

Lyubov A Frolova

List of Publications by Year in descending order

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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	Molecular Engineering of Polytriarylamine-Based Hole-Transport Materials for Perovskite Solar Cells: Methyl Groups Matter. ACS Applied Energy Materials, 2022, 5, 5388-5394.	5.1	6
2	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
3	Nanoscale Visualization of Photodegradation Dynamics of MAPbI ₃ Perovskite Films. Journal of Physical Chemistry Letters, 2022, 13, 2744-2749.	4.6	11
4	Improving stability of perovskite solar cells using fullerene-polymer composite electron transport layer. Synthetic Metals, 2022, 286, 117028.	3.9	9
5	Novel benzodithiophene-TTBTBTT copolymers: synthesis and investigation in organic and perovskite solar cells. Sustainable Energy and Fuels, 2022, 6, 3542-3550.	4.9	3
6	Oxidative polymerization of triaryl amines: 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
7	Novel functionalized indigo derivatives for organic electronics. Dyes and Pigments, 2021, 186, 108966.	3.7	14
8	XPS spectra as a tool for studying photochemical and thermal degradation in APbX ₃ hybrid halide perovskites. Nano Energy, 2021, 79, 105421.	16.0	50
9	Spectacular Enhancement of the Thermal and Photochemical Stability of MAPbI ₃ Perovskite Films Using Functionalized Tetraazaadamantane as a Molecular Modifier. Energies, 2021, 14, 669.	3.1	7
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.	19.5	56
11	When iodide meets bromide: Halide mixing facilitates the light-induced decomposition of perovskite absorber films. Nano Energy, 2021, 86, 106082.	16.0	12
12	Temperature Dynamics of MAPbI ₃ and PbI ₂ 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
13	Influence of Oxygen Ion Migration from Substrates on Photochemical Degradation of CH ₃ NH ₃ PbI ₃ Hybrid Perovskite. Energies, 2021, 14, 5062.	3.1	1
14	Exploring CsPbI ₃ FAI alloys: Introducing low-dimensional Cs ₂ FAPb ₂ I ₇ absorber for efficient and stable perovskite solar cells. Chemical Engineering Journal, 2021, 426, 131754.	12.7	8
15	Partial Substitution of Pb ²⁺ in CsPbI ₃ as an Efficient Strategy To Design Fairly Stable All-Inorganic Perovskite Formulations. ACS Applied Materials & Interfaces, 2021, 13, 5184-5194.	8.0	21
16	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
17	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
18	Efficient and Stable MAPbI ₃ -Based Perovskite Solar Cells Using Polyvinylcarbazole Passivation. Journal of Physical Chemistry Letters, 2020, 11, 6772-6778.	4.6	48

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19	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.	3.1	22
20	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.	4.6	28
21	Unravelling the Material Composition Effects on the Gamma Ray Stability of Lead Halide Perovskite Solar Cells: MAPbI ₃ Breaks the Records. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 2630-2636.	4.6	35
22	Memory devices based on novel alkyl viologen halobismuthate(ⁱⁱⁱ) complexes. <i>Chemical Communications</i> , 2020, 56, 9162-9165.	4.1	13
23	Intrinsic thermal decomposition pathways of lead halide perovskites APbX ₃ . <i>Solar Energy Materials and Solar Cells</i> , 2020, 213, 110559.	6.2	45
24	A new polytriarylamine derivative for dopant-free high-efficiency perovskite solar cells. <i>Sustainable Energy and Fuels</i> , 2019, 3, 2627-2632.	4.9	32
25	Polymeric iodobismuthates {[Bi ₃ I ₁₀]} and {[BiI ₄]} with N-heterocyclic cations: promising perovskite-like photoactive materials for electronic devices. <i>Journal of Materials Chemistry A</i> , 2019, 7, 5957-5966.	10.3	53
26	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.	5.5	21
27	Efficient and stable all-inorganic perovskite solar cells based on nonstoichiometric Cs _x PbI ₂ Br _x (x > 1) alloys. <i>Journal of Materials Chemistry C</i> , 2019, 7, 5314-5323.	5.5	30
28	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.	19.5	1
29	Antimony (V) Complex Halides: Lead-Free Perovskite-Like Materials for Hybrid Solar Cells. <i>Advanced Energy Materials</i> , 2018, 8, 1701140.	19.5	72
30	Probing the Intrinsic Thermal and Photochemical Stability of Hybrid and Inorganic Lead Halide Perovskites. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 1211-1218.	4.6	216
31	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.	8.0	27
32	Effect of Electron Transport Material on Light-Induced Degradation of Inverted Planar Junction Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2017, 7, 1700476.	19.5	103
33	Exploring the Photovoltaic Performance of All-Inorganic Ag ₂ PbI ₄ /PbI ₂ Blends. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 1651-1656.	4.6	25
34	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.	4.1	1
35	Dibenzoindigo: A Nature-Inspired Biocompatible Semiconductor Material for Sustainable Organic Electronics. <i>Advanced Optical Materials</i> , 2017, 5, 1601033.	7.3	9
36	Highly Efficient All-Inorganic Planar Heterojunction Perovskite Solar Cells Produced by Thermal Coevaporation of CsI and PbI ₂ . <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 67-72.	4.6	269

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37	Spatially-resolved nanoscale measurements of grain boundary enhanced photocurrent in inorganic CsPbBr ₃ perovskite films. <i>Solar Energy Materials and Solar Cells</i> , 2017, 171, 205-212.	6.2	38
38	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.	5.1	28
39	Hydrazinium-loaded perovskite solar cells with enhanced performance and stability. <i>Journal of Materials Chemistry A</i> , 2016, 4, 18378-18382.	10.3	34
40	Exploring the Effects of the Pb ²⁺ Substitution in MAPbI ₃ on the Photovoltaic Performance of the Hybrid Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 4353-4357.	4.6	79
41	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.	1.6	10
42	Photoswitchable organic field-effect transistors and memory elements comprising an interfacial photochromic layer. <i>Chemical Communications</i> , 2015, 51, 6130-6132.	4.1	60
43	Design of (X-DADAD) _n Type Copolymers for Efficient Bulk Heterojunction Organic Solar Cells. <i>Macromolecules</i> , 2015, 48, 2013-2021.	4.8	33
44	Design of rewritable and read-only non-volatile optical memory elements using photochromic spiropyran-based salts as light-sensitive materials. <i>Journal of Materials Chemistry C</i> , 2015, 3, 11675-11680.	5.5	68
45	The chemical origin of the p-type and n-type doping effects in the hybrid methylammonium-lead iodide (MAPbI ₃) perovskite solar cells. <i>Chemical Communications</i> , 2015, 51, 14917-14920.	4.1	122
46	ESR spectroscopy for monitoring the photochemical and thermal degradation of conjugated polymers used as electron donor materials in organic bulk heterojunction solar cells. <i>Chemical Communications</i> , 2015, 51, 2242-2244.	4.1	54
47	ESR spectroscopy as a powerful tool for probing the quality of conjugated polymers designed for photovoltaic applications. <i>Chemical Communications</i> , 2015, 51, 2239-2241.	4.1	35
48	Surface Passivation for Efficient Bifacial HTL-free Perovskite Solar Cells with SWCNT Top Electrodes. <i>ACS Applied Energy Materials</i> , 0, , .	5.1	8
49	Chasing Stable Interfaces for Perovskite Solar Cells. , 0, , .		0
50	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, , .	4.9	4