Ali Beskok

List of Publications by Year
in descending order

88 papers	3,667 citations	117625 34 h-index	138484 58 g-index
89 all docs	89 docs citations	89 times ranked	3769 citing authors

#	Article	IF	Citations
1	Analytical Solution of Combined Electroosmotic/Pressure Driven Flows in Two-Dimensional Straight Channels:â€‰ Finite Debye Layer Effects. Analytical Chemistry, 2001, 73, 1979-1986.	6.5	257
2	Size Dependent Surface Charge Properties of Silica Nanoparticles. Journal of Physical Chemistry C, 2014, 118, 1836-1842.	3.1	216
3	Simulation of heat and momentum transfer in complex microgeometries. Journal of Thermophysics and Heat Transfer, 1994, 8, 647-655.	1.6	205
4	Analytical Solution of Time Periodic Electroosmotic Flows:Â Analogies to Stokes' Second Problem. Analytical Chemistry, 2001, 73, 5097-5102.	6.5	174
5	Molecular dynamics simulations of thermal resistance at the liquid-solid interface. Journal of Chemical Physics, 2008, 129, 174701.	3.0	146
6	Generating fixed concentration arrays in a microfluidic device. Sensors and Actuators B: Chemical, 2003, 92, 199-207.	7.8	141
7	Zeta Potential of Selected Bacteria in Drinking Water When Dead, Starved, or Exposed to Minimal and Rich Culture Media. Current Microbiology, 2008, 56, 93-97.	2.2	120
8	Probing nanoparticle interactions in cell culture media. Colloids and Surfaces B: Biointerfaces, 2012, 95, 96-102.	5.0	95
9	Thermal interactions in nanoscale fluid flow: molecular dynamics simulations with solidâ€“liquid interfaces. Microfluidics and Nanofluidics, 2008, 5, 551-559.	2.2	92
10	Temperature dependence of thermal resistance at the water/silicon interface. International Journal of Thermal Sciences, 2014, 77, 47-54.	4.9	89
11	Particle Trapping in High-Conductivity Media with Electrothermally Enhanced Negative Dielectrophoresis. Analytical Chemistry, 2009, 81, 2303-2310.	6.5	78
12	Equilibrium molecular dynamics studies on nanoscale-confined fluids. Microfluidics and Nanofluidics, 2011, 11, 269-282.	2.2	77
13	Wetting characterisation of silicon (1,0,0) surface. Molecular Simulation, 2013, 39, 700-709.	2.0	75
14	DC Electrokinetic Particle Transport in an L-Shaped Microchannel. Langmuir, 2010, 26, 2937-2944.	3.5	74
15	Microfluidic diffusion diluter: bulging of PDMS microchannels under pressure-driven flow*. Journal of Micromechanics and Microengineering, 2003, 13, 412-418.	2.6	62
16	A phenomenological lubrication model for the entire Knudsen regime. Journal of Micromechanics and Microengineering, 2003, 13, 873-884.	2.6	60
17	VALIDATION OF A NEW VELOCITY-SLIP MODEL FOR SEPARATED GAS MICROFLOWS. Numerical Heat Transfer, Part B: Fundamentals, 2001, 40, 451-471.	0.9	59
18	Viscous heating in nanoscale shear driven liquid flows. Microfluidics and Nanofluidics, 2010, 9, 31-40.	2.2	58

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19	Microfluidic impedance spectroscopy as a tool for quantitative biology and biotechnology. Biomicrofluidics, 2012, 6, 34103.	2.4	57
20	Molecular dynamics simulations of shear-driven gas flows in nano-channels. Microfluidics and Nanofluidics, 2011, 11, 611-622.	2.2	54
21	Boundary treatment effects on molecular dynamics simulations of interface thermal resistance. Journal of Computational Physics, 2012, 231, 7881-7892.	3.8	54
22	A low-voltage nano-porous electroosmotic pump. Journal of Colloid and Interface Science, 2010, 350, 465-470.	9.4	50
23	Confined chemiluminescence detection of nanomolar levels of H₂O₂ in a paperâ€“plastic disposable microfluidic device using a smartphone. Analyst, The, 2015, 140, 5006-5011.	3.5	49
24	Scale effects in gas nano flows. Physics of Fluids, 2014, 26, .	4.0	48
25	A microfluidic device for continuous capture and concentration of microorganisms from potable water. Lab on A Chip, 2007, 7, 1315.	6.0	47
26	Alternating Current Electrokinetic Motion of Colloidal Particles on Interdigitated Microelectrodes. Analytical Chemistry, 2008, 80, 2832-2841.	6.5	46
27	Surfaceâ€“gas interaction effects on nanoscale gas flows. Microfluidics and Nanofluidics, 2012, 13, 789-798.	2.2	43
28	Quantification of chaotic strength and mixing in a micro fluidic system. Journal of Micromechanics and Microengineering, 2007, 17, 2197-2210.	2.6	42
29	A phenomenological continuum model for force-driven nano-channel liquid flows. Journal of Chemical Physics, 2016, 145, 184109.	3.0	38
30	Scale effects in nano-channel liquid flows. Microfluidics and Nanofluidics, 2016, 20, 1.	2.2	38
31	Molecular and Continuum Transport Perspectives on Electroosmotic Slip Flows. Journal of Physical Chemistry C, 2018, 122, 9699-9709.	3.1	37
32	Heat transfer enhancement in a slot channel via a transversely oscillating adiabatic circular cylinder. International Journal of Heat and Mass Transfer, 2010, 53, 626-634.	4.8	36
33	Electric field controlled transport of water in graphene nano-channels. Journal of Chemical Physics, 2017, 147, 164311.	3.0	36
34	Electrical Impedance Measurements of Biological Cells in Response to External Stimuli. Analytical Chemistry, 2018, 90, 4320-4327.	6.5	36
35	Surface Charge of a Nanoparticle Interacting with a Flat Substrate. Journal of Physical Chemistry C, 2014, 118, 10927-10935.	3.1	35
36	Surface charge-dependent transport of water in graphene nano-channels. Microfluidics and Nanofluidics, 2018, 22, 1.	2.2	35

