

# William A Tisdale

## List of Publications by Year in descending order

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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	Hot-Electron Transfer from Semiconductor Nanocrystals. <i>Science</i> , 2010, 328, 1543-1547.	12.6	775
2	State of the Art and Prospects for Halide Perovskite Nanocrystals. <i>ACS Nano</i> , 2021, 15, 10775-10981.	14.6	705
3	Highly Tunable Colloidal Perovskite Nanoplatelets through Variable Cation, Metal, and Halide Composition. <i>ACS Nano</i> , 2016, 10, 7830-7839.	14.6	466
4	Colloidal Organohalide Perovskite Nanoplatelets Exhibiting Quantum Confinement. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 1911-1916.	4.6	358
5	Monodisperse, Air-Stable PbS Nanocrystals <i>via</i> Precursor Stoichiometry Control. <i>ACS Nano</i> , 2014, 8, 6363-6371.	14.6	315
6	Visualization of exciton transport in ordered and disordered molecular solids. <i>Nature Communications</i> , 2014, 5, 3646.	12.8	270
7	Colloidal Halide Perovskite Nanoplatelets: An Exciting New Class of Semiconductor Nanomaterials. <i>Chemistry of Materials</i> , 2017, 29, 5019-5030.	6.7	237
8	Kinetics of the self-assembly of nanocrystal superlattices measured by real-time in situ X-ray Scattering. <i>Nature Materials</i> , 2016, 15, 775-781.	27.5	216
9	Reduced Dielectric Screening and Enhanced Energy Transfer in Single- and Few-Layer MoS <sub>2</sub> . <i>Nano Letters</i> , 2014, 14, 6087-6091.	9.1	178
10	Unconventional ferroelectricity in moiré heterostructures. <i>Nature</i> , 2020, 588, 71-76.	27.8	165
11	Coulomb Barrier for Charge Separation at an Organic Semiconductor Interface. <i>Physical Review Letters</i> , 2008, 101, 196403.	7.8	153
12	Subdiffusive Exciton Transport in Quantum Dot Solids. <i>Nano Letters</i> , 2014, 14, 3556-3562.	9.1	152
13	Excitons in 2D Organic-Inorganic Halide Perovskites. <i>Trends in Chemistry</i> , 2019, 1, 380-393.	8.5	146
14	Origin of Efficiency Roll-Off in Colloidal Quantum-Dot Light-Emitting Diodes. <i>Physical Review Letters</i> , 2013, 110, 217403.	7.8	144
15	CdSe Nanoplatelet Films with Controlled Orientation of their Transition Dipole Moment. <i>Nano Letters</i> , 2017, 17, 3837-3843.	9.1	135
16	Tunable Light-Emitting Diodes Utilizing Quantum-Confined Layered Perovskite Emitters. <i>ACS Photonics</i> , 2017, 4, 476-481.	6.6	124
17	Tunable exciton binding energy in 2D hybrid layered perovskites through donor-acceptor interactions within the organic layer. <i>Nature Chemistry</i> , 2020, 12, 672-682.	13.6	120
18	Interparticle Spacing and Structural Ordering in Superlattice PbS Nanocrystal Solids Undergoing Ligand Exchange. <i>Chemistry of Materials</i> , 2015, 27, 474-482.	6.7	111

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19	Strong Electronic Coupling in Two-Dimensional Assemblies of Colloidal PbSe Quantum Dots. ACS Nano, 2009, 3, 1532-1538.	14.6	109
20	Multi-cation perovskites prevent carrier reflection from grain surfaces. Nature Materials, 2020, 19, 412-418.	27.5	100
21	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
22	Spatially Resolved Photogenerated Exciton and Charge Transport in Emerging Semiconductors. Annual Review of Physical Chemistry, 2020, 71, 1-30.	10.8	95
23	A Nanobionic Light-Emitting Plant. Nano Letters, 2017, 17, 7951-7961.	9.1	93
24	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
25	Synthetic Lateral Metal-Semiconductor Heterostructures of Transition Metal Disulfides. Journal of the American Chemical Society, 2018, 140, 12354-12358.	13.7	85
26	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
27	Charge Carrier Hopping Dynamics in Homogeneously Broadened PbS Quantum Dot Solids. Nano Letters, 2017, 17, 893-901.	9.1	84
28	Synthetic Variation and Structural Trends in Layered Two-Dimensional Alkylammonium Lead Halide Perovskites. Chemistry of Materials, 2019, 31, 5592-5607.	6.7	80
29	Highly efficient, dual state emission from an organic semiconductor. Applied Physics Letters, 2013, 103, .	3.3	76
30	Efficient Nanosecond Photoluminescence from Infrared PbS Quantum Dots Coupled to Plasmonic Nanoantennas. ACS Photonics, 2016, 3, 1741-1746.	6.6	70
31	Magnitude of the First Radius in Colloidal Quantum Dot Solids. Journal of Physical Chemistry C, 2014, 118, 13920-13928.	3.1	67
32	Two Origins of Broadband Emission in Multilayered 2D Lead Iodide Perovskites. Journal of Physical Chemistry Letters, 2020, 11, 8565-8572.	4.6	61
33	Epitaxial Dimers and Auger-Assisted Detrapping in PbS Quantum Dot Solids. Matter, 2019, 1, 250-265.	10.0	56
34	Exciton trapping is responsible for the long apparent lifetime in acid-treated $\text{MoS}_2$ . Physical Review B, 2017, 96, .	6.2	55
35	Toward Stable Deep-Blue Luminescent Colloidal Lead Halide Perovskite Nanoplatelets: Systematic Photostability Investigation. Chemistry of Materials, 2019, 31, 2486-2496.	6.7	55
36	Size-Dependent Biexciton Spectrum in $\text{CsPbBr}_3$ Perovskite Nanocrystals. ACS Energy Letters, 2019, 4, 2639-2645.	17.4	53

