

Lyubov A Frolova

List of Publications by Year in descending order

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50
papers

1,930
citations

236612

25
h-index

253896

43
g-index

50
all docs

50
docs citations

50
times ranked

2999
citing authors

#	ARTICLE	IF	CITATIONS
1	Highly Efficient All-Inorganic Planar Heterojunction Perovskite Solar Cells Produced by Thermal Coevaporation of CsI and PbI ₂ . Journal of Physical Chemistry Letters, 2017, 8, 67-72.	2.1	269
2	Probing the Intrinsic Thermal and Photochemical Stability of Hybrid and Inorganic Lead Halide Perovskites. Journal of Physical Chemistry Letters, 2017, 8, 1211-1218.	2.1	216
3	The chemical origin of the p-type and n-type doping effects in the hybrid methylammonium-lead iodide (MAPbI ₃) perovskite solar cells. Chemical Communications, 2015, 51, 14917-14920.	2.2	122
4	Effect of Electron Transport Material on Light-Induced Degradation of Inverted Planar Junction Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700476.	10.2	103
5	Light or Heat: What Is Killing Lead Halide Perovskites under Solar Cell Operation Conditions?. Journal of Physical Chemistry Letters, 2020, 11, 333-339.	2.1	85
6	Exploring the Effects of the Pb ²⁺ Substitution in MAPbI ₃ on the Photovoltaic Performance of the Hybrid Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2016, 7, 4353-4357.	2.1	79
7	Antimony (V) Complex Halides: Lead-Free Perovskite-Like Materials for Hybrid Solar Cells. Advanced Energy Materials, 2018, 8, 1701140.	10.2	72
8	Design of rewritable and read-only non-volatile optical memory elements using photochromic spiropyran-based salts as light-sensitive materials. Journal of Materials Chemistry C, 2015, 3, 11675-11680.	2.7	68
9	Photoswitchable organic field-effect transistors and memory elements comprising an interfacial photochromic layer. Chemical Communications, 2015, 51, 6130-6132.	2.2	60
10	Reversible Pb ²⁺ /Pb ⁰ and I [•] /I ₃ [•] Redox Chemistry Drives the Light-Induced Phase Segregation in All-Inorganic Mixed Halide Perovskites. Advanced Energy Materials, 2021, 11, 2002934.	10.2	56
11	ESR spectroscopy for monitoring the photochemical and thermal degradation of conjugated polymers used as electron donor materials in organic bulk heterojunction solar cells. Chemical Communications, 2015, 51, 2242-2244.	2.2	54
12	Polymeric iodobismuthates {[Bi ₃ I ₁₀]} and {[BiI ₄]} with N-heterocyclic cations: promising perovskite-like photoactive materials for electronic devices. Journal of Materials Chemistry A, 2019, 7, 5957-5966.	5.2	53
13	XPS spectra as a tool for studying photochemical and thermal degradation in APbX ₃ hybrid halide perovskites. Nano Energy, 2021, 79, 105421.	8.2	50
14	Efficient and Stable MAPbI ₃ -Based Perovskite Solar Cells Using Polyvinylcarbazole Passivation. Journal of Physical Chemistry Letters, 2020, 11, 6772-6778.	2.1	48
15	Intrinsic thermal decomposition pathways of lead halide perovskites APbX ₃ . Solar Energy Materials and Solar Cells, 2020, 213, 110559.	3.0	45
16	Spatially-resolved nanoscale measurements of grain boundary enhanced photocurrent in inorganic CsPbBr ₃ perovskite films. Solar Energy Materials and Solar Cells, 2017, 171, 205-212.	3.0	38
17	ESR spectroscopy as a powerful tool for probing the quality of conjugated polymers designed for photovoltaic applications. Chemical Communications, 2015, 51, 2239-2241.	2.2	35
18	Unravelling the Material Composition Effects on the Gamma Ray Stability of Lead Halide Perovskite Solar Cells: MAPbI ₃ Breaks the Records. Journal of Physical Chemistry Letters, 2020, 11, 2630-2636.	2.1	35

