Chih-Jen Shih

List of Publications by Year in Descending Order

70 papers	5,119 citations	31 h-index	71 g-index
71 ext. papers	6,030 ext. citations	10.2 avg, IF	5.62 L-index

#	Paper	IF	Citations
70	Stabilization of Lead-Reduced Metal Halide Perovskite Nanocrystals by High-Entropy Alloying.. *Journal of the American Chemical Society*, **2022**,	16.4	2
69	Anisotropic nanocrystal superlattices overcoming intrinsic light outcoupling efficiency limit in perovskite quantum dot light-emitting diodes.. *Nature Communications*, **2022**, 13, 2106	17.4	6
68	Continuous color tuning of single-fluorophore emission via polymerization-mediated through-space charge transfer. *Science Advances*, **2021**, 7,	14.3	14
67	State of the Art and Prospects for Halide Perovskite Nanocrystals. *ACS Nano*, **2021**, 15, 10775-10981	16.7	222
66	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	7.1	2
65	23.7: Invited Paper: High Performance Perovskite Quantum Dot Light-Emitting Diodes Featuring Outcoupling-Enhanced Two-Dimensional Superlattices. *Digest of Technical Papers SID International Symposium*, **2021**, 52, 307-307	0.5	
64	Highly Efficient Green Solution Processable Organic Light-Emitting Diodes Based on a Phosphorescent β-(N^C^C)Gold(III)-Alkynyl Complex. *Chemistry of Materials*, **2020**, 32, 1605-1611	9.6	28
63	Scalable photonic sources using two-dimensional lead halide perovskite superlattices. *Nature Communications*, **2020**, 11, 387	17.4	19
62	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	4.6	31
61	Electronic Polarizability as the Fundamental Variable in the Dielectric Properties of Two-Dimensional Materials. *Nano Letters*, **2020**, 20, 841-851	11.5	31
60	Blue electroluminescent metal halide perovskites. *Journal of Applied Physics*, **2020**, 128, 120901	2.5	2
59	Phosphorescent β(N^C^C)-Gold(III) Complexes: Synthesis, Photophysics, Computational Studies and Application to Solution-Processable OLEDs. *Chemistry - A European Journal*, **2020**, 26, 17604-17612	4.8	7
58	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	7.1	8
57	Flexible Green Perovskite Light Emitting Diodes. *IEEE Journal of the Electron Devices Society*, **2019**, 7, 769-775	2.3	2
56	Molecular Orientation Effects in Organic Light-Emitting Diodes. *Helvetica Chimica Acta*, **2019**, 102, e1900048	2	17
55	Macroscopic Salt Rejection through Electrostatically Gated Nanoporous Graphene. *Nano Letters*, **2019**, 19, 6400-6409	11.5	9
54	Monochromatic LEDs based on perovskite quantum dots: Opportunities and challenges. *Journal of the Society for Information Display*, **2019**, 27, 667-678	2.1	7

53	Layered metal vanadates with different interlayer cations for high-rate Na-ion storage. *Journal of Materials Chemistry A*, **2019**, 7, 16109-16116	13	14
52	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	6.4	31
51	Length- and Thickness-Dependent Optical Response of Liquid-Exfoliated Transition Metal Dichalcogenides. *Chemistry of Materials*, **2019**, 31, 10049-10062	9.6	27
50	Mixing Entropy-Induced Layering Polydispersity Enabling Efficient and Stable Perovskite Nanocrystal Light-Emitting Diodes. *ACS Energy Letters*, **2019**, 4, 118-125	20.1	20
49	Conformal Deposition of Conductive Single-Crystalline Cobalt Silicide Layer on Si Wafer via a Molecular Approach. *Chemistry of Materials*, **2018**, 30, 2168-2173	9.6	1
48	Spectroscopic Size and Thickness Metrics for Liquid-Exfoliated h-BN. *Chemistry of Materials*, **2018**, 30, 1998-2005	9.6	43
47	Asymmetric electric field screening in van der Waals heterostructures. *Nature Communications*, **2018**, 9, 1271	17.4	23
46	Colloidal CsPbX (X = Cl, Br, I) Nanocrystals 2.0: Zwitterionic Capping Ligands for Improved Durability and Stability. *ACS Energy Letters*, **2018**, 3, 641-646	20.1	435
45	Exploration of Near-Infrared-Emissive Colloidal Multinary Lead Halide Perovskite Nanocrystals Using an Automated Microfluidic Platform. *ACS Nano*, **2018**, 12, 5504-5517	16.7	99
44	Quantum Confined Colloidal Perovskite Nanoplatelets for Extremely Pure Green and Efficient LEDs **2018**,		1
43	An Elastic Interfacial Transistor Enabled by Superhydrophobicity. *Small*, **2018**, 14, e1804006	11	5
42	Interfacial Field-Effect Transistors: An Elastic Interfacial Transistor Enabled by Superhydrophobicity (Small 51/2018). *Small*, **2018**, 14, 1870247	11	
41	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	0.5	3
40	Low-Temperature Wet Conformal Nickel Silicide Deposition for Transistor Technology through an Organometallic Approach. *ACS Applied Materials & Interfaces*, **2017**, 9, 4948-4955	9.5	1
39	Dismantling the "Red Wall" of Colloidal Perovskites: Highly Luminescent Formamidinium and Formamidinium-Cesium Lead Iodide Nanocrystals. *ACS Nano*, **2017**, 11, 3119-3134	16.7	291
38	Layer-controlled two-dimensional perovskites: synthesis and optoelectronics. *Journal of Materials Chemistry C*, **2017**, 5, 5610-5627	7.1	47
37	Doping-Driven Wettability of Two-Dimensional Materials: A Multiscale Theory. *Langmuir*, **2017**, 33, 12827-12837	4	9
36	Molecular Epitaxy on Two-Dimensional Materials: The Interplay between Interactions. *Industrial & Engineering Chemistry Research*, **2017**, 56, 10552-10581	3.9	22

