Liangzheng Tan

List of Publications by Year
in descending order

52 papers	3,740 citations	201674 27 h-index	182427 51 g-index
52 all docs	52 docs citations	52 times ranked	6787 citing authors

#	Article	IF	Citations
1	Nonperturbative study of bulk photovoltaic effect enhanced by an optically induced phase transition. Physical Review B, 2022, 105, .	3.2	6
2	Evidence of nested quasi-one-dimensional Fermi surface and decoupled charge-lattice orders in layered <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi>TaTe</mml:mi></mml:mrow><mml:mn>2</m Physical Review Research, 2022, 4, .	3.6	6
3	Impact of anisotropy in spin-orbit coupling on the magneto-optical properties of bulk lead halide perovskites. Physical Review B, 2022, 106, .	3.2	4
4	Aging of Self-Assembled Lead Halide Perovskite Nanocrystal Superlattices: Effects on Photoluminescence and Energy Transfer. ACS Nano, 2021, 15, 650-664.	14.6	46
5	Layer Edge States Stabilized by Internal Electric Fields in Two-Dimensional Hybrid Perovskites. Nano Letters, 2021, 21, 182-188.	9.1	14
6	Phonon-Assisted Ballistic Current from First-Principles Calculations. Physical Review Letters, 2021, 126, 177403.	7.8	32
7	The Significance of Polarons and Dynamic Disorder in Halide Perovskites. ACS Energy Letters, 2021, 6, 2162-2173.	17.4	74
8	Enhancing Defect Tolerance with Ligands at the Surface of Lead Halide Perovskites. Journal of Physical Chemistry Letters, 2021, 12, 6299-6304.	4.6	20
9	Ultrafast optical melting of trimer superstructure in layered 1Tâ€²-TaTe2. Communications Physics, 2021, 4, .	5.3	15
10	Thermal fluctuations and carrier localization induced by dynamic disorder in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi>MAPbI</mml:mi></mml:mrow><mml:mn>3< described by first-principles based tight-binding model. Physical Review Materials, 2021, 5, .	2.4	2
11	First-Principles Characterization of Surface Phonons of Halide Perovskite CsPbI₃ and Their Role in Stabilization. Journal of Physical Chemistry Letters, 2021, 12, 9253-9261.	4.6	4
12	<scp>Inq</scp>, a Modern GPU-Accelerated Computational Framework for (Time-Dependent) Density Functional Theory. Journal of Chemical Theory and Computation, 2021, 17, 7447-7467.	5.3	7
13	Light-Induced Currents at Domain Walls in Multiferroic BiFeO₃. Nano Letters, 2020, 20, 145-151.	9.1	36
14	Phase Control and In Situ Passivation of Quasi-2D Metal Halide Perovskites for Spectrally Stable Blue Light-Emitting Diodes. ACS Applied Materials & Interfaces, 2020, 12, 45056-45063.	8.0	49
15	Ultrafast spin-nematic and ferroelectric phase transitions induced by femtosecond light pulses. Physical Review B, 2020, 102, .	3.2	5
16	Ultrafast Dynamics of Excited Electronic States in Nitrobenzene Measured by Ultrafast Transient Polarization Spectroscopy. Journal of Physical Chemistry A, 2020, 124, 2573-2579.	2.5	8
17	Shift-current bulk photovoltaic effect influenced by quasiparticle and exciton. Physical Review B, 2020, 101, .	3.2	37
18	Understanding size dependence of phase stability and band gap in CsPbI3 perovskite nanocrystals. Journal of Chemical Physics, 2020, 152, 034702.	3.0	56

