Erkki Alarousu

List of Publications by Year
in descending order

85	12,871	87888 38	85541 71
papers	citations	h-index	g-index

88	88	88	14274
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Intrinsic efficiency limits in low-bandgap non-fullerene acceptor organic solar cells. Nature Materials, 2021, 20, 378-384.	27.5	257
2	Light-Harvesting Two-Photon-Absorbing Polymers. Macromolecules, 2020, 53, 6279-6287.	4.8	9
3	How Humidity and Light Exposure Change the Photophysics of Metal Halide Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000382.	5.8	23
4	Tuning Soluteâ€Redistribution Dynamics for Scalable Fabrication of Colloidal Quantumâ€Dot Optoelectronics. Advanced Materials, 2019, 31, e1805886.	21.0	28
5	Ligand-Free Nanocrystals of Highly Emissive Cs₄PbBr₆ Perovskite. Journal of Physical Chemistry C, 2018, 122, 6493-6498.	3.1	63
6	Water-Induced Dimensionality Reduction in Metal-Halide Perovskites. Journal of Physical Chemistry C, 2018, 122, 14128-14134.	3.1	78
7	Giant Photoluminescence Enhancement in CsPbCl₃ Perovskite Nanocrystals by Simultaneous Dual-Surface Passivation. ACS Energy Letters, 2018, 3, 2301-2307.	17.4	244
8	Double Charged Surface Layers in Lead Halide Perovskite Crystals. Nano Letters, 2017, 17, 2021-2027.	9.1	60
9	Ultrahigh Carrier Mobility Achieved in Photoresponsive Hybrid Perovskite Films via Coupling with Singleâ€Walled Carbon Nanotubes. Advanced Materials, 2017, 29, 1602432.	21.0	106
10	Zero-Dimensional Cs₄PbBr₆ Perovskite Nanocrystals. Journal of Physical Chemistry Letters, 2017, 8, 961-965.	4.6	299
11	Amorphous Tin Oxide as a Low-Temperature-Processed Electron-Transport Layer for Organic and Hybrid Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 11828-11836.	8.0	145
12	The Surface of Hybrid Perovskite Crystals: A Boon or Bane. ACS Energy Letters, 2017, 2, 846-856.	17.4	91
13	Pyridine-Induced Dimensionality Change in Hybrid Perovskite Nanocrystals. Chemistry of Materials, 2017, 29, 4393-4400.	6.7	100
14	Temperature-Induced Lattice Relaxation of Perovskite Crystal Enhances Optoelectronic Properties and Solar Cell Performance. Journal of Physical Chemistry Letters, 2017, 8, 137-143.	4.6	39
15	Ultralong Radiative States in Hybrid Perovskite Crystals: Compositions for Submillimeter Diffusion Lengths. Journal of Physical Chemistry Letters, 2017, 8, 4386-4390.	4.6	83
16	Inside Perovskites: Quantum Luminescence from Bulk Cs₄PbBr₆ Single Crystals. Chemistry of Materials, 2017, 29, 7108-7113.	6.7	200
17	Ultralow Self-Doping in Two-dimensional Hybrid Perovskite Single Crystals. Nano Letters, 2017, 17, 4759-4767.	9.1	251
18	Real-time observation of intersystem crossing induced by charge recombination during bimolecular electron transfer reactions. Dyes and Pigments, 2017, 136, 881-886.	3.7	2

