William A Tisdale

List of Publications by Year
in descending order

83 papers	7,131 citations	76326 40 h-index	58581 82 g-index
91 all docs	91 docs citations	91 times ranked	9581 citing authors

#	Article	IF	Citations
1	Morphological Control of 2D Hybrid Organicâ€“Inorganic Semiconductor AgSePh. ACS Nano, 2022, 16, 2054-2065.	14.6	13
2	Super-resolved second harmonic generation imaging by coherent image scanning microscopy. Applied Physics Letters, 2022, 120, .	3.3	3
3	Healing of donor defect states in monolayer molybdenum disulfide using oxygen-incorporated chemical vapour deposition. Nature Electronics, 2022, 5, 28-36.	26.0	44
4	Busting through quantum dot barriers. Nature Materials, 2022, 21, 497-499.	27.5	3
5	Quantification of Exciton Fine Structure Splitting in a Two-Dimensional Perovskite Compound. Journal of Physical Chemistry Letters, 2022, 13, 4463-4469.	4.6	20
6	Tuning the Excitonic Properties of the 2D (PEA)₂(MA)_{<i>n</i>âˆ’1}Pb_{<i>n</i>}I_{3<i>n</i>+1} Perovskite Family via Quantum Confinement. Journal of Physical Chemistry Letters, 2021, 12, 1638-1643.	4.6	49
7	Repulsive, Densely Packed Ligand-Shells Mediate Interactions between PbS Nanocrystals in Solution. Journal of Physical Chemistry C, 2021, 125, 8014-8020.	3.1	4
8	Resonance-Enhanced Excitation of Interlayer Vibrations in Atomically Thin Black Phosphorus. Nano Letters, 2021, 21, 4809-4815.	9.1	8
9	State of the Art and Prospects for Halide Perovskite Nanocrystals. ACS Nano, 2021, 15, 10775-10981.	14.6	705
10	Temperature-Independent Dielectric Constant in CsPbBr₃ Nanocrystals Revealed by Linear Absorption Spectroscopy. Journal of Physical Chemistry Letters, 2021, 12, 8088-8095.	4.6	19
11	Colloidal nano-MOFs nucleate and stabilize ultra-small quantum dots of lead bromide perovskites. Chemical Science, 2021, 12, 6129-6135.	7.4	14
12	Revealing the BrÃ¸nsted-Evans-Polanyi relation in halide-activated fast MoS ₂ growth toward millimeter-sized 2D crystals. Science Advances, 2021, 7, eabj3274.	10.3	18
13	Power-Dependent Photoluminescence Efficiency in Manganese-Doped 2D Hybrid Perovskite Nanoplatelets. ACS Nano, 2021, 15, 20527-20538.	14.6	16
14	Size and Quality Enhancement of 2D Semiconducting Metalâ€“Organic Chalcogenolates by Amine Addition. Journal of the American Chemical Society, 2021, 143, 20256-20263.	13.7	20
15	Spatially Resolved Photogenerated Exciton and Charge Transport in Emerging Semiconductors. Annual Review of Physical Chemistry, 2020, 71, 1-30.	10.8	95
16	Two Origins of Broadband Emission in Multilayered 2D Lead Iodide Perovskites. Journal of Physical Chemistry Letters, 2020, 11, 8565-8572.	4.6	61
17	Unconventional ferroelectricity in moirÃ© heterostructures. Nature, 2020, 588, 71-76.	27.8	165
18	Low-frequency Raman spectrum of 2D layered perovskites: Local atomistic motion or superlattice modes?. Journal of Chemical Physics, 2020, 153, 044710.	3.0	26

