# Lakshminarayana Polavarapu

List of Publications by Year
in descending order

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|---|---|---|---|
| 100 papers | 12,088 citations | 25034 57 h-index | 33894 99 g-index |
| 106 all docs | 106 docs citations | 106 times ranked | 16474 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Colloidal Metalâ€Halide Perovskite Nanoplatelets: Thicknessâ€Controlled Synthesis, Properties, and Application in Lightâ€Emitting Diodes. Advanced Materials, 2022, 34, e2107105. | 21.0 | 124 |
| 2 | Enhanced Photoluminescence of Cesium Lead Halide Perovskites by Quasiâ€3D Photonic Crystals. Advanced Optical Materials, 2022, 10, 2101324. | 7.3 | 10 |
| 3 | Revisiting the nontemplate approach for the synthesis of highly green emissive hybrid perovskite nanocrystals: platelets or spheres?. Nanoscale, 2022, 14, 1160-1164. | 5.6 | 2 |
| 4 | Enhancing the Intrinsic and Extrinsic Stability of Halide Perovskite Nanocrystals for Efficient and Durable Optoelectronics. ACS Applied Materials & Interfaces, 2022, 14, 34291-34302. | 8.0 | 34 |
| 5 | Oleic acid/oleylamine ligand pair: a versatile combination in the synthesis of colloidal nanoparticles. Nanoscale Horizons, 2022, 7, 941-1015. | 8.0 | 61 |
| 6 | Fast Aâ€Site Cation Crossâ€Exchange at Room Temperature: Singleâ€to Doubleâ€and Tripleâ€Cation Halide Perovskite Nanocrystals. Angewandte Chemie - International Edition, 2022, 61, . | 13.8 | 29 |
| 7 | Recent Progress in Mixed Aâ€Site Cation Halide Perovskite Thinâ€Films and Nanocrystals for Solar Cells and Lightâ€Emitting Diodes. Advanced Optical Materials, 2022, 10, . | 7.3 | 47 |
| 8 | Elucidating the Role of Antisolvents on the Surface Chemistry and Optoelectronic Properties of CsPbBr<sub>x</sub>I<sub>3-x</sub> Perovskite Nanocrystals. Journal of the American Chemical Society, 2022, 144, 12102-12115. | 13.7 | 31 |
| 9 | Photonics and Optoelectronics of Nanosystems. Advanced Optical Materials, 2022, 10, . | 7.3 | 0 |
| 10 | Defect Passivation in Leadâ€Halide Perovskite Nanocrystals and Thin Films: Toward Efficient LEDs and Solar Cells. Angewandte Chemie, 2021, 133, 21804-21828. | 2.0 | 76 |
| 11 | Charge Traps in Allâ€Inorganic CsPbBr<sub>3</sub> Perovskite Nanowire Fieldâ€Effect Phototransistors. Advanced Electronic Materials, 2021, 7, 2100105. | 5.1 | 12 |
| 12 | Coherent vibrational dynamics reveals lattice anharmonicity in organicâ€“inorganic halide perovskite nanocrystals. Nature Communications, 2021, 12, 2629. | 12.8 | 58 |
| 13 | Defect Passivation in Leadâ€Halide Perovskite Nanocrystals and Thin Films: Toward Efficient LEDs and Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 21636-21660. | 13.8 | 183 |
| 14 | State of the Art and Prospects for Halide Perovskite Nanocrystals. ACS Nano, 2021, 15, 10775-10981. | 14.6 | 705 |
| 15 | Dimensionality Control of Inorganic and Hybrid Perovskite Nanocrystals by Reaction Temperature: From Noâ€Confinement to 3D and 1D Quantum Confinement. Angewandte Chemie - International Edition, 2021, 60, 26677-26684. | 13.8 | 49 |
| 16 | Oriented Halide Perovskite Crystals. Chemical Reviews, 2021, 121, 12107-12108. | 47.7 | 1 |
| 17 | Dimensionality Control of Inorganic and Hybrid Perovskite Nanocrystals by Reaction Temperature: From Noâ€Confinement to 3D and 1D Quantum Confinement. Angewandte Chemie, 2021, 133, 26881. | 2.0 | 5 |
