

Zirui Li

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39
papers

1,327
citations

18
h-index

36
g-index

41
ext. papers

1,502
ext. citations

3.3
avg, IF

4.29
L-index

#	Paper	IF	Citations
39	Isolation and retrieval of circulating tumor cells using centrifugal forces. <i>Scientific Reports</i> , 2013 , 3, 12594.9	4.9	523
38	Spiral microchannel with rectangular and trapezoidal cross-sections for size based particle separation. <i>Scientific Reports</i> , 2013 , 3, 1475	4.9	184
37	Direct numerical simulation of electroconvective instability and hysteretic current-voltage response of a permselective membrane. <i>Physical Review E</i> , 2012 , 86, 046310	2.4	112
36	A node-based smoothed point interpolation method (NS-PIM) for three-dimensional heat transfer problems. <i>International Journal of Thermal Sciences</i> , 2009 , 48, 1367-1376	4.1	62
35	Computational analysis of binding free energies between peptides and single-walled carbon nanotubes. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2006 , 367, 293-304	3.3	35
34	A STUDY ON SELF-INSERTION OF PEPTIDES INTO SINGLE-WALLED CARBON NANOTUBES BASED ON MOLECULAR DYNAMICS SIMULATION. <i>International Journal of Modern Physics C</i> , 2005 , 16, 1239-1250 ^{1.1}	1.1	35
33	Deciphering ion concentration polarization-based electrokinetic molecular concentration at the micro-nanofluidic interface: theoretical limits and scaling laws. <i>Nanoscale</i> , 2018 , 10, 15187-15194	7.7	34
32	Direct numerical simulation of continuous lithium extraction from high Mg/Li ratio brines using microfluidic channels with ion concentration polarization. <i>Journal of Membrane Science</i> , 2018 , 556, 34-41 ^{9.6}	9.6	30
31	A comparative study of different baffles on mitigating liquid sloshing in a rectangular tank due to a horizontal excitation. <i>Engineering Computations</i> , 2015 , 32, 1172-1190	1.4	24
30	Accurate Multi-Physics Numerical Analysis of Particle Preconcentration Based on Ion Concentration Polarization. <i>International Journal of Applied Mechanics</i> , 2017 , 09, 1750107	2.4	23
29	Virtual Reality Training In Interventional Radiology: The Johns Hopkins and Kent Ridge Digital Laboratory Experience. <i>Seminars in Interventional Radiology</i> , 2002 , 19, 179-186	1.6	22
28	The stress-strain relationship of liquid marbles under compression. <i>Applied Physics Letters</i> , 2019 , 114, 043701	3.4	20
27	Continuum transport model of Ogston sieving in patterned nanofilter arrays for separation of rod-like biomolecules. <i>Electrophoresis</i> , 2008 , 29, 329-39	3.6	20
26	Thermodynamic analysis of protein sequence-structure relationships in monomer and dimer forms. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2005 , 354, 381-392	3.3	19
25	Computer-Aided Design and Analysis of Rewritable Phase-Change Optical Disk. <i>Japanese Journal of Applied Physics</i> , 2000 , 39, 3458-3462	1.4	19
24	Pressure-Modulated Selective Electrokinetic Trapping for Direct Enrichment, Purification, and Detection of Nucleic Acids in Human Serum. <i>Analytical Chemistry</i> , 2018 , 90, 11366-11375	7.8	19
23	An evidence-theory model considering dependence among parameters and its application in structural reliability analysis. <i>Engineering Structures</i> , 2013 , 57, 12-22	4.7	18

22	Computer Environment for Interventional Neuroradiology Procedures. <i>Simulation and Gaming</i> , 2001 , 32, 404-419	1.9	18
21	Temperature-dependent structural properties of water molecules confined in TiO ₂ nanoslits: Insights from molecular dynamics simulations. <i>Fluid Phase Equilibria</i> , 2016 , 430, 169-177	2.5	18
20	Force fields of charged particles in micro-nanofluidic preconcentration systems. <i>AIP Advances</i> , 2017 , 7, 125020	1.5	17
19	Transport of biomolecules in asymmetric nanofilter arrays. <i>Analytical and Bioanalytical Chemistry</i> , 2009 , 394, 427-35	4.4	13
18	Numerical simulation of continuous extraction of highly concentrated Li ⁺ from high Mg ²⁺ /Li ⁺ ratio brines in an ion concentration polarization-based microfluidic system. <i>Separation and Purification Technology</i> , 2019 , 217, 174-182	8.3	8
17	Relationships between the folding rate constant and the topological parameters of small two-state proteins based on general random walk model. <i>Journal of Theoretical Biology</i> , 2006 , 241, 152-7	2.3	6
16	Electrokinetic flow in the U-shaped micro-nanochannels. <i>Theoretical and Applied Mechanics Letters</i> , 2019 , 9, 36-42	1.8	6
15	Analytical description of Ogston-regime biomolecule separation using nanofilters and nanopores. <i>Physical Review E</i> , 2009 , 80, 041911	2.4	5
14	A thermodynamic study of peptides binding to carbon nanotubes based on a hydrophobic-polar lattice model using Monte Carlo simulations. <i>Journal Physics D: Applied Physics</i> , 2008 , 41, 055308	3	5
13	Rapid Simulation of 3D Liquid Sloshing in the Lunar Soft-Landing Spacecraft. <i>AIAA Journal</i> , 2019 , 57, 4504-4513	4	4
12	Numerical simulation of electrokinetic desalination using microporous permselective membranes. <i>Desalination</i> , 2020 , 477, 114262	10.3	4
11	Dispersive transport of biomolecules in periodic energy landscapes with application to nanofilter sieving arrays. <i>Electrophoresis</i> , 2011 , 32, 506-17	3.6	3
10	Protein designability analysis in sequence principal component space using 2D lattice model. <i>Computer Methods and Programs in Biomedicine</i> , 2004 , 76, 21-9	6.9	3
9	Augmented electroosmotic flow and simultaneous desalination in microchannels embedded with permselective membranes. <i>Zhongguo Kexue Jishu Kexue/Scientia Sinica Technologica</i> , 2018 , 48, 17-24	1.3	3
8	Effect of Cooling Rate on the Microstructure Evolution and Mechanical Properties of Iron-Rich Al-Si Alloy. <i>Materials</i> , 2022 , 15,	3.5	3
7	Interactive Catheter Shape Modeling in Interventional Radiology Simulation. <i>Lecture Notes in Computer Science</i> , 2001 , 457-464	0.9	3
6	Modeling of the Human Orbit from MR Images. <i>Lecture Notes in Computer Science</i> , 2002 , 339-347	0.9	3
5	Quantifying the parameters of Prusiner's heterodimer model for prion replication. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2005 , 346, 459-474	3.3	2

- 4 Ion concentration polarization and its application in molecular preconcentration in micro-nanofluidic systems. *Zhongguo Kexue Jishu Kexue/Scientia Sinica Technologica*, **2018**, 48, 1151-1166^{1,3} 2
- 3 On the validity of ion selective membrane simplification in concentration polarization. *AIP Advances*, **2021**, 11, 035116 1.5 1
- 2 Macrotransport analysis of effective mobility of biomolecules in periodic nano-filter polar arrays. *Wuli Xuebao/Acta Physica Sinica*, **2013**, 62, 218701 0.6
- 1 Numerical Simulation of Seawater Desalination Effect in The Micro-Nanochannel. *IOP Conference Series: Materials Science and Engineering*, **2019**, 612, 022056 0.4