

Zhenda Lu

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

118
papers

13,583
citations

49
h-index

116
g-index

128
ext. papers

15,296
ext. citations

11.5
avg, IF

6.58
L-index

#	Paper	IF	Citations
118	Scalable hierarchical lithiophilic engineering of metal foam enables stable lithium metal batteries. <i>Chemical Engineering Journal</i> , 2022 , 435, 134643	14.7	5
117	Transferring Liquid Metal to form a Hybrid Solid Electrolyte via a Wettability-Tuning Technology for Lithium Metal Anodes.. <i>Advanced Materials</i> , 2022 , e2200181	24	4
116	Atomic resolution in situ observation on photon-induced reshaping and phase transitions of CsPbBr ₃ nanocube and quantum dot. <i>Applied Physics Letters</i> , 2021 , 119, 203103	3.4	
115	In-situ forming Sub-2 nm hydrous iron oxide particles in MOFs for deep-treatment and high anti-interference in arsenic removal. <i>Chemical Engineering Journal</i> , 2021 , 431, 133813	14.7	0
114	Automated pick-and-place of single nanoparticle using electrically controlled low-surface energy nanotweezer. <i>AIP Advances</i> , 2021 , 11, 035219	1.5	1
113	Sulfophobic and Vacancy Design Enables Self-Cleaning Electrodes for Efficient Desulfurization and Concurrent Hydrogen Evolution with Low Energy Consumption. <i>Advanced Functional Materials</i> , 2021 , 31, 2101922	15.6	10
112	Engineering Two-Dimensional Metal-Organic Framework on Molecular Basis for Fast Li Conduction. <i>Nano Letters</i> , 2021 , 21, 5805-5812	11.5	9
111	Ultrasonic activation of inert poly(tetrafluoroethylene) enables piezocatalytic generation of reactive oxygen species. <i>Nature Communications</i> , 2021 , 12, 3508	17.4	33
110	Unexpected Coulomb Interactions in Nonpolar Solvent for Highly Efficient Nanoxerography of Perovskite Quantum Dots. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 59-64	6.4	2
109	The Role of Polymer and Inorganic Coatings to Enhance Interparticle Connections Diagnosed by Techniques. <i>Nano Letters</i> , 2021 , 21, 1530-1537	11.5	3
108	Assembly of Colloidal Nanoparticles into Hollow Superstructures by Controlling Phase Separation in Emulsion Droplets. <i>Small Structures</i> , 2021 , 2, 2100005	8.7	4
107	Synthesis of monodispersed VO ₂ @Au core-shell submicroparticles and their switchable optical properties. <i>Journal of Materials Chemistry C</i> , 2021 , 9, 11669-11673	7.1	1
106	Oxygen-Deficient Ferric Oxide as an Electrochemical Cathode Catalyst for High-Energy Lithium-Sulfur Batteries. <i>Small</i> , 2020 , 16, e2000870	11	26
105	Selective removal of nitrate via the synergistic effect of oxygen vacancies and plasmon-induced hot carriers. <i>Chemical Engineering Journal</i> , 2020 , 397, 125435	14.7	13
104	Self-Assembly of Perovskite CsPbBr ₃ Quantum Dots Driven by a Photo-Induced Alkynyl Homocoupling Reaction. <i>Angewandte Chemie</i> , 2020 , 132, 17360-17366	3.6	7
103	Self-Assembly of Perovskite CsPbBr ₃ Quantum Dots Driven by a Photo-Induced Alkynyl Homocoupling Reaction. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 17207-17213	16.4	6
102	In Situ Tuning of Defects and Phase Transition in Titanium Dioxide by Lithiothermic Reduction. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 5750-5758	9.5	12