| 18 | An Expanded Surface-Enhanced Raman Scattering Tags Library by Combinatorial Encapsulation of Reporter Molecules in Metal Nanoshells. ACS Nano, 2020, 14, 14655-14664. | 14.6 | 20 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Titelbild: Templateâ€basierte Herstellung von 2Dâ€photonischen Superkristallen mit verstÃrkter spontaner Emission aus CsPbBr<sub>3</sub>â€Perowskitâ€Nanokristallen (Angew. Chem. 40/2020). Angewandte Chemie, 2020, 132, 17457-17457. | 2.0 | 0 |
| 20 | RÃ¼cktitelbild: Manganâ€Dotierung von Perowskitâ€Nanokristallen: QuanteneinschrÃnkung Aufgrund von Ruddlesdenâ€Popperâ€Defekten (Angew. Chem. 17/2020). Angewandte Chemie, 2020, 132, 7004-7004. | 2.0 | 0 |
| 21 | Spin Polarization Dynamics of Free Charge Carriers in CsPbI<sub>3</sub> Nanocrystals. Nano Letters, 2020, 20, 4724-4730. | 9.1 | 32 |
| 22 | Thickness-Dependence of Excitonâ€“Exciton Annihilation in Halide Perovskite Nanoplatelets. Journal of Physical Chemistry Letters, 2020, 11, 5361-5366. | 4.6 | 23 |
| 23 | Templatedâ€Assembly of CsPbBr<sub>3</sub> Perovskite Nanocrystals into 2D Photonic Supercrystals with Amplified Spontaneous Emission. Angewandte Chemie - International Edition, 2020, 59, 17750-17756. | 13.8 | 72 |
| 24 | Templateâ€basierte Herstellung von 2Dâ€photonischen Superkristallen mit verstÃrkter spontaner Emission aus CsPbBr 3 â€Perowskitâ€Nanokristallen. Angewandte Chemie, 2020, 132, 17903-17909. | 2.0 | 6 |
| 25 | Transfer of Direct to Indirect Bound Excitons by Electron Intervalley Scattering in Cs<sub>2</sub>AgBiBr<sub>6</sub> Double Perovskite Nanocrystals. ACS Nano, 2020, 14, 5855-5861. | 14.6 | 58 |
| 26 | Manganâ€Dotierung von Perowskitâ€Nanokristallen: QuanteneinschrÃnkung Aufgrund von Ruddlesdenâ€Popperâ€Defekten. Angewandte Chemie, 2020, 132, 6860-6865. | 2.0 | 7 |
| 27 | Manganeseâ€Dopingâ€Induced Quantum Confinement within Host Perovskite Nanocrystals through Ruddlesdenâ€“Popper Defects. Angewandte Chemie - International Edition, 2020, 59, 6794-6799. | 13.8 | 72 |
| 28 | Spontaneous Crystallization of Perovskite Nanocrystals in Nonpolar Organic Solvents: A Versatile Approach for their Shapeâ€Controlled Synthesis. Angewandte Chemie - International Edition, 2019, 58, 16558-16562. | 13.8 | 96 |
| 29 | Spontane Kristallisation von Perowskitâ€Nanokristallen in unpolaren organischen LÃ¶sungsmitteln: Ein vielseitiges Konzept fÃ¼r deren morphologiekontrollierende Synthese. Angewandte Chemie, 2019, 131, 16710-16715. | 2.0 | 5 |
| 30 | Real-Time Electron and Hole Transport Dynamics in Halide Perovskite Nanowires. Nano Letters, 2019, 19, 8701-8707. | 9.1 | 14 |
| 31 | Nanoscale & Nanoscale Advances joint themed collection on halide perovskite nanocrystals. Nanoscale, 2019, 11, 8648-8650. | 5.6 | 8 |
| 32 | Identifying and Reducing Interfacial Losses to Enhance Color-Pure Electroluminescence in Blue-Emitting Perovskite Nanoplatelet Light-Emitting Diodes. ACS Energy Letters, 2019, 4, 1181-1188. | 17.4 | 115 |
| 33 | Exciton Diffusion Lengths and Dissociation Rates in CsPbBr<sub>3</sub> Nanocrystalâ€“Fullerene Composites: Layerâ€byâ€Layer versus Blend Structures. Advanced Optical Materials, 2019, 7, 1801776. | 7.3 | 23 |
