# Erkki Alarousu

## List of Publications by Year in Descending Order



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|---|---|---|---|
| 80 papers | 10,169 citations | 36 h-index | 88 g-index |
| 88 ext. papers | 11,514 ext. citations | 9.3 avg, IF | 5.87 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 80 | Intrinsic efficiency limits in low-bandgap non-fullerene acceptor organic solar cells. *Nature Materials*, **2021**, 20, 378-384 | 27 | 108 |
| 79 | Light-Harvesting Two-Photon-Absorbing Polymers. *Macromolecules*, **2020**, 53, 6279-6287 | 5.5 | 2 |
| 78 | How Humidity and Light Exposure Change the Photophysics of Metal Halide Perovskite Solar Cells. *Solar Rrl*, **2020**, 4, 2000382 | 7.1 | 13 |
| 77 | Tuning Solute-Redistribution Dynamics for Scalable Fabrication of Colloidal Quantum-Dot Optoelectronics. *Advanced Materials*, **2019**, 31, e1805886 | 24 | 20 |
| 76 | Ligand-Free Nanocrystals of Highly Emissive Cs4PbBr6 Perovskite. *Journal of Physical Chemistry C*, **2018**, 122, 6493-6498 | 3.8 | 52 |
| 75 | Water-Induced Dimensionality Reduction in Metal-Halide Perovskites. *Journal of Physical Chemistry C*, **2018**, 122, 14128-14134 | 3.8 | 56 |
| 74 | Giant Photoluminescence Enhancement in CsPbCl3 Perovskite Nanocrystals by Simultaneous Dual-Surface Passivation. *ACS Energy Letters*, **2018**, 3, 2301-2307 | 20.1 | 189 |
| 73 | Double Charged Surface Layers in Lead Halide Perovskite Crystals. *Nano Letters*, **2017**, 17, 2021-2027 | 11.5 | 52 |
| 72 | Ultrahigh Carrier Mobility Achieved in Photoresponsive Hybrid Perovskite Films via Coupling with Single-Walled Carbon Nanotubes. *Advanced Materials*, **2017**, 29, 1602432 | 24 | 87 |
| 71 | Zero-Dimensional CsPbBr Perovskite Nanocrystals. *Journal of Physical Chemistry Letters*, **2017**, 8, 961-965 | 6.4 | 229 |
| 70 | 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 | 9.5 | 110 |
| 69 | The Surface of Hybrid Perovskite Crystals: A Boon or Bane. *ACS Energy Letters*, **2017**, 2, 846-856 | 20.1 | 73 |
| 68 | Pyridine-Induced Dimensionality Change in Hybrid Perovskite Nanocrystals. *Chemistry of Materials*, **2017**, 29, 4393-4400 | 9.6 | 68 |
| 67 | Temperature-Induced Lattice Relaxation of Perovskite Crystal Enhances Optoelectronic Properties and Solar Cell Performance. *Journal of Physical Chemistry Letters*, **2017**, 8, 137-143 | 6.4 | 32 |
| 66 | Ultralong Radiative States in Hybrid Perovskite Crystals: Compositions for Submillimeter Diffusion Lengths. *Journal of Physical Chemistry Letters*, **2017**, 8, 4386-4390 | 6.4 | 59 |
| 65 | Inside Perovskites: Quantum Luminescence from Bulk Cs4PbBr6 Single Crystals. *Chemistry of Materials*, **2017**, 29, 7108-7113 | 9.6 | 160 |
| 64 | Ultralow Self-Doping in Two-dimensional Hybrid Perovskite Single Crystals. *Nano Letters*, **2017**, 17, 4759-4767 | 11.5 | 202 |

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|---|---|---|---|
| 63 | Real-time observation of intersystem crossing induced by charge recombination during bimolecular electron transfer reactions. *Dyes and Pigments*, **2017**, 136, 881-886 | 4.6 | 1 |
| 62 | Harnessing structural darkness in the visible and infrared wavelengths for a new source of light. *Nature Nanotechnology*, **2016**, 11, 60-6 | 28.7 | 94 |