101	Porous gold layer coated silver nanoplates with efficient antimicrobial activity. <i>Colloids and Surfaces B: Biointerfaces</i> , 2020 , 186, 110727	6	7
100	High-resolution combinatorial patterning of functional nanoparticles. <i>Nature Communications</i> , 2020 , 11, 6002	17.4	11
99	Deterministic Assembly of Single Sub-20nm Functional Nanoparticles Using a Thermally Modified Template with a Scanning Nanoprobe. <i>Advanced Materials</i> , 2020 , 32, e2005979	24	5
98	Fabrication of Homogeneous Non-Noble Metal Nanoparticles within Metal-Organic Framework Nanosheets for Catalytic Reduction of 4-Nitrophenol. <i>Crystal Growth and Design</i> , 2020 , 20, 6217-6225	3.5	13
97	Gallium-Carbenicillin Framework Coated Defect-Rich Hollow TiO ₂ as a Photocatalyzed Oxidative Stress Amplifier against Complex Infections. <i>Advanced Functional Materials</i> , 2020 , 30, 2004861	15.6	24
96	Three-Dimensional-Percolated Ceramic Nanoparticles along Natural-Cellulose-Derived Hierarchical Networks for High Li Conductivity and Mechanical Strength. <i>Nano Letters</i> , 2020 , 20, 7397-7404	11.5	12
95	A systematic study of the synthesis of cesium lead halide nanocrystals: does CsPbBr ₃ or CsPbBr ₂ form?. <i>Nanoscale</i> , 2019 , 11, 1784-1789	7.7	32
94	Highly luminescent CsPbBr ₃ nanorods synthesized by a ligand-regulated reaction at the water-oil interface. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 1854-1858	7.1	31
93	Patterned plasmonic gradient for high-precision biosensing using a smartphone reader. <i>Nanoscale</i> , 2019 , 11, 12471-12476	7.7	8
92	Boosting the cycling stability of Li _x Si alloy microparticles through electroless copper deposition. <i>Chemical Engineering Journal</i> , 2019 , 370, 1019-1026	14.7	12
91	Highly enhanced durability of a graphitic carbon layer decorated PtNi alloy electrocatalyst toward the oxygen reduction reaction. <i>Chemical Communications</i> , 2019 , 55, 5693-5696	5.8	26
90	Efficient plasmon-hot electron conversion in Ag-CsPbBr ₃ hybrid nanocrystals. <i>Nature Communications</i> , 2019 , 10, 1163	17.4	54
89	Fluorescence hydrogel array based on interfacial cation exchange amplification for highly sensitive microRNA detection. <i>Analytica Chimica Acta</i> , 2019 , 1080, 206-214	6.6	12
88	Epitaxial growth of gold on silver nanoplates for imaging-guided photothermal therapy. <i>Materials Science and Engineering C</i> , 2019 , 105, 110023	8.3	13
87	Li-Containing, Continuous Silica Nanofibers for High Li Conductivity in Composite Polymer Electrolyte. <i>Small</i> , 2019 , 15, e1902729	11	29
86	Arbitrary Gold Nanoparticle Arrays Fabricated through AFM Nanoxerography and Interfacial Seeded Growth. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 38347-38352	9.5	2
85	Preventing Anion Exchange between Perovskite Nanocrystals by Confinement in Porous SiO ₂ Nanobeads. <i>ACS Omega</i> , 2019 , 4, 22209-22213	3.9	13
84	Understanding the role of conductive polymer in thermal lithiation and battery performance of Li-Sn alloy anode. <i>Energy Storage Materials</i> , 2019 , 20, 7-13	19.4	14

