Narayana Aluru

List of Publications by Year
in descending order

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295 papers	16,985 citations	17440 63 h-index	18130 120 g-index
298 all docs	298 docs citations	298 times ranked	15366 citing authors

#	Article	IF	Citations
1	Strainâ€induced tunable energy barrier of proton diffusion in Yâ€doped <scp> BaCeO ₃ </scp> and Yâ€doped <scp> BaZrO ₃ </scp>. International Journal of Energy Research, 2022, 46, 7816-7824.	4.5	5
2	Nonlinear electrohydrodynamic ion transport in graphene nanopores. Science Advances, 2022, 8, eabj2510.	10.3	21
3	Machine Learning Assisted Screening of Two-Dimensional Materials for Water Desalination. ACS Nano, 2022, 16, 1929-1939.	14.6	25
4	Extended DeepILST for Various Thermodynamic States and Applications in Coarse-Graining. Journal of Physical Chemistry A, 2022, 126, 1562-1570.	2.5	6
5	The electricalâ€double layer revisited. Natural Sciences, 2022, 2, .	2.1	8
6	Many-Body Neural Network-Based Force Field for Structure-Based Coarse-Graining of Water. Journal of Physical Chemistry A, 2022, 126, 2031-2041.	2.5	4
7	Phonon-Fluid Coupling Enhanced Water Desalination in Flexible Two-Dimensional Porous Membranes. Nano Letters, 2022, 22, 419-425.	9.1	20
8	Nonlocal hydrodynamic model for gravity-driven transport in nanochannels. Journal of Chemical Physics, 2022, 156, .	3.0	1
9	Modified Lucas-Washburn theory for fluid filling in nanotubes. Physical Review E, 2022, 105, .	2.1	5
10	Interstitial proton transport through defective MXenes. Applied Physics Letters, 2022, 120, 211601.	3.3	1
11	Surrogate neural network model for sensitivity analysis and uncertainty quantification of the mechanical behavior in the optical lens-barrel assembly. Computers and Structures, 2022, 270, 106843.	4.4	12
12	A multiscale framework to predict electrochemical characteristics of yttrium doped Barium Zirconate based solid oxide cells. Journal of Power Sources, 2021, 481, 228969.	7.8	6
13	Selective filling of n-hexane in a tight nanopore. Nature Communications, 2021, 12, 310.	12.8	21
14	Diameter Dependence of Water Filling in Lithographically Segmented Isolated Carbon Nanotubes. ACS Nano, 2021, 15, 2778-2790.	14.6	20
15	Strain-resilient electrical functionality in thin-film metal electrodes using two-dimensional interlayers. Nature Electronics, 2021, 4, 126-133.	26.0	67
16	Ion Solvation and Transport in Narrow Carbon Nanotubes: Effects of Polarizability, Cationâ^Ï€ Interaction, and Confinement. Journal of Chemical Theory and Computation, 2021, 17, 1596-1605.	5.3	23
17	Pore-Scale Modeling of Electrokinetics in Geomaterials. Transport in Porous Media, 2021, 137, 651-666.	2.6	6
18	Dynamic and weak electric double layers in ultrathin nanopores. Journal of Chemical Physics, 2021, 154, 134703.	3.0	4

