

Derek Stein

List of Publications by Year in descending order

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Version: 2024-02-01

37
papers

6,922
citations

236912

25
h-index

330122

37
g-index

41
all docs

41
docs citations

41
times ranked

5440
citing authors

#	ARTICLE	IF	CITATIONS
1	Ion-beam sculpting at nanometre length scales. <i>Nature</i> , 2001, 412, 166-169.	27.8	1,524
2	Surface-Charge-Governed Ion Transport in Nanofluidic Channels. <i>Physical Review Letters</i> , 2004, 93, 035901.	7.8	936
3	DNA molecules and configurations in a solid-state nanopore microscope. <i>Nature Materials</i> , 2003, 2, 611-615.	27.5	847
4	Massive radius-dependent flow slippage in carbon nanotubes. <i>Nature</i> , 2016, 537, 210-213.	27.8	537
5	Power Generation by Pressure-Driven Transport of Ions in Nanofluidic Channels. <i>Nano Letters</i> , 2007, 7, 1022-1025.	9.1	489
6	Streaming Currents in a Single Nanofluidic Channel. <i>Physical Review Letters</i> , 2005, 95, 116104.	7.8	420
7	Electrokinetic Energy Conversion Efficiency in Nanofluidic Channels. <i>Nano Letters</i> , 2006, 6, 2232-2237.	9.1	394
8	Charge Inversion at High Ionic Strength Studied by Streaming Currents. <i>Physical Review Letters</i> , 2006, 96, 224502.	7.8	239
9	Slip-enhanced electrokinetic energy conversion in nanofluidic channels. <i>Nanotechnology</i> , 2008, 19, 195707.	2.6	202
10	The emerging landscape of single-molecule protein sequencing technologies. <i>Nature Methods</i> , 2021, 18, 604-617.	19.0	198
11	Pressure-driven transport of confined DNA polymers in fluidic channels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 15853-15858.	7.1	163
12	Conformation and Dynamics of DNA Confined in Slitlike Nanofluidic Channels. <i>Physical Review Letters</i> , 2008, 101, 108303.	7.8	124
13	Stiff filamentous virus translocations through solid-state nanopores. <i>Nature Communications</i> , 2014, 5, 4171.	12.8	103
14	Statistics of DNA Capture by a Solid-State Nanopore. <i>Physical Review Letters</i> , 2013, 110, 028102.	7.8	85
15	Charge regulation in nanopore ionic field-effect transistors. <i>Physical Review E</i> , 2011, 83, 031203.	2.1	82
16	Electrokinetic Concentration of DNA Polymers in Nanofluidic Channels. <i>Nano Letters</i> , 2010, 10, 765-772.	9.1	71
17	Ion-Beam Sculpting Time Scales. <i>Physical Review Letters</i> , 2002, 89, 276106.	7.8	70
18	Electrofluidic Gating of a Chemically Reactive Surface. <i>Langmuir</i> , 2010, 26, 8161-8173.	3.5	66

#	ARTICLE	IF	CITATIONS
19	Feedback-controlled ion beam sculpting apparatus. <i>Review of Scientific Instruments</i> , 2004, 75, 900-905.	1.3	59
20	Entropic cages for trapping DNA near a nanopore. <i>Nature Communications</i> , 2015, 6, 6222.	12.8	59
21	Nanoscale Volcanoes: Accretion of Matter at Ion-Sculpted Nanopores. <i>Physical Review Letters</i> , 2006, 96, 036102.	7.8	40
22	Dark Matter Detection Using Helium Evaporation and Field Ionization. <i>Physical Review Letters</i> , 2017, 119, 181303.	7.8	36
23	Molecular ping-pong. <i>Nature Nanotechnology</i> , 2007, 2, 741-742.	31.5	33
24	Fabrication of nanopores with embedded annular electrodes and transverse carbon nanotube electrodes. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 454114.	1.8	31
25	Giant Acceleration of DNA Diffusion in an Array of Entropic Barriers. <i>Physical Review Letters</i> , 2017, 118, 048002.	7.8	31
26	The nanopore mass spectrometer. <i>Review of Scientific Instruments</i> , 2017, 88, 113307.	1.3	20
27	Preserving the Sequence of a Biopolymer's Monomers as They Enter an Electrospray Mass Spectrometer. <i>Physical Review Applied</i> , 2016, 6, .	3.8	15
28	Nanopore Measurements of Filamentous Viruses Reveal a Sub-nanometer-Scale Stagnant Fluid Layer. <i>ACS Nano</i> , 2017, 11, 11669-11677.	14.6	13
29	Buckling Causes Nonlinear Dynamics of Filamentous Viruses Driven through Nanopores. <i>Physical Review Letters</i> , 2018, 120, 078101.	7.8	7
30	Osmotically Driven and Detected DNA Translocations. <i>Scientific Reports</i> , 2019, 9, 15065.	3.3	6
31	Controlling the conformations and transport of DNA by free energy landscaping. <i>Applied Physics Letters</i> , 2011, 99, 263112.	3.3	5
32	Coulomb Forces on DNA Polymers in Charged Fluidic Nanoslits. <i>Physical Review Letters</i> , 2011, 106, 068302.	7.8	4
33	Nanopore Sequencing: Forcing Improved Resolution. <i>Biophysical Journal</i> , 2015, 109, 2001-2002.	0.5	3
34	Controlled Amplification of DNA Brownian Motion Using Electrokinetic Noise. <i>Physical Review Applied</i> , 2020, 14, .	3.8	3
35	Passive and Electrically Actuated Solid-State Nanopores for Sensing and Manipulating DNA. <i>Methods in Molecular Biology</i> , 2012, 870, 241-264.	0.9	2
36	Bayesian Uncertainty Quantification for Particle-Based Simulation of Lipid Bilayer Membranes. <i>Modeling and Simulation in Science, Engineering and Technology</i> , 2018, , 77-102.	0.6	2

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37	Electrokinetic-Noise-Assisted Barrier Crossing in a Nanofluidic Environment. Physical Review Applied, 2021, 16, .	3.8	0