Narayana Aluru

List of Publications by Year in Descending Order

277 papers	13,307 citations	60 h-index	108 g-index
298 ext. papers	15,217 ext. citations	5.9 avg, IF	7.03 L-index

#	Paper	IF	Citations
277	Nonlinear electrohydrodynamic ion transport in graphene nanopores.. *Science Advances*, **2022**, 8, eabj2510	14.3	3
276	Interstitial proton transport through defective MXenes. *Applied Physics Letters*, **2022**, 120, 211601	3.4	1
275	Toward Durable Protonic Ceramic Cells: Hydration-Induced Chemical Expansion Correlates with Symmetry in the Y-Doped BaZrO3BaCeO3 Solid Solution. *Journal of Physical Chemistry C*, **2021**, 125, 26216-26228	3.8	1
274	Pore-Scale Modeling of Electrokinetics in Geomaterials. *Transport in Porous Media*, **2021**, 137, 651-666	3.1	0
273	Dynamic and weak electric double layers in ultrathin nanopores. *Journal of Chemical Physics*, **2021**, 154, 134703	3.9	3
272	Highly Strain-Tunable Interlayer Excitons in MoS/WSe Heterobilayers. *Nano Letters*, **2021**, 21, 3956-3964	11.5	16
271	Super-resolved Optical Mapping of Reactive Sulfur-Vacancies in Two-Dimensional Transition Metal Dichalcogenides. *ACS Nano*, **2021**, 15, 7168-7178	16.7	2
270	Understanding simple liquids through statistical and deep learning approaches. *Journal of Chemical Physics*, **2021**, 154, 204503	3.9	1
269	Electronic Structure and Transport in Graphene Nanoribbon Heterojunctions under Uniaxial Strain: Implications for Flexible Electronics. *ACS Applied Nano Materials*, **2021**, 4, 5816-5824	5.6	2
268	Accelerated design and discovery of perovskites with high conductivity for energy applications through machine learning. *Npj Computational Materials*, **2021**, 7,	10.9	9
267	A multiscale framework to predict electrochemical characteristics of yttrium doped Barium Zirconate based solid oxide cells. *Journal of Power Sources*, **2021**, 481, 228969	8.9	5
266	Selective filling of n-hexane in a tight nanopore. *Nature Communications*, **2021**, 12, 310	17.4	10
265	Diameter Dependence of Water Filling in Lithographically Segmented Isolated Carbon Nanotubes. *ACS Nano*, **2021**, 15, 2778-2790	16.7	4
264	Strain-resilient electrical functionality in thin-film metal electrodes using two-dimensional interlayers.. *Nature Electronics*, **2021**, 4, 126-133	28.4	20
263	Ion Solvation and Transport in Narrow Carbon Nanotubes: Effects of Polarizability, Cation-π Interaction, and Confinement. *Journal of Chemical Theory and Computation*, **2021**, 17, 1596-1605	6.4	9
262	Culture-free biphasic approach for sensitive detection of Escherichia coli O157:H7 from beef samples. *Biotechnology and Bioengineering*, **2021**, 118, 4516-4529	4.9	1
261	Ultrasensitive Detection of Dopamine, IL-6 and SARS-CoV-2 Proteins on Crumpled Graphene FET Biosensor.. *Advanced Materials Technologies*, **2021**, 6, 2100712	6.8	11

