Cherie R Kagan

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/736849/publications.pdf

Version: 2024-02-01

139	13,127	31976	22166
papers	citations	53 h-index	113 g-index

142	142	142	18089
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Prospects of Nanoscience with Nanocrystals. ACS Nano, 2015, 9, 1012-1057.	14.6	1,005
2	Building devices from colloidal quantum dots. Science, 2016, 353, .	12.6	996
3	Charge Transfer on the Nanoscale:â€‰ Current Status. Journal of Physical Chemistry B, 2003, 107, 6668-6697.	2.6	946
4	Improved Size-Tunable Synthesis of Monodisperse Gold Nanorods through the Use of Aromatic Additives. ACS Nano, 2012, 6, 2804-2817.	14.6	749
5	Synergism in binary nanocrystal superlattices leads to enhanced p-type conductivity in self-assembled PbTe/Ag2Te thin films. Nature Materials, 2007, 6, 115-121.	27.5	498
6	Charge transport in strongly coupled quantum dot solids. Nature Nanotechnology, 2015, 10, 1013-1026.	31.5	473
7	Wrinkles and deep folds as photonic structures in photovoltaics. Nature Photonics, 2012, 6, 327-332.	31.4	346
8	Bandlike Transport in Strongly Coupled and Doped Quantum Dot Solids: A Route to High-Performance Thin-Film Electronics. Nano Letters, 2012, 12, 2631-2638.	9.1	340
9	Design, Structure, and Optical Properties of Organicâ^'Inorganic Perovskites Containing an Oligothiophene Chromophore. Inorganic Chemistry, 1999, 38, 6246-6256.	4.0	314
10	Thiocyanate-Capped Nanocrystal Colloids: Vibrational Reporter of Surface Chemistry and Solution-Based Route to Enhanced Coupling in Nanocrystal Solids. Journal of the American Chemical Society, 2011, 133, 15753-15761.	13.7	309
11	Electrons, Excitons, and Phonons in Two-Dimensional Hybrid Perovskites: Connecting Structural, Optical, and Electronic Properties. Journal of Physical Chemistry Letters, 2018, 9, 1434-1447.	4.6	283
12	Competition of shape and interaction patchiness for self-assembling nanoplates. Nature Chemistry, 2013, 5, 466-473.	13.6	278
13	Metal-Enhanced Upconversion Luminescence Tunable through Metal Nanoparticleâ€“Nanophosphor Separation. ACS Nano, 2012, 6, 8758-8766.	14.6	262
14	Exploiting the colloidal nanocrystal library to construct electronic devices. Science, 2016, 352, 205-208.	12.6	234
15	The State of Nanoparticle-Based Nanoscience and Biotechnology: Progress, Promises, and Challenges. ACS Nano, 2012, 6, 8468-8483.	14.6	211
16	Stoichiometric Control of Lead Chalcogenide Nanocrystal Solids to Enhance Their Electronic and Optoelectronic Device Performance. ACS Nano, 2013, 7, 2413-2421.	14.6	210
17	Plasmonic Enhancement of Nanophosphor Upconversion Luminescence in Au Nanohole Arrays. ACS Nano, 2013, 7, 7186-7192.	14.6	199
18	Direct Observation of Electronâ€“Phonon Coupling and Slow Vibrational Relaxation in Organicâ€“Inorganic Hybrid Perovskites. Journal of the American Chemical Society, 2016, 138, 13798-13801.	13.7	196

