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	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
2	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
3	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
4	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
5	Notice who the science system honours, and how. Nature, 2021, 595, 30-30.	13.7	3
6	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
7	Chemically tailoring nanopores for single-molecule sensing and glycomics. Analytical and Bioanalytical Chemistry, 2020, 412, 6639-6654.	1.9	22
8	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
9	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
10	Chemically Functionalizing Controlled Dielectric Breakdown Silicon Nitride Nanopores by Direct Photohydrosilylation. ACS Applied Materials & Interfaces, 2019, 11, 30411-30420.	4.0	26
11	Geometry-Based Self-Assembly of Histoneâ€“DNA Nanostructures at Single-Nucleotide Resolution. ACS Nano, 2019, 13, 8155-8168.	7.3	7
12	Challenging Nanopores with Analyte Scope and Environment. Journal of Analysis and Testing, 2019, 3, 61-79.	2.5	22
13	Push-Button Method To Create Nanopores Using a Tesla-Coil Lighter. ACS Omega, 2019, 4, 226-230.	1.6	24
14	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
15	Conductanceâ€based profiling of nanopores: Accommodating fabrication irregularities. Electrophoresis, 2018, 39, 626-634.	1.3	16
16	Surveying silicon nitride nanopores for glycomics and heparin quality assurance. Nature Communications, 2018, 9, 3278.	5.8	82
17	A comparison of SERS and MEF of rhodamine 6G on a gold substrate. Physical Chemistry Chemical Physics, 2017, 19, 27074-27080.	1.3	12
18	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

#	Article	IF	Citations
19	(Invited) Thin-Film Nanofluidic Devices for Single-Molecule Science: Electronic, Optical, and Force Sensor Platforms. ECS Meeting Abstracts, 2017, , .	0.0	0
20	Low-Overhead Thin-Film Approaches and Platforms for Spectroscopic Fingerprinting and Electronic Single-Molecule Sensing. ECS Meeting Abstracts, 2017, , .	0.0	0
21	Solution-Based Photo-Patterned Gold Film Formation on Silicon Nitride. ACS Applied Materials & Interfaces, 2016, 8, 34964-34969.	4.0	7
22	Real-Time Profiling of Solid-State Nanopores During Solution-Phase Nanofabrication. ACS Applied Materials & Interfaces, 2016, 8, 30583-30589.	4.0	16
23	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
24	Note: An environmental cell for transient spectroscopy on solid samples in controlled atmospheres. Review of Scientific Instruments, 2013, 84, 036101.	0.6	9
25	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
26	Nanopore Surface Coating Delivers Nanopore Size and Shape through Conductance-Based Sizing. ACS Applied Materials & Interfaces, 2013, 5, 9330-9337.	4.0	23
27	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
28	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
29	Ultrafast dynamics of Nâ€“H and Oâ€“H stretching excitations in hydrated DNA oligomers. Chemical Physics, 2009, 357, 36-44.	0.9	33
30	Single-Molecule Bonds Characterized by Solid-State Nanopore Force Spectroscopy. ACS Nano, 2009, 3, 3009-3014.	7.3	69
31	Ultrafast Vibrational Dynamics of Adenine-Thymine Base Pairs in DNA Oligomers. Journal of Physical Chemistry B, 2008, 112, 11194-11197.	1.2	43
32	Experimental basics for femtosecond electron diffraction studies. Journal of Modern Optics, 2007, 54, 923-942.	0.6	14
33	Femtosecond electron diffraction: an atomic perspective of condensed phase dynamics. Journal of Modern Optics, 2007, 54, 905-922.	0.6	26
34	Ultrafast vibrational dynamics and anharmonic couplings of hydrogen-bonded dimers in solution. Chemical Physics, 2007, 341, 175-188.	0.9	41
35	Ultrafast dynamics of vibrational Nâ€“H stretching excitations in the 7-azaindole dimer. Chemical Physics Letters, 2006, 432, 146-151.	1.2	56
36	Femtosecond electron diffraction: â€˜making the molecular movieâ€™. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 741-778.	1.6	176

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37	Femtosecond electron diffraction: making the "molecular movie". , 2005, , .		0
38	Ultrafast memory loss and energy redistribution in the hydrogen bond network of liquid H2O. Nature, 2005, 434, 199-202.	13.7	691
39	Femtosecond electron diffraction: Towards making the â€œmolecular movieâ€• Springer Series in Chemical Physics, 2005, , 144-148.	0.2	0
40	Femtosecond electron diffraction studies of strongly driven structural phase transitions. Chemical Physics, 2004, 299, 285-305.	0.9	103
41	Watching a solid shake itself apart: an atomic view of melting. , 2004, , .		1
42	Femtosecond Electron Optics: Towards Atomically Resolved Transition States. Springer Series in Optical Sciences, 2004, , 461-466.	0.5	0
43	An Atomic-Level View of Melting Using Femtosecond Electron Diffraction. Science, 2003, 302, 1382-1385.	6.0	802
44	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
45	Ultrafast Electron Optics: Propagation Dynamics and Measurement of Femtosecond Electron Packets. Springer Series in Chemical Physics, 2003, , 322-324.	0.2	1
46	Ultrafast electron optics: Propagation dynamics of femtosecond electron packets. Journal of Applied Physics, 2002, 92, 1643-1648.	1.1	285
47	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
48	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
49	Effect of Structure and Conformation on Raman Trace Scattering Intensities in Hydrocarbons. Journal of Physical Chemistry A, 1998, 102, 2723-2731.	1.1	17
50	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
51	QTAIM Analysis of Raman Scattering Intensities: Insights into the Relationship Between Molecular Structure and Electronic Charge Flow. , 0, , 95-120.		1