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19	Temperature and Gate Dependence of Carrier Diffusion in Single Crystal Methylammonium Lead Iodide Perovskite Microstructures. Journal of Physical Chemistry Letters, 2020, 11, 1000-1006.	4.6	12
20	Upper limit on shift current generation in extended systems. Physical Review B, 2019, 100, .	3.2	23
21	Effect of wavefunction delocalization on shift current generation. Journal of Physics Condensed Matter, 2019, 31, 084002.	1.8	9
22	Spin-orbit enhanced carrier lifetimes in noncentrosymmetric semiconductors. Journal of Physics and Chemistry of Solids, 2019, 128, 225-230.	4.0	1
23	Molecule-Adsorbed Topological Insulator and Metal Surfaces: A Comparative First-Principles Study. Chemistry of Materials, 2018, 30, 1849-1855.	6.7	10
24	Anion Exchange in IIâ€“VI Semiconducting Nanostructures via Atomic Templating. Nano Letters, 2018, 18, 1620-1627.	9.1	11
25	Ubiquitous Short-Range Distortion of Hybrid Perovskites and Hydrogen-Bonding Role: the MAPbCl₃ Case. Journal of Physical Chemistry C, 2018, 122, 28265-28272.	3.1	21
26	How Lattice and Charge Fluctuations Control Carrier Dynamics in Halide Perovskites. Nano Letters, 2018, 18, 8041-8046.	9.1	97
27	Long-lived polarization memory in the electronic states of lead-halide perovskites from local structural dynamics. Nature Communications, 2018, 9, 3531.	12.8	29
28	Enhancing ferroelectric photovoltaic effect by polar order engineering. Science Advances, 2018, 4, eaat3438.	10.3	152
29	Large-area synthesis of high-quality monolayer 1Tâ€™-WTe ₂ flakes. 2D Materials, 2017, 4, 021008.	4.4	81
30	Local Polar Fluctuations in Lead Halide Perovskite Crystals. Physical Review Letters, 2017, 118, 136001.	7.8	489
31	Intermolecular Interactions in Hybrid Perovskites Understood from a Combined Density Functional Theory and Effective Hamiltonian Approach. ACS Energy Letters, 2017, 2, 937-942.	17.4	28
32	Light-induced picosecond rotational disordering of the inorganic sublattice in hybrid perovskites. Science Advances, 2017, 3, e1602388.	10.3	149
33	Polarized emission in IIâ€“VI and perovskite colloidal quantum dots. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 214001.	1.5	4
34	Synthesis and Physical Properties of Phase-Engineered Transition Metal Dichalcogenide Monolayer Heterostructures. ACS Nano, 2017, 11, 8619-8627.	14.6	42
35	Rashba Effect in a Single Colloidal CsPbBr₃ Perovskite Nanocrystal Detected by Magneto-Optical Measurements. Nano Letters, 2017, 17, 5020-5026.	9.1	180
36	Shift current bulk photovoltaic effect in polar materialsâ€"hybrid and oxide perovskites and beyond. Npj Computational Materials, 2016, 2, .	8.7	246

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37	High Chloride Doping Levels Stabilize the Perovskite Phase of Cesium Lead Iodide. Nano Letters, 2016, 16, 3563-3570.	9.1	247
38	Enhancement of the Bulk Photovoltaic Effect in Topological Insulators. Physical Review Letters, 2016, 116, 237402.	7.8	61
39	Effective mass in bilayer graphene at low carrier densities: The role of potential disorder and electron-electron interaction. Physical Review B, 2016, 94, .	3.2	16
40	Strain-Induced Ferroelectric Topological Insulator. Nano Letters, 2016, 16, 1663-1668.	9.1	82
41	SU(4) symmetry breaking revealed by magneto-optical spectroscopy in epitaxial graphene. Physical Review B, 2015, 91, .	3.2	2
42	Rashba Spinâ€“Orbit Coupling Enhanced Carrier Lifetime in CH₃NH₃PbI₃. Nano Letters, 2015, 15, 7794-7800.	9.1	438
43	Local Electronic and Chemical Structure of Oligo-acetylene Derivatives Formed Through Radical Cyclizations at a Surface. Nano Letters, 2014, 14, 2251-2255.	9.1	108
44	Manipulation and Characterization of Aperiodical Graphene Structures Created in a Two-Dimensional Electron Gas. Physical Review Letters, 2014, 113, 196803.	7.8	36
45	Imaging and Tuning Molecular Levels at the Surface of a Gated Graphene Device. ACS Nano, 2014, 8, 5395-5401.	14.6	39
46	Theory of the Raman spectrum of rotated double-layer graphene. Physical Review B, 2013, 88, .	3.2	47
47	Tuning two-dimensional band structure of Cu(111) surface-state electrons that interplay with artificial supramolecular architectures. Physical Review B, 2013, 88, .	3.2	42
48	Publisherâ€™s Note: Resonant Excitation of Graphene<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>K</mml:mi></mml:math>-Phonon and Intra-Landau-Level Excitons in Magneto-Optical Spectroscopy [Phys. Rev. Lett.108, 247401 (2012)]. Physical Review Letters, 2012, 108, .	7.8	0
49	Resonant Excitation of GrapheneK-Phonon and Intra-Landau-Level Excitons in Magneto-Optical Spectroscopy. Physical Review Letters, 2012, 108, 247401.	7.8	11
50	Raman Spectroscopy Study of Rotated Double-Layer Graphene: Misorientation-Angle Dependence of Electronic Structure. Physical Review Letters, 2012, 108, 246103.	7.8	486
51	New Dirac Fermions in Periodically Modulated Bilayer Graphene. Nano Letters, 2011, 11, 2596-2600.	9.1	22
52	Graphene Dirac fermions in one-dimensional inhomogeneous field profiles: Transforming magnetic to electric field. Physical Review B, 2010, 81, .	3.2	98