260	Anomalous interfacial dynamics of single proton charges in binary aqueous solutions. *Science Advances*, **2021**, 7, eabg8568	14.3	2
259	Prospects for sub-nanometer scale imaging of optical phenomena using electron microscopy. *Applied Physics Letters*, **2021**, 118, 033104	3.4	2
258	Confinement-Induced Enhancement of Parallel Dielectric Permittivity: Super Permittivity Under Extreme Confinement. *Journal of Physical Chemistry Letters*, **2020**, 11, 10532-10537	6.4	6
257	Intrinsic Dissipation Due to Mode Coupling in Two-Dimensional-Material Resonators Revealed Through a Multiscale Approach. *Physical Review Applied*, **2020**, 14,	4.3	2
256	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	3
255	Ultrasensitive detection of nucleic acids using deformed graphene channel field effect biosensors. *Nature Communications*, **2020**, 11, 1543	17.4	123
254	Current understanding and emerging applications of 3D crumpling mediated 2D material-liquid interactions. *Current Opinion in Solid State and Materials Science*, **2020**, 24, 100836	12	5
253	Optimization of solidification in die casting using numerical simulations and machine learning. *Journal of Manufacturing Processes*, **2020**, 51, 130-141	5	8
252	Revisiting Sampson's theory for hydrodynamic transport in ultrathin nanopores. *Physical Review Research*, **2020**, 2,	3.9	7
251	Kirigami-inspired strain-insensitive sensors based on atomically-thin materials. *Materials Today*, **2020**, 34, 58-65	21.8	33
250	The role of A-site ion on proton diffusion in perovskite oxides (ABO3). *Journal of Power Sources*, **2020**, 445, 227327	8.9	16
249	Nanofluidic Transport Theory with Enhancement Factors Approaching One. *ACS Nano*, **2020**, 14, 272-281	16.7	19
248	Three-Dimensional Molecular Mapping of Ionic Liquids at Electrified Interfaces. *ACS Nano*, **2020**,	16.7	20
247	Curved neuromorphic image sensor array using a MoS-organic heterostructure inspired by the human visual recognition system. *Nature Communications*, **2020**, 11, 5934	17.4	60
246	Ion Transport in Electrically Imperfect Nanopores. *ACS Nano*, **2020**, 14, 10518-10526	16.7	16
245	Water-Assisted Increase of Ionic Conductivity of Lithium Poly(acrylic acid)-Based Aqueous Polymer Electrolyte. *ACS Applied Energy Materials*, **2020**, 3, 10119-10130	6.1	9
244	Universal Reduction in Dielectric Response of Confined Fluids. *ACS Nano*, **2020**, 14, 12761-12770	16.7	20
243	Interfacial Properties of Water on Hydrogenated and Fluorinated Graphene Surfaces: Parametrization of Nonbonded Interactions. *Journal of Physical Chemistry C*, **2020**, 124, 21467-21475	3.8	8

242	Highly Efficient Solar-Driven Carbon Dioxide Reduction on Molybdenum Disulfide Catalyst Using Choline Chloride-Based Electrolyte. *Advanced Energy Materials*, **2019**, 9, 1803536	21.8	26
241	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	3.3	6
240	Electrical Double Layer of Supported Atomically Thin Materials. *Nano Letters*, **2019**, 19, 4588-4593	11.5	15
239	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	4.9	3
238	Measurements of the size and correlations between ions using an electrolytic point contact. *Nature Communications*, **2019**, 10, 2382	17.4	25
237	Anomalous scaling of flexural phonon damping in nanoresonators with confined fluid. *Microsystems and Nanoengineering*, **2019**, 5, 2	7.7	5
236	Critical Knowledge Gaps in Mass Transport through Single-Digit Nanopores: A Review and Perspective. *Journal of Physical Chemistry C*, **2019**, 123, 21309-21326	3.8	121
235	Finite volume simulation framework for die casting with uncertainty quantification. *Applied Mathematical Modelling*, **2019**, 74, 132-150	4.5	3
234	Spatial Uncertainty Modeling for Surface Roughness of Additively Manufactured Microstructures via Image Segmentation. *Applied Sciences (Switzerland)*, **2019**, 9, 1093	2.6	3
233	Transfer-Learning-Based Coarse-Graining Method for Simple Fluids: Toward Deep Inverse Liquid-State Theory. *Journal of Physical Chemistry Letters*, **2019**, 10, 1242-1250	6.4	19
232	Cluster Expansion Framework for the Sr(Ti1⊠Fex)O3⊠/2 (0 Chemistry of Materials, **2019**, 31, 3144-3153	9.6	3
231	Simulations of Die Casting With Uncertainty Quantification. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2019**, 141,	3.3	3
230	Strong Electroosmotic Coupling Dominates Ion Conductance of 1.5 nm Diameter Carbon Nanotube Porins. *ACS Nano*, **2019**, 13, 12851-12859	16.7	25
229	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	6.4	9
228	Strain Modulation of Graphene by Nanoscale Substrate Curvatures: A Molecular View. *Nano Letters*, **2018**, 18, 2098-2104	11.5	42
227	Energy Dissipation in Fluid Coupled Nanoresonators: The Effect of Phonon-Fluid Coupling. *ACS Nano*, **2018**, 12, 368-377	16.7	13
226	Ab initio based interionic potential for silver iodide. *Solid State Ionics*, **2018**, 325, 102-111	3.3	3
225	A multiscale model for charge inversion in electric double layers. *Journal of Chemical Physics*, **2018**, 148, 214102	3.9	10

