

# Ruifeng Lu

## List of Publications by Year in descending order

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times ranked

5482  
citing authors

#	ARTICLE	IF	CITATIONS
1	Lead-Free All-Inorganic Indium Chloride Perovskite Variant Nanocrystals for Efficient Luminescence. <i>Advanced Optical Materials</i> , 2022, 10, 2101344.	7.3	26
2	High-Harmonic Generation Approaching the Quantum Critical Point of Strongly Correlated Systems. <i>Physical Review Letters</i> , 2022, 128, 047401.	7.8	31
3	Excitation-Dependent Emission in All-Inorganic Lead-Free $\text{Cs}_{2-x}\text{ScCl}_5\cdot\text{H}_2\text{O}$ Perovskite Crystals. <i>Laser and Photonics Reviews</i> , 2022, 16, .	8.7	26
4	A Magnetically Separable Pd Single-Atom Catalyst for Efficient Selective Hydrogenation of Phenylacetylene. <i>Advanced Materials</i> , 2022, 34, e2110455.	21.0	44
5	Band-Gap and Dimensional Engineering in Lead-Free Inorganic Halide Double Perovskite $\text{Cs}_4\text{Cu}_{1-x}\text{Ag}_2\text{Sb}_2\text{Cl}_{12}$ Single Crystals and Nanocrystals. <i>Frontiers in Materials</i> , 2022, 9, .	2.4	3
6	Confined lamellar channels structured by multilayer graphene for high-efficiency desalination. <i>Desalination</i> , 2022, 530, 115681.	8.2	16
7	Beyond the Pore Size Limitation of a Nanoporous Graphene Monolayer Membrane for Water Desalination Assisted by an External Electric Field. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 258-266.	4.6	15
8	Role of Shift Vector in High-Harmonic Generation from Noncentrosymmetric Topological Insulators under Strong Laser Fields. <i>Physical Review X</i> , 2022, 12, .	8.9	18
9	Substrate-Modulated Electric and Magnetic Resonances of Lithium Niobite Nanoparticles Illuminated by White Light. <i>Nanomaterials</i> , 2022, 12, 2010.	4.1	1
10	Selectivity of ion transport in narrow carbon nanotubes depends on the driving force due to drag or drive nature of their active hydration shells. <i>Journal of Chemical Physics</i> , 2021, 154, 104707.	3.0	18
11	Nanoscale Venturi-Bernoulli Pumping of Liquids. <i>ACS Nano</i> , 2021, 15, 10342-10346.	14.6	6
12	Photodissociation dynamics of water molecule at short photon wavelengths: full dimensional potential energy surface of Rydberg states. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2021, 54, 125102.	1.5	6
13	Ultraviolet waveband vector beams generation assisted by the nonlinear frequency conversion. <i>Applied Physics Letters</i> , 2021, 119, .	3.3	4
14	Using optical conductivity to detect the underlying metallic edge state in the interacting Haldane model. <i>Physical Review B</i> , 2021, 104, .	3.2	1
15	Nonlinear level attraction of cavity axion polariton in antiferromagnetic topological insulator. <i>Physical Review B</i> , 2021, 104, .	3.2	9
16	Ultrafast Interlayer Charge Separation, Enhanced Visible-Light Absorption, and Tunable Overpotential in Twisted Graphitic Carbon Nitride Bilayers for Water Splitting. <i>Advanced Materials</i> , 2021, 33, e2104695.	21.0	26
17	Efficient Luminescent Halide Quadruple-Perovskite Nanocrystals via Trap-Engineering for Highly Sensitive Photodetectors. <i>Advanced Materials</i> , 2021, 33, e2007215.	21.0	49
18	Computational Screening of Single Non-Noble Transition-Metal Atoms Confined Inside Boron Nitride Nanotubes for CO Oxidation. <i>Journal of Physical Chemistry C</i> , 2020, 124, 2030-2038.	3.1	10