#	Article	IF	Citations
19	Designing High-Performance PbS and PbSe Nanocrystal Electronic Devices through Stepwise, Post-Synthesis, Colloidal Atomic Layer Deposition. Nano Letters, 2014, 14, 1559-1566.	9.1	176
20	Substitutional doping in nanocrystal superlattices. Nature, 2015, 524, 450-453.	27.8	174
21	Flexible and low-voltage integrated circuits constructed from high-performance nanocrystal transistors. Nature Communications, 2012, 3, 1216.	12.8	172
22	Thiocyanate-Capped PbS Nanocubes: Ambipolar Transport Enables Quantum Dot Based Circuits on a Flexible Substrate. Nano Letters, 2011, 11, 4764-4767.	9.1	171
23	Photocatalytic Hydrogen Evolution from Substoichiometric Colloidal WO_{3â€“x} Nanowires. ACS Energy Letters, 2018, 3, 1904-1910.	17.4	145
24	Colloidal Quantum Dots as Platforms for Quantum Information Science. Chemical Reviews, 2021, 121, 3186-3233.	47.7	138
25	Attaching Organic Semiconductors to Gate Oxides:Â In Situ Assembly of Monolayer Field Effect Transistors. Journal of the American Chemical Society, 2004, 126, 15048-15050.	13.7	130
26	Plasmon-Enhanced Upconversion Luminescence in Single Nanophosphorâ€“Nanorod Heterodimers Formed through Template-Assisted Self-Assembly. ACS Nano, 2014, 8, 9482-9491.	14.6	127
27	Engineering Catalytic Contacts and Thermal Stability: Gold/Iron Oxide Binary Nanocrystal Superlattices for CO Oxidation. Journal of the American Chemical Society, 2013, 135, 1499-1505.	13.7	122
28	Roadmap on optical metamaterials. Journal of Optics (United Kingdom), 2016, 18, 093005.	2.2	118
29	Solution-Processed Phase-Change VO₂ Metamaterials from Colloidal Vanadium Oxide (VO_x) Nanocrystals. ACS Nano, 2014, 8, 797-806.	14.6	112
30	Binary and Ternary Superlattices Self-Assembled from Colloidal Nanodisks and Nanorods. Journal of the American Chemical Society, 2015, 137, 6662-6669.	13.7	110
31	Engineering Charge Injection and Charge Transport for High Performance PbSe Nanocrystal Thin Film Devices and Circuits. Nano Letters, 2014, 14, 6210-6216.	9.1	100
32	Unbalanced Hole and Electron Diffusion in Lead Bromide Perovskites. Nano Letters, 2017, 17, 1727-1732.	9.1	100
33	Layer-By-Layer Growth of Metalâ^'Metal Bonded Supramolecular Thin Films and Its Use in the Fabrication of Lateral Nanoscale Devices. Journal of the American Chemical Society, 2003, 125, 336-337.	13.7	97
34	Flexible colloidal nanocrystal electronics. Chemical Society Reviews, 2019, 48, 1626-1641.	38.1	95
35	Chemically Tailored Dielectric-to-Metal Transition for the Design of Metamaterials from Nanoimprinted Colloidal Nanocrystals. Nano Letters, 2013, 13, 350-357.	9.1	87
36	Limits of Carrier Diffusion in n-Type and p-Type CH₃NH₃PbI₃ Perovskite Single Crystals. Journal of Physical Chemistry Letters, 2016, 7, 3510-3518.	4.6	86

