Jason R Dwyer

List of Publications by Year
in descending order

51 papers	2,967 citations	304368 22 h-index	223531 46 g-index
54 all docs	54 docs citations	54 times ranked	2858 citing authors

#	Article	IF	Citations
1	An Atomic-Level View of Melting Using Femtosecond Electron Diffraction. Science, 2003, 302, 1382-1385.	6.0	802
2	Ultrafast memory loss and energy redistribution in the hydrogen bond network of liquid H2O. Nature, 2005, 434, 199-202.	13.7	691
3	Ultrafast electron optics: Propagation dynamics of femtosecond electron packets. Journal of Applied Physics, 2002, 92, 1643-1648.	1.1	285
4	Femtosecond electron diffraction: â€˜making the molecular movieâ€™. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 741-778.	1.6	176
5	Femtosecond electron diffraction studies of strongly driven structural phase transitions. Chemical Physics, 2004, 299, 285-305.	0.9	103
6	Surveying silicon nitride nanopores for glycomics and heparin quality assurance. Nature Communications, 2018, 9, 3278.	5.8	82
7	Single-Molecule Bonds Characterized by Solid-State Nanopore Force Spectroscopy. ACS Nano, 2009, 3, 3009-3014.	7.3	69
8	Nanofluidic Cells with Controlled Pathlength and Liquid Flow for Rapid, High-Resolution In Situ Imaging with Electrons. Journal of Physical Chemistry Letters, 2013, 4, 2339-2347.	2.1	60
9	Ultrafast dynamics of vibrational Nâ€“H stretching excitations in the 7-azaindole dimer. Chemical Physics Letters, 2006, 432, 146-151.	1.2	56
10	Ultrafast Vibrational Dynamics of Adenine-Thymine Base Pairs in DNA Oligomers. Journal of Physical Chemistry B, 2008, 112, 11194-11197.	1.2	43
11	Conductance-Based Determination of Solid-State Nanopore Size and Shape: An Exploration of Performance Limits. Journal of Physical Chemistry C, 2012, 116, 23315-23321.	1.5	42
12	Ultrafast vibrational dynamics and anharmonic couplings of hydrogen-bonded dimers in solution. Chemical Physics, 2007, 341, 175-188.	0.9	41
13	Analysis of molecular polarizabilities and polarizability derivatives in H2, N2, F2, CO, and HF, with the theory of atoms in molecules. Canadian Journal of Chemistry, 1996, 74, 1139-1144.	0.6	37
14	Through a Window, Brightly: A Review of Selected Nanofabricated Thin-Film Platforms for Spectroscopy, Imaging, and Detection. Applied Spectroscopy, 2017, 71, 2051-2075.	1.2	36
15	Ultrafast dynamics of Nâ€“H and Oâ€“H stretching excitations in hydrated DNA oligomers. Chemical Physics, 2009, 357, 36-44.	0.9	33
16	Beyond nanopore sizing: improving solid-state single-molecule sensing performance, lifetime, and analyte scope for omics by targeting surface chemistry during fabrication. Nanotechnology, 2020, 31, 335707.	1.3	28
17	Synthetic heparan sulfate standards and machine learning facilitate the development of solid-state nanopore analysis. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	28
18	Femtosecond electron diffraction: an atomic perspective of condensed phase dynamics. Journal of Modern Optics, 2007, 54, 905-922.	0.6	26