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19	Strain effect on the orientation-dependent harmonic spectrum of monolayer aluminum nitride. Science China: Physics, Mechanics and Astronomy, 2020, 63, 1.	5.1	40
20	Lithium and sodium decorated graphdiyne as a candidate for hydrogen storage: First-principles and grand canonical Monte Carlo study. Applied Surface Science, 2020, 509, 144855.	6.1	41
21	Smooth periodic gauge satisfying crystal symmetry and periodicity to study high-harmonic generation in solids. Physical Review B, 2020, 102, .	3.2	31
22	Lead-Free Small-Bandgap Cs <sub>2</sub> CuSbCl <sub>6</sub> Double Perovskite Nanocrystals. Journal of Physical Chemistry Letters, 2020, 11, 6463-6467.	4.6	57
23	Higher harmonic generation from bilayer nanostructures assisted by electron backscattering. Physical Review B, 2020, 102, .	3.2	20
24	Polymeric heptazine imide by O doping and constructing van der Waals heterostructures for photocatalytic water splitting: a theoretical perspective from transition dipole moment analyses. Physical Chemistry Chemical Physics, 2020, 22, 9915-9922.	2.8	14
25	Porous MOF-205 with multiple modifications for efficiently storing hydrogen and methane as well as separating carbon dioxide from hydrogen and methane. International Journal of Energy Research, 2019, 43, 7517.	4.5	9
26	Crystal symmetry and polarization of high-order harmonics in ZnO. Journal of Physics B: Atomic, Molecular and Optical Physics, 2019, 52, 225601.	1.5	49
27	Identification of Key Reversible Intermediates in Self-Reconstructed Nickel-Based Hybrid Electrocatalysts for Oxygen Evolution. Angewandte Chemie - International Edition, 2019, 58, 17458-17464.	13.8	255
28	The role of transition dipole phase in atomic attosecond transient absorption from the multi-level model. Structural Dynamics, 2019, 6, 054102.	2.3	9
29	Water Transport through Ultrathin Nanopores with Highly Polar Rims. Journal of Physical Chemistry C, 2019, 123, 27690-27696.	3.1	14
30	Identification of Key Reversible Intermediates in Self-Reconstructed Nickel-Based Hybrid Electrocatalysts for Oxygen Evolution. Angewandte Chemie, 2019, 131, 17619-17625.	2.0	45
31	Nanocrystalline Cr-Ni Alloying Layer Induced by High-Current Pulsed Electron Beam. Nanomaterials, 2019, 9, 74.	4.1	7
32	Surface alloying of Cr on Ti6Al4V alloy induced by high-current pulse electron beam. Surface and Coatings Technology, 2019, 370, 288-297.	4.8	17
33	Interfacial competition between a borophene-based cathode and electrolyte for the multiple-sulfide immobilization of a lithium sulfur battery. Journal of Materials Chemistry A, 2019, 7, 7092-7098.	10.3	30
34	Tunable Topological State, High Hole-Carrier Mobility, and Prominent Sunlight Absorbance in Monolayered Calcium Triarsenide. Journal of Physical Chemistry Letters, 2019, 10, 761-767.	4.6	15
35	Microconcave MAPbBr <sub>3</sub> Single Crystal for High-Performance Photodetector. Journal of Physical Chemistry Letters, 2019, 10, 786-792.	4.6	41
36	Heterofullerene-linked metal-organic framework with lithium decoration for storing hydrogen and methane gases. International Journal of Hydrogen Energy, 2019, 44, 6702-6708.	7.1	10