224	Mechanistic Insights into Hydration of Solid Oxides. *Chemistry of Materials*, **2018**, 30, 138-144	9.6	18
223	A Multiscale Model for Electrochemical Reactions in LSCF Based Solid Oxide Cells. *Journal of the Electrochemical Society*, **2018**, 165, F1232-F1241	3.9	10
222	Extended coarse-grained dipole model for polar liquids: Application to bulk and confined water. *Physical Review E*, **2018**, 98,	2.4	10
221	Asymmetric-Fluidic-Reservoirs Induced High Rectification Nanofluidic Diode. *Scientific Reports*, **2018**, 8, 13941	4.9	16
220	Identification of amino acids with sensitive nanoporous MoS2: towards machine learning-based prediction. *Npj 2D Materials and Applications*, **2018**, 2,	8.8	29
219	Coarse-Grained Force Field for Imidazolium-Based Ionic Liquids. *Journal of Chemical Theory and Computation*, **2018**, 14, 3252-3261	6.4	23
218	Integral equation theory based direct and accelerated systematic coarse-graining approaches. *Journal of Chemical Physics*, **2018**, 148, 214105	3.9	9
217	Langevin-Poisson-EQT: A dipolar solvent based quasi-continuum approach for electric double layers. *Journal of Chemical Physics*, **2017**, 146, 044108	3.9	12
216	Nonlinear intrinsic dissipation in single layer MoS2 resonators. *RSC Advances*, **2017**, 7, 6403-6410	3.7	9
215	Multiscale modeling of electroosmotic flow: Effects of discrete ion, enhanced viscosity, and surface friction. *Journal of Chemical Physics*, **2017**, 146, 184106	3.9	20
214	Size effect on brittle and ductile fracture of two-dimensional interlinked carbon nanotube network. *Physica B: Condensed Matter*, **2017**, 520, 82-88	2.8	4
213	An EQT-based cDFT approach for thermodynamic properties of confined fluid mixtures. *Journal of Chemical Physics*, **2017**, 146, 154102	3.9	7
212	Antibody Subclass Detection Using Graphene Nanopores. *Journal of Physical Chemistry Letters*, **2017**, 8, 1670-1676	6.4	22
211	DNA Origami-Graphene Hybrid Nanopore for DNA Detection. *ACS Applied Materials & Interfaces*, **2017**, 9, 92-100	9.5	67
210	Solution-Synthesized Chevron Graphene Nanoribbons Exfoliated onto H:Si(100). *Nano Letters*, **2017** , 17, 170-178	11.5	42
209	Quantitative Chemical Imaging of Nonplanar Microfluidics. *Analytical Chemistry*, **2017**, 89, 1716-1723	7.8	9
208	1/f pink chaos in nanopores. *RSC Advances*, **2017**, 7, 46092-46100	3.7	2
207	Laterally extended atomically precise graphene nanoribbons with improved electrical conductivity for efficient gas sensing. *Nature Communications*, **2017**, 8, 820	17.4	79