| 61 | Optoelectronic and photovoltaic properties of the air-stable organohalide semiconductor (CH3NH3)3Bi2I9. *Journal of Materials Chemistry A*, **2016**, 4, 12504-12515 | 13 | 124 |
| 60 | Perovskite Photodetectors Operating in Both Narrowband and Broadband Regimes. *Advanced Materials*, **2016**, 28, 8144-8149 | 24 | 206 |
| 59 | Surface Restructuring of Hybrid Perovskite Crystals. *ACS Energy Letters*, **2016**, 1, 1119-1126 | 20.1 | 115 |
| 58 | Ultrathin Cu2O as an efficient inorganic hole transporting material for perovskite solar cells. *Nanoscale*, **2016**, 8, 6173-9 | 7.7 | 157 |
| 57 | Triplet excited state properties in variable gap □-conjugated donor-acceptor-donor chromophores. *Chemical Science*, **2016**, 7, 3621-3631 | 9.4 | 46 |
| 56 | Heterovalent Dopant Incorporation for Bandgap and Type Engineering of Perovskite Crystals. *Journal of Physical Chemistry Letters*, **2016**, 7, 295-301 | 6.4 | 268 |
| 55 | The impact of electrostatic interactions on ultrafast charge transfer at Ag29 nanocluster–fullerene and CdTe quantum dots–fullerene interfaces. *Journal of Materials Chemistry C*, **2016**, 4, 2894-2900 | 7.1 | 11 |
| 54 | Solution-Grown Monocrystalline Hybrid Perovskite Films for Hole-Transporter-Free Solar Cells. *Advanced Materials*, **2016**, 28, 3383-90 | 24 | 238 |
| 53 | Real-Space Mapping of Surface Trap States in CIGSe Nanocrystals Using 4D Electron Microscopy. *Nano Letters*, **2016**, 16, 4417-23 | 11.5 | 20 |
| 52 | Formamidinium Lead Halide Perovskite Crystals with Unprecedented Long Carrier Dynamics and Diffusion Length. *ACS Energy Letters*, **2016**, 1, 32-37 | 20.1 | 551 |
| 51 | Engineering of CH3NH3PbI3 Perovskite Crystals by Alloying Large Organic Cations for Enhanced Thermal Stability and Transport Properties. *Angewandte Chemie*, **2016**, 128, 10844-10848 | 3.6 | 15 |
| 50 | Engineering of CH3 NH3 PbI3 Perovskite Crystals by Alloying Large Organic Cations for Enhanced Thermal Stability and Transport Properties. *Angewandte Chemie - International Edition*, **2016**, 55, 10686-90 | 11.4 | 121 |
| 49 | Real-time observation of ultrafast electron injection at graphene-Zn porphyrin interfaces. *Physical Chemistry Chemical Physics*, **2015**, 17, 9015-9 | 3.6 | 15 |
| 48 | To what extent can charge localization influence electron injection efficiency at graphene-porphyrin interfaces?. *Physical Chemistry Chemical Physics*, **2015**, 17, 14513-7 | 3.6 | 6 |
| 47 | High-quality bulk hybrid perovskite single crystals within minutes by inverse temperature crystallization. *Nature Communications*, **2015**, 6, 7586 | 17.4 | 1164 |
| 46 | 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 | 3.8 | 13 |

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|---|---|---|---|
| 45 | Facile Synthesis and High Performance of a New Carbazole-Based Hole-Transporting Material for Hybrid Perovskite Solar Cells. *ACS Photonics*, **2015**, 2, 849-855 | 6.3 | 91 |
| 44 | Bimolecular Excited-State Electron Transfer with Surprisingly Long-Lived Radical Ions. *Journal of Physical Chemistry C*, **2015**, 119, 21896-21903 | 3.8 | 13 |
| 43 | CH3NH3PbCl3 Single Crystals: Inverse Temperature Crystallization and Visible-Blind UV-Photodetector. *Journal of Physical Chemistry Letters*, **2015**, 6, 3781-6 | 6.4 | 507 |
| 42 | 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, 5027-33 | 6.4 | 398 |