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37	High order harmonic generation in solids: a review on recent numerical methods. <i>Advances in Physics</i> : X, 2019, 4, 1562982.	4.1	75
38	Crystallographic Facet Dependence of the Hydrogen Evolution Reaction on CoPS: Theory and Experiments. <i>ACS Catalysis</i> , 2018, 8, 1143-1152.	11.2	71
39	FeO <sub>x</sub> /FeP hybrid nanorods neutral hydrogen evolution electrocatalysis: insight into interface. <i>Journal of Materials Chemistry A</i> , 2018, 6, 9467-9472.	10.3	105
40	Confinement boosts CO oxidation on an Ni atom embedded inside boron nitride nanotubes. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 17599-17605.	2.8	15
41	Water desalination and biofuel dehydration through a thin membrane of polymer of intrinsic microporosity: Atomistic simulation study. <i>Journal of Membrane Science</i> , 2018, 545, 49-56.	8.2	55
42	A New Member of Electrocatalysts Based on Nickel Metaphosphate Nanocrystals for Efficient Water Oxidation. <i>Advanced Materials</i> , 2018, 30, 1705045.	21.0	149
43	Two-dimensional imaging of energy bands from crystal orientation dependent higher-order harmonic spectra in $\text{BN}$ . <i>Physical Review B</i> , 2018, 98, 115411.	3.2	65
44	Bilayer graphene with ripples for reverse osmosis desalination. <i>Carbon</i> , 2018, 136, 21-27.	10.3	34
45	Cytomembrane-Inspired Active Ni <sub>2</sub> O Interface for Enhanced Oxygen Evolution Reaction. <i>Advanced Materials</i> , 2018, 30, e1803367.	21.0	112
46	A remarkable two-dimensional membrane for multifunctional gas separation: halogenated metal-free fused-ring polyphthalocyanine. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 18931-18937.	2.8	7
47	Role of the Transition Dipole Amplitude and Phase on the Generation of Odd and Even High-Order Harmonics in Crystals. <i>Physical Review Letters</i> , 2018, 120, 253201.	7.8	167
48	Molecular dynamics study on water desalination through functionalized nanoporous graphene. <i>Carbon</i> , 2017, 116, 120-127.	10.3	198
49	One step synthesis of oxygen doped porous graphitic carbon nitride with remarkable improvement of photo-oxidation activity: Role of oxygen on visible light photocatalytic activity. <i>Applied Catalysis B: Environmental</i> , 2017, 206, 319-327.	20.2	387
50	Dissociation and Ionization of Quasi-Periodically Vibrating H <sub>2</sub> <sup>+</sup> in Intense Few-Cycle Mid-Infrared Laser Fields. <i>Scientific Reports</i> , 2017, 7, 42086.	3.3	20
51	Mechanism on the Improved Performance of Lithium Sulfur Batteries with MXene-Based Additives. <i>Journal of Physical Chemistry C</i> , 2017, 121, 11047-11054.	3.1	118
52	Layered Fe-Substituted LiNiO <sub>2</sub> Electrocatalysts for High-Efficiency Oxygen Evolution Reaction. <i>ACS Energy Letters</i> , 2017, 2, 1654-1660.	17.4	46
53	A DFT Exploration of Efficient Catalysts Based on Metal-Salen Monomers for the Cycloaddition Reaction of CO <sub>2</sub> to Propylene Oxide. <i>ChemistrySelect</i> , 2017, 2, 4533-4537.	1.5	15
54	Ultrahigh energy storage and ultrafast ion diffusion in borophene-based anodes for rechargeable metal ion batteries. <i>Journal of Materials Chemistry A</i> , 2017, 5, 2328-2338.	10.3	134