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19	Hydrazinium-loaded perovskite solar cells with enhanced performance and stability. <i>Journal of Materials Chemistry A</i> , 2016, 4, 18378-18382.	5.2	34
20	Design of (X-DADAD) _n Type Copolymers for Efficient Bulk Heterojunction Organic Solar Cells. <i>Macromolecules</i> , 2015, 48, 2013-2021.	2.2	33
21	A new polytriarylamine derivative for dopant-free high-efficiency perovskite solar cells. <i>Sustainable Energy and Fuels</i> , 2019, 3, 2627-2632.	2.5	32
22	Efficient and stable all-inorganic perovskite solar cells based on nonstoichiometric Cs _x Pb ₂ Br _x (x > 1) alloys. <i>Journal of Materials Chemistry C</i> , 2019, 7, 5314-5323.	2.7	30
23	OFET-Based Memory Devices Operating via Optically and Electrically Modulated Charge Separation between the Semiconductor and 1,2-Bis(Hetaryl)ethene Dielectric Layers. <i>Advanced Electronic Materials</i> , 2016, 2, 1500219.	2.6	28
24	Incorporation of Vanadium(V) Oxide in Hybrid Hole Transport Layer Enables Long-term Operational Stability of Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 5563-5568.	2.1	28
25	Reversible and Irreversible Electric Field Induced Morphological and Interfacial Transformations of Hybrid Lead Iodide Perovskites. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 33478-33483.	4.0	27
26	Exploring the Photovoltaic Performance of All-Inorganic Ag ₂ Pb ₄ Pb ₂ Blends. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 1651-1656.	2.1	25
27	Film Deposition Techniques Impact the Defect Density and Photostability of MAPbI ₃ Perovskite Films. <i>Journal of Physical Chemistry C</i> , 2020, 124, 21378-21385.	1.5	22
28	Molecular structure-electrical performance relationship for OFET-based memory elements comprising unsymmetrical photochromic diarylethenes. <i>Journal of Materials Chemistry C</i> , 2019, 7, 6889-6894.	2.7	21
29	Partial Substitution of Pb ²⁺ in CsPbI ₃ as an Efficient Strategy To Design Fairly Stable All-Inorganic Perovskite Formulations. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 5184-5194.	4.0	21
30	Novel functionalized indigo derivatives for organic electronics. <i>Dyes and Pigments</i> , 2021, 186, 108966.	2.0	14
31	Memory devices based on novel alkyl viologen halobismuthate(_{iii}) complexes. <i>Chemical Communications</i> , 2020, 56, 9162-9165.	2.2	13
32	When iodide meets bromide: Halide mixing facilitates the light-induced decomposition of perovskite absorber films. <i>Nano Energy</i> , 2021, 86, 106082.	8.2	12
33	Design Principles for Organic Small Molecule Hole-Transport Materials for Perovskite Solar Cells: Film Morphology Matters. <i>ACS Applied Energy Materials</i> , 2022, 5, 5395-5403.	2.5	11
34	Nanoscale Visualization of Photodegradation Dynamics of MAPbI ₃ Perovskite Films. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 2744-2749.	2.1	11
35	Design of optical memory elements based on n-type organic field-effect transistors comprising a light-sensitive spirooxazine layer. <i>Mendeleev Communications</i> , 2016, 26, 26-28.	0.6	10
36	Temperature Dynamics of MAPbI ₃ and PbI ₂ Photolysis: Revealing the Interplay between Light and Heat, Two Enemies of Perovskite Photovoltaics. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 4362-4367.	2.1	10

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37	Dibenzoindigo: A Nature-Inspired Biocompatible Semiconductor Material for Sustainable Organic Electronics. <i>Advanced Optical Materials</i> , 2017, 5, 1601033.	3.6	9
38	Improving stability of perovskite solar cells using fullerene-polymer composite electron transport layer. <i>Synthetic Metals</i> , 2022, 286, 117028.	2.1	9
39	Exploring CsPbI ₃ FAI alloys: Introducing low-dimensional Cs ₂ FAPb ₂ I ₇ absorber for efficient and stable perovskite solar cells. <i>Chemical Engineering Journal</i> , 2021, 426, 131754.	6.6	8
40	Surface Passivation for Efficient Bifacial HTL-free Perovskite Solar Cells with SWCNT Top Electrodes. <i>ACS Applied Energy Materials</i> , 0, , .	2.5	8
41	Spectacular Enhancement of the Thermal and Photochemical Stability of MAPbI ₃ Perovskite Films Using Functionalized Tetraazaadamantane as a Molecular Modifier. <i>Energies</i> , 2021, 14, 669.	1.6	7
42	Molecular Engineering of Polytriarylamine-Based Hole-Transport Materials for Perovskite Solar Cells: Methyl Groups Matter. <i>ACS Applied Energy Materials</i> , 2022, 5, 5388-5394.	2.5	6
43	Enhanced photostability of CsPbI ₂ Br-based perovskite solar cells through suppression of phase segregation using a zwitterionic additive. <i>Sustainable Energy and Fuels</i> , 0, , .	2.5	4
44	Novel benzodithiophene-TTBTBTT copolymers: synthesis and investigation in organic and perovskite solar cells. <i>Sustainable Energy and Fuels</i> , 2022, 6, 3542-3550.	2.5	3
45	Oxidative polymerization of triaryl amines: a promising route to low-cost hole transport materials for efficient perovskite solar cells. <i>Sustainable Energy and Fuels</i> , 2022, 6, 3485-3489.	2.5	2
46	Unprecedented thermal condensation of tetracyanocyclopropanes to triazaphenalenenes: a facile route for the design of novel materials for electronic applications. <i>Chemical Communications</i> , 2017, 53, 4830-4833.	2.2	1
47	Hybrid Solar Cells: Antimony (V) Complex Halides: Lead-Free Perovskite-Like Materials for Hybrid Solar Cells (<i>Adv. Energy Mater.</i> 6/2018). <i>Advanced Energy Materials</i> , 2018, 8, 1870026.	10.2	1
48	Influence of Oxygen Ion Migration from Substrates on Photochemical Degradation of CH ₃ NH ₃ PbI ₃ Hybrid Perovskite. <i>Energies</i> , 2021, 14, 5062.	1.6	1
49	Conjugated push-pull type oligomer as a new electron transport material for improved stability p-i-n perovskite solar cells. <i>Synthetic Metals</i> , 2021, 281, 116921.	2.1	1
50	Chasing Stable Interfaces for Perovskite Solar Cells. , 0, , .		0