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19	Solutionâ€Grown Monocrystalline Hybrid Perovskite Films for Holeâ€Transporterâ€Free Solar Cells. Advanced Materials, 2016, 28, 3383-3390.	21.0	298
20	Real-Space Mapping of Surface Trap States in CIGSe Nanocrystals Using 4D Electron Microscopy. Nano Letters, 2016, 16, 4417-4423.	9.1	22
21	Formamidinium Lead Halide Perovskite Crystals with Unprecedented Long Carrier Dynamics and Diffusion Length. ACS Energy Letters, 2016, 1, 32-37.	17.4	752
22	Engineering of CH₃NH₃PbI₃ Perovskite Crystals by Alloying Large Organic Cations for Enhanced Thermal Stability and Transport Properties. Angewandte Chemie, 2016, 128, 10844-10848.	2.0	18
23	Engineering of CH₃NH₃PbI₃ Perovskite Crystals by Alloying Large Organic Cations for Enhanced Thermal Stability and Transport Properties. Angewandte Chemie - International Edition, 2016, 55, 10686-10690.	13.8	152
24	Optoelectronic and photovoltaic properties of the air-stable organohalide semiconductor (CH₃NH₃)₃Bi₂I₉. Journal of Materials Chemistry A, 2016, 4, 12504-12515.	10.3	151
25	Perovskite Photodetectors Operating in Both Narrowband and Broadband Regimes. Advanced Materials, 2016, 28, 8144-8149.	21.0	260
26	Surface Restructuring of Hybrid Perovskite Crystals. ACS Energy Letters, 2016, 1, 1119-1126.	17.4	140
27	Ultrathin Cu₂O as an efficient inorganic hole transporting material for perovskite solar cells. Nanoscale, 2016, 8, 6173-6179.	5.6	191
28	Triplet excited state properties in variable gap Ï€-conjugated donorâ€“acceptorâ€“donor chromophores. Chemical Science, 2016, 7, 3621-3631.	7.4	59
29	Heterovalent Dopant Incorporation for Bandgap and Type Engineering of Perovskite Crystals. Journal of Physical Chemistry Letters, 2016, 7, 295-301.	4.6	332
30	The impact of electrostatic interactions on ultrafast charge transfer at Ag₂₉ nanoclustersâ€“fullerene and CdTe quantum dotsâ€“fullerene interfaces. Journal of Materials Chemistry C, 2016, 4, 2894-2900.	5.5	12
31	Harnessing structural darkness in the visible and infrared wavelengths for a new source of light. Nature Nanotechnology, 2016, 11, 60-66.	31.5	125
32	Quantum Dots: Overcoming the Cutâ€Off Charge Transfer Bandgaps at the PbS Quantum Dot Interface (Adv. Funct. Mater. 48/2015). Advanced Functional Materials, 2015, 25, 7548-7548.	14.9	0
33	The Impact of Grain Alignment of the Electron Transporting Layer on the Performance of Inverted Bulk Heterojunction Solar Cells. Small, 2015, 11, 5272-5279.	10.0	6
34	Overcoming the Cutâ€Off Charge Transfer Bandgaps at the PbS Quantum Dot Interface. Advanced Functional Materials, 2015, 25, 7435-7441.	14.9	18
35	Fast Crystallization and Improved Stability of Perovskite Solar Cells with Zn₂SnO₄ Electron Transporting Layer: Interface Matters. ACS Applied Materials & Interfaces, 2015, 7, 28404-28411.	8.0	103
36	Photoinduced triplet-state electron transfer of platinum porphyrin: a one-step direct method for sensing iodide with an unprecedented detection limit. Journal of Materials Chemistry A, 2015, 3, 6733-6738.	10.3	33