#	Article	IF	Citations
37	Bistable Magnetoresistance Switching in Exchange-Coupled CoFe₂O₄â€“Fe₃O₄ Binary Nanocrystal Superlattices by Self-Assembly and Thermal Annealing. ACS Nano, 2013, 7, 1478-1486.	14.6	85
38	Chemical Complementarity in the Contacts for Nanoscale Organic Field-Effect Transistors. Journal of the American Chemical Society, 2006, 128, 1788-1789.	13.7	80
39	Multiscale Periodic Assembly of Striped Nanocrystal Superlattice Films on a Liquid Surface. Nano Letters, 2011, 11, 841-846.	9.1	79
40	Plasmon Resonances in Self-Assembled Two-Dimensional Au Nanocrystal Metamolecules. ACS Nano, 2017, 11, 2917-2927.	14.6	78
41	Nano Day: Celebrating the Next Decade of Nanoscience and Nanotechnology. ACS Nano, 2016, 10, 9093-9103.	14.6	77
42	High-strength magnetically switchable plasmonic nanorods assembled from a binary nanocrystal mixture. Nature Nanotechnology, 2017, 12, 228-232.	31.5	75
43	Longer Cations Increase Energetic Disorder in Excitonic 2D Hybrid Perovskites. Journal of Physical Chemistry Letters, 2019, 10, 1198-1205.	4.6	75
44	Plasmonic Optical and Chiroptical Response of Self-Assembled Au Nanorod Equilateral Trimers. ACS Nano, 2019, 13, 1617-1624.	14.6	75
45	Large-Area Nanoimprinted Colloidal Au Nanocrystal-Based Nanoantennas for Ultrathin Polarizing Plasmonic Metasurfaces. Nano Letters, 2015, 15, 5254-5260.	9.1	73
46	Smectic Nanorod Superlattices Assembled on Liquid Subphases: Structure, Orientation, Defects, and Optical Polarization. Chemistry of Materials, 2015, 27, 2998-3008.	6.7	69
47	Advanced Architecture for Colloidal PbS Quantum Dot Solar Cells Exploiting a CdSe Quantum Dot Buffer Layer. ACS Nano, 2016, 10, 9267-9273.	14.6	69
48	Small-Molecule Thiophene-C₆₀ Dyads As Compatibilizers in Inverted Polymer Solar Cells. Chemistry of Materials, 2010, 22, 5762-5773.	6.7	68
49	Chemically Assisted Directed Assembly of Carbon Nanotubes for the Fabrication of Large-Scale Device Arrays. Journal of the American Chemical Society, 2007, 129, 11964-11968.	13.7	66
50	Near-Infrared Metatronic Nanocircuits by Design. Physical Review Letters, 2013, 111, 073904.	7.8	64
51	Report from the third workshop on future directions of solid-state chemistry: The status of solid-state chemistry and its impact in the physical sciences. Progress in Solid State Chemistry, 2008, 36, 1-133.	7.2	58
52	Airâ€“Liquid Interfacial Self-Assembly of Conjugated Block Copolymers into Ordered Nanowire Arrays. ACS Nano, 2014, 8, 12755-12762.	14.6	55
53	Low-Frequency (1/f) Noise in Nanocrystal Field-Effect Transistors. ACS Nano, 2014, 8, 9664-9672.	14.6	55
54	Enforced One-Dimensional Photoconductivity in Core-Cladding Hexabenzocoronenes. Nano Letters, 2006, 6, 2838-2841.	9.1	54

#	Article	IF	Citations
55	General Synthetic Route to High-Quality Colloidal IIIâ€“V Semiconductor Quantum Dots Based on Pnictogen Chlorides. Journal of the American Chemical Society, 2019, 141, 15145-15152.	13.7	54
56	Alignment, Electronic Properties, Doping, and On-Chip Growth of Colloidal PbSe Nanowires. Journal of Physical Chemistry C, 2007, 111, 13244-13249.	3.1	53
57	Flexible, Low-Voltage, and Low-Hysteresis PbSe Nanowire Field-Effect Transistors. ACS Nano, 2011, 5, 10074-10083.	14.6	53
58	Reproducibility in Nanocrystal Synthesis? Watch Out for Impurities!. ACS Nano, 2020, 14, 6359-6361.	14.6	53
59	In Situ Repair of High-Performance, Flexible Nanocrystal Electronics for Large-Area Fabrication and Operation in Air. ACS Nano, 2013, 7, 8275-8283.	14.6	52
60	Deposition of Waferâ€Scale Singleâ€Component and Binary Nanocrystal Superlattice Thin Films Via Dipâ€Coating. Advanced Materials, 2015, 27, 2846-2851.	21.0	52
61	Flexible, High-Speed CdSe Nanocrystal Integrated Circuits. Nano Letters, 2015, 15, 7155-7160.	9.1	52
62	Near-Infrared Absorption of Monodisperse Silver Telluride (Ag₂Te) Nanocrystals and Photoconductive Response of Their Self-Assembled Superlattices. Chemistry of Materials, 2011, 23, 4657-4659.	6.7	51
63	Electrostatic Field and Partial Fermi Level Pinning at the Pentaceneâ^'SiO2Interface. Journal of Physical Chemistry B, 2005, 109, 1834-1838.	2.6	47
64	Increased Carrier Mobility and Lifetime in CdSe Quantum Dot Thin Films through Surface Trap Passivation and Doping. Journal of Physical Chemistry Letters, 2015, 6, 4605-4609.	4.6	47
65	At the Nexus of Food Security and Safety: Opportunities for Nanoscience and Nanotechnology. ACS Nano, 2016, 10, 2985-2986.	14.6	47
66	Synthesis of N-Type Plasmonic Oxide Nanocrystals and the Optical and Electrical Characterization of their Transparent Conducting Films. Chemistry of Materials, 2014, 26, 4579-4588.	6.7	46
67	Diketopyrrolopyrrole-Based Ï€-Bridged Donorâ€“Acceptor Polymer for Photovoltaic Applications. ACS Applied Materials & Interfaces, 2011, 3, 3874-3883.	8.0	43
68	Solution-Based Stoichiometric Control over Charge Transport in Nanocrystalline CdSe Devices. ACS Nano, 2013, 7, 8760-8770.	14.6	43
69	Molecular Transport Junctions: An Introduction. MRS Bulletin, 2004, 29, 376-384.	3.5	42
70	Air-Stable, Nanostructured Electronic and Plasmonic Materials from Solution-Processable, Silver Nanocrystal Building Blocks. ACS Nano, 2014, 8, 2746-2754.	14.6	40
71	Hierarchical Materials Design by Pattern Transfer Printing of Self-Assembled Binary Nanocrystal Superlattices. Nano Letters, 2017, 17, 1387-1394.	9.1	40
72	Tailoring Hot Exciton Dynamics in 2D Hybrid Perovskites through Cation Modification. ACS Nano, 2020, 14, 3621-3629.	14.6	38