#	Article	IF	Citations
19	Chemically Functionalizing Controlled Dielectric Breakdown Silicon Nitride Nanopores by Direct Photohydrosilylation. ACS Applied Materials & Interfaces, 2019, 11, 30411-30420.	4.0	26
20	Electroless Plating of Thin Gold Films Directly onto Silicon Nitride Thin Films and into Micropores. ACS Applied Materials & Interfaces, 2014, 6, 10952-10957.	4.0	24
21	Push-Button Method To Create Nanopores Using a Tesla-Coil Lighter. ACS Omega, 2019, 4, 226-230.	1.6	24
22	Nanopore Surface Coating Delivers Nanopore Size and Shape through Conductance-Based Sizing. ACS Applied Materials & Interfaces, 2013, 5, 9330-9337.	4.0	23
23	Challenging Nanopores with Analyte Scope and Environment. Journal of Analysis and Testing, 2019, 3, 61-79.	2.5	22
24	Chemically tailoring nanopores for single-molecule sensing and glycomics. Analytical and Bioanalytical Chemistry, 2020, 412, 6639-6654.	1.9	22
25	Effect of Structure and Conformation on Raman Trace Scattering Intensities in Hydrocarbons. Journal of Physical Chemistry A, 1998, 102, 2723-2731.	1.1	17
26	Real-Time Profiling of Solid-State Nanopores During Solution-Phase Nanofabrication. ACS Applied Materials & Interfaces, 2016, 8, 30583-30589.	4.0	16
27	Conductanceâ€based profiling of nanopores: Accommodating fabrication irregularities. Electrophoresis, 2018, 39, 626-634.	1.3	16
28	Histogram filtering: A technique to optimize wave functions for use in Monte Carlo simulations. Journal of Chemical Physics, 1999, 111, 9971-9981.	1.2	15
29	Ab initio analysis of C-H and C-C stretching intensities in Raman spectra of hydrocarbons. Canadian Journal of Chemistry, 2000, 78, 1035-1043.	0.6	15
30	Experimental basics for femtosecond electron diffraction studies. Journal of Modern Optics, 2007, 54, 923-942.	0.6	14
31	Response to â€œComment on â€˜Ultrafast electron optics: Propagation dynamics of femtosecond electron packetsâ€™â€Šâ€•[J. Appl. Phys.94, 803 (2003)]. Journal of Applied Physics, 2003, 94, 807-808.	1.1	12
32	A comparison of SERS and MEF of rhodamine 6G on a gold substrate. Physical Chemistry Chemical Physics, 2017, 19, 27074-27080.	1.3	12
33	General Strategy To Make an On-Demand Library of Structurally and Functionally Diverse SERS Substrates. ACS Applied Nano Materials, 2018, 1, 960-968.	2.4	11
34	Note: An environmental cell for transient spectroscopy on solid samples in controlled atmospheres. Review of Scientific Instruments, 2013, 84, 036101.	0.6	9
35	Solution-Based Photo-Patterned Gold Film Formation on Silicon Nitride. ACS Applied Materials & Interfaces, 2016, 8, 34964-34969.	4.0	7
36	Geometry-Based Self-Assembly of Histoneâ€“DNA Nanostructures at Single-Nucleotide Resolution. ACS Nano, 2019, 13, 8155-8168.	7.3	7

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37	Optimizing noncontact oxygenâ€plasma treatment to improve the performance of a topâ€down nanofabricated surface enhanced Raman spectroscopy substrate with structurally responsive, highâ€aspectâ€ratio nanopillar array. Journal of Raman Spectroscopy, 2021, 52, 608-615.	1.2	6
38	An Open Source, Iterative Dual-Tree Wavelet Background Subtraction Method Extended from Automated Diffraction Pattern Analysis to Optical Spectroscopy. Applied Spectroscopy, 2019, 73, 1370-1379.	1.2	5
39	Photoswitchable Binary Nanopore Conductance and Selective Electronic Detection of Single Biomolecules under Wavelength and Voltage Polarity Control. ACS Nano, 2022, 16, 5537-5544.	7.3	4
40	Notice who the science system honours, and how. Nature, 2021, 595, 30-30.	13.7	3
41	QTAIM Investigation of the Electronic Structure and Large Raman Scattering Intensity of Bicyclo-[1.1.1]-pentane. Journal of Physical Chemistry A, 2011, 115, 13149-13157.	1.1	2
42	Rapid, General-Purpose Patterning of Silicon Nitride Thin Films Under Ambient Conditions for Applications Including Fluid Channel and SERS Substrate Formation. ACS Applied Nano Materials, 2020, 3, 2969-2977.	2.4	2
43	Watching a solid shake itself apart: an atomic view of melting. , 2004, , .		1
44	QTAIM Analysis of Raman Scattering Intensities: Insights into the Relationship Between Molecular Structure and Electronic Charge Flow. , 0, , 95-120.		1
45	Targeting improved reproducibility in surface-enhanced Raman spectroscopy with planar substrates using 3D printed alignment holders. Review of Scientific Instruments, 2021, 92, 043102.	0.6	1
46	Ultrafast Electron Optics: Propagation Dynamics and Measurement of Femtosecond Electron Packets. Springer Series in Chemical Physics, 2003, , 322-324.	0.2	1
47	Femtosecond electron diffraction: making the "molecular movie". , 2005, , .		0
48	Femtosecond electron diffraction: Towards making the â€œmolecular movieâ€. Springer Series in Chemical Physics, 2005, , 144-148.	0.2	0
49	Femtosecond Electron Optics: Towards Atomically Resolved Transition States. Springer Series in Optical Sciences, 2004, , 461-466.	0.5	0
50	(Invited) Thin-Film Nanofluidic Devices for Single-Molecule Science: Electronic, Optical, and Force Sensor Platforms. ECS Meeting Abstracts, 2017, , .	0.0	0
51	Low-Overhead Thin-Film Approaches and Platforms for Spectroscopic Fingerprinting and Electronic Single-Molecule Sensing. ECS Meeting Abstracts, 2017, , .	0.0	0