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19	Highly Strain-Tunable Interlayer Excitons in MoS₂/WSe₂ Heterobilayers. Nano Letters, 2021, 21, 3956-3964.	9.1	60
20	Super-resolved Optical Mapping of Reactive Sulfur-Vacancies in Two-Dimensional Transition Metal Dichalcogenides. ACS Nano, 2021, 15, 7168-7178.	14.6	20
21	Understanding simple liquids through statistical and deep learning approaches. Journal of Chemical Physics, 2021, 154, 204503.	3.0	4
22	Electronic Structure and Transport in Graphene Nanoribbon Heterojunctions under Uniaxial Strain: Implications for Flexible Electronics. ACS Applied Nano Materials, 2021, 4, 5816-5824.	5.0	6
23	Accelerated design and discovery of perovskites with high conductivity for energy applications through machine learning. Npj Computational Materials, 2021, 7, .	8.7	31
24	Cultureâ€free biphasic approach for sensitive detection of Escherichia coli O157:H7 from beef samples. Biotechnology and Bioengineering, 2021, 118, 4516-4529.	3.3	4
25	Ultrasensitive Detection of Dopamine, ILâ€6 and SARSâ€CoVâ€2 Proteins on Crumpled Graphene FET Biosensor. Advanced Materials Technologies, 2021, 6, 2100712.	5.8	60
26	Anomalous interfacial dynamics of single proton charges in binary aqueous solutions. Science Advances, 2021, 7, eabg8568.	10.3	8
27	Prospects for sub-nanometer scale imaging of optical phenomena using electron microscopy. Applied Physics Letters, 2021, 118, 033104.	3.3	2
28	Back Cover Image, Volume 118, Number 11, November 2021. Biotechnology and Bioengineering, 2021, 118, ii.	3.3	0
29	Toward Durable Protonic Ceramic Cells: Hydration-Induced Chemical Expansion Correlates with Symmetry in the Y-Doped BaZrO₃â€“BaCeO₃ Solid Solution. Journal of Physical Chemistry C, 2021, 125, 26216-26228.	3.1	12
30	Kirigami-inspired strain-insensitive sensors based on atomically-thin materials. Materials Today, 2020, 34, 58-65.	14.2	65
31	The role of A-site ion on proton diffusion in perovskite oxides (ABO3). Journal of Power Sources, 2020, 445, 227327.	7.8	39
32	Nanofluidic Transport Theory with Enhancement Factors Approaching One. ACS Nano, 2020, 14, 272-281.	14.6	33
33	Three-Dimensional Molecular Mapping of Ionic Liquids at Electrified Interfaces. ACS Nano, 2020, 14, 17515-17523.	14.6	47
34	Curved neuromorphic image sensor array using a MoS2-organic heterostructure inspired by the human visual recognition system. Nature Communications, 2020, 11, 5934.	12.8	182
35	Ion Transport in Electrically Imperfect Nanopores. ACS Nano, 2020, 14, 10518-10526.	14.6	33
36	Water-Assisted Increase of Ionic Conductivity of Lithium Poly(acrylic acid)-Based Aqueous Polymer Electrolyte. ACS Applied Energy Materials, 2020, 3, 10119-10130.	5.1	19

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37	Universal Reduction in Dielectric Response of Confined Fluids. ACS Nano, 2020, 14, 12761-12770.	14.6	54
38	Interfacial Properties of Water on Hydrogenated and Fluorinated Graphene Surfaces: Parametrization of Nonbonded Interactions. Journal of Physical Chemistry C, 2020, 124, 21467-21475.	3.1	16
39	Confinement-Induced Enhancement of Parallel Dielectric Permittivity: Super Permittivity Under Extreme Confinement. Journal of Physical Chemistry Letters, 2020, 11, 10532-10537.	4.6	13
40	Intrinsic Dissipation Due to Mode Coupling in Two-Dimensional-Material Resonators Revealed Through a Multiscale Approach. Physical Review Applied, 2020, 14, .	3.8	5
41	Chevron-type graphene nanoribbons with a reduced energy band gap: Solution synthesis, scanning tunneling microscopy and electrical characterization. Nano Research, 2020, 13, 1713-1722.	10.4	12
42	Ultrasensitive detection of nucleic acids using deformed graphene channel field effect biosensors. Nature Communications, 2020, 11, 1543.	12.8	251
43	Current understanding and emerging applications of 3D crumpling mediated 2D material-liquid interactions. Current Opinion in Solid State and Materials Science, 2020, 24, 100836.	11.5	10
44	Optimization of solidification in die casting using numerical simulations and machine learning. Journal of Manufacturing Processes, 2020, 51, 130-141.	5.9	22
45	Revisiting Sampson's theory for hydrodynamic transport in ultrathin nanopores. Physical Review Research, 2020, 2, .	3.6	19
46	Strong Electroosmotic Coupling Dominates Ion Conductance of 1.5 nm Diameter Carbon Nanotube Porins. ACS Nano, 2019, 13, 12851-12859.	14.6	46
47	Highly Efficient Solarâ€Driven Carbon Dioxide Reduction on Molybdenum Disulfide Catalyst Using Choline Chlorideâ€Based Electrolyte. Advanced Energy Materials, 2019, 9, 1803536.	19.5	34
48	Understanding the effect of Ce and Zr on chemical expansion in yttrium doped strontium cerate and zirconate by high temperature X-ray analysis and density functional theory. Solid State Ionics, 2019, 333, 1-8.	2.7	13
49	Electrical Double Layer of Supported Atomically Thin Materials. Nano Letters, 2019, 19, 4588-4593.	9.1	24
50	Uncertainty quantification in three dimensional natural convection using polynomial chaos expansion and deep neural networks. International Journal of Heat and Mass Transfer, 2019, 139, 613-631.	4.8	14
51	Measurements of the size and correlations between ions using an electrolytic point contact. Nature Communications, 2019, 10, 2382.	12.8	34
52	Anomalous scaling of flexural phonon damping in nanoresonators with confined fluid. Microsystems and Nanoengineering, 2019, 5, 2.	7.0	6
53	Critical Knowledge Gaps in Mass Transport through Single-Digit Nanopores: A Review and Perspective. Journal of Physical Chemistry C, 2019, 123, 21309-21326.	3.1	234
54	Finite volume simulation framework for die casting with uncertainty quantification. Applied Mathematical Modelling, 2019, 74, 132-150.	4.2	13