| 41 | Carrier dynamics of a visible-light-responsive Ta3N5 photoanode for water oxidation. *Physical Chemistry Chemical Physics*, **2015**, 17, 2670-7 | 3.6 | 76 |
| 40 | Solvent-dependent excited-state hydrogen transfer and intersystem crossing in 2-(2′-hydroxyphenyl)-benzothiazole. *Journal of Physical Chemistry B*, **2015**, 119, 2596-603 | 3.4 | 31 |
| 39 | A layer-by-layer ZnO nanoparticle-PbS quantum dot self-assembly platform for ultrafast interfacial electron injection. *Small*, **2015**, 11, 112-8 | 11 | 28 |
| 38 | Quantum Dots: Overcoming the Cut-Off Charge Transfer Bandgaps at the PbS Quantum Dot Interface (Adv. Funct. Mater. 48/2015). *Advanced Functional Materials*, **2015**, 25, 7548-7548 | 15.6 | |
| 37 | The Impact of Grain Alignment of the Electron Transporting Layer on the Performance of Inverted Bulk Heterojunction Solar Cells. *Small*, **2015**, 11, 5272-9 | 11 | 6 |
| 36 | Overcoming the Cut-Off Charge Transfer Bandgaps at the PbS Quantum Dot Interface. *Advanced Functional Materials*, **2015**, 25, 7435-7441 | 15.6 | 16 |
| 35 | Fast Crystallization and Improved Stability of Perovskite Solar Cells with Zn2SnO4 Electron Transporting Layer: Interface Matters. *ACS Applied Materials & Interfaces*, **2015**, 7, 28404-11 | 9.5 | 94 |
| 34 | 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 | 11 | 31 |
| 33 | Solar cells. Low trap-state density and long carrier diffusion in organolead trihalide perovskite single crystals. *Science*, **2015**, 347, 519-22 | 33.3 | 3307 |
| 32 | Tunable Photophysical Processes of Porphyrin Macrocycles on the Surface of ZnO Nanoparticles. *Journal of Physical Chemistry C*, **2015**, 119, 2614-2621 | 3.8 | 16 |
| 31 | 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 | 3.8 | 36 |
| 30 | Generation of Multiple Excitons in Ag2S Quantum Dots: Single High-Energy versus Multiple-Photon Excitation. *Journal of Physical Chemistry Letters*, **2014**, 5, 659-65 | 6.4 | 72 |
| 29 | Perovskite Oxide SrTiO3 as an Efficient Electron Transporter for Hybrid Perovskite Solar Cells. *Journal of Physical Chemistry C*, **2014**, 118, 28494-28501 | 3.8 | 209 |
| 28 | Photoinduced energy and electron transfer in rubrene–benzoquinone and rubrene–porphyrin systems. *Chemical Physics Letters*, **2014**, 616-617, 237-242 | 2.5 | 3 |

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|---|---|---|---|
| 27 | Nd:YAG laser annealing investigation of screen-printed CIGS layer on PET: Layer annealing method for photovoltaic cell fabrication process **2014**, | | 2 |
| 26 | Ultrafast electron injection at the cationic porphyrin-graphene interface assisted by molecular flattening. *Chemical Communications*, **2014**, 50, 10452-5 | 5.8 | 64 |
| 25 | Impact of metal ions in porphyrin-based applied materials for visible-light photocatalysis: key information from ultrafast electronic spectroscopy. *Chemistry - A European Journal*, **2014**, 20, 10475-83 | 4.8 | 32 |
| 24 | Ultrafast carrier trapping of a metal-doped titanium dioxide semiconductor revealed by femtosecond transient absorption spectroscopy. *ACS Applied Materials & Interfaces*, **2014**, 6, 10022-7 | 5.5 | 25 |
| 23 | Quantum confinement-tunable ultrafast charge transfer at the PbS quantum dot and phenyl-C□butyric acid methyl ester interface. *Journal of the American Chemical Society*, **2014**, 136, 6952-9 | 16.4 | 88 |
