

Erkki Alarousu

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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 | Solar cells. Low trap-state density and long carrier diffusion in organolead trihalide perovskite single crystals. <i>Science</i> , 2015 , 347, 519-22 | 33.3 | 3307 |
| 79 | High-quality bulk hybrid perovskite single crystals within minutes by inverse temperature crystallization. <i>Nature Communications</i> , 2015 , 6, 7586 | 17.4 | 1164 |
| 78 | Formamidinium Lead Halide Perovskite Crystals with Unprecedented Long Carrier Dynamics and Diffusion Length. <i>ACS Energy Letters</i> , 2016 , 1, 32-37 | 20.1 | 551 |
| 77 | CH ₃ NH ₃ PbCl ₃ Single Crystals: Inverse Temperature Crystallization and Visible-Blind UV-Photodetector. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 3781-6 | 6.4 | 507 |
| 76 | Air-Stable Surface-Passivated Perovskite Quantum Dots for Ultra-Robust, Single- and Two-Photon-Induced Amplified Spontaneous Emission. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 5027-33 | 6.4 | 398 |
| 75 | Heterovalent Dopant Incorporation for Bandgap and Type Engineering of Perovskite Crystals. <i>Journal of Physical Chemistry Letters</i> , 2016 , 7, 295-301 | 6.4 | 268 |
| 74 | Solution-Grown Monocrystalline Hybrid Perovskite Films for Hole-Transporter-Free Solar Cells. <i>Advanced Materials</i> , 2016 , 28, 3383-90 | 24 | 238 |
| 73 | Zero-Dimensional CsPbBr Perovskite Nanocrystals. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 961-965 | 6.4 | 229 |
| 72 | Perovskite Oxide SrTiO ₃ as an Efficient Electron Transporter for Hybrid Perovskite Solar Cells. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 28494-28501 | 3.8 | 209 |
| 71 | Perovskite Photodetectors Operating in Both Narrowband and Broadband Regimes. <i>Advanced Materials</i> , 2016 , 28, 8144-8149 | 24 | 206 |
| 70 | Ultralow Self-Doping in Two-dimensional Hybrid Perovskite Single Crystals. <i>Nano Letters</i> , 2017 , 17, 4759-4767 | 11.7 | 202 |
| 69 | Giant Photoluminescence Enhancement in CsPbCl ₃ Perovskite Nanocrystals by Simultaneous Dual-Surface Passivation. <i>ACS Energy Letters</i> , 2018 , 3, 2301-2307 | 20.1 | 189 |
| 68 | Inside Perovskites: Quantum Luminescence from Bulk Cs ₄ PbBr ₆ Single Crystals. <i>Chemistry of Materials</i> , 2017 , 29, 7108-7113 | 9.6 | 160 |
| 67 | Ultrathin Cu ₂ O as an efficient inorganic hole transporting material for perovskite solar cells. <i>Nanoscale</i> , 2016 , 8, 6173-9 | 7.7 | 157 |
| 66 | Optoelectronic and photovoltaic properties of the air-stable organohalide semiconductor (CH ₃ NH ₃) ₃ Bi ₂ I ₉ . <i>Journal of Materials Chemistry A</i> , 2016 , 4, 12504-12515 | 13 | 124 |
| 65 | Engineering of CH ₃ NH ₃ PbI ₃ Perovskite Crystals by Alloying Large Organic Cations for Enhanced Thermal Stability and Transport Properties. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 10686-90 | 16.4 | 121 |
| 64 | Surface Restructuring of Hybrid Perovskite Crystals. <i>ACS Energy Letters</i> , 2016 , 1, 1119-1126 | 20.1 | 115 |

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| 63 | Amorphous Tin Oxide as a Low-Temperature-Processed Electron-Transport Layer for Organic and Hybrid Perovskite Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 11828-11836 | 9.5 | 110 |
| 62 | Intrinsic efficiency limits in low-bandgap non-fullerene acceptor organic solar cells. <i>Nature Materials</i> , 2021 , 20, 378-384 | 27 | 108 |