35	Ultrapure Green Light-Emitting Diodes Using Two-Dimensional Formamidinium Perovskites: Achieving Recommendation 2020 Color Coordinates. *Nano Letters*, **2017**, 17, 5277-5284	11.5	166
34	Design and Synthesis of Heteroleptic Iridium(III) Phosphors for Efficient Organic Light-Emitting Devices. *Inorganic Chemistry*, **2017**, 56, 15304-15313	5.1	18
33	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	14.3	28
32	Aggregation-induced emission in lamellar solids of colloidal perovskite quantum wells. *Science Advances*, **2017**, 3, eaaq0208	14.3	51
31	Layered and scrolled nanocomposites with aligned semi-infinite graphene inclusions at the platelet limit. *Science*, **2016**, 353, 364-7	33.3	94
30	Multiscale Analysis for Field-Effect Penetration through Two-Dimensional Materials. *Nano Letters*, **2016**, 16, 5044-52	11.5	22
29	Engineering Two-dimensional Materials Surface Chemistry. *Chimia*, **2016**, 70, 800-804	1.3	2
28	Efficient Blue Electroluminescence Using Quantum-Confined Two-Dimensional Perovskites. *ACS Nano*, **2016**, 10, 9720-9729	16.7	239
27	Layer number dependence of MoS2 photoconductivity using photocurrent spectral atomic force microscopic imaging. *ACS Nano*, **2015**, 9, 2843-55	16.7	63
26	Partially-Screened Field Effect and Selective Carrier Injection at Organic Semiconductor/Graphene Heterointerface. *Nano Letters*, **2015**, 15, 7587-95	11.5	49
25	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	3.8	41
24	Tuning on-off current ratio and field-effect mobility in a MoS(2)-graphene heterostructure via Schottky barrier modulation. *ACS Nano*, **2014**, 8, 5790-8	16.7	207
23	Evolution of physical and electronic structures of bilayer graphene upon chemical functionalization. *Journal of the American Chemical Society*, **2013**, 135, 18866-75	16.4	39
22	Wetting translucency of graphene. *Nature Materials*, **2013**, 12, 866-9	27	198
21	Metallized DNA nanolithography for encoding and transferring spatial information for graphene patterning. *Nature Communications*, **2013**, 4, 1663	17.4	126
20	Charge transfer at junctions of a single layer of graphene and a metallic single walled carbon nanotube. *Small*, **2013**, 9, 1954-63	11	16
19	Disorder imposed limits of mono- and bilayer graphene electronic modification using covalent chemistry. *Nano Letters*, **2013**, 13, 809-17	11.5	55
18	Understanding and controlling the substrate effect on graphene electron-transfer chemistry via reactivity imprint lithography. *Nature Chemistry*, **2012**, 4, 724-32	17.6	407

17	Understanding the pH-dependent behavior of graphene oxide aqueous solutions: a comparative experimental and molecular dynamics simulation study. *Langmuir*, **2012**, 28, 235-41	4	442
16	Breakdown in the wetting transparency of graphene. *Physical Review Letters*, **2012**, 109, 176101	7.4	268
15	Understanding surfactant/graphene interactions using a graphene field effect transistor: relating molecular structure to hysteresis and carrier mobility. *Langmuir*, **2012**, 28, 8579-86	4	46
14	Molecular insights into the surface morphology, layering structure, and aggregation kinetics of surfactant-stabilized graphene dispersions. *Journal of the American Chemical Society*, **2011**, 133, 12810-23	16.4	128
13	A Compositional Window of Kinetic Stability for Amphiphilic Polymers and Colloidal Nanorods. *Journal of Physical Chemistry C*, **2011**, 115, 7164-7170	3.8	7
12	Click Chemistry on Solution-Dispersed Graphene and Monolayer CVD Graphene. *Chemistry of Materials*, **2011**, 23, 3362-3370	9.6	156
11	Bi- and trilayer graphene solutions. *Nature Nanotechnology*, **2011**, 6, 439-45	28.7	304
10	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, 14638-48	16.4	234
9	Phase field modeling of excimer laser crystallization of thin silicon films on amorphous substrates. *Journal of Applied Physics*, **2006**, 100, 053504	2.5	9
8	Phase field modeling of convective and morphological instability during directional solidification of an alloy. *Journal of Crystal Growth*, **2006**, 295, 202-208	1.6	22
7	A simple approach toward quantitative phase field simulation for dilute-alloy solidification. *Journal of Crystal Growth*, **2005**, 282, 515-524	1.6	11
6	Quantitative phase field simulation of deep cells in directional solidification of an alloy. *Acta Materialia*, **2005**, 53, 2285-2294	8.4	25
5	Efficient phase field simulation of a binary dendritic growth in a forced flow. *Physical Review E*, **2004**, 69, 031601	2.4	32
4	Long-time scale morphological dynamics near the onset of instability during directional solidification of an alloy. *Journal of Crystal Growth*, **2004**, 264, 379-384	1.6	15
3	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	1.6	60
2	Adaptive phase field simulation of non-isothermal free dendritic growth of a binary alloy. *Acta Materialia*, **2003**, 51, 1857-1869	8.4	56
1	Two-Dimensional Nanoplatelet Superlattices Overcoming Light Outcoupling Efficiency Limit in Perovskite Quantum Dot Light-Emitting Diodes		2