	7.2	59
20	Transition metal doping activated basal-plane catalytic activity of two-dimensional 1T- ReS_2 for hydrogen evolution reaction: a first-principles calculation study. <i>Nanoscale</i> , 2019, 11, 10402-10409.	2.8	56
21	Half-Metallicity in One-Dimensional Metal Trihydride Molecular Nanowires. <i>Journal of the American Chemical Society</i> , 2017, 139, 6290-6293.	6.6	54
22	In- and Ga-based inorganic double perovskites with direct bandgaps for photovoltaic applications. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 21691-21695.	1.3	37
23	Oxygen Intercalation of Graphene on Transition Metal Substrate: An Edge-Limited Mechanism. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 4099-4105.	2.1	35
24	Mechanism of Transition-Metal Nanoparticle Catalytic Graphene Cutting. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 1192-1197.	2.1	33
25	Point defects in lines in single crystalline phosphorene: directional migration and tunable band gaps. <i>Nanoscale</i> , 2016, 8, 17801-17808.	2.8	30
26	Catalytic Directional Cutting of Hexagonal Boron Nitride: The Roles of Interface and Etching Agents. <i>Nano Letters</i> , 2017, 17, 3208-3214.	4.5	26
27	Au_6S_2 monolayer sheets: metallic and semiconducting polymorphs. <i>Materials Horizons</i> , 2017, 4, 1085-1091.	6.4	26
28	A type-I van der Waals heterobilayer of $\text{WSe}_2/\text{MoTe}_2$. <i>Nanotechnology</i> , 2018, 29, 335203.	1.3	24
29	Lead-free low-dimensional tin halide perovskites with functional organic spacers: breaking the charge-transport bottleneck. <i>Journal of Materials Chemistry A</i> , 2019, 7, 16742-16747.	5.2	24
30	Reconciling the Debate on the Existence of Pentazole HN_5 in the Pentazolate Salt of $(\text{N}_5)_6(\text{H}_3\text{O})_3(\text{NH}_4)_4\text{Cl}$. <i>Journal of the American Chemical Society</i> , 2019, 141, 2984-2989.	6.6	21
31	Highly Promoted Carrier Mobility and Intrinsic Stability by Rolling Up Monolayer Black Phosphorus into Nanoscrolls. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 6847-6852.	2.1	20
32	Two dimensional CrGa_2Se_4 : a spin-gapless ferromagnetic semiconductor with inclined uniaxial anisotropy. <i>Nanoscale</i> , 2021, 13, 6024-6029.	2.8	17
33	Modulating the electronic and magnetic properties of bilayer borophene via transition metal atoms intercalation: from metal to half metal and semiconductor. <i>Nanotechnology</i> , 2018, 29, 305706.	1.3	16
34	AgBiS_2 as a low-cost and eco-friendly all-inorganic photovoltaic material: nanoscale morphology-property relationship. <i>Nanoscale Advances</i> , 2020, 2, 770-776.	2.2	15
35	Ultralong lifetime for fully photogenerated spin-polarized current in two-dimensional ferromagnetic/nonmagnetic semiconductor heterostructures. <i>Physical Review B</i> , 2021, 103, .	1.1	14
36	Making graphene nanoribbons: a theoretical exploration. <i>Wiley Interdisciplinary Reviews: Computational Molecular Science</i> , 2016, 6, 243-254.	6.2	13

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37	Revealing the pH-Dependent Photoluminescence Mechanism of Graphitic C ₃ N ₄ Quantum Dots. <i>Advanced Theory and Simulations</i> , 2019, 2, 1900074.	1.3	13
38	Organic Dye Molecules Sensitization-Enhanced Photocatalytic Water-Splitting Activity of MoS ₂ from First-Principles Calculations. <i>Journal of Physical Chemistry C</i> , 2020, 124, 6580-6587.	1.5	12
39	Two-Dimensional AuMX ₂ (M = Al, Ga, In; X = S, Se) Monolayers Featuring Intracrystalline Auophilic Interactions with Novel Electronic and Optical Properties. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 16739-16746.	4.0	11
40	Diisopropylammonium Bromide Based Two-Dimensional Ferroelectric Monolayer Molecular Crystal with Large In-Plane Spontaneous Polarization. <i>Journal of the American Chemical Society</i> , 2019, 141, 1452-1456.	6.6	10
41	Bi(Sb)NCa ₃ : Expansion of Perovskite Photovoltaics into All-Inorganic Anti-Perovskite Materials. <i>Journal of Physical Chemistry C</i> , 2019, 123, 6363-6369.	1.5	10
42	Unravelling the Role of Topological Defects on Catalytic Unzipping of Single-Walled Carbon Nanotubes by Single Transition Metal Atom. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 6801-6807.	2.1	7
43	Tuning electronic structure of monolayer InP ₃ in contact with graphene or Ni: effect of a buffer layer and intrinsic In and P-vacancy. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 1285-1293.	1.3	7
44	Theoretical study on two dimensional group IV-VI ternary compounds with large in-plane spontaneous polarization. <i>Computational Materials Science</i> , 2021, 198, 110688.	1.4	4
45	Metal-cation-mixed lead-less two-dimensional hybrid perovskites with high carrier mobility and promoted light adsorption. <i>Materials Today Physics</i> , 2022, 27, 100769.	2.9	3