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37	Low trap-state density and long carrier diffusion in organolead trihalide perovskite single crystals. Science, 2015, 347, 519-522.	12.6	4,156
38	Tunable Photophysical Processes of Porphyrin Macrocycles on the Surface of ZnO Nanoparticles. Journal of Physical Chemistry C, 2015, 119, 2614-2621.	3.1	18
39	Direct Femtosecond Observation of Charge Carrier Recombination in Ternary Semiconductor Nanocrystals: The Effect of Composition and Shelling. Journal of Physical Chemistry C, 2015, 119, 3439-3446.	3.1	38
40	Real-time observation of ultrafast electron injection at grapheneâ€“Zn porphyrin interfaces. Physical Chemistry Chemical Physics, 2015, 17, 9015-9019.	2.8	19
41	To what extent can charge localization influence electron injection efficiency at grapheneâ€“porphyrin interfaces?. Physical Chemistry Chemical Physics, 2015, 17, 14513-14517.	2.8	7
42	High-quality bulk hybrid perovskite single crystals within minutes by inverse temperature crystallization. Nature Communications, 2015, 6, 7586.	12.8	1,478
43	Ultrafast Excited-State Dynamics of Diketopyrrolopyrrole (DPP)-Based Materials: Static versus Diffusion-Controlled Electron Transfer Process. Journal of Physical Chemistry C, 2015, 119, 15919-15925.	3.1	15
44	Facile Synthesis and High Performance of a New Carbazole-Based Hole-Transporting Material for Hybrid Perovskite Solar Cells. ACS Photonics, 2015, 2, 849-855.	6.6	99
45	Bimolecular Excited-State Electron Transfer with Surprisingly Long-Lived Radical Ions. Journal of Physical Chemistry C, 2015, 119, 21896-21903.	3.1	16
46	CH₃NH₃PbCl₃ Single Crystals: Inverse Temperature Crystallization and Visible-Blind UV-Photodetector. Journal of Physical Chemistry Letters, 2015, 6, 3781-3786.	4.6	636
47	Air-Stable Surface-Passivated Perovskite Quantum Dots for Ultra-Robust, Single- and Two-Photon-Induced Amplified Spontaneous Emission. Journal of Physical Chemistry Letters, 2015, 6, 5027-5033.	4.6	466
48	Carrier dynamics of a visible-light-responsive Ta₃N₅photoanode for water oxidation. Physical Chemistry Chemical Physics, 2015, 17, 2670-2677.	2.8	85
49	Solvent-Dependent Excited-State Hydrogen Transfer and Intersystem Crossing in 2-(2â€²-Hydroxyphenyl)-Benzothiazole. Journal of Physical Chemistry B, 2015, 119, 2596-2603.	2.6	40
50	A Layerâ€byâ€Layer ZnO Nanoparticleâ€“PbS Quantum Dot Selfâ€Assembly Platform for Ultrafast Interfacial Electron Injection. Small, 2015, 11, 112-118.	10.0	31
51	Blackbody metamaterial lasers. , 2015, , .		0
52	Photophysics of Organometallic Platinum(II) Derivatives of the Diketopyrrolopyrrole Chromophore. Journal of Physical Chemistry A, 2014, 118, 11735-11743.	2.5	36
53	Generation of Multiple Excitons in Ag₂S Quantum Dots: Single High-Energy versus Multiple-Photon Excitation. Journal of Physical Chemistry Letters, 2014, 5, 659-665.	4.6	81
54	Perovskite Oxide SrTiO₃ as an Efficient Electron Transporter for Hybrid Perovskite Solar Cells. Journal of Physical Chemistry C, 2014, 118, 28494-28501.	3.1	251