83	Mesoporous Ce-Ti-Zr ternary oxide millispheres for efficient catalytic ozonation in bubble column. <i>Chemical Engineering Journal</i> , 2018 , 338, 261-270	14.7	35
82	Tailoring a nanostructured plasmonic absorber for high efficiency surface-assisted laser desorption/ionization. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 3424-3429	3.6	1
81	Thermal Lithiated-TiO: A Robust and Electron-Conducting Protection Layer for Li-Si Alloy Anode. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 12750-12758	9.5	29
80	Ultrasensitive Detection of Bacterial Protein Toxins on Patterned Microarray via Surface Plasmon Resonance Imaging with Signal Amplification by Conjugate Nanoparticle Clusters. <i>ACS Sensors</i> , 2018 , 3, 1639-1646	9.2	16
79	Atomic Characterization of Byproduct Nanoparticles on Cesium Lead Halide Nanocrystals Using High-Resolution Scanning Transmission Electron Microscopy. <i>Crystals</i> , 2018 , 8, 2	2.3	19
78	Systematic Investigation of Prelithiated SiO ₂ Particles for High-Performance Anodes in Lithium-Ion Battery. <i>Applied Sciences (Switzerland)</i> , 2018 , 8, 1245	2.6	17
77	Enhancing Luminescence and Photostability of CsPbBr ₃ Nanocrystals via Surface Passivation with Silver Complex. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 12994-13000	3.8	55
76	Core-Shell Nanoparticle Coating as an Interfacial Layer for Dendrite-Free Lithium Metal Anodes. <i>ACS Central Science</i> , 2017 , 3, 135-140	16.8	140
75	Surface passivation of mixed-halide perovskite CsPb(BrI) nanocrystals by selective etching for improved stability. <i>Nanoscale</i> , 2017 , 9, 7391-7396	7.7	58
74	Decorating fiber nanotip with single perovskite quantum dot and other luminescent nanocrystals synthesized in oil-phase. <i>Nanotechnology</i> , 2017 , 28, 46LT02	3.4	1
73	Challenges and Recent Progress in the Development of Si Anodes for Lithium-Ion Battery. <i>Advanced Energy Materials</i> , 2017 , 7, 1700715	21.8	459
72	Highly Efficient Water Decontamination by Using Sub-10 nm FeOOH Confined within Millimeter-Sized Mesoporous Polystyrene Beads. <i>Environmental Science & Technology</i> , 2017 , 51, 9210-9218	10.3	55
71	Use of an intermediate solid-state electrode to enable efficient hydrogen production from dilute organic matter. <i>Nano Energy</i> , 2017 , 39, 499-505	17.1	6
70	Assembly of LiMnPO Nanoplates into Microclusters as a High-Performance Cathode in Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 27618-27624	9.5	33
69	A new strategy to address the challenges of nanoparticles in practical water treatment: mesoporous nanocomposite beads via flash freezing. <i>Nanoscale</i> , 2017 , 9, 19154-19161	7.7	24
68	Broadband enhancement of photoluminance from colloidal metal halide perovskite nanocrystals on plasmonic nanostructured surfaces. <i>Scientific Reports</i> , 2017 , 7, 14695	4.9	3
67	High-Performance Lithium Metal Negative Electrode with a Soft and Flowable Polymer Coating. <i>ACS Energy Letters</i> , 2016 , 1, 1247-1255	20.1	218
66	Growth of conformal graphene cages on micrometre-sized silicon particles as stable battery anodes. <i>Nature Energy</i> , 2016 , 1,	62.3	509