| 34 | Excitons and narrow bands determine the optical properties of cesium bismuth halides. Physical Review B, 2019, 100, . | 3.2 | 21 |
| 35 | Challenges and Prospects in Solar Water Splitting and CO<sub>2</sub> Reduction with Inorganic and Hybrid Nanostructures. ACS Catalysis, 2018, 8, 3602-3635. | 11.2 | 365 |
| 36 | Resonantly enhanced multiple exciton generation through below-band-gap multi-photon absorption in perovskite nanocrystals. Nature Communications, 2018, 9, 1518. | 12.8 | 71 |

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| 37 | Dephasing and Quantum Beating of Excitons in Methylammonium Lead Iodide Perovskite Nanoplatelets. ACS Photonics, 2018, 5, 648-654. | 6.6 | 37 |
| 38 | Accelerated Carrier Relaxation through Reduced Coulomb Screening in Two-Dimensional Halide Perovskite Nanoplatelets. ACS Nano, 2018, 12, 10151-10158. | 14.6 | 89 |
| 39 | Chemical Cutting of Perovskite Nanowires into Singleâ€Photon Emissive Lowâ€Aspectâ€Ratio CsPbX<sub>3</sub> (X=Cl, Br, I) Nanorods. Angewandte Chemie, 2018, 130, 16326-16330. | 2.0 | 32 |
| 40 | Chemical Cutting of Perovskite Nanowires into Singleâ€Photon Emissive Lowâ€Aspectâ€Ratio CsPbX<sub>3</sub> (X=Cl, Br, I) Nanorods. Angewandte Chemie - International Edition, 2018, 57, 16094-16098. | 13.8 | 79 |
| 41 | Boosting Tunable Blue Luminescence of Halide Perovskite Nanoplatelets through Postsynthetic Surface Trap Repair. Nano Letters, 2018, 18, 5231-5238. | 9.1 | 382 |
| 42 | Spontaneous Selfâ€Assembly of Perovskite Nanocrystals into Electronically Coupled Supercrystals: Toward Filling the Green Gap. Advanced Materials, 2018, 30, e1801117. | 21.0 | 163 |
| 43 | Advances in Quantumâ€Confined Perovskite Nanocrystals for Optoelectronics. Advanced Energy Materials, 2017, 7, 1700267. | 19.5 | 176 |
| 44 | Von VorlÃuferpulvern zu CsPbX<sub>3</sub>â€PerowskitâNanodrÃhten: Eintopfreaktion, Wachstumsmechanismus und gerichtete Selbstassemblierung. Angewandte Chemie, 2017, 129, 14075-14080. | 2.0 | 24 |
| 45 | From Precursor Powders to CsPbX<sub>3</sub> Perovskite Nanowires: Oneâ€Pot Synthesis, Growth Mechanism, and Oriented Selfâ€Assembly. Angewandte Chemie - International Edition, 2017, 56, 13887-13892. | 13.8 | 249 |
| 46 | Encapsulation of Single Plasmonic Nanoparticles within ZIFâ€8 and SERS Analysis of the MOF Flexibility. Small, 2016, 12, 3935-3943. | 10.0 | 142 |
| 47 | A New Method for Quantitative XEDS Tomography of Complex Heteronanostructures. Particle and Particle Systems Characterization, 2016, 33, 396-403. | 2.3 | 30 |
| 48 | Plasmonic Au@Pd Nanorods with Boosted Refractive Index Susceptibility and SERS Efficiency: A Multifunctional Platform for Hydrogen Sensing and Monitoring of Catalytic Reactions. Chemistry of Materials, 2016, 28, 9169-9180. | 6.7 | 85 |
| 49 | Highly Luminescent Cesium Lead Halide Perovskite Nanocrystals with Tunable Composition and Thickness by Ultrasonication. Angewandte Chemie - International Edition, 2016, 55, 13887-13892. | 13.8 | 615 |
| 50 | Synthesis, properties, and optical applications of low-dimensional perovskites. Chemical Communications, 2016, 52, 13637-13655. | 4.1 | 252 |
| 51 | Starke Lumineszenz in Nanokristallen aus Caesiumbleihalogenidâ€Perowskit mit durchstimmbarer Zusammensetzung und Dicke mittels Ultraschalldispersion. Angewandte Chemie, 2016, 128, 14091-14096. | 2.0 | 54 |