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55	Photoinduced energy and electron transfer in rubreneâ€“benzoquinone and rubreneâ€“porphyrin systems. Chemical Physics Letters, 2014, 616-617, 237-242.	2.6	4
56	Nd:YAG laser annealing investigation of screen-printed CIGS layer on PET: Layer annealing method for photovoltaic cell fabrication process. , 2014, , .		2
57	Ultrafast electron injection at the cationic porphyrinâ€“graphene interface assisted by molecular flattening. Chemical Communications, 2014, 50, 10452.	4.1	68
58	Impact of Metal Ions in Porphyrinâ€Based Applied Materials for Visibleâ€Light Photocatalysis: Key Information from Ultrafast Electronic Spectroscopy. Chemistry - A European Journal, 2014, 20, 10475-10483.	3.3	36
59	Ultrafast Carrier Trapping of a Metal-Doped Titanium Dioxide Semiconductor Revealed by Femtosecond Transient Absorption Spectroscopy. ACS Applied Materials & Interfaces, 2014, 6, 10022-10027.	8.0	32
60	Quantum Confinement-Tunable Ultrafast Charge Transfer at the PbS Quantum Dot and Phenyl-C₆₁-butyric Acid Methyl Ester Interface. Journal of the American Chemical Society, 2014, 136, 6952-6959.	13.7	97
61	Remarkable Fluorescence Enhancement versus Complex Formation of Cationic Porphyrins on the Surface of ZnO Nanoparticles. Journal of Physical Chemistry C, 2014, 118, 12154-12161.	3.1	19
62	Real-Time Observation of Ultrafast Intraband Relaxation and Exciton Multiplication in PbS Quantum Dots. ACS Photonics, 2014, 1, 285-292.	6.6	54
63	Online monitoring of printed electronics by Spectral-Domain Optical Coherence Tomography. Scientific Reports, 2013, 3, 1562.	3.3	28
64	Ultra-high resolution optical coherence tomography for encapsulation quality inspection. Applied Physics B: Lasers and Optics, 2011, 105, 649-657.	2.2	22
65	Optical coherence tomography as an accurate inspection and quality evaluation technique in paper industry. Optical Review, 2010, 17, 218-222.	2.0	46
66	Optical coherence tomography as a method of quality inspection for printed electronics products. Optical Review, 2010, 17, 257-262.	2.0	39
67	<title>Comparison of artificial neural network and multilinear regression analysis models in estimation of pulp flow speed from low coherence Doppler flowmetry measurement data</title>. , 2007, , .		0
68	<title>Comparing low coherence interferometry with conventional methods of measuring paper roughness</title>. , 2007, , .		1
69	Detection of local specular gloss and surface roughness from black prints. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2007, 299, 101-108.	4.7	31
70	<title>Neural network analysis of pulp flow speed in low coherence Doppler flowmetry measurement</title>. , 2007, , .		0
71	Nonlinear dynamic filtering of logarithmically amplified fringe signals in optical coherence tomography applied to paper measurements. Optics and Spectroscopy (English Translation of Optika I) Tj ETQq1 1 0.784314 rgBT /O		
72	Characterisation of optically cleared paper by optical coherence tomography. Quantum Electronics, 2006, 36, 181-187.	1.0	27

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73	Diffractive-optical-element-based glossmeter and low coherence interferometer in assessment of local surface quality of paper. Optical Engineering, 2006, 45, 043601.	1.0	10
74	Study on the use of optical coherence tomography in measurements of paper properties. Measurement Science and Technology, 2005, 16, 1131-1137.	2.6	58
75	Glucose sensing in aqueous Intralipid suspension with an optical coherence tomography system: experiment and Monte Carlo simulation. , 2004, 5325, 164.		17
76	<title>Evaluation of a scattering liquid flow velocity profile using Doppler optical coherence tomography and dynamic stochastic interference fringe processing</title>. , 2004, 5475, 66.		0
77	<title>Optical coherence tomography device for paper characterization</title>. , 2004, , .		2
78	<title>Noninvasive glucose sensing in scattering media using OCT, PAS, and TOF techniques</title>. , 2004, , .		11
79	<title>Enhancing the OCT images by the low-coherence fringe envelope deconvolution method</title>. , 2004, 5486, 180.		1
80	Optical coherence tomography evaluating the random tissues based on dynamical processing the stochastic low-coherence interference fringes. , 2003, , .		1
81	Optical coherence tomography evaluation of internal random structure of wood fiber tissue. , 2003, , .		4
82	Flow velocity profile measurement of scattering liquid using Doppler optical coherence tomography. , 2003, , .		4
83	Optical coherence tomography of multilayer tissue based on the dynamical stochastic fringe processing. , 2003, , .		6
84	Optical coherence tomography evaluating the random tissues based on dynamical processing the stochastic low-coherence interference fringes. , 2003, , .		0
85	<title>Optical coherence tomography in scattering material for industrial applications</title>. , 2001, , .		4