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55	Spatial Uncertainty Modeling for Surface Roughness of Additively Manufactured Microstructures via Image Segmentation. Applied Sciences (Switzerland), 2019, 9, 1093.	2.5	4
56	Transfer-Learning-Based Coarse-Graining Method for Simple Fluids: Toward Deep Inverse Liquid-State Theory. Journal of Physical Chemistry Letters, 2019, 10, 1242-1250.	4.6	36
57	Cluster Expansion Framework for the Sr(Ti1â€“xFex)O3â€“x/2 (0 < x < 1) Mixed Ionic Electronic Conductor: Properties Based on Realistic Configurations. Chemistry of Materials, 2019, 31, 3144-3153.	6.7	6
58	Simulations of Die Casting With Uncertainty Quantification. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2019, 141, .	2.2	4
59	Molecular Dynamics Properties without the Full Trajectory: A Denoising Autoencoder Network for Properties of Simple Liquids. Journal of Physical Chemistry Letters, 2019, 10, 7568-7576.	4.6	16
60	Strain Modulation of Graphene by Nanoscale Substrate Curvatures: A Molecular View. Nano Letters, 2018, 18, 2098-2104.	9.1	62
61	Energy Dissipation in Fluid Coupled Nanoresonators: The Effect of Phonon-Fluid Coupling. ACS Nano, 2018, 12, 368-377.	14.6	17
62	Mechanistic Insights into Hydration of Solid Oxides. Chemistry of Materials, 2018, 30, 138-144.	6.7	26
63	A Multiscale Model for Electrochemical Reactions in LSCF Based Solid Oxide Cells. Journal of the Electrochemical Society, 2018, 165, F1232-F1241.	2.9	14
64	Extended coarse-grained dipole model for polar liquids: Application to bulk and confined water. Physical Review E, 2018, 98, .	2.1	12
65	Asymmetric-Fluidic-Reservoirs Induced High Rectification Nanofluidic Diode. Scientific Reports, 2018, 8, 13941.	3.3	23
66	Identification of amino acids with sensitive nanoporous MoS2: towards machine learning-based prediction. Npj 2D Materials and Applications, 2018, 2, .	7.9	47
67	Coarse-Grained Force Field for Imidazolium-Based Ionic Liquids. Journal of Chemical Theory and Computation, 2018, 14, 3252-3261.	5.3	34
68	Integral equation theory based direct and accelerated systematic coarse-graining approaches. Journal of Chemical Physics, 2018, 148, 214105.	3.0	12
69	Ab initio based interionic potential for silver iodide. Solid State Ionics, 2018, 325, 102-111.	2.7	4
70	A multiscale model for charge inversion in electric double layers. Journal of Chemical Physics, 2018, 148, 214102.	3.0	18
71	Langevin-Poisson-EQT: A dipolar solvent based quasi-continuum approach for electric double layers. Journal of Chemical Physics, 2017, 146, 044108.	3.0	14
72	Nonlinear intrinsic dissipation in single layer MoS₂ resonators. RSC Advances, 2017, 7, 6403-6410.	3.6	15