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55	Diverse carrier mobility of monolayer BNC <sub>2</sub> : a combined density functional theory and Boltzmann transport theory study. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 455305.	1.8	1
56	Ca-Embedded C <sub>2</sub> N: an efficient adsorbent for CO <sub>2</sub> capture. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 28323-28329.	2.8	25
57	First-Principles Screening of Lead-Free Methylammonium Metal Iodine Perovskites for Photovoltaic Application. <i>Journal of Physical Chemistry C</i> , 2017, 121, 24359-24364.	3.1	25
58	Perovskites decorated with oxygen vacancies and Fe-Ni alloy nanoparticles as high-efficiency electrocatalysts for the oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 19836-19845.	10.3	141
59	(C <sub>6</sub> H <sub>5</sub> C <sub>2</sub> H <sub>4</sub> NH <sub>3</sub> ) <sub>2</sub> GeI <sub>4</sub> : A Layered Two-Dimensional Perovskite with Potential for Photovoltaic Applications. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 4402-4406.	4.6	98
60	Rational Design and Strain Engineering of Nanoporous Boron Nitride Nanosheet Membranes for Water Desalination. <i>Journal of Physical Chemistry C</i> , 2017, 121, 22105-22113.	3.1	102
61	Adsorption of methanol, methanal, toluene, ethylbenzene, and styrene in zeolites: a grand canonical Monte Carlo simulation study. <i>Canadian Journal of Chemistry</i> , 2017, 95, 1241-1247.	1.1	3
62	Effect of transition dipole phase on high-order-harmonic generation in solid materials. <i>Physical Review A</i> , 2017, 96, .	2.5	92
63	Efficient ethanol/water separation via functionalized nanoporous graphene membranes: insights from molecular dynamics study. <i>Journal of Materials Science</i> , 2017, 52, 173-184.	3.7	34
64	Quantum-trajectory analysis for charge transfer in solid materials induced by strong laser fields. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 275702.	1.8	16
65	Half-metallicity obtained in silicene nanosheet by nitrogenation engineering. <i>Journal of Applied Physics</i> , 2016, 120, 234303.	2.5	9
66	Carrier mobility in double-helix DNA and RNA: A quantum chemistry study with Marcus-Hush theory. <i>Journal of Chemical Physics</i> , 2016, 145, 235101.	3.0	2
67	Graphdiyne as a High-Efficiency Membrane for Separating Oxygen from Harmful Gases: A First-Principles Study. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 28166-28170.	8.0	68
68	Dependence of high-order-harmonic generation on dipole moment in $\text{SiO}_2$ crystals. <i>Physical Review A</i> , 2016, 94, .	2.5	70
69	Mechanism of polysulfide immobilization on defective graphene sheets with N-substitution. <i>Carbon</i> , 2016, 110, 207-214.	10.3	92
70	Population Redistribution Among Multiple Electronic States of Molecular Nitrogen Ions in Strong Laser Fields. <i>Physical Review Letters</i> , 2016, 116, 143007.	7.8	132
71	Efficient band structure tuning, charge separation, and visible-light response in ZrS <sub>2</sub> -based van der Waals heterostructures. <i>Energy and Environmental Science</i> , 2016, 9, 841-849.	30.8	161
72	Reconstruction of two-dimensional molecular structure with laser-induced electron diffraction from laser-aligned polyatomic molecules. <i>Scientific Reports</i> , 2015, 5, 15753.	3.3	12