| 52 | Galvanic Replacement Coupled to Seeded Growth as a Route for Shape-Controlled Synthesis of Plasmonic Nanorattles. Journal of the American Chemical Society, 2016, 138, 11453-11456. | 13.7 | 83 |
| 53 | Dilution-Induced Formation of Hybrid Perovskite Nanoplatelets. ACS Nano, 2016, 10, 10936-10944. | 14.6 | 130 |
| 54 | Tuning the Optical Properties of Perovskite Nanoplatelets through Composition and Thickness by Ligandâ€Assisted Exfoliation. Advanced Materials, 2016, 28, 9478-9485. | 21.0 | 276 |

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| 55 | Colloidal lead halide perovskite nanocrystals: synthesis, optical properties and applications. NPG Asia Materials, 2016, 8, e328-e328. | 7.9 | 385 |
| 56 | Inorganic engineered nanoparticles in drinking water treatment: a critical review. Environmental Science: Water Research and Technology, 2016, 2, 43-70. | 2.4 | 187 |
| 57 | Mesoporous SnO<sub>2</sub>-Coated Metal Nanoparticles with Enhanced Catalytic Efficiency. ACS Applied Materials & Interfaces, 2015, 7, 4844-4850. | 8.0 | 52 |
| 58 | Controlled preparation of Au/Ag/SnO<sub>2</sub> coreâ€“shell nanoparticles using a photochemical method and applications in LSPR based sensing. Nanoscale, 2015, 7, 9025-9032. | 5.6 | 30 |
| 59 | Plasmon-enhanced light harvesting: applications in enhanced photocatalysis, photodynamic therapy and photovoltaics. RSC Advances, 2015, 5, 29076-29097. | 3.6 | 196 |
| 60 | Gold Nanorodâ€“pNIPAM Hybrids with Reversible Plasmon Coupling: Synthesis, Modeling, and SERS Properties. ACS Applied Materials & Interfaces, 2015, 7, 12530-12538. | 8.0 | 105 |
| 61 | Nanocrystal engineering of noble metals and metal chalcogenides: controlling the morphology, composition and crystallinity. CrystEngComm, 2015, 17, 3727-3762. | 2.6 | 113 |
| 62 | Flexible, robust and highly efficient broadband nonlinear optical materials based on graphene oxide impregnated polymer sheets. Photonics Research, 2015, 3, A87. | 7.0 | 17 |
| 63 | Polyvinylpyrrolidone (PVP) in nanoparticle synthesis. Dalton Transactions, 2015, 44, 17883-17905. | 3.3 | 1,176 |
| 64 | Gold Nanooctahedra with Tunable Size and Microfluidic-Induced 3D Assembly for Highly Uniform SERS-Active Supercrystals. Chemistry of Materials, 2015, 27, 8310-8317. | 6.7 | 85 |
| 65 | Gold nanoparticle-loaded filter paper: a recyclable dip-catalyst for real-time reaction monitoring by surface enhanced Raman scattering. Chemical Communications, 2015, 51, 4572-4575. | 4.1 | 170 |
| 66 | Palladium Nanoparticle-Loaded Cellulose Paper: A Highly Efficient, Robust, and Recyclable Self-Assembled Composite Catalytic System. Journal of Physical Chemistry Letters, 2015, 6, 230-238. | 4.6 | 82 |
| 67 | Monitoring Galvanic Replacement Through Three-Dimensional Morphological and Chemical Mapping. Nano Letters, 2014, 14, 3220-3226. | 9.1 | 136 |
| 68 | Reduced Graphene Oxide-Supported Gold Nanostars for Improved SERS Sensing and Drug Delivery. ACS Applied Materials & Interfaces, 2014, 6, 21798-21805. | 8.0 | 168 |
| 69 | Optical sensing of biological, chemical and ionic species through aggregation of plasmonic nanoparticles. Journal of Materials Chemistry C, 2014, 2, 7460. | 5.5 | 201 |
