Lyubov A Frolova

List of Publications by Year
in descending order

50 papers	1,930 citations	236925 25 h-index	254184 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 PbI₂. Journal of Physical Chemistry Letters, 2017, 8, 67-72.	4.6	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.	4.6	216
3	The chemical origin of the p-type and n-type doping effects in the hybrid methylammoniumâ€“lead iodide (MAPbI₃) perovskite solar cells. Chemical Communications, 2015, 51, 14917-14920.	4.1	122
4	Effect of Electronâ€Transport Material on Lightâ€Induced Degradation of Inverted Planar Junction Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700476.	19.5	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.	4.6	85
6	Exploring the Effects of the Pb²⁺ Substitution in MAPbI₃ on the Photovoltaic Performance of the Hybrid Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2016, 7, 4353-4357.	4.6	79
7	Antimony (V) Complex Halides: Leadâ€Free Perovskiteâ€Like Materials for Hybrid Solar Cells. Advanced Energy Materials, 2018, 8, 1701140.	19.5	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.	5.5	68
9	Photoswitchable organic field-effect transistors and memory elements comprising an interfacial photochromic layer. Chemical Communications, 2015, 51, 6130-6132.	4.1	60
10	Reversible Pb²⁺/Pb⁰ and I^{âˆ’}/I₃^{âˆ’} Redox Chemistry Drives the Lightâ€Induced Phase Segregation in Allâ€Inorganic Mixed Halide Perovskites. Advanced Energy Materials, 2021, 11, 2002934.	19.5	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.	4.1	54
12	Polymeric iodobismuthates {[Bi₃I₁₀]} and {[BiI₄]} with N-heterocyclic cations: promising perovskite-like photoactive materials for electronic devices. Journal of Materials Chemistry A, 2019, 7, 5957-5966.	10.3	53
13	XPS spectra as a tool for studying photochemical and thermal degradation in APbX3 hybrid halide perovskites. Nano Energy, 2021, 79, 105421.	16.0	50
14	Efficient and Stable MAPbI₃-Based Perovskite Solar Cells Using Polyvinylcarbazole Passivation. Journal of Physical Chemistry Letters, 2020, 11, 6772-6778.	4.6	48
15	Intrinsic thermal decomposition pathways of lead halide perovskites APbX3. Solar Energy Materials and Solar Cells, 2020, 213, 110559.	6.2	45
16	Spatially-resolved nanoscale measurements of grain boundary enhanced photocurrent in inorganic CsPbBr3 perovskite films. Solar Energy Materials and Solar Cells, 2017, 171, 205-212.	6.2	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.	4.1	35
18	Unravelling the Material Composition Effects on the Gamma Ray Stability of Lead Halide Perovskite Solar Cells: MAPbI₃ Breaks the Records. Journal of Physical Chemistry Letters, 2020, 11, 2630-2636.	4.6	35

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19	Hydrazinium-loaded perovskite solar cells with enhanced performance and stability. Journal of Materials Chemistry A, 2016, 4, 18378-18382.	10.3	34
20	Design of (X-DADAD)_{<i>n</i>} Type Copolymers for Efficient Bulk Heterojunction Organic Solar Cells. Macromolecules, 2015, 48, 2013-2021.	4.8	33
21	A new polytriarylamine derivative for dopant-free high-efficiency perovskite solar cells. Sustainable Energy and Fuels, 2019, 3, 2627-2632.	4.9	32
22	Efficient and stable all-inorganic perovskite solar cells based on nonstoichiometric Cs_xPbI₂Br_x (<i>x</i> > 1) alloys. Journal of Materials Chemistry C, 2019, 7, 5314-5323.	5.5	30
23	OFETâ€Based Memory Devices Operating via Optically and Electrically Modulated Charge Separation between the Semiconductor and 1,2â€bis(Hetaryl)ethene Dielectric Layers. Advanced Electronic Materials, 2016, 2, 1500219.	5.1	28
24	Incorporation of Vanadium(V) Oxide in Hybrid Hole Transport Layer Enables Long-term Operational Stability of Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2020, 11, 5563-5568.	4.6	28
25	Reversible and Irreversible Electric Field Induced Morphological and Interfacial Transformations of Hybrid Lead Iodide Perovskites. ACS Applied Materials & Interfaces, 2017, 9, 33478-33483.	8.0	27
26	Exploring the Photovoltaic Performance of All-Inorganic Ag₂PbI₄/PbI₂ Blends. Journal of Physical Chemistry Letters, 2017, 8, 1651-1656.	4.6	25
27	Film Deposition Techniques Impact the Defect Density and Photostability of MAPbI₃ Perovskite Films. Journal of Physical Chemistry C, 2020, 124, 21378-21385.	3.1	22
28	Molecular structureâ€“electrical performance relationship for OFET-based memory elements comprising unsymmetrical photochromic diarylethenes. Journal of Materials Chemistry C, 2019, 7, 6889-6894.	5.5	21
29	Partial Substitution of Pb²⁺ in CsPbI₃ as an Efficient Strategy To Design Fairly Stable All-Inorganic Perovskite Formulations. ACS Applied Materials & Interfaces, 2021, 13, 5184-5194.	8.0	21
30	Novel functionalized indigo derivatives for organic electronics. Dyes and Pigments, 2021, 186, 108966.	3.7	14
31	Memory devices based on novel alkyl viologen halobismuthate(<scp>iii</scp>) complexes. Chemical Communications, 2020, 56, 9162-9165.	4.1	13
32	When iodide meets bromide: Halide mixing facilitates the light-induced decomposition of perovskite absorber films. Nano Energy, 2021, 86, 106082.	16.0	12
33	Design Principles for Organic Small Molecule Hole-Transport Materials for Perovskite Solar Cells: Film Morphology Matters. ACS Applied Energy Materials, 2022, 5, 5395-5403.	5.1	11
34	Nanoscale Visualization of Photodegradation Dynamics of MAPbI₃ Perovskite Films. Journal of Physical Chemistry Letters, 2022, 13, 2744-2749.	4.6	11
35	Design of optical memory elements based on n-type organic field-effect transistors comprising a light-sensitive spirooxazine layer. Mendeleev Communications, 2016, 26, 26-28.	1.6	10
36	Temperature Dynamics of MAPbI3 and PbI2 Photolysis: Revealing the Interplay between Light and Heat, Two Enemies of Perovskite Photovoltaics. Journal of Physical Chemistry Letters, 2021, 12, 4362-4367.	4.6	10