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37	Charged nanoporous graphene membranes for water desalination. Physical Chemistry Chemical Physics, 2019, 21, 9483-9494.	2.8	34
38	Acoustophoresis in shallow microchannels. Journal of Colloid and Interface Science, 2010, 351, 407-414.	9.4	33
39	Molecular free paths in nanoscale gas flows. Microfluidics and Nanofluidics, 2015, 18, 1365-1371.	2.2	30
40	Rough Gold Electrodes for Decreasing Impedance at the Electrolyte/Electrode Interface. Electrochimica Acta, 2016, 205, 215-225.	5.2	28
41	Modeling electrokinetic flows by the smoothed profile method. Journal of Computational Physics, 2010, 229, 3828-3847.	3.8	27
42	Quantification of Cell Death Using an Impedance-Based Microfluidic Device. Analytical Chemistry, 2019, 91, 4140-4148.	6.5	27
43	An Unstructured hp Finite-Element Scheme for Fluid Flow and Heat Transfer in Moving Domains. Journal of Computational Physics, 2001, 174, 492-509.	3.8	26
44	The role of water models on the prediction of slip length of water in graphene nanochannels. Journal of Chemical Physics, 2019, 151, 174705.	3.0	25
45	Micro-PIV measurements of induced-charge electro-osmosis around a metal rod. Microfluidics and Nanofluidics, 2013, 14, 153-162.	2.2	24
46	Dielectrophoresis assisted loading and unloading of microwells for impedance spectroscopy. Electrophoresis, 2017, 38, 1466-1474.	2.4	22
47	Molecular and Continuum Perspectives on Intermediate and Flow Reversal Regimes in Electroosmotic Transport. Journal of Physical Chemistry C, 2019, 123, 14024-14035.	3.1	22
48	Atomic Scale Interfacial Transport at an Extended Evaporating Meniscus. Langmuir, 2019, 35, 4491-4497.	3.5	22
49	A first look at the performance of nano-grooved heat pipes. International Journal of Heat and Mass Transfer, 2019, 132, 280-287.	4.8	22
50	Flow past an oscillating circular cylinder in a channel with an upstream splitter plate. Physics of Fluids, 2008, 20, .	4.0	21
51	â€œLaw of the nano-wallâ€•in nano-channel gas flows. Microfluidics and Nanofluidics, 2016, 20, 1.	2.2	21
52	Induced-charge electro-osmosis of polymer-containing fluid around a metallic rod. Microfluidics and Nanofluidics, 2014, 16, 247-255.	2.2	20
53	Enhancement of dielectrophoresis using fractal gold nanostructured electrodes. Electrophoresis, 2017, 38, 1458-1465.	2.4	19
54	Rarefaction, Compressibility, and Viscous Heating in Gas Microfilters. Journal of Thermophysics and Heat Transfer, 2002, 16, 161-170.	1.6	18

