Chih-Jen Shih

List of Publications by Year
in descending order

69 papers	6,942 citations	101543 36 h-index	98798 67 g-index
71 all docs	71 docs citations	71 times ranked	11092 citing authors

#	Article	IF	Citations
1	State of the Art and Prospects for Halide Perovskite Nanocrystals. ACS Nano, 2021, 15, 10775-10981.	14.6	705
2	Colloidal CsPbX₃ (X = Cl, Br, I) Nanocrystals 2.0: Zwitterionic Capping Ligands for Improved Durability and Stability. ACS Energy Letters, 2018, 3, 641-646.	17.4	647
3	Understanding the pH-Dependent Behavior of Graphene Oxide Aqueous Solutions: A Comparative Experimental and Molecular Dynamics Simulation Study. Langmuir, 2012, 28, 235-241.	3.5	517
4	Understanding and controlling the substrate effect on graphene electron-transfer chemistry via reactivity imprint lithography. Nature Chemistry, 2012, 4, 724-732.	13.6	463
5	Dismantling the â€œRed Wallâ€• of Colloidal Perovskites: Highly Luminescent Formamidinium and Formamidiniumâ€“Cesium Lead Iodide Nanocrystals. ACS Nano, 2017, 11, 3119-3134.	14.6	414
6	Bi- and trilayer graphene solutions. Nature Nanotechnology, 2011, 6, 439-445.	31.5	337
7	Breakdown in the Wetting Transparency of Graphene. Physical Review Letters, 2012, 109, 176101.	7.8	313
8	Efficient Blue Electroluminescence Using Quantum-Confined Two-Dimensional Perovskites. ACS Nano, 2016, 10, 9720-9729.	14.6	299
9	Understanding the Stabilization of Liquid-Phase-Exfoliated Graphene in Polar Solvents: Molecular Dynamics Simulations and Kinetic Theory of Colloid Aggregation. Journal of the American Chemical Society, 2010, 132, 14638-14648.	13.7	260
10	Wetting translucency of graphene. Nature Materials, 2013, 12, 866-869.	27.5	241
11	Tuning Onâ€“Off Current Ratio and Field-Effect Mobility in a MoS₂â€“Graphene Heterostructure <i>via</i> Schottky Barrier Modulation. ACS Nano, 2014, 8, 5790-5798.	14.6	240
12	Ultrapure Green Light-Emitting Diodes Using Two-Dimensional Formamidinium Perovskites: Achieving Recommendation 2020 Color Coordinates. Nano Letters, 2017, 17, 5277-5284.	9.1	221
13	Click Chemistry on Solution-Dispersed Graphene and Monolayer CVD Graphene. Chemistry of Materials, 2011, 23, 3362-3370.	6.7	169
14	Metallized DNA nanolithography for encoding and transferring spatial information for graphene patterning. Nature Communications, 2013, 4, 1663.	12.8	155
15	Molecular Insights into the Surface Morphology, Layering Structure, and Aggregation Kinetics of Surfactant-Stabilized Graphene Dispersions. Journal of the American Chemical Society, 2011, 133, 12810-12823.	13.7	140
16	Exploration of Near-Infrared-Emissive Colloidal Multinary Lead Halide Perovskite Nanocrystals Using an Automated Microfluidic Platform. ACS Nano, 2018, 12, 5504-5517.	14.6	138
17	Layered and scrolled nanocomposites with aligned semi-infinite graphene inclusions at the platelet limit. Science, 2016, 353, 364-367.	12.6	125
18	Layer Number Dependence of MoS₂ Photoconductivity Using Photocurrent Spectral Atomic Force Microscopic Imaging. ACS Nano, 2015, 9, 2843-2855.	14.6	84