| 61 | Harnessing structural darkness in the visible and infrared wavelengths for a new source of light. <i>Nature Nanotechnology</i> , 2016 , 11, 60-6 | 28.7 | 94 |
| 60 | Fast Crystallization and Improved Stability of Perovskite Solar Cells with Zn ₂ SnO ₄ Electron Transporting Layer: Interface Matters. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 28404-11 | 9.5 | 94 |
| 59 | Facile Synthesis and High Performance of a New Carbazole-Based Hole-Transporting Material for Hybrid Perovskite Solar Cells. <i>ACS Photonics</i> , 2015 , 2, 849-855 | 6.3 | 91 |
| 58 | Quantum confinement-tunable ultrafast charge transfer at the PbS quantum dot and phenyl- <i>n</i> -butyric acid methyl ester interface. <i>Journal of the American Chemical Society</i> , 2014 , 136, 6952-9 ^{16.4} | 16.4 | 88 |
| 57 | Ultrahigh Carrier Mobility Achieved in Photoresponsive Hybrid Perovskite Films via Coupling with Single-Walled Carbon Nanotubes. <i>Advanced Materials</i> , 2017 , 29, 1602432 | 24 | 87 |
| 56 | Carrier dynamics of a visible-light-responsive Ta ₃ N ₅ photoanode for water oxidation. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 2670-7 | 3.6 | 76 |
| 55 | The Surface of Hybrid Perovskite Crystals: A Boon or Bane. <i>ACS Energy Letters</i> , 2017 , 2, 846-856 | 20.1 | 73 |
| 54 | Generation of Multiple Excitons in Ag ₂ S Quantum Dots: Single High-Energy versus Multiple-Photon Excitation. <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 659-65 | 6.4 | 72 |
| 53 | Pyridine-Induced Dimensionality Change in Hybrid Perovskite Nanocrystals. <i>Chemistry of Materials</i> , 2017 , 29, 4393-4400 | 9.6 | 68 |
| 52 | Ultrafast electron injection at the cationic porphyrin-graphene interface assisted by molecular flattening. <i>Chemical Communications</i> , 2014 , 50, 10452-5 | 5.8 | 64 |
| 51 | Ultralong Radiative States in Hybrid Perovskite Crystals: Compositions for Submillimeter Diffusion Lengths. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 4386-4390 | 6.4 | 59 |
| 50 | Water-Induced Dimensionality Reduction in Metal-Halide Perovskites. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 14128-14134 | 3.8 | 56 |
| 49 | Double Charged Surface Layers in Lead Halide Perovskite Crystals. <i>Nano Letters</i> , 2017 , 17, 2021-2027 | 11.5 | 52 |
| 48 | Ligand-Free Nanocrystals of Highly Emissive Cs ₄ PbBr ₆ Perovskite. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 6493-6498 | 3.8 | 52 |
| 47 | Real-Time Observation of Ultrafast Intraband Relaxation and Exciton Multiplication in PbS Quantum Dots. <i>ACS Photonics</i> , 2014 , 1, 285-292 | 6.3 | 50 |
| 46 | Triplet excited state properties in variable gap π -conjugated donor-acceptor-donor chromophores. <i>Chemical Science</i> , 2016 , 7, 3621-3631 | 9.4 | 46 |

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| 45 | Study on the use of optical coherence tomography in measurements of paper properties. <i>Measurement Science and Technology</i> , 2005 , 16, 1131-1137 | 2 | 42 |
| 44 | Direct Femtosecond Observation of Charge Carrier Recombination in Ternary Semiconductor Nanocrystals: The Effect of Composition and Shelling. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 3439-3446 | 2.8 | 36 |
| 43 | Optical coherence tomography as an accurate inspection and quality evaluation technique in paper industry. <i>Optical Review</i> , 2010 , 17, 218-222 | 0.9 | 35 |
| 42 | Photophysics of organometallic platinum(II) derivatives of the diketopyrrolopyrrole chromophore. <i>Journal of Physical Chemistry A</i> , 2014 , 118, 11735-43 | 2.8 | 33 |