| 70 | Solution processed polydimethylsiloxane/gold nanostar flexible substrates for plasmonic sensing. Nanoscale, 2014, 6, 9817-9823. | 5.6 | 145 |
| 71 | Penâ€onâ€Paper Approach Toward the Design of Universal Surface Enhanced Raman Scattering Substrates. Small, 2014, 10, 3065-3071. | 10.0 | 185 |
| 72 | Size Tunable Au@Ag Coreâ€“Shell Nanoparticles: Synthesis and Surface-Enhanced Raman Scattering Properties. Langmuir, 2013, 29, 15076-15082. | 3.5 | 303 |

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| 73 | Towards low-cost flexible substrates for nanoplasmonic sensing. Physical Chemistry Chemical Physics, 2013, 15, 5288. | 2.8 | 232 |
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| 75 | Growth and galvanic replacement of silver nanocubes in organic media. Nanoscale, 2013, 5, 4355. | 5.6 | 73 |
| 76 | Enhanced Optical Properties of Graphene Oxideâ€“Au Nanocrystal Composites. Langmuir, 2012, 28, 321-326. | 3.5 | 73 |
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| 84 | One-Pot Synthesis of Cu<sub>1.94</sub>Sâ^'CdS and Cu<sub>1.94</sub>Sâ^'Zn<sub>x</sub>Cd<sub>1â^'x</sub>S Nanodisk Heterostructures. Journal of the American Chemical Society, 2011, 133, 2052-2055. | 13.7 | 103 |
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| 88 | Monolayer graphene as a saturable absorber in a mode-locked laser. Nano Research, 2011, 4, 297-307. | 10.4 | 408 |
| 89 | A Graphene Oxideâ€“Organic Dye Ionic Complex with DNAâ€Sensing and Opticalâ€Limiting Properties. Angewandte Chemie - International Edition, 2010, 49, 6549-6553. | 13.8 | 304 |
| 90 | RECENT ADVANCES IN METAL-ENHANCED OPTICAL PROPERTIES. Cosmos, 2010, 06, 167-195. | 0.4 | 5 |

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| 91 | Transient photoconductivity and femtosecond nonlinear optical properties of a conjugated polymerâ€“graphene oxide composite. Nanotechnology, 2010, 21, 415203. | 2.6 | 40 |
| 92 | Enhanced nonlinear optical responses in donor-acceptor ionic complexes via photo induced energy transfer. Optics Express, 2010, 18, 25928. | 3.4 | 43 |
| 93 | Enhanced Two-Photon Emission in Coupled Metal Nanoparticles Induced by Conjugated Polymers. Langmuir, 2010, 26, 18020-18023. | 3.5 | 66 |
| 94 | Optical-Limiting Properties of Oleylamine-Capped Gold Nanoparticles for Both Femtosecond and Nanosecond Laser Pulses. ACS Applied Materials & Interfaces, 2009, 1, 2298-2303. | 8.0 | 118 |
| 95 | Nonlinear optical switching behavior of Au nanocubes and nano-octahedra investigated by femtosecond Z-scan measurements. Applied Physics Letters, 2009, 95, . | 3.3 | 89 |
| 96 | A simple method for large scale synthesis of highly monodisperse gold nanoparticles at room temperature and their electron relaxation properties. Nanotechnology, 2009, 20, 185606. | 2.6 | 63 |
| 97 | A single-step synthesis of gold nanochains using an amino acid as a capping agent and characterization of their optical properties. Nanotechnology, 2008, 19, 075601. | 2.6 | 77 |
| 98 | Optical limiting properties of silver nanoprisms. Applied Physics Letters, 2008, 92, . | 3.3 | 52 |
| 99 | Water-Soluble Conjugated Polymer-Induced Self-Assembly of Gold Nanoparticles and Its Application to SERS. Langmuir, 2008, 24, 10608-10611. | 3.5 | 145 |
| 100 | Spin Polarization Dynamics of Free Charge Carriers in CsPbI3 Nanocrystals. , 0, , . | | 0 |