#	Article	IF	Citations
19	Electronic Polarizability as the Fundamental Variable in the Dielectric Properties of Two-Dimensional Materials. Nano Letters, 2020, 20, 841-851.	9.1	70
20	Aggregation-induced emission in lamellar solids of colloidal perovskite quantum wells. Science Advances, 2017, 3, eaaq0208.	10.3	65
21	Spectroscopic Size and Thickness Metrics for Liquid-Exfoliated <i>h</i>-BN. Chemistry of Materials, 2018, 30, 1998-2005.	6.7	65
22	Phase field simulation of non-isothermal free dendritic growth of a binary alloy in a forced flow. Journal of Crystal Growth, 2004, 264, 472-482.	1.5	63
23	Adaptive phase field simulation of non-isothermal free dendritic growth of a binary alloy. Acta Materialia, 2003, 51, 1857-1869.	7.9	62
24	Disorder Imposed Limits of Mono- and Bilayer Graphene Electronic Modification Using Covalent Chemistry. Nano Letters, 2013, 13, 809-817.	9.1	62
25	Layer-controlled two-dimensional perovskites: synthesis and optoelectronics. Journal of Materials Chemistry C, 2017, 5, 5610-5627.	5.5	60
26	Partially-Screened Field Effect and Selective Carrier Injection at Organic Semiconductor/Graphene Heterointerface. Nano Letters, 2015, 15, 7587-7595.	9.1	58
27	Length- and Thickness-Dependent Optical Response of Liquid-Exfoliated Transition Metal Dichalcogenides. Chemistry of Materials, 2019, 31, 10049-10062.	6.7	57
28	Understanding Surfactant/Graphene Interactions Using a Graphene Field Effect Transistor: Relating Molecular Structure to Hysteresis and Carrier Mobility. Langmuir, 2012, 28, 8579-8586.	3.5	53
29	Nanomaterials for molecular signal amplification in electrochemical nucleic acid biosensing: recent advances and future prospects for point-of-care diagnostics. Molecular Systems Design and Engineering, 2020, 5, 49-66.	3.4	53
30	Understanding the Stabilization of Single-Walled Carbon Nanotubes and Graphene in Ionic Surfactant Aqueous Solutions: Large-Scale Coarse-Grained Molecular Dynamics Simulation-Assisted DLVO Theory. Journal of Physical Chemistry C, 2015, 119, 1047-1060.	3.1	50
31	Understanding the Ligand Effects on Photophysical, Optical, and Electroluminescent Characteristics of Hybrid Lead Halide Perovskite Nanocrystal Solids. Journal of Physical Chemistry Letters, 2019, 10, 7560-7567.	4.6	49
32	Evolution of Physical and Electronic Structures of Bilayer Graphene upon Chemical Functionalization. Journal of the American Chemical Society, 2013, 135, 18866-18875.	13.7	43
33	Continuous color tuning of single-fluorophore emission via polymerization-mediated through-space charge transfer. Science Advances, 2021, 7, .	10.3	43
34	Efficient phase field simulation of a binary dendritic growth in a forced flow. Physical Review E, 2004, 69, 031601.	2.1	42
35	Asymmetric electric field screening in van der Waals heterostructures. Nature Communications, 2018, 9, 1271.	12.8	38
36	Understanding the colloidal dispersion stability of 1D and 2D materials: Perspectives from molecular simulations and theoretical modeling. Advances in Colloid and Interface Science, 2017, 244, 36-53.	14.7	37