| 41 | Temperature-Induced Lattice Relaxation of Perovskite Crystal Enhances Optoelectronic Properties and Solar Cell Performance. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 137-143 | 6.4 | 32 |
| 40 | Impact of metal ions in porphyrin-based applied materials for visible-light photocatalysis: key information from ultrafast electronic spectroscopy. <i>Chemistry - A European Journal</i> , 2014 , 20, 10475-83 | 4.8 | 32 |
| 39 | Solvent-dependent excited-state hydrogen transfer and intersystem crossing in 2-(2-hydroxyphenyl)-benzothiazole. <i>Journal of Physical Chemistry B</i> , 2015 , 119, 2596-603 | 3.4 | 31 |
| 38 | Photoinduced triplet-state electron transfer of platinum porphyrin: a one-step direct method for sensing iodide with an unprecedented detection limit. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 6733-6738 | 1.3 | 31 |
| 37 | Detection of local specular gloss and surface roughness from black prints. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2007 , 299, 101-108 | 5.1 | 29 |
| 36 | A layer-by-layer ZnO nanoparticle-PbS quantum dot self-assembly platform for ultrafast interfacial electron injection. <i>Small</i> , 2015 , 11, 112-8 | 11 | 28 |
| 35 | Ultrafast carrier trapping of a metal-doped titanium dioxide semiconductor revealed by femtosecond transient absorption spectroscopy. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 10022-25 | 9.5 | 25 |
| 34 | Characterisation of optically cleared paper by optical coherence tomography. <i>Quantum Electronics</i> , 2006 , 36, 181-187 | 1.8 | 25 |
| 33 | Online monitoring of printed electronics by Spectral-Domain Optical Coherence Tomography. <i>Scientific Reports</i> , 2013 , 3, 1562 | 4.9 | 22 |
| 32 | Optical coherence tomography as a method of quality inspection for printed electronics products. <i>Optical Review</i> , 2010 , 17, 257-262 | 0.9 | 22 |
| 31 | Tuning Solute-Redistribution Dynamics for Scalable Fabrication of Colloidal Quantum-Dot Optoelectronics. <i>Advanced Materials</i> , 2019 , 31, e1805886 | 24 | 20 |
| 30 | Real-Space Mapping of Surface Trap States in CIGSe Nanocrystals Using 4D Electron Microscopy. <i>Nano Letters</i> , 2016 , 16, 4417-23 | 11.5 | 20 |
| 29 | Remarkable Fluorescence Enhancement versus Complex Formation of Cationic Porphyrins on the Surface of ZnO Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 12154-12161 | 3.8 | 16 |
| 28 | Overcoming the Cut-Off Charge Transfer Bandgaps at the PbS Quantum Dot Interface. <i>Advanced Functional Materials</i> , 2015 , 25, 7435-7441 | 15.6 | 16 |

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| 27 | Tunable Photophysical Processes of Porphyrin Macrocycles on the Surface of ZnO Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 2614-2621 | 3.8 | 16 |
| 26 | Ultra-high resolution optical coherence tomography for encapsulation quality inspection. <i>Applied Physics B: Lasers and Optics</i> , 2011 , 105, 649-657 | 1.9 | 16 |
| 25 | Real-time observation of ultrafast electron injection at graphene-Zn porphyrin interfaces. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 9015-9 | 3.6 | 15 |
| 24 | Engineering of CH ₃ NH ₃ PbI ₃ Perovskite Crystals by Alloying Large Organic Cations for Enhanced Thermal Stability and Transport Properties. <i>Angewandte Chemie</i> , 2016 , 128, 10844-10848 | 3.6 | 15 |