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37	Substrate-Dependent Exciton Diffusion and Annihilation in Chemically Treated MoS <sub>2</sub> and WS <sub>2</sub> . Journal of Physical Chemistry C, 2020, 124, 12175-12184.	3.1	51
38	Optimal Bandgap in a 2D Ruddlesden-Popper Perovskite Chalcogenide for Single-Junction Solar Cells. Chemistry of Materials, 2018, 30, 4882-4886.	6.7	49
39	Tuning the Excitonic Properties of the 2D (PEA) <sub>2</sub> (MA) <sub>n-1</sub> Pb <sub>n</sub> I <sub>3n+1</sub> Perovskite Family via Quantum Confinement. Journal of Physical Chemistry Letters, 2021, 12, 1638-1643.	4.6	49
40	Inorganic Cage Motion Dominates Excited-State Dynamics in 2D-Layered Perovskites (C <sub>x</sub> H <sub>2</sub> <sub>x</sub> ) <sub>2</sub> (NH <sub>3</sub> ) <sub>2</sub> PbI <sub>4</sub> (x = 4-9). Journal of Physical Chemistry C, 2019, 123, 27904-27916.	3.1	36
41	Healing of donor defect states in monolayer molybdenum disulfide using oxygen-incorporated chemical vapour deposition. Nature Electronics, 2022, 5, 28-36.	26.0	44
42	Electron Dynamics at the ZnO (101̄...0) Surface. Journal of Physical Chemistry C, 2008, 112, 14682-14692.	3.1	38
43	Quantification of a PbCl <sub>x</sub> Shell on the Surface of PbS Nanocrystals. , 2019, 1, 209-216.		35
44	Inverse Temperature Dependence of Charge Carrier Hopping in Quantum Dot Solids. ACS Nano, 2018, 12, 7741-7749.	14.6	33
45	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
46	Setting an Upper Bound to the Biexciton Binding Energy in CsPbBr <sub>3</sub> Perovskite Nanocrystals. Journal of Physical Chemistry Letters, 2019, 10, 5680-5686.	4.6	29
47	Twenty-Fold Enhancement of Molecular Fluorescence by Coupling to a J-Aggregate Critically Coupled Resonator. ACS Nano, 2012, 6, 467-471.	14.6	28
48	Low-frequency Raman spectrum of 2D layered perovskites: Local atomistic motion or superlattice modes?. Journal of Chemical Physics, 2020, 153, 044710.	3.0	26
49	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
50	Melting Transitions of the Organic Subphase in Layered Two-Dimensional Halide Perovskites. Journal of Physical Chemistry Letters, 2019, 10, 2924-2930.	4.6	23
51	The Importance of Unbound Ligand in Nanocrystal Superlattice Formation. Journal of the American Chemical Society, 2020, 142, 9675-9685.	13.7	23
52	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
53	Can Disorder Enhance Incoherent Exciton Diffusion?. Journal of Physical Chemistry B, 2015, 119, 9501-9509.	2.6	22
54	Including surface ligand effects in continuum elastic models of nanocrystal vibrations. Journal of Chemical Physics, 2017, 147, 044711.	3.0	22

