David B Newell

List of Publications by Year
in descending order

40 papers	4,831 citations	257450 24 h-index	302126 39 g-index
40 all docs	40 docs citations	40 times ranked	4901 citing authors

#	Article	IF	Citations
1	CODATA recommended values of the fundamental physical constants: 2010. Reviews of Modern Physics, 2012, 84, 1527-1605.	45.6	1,194
2	CODATA recommended values of the fundamental physical constants: 2006. Reviews of Modern Physics, 2008, 80, 633-730.	45.6	881
3	CODATA recommended values of the fundamental physical constants: 2014. Reviews of Modern Physics, 2016, 88, .	45.6	791
4	CODATA recommended values of the fundamental physical constants: 2018. Reviews of Modern Physics, 2021, 93, .	45.6	264
5	CODATA Recommended Values of the Fundamental Physical Constants: 2014. Journal of Physical and Chemical Reference Data, 2016, 45, .	4.2	201
6	Accurate Measurement of the Planck Constant. Physical Review Letters, 1998, 81, 2404-2407.	7.8	164
7	Data and analysis for the CODATA 2017 special fundamental constants adjustment. Metrologia, 2018, 55, 125-146.	1.2	135
8	Uncertainty Improvements of the NIST Electronic Kilogram. IEEE Transactions on Instrumentation and Measurement, 2007, 56, 592-596.	4.7	129
9	Towards an electronic kilogram: an improved measurement of the Planck constant and electron mass. Metrologia, 2005, 42, 431-441.	1.2	121
10	CODATA recommended values of the fundamental physical constants: 2006. Journal of Physical and Chemical Reference Data, 2008, 37, 1187-1284.	4.2	116
11	CODATA Recommended Values of the Fundamental Physical Constants: 2010. Journal of Physical and Chemical Reference Data, 2012, 41, 043109.	4.2	113
12	CODATA Recommended Values of the Fundamental Physical Constants: 2018. Journal of Physical and Chemical Reference Data, 2021, 50, .	4.2	81
13	Low Carrier Density Epitaxial Graphene Devices On SiC. Small, 2015, 11, 90-95.	10.0	59
14	A more fundamental International System of Units. Physics Today, 2014, 67, 35-41.	0.3	52
15	Details of the 1998 watt balance experiment determining the Planck constant. Journal of Research of the National Institute of Standards and Technology, 2005, 110, 1.	1.2	50
16	Gateless and reversible Carrier density tunability in epitaxial graphene devices functionalized with chromium tricarbonyl. Carbon, 2019, 142, 468-474.	10.3	37
17	Confocal laser scanning microscopy for rapid optical characterization of graphene. Communications Physics, 2018, 1, .	5.3	36
18	Edge-state transport in graphene<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>p</mml:mi><mml:mo>â^'</mml:mo><mml:mi>[illegible]</mml:mi in the quantum Hall regime. Physical Review B, 2015, 92, .	3.2	34

#	Article	IF	Citations
19	Electrical Stabilization of Surface Resistivity in Epitaxial Graphene Systems by Amorphous Boron Nitride Encapsulation. ACS Omega, 2017, 2, 2326-2332.	3.5	34
20	Two-Terminal and Multi-Terminal Designs for Next-Generation Quantized Hall Resistance Standards: Contact Material and Geometry. IEEE Transactions on Electron Devices, 2019, 66, 3973-3977.	3.0	34
21	Graphene Devices for Tabletop and High-Current Quantized Hall Resistance Standards. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 1870-1878.	4.7	32
22	Towards epitaxial graphene p-n junctions as electrically programmable quantum resistance standards. Scientific Reports, 2018, 8, 15018.	3.3	31
23	Next-generation crossover-free quantum Hall arrays with superconducting interconnections. Metrologia, 2019, 56, 065002.	1.2	30
24	Preservation of Surface Conductivity and Dielectric Loss Tangent in Largeâ€Scale, Encapsulated Epitaxial Graphene Measured by Noncontact Microwave Cavity Perturbations. Small, 2017, 13, 1700452.	10.0	29
25	Measuring the dielectric and optical response of millimeter-scale amorphous and hexagonal boron nitride films grown on epitaxial graphene. 2D Materials, 2018, 5, 011011.	4.4	24
26	Quantum transport in graphene <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>p</mml:mi><mml:mtext>âˆ’</mml:mtext><mml:mi>n</m junctions with moirÃ© superlattice modulation. Physical Review B, 2018, 98, .	3.2	22
27	Comprehensive optical characterization of atomically thin <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>NbSe</mml:mi><mml:mn>2</mml:mn></mml:msub></m Physical Review B, 2018, 98, .	3.2	20
28	Atypical quantized resistances in millimeter-scale epitaxial graphene p-n junctions. Carbon, 2019, 154, 230-237.	10.3	19
29	The Design and Development of a Tabletop Kibble Balance at NIST. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 2176-2182.	4.7	18
30	Probing the dielectric response of the interfacial buffer layer in epitaxial graphene via optical spectroscopy. Physical Review B, 2017, 96, .	3.2	17
31	Analytical determination of atypical quantized resistances in graphene p-n junctions. Physica B: Condensed Matter, 2020, 582, 411971.	2.7	15
32	The performance of the KIBB-g1 tabletop Kibble balance at NIST. Metrologia, 2020, 57, 035014.	1.2	13
33	Resource Letter FC-1: The physics of fundamental constants. American Journal of Physics, 2010, 78, 338-358.	0.7	8
34	Advances in Determination of Fundamental Constants. Journal of Physical and Chemical Reference Data, 2015, 44, .	4.2	8
35	Magnet System for the Quantum Electromechanical Metrology Suite. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 5736-5744.	4.7	7
36	Accessing ratios of quantized resistances in graphene pâ€“n junction devices using multiple terminals. AIP Advances, 2020, 10, 025112.	1.3	6

#	Article	IF	Citations
37	Dielectric Properties of NbxW1-xSe2 Alloys. Journal of Research of the National Institute of Standards and Technology, 2019, 124, 1-10.	1.2	3
38	Comparison Between Graphene and GaAs Quantized Hall Devices With a Dual Probe. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 9374-9380.	4.7	2
39	Design of an enhanced mechanism for a new Kibble balance directly traceable to the quantum SI. EPJ Techniques and Instrumentation, 2022, 9, .	1.3	1
40	Design of Electrostatic Feedback for an Experiment to Measure <i>G</i>. , 2022, 1, 1-10.		0