#	Article	IF	Citations
73	Nanoimprinted Chiral Plasmonic Substrates with Three-Dimensional Nanostructures. Nano Letters, 2018, 18, 7389-7394.	9.1	36
74	Ultrasensitive, Mechanically Responsive Optical Metasurfaces via Strain Amplification. ACS Nano, 2018, 12, 10683-10692.	14.6	34
75	Effects of Post-Synthesis Processing on CdSe Nanocrystals and Their Solids: Correlation between Surface Chemistry and Optoelectronic Properties. Journal of Physical Chemistry C, 2014, 118, 27097-27105.	3.1	33
76	Selective p- and n-Doping of Colloidal PbSe Nanowires To Construct Electronic and Optoelectronic Devices. ACS Nano, 2015, 9, 7536-7544.	14.6	32
77	Ambipolar and Unipolar PbSe Nanowire Field-Effect Transistors. ACS Nano, 2011, 5, 3230-3236.	14.6	31
78	Spectrally-Resolved Dielectric Functions of Solution-Cast Quantum Dot Thin Films. Chemistry of Materials, 2015, 27, 6463-6469.	6.7	31
79	Remote Doping and Schottky Barrier Formation in Strongly Quantum Confined Single PbSe Nanowire Field-Effect Transistors. ACS Nano, 2012, 6, 4328-4334.	14.6	30
80	Ambipolar transport in solution-deposited pentacene transistors enhanced by molecular engineering of device contacts. Applied Physics Letters, 2009, 95, 023301.	3.3	28
81	Device Configurations for Ambipolar Transport in Flexible, Pentacene Transistors. Advanced Materials, 2010, 22, 5063-5068.	21.0	27
82	Rapid Large-Scale Assembly and Pattern Transfer of One-Dimensional Gold Nanorod Superstructures. ACS Applied Materials & Interfaces, 2017, 9, 25513-25521.	8.0	27
83	Gate-Induced Carrier Delocalization in Quantum Dot Field Effect Transistors. Nano Letters, 2014, 14, 5948-5952.	9.1	25
84	The Role of Chemical Contacts in Molecular Conductance. Nano Letters, 2006, 6, 2955-2958.	9.1	24
85	Air-Stable CuInSe₂ Nanocrystal Transistors and Circuits via Post-Deposition Cation Exchange. ACS Nano, 2019, 13, 2324-2333.	14.6	24
86	Ink-Lithography for Property Engineering and Patterning of Nanocrystal Thin Films. ACS Nano, 2021, 15, 15667-15675.	14.6	23
87	Nanoscience and Nanotechnology Impacting Diverse Fields of Science, Engineering, and Medicine. ACS Nano, 2016, 10, 10615-10617.	14.6	22
88	Angle-Independent Optical Moisture Sensors Based on Hydrogel-Coated Plasmonic Lattice Arrays. ACS Applied Nano Materials, 2018, 1, 1430-1437.	5.0	22
89	Favoring the Growth of High-Quality, Three-Dimensional Supercrystals of Nanocrystals. Journal of Physical Chemistry C, 2020, 124, 11256-11264.	3.1	21
90	Charge Transport Modulation in PbSe Nanocrystal Solids by Au_xAg_{1â€“x} Nanoparticle Doping. ACS Nano, 2018, 12, 9091-9100.	14.6	20