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73	Multiscale modeling of electroosmotic flow: Effects of discrete ion, enhanced viscosity, and surface friction. Journal of Chemical Physics, 2017, 146, .	3.0	26
74	Size effect on brittle and ductile fracture of two-dimensional interlinked carbon nanotube network. Physica B: Condensed Matter, 2017, 520, 82-88.	2.7	6
75	An EQT-based cDFT approach for thermodynamic properties of confined fluid mixtures. Journal of Chemical Physics, 2017, 146, 154102.	3.0	8
76	Antibody Subclass Detection Using Graphene Nanopores. Journal of Physical Chemistry Letters, 2017, 8, 1670-1676.	4.6	25
77	DNA Origamiâ€“Graphene Hybrid Nanopore for DNA Detection. ACS Applied Materials & Interfaces, 2017, 9, 92-100.	8.0	88
78	Solution-Synthesized Chevron Graphene Nanoribbons Exfoliated onto H:Si(100). Nano Letters, 2017, 17, 170-178.	9.1	49
79	Quantitative Chemical Imaging of Nonplanar Microfluidics. Analytical Chemistry, 2017, 89, 1716-1723.	6.5	14
80	1/f pink chaos in nanopores. RSC Advances, 2017, 7, 46092-46100.	3.6	2
81	Laterally extended atomically precise graphene nanoribbons with improved electrical conductivity for efficient gas sensing. Nature Communications, 2017, 8, 820.	12.8	113
82	Molybdenum disulfide and water interaction parameters. Journal of Chemical Physics, 2017, 147, 104706.	3.0	23
83	Modeling Water Flow Through Carbon Nanotube Membranes with Entrance/Exit Effects. Nanoscale and Microscale Thermophysical Engineering, 2017, 21, 247-262.	2.6	60
84	Dissolution of Monocrystalline Silicon Nanomembranes and Their Use as Encapsulation Layers and Electrical Interfaces in Water-Soluble Electronics. ACS Nano, 2017, 11, 12562-12572.	14.6	82
85	A multiscale transport model for non-classical nanochannel electroosmosis. Journal of Chemical Physics, 2017, 147, 214105.	3.0	8
86	Anomalous characteristics of pore formation in Graphene induced by Si-nanoparticle bombardment. MRS Communications, 2017, 7, 840-847.	1.8	1
87	Mixed role of surface on intrinsic losses in silicon nanostructures. Journal of Applied Physics, 2016, 119, 114304.	2.5	8
88	Doping-Induced Tunable Wettability and Adhesion of Graphene. Nano Letters, 2016, 16, 4708-4712.	9.1	119
89	Nano-electro-mechanical pump: Giant pumping of water in carbon nanotubes. Scientific Reports, 2016, 6, 26211.	3.3	17
90	Analysis of the Effect of Spatial Uncertainties on the Dynamic Behavior of Electrostatic Microactuators. Communications in Computational Physics, 2016, 20, 279-300.	1.7	0

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91	A multiscale transport model for Lennard-Jones binary mixtures based on interfacial friction. Journal of Chemical Physics, 2016, 145, 074115.	3.0	5
92	Hexagonal boron nitride and water interaction parameters. Journal of Chemical Physics, 2016, 144, 164118.	3.0	89
93	Memory effects in nanoparticle dynamics and transport. Journal of Chemical Physics, 2016, 145, 134108.	3.0	7
94	Simulations show that a nanometre-thick sheet of MoS2 removes salt from sea water. Membrane Technology, 2016, 2016, 7.	0.1	0
95	Existence of Multiple Phases of Water at Nanotube Interfaces. Journal of Physical Chemistry C, 2016, 120, 23763-23771.	3.1	49
96	Multiscale approach to modeling intrinsic dissipation in solids. Physical Review B, 2016, 94, .	3.2	1
97	Avalanche effects near nanojunctions. Physical Review E, 2016, 94, 012402.	2.1	3
98	Single-layer MoS2 nanopores as nanopower generators. Nature, 2016, 536, 197-200.	27.8	830
99	Ultrathin, transferred layers of thermally grown silicon dioxide as biofluid barriers for biointegrated flexible electronic systems. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 11682-11687.	7.1	175
100	Characterizing phonon dynamics using stochastic sampling. Journal of Applied Physics, 2016, 119, 115101.	2.5	0
101	Concentration Polarization at Micro-/Nanofluidic Interfaces. , 2016, , 651-660.		0
102	Mechanically modulated electronic properties of water-filled fullerenes. MRS Communications, 2015, 5, 305-310.	1.8	8
103	Silicon Nanomembranes: Mechanisms for Hydrolysis of Silicon Nanomembranes as Used in Bioresorbable Electronics (Adv. Mater. 11/2015). Advanced Materials, 2015, 27, 1856-1856.	21.0	3
104	Interfacial friction based quasi-continuum hydrodynamical model for nanofluidic transport of water. Journal of Chemical Physics, 2015, 143, 174702.	3.0	21
105	Multiscale modeling of droplet interface bilayer membrane networks. Biomicrofluidics, 2015, 9, 064101.	2.4	13
106	An EQT-based cDFT approach for a confined Lennard-Jones fluid mixture. Journal of Chemical Physics, 2015, 143, 124106.	3.0	7
107	Data-driven stochastic models for spatial uncertainties in micromechanical systems. Journal of Micromechanics and Microengineering, 2015, 25, 115009.	2.6	1
108	A NONSTATIONARY COVARIANCE FUNCTION MODEL FOR SPATIAL UNCERTAINTIES IN ELECTROSTATICALLY ACTUATED MICROSYSTEMS. , 2015, 5, 99-121.		4