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37	Dibenzoindigo: A Natureâ€Inspired Biocompatible Semiconductor Material for Sustainable Organic Electronics. Advanced Optical Materials, 2017, 5, 1601033.	7.3	9
38	Improving stability of perovskite solar cells using fullerene-polymer composite electron transport layer. Synthetic Metals, 2022, 286, 117028.	3.9	9
39	Exploring CsPbI3 â€“ FAI alloys: Introducing low-dimensional Cs2FAPb2I7 absorber for efficient and stable perovskite solar cells. Chemical Engineering Journal, 2021, 426, 131754.	12.7	8
40	Surface Passivation for Efficient Bifacial HTL-free Perovskite Solar Cells with SWCNT Top Electrodes. ACS Applied Energy Materials, 0, , .	5.1	8
41	Spectacular Enhancement of the Thermal and Photochemical Stability of MAPbI3 Perovskite Films Using Functionalized Tetraazaadamantane as a Molecular Modifier. Energies, 2021, 14, 669.	3.1	7
42	Molecular Engineering of Polytriarylamine-Based Hole-Transport Materials for pâ€“iâ€“n Perovskite Solar Cells: Methyl Groups Matter. ACS Applied Energy Materials, 2022, 5, 5388-5394.	5.1	6
43	Enhanced photostability of CsPbI₂Br-based perovskite solar cells through suppression of phase segregation using a zwitterionic additive. Sustainable Energy and Fuels, 0, , .	4.9	4
44	Novel benzodithiophene-TTBTBTT copolymers: synthesis and investigation in organic and perovskite solar cells. Sustainable Energy and Fuels, 2022, 6, 3542-3550.	4.9	3
45	Oxidative polymerization of triarylamines: a promising route to low-cost hole transport materials for efficient perovskite solar cells. Sustainable Energy and Fuels, 2022, 6, 3485-3489.	4.9	2
46	Unprecedented thermal condensation of tetracyanocyclopropanes to triazaphenalenes: a facile route for the design of novel materials for electronic applications. Chemical Communications, 2017, 53, 4830-4833.	4.1	1
47	Hybrid Solar Cells: Antimony (V) Complex Halides: Leadâ€Free Perovskiteâ€Like Materials for Hybrid Solar Cells (Adv. Energy Mater. 6/2018). Advanced Energy Materials, 2018, 8, 1870026.	19.5	1
48	Influence of Oxygen Ion Migration from Substrates on Photochemical Degradation of CH3NH3PbI3 Hybrid Perovskite. Energies, 2021, 14, 5062.	3.1	1
49	Conjugated push-pull type oligomer as a new electron transport material for improved stability p-i-n perovskite solar cells. Synthetic Metals, 2021, 281, 116921.	3.9	1
50	Chasing Stable Interfaces for pâ€˜iâ€˜n Perovskite Solar Cells. , 0, , .		0