#	Article	IF	Citations
91	Chemo- and Thermomechanically Configurable 3D Optical Metamaterials Constructed from Colloidal Nanocrystal Assemblies. ACS Nano, 2020, 14, 1427-1435.	14.6	20
92	X-ray Mapping of Nanoparticle Superlattice Thin Films. ACS Nano, 2014, 8, 12843-12850.	14.6	19
93	Directional Carrier Transfer in Strongly Coupled Binary Nanocrystal Superlattice Films Formed by Assembly and in Situ Ligand Exchange at a Liquidâ€“Air Interface. Journal of Physical Chemistry C, 2017, 121, 4146-4157.	3.1	19
94	The effects of inorganic surface treatments on photogenerated carrier mobility and lifetime in PbSe quantum dot thin films. Chemical Physics, 2016, 471, 81-88.	1.9	18
95	Designing Strong Optical Absorbers via Continuous Tuning of Interparticle Interaction in Colloidal Gold Nanocrystal Assemblies. ACS Nano, 2019, 13, 7493-7501.	14.6	18
96	Template-Assisted Self-Assembly of Fluorescent Nanodiamonds for Scalable Quantum Technologies. ACS Nano, 2022, 16, 1847-1856.	14.6	18
97	Photophysics of Two-Dimensional Semiconducting Organicâ€“Inorganic Metal-Halide Perovskites. Annual Review of Physical Chemistry, 2022, 73, 403-428.	10.8	18
98	Enhanced Carrier Transport in Strongly Coupled, Epitaxially Fused CdSe Nanocrystal Solids. Nano Letters, 2021, 21, 3318-3324.	9.1	17
99	Entrepreneurial Talent Building for 21st Century Agricultural Innovation. ACS Nano, 2021, 15, 10748-10758.	14.6	17
100	Redefining the Experimental and Methods Sections. ACS Nano, 2019, 13, 4862-4864.	14.6	16
101	Ultrafast Electron Trapping in Ligand-Exchanged Quantum Dot Assemblies. ACS Nano, 2015, 9, 1440-1447.	14.6	15
102	3D Nanofabrication via Chemoâ€Mechanical Transformation of Nanocrystal/Bulk Heterostructures. Advanced Materials, 2018, 30, e1800233.	21.0	15
103	Alternate current magnetic property characterization of nonstoichiometric zinc ferrite nanocrystals for inductor fabrication via a solution based process. Journal of Applied Physics, 2016, 119, .	2.5	13
104	Special report: The Internet of Things for Precision Agriculture (IoT4Ag). Computers and Electronics in Agriculture, 2022, 196, 106742.	7.7	13
105	Mapping the Competition between Exciton Dissociation and Charge Transport in Organic Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 28743-28749.	8.0	12
106	The Effect of Dielectric Environment on Doping Efficiency in Colloidal PbSe Nanostructures. ACS Nano, 2018, 12, 1313-1320.	14.6	12
107	Grafted Nanoparticle Surface Wetting during Phase Separation in Polymer Nanocomposite Films. ACS Applied Materials & Interfaces, 2021, 13, 37628-37637.	8.0	12
108	Dynamic magnetic field alignment and polarized emission of semiconductor nanoplatelets in a liquid crystal polymer. Nature Communications, 2022, 13, 2507.	12.8	12