| 22 | Remarkable Fluorescence Enhancement versus Complex Formation of Cationic Porphyrins on the Surface of ZnO Nanoparticles. *Journal of Physical Chemistry C*, **2014**, 118, 12154-12161 | 3.8 | 16 |
| 21 | Real-Time Observation of Ultrafast Intraband Relaxation and Exciton Multiplication in PbS Quantum Dots. *ACS Photonics*, **2014**, 1, 285-292 | 6.3 | 50 |
| 20 | Photophysics of organometallic platinum(II) derivatives of the diketopyrrolopyrrole chromophore. *Journal of Physical Chemistry A*, **2014**, 118, 11735-43 | 2.8 | 33 |
| 19 | Online monitoring of printed electronics by Spectral-Domain Optical Coherence Tomography. *Scientific Reports*, **2013**, 3, 1562 | 4.9 | 22 |
| 18 | Ultra-high resolution optical coherence tomography for encapsulation quality inspection. *Applied Physics B: Lasers and Optics*, **2011**, 105, 649-657 | 1.9 | 16 |
| 17 | Optical coherence tomography as an accurate inspection and quality evaluation technique in paper industry. *Optical Review*, **2010**, 17, 218-222 | 0.9 | 35 |
| 16 | Optical coherence tomography as a method of quality inspection for printed electronics products. *Optical Review*, **2010**, 17, 257-262 | 0.9 | 22 |
| 15 | Detection of local specular gloss and surface roughness from black prints. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2007**, 299, 101-108 | 5.1 | 29 |
| 14 | Characterisation of optically cleared paper by optical coherence tomography. *Quantum Electronics*, **2006**, 36, 181-187 | 1.8 | 25 |
| 13 | Diffractive-optical-element-based glossmeter and low coherence interferometer in assessment of local surface quality of paper. *Optical Engineering*, **2006**, 45, 043601 | 1.1 | 7 |
| 12 | Nonlinear dynamic filtering of logarithmically amplified fringe signals in optical coherence tomography applied to paper measurements. *Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)*, **2006**, 101, 27-32 | 0.7 | 1 |
| 11 | Study on the use of optical coherence tomography in measurements of paper properties. *Measurement Science and Technology*, **2005**, 16, 1131-1137 | 2 | 42 |
| 10 | Glucose sensing in aqueous Intralipid suspension with an optical coherence tomography system: experiment and Monte Carlo simulation **2004**, 5325, 164 | | 12 |

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| 9 | Evaluation of a scattering liquid flow velocity profile using Doppler optical coherence tomography and dynamic stochastic interference fringe processing **2004**, 5475, 66 | |
| 8 | Optical coherence tomography device for paper characterization **2004**, | 1 |
| 7 | Noninvasive glucose sensing in scattering media using OCT, PAS, and TOF techniques **2004**, | 5 |
| 6 | Enhancing the OCT images by the low-coherence fringe envelope deconvolution method **2004**, 5486, 180 | 1 |
| 5 | Optical coherence tomography evaluating the random tissues based on dynamical processing the stochastic low-coherence interference fringes **2003**, | 1 |
| 4 | Optical coherence tomography evaluation of internal random structure of wood fiber tissue **2003**, | 2 |
| 3 | Flow velocity profile measurement of scattering liquid using Doppler optical coherence tomography **2003**, | 2 |
| 2 | Optical coherence tomography of multilayer tissue based on the dynamical stochastic fringe processing **2003**, | 4 |
| 1 | Optical coherence tomography in scattering material for industrial applications **2001**, | 2 |