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73	First-principles study on electronic and optical properties of Cu <sub>2</sub> ZnSiV <sub>4</sub> (V=S, Se, and Te) quaternary semiconductors. AIP Advances, 2015, 5, .	1.3	13
74	Lithium decoration of three dimensional boron-doped graphene frameworks for high-capacity hydrogen storage. Applied Physics Letters, 2015, 106, .	3.3	21
75	Theoretical study of H <sub>2</sub> adsorption on metal-doped graphene sheets with nitrogen-substituted defects. International Journal of Hydrogen Energy, 2015, 40, 14154-14162.	7.1	37
76	Hexagonal Boron Nitride with Designed Nanopores as a High-Efficiency Membrane for Separating Gaseous Hydrogen from Methane. Journal of Physical Chemistry C, 2015, 119, 19826-19831.	3.1	71
77	Reagent vibrational, rotational and isotopic effects on stereodynamics of the H + OCl → OH + Cl reaction. Journal of Theoretical and Computational Chemistry, 2014, 13, 1450002.	1.8	0
78	Will a graphitic-like ZnO single-layer be an ideal substrate for graphene?. RSC Advances, 2014, 4, 17478.	3.6	16
79	A B <sup>+</sup> C <sup>-</sup> N hybrid porous sheet: an efficient metal-free visible-light absorption material. Physical Chemistry Chemical Physics, 2014, 16, 4299.	2.8	13
80	High Catalytic Activity of Au Clusters Supported on ZnO Nanosheets. Journal of Physical Chemistry C, 2014, 118, 21038-21041.	3.1	19
81	A promising monolayer membrane for oxygen separation from harmful gases: nitrogen-substituted polyphenylene. Nanoscale, 2014, 6, 9960-9964.	5.6	51
82	Reexamination of wavelength scaling of harmonic yield in intense midinfrared fields. Physical Review A, 2014, 89, .	2.5	35
83	Tunable band gap and hydrogen adsorption property of a two-dimensional porous polymer by nitrogen substitution. Physical Chemistry Chemical Physics, 2013, 15, 666-670.	2.8	20
84	Boron-substituted graphyne as a versatile material with high storage capacities of Li and H <sub>2</sub> : a multiscale theoretical study. Physical Chemistry Chemical Physics, 2013, 15, 16120.	2.8	96
85	Catenated metal-organic frameworks: Promising hydrogen purification materials and high hydrogen storage medium with further lithium doping. International Journal of Hydrogen Energy, 2013, 38, 9811-9818.	7.1	37
86	Influences of lithium doping and fullerene impregnation on hydrogen storage in metal organic frameworks. Molecular Simulation, 2013, 39, 968-974.	2.0	12
87	Quantum wave packet and quasiclassical trajectory studies of the reaction H( <sup>2</sup> S) + CH(X( <sup>2</sup> Σ <sup>+</sup> ); <i>v</i> = 0, <i>j</i> = 1) → C( <sup>1</sup> D) + H( <sub>2</sub> )(X( <sup>1</sup> Σ <sup>+</sup> )): Coriolis coupling effects and stereodynamics. Journal of Computational Chemistry, 2013, 34, 1735-1742.	3.3	10
88	Biaxial strain effect on the electronic and magnetic phase transitions in double perovskite La <sub>2</sub> FeMnO <sub>6</sub> : A first-principles study. Journal of Applied Physics, 2013, 114, .	2.5	23
89	QUASI-CLASSICAL TRAJECTORY STUDY OF THE REACTION N <sub>2</sub> + NH ( <i>v</i> = 0–3, <i>j</i> =0) → N <sub>2</sub> + H. Journal of Theoretical and Computational Chemistry, 2013, 12, 1350015.	1.8	1
90	Laser-parameter effects on the generation of ultrabroad harmonic and ultrashort attosecond pulse in a long-plus-short scheme. Journal of Modern Optics, 2012, 59, 1640-1649.	1.3	14

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91	Effect of high-pressure on the electronic and magnetic properties in double perovskite oxide Sr <sub>2</sub> FeMoO <sub>6</sub> . Journal of Applied Physics, 2012, 112, .	2.5	17
92	Enhancing magnetic vacancies in semiconductors by strain. Applied Physics Letters, 2012, 100, 072401.	3.3	21
93	S doping effect on the properties of double perovskite La <sub>2</sub> FeMoO <sub>6</sub> . Applied Physics Letters, 2012, 100, .	3.3	14
94	Prominently Improved Hydrogen Purification and Dispersive Metal Binding for Hydrogen Storage by Substitutional Doping in Porous Graphene. Journal of Physical Chemistry C, 2012, 116, 21291-21296.	3.1	76
95	Isolated sub-10 attosecond pulse generation by a 6-fs driving pulse and a 5-fs subharmonic controlling pulse. AIP Advances, 2012, 2, 022102.	1.3	12
96	Lithium-doped MOF impregnated with lithium-coated fullerenes: A hydrogen storage route for high gravimetric and volumetric uptakes at ambient temperatures. Chemical Communications, 2011, 47, 7698.	4.1	60
97	<a href="#">Theoretical investigation of the origin of the multipulse structure of kinetic energy release spectra from charge-resonance-enhanced ionization of</a> $H^{2+}$ in intense laser fields. Physical Review A, 2011, 84, .		