65	Selective deposition and stable encapsulation of lithium through heterogeneous seeded growth. <i>Nature Energy</i> , 2016 , 1,	62.3	1065
64	Direct Conversion of Perovskite Thin Films into Nanowires with Kinetic Control for Flexible Optoelectronic Devices. <i>Nano Letters</i> , 2016 , 16, 871-6	11.5	147
63	Composite lithium metal anode by melt infusion of lithium into a 3D conducting scaffold with lithiophilic coating. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 2862-7	11.5	643
62	Metallurgically lithiated SiO _x anode with high capacity and ambient air compatibility. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 7408-13	11.5	103
61	Free-Standing Graphene-Encapsulated Silicon Nanoparticle Aerogel as an Anode for Lithium Ion Batteries. <i>ChemNanoMat</i> , 2016 , 2, 671-674	3.5	22
60	Fine-tuning the metallic core-shell nanostructures for plasmonic perovskite solar cells. <i>Applied Physics Letters</i> , 2016 , 109, 183901	3.4	28
59	Water-assisted crystallization of mesoporous anatase TiO ₂ nanospheres. <i>Nanoscale</i> , 2016 , 8, 9113-7	7.7	15
58	Precise Perforation and Scalable Production of Si Particles from Low-Grade Sources for High-Performance Lithium Ion Battery Anodes. <i>Nano Letters</i> , 2016 , 16, 7210-7215	11.5	89
57	Nonfilling carbon coating of porous silicon micrometer-sized particles for high-performance lithium battery anodes. <i>ACS Nano</i> , 2015 , 9, 2540-7	16.7	372
56	Artificial Solid Electrolyte Interphase-Protected Li _x Si Nanoparticles: An Efficient and Stable Prelithiation Reagent for Lithium-Ion Batteries. <i>Journal of the American Chemical Society</i> , 2015 , 137, 8372-5	16.4	232
55	A high tap density secondary silicon particle anode fabricated by scalable mechanical pressing for lithium-ion batteries. <i>Energy and Environmental Science</i> , 2015 , 8, 2371-2376	35.4	339
54	A Sulfur Cathode with Pomegranate-Like Cluster Structure. <i>Advanced Energy Materials</i> , 2015 , 5, 1500211	21.8	108
53	Magnetic Field-Controlled Lithium Polysulfide Semiliquid Battery with Ferrofluidic Properties. <i>Nano Letters</i> , 2015 , 15, 7394-9	11.5	48
52	Nanopurification of silicon from 84% to 99.999% purity with a simple and scalable process. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 13473-7	11.5	46
51	Confined growth of CdSe quantum dots in colloidal mesoporous silica for multifunctional nanostructures. <i>Science China Materials</i> , 2015 , 58, 481-489	7.1	8
50	A versatileclick chemistryRoute to size-restricted, robust, and functionalizable hydrophilic nanocrystals. <i>Small</i> , 2015 , 11, 1644-8	11	11
49	Self-Assembled TiO ₂ Nanorods as Electron Extraction Layer for High-Performance Inverted Polymer Solar Cells. <i>Chemistry of Materials</i> , 2015 , 27, 44-52	9.6	31
48	High-Areal-Capacity Silicon Electrodes with Low-Cost Silicon Particles Based on Spatial Control of Self-Healing Binder. <i>Advanced Energy Materials</i> , 2015 , 5, 1401826	21.8	166