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55	Colloidal microstructures, transport, and impedance properties within interfacial microelectrodes. Applied Physics Letters, 2007, 90, 224102.	3.3	18
56	Differential dielectric responses of chondrocyte and Jurkat cells in electromanipulation buffers. Electrophoresis, 2015, 36, 1499-1506.	2.4	18
57	Flexible Bioimpedance Sensor for Label-Free Detection of Cell Viability and Biomass. IEEE Transactions on Nanobioscience, 2015, 14, 700-706.	3.3	18
58	Dielectric characterization of costal cartilage chondrocytes. Biochimica Et Biophysica Acta - General Subjects, 2014, 1840, 146-152.	2.4	17
59	Saltwater transport through pristine and positively charged graphene membranes. Journal of Chemical Physics, 2018, 149, 024704.	3.0	17
60	Dispersion state and toxicity of mwCNTs in cell culture medium with different T80 concentrations. Colloids and Surfaces B: Biointerfaces, 2010, 78, 36-43.	5.0	16
61	Platinum black electrodeposited thread based electrodes for dielectrophoretic assembly of microparticles. Biomicrofluidics, 2016, 10, 033101.	2.4	16
62	Accuracy of the Maxwellâ€“Wagner and the Bruggemanâ€“Hanai mixture models for single cell dielectric spectroscopy. IET Nanobiotechnology, 2017, 11, 874-882.	3.8	16
63	Pressure-driven water flow through hydrophilic alumina nanomembranes. Microfluidics and Nanofluidics, 2017, 21, 1.	2.2	15
64	An extended Kozeny-Carman-Klinkenberg model for gas permeability in micro/nano-porous media. Physics of Fluids, 2019, 31, .	4.0	15
65	Characterization of Temperature Rise in Alternating Current Electrothermal Flow Using Thermoreflectance Method. Analytical Chemistry, 2019, 91, 12492-12500.	6.5	15
66	Water desalination performance of h-BN and optimized charged graphene membranes. Microfluidics and Nanofluidics, 2020, 24, 1.	2.2	14
67	Spectral element formulations on non-conforming grids: A comparative study of pointwise matching and integral projection methods. Journal of Computational Physics, 2006, 211, 300-325.	3.8	13
68	Self-Similar Interfacial Impedance of Electrodes in High Conductivity Media. Analytical Chemistry, 2017, 89, 12533-12540.	6.5	13
69	Gold nanostructure microelectrode arrays for in vitro recording and stimulation from neuronal networks. Nanotechnology, 2019, 30, 235501.	2.6	13
70	Rapid and Sensitive Detection of Nanomolecules by an AC Electrothermal Flow Facilitated Impedance Immunosensor. Analytical Chemistry, 2020, 92, 7762-7769.	6.5	13
71	Numerical Simulations of Peristaltic Mixing. Journal of Fluids Engineering, Transactions of the ASME, 2007, 129, 1361-1371.	1.5	12
72	Temperature profiles and heat fluxes observed in molecular dynamics simulations of force-driven liquid flows. Physical Chemistry Chemical Physics, 2017, 19, 10317-10325.	2.8	12

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73	Effects of electrode size and surface morphology on electrode polarization in physiological buffers. Electrophoresis, 2019, 40, 766-775.	2.4	12
74	Numerical Modeling of Chaotic Mixing in Electroosmotically Stirred Continuous Flow Mixers. Journal of Heat Transfer, 2009, 131, .	2.1	11
75	Molecular diffusion replaces capillary pumping in phase-change-driven nanopumps. Microfluidics and Nanofluidics, 2019, 23, 1.	2.2	11
76	A separability parameter for dielectrophoretic cell separation. Electrophoresis, 2013, 34, 1051-1058.	2.4	10
77	An algebraic factorisation scheme for spectral element solution of incompressible flow and scalar transport. International Journal of Computational Fluid Dynamics, 2010, 24, 95-108.	1.2	9
78	In situanalysis of bacterial capture in a microfluidic channel. Journal of Micromechanics and Microengineering, 2007, 17, 1467-1478.	2.6	8
79	Changes in the dielectric spectra of murine colon during neoplastic progression. Biomedical Physics and Engineering Express, 2018, 4, 035003.	1.2	7
80	Energy-Based Interface Detection for Phase Change Processes of Monatomic Fluids in Nanoconfinements. Journal of Physical Chemistry Letters, 2021, 12, 8397-8403.	4.6	5
81	Self-Similar Interfacial Impedance of Electrodes in High Conductivity Media: II. Disk Electrodes. Analytical Chemistry, 2019, 91, 2455-2463.	6.5	4
82	A Microfluidic Dielectric Spectroscopy System for Characterization of Biological Cells in Physiological Media. Sensors, 2022, 22, 463.	3.8	4
83	Surface wettability effects on evaporating meniscus in nanochannels. International Communications in Heat and Mass Transfer, 2022, 136, 106166.	5.6	4
84	Self-Similar Response of Electrode Polarization for Binary Electrolytes in Parallel Plate Capacitor Systems. Analytical Chemistry, 2019, 91, 11231-11239.	6.5	3
85	DCâ€electrokinetic motion of colloidal cylinder(s) in the vicinity of a conducting wall. Electrophoresis, 2022, 43, 1263-1274.	2.4	3
86	Biological Compatibility of Electromanipulation Media. Biophysical Journal, 2014, 106, 811a-812a.	0.5	2
87	Molecular Dynamics Studies on Nanoscale Gas Transport. , 2015, , 2307-2315.		1
88	10.1063/1.4946015.1. , 2016, , .		0