| 23 | Ultrafast Excited-State Dynamics of Diketopyrrolopyrrole (DPP)-Based Materials: Static versus Diffusion-Controlled Electron Transfer Process. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 15919-15925 | 3.8 | 13 |
| 22 | Bimolecular Excited-State Electron Transfer with Surprisingly Long-Lived Radical Ions. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 21896-21903 | 3.8 | 13 |
| 21 | How Humidity and Light Exposure Change the Photophysics of Metal Halide Perovskite Solar Cells. <i>Solar Rrl</i> , 2020 , 4, 2000382 | 7.1 | 13 |
| 20 | Glucose sensing in aqueous Intralipid suspension with an optical coherence tomography system: experiment and Monte Carlo simulation 2004 , 5325, 164 | | 12 |
| 19 | The impact of electrostatic interactions on ultrafast charge transfer at Ag ₂₉ nanoclusters/fullerene and CdTe quantum dots/fullerene interfaces. <i>Journal of Materials Chemistry C</i> , 2016 , 4, 2894-2900 | 7.1 | 11 |
| 18 | Diffraction-optical-element-based glossmeter and low coherence interferometer in assessment of local surface quality of paper. <i>Optical Engineering</i> , 2006 , 45, 043601 | 1.1 | 7 |
| 17 | To what extent can charge localization influence electron injection efficiency at graphene-porphyrin interfaces?. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 14513-7 | 3.6 | 6 |
| 16 | The Impact of Grain Alignment of the Electron Transporting Layer on the Performance of Inverted Bulk Heterojunction Solar Cells. <i>Small</i> , 2015 , 11, 5272-9 | 11 | 6 |
| 15 | Noninvasive glucose sensing in scattering media using OCT, PAS, and TOF techniques 2004 , | | 5 |
| 14 | Optical coherence tomography of multilayer tissue based on the dynamical stochastic fringe processing 2003 , | | 4 |
| 13 | Photoinduced energy and electron transfer in rubrene/benzoquinone and rubrene/porphyrin systems. <i>Chemical Physics Letters</i> , 2014 , 616-617, 237-242 | 2.5 | 3 |
| 12 | Nd:YAG laser annealing investigation of screen-printed CIGS layer on PET: Layer annealing method for photovoltaic cell fabrication process 2014 , | | 2 |
| 11 | Optical coherence tomography evaluation of internal random structure of wood fiber tissue 2003 , | | 2 |
| 10 | Flow velocity profile measurement of scattering liquid using Doppler optical coherence tomography 2003 , | | 2 |

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| 9 | Optical coherence tomography in scattering material for industrial applications 2001 , | | 2 |
| 8 | Light-Harvesting Two-Photon-Absorbing Polymers. <i>Macromolecules</i> , 2020 , 53, 6279-6287 | 5.5 | 2 |
| 7 | Real-time observation of intersystem crossing induced by charge recombination during bimolecular electron transfer reactions. <i>Dyes and Pigments</i> , 2017 , 136, 881-886 | 4.6 | 1 |
| 6 | Nonlinear dynamic filtering of logarithmically amplified fringe signals in optical coherence tomography applied to paper measurements. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2006 , 101, 27-32 | 0.7 | 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 device for paper characterization 2004 , | | 1 |
| 3 | Enhancing the OCT images by the low-coherence fringe envelope deconvolution method 2004 , 5486, 180 | | 1 |
| 2 | Quantum Dots: Overcoming the Cut-Off Charge Transfer Bandgaps at the PbS Quantum Dot Interface (Adv. Funct. Mater. 48/2015). <i>Advanced Functional Materials</i> , 2015 , 25, 7548-7548 | 15.6 | |
| 1 | Evaluation of a scattering liquid flow velocity profile using Doppler optical coherence tomography and dynamic stochastic interference fringe processing 2004 , 5475, 66 | | |