47	In situ observation of divergent phase transformations in individual sulfide nanocrystals. <i>Nano Letters</i> , 2015 , 15, 1264-71	11.5	86
46	A pomegranate-inspired nanoscale design for large-volume-change lithium battery anodes. <i>Nature Nanotechnology</i> , 2014 , 9, 187-92	28.7	1804
45	A Three-Dimensionally Interconnected Carbon Nanotube-Conducting Polymer Hydrogel Network for High-Performance Flexible Battery Electrodes. <i>Advanced Energy Materials</i> , 2014 , 4, 1400207	21.8	242
44	Ultrathin two-dimensional atomic crystals as stable interfacial layer for improvement of lithium metal anode. <i>Nano Letters</i> , 2014 , 14, 6016-22	11.5	545
43	Dry-air-stable lithium silicide-lithium oxide core-shell nanoparticles as high-capacity prelithiation reagents. <i>Nature Communications</i> , 2014 , 5, 5088	17.4	203
42	Photocatalytic synthesis and photovoltaic application of Ag-TiO ₂ nanorod composites. <i>Nano Letters</i> , 2013 , 13, 5698-702	11.5	162
41	Upconversion luminescence with tunable lifetime in NaYF ₄ :Yb,Er nanocrystals: role of nanocrystal size. <i>Nanoscale</i> , 2013 , 5, 944-52	7.7	278
40	Crab shells as sustainable templates from nature for nanostructured battery electrodes. <i>Nano Letters</i> , 2013 , 13, 3385-90	11.5	185
39	Mesoporous titanate-based cation exchanger for efficient removal of metal cations. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 5097	13	24
38	Lanthanide upconversion within microstructured optical fibers: improved detection limits for sensing and the demonstration of a new tool for nanocrystal characterization. <i>Nanoscale</i> , 2012 , 4, 7448-51	7.7	14
37	Colloidal nanoparticle clusters: functional materials by design. <i>Chemical Society Reviews</i> , 2012 , 41, 6874-88.5	38.5	319
36	Highly Stable Silver Nanoplates for Surface Plasmon Resonance Biosensing. <i>Angewandte Chemie</i> , 2012 , 124, 5727-5731	3.6	21
35	Highly stable silver nanoplates for surface plasmon resonance biosensing. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 5629-33	16.4	281
34	Templated synthesis of metal nanorods in silica nanotubes. <i>Journal of the American Chemical Society</i> , 2011 , 133, 19706-9	16.4	168
33	Assembly and photonic properties of superparamagnetic colloids in complex magnetic fields. <i>Langmuir</i> , 2011 , 27, 13444-50	4	32
32	Gram-scale synthesis of silica nanotubes with controlled aspect ratios by templating of nickel-hydrazine complex nanorods. <i>Langmuir</i> , 2011 , 27, 12201-8	4	77
31	Synthesis and thermochromic properties of vanadium dioxide colloidal particles. <i>Journal of Materials Chemistry</i> , 2011 , 21, 14776		49
30	Role of salt in the spontaneous assembly of charged gold nanoparticles in ethanol. <i>Langmuir</i> , 2011 , 27, 5282-9	4	91

29	Direct assembly of hydrophobic nanoparticles to multifunctional structures. <i>Nano Letters</i> , 2011 , 11, 3404-13	4.1	91
28	Formation mechanism and size control in one-pot synthesis of mercapto-silica colloidal spheres. <i>Langmuir</i> , 2011 , 27, 3372-80	4	25
27	A systematic study of the synthesis of silver nanoplates: is citrate a "magic" reagent?. <i>Journal of the American Chemical Society</i> , 2011 , 133, 18931-9	16.4	563
26	Self-assembly and photocatalysis of mesoporous TiO ₂ nanocrystal clusters. <i>Nano Research</i> , 2011 , 4, 103-114	11.4	126
25	An interesting molecular-assembly of β -cyclodextrin pipelines with embedded hydrophilic nickel maleonitriledithiolate. <i>Dalton Transactions</i> , 2011 , 40, 11788-94	4.3	9
24	Porous monodisperse V ₂ O ₅ microspheres as cathode materials for lithium-ion batteries. <i>Journal of Materials Chemistry</i> , 2011 , 21, 6365		176
23	One-pot synthesis and optical property of copper(I) sulfide nanodisks. <i>Inorganic Chemistry</i> , 2010 , 49, 6601-8	5.1	85
22	Mesoporous TiO ₂ nanocrystal clusters for selective enrichment of phosphopeptides. <i>Analytical Chemistry</i> , 2010 , 82, 7249-58	7.8	108
21	Superparamagnetic nanocrystal clusters for enrichment of low-abundance peptides and proteins. <i>Chemical Communications</i> , 2010 , 46, 6174-6	5.8	26
20	Stable Bulky Particles Formed by TS-1 Zeolite Nanocrystals in the Presence of H ₂ O ₂ . <i>ChemCatChem</i> , 2010 , 2, 407-412	5.2	38
19	Magnetically recoverable core-shell nanocomposites with enhanced photocatalytic activity. <i>Chemistry - A European Journal</i> , 2010 , 16, 6243-50	4.8	285
18	Self-Assembled TiO ₂ Nanocrystal Clusters for Selective Enrichment of Intact Phosphorylated Proteins. <i>Angewandte Chemie</i> , 2010 , 122, 1906-1910	3.6	26
17	Self-assembled TiO ₂ nanocrystal clusters for selective enrichment of intact phosphorylated proteins. <i>Angewandte Chemie - International Edition</i> , 2010 , 49, 1862-6	16.4	119
16	Rewritable Photonic Paper with Hygroscopic Salt Solution as Ink. <i>Advanced Materials</i> , 2009 , 21, 4259-4264	11.4	204
15	Reconstruction of Silver Nanoplates by UV Irradiation: Tailored Optical Properties and Enhanced Stability. <i>Angewandte Chemie</i> , 2009 , 121, 3568-3571	3.6	54
14	Reconstruction of silver nanoplates by UV irradiation: tailored optical properties and enhanced stability. <i>Angewandte Chemie - International Edition</i> , 2009 , 48, 3516-9	16.4	219
13	Rattle-type silica colloidal particles prepared by a surface-protected etching process. <i>Nano Research</i> , 2009 , 2, 583-591	10	164
12	Magnetochromatic microspheres: rotating photonic crystals. <i>Journal of the American Chemical Society</i> , 2009 , 131, 15687-94	16.4	214