#	Article	IF	Citations
109	Self-Assembly and Oligomerization of Alkyne-Terminated Molecules on Metal and Oxide Surfaces. Langmuir, 2005, 21, 11574-11577.	3.5	11
110	Self-assembly for electronics. MRS Bulletin, 2020, 45, 807-814.	3.5	10
111	Chemical and Physical Properties of Photonic Nobleâ€Metal Nanomaterials. Advanced Materials, 2023, 35, e2108104.	21.0	10
112	Molecular Monolayers as Semiconducting Channels in Field Effect Transistors. Topics in Current Chemistry, 2011, 312, 213-237.	4.0	9
113	The dendritic effect and magnetic permeability in dendron coated nickel and manganese zinc ferrite nanoparticles. Nanoscale, 2017, 9, 13922-13928.	5.6	9
114	Broadband Circular Polarizers via Coupling in 3D Plasmonic Meta-Atom Arrays. ACS Photonics, 2021, 8, 1286-1292.	6.6	9
115	Nanocomposites of 2D-MoS₂ Exfoliated in Thermotropic Liquid Crystals. , 2021, 3, 704-712.		9
116	Monodisperse Nanocrystal Superparticles through a Sourceâ€“Sink Emulsion System. Chemistry of Materials, 2022, 34, 2779-2789.	6.7	9
117	Nanocrystal Superparticles with Whispering-Gallery Modes Tunable through Chemical and Optical Triggers. Nano Letters, 2022, 22, 4765-4773.	9.1	7
118	Comparison of the Energy-Level Alignment of Thiolate- and Carbodithiolate-Bound Self-Assembled Monolayers on Gold. Journal of Physical Chemistry C, 2010, 114, 20843-20851.	3.1	6
119	A Year for Nanoscience. ACS Nano, 2014, 8, 11901-11903.	14.6	6
120	Sub-5 nm Anisotropic Pattern Transfer via Colloidal Lithography of a Self-Assembled GdF₃ Nanocrystal Monolayer. Nano Letters, 2022, 22, 1992-2000.	9.1	5
121	Electron and hole transport in ambipolar, thin film pentacene transistors. Journal of Applied Physics, 2015, 117, .	2.5	4
122	Nanoscience and Nanotechnology Cross Borders. ACS Nano, 2017, 11, 1123-1126.	14.6	4
123	Preparation of silica coated and⁹⁰Y-radiolabeledÎ²-NaYF₄upconverting nanophosphors for multimodal tracing. Nano Futures, 2018, 2, 025002.	2.2	4
124	What Will We Carry Forward from This Time?. ACS Nano, 2020, 14, 14253-14254.	14.6	4
125	Impurities in Nanocrystal Thin-Film Transistors Fabricated by Cation Exchange. Journal of Physical Chemistry Letters, 2021, 12, 6514-6518.	4.6	4
126	Heavyâ€Metalâ€Free Quantum Dotâ€Based Flexible Electronics. Information Display, 2021, 37, 24-32.	0.2	4

#	Article	IF	Citations
127	Grand Plans for Nano. ACS Nano, 2015, 9, 11503-11505.	14.6	3
128	Flexible organic electronics for use in neural sensing. , 2011, 2011, 5400-3.		2
129	Prof. Millie Dresselhaus (1930â€“2017), Carbon Nanomaterials Pioneer. ACS Nano, 2017, 11, 2307-2308.	14.6	2
130	Electrochemically deposited molybdenum disulfide surfaces enable polymer adsorption studies using quartz crystal microbalance with dissipation monitoring (QCM-D). Journal of Colloid and Interface Science, 2022, 614, 522-531.	9.4	2
131	Exciting Times for Nano. ACS Nano, 2013, 7, 10437-10439.	14.6	1
132	A Big Year Ahead for Nano in 2018. ACS Nano, 2017, 11, 11755-11757.	14.6	1
133	Growing Contributions of Nano in 2020. ACS Nano, 2020, 14, 16163-16164.	14.6	1
134	Our First and Next Decades at ACS Nano. ACS Nano, 2017, 11, 7553-7555.	14.6	0
135	Helmuth MÃ¶hwald (1946â€“2018). ACS Nano, 2018, 12, 3053-3055.	14.6	0
136	IoT4Ag: MEMS-Enabled Distributed Sensing, Communications, And Information Systems for The Internet Of Things For Precision Agriculture. , 2021, , .		0
137	Unraveling the Self-Assembly Pathway of Binary Nanocrystal Superlattices. , 0, , .		0
138	In-line Production of Colloidal Microlasers. , 0, , .		0
139	Tanks and Truth. ACS Nano, 2022, 16, 4975-4976.	14.6	0