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55	Characterization of colloidal nanocrystal surface structure using small angle neutron scattering and efficient Bayesian parameter estimation. <i>Journal of Chemical Physics</i> , 2019, 150, 244702.	3.0	22
56	Near-Infrared Photoluminescence and Thermal Stability of PbS Nanocrystals at Elevated Temperatures. <i>Journal of Physical Chemistry C</i> , 2016, 120, 20341-20349.	3.1	21
57	Direct Observation of Symmetry-Dependent Electron-Phonon Coupling in Black Phosphorus. <i>Journal of the American Chemical Society</i> , 2019, 141, 18994-19001.	13.7	21
58	Size and Quality Enhancement of 2D Semiconducting Metal-Organic Chalcogenolates by Amine Addition. <i>Journal of the American Chemical Society</i> , 2021, 143, 20256-20263.	13.7	20
59	Quantification of Exciton Fine Structure Splitting in a Two-Dimensional Perovskite Compound. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 4463-4469.	4.6	20
60	Temperature-Independent Dielectric Constant in CsPbBr <sub>3</sub> Nanocrystals Revealed by Linear Absorption Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 8088-8095.	4.6	19
61	Revealing the Brønsted-Evans-Polanyi relation in halide-activated fast MoS <sub>2</sub> growth toward millimeter-sized 2D crystals. <i>Science Advances</i> , 2021, 7, eabj3274.	10.3	18
62	Temperature dependence of acoustic vibrations of CdSe and CdSe/CdS core-shell nanocrystals measured by low-frequency Raman spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 28797-28801.	2.8	17
63	Power-Dependent Photoluminescence Efficiency in Manganese-Doped 2D Hybrid Perovskite Nanoplatelets. <i>ACS Nano</i> , 2021, 15, 20527-20538.	14.6	16
64	Enhancement of Second-Order Nonlinear-Optical Signals by Optical Stimulation. <i>Physical Review Letters</i> , 2015, 114, 183902.	7.8	15
65	Obtaining Structural Parameters from STEM-EDX Maps of Core/Shell Nanocrystals for Optoelectronics. <i>ACS Applied Nano Materials</i> , 2018, 1, 989-996.	5.0	15
66	Perspective: Nonequilibrium dynamics of localized and delocalized excitons in colloidal quantum dot solids. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2018, 36, .	2.1	15
67	Constructing Multifunctional Virus-Templated Nanoporous Composites for Thin Film Solar Cells: Contributions of Morphology and Optics to Photocurrent Generation. <i>Journal of Physical Chemistry C</i> , 2015, , 150610114441003.	3.1	14
68	Phase-Modulated Degenerate Parametric Amplification Microscopy. <i>Nano Letters</i> , 2018, 18, 5001-5006.	9.1	14
69	Colloidal nano-MOFs nucleate and stabilize ultra-small quantum dots of lead bromide perovskites. <i>Chemical Science</i> , 2021, 12, 6129-6135.	7.4	14
70	Morphological Control of 2D Hybrid Organic-Inorganic Semiconductor AgSePh. <i>ACS Nano</i> , 2022, 16, 2054-2065.	14.6	13
71	Spatially Resolved Energy Transfer in Patterned Colloidal Quantum Dot Heterostructures. <i>ACS Applied Materials &amp; Interfaces</i> , 2014, 6, 3111-3114.	8.0	12
72	Markov Chain Monte Carlo Sampling for Target Analysis of Transient Absorption Spectra. <i>Journal of Physical Chemistry A</i> , 2019, 123, 3893-3902.	2.5	10

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73	Reversible Temperature-Induced Structural Transformations in PbS Nanocrystal Superlattices. Journal of Physical Chemistry C, 2020, 124, 13456-13466.	3.1	9
74	High repetition-rate femtosecond stimulated Raman spectroscopy with fast acquisition. Optics Express, 2018, 26, 18331.	3.4	8
75	A time-domain view of charge carriers in semiconductor nanocrystal solids. Chemical Science, 2020, 11, 5157-5167.	7.4	8
76	Resonance-Enhanced Excitation of Interlayer Vibrations in Atomically Thin Black Phosphorus. Nano Letters, 2021, 21, 4809-4815.	9.1	8
77	Repulsive, Densely Packed Ligand-Shells Mediate Interactions between PbS Nanocrystals in Solution. Journal of Physical Chemistry C, 2021, 125, 8014-8020.	3.1	4
78	Facile Synthesis of Colloidal Lead Halide Perovskite Nanoplatelets via Ligand-Assisted Reprecipitation. Journal of Visualized Experiments, 2019, , .	0.3	3
79	Super-resolved second harmonic generation imaging by coherent image scanning microscopy. Applied Physics Letters, 2022, 120, .	3.3	3
80	Busting through quantum dot barriers. Nature Materials, 2022, 21, 497-499.	27.5	3
81	Goodman and Tisdale Reply:. Physical Review Letters, 2016, 116, 059402.	7.8	2
82	Optimal loading for injection. AIChE Journal, 2020, 66, e17102.	3.6	1
83	Surfaces of Infrared-Active PbS Nanocrystals and their Assemblies. , 0, , .		0