#	Article	IF	Citations
37	Highly Efficient Green Solution Processable Organic Light-Emitting Diodes Based on a Phosphorescent Î¼3-(N^C^C)Gold(III)-Alkynyl Complex. Chemistry of Materials, 2020, 32, 1605-1611.	6.7	37
38	Anisotropic nanocrystal superlattices overcoming intrinsic light outcoupling efficiency limit in perovskite quantum dot light-emitting diodes. Nature Communications, 2022, 13, 2106.	12.8	34
39	Quantitative phase field simulation of deep cells in directional solidification of an alloy. Acta Materialia, 2005, 53, 2285-2294.	7.9	29
40	Molecular Epitaxy on Two-Dimensional Materials: The Interplay between Interactions. Industrial & Engineering Chemistry Research, 2017, 56, 10552-10581.	3.7	29
41	Molecular Orientation Effects in Organic Lightâ€Emitting Diodes. Helvetica Chimica Acta, 2019, 102, e1900048.	1.6	29
42	Scalable photonic sources using two-dimensional lead halide perovskite superlattices. Nature Communications, 2020, 11, 387.	12.8	29
43	Multiscale Analysis for Field-Effect Penetration through Two-Dimensional Materials. Nano Letters, 2016, 16, 5044-5052.	9.1	28
44	Layered metal vanadates with different interlayer cations for high-rate Na-ion storage. Journal of Materials Chemistry A, 2019, 7, 16109-16116.	10.3	26
45	Charge Transfer at Junctions of a Single Layer of Graphene and a Metallic Single Walled Carbon Nanotube. Small, 2013, 9, 1954-1963.	10.0	24
46	Mixing Entropy-Induced Layering Polydispersity Enabling Efficient and Stable Perovskite Nanocrystal Light-Emitting Diodes. ACS Energy Letters, 2019, 4, 118-125.	17.4	24
47	Phase field modeling of convective and morphological instability during directional solidification of an alloy. Journal of Crystal Growth, 2006, 295, 202-208.	1.5	23
48	Design and Synthesis of Heteroleptic Iridium(III) Phosphors for Efficient Organic Light-Emitting Devices. Inorganic Chemistry, 2017, 56, 15304-15313.	4.0	20
49	Stabilization of Lead-Reduced Metal Halide Perovskite Nanocrystals by High-Entropy Alloying. Journal of the American Chemical Society, 2022, 144, 5864-5870.	13.7	20
50	Macroscopic Salt Rejection through Electrostatically Gated Nanoporous Graphene. Nano Letters, 2019, 19, 6400-6409.	9.1	18
51	Long-time scale morphological dynamics near the onset of instability during directional solidification of an alloy. Journal of Crystal Growth, 2004, 264, 379-384.	1.5	16
52	Phosphorescent Î¼³â€(N^C^C)â€Gold(III) Complexes: Synthesis, Photophysics, Computational Studies and Application to Solutionâ€Processable OLEDs. Chemistry - A European Journal, 2020, 26, 17604-17612.	3.3	15
53	Phase field modeling of excimer laser crystallization of thin silicon films on amorphous substrates. Journal of Applied Physics, 2006, 100, 053504.	2.5	13
54	Efficient perovskite nanocrystal light-emitting diodes using a benzimidazole-substituted anthracene derivative as the electron transport material. Journal of Materials Chemistry C, 2019, 7, 8938-8945.	5.5	12

#	Article	IF	Citations
55	A simple approach toward quantitative phase field simulation for dilute-alloy solidification. Journal of Crystal Growth, 2005, 282, 515-524.	1.5	11
56	Doping-Driven Wettability of Two-Dimensional Materials: A Multiscale Theory. Langmuir, 2017, 33, 12827-12837.	3.5	10
57	Ligand-assisted solid phase synthesis of mixed-halide perovskite nanocrystals for color-pure and efficient electroluminescence. Journal of Materials Chemistry C, 2021, 9, 5771-5778.	5.5	10
58	A Compositional Window of Kinetic Stability for Amphiphilic Polymers and Colloidal Nanorods. Journal of Physical Chemistry C, 2011, 115, 7164-7170.	3.1	7
59	Monochromatic LEDs based on perovskite quantum dots: Opportunities and challenges. Journal of the Society for Information Display, 2019, 27, 667-678.	2.1	7
60	An Elastic Interfacial Transistor Enabled by Superhydrophobicity. Small, 2018, 14, e1804006.	10.0	6
61	Flexible Green Perovskite Light Emitting Diodes. IEEE Journal of the Electron Devices Society, 2019, 7, 769-775.	2.1	6
62	Blue electroluminescent metal halide perovskites. Journal of Applied Physics, 2020, 128, 120901.	2.5	4
63	18-2: Ultrapure Green Light-Emitting Diodes using Colloidal Quantum Wells of Hybrid Lead Halide Perovskites. Digest of Technical Papers SID International Symposium, 2018, 49, 214-217.	0.3	3
64	Engineering Two-dimensional Materials Surface Chemistry. Chimia, 2016, 70, 800.	0.6	2
65	Conformal Deposition of Conductive Single-Crystalline Cobalt Silicide Layer on Si Wafer via a Molecular Approach. Chemistry of Materials, 2018, 30, 2168-2173.	6.7	2
66	Low-Temperature Wet Conformal Nickel Silicide Deposition for Transistor Technology through an Organometallic Approach. ACS Applied Materials & Interfaces, 2017, 9, 4948-4955.	8.0	1
67	Quantum Confined Colloidal Perovskite Nanoplatelets for Extremely Pure Green and Efficient LEDs. , 2018, , .		1
68	Interfacial Field-Effect Transistors: An Elastic Interfacial Transistor Enabled by Superhydrophobicity (Small 51/2018). Small, 2018, 14, 1870247.	10.0	0
69	23.7: Invited Paper: High Performance Perovskite Quantum Dot Lightâ€Emitting Diodes Featuring Outcouplingâ€Enhanced Twoâ€Dimensional Superlattices. Digest of Technical Papers SID International Symposium, 2021, 52, 307-307.	0.3	0