11	Self-assembly and tunable plasmonic property of gold nanoparticles on mercapto-silica microspheres. <i>Journal of Materials Chemistry</i> , 2009 , 19, 4597		41
10	Shape- and Size-Controlled Synthesis of Calcium Molybdate Doughnut-Shaped Microstructures. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 16414-16423	3.8	65
9	An inclusion complex of β -cyclodextrin with mnt anion (mnt = maleonitriledithiolate) studied by induced circular dichroism. <i>Journal of Inclusion Phenomena and Macrocyclic Chemistry</i> , 2008 , 61, 101-106		5
8	Syntheses, Structures, and Physical Properties of Three Novel Metal-Organic Frameworks Constructed from Aromatic Polycarboxylate Acids and Flexible Imidazole-Based Synthons. <i>Crystal Growth and Design</i> , 2007 , 7, 93-99	3.5	328
7	Syntheses, Structures, and Photoluminescent and Magnetic Studies of Metal-Organic Frameworks Assembled with 5-Sulfosalicylic Acid and 1,4-Bis(imidazol-1-ylmethyl)-benzene. <i>Crystal Growth and Design</i> , 2007 , 7, 268-274	3.5	75
6	A novel 2D herringbone-like zinc coordination polymer built from helical motif: Hydrothermal synthesis, structure and properties. <i>Inorganic Chemistry Communication</i> , 2007 , 10, 74-76	3.1	20
5	A di(thio-1,2-dicyane ethylenylthio)ethane-tethered β -cyclodextrin dimer as a molecular carrier of ferrocene in DMF solution. <i>Journal of Inclusion Phenomena and Macrocyclic Chemistry</i> , 2007 , 59, 357-361		2
4	Syntheses and Structures of Four d10 Metal-Organic Frameworks Assembled with Aromatic Polycarboxylate and bix [bix = 1,4-Bis(imidazol-1-ylmethyl)benzene]. <i>Crystal Growth and Design</i> , 2006 , 6, 530-537	3.5	256
3	Two types of novel layer framework structures assembled from 5-sulfosalicylic acid and lanthanide ions. <i>CrystEngComm</i> , 2006 , 8, 847	3.3	55
2	New metallocene-bridged cyclodextrin dimer: A stable derivative of the antitumor drug titanocene dichloride and its potent cytotoxicity against human breast cancer (MCF-7) cells. <i>Journal of Organometallic Chemistry</i> , 2006 , 691, 5895-5899	2.3	8
1	Lithiated Hybrid Polymer/Inorganic PAA/MnO ₂ Protection Layer for High-Performance Tin Oxide Alloy Anode. <i>ACS Applied Energy Materials</i> ,	6.1	2