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109	Adsorption Kinetics Dictate Monolayer Self-Assembly for Both Lipid-In and Lipid-Out Approaches to Droplet Interface Bilayer Formation. Langmuir, 2015, 31, 12883-12893.	3.5	58
110	Electromechanical Signatures for DNA Sequencing through a Mechanosensitive Nanopore. Journal of Physical Chemistry Letters, 2015, 6, 650-657.	4.6	19
111	Mechanisms for Hydrolysis of Silicon Nanomembranes as Used in Bioresorbable Electronics. Advanced Materials, 2015, 27, 1857-1864.	21.0	98
112	The interaction between hexagonal boron nitride and water from first principles. Journal of Chemical Physics, 2015, 142, 234702.	3.0	27
113	Controlling the Ionic Current Rectification Factor of a Nanofluidic/Microfluidic Interface with Symmetric Nanocapillary Interconnects. Analytical Chemistry, 2015, 87, 3598-3605.	6.5	15
114	Water desalination with a single-layer MoS2 nanopore. Nature Communications, 2015, 6, 8616.	12.8	604
115	An EQT-cDFT approach to determine thermodynamic properties of confined fluids. Journal of Chemical Physics, 2015, 142, 244116.	3.0	12
116	Capacitive Sensing of Intercalated H₂O Molecules Using Graphene. ACS Applied Materials & Interfaces, 2015, 7, 25804-25812.	8.0	30
117	Relative Entropy and Optimization-Driven Coarse-Graining Methods in VOTCA. PLoS ONE, 2015, 10, e0131754.	2.5	55
118	Ion transport in sub-5-nm graphene nanopores. Journal of Chemical Physics, 2014, 140, 084707.	3.0	95
119	Intrinsic dissipation in a nano-mechanical resonator. Journal of Applied Physics, 2014, 116, .	2.5	13
120	Spectroscopic Investigation of the Wettability of Multilayer Graphene Using Highly Ordered Pyrolytic Graphite as a Model Material. Langmuir, 2014, 30, 12827-12836.	3.5	81
121	Crosslinking PMMA: Molecular dynamics investigation of the shear response. Journal of Polymer Science, Part B: Polymer Physics, 2014, 52, 444-449.	2.1	31
122	Thermodynamic insight into spontaneous hydration and rapid water permeation in aquaporins. Applied Physics Letters, 2014, 105, 083702.	3.3	27
123	Thermal noise in confined fluids. Journal of Chemical Physics, 2014, 141, 174707.	3.0	6
124	Effect of intermolecular force on the static/dynamic behaviour of M/NEM devices. Nanotechnology, 2014, 25, 485204.	2.6	4
125	DNA Base Detection Using a Single-Layer MoS₂. ACS Nano, 2014, 8, 7914-7922.	14.6	305
126	Scanning tunneling spectroscopy and density functional calculation of silicon dangling bonds on the Si(100)-2Ã—1:H surface. Surface Science, 2013, 609, 147-151.	1.9	18