#	Article	IF	Citations
19	Optimal loading for injection. AIChE Journal, 2020, 66, e17102.	3.6	1
20	A time-domain view of charge carriers in semiconductor nanocrystal solids. Chemical Science, 2020, 11, 5157-5167.	7.4	8
21	The Importance of Unbound Ligand in Nanocrystal Superlattice Formation. Journal of the American Chemical Society, 2020, 142, 9675-9685.	13.7	23
22	Reversible Temperature-Induced Structural Transformations in PbS Nanocrystal Superlattices. Journal of Physical Chemistry C, 2020, 124, 13456-13466.	3.1	9
23	Tunable exciton binding energy in 2D hybrid layered perovskites through donorâ€“acceptor interactions within the organic layer. Nature Chemistry, 2020, 12, 672-682.	13.6	120
24	Multi-cation perovskites prevent carrier reflection from grain surfaces. Nature Materials, 2020, 19, 412-418.	27.5	100
25	Substrate-Dependent Exciton Diffusion and Annihilation in Chemically Treated MoS₂ and WS₂. Journal of Physical Chemistry C, 2020, 124, 12175-12184.	3.1	51
26	Synthetic Variation and Structural Trends in Layered Two-Dimensional Alkylammonium Lead Halide Perovskites. Chemistry of Materials, 2019, 31, 5592-5607.	6.7	80
27	Epitaxial Dimers and Auger-Assisted Detrapping in PbS Quantum Dot Solids. Matter, 2019, 1, 250-265.	10.0	56
28	Characterization of colloidal nanocrystal surface structure using small angle neutron scattering and efficient Bayesian parameter estimation. Journal of Chemical Physics, 2019, 150, 244702.	3.0	22
29	Quantification of a PbClx Shell on the Surface of PbS Nanocrystals. , 2019, 1, 209-216.		35
30	Facile Synthesis of Colloidal Lead Halide Perovskite Nanoplatelets via Ligand-Assisted Reprecipitation. Journal of Visualized Experiments, 2019, , .	0.3	3
31	Size-Dependent Biexciton Spectrum in CsPbBr₃ Perovskite Nanocrystals. ACS Energy Letters, 2019, 4, 2639-2645.	17.4	53
32	Direct Observation of Symmetry-Dependent Electronâ€“Phonon Coupling in Black Phosphorus. Journal of the American Chemical Society, 2019, 141, 18994-19001.	13.7	21
33	Inorganic Cage Motion Dominates Excited-State Dynamics in 2D-Layered Perovskites (C<i>_x</i>H₂<i>_x</i>₊₁NH₃)₂PbI<sub>4</sub (<i>x</i> = 4â€“9). Journal of Physical Chemistry C, 2019, 123, 27904-27916.	3.1	46
34	Setting an Upper Bound to the Biexciton Binding Energy in CsPbBr3 Perovskite Nanocrystals. Journal of Physical Chemistry Letters, 2019, 10, 5680-5686.	4.6	29
35	Excitons in 2D Organicâ€“Inorganic Halide Perovskites. Trends in Chemistry, 2019, 1, 380-393.	8.5	146
36	Melting Transitions of the Organic Subphase in Layered Two-Dimensional Halide Perovskites. Journal of Physical Chemistry Letters, 2019, 10, 2924-2930.	4.6	23

#	Article	IF	Citations
37	Markov Chain Monte Carlo Sampling for Target Analysis of Transient Absorption Spectra. Journal of Physical Chemistry A, 2019, 123, 3893-3902.	2.5	10
38	Toward Stable Deep-Blue Luminescent Colloidal Lead Halide Perovskite Nanoplatelets: Systematic Photostability Investigation. Chemistry of Materials, 2019, 31, 2486-2496.	6.7	55
39	Obtaining Structural Parameters from STEMâ€"EDX Maps of Core/Shell Nanocrystals for Optoelectronics. ACS Applied Nano Materials, 2018, 1, 989-996.	5.0	15
40	Impact of Size Dispersity, Ligand Coverage, and Ligand Length on the Structure of PbS Nanocrystal Superlattices. Chemistry of Materials, 2018, 30, 807-816.	6.7	93
41	Perspective: Nonequilibrium dynamics of localized and delocalized excitons in colloidal quantum dot solids. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	2.1	15
42	Synthetic Lateral Metal-Semiconductor Heterostructures of Transition Metal Disulfides. Journal of the American Chemical Society, 2018, 140, 12354-12358.	13.7	85
43	Phase-Modulated Degenerate Parametric Amplification Microscopy. Nano Letters, 2018, 18, 5001-5006.	9.1	14
44	High repetition-rate femtosecond stimulated Raman spectroscopy with fast acquisition. Optics Express, 2018, 26, 18331.	3.4	8
45	Optimal Bandgap in a 2D Ruddlesdenâ€"Popper Perovskite Chalcogenide for Single-Junction Solar Cells. Chemistry of Materials, 2018, 30, 4882-4886.	6.7	49
46	Ultrafast Charge Transfer at a Quantum Dot/2D Materials Interface Probed by Second Harmonic Generation. Journal of Physical Chemistry Letters, 2018, 9, 4227-4232.	4.6	32
47	Inverse Temperature Dependence of Charge Carrier Hopping in Quantum Dot Solids. ACS Nano, 2018, 12, 7741-7749.	14.6	33
48	Charge Carrier Hopping Dynamics in Homogeneously Broadened PbS Quantum Dot Solids. Nano Letters, 2017, 17, 893-901.	9.1	84
49	Tunable Light-Emitting Diodes Utilizing Quantum-Confined Layered Perovskite Emitters. ACS Photonics, 2017, 4, 476-481.	6.6	124
50	Colloidal Halide Perovskite Nanoplatelets: An Exciting New Class of Semiconductor Nanomaterials. Chemistry of Materials, 2017, 29, 5019-5030.	6.7	237
51	CdSe Nanoplatelet Films with Controlled Orientation of their Transition Dipole Moment. Nano Letters, 2017, 17, 3837-3843.	9.1	135
52	Exciton trapping is responsible for the long apparent lifetime in acid-treated <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mn Physical Review B, 2017, 96, .	3.2	55
53	Including surface ligand effects in continuum elastic models of nanocrystal vibrations. Journal of Chemical Physics, 2017, 147, 044711.	3.0	22
54	A Nanobionic Light-Emitting Plant. Nano Letters, 2017, 17, 7951-7961.	9.1	93