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127	Mechanical properties of a silicon nanofilm covered with defective graphene. Surface Science, 2013, 611, 80-85.	1.9	10
128	Improved statistical models for limited datasets in uncertainty quantification using stochastic collocation. Journal of Computational Physics, 2013, 255, 521-539.	3.8	4
129	Intrinsic loss due to unstable modes in graphene. Nanotechnology, 2013, 24, 275701.	2.6	6
130	Rotational motion of a single water molecule in a buckyball. Physical Chemistry Chemical Physics, 2013, 15, 17993.	2.8	56
131	Water-solubility-driven separation of gases using graphene membrane. Journal of Membrane Science, 2013, 428, 546-553.	8.2	54
132	Characterization of electrochemical properties of a microâ€“nanochannel integrated system using computational impedance spectroscopy (CIS). Electrochimica Acta, 2013, 105, 514-523.	5.2	18
133	A quasi-continuum hydrodynamic model for slit shaped nanochannel flow. Journal of Chemical Physics, 2013, 139, 074109.	3.0	46
134	The Role of External Defects in Chemical Sensing of Graphene Field-Effect Transistors. Nano Letters, 2013, 13, 1962-1968.	9.1	125
135	Simulation and experiment of substrate aluminum grain orientation dependent self-ordering in anodic porous alumina. Journal of Applied Physics, 2013, 113, .	2.5	16
136	Molecular and continuum hydrodynamics in graphene nanopores. RSC Advances, 2013, 3, 9365.	3.6	112
137	Electrochemistry at the Edge of a Single Graphene Layer in a Nanopore. ACS Nano, 2013, 7, 834-843.	14.6	105
138	A combined quasi-continuum/Langevin equation approach to study the self-diffusion dynamics of confined fluids. Journal of Chemical Physics, 2013, 138, 124109.	3.0	5
139	Graphitic Carbonâ€“Water Nonbonded Interaction Parameters. Journal of Physical Chemistry B, 2013, 117, 8802-8813.	2.6	138
140	Phonon mediated loss in a graphene nanoribbon. Journal of Applied Physics, 2013, 114, .	2.5	8
141	Modeling mechanophore activation within a crosslinked glassy matrix. Journal of Applied Physics, 2013, 114, .	2.5	48
142	Mechanical behavior of water filled C60. Applied Physics Letters, 2013, 103, .	3.3	8
143	Nonlinear Electrokinetic Transport Under Combined ac and dc Fields in Micro/Nanofluidic Interface Devices. Journal of Fluids Engineering, Transactions of the ASME, 2013, 135, .	1.5	9
144	Carbon Nanotube-Metal Contact. , 2012, , 388-391.		1

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145	Thermodynamic state-dependent structure-based coarse-graining of confined water. Journal of Chemical Physics, 2012, 137, 214707.	3.0	24
146	Resonant MEMS Mass Sensors for Measurement of Microdroplet Evaporation. Journal of Microelectromechanical Systems, 2012, 21, 702-711.	2.5	60
147	Reduced-Order Models of Finite Element Approximations of Electromagnetic Devices Exhibiting Statistical Variability. IEEE Transactions on Antennas and Propagation, 2012, 60, 301-309.	5.1	88
148	Understanding anomalous currentâ€“voltage characteristics in microchannelâ€“nanochannel interconnect devices. Journal of Colloid and Interface Science, 2012, 384, 162-171.	9.4	22
149	Capacitive MEMS Switches. , 2012, , 363-374.		0
150	Coarse-grained potential models for structural prediction of carbon dioxide (CO2) in confined environments. Journal of Chemical Physics, 2012, 136, 024102.	3.0	25
151	Chitosan Nanoparticles. , 2012, , 427-433.		0
152	Stacked Graphene-Al₂O₃ Nanopore Sensors for Sensitive Detection of DNA and DNAâ€“Protein Complexes. ACS Nano, 2012, 6, 441-450.	14.6	189
153	Coarse-Grained Potential Model for Structural Prediction of Confined Water. Journal of Chemical Theory and Computation, 2012, 8, 1828-1840.	5.3	35
154	Mechanistic Analysis of Gas Enrichment in Gasâ€“Water Mixtures near Extended Surfaces. Journal of Physical Chemistry C, 2011, 115, 17495-17502.	3.1	8
155	Inducing Electronic Changes in Graphene through Silicon (100) Substrate Modification. Nano Letters, 2011, 11, 2735-2742.	9.1	57
156	Mechanical properties of graphene under shear deformation. Applied Physics Letters, 2011, 98, .	3.3	280
157	Spatial Diffusion of Water in Carbon Nanotubes: From Fickian to Ballistic Motion. Journal of Physical Chemistry B, 2011, 115, 12145-12149.	2.6	153
158	Atomistic simulations on the mechanical properties of a silicon nanofilm covered with graphene. Computational Materials Science, 2011, 50, 3063-3066.	3.0	20
159	Uncertainty quantification of MEMS using a data-dependent adaptive stochastic collocation method. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 3169-3182.	6.6	5
160	Akhiezer damping in nanostructures. Physical Review B, 2011, 84, .	3.2	50
161	Gated transport in nanofluidic devices. Microfluidics and Nanofluidics, 2011, 11, 297-306.	2.2	45
162	A conformal mappingâ€based approach for fast twoâ€dimensional FEM electrostatic analysis of MEMS devices. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2011, 24, 194-206.	1.9	5