#	Article	IF	Citations
55	Near-Infrared Photoluminescence and Thermal Stability of PbS Nanocrystals at Elevated Temperatures. Journal of Physical Chemistry C, 2016, 120, 20341-20349.	3.1	21
56	Modulation of Low-Frequency Acoustic Vibrations in Semiconductor Nanocrystals through Choice of Surface Ligand. Journal of Physical Chemistry Letters, 2016, 7, 4213-4216.	4.6	24
57	Temperature dependence of acoustic vibrations of CdSe and CdSeâ€“CdS coreâ€“shell nanocrystals measured by low-frequency Raman spectroscopy. Physical Chemistry Chemical Physics, 2016, 18, 28797-28801.	2.8	17
58	Highly Tunable Colloidal Perovskite Nanoplatelets through Variable Cation, Metal, and Halide Composition. ACS Nano, 2016, 10, 7830-7839.	14.6	466
59	Efficient Nanosecond Photoluminescence from Infrared PbS Quantum Dots Coupled to Plasmonic Nanoantennas. ACS Photonics, 2016, 3, 1741-1746.	6.6	70
60	Goodman and Tisdale Reply:. Physical Review Letters, 2016, 116, 059402.	7.8	2
61	Kinetics of the self-assembly of nanocrystal superlattices measured by real-time in situ X-rayÂscattering. Nature Materials, 2016, 15, 775-781.	27.5	216
62	Constructing Multifunctional Virus-Templated Nanoporous Composites for Thin Film Solar Cells: Contributions of Morphology and Optics to Photocurrent Generation. Journal of Physical Chemistry C, 2015, , 150610114441003.	3.1	14
63	Can Disorder Enhance Incoherent Exciton Diffusion?. Journal of Physical Chemistry B, 2015, 119, 9501-9509.	2.6	22
64	Enhancement of Second-Order Nonlinear-Optical Signals by Optical Stimulation. Physical Review Letters, 2015, 114, 183902.	7.8	15
65	Colloidal Organohalide Perovskite Nanoplatelets Exhibiting Quantum Confinement. Journal of Physical Chemistry Letters, 2015, 6, 1911-1916.	4.6	358
66	Determination of Exciton Diffusion Length by Transient Photoluminescence Quenching and Its Application to Quantum Dot Films. Journal of Physical Chemistry C, 2015, 119, 9005-9015.	3.1	84
67	Interparticle Spacing and Structural Ordering in Superlattice PbS Nanocrystal Solids Undergoing Ligand Exchange. Chemistry of Materials, 2015, 27, 474-482.	6.7	111
68	Visualization of exciton transport in ordered and disordered molecular solids. Nature Communications, 2014, 5, 3646.	12.8	270
69	Subdiffusive Exciton Transport in Quantum Dot Solids. Nano Letters, 2014, 14, 3556-3562.	9.1	152
70	Reduced Dielectric Screening and Enhanced Energy Transfer in Single- and Few-Layer MoS₂. Nano Letters, 2014, 14, 6087-6091.	9.1	178
71	Spatially Resolved Energy Transfer in Patterned Colloidal Quantum Dot Heterostructures. ACS Applied Materials & Interfaces, 2014, 6, 3111-3114.	8.0	12
72	Monodisperse, Air-Stable PbS Nanocrystals <i>via</i> Precursor Stoichiometry Control. ACS Nano, 2014, 8, 6363-6371.	14.6	315

#	Article	IF	Citations
73	Transition from Thermodynamic to Kinetic-Limited Excitonic Energy Migration in Colloidal Quantum Dot Solids. Journal of Physical Chemistry C, 2014, 118, 7894-7900.	3.1	22
74	Magnitude of the FÃ¶rster Radius in Colloidal Quantum Dot Solids. Journal of Physical Chemistry C, 2014, 118, 13920-13928.	3.1	67
75	Origin of Efficiency Roll-Off in Colloidal Quantum-Dot Light-Emitting Diodes. Physical Review Letters, 2013, 110, 217403.	7.8	144
76	Highly efficient, dual state emission from an organic semiconductor. Applied Physics Letters, 2013, 103, .	3.3	76
77	Twenty-Fold Enhancement of Molecular Fluorescence by Coupling to a J-Aggregate Critically Coupled Resonator. ACS Nano, 2012, 6, 467-471.	14.6	28
78	Artificial atoms on semiconductor surfaces. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 965-970.	7.1	96
79	Hot-Electron Transfer from Semiconductor Nanocrystals. Science, 2010, 328, 1543-1547.	12.6	775
80	Strong Electronic Coupling in Two-Dimensional Assemblies of Colloidal PbSe Quantum Dots. ACS Nano, 2009, 3, 1532-1538.	14.6	109
81	Electron Dynamics at the ZnO (101Ì…0) Surface. Journal of Physical Chemistry C, 2008, 112, 14682-14692.	3.1	38
82	Coulomb Barrier for Charge Separation at an Organic Semiconductor Interface. Physical Review Letters, 2008, 101, 196403.	7.8	153
83	Surfaces of Infrared-Active PbS Nanocrystals and their Assemblies. , 0, , .		0