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163	Weighted Smolyak algorithm for solution of stochastic differential equations on nonâ€uniform probability measures. International Journal for Numerical Methods in Engineering, 2011, 85, 1365-1389.	2.8	18
164	Self-assembly of graphenes. Surface Science, 2011, 605, 1616-1620.	1.9	16
165	A dataâ€driven stochastic collocation approach for uncertainty quantification in MEMS. International Journal for Numerical Methods in Engineering, 2010, 83, 575-597.	2.8	23
166	DNA translocation through an array of kinkedÂnanopores. Nature Materials, 2010, 9, 667-675.	27.5	109
167	Separation of gases from gasâ€“water mixtures using carbon nanotubes. Applied Physics Letters, 2010, 96, .	3.3	33
168	Water film thickness-dependent conformation and diffusion of single-strand DNA on poly(ethylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	3.3	10
169	Order reduction of finite element models of passive electromagnetic structures with statistical variability. , 2010, , .		1
170	A sparse grid based collocation method for model order reduction of finite element approximations of passive electromagnetic devices under uncertainty. , 2010, , .		14
171	Measurement of adherent cell mass and growth. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 20691-20696.	7.1	186
172	A transferable coarse-grained potential to study the structure of confined, supercritical Lennard-Jones fluids. Journal of Chemical Physics, 2010, 132, 044703.	3.0	19
173	Temperature and strain-rate dependent fracture strength of graphene. Journal of Applied Physics, 2010, 108, .	2.5	309
174	Water Transport through Ultrathin Graphene. Journal of Physical Chemistry Letters, 2010, 1, 1590-1594.	4.6	484
175	Suk and Aluru Reply:. Physical Review Letters, 2010, 105, .	7.8	10
176	Ordering-Induced Fast Diffusion of Nanoscale Water Film on Graphene. Journal of Physical Chemistry C, 2010, 114, 2595-2599.	3.1	48
177	Corrections to â€œAnalysis of Hybrid Electrothermomechanical Microactuators With Integrated Electrothermal and Electrostatic Actuationâ€•[Oct 09 1126-1136. Journal of Microelectromechanical Systems, 2010, 19, 430-430.	2.5	0
178	Analysis of Hybrid Electrothermomechanical Microactuators With Integrated Electrothermal and Electrostatic Actuation. Journal of Microelectromechanical Systems, 2009, 18, 1126-1136.	2.5	21
179	Detection of defective DNA in carbon nanotubes by combined molecular dynamics/tight-binding technique. Applied Physics Letters, 2009, 95, 113116.	3.3	6
180	Size and surface orientation effects on thermal expansion coefficient of one-dimensional silicon nanostructures. Journal of Applied Physics, 2009, 105, 104309.	2.5	13

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181	Temperature-dependent wettability on a titanium dioxide surface. Molecular Simulation, 2009, 35, 31-37.	2.0	49
182	An empirical potential based quasicontinuum theory for structural prediction of water. Journal of Chemical Physics, 2009, 131, 184703.	3.0	5
183	A nodeâ€based agglomeration AMG solver for linear elasticity in thin bodies. Communications in Numerical Methods in Engineering, 2009, 25, 219-236.	1.3	8
184	A compact model for dielectric charging in RF MEMS capacitive switches. International Journal of RF and Microwave Computer-Aided Engineering, 2009, 19, 197-203.	1.2	7
185	A methodology for fast finite element modeling of electrostatically actuated MEMS. International Journal for Numerical Methods in Engineering, 2009, 77, 1789-1808.	2.8	7
186	A domain adaptive stochastic collocation approach for analysis of MEMS under uncertainties. Journal of Computational Physics, 2009, 228, 7662-7688.	3.8	75
187	A chloride ion-selective boron nitride nanotube. Chemical Physics Letters, 2009, 478, 185-190.	2.6	35
188	A conformal mapping based approach for fast two-dimensional FEM electrostatic analysis of MEMS devices without re-meshing. , 2009, , .		0
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