206	Molybdenum disulfide and water interaction parameters. *Journal of Chemical Physics*, **2017**, 147, 104706	3.9	16
205	Modeling Water Flow Through Carbon Nanotube Membranes with Entrance/Exit Effects. *Nanoscale and Microscale Thermophysical Engineering*, **2017**, 21, 247-262	3.7	45
204	Dissolution of Monocrystalline Silicon Nanomembranes and Their Use as Encapsulation Layers and Electrical Interfaces in Water-Soluble Electronics. *ACS Nano*, **2017**, 11, 12562-12572	16.7	61
203	A multiscale transport model for non-classical nanochannel electroosmosis. *Journal of Chemical Physics*, **2017**, 147, 214105	3.9	5
202	Anomalous characteristics of pore formation in Graphene induced by Si-nanoparticle bombardment. *MRS Communications*, **2017**, 7, 840-847	2.7	1
201	Avalanche effects near nanojunctions. *Physical Review E*, **2016**, 94, 012402	2.4	3
200	Single-layer MoS2 nanopores as nanopower generators. *Nature*, **2016**, 536, 197-200	50.4	560
199	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	11.5	133
198	Characterizing phonon dynamics using stochastic sampling. *Journal of Applied Physics*, **2016**, 119, 115101	2.5	
197	Mixed role of surface on intrinsic losses in silicon nanostructures. *Journal of Applied Physics*, **2016**, 119, 114304	2.5	6
196	Doping-Induced Tunable Wettability and Adhesion of Graphene. *Nano Letters*, **2016**, 16, 4708-12	11.5	97
195	Nano-electro-mechanical pump: Giant pumping of water in carbon nanotubes. *Scientific Reports*, **2016**, 6, 26211	4.9	9
194	Analysis of the Effect of Spatial Uncertainties on the Dynamic Behavior of Electrostatic Microactuators. *Communications in Computational Physics*, **2016**, 20, 279-300	2.4	
193	A multiscale transport model for Lennard-Jones binary mixtures based on interfacial friction. *Journal of Chemical Physics*, **2016**, 145, 074115	3.9	4
192	Hexagonal boron nitride and water interaction parameters. *Journal of Chemical Physics*, **2016**, 144, 164118	3.9	65
191	Memory effects in nanoparticle dynamics and transport. *Journal of Chemical Physics*, **2016**, 145, 134108	3.9	7
190	Existence of Multiple Phases of Water at Nanotube Interfaces. *Journal of Physical Chemistry C*, **2016**, 120, 23763-23771	3.8	41
189	The interaction between hexagonal boron nitride and water from first principles. *Journal of Chemical Physics*, **2015**, 142, 234702	3.9	23

188	Controlling the ionic current rectification factor of a nanofluidic/microfluidic interface with symmetric nanocapillary interconnects. *Analytical Chemistry*, **2015**, 87, 3598-605	7.8	14
187	Water desalination with a single-layer MoS2 nanopore. *Nature Communications*, **2015**, 6, 8616	17.4	435
186	An EQT-cDFT approach to determine thermodynamic properties of confined fluids. *Journal of Chemical Physics*, **2015**, 142, 244116	3.9	11
185	Capacitive Sensing of Intercalated H2O Molecules Using Graphene. *ACS Applied Materials & Interfaces*, **2015**, 7, 25804-12	9.5	26
184	Mechanically modulated electronic properties of water-filled fullerenes. *MRS Communications*, **2015**, 5, 305-310	2.7	6
183	Silicon Nanomembranes: Mechanisms for Hydrolysis of Silicon Nanomembranes as Used in Bioresorbable Electronics (Adv. Mater. 11/2015). *Advanced Materials*, **2015**, 27, 1856-1856	24	2
182	Interfacial friction based quasi-continuum hydrodynamical model for nanofluidic transport of water. *Journal of Chemical Physics*, **2015**, 143, 174702	3.9	18
181	Multiscale modeling of droplet interface bilayer membrane networks. *Biomicrofluidics*, **2015**, 9, 064101	3.2	11
180	An EQT-based cDFT approach for a confined Lennard-Jones fluid mixture. *Journal of Chemical Physics*, **2015**, 143, 124106	3.9	7
179	Data-driven stochastic models for spatial uncertainties in micromechanical systems. *Journal of Micromechanics and Microengineering*, **2015**, 25, 115009	2	1
178	A NONSTATIONARY COVARIANCE FUNCTION MODEL FOR SPATIAL UNCERTAINTIES IN ELECTROSTATICALLY ACTUATED MICROSYSTEMS **2015**, 5, 99-121		4
177	Adsorption Kinetics Dictate Monolayer Self-Assembly for Both Lipid-In and Lipid-Out Approaches to Droplet Interface Bilayer Formation. *Langmuir*, **2015**, 31, 12883-93	4	48
176	Electromechanical Signatures for DNA Sequencing through a Mechanosensitive Nanopore. *Journal of Physical Chemistry Letters*, **2015**, 6, 650-7	6.4	17
175	Mechanisms for hydrolysis of silicon nanomembranes as used in bioresorbable electronics. *Advanced Materials*, **2015**, 27, 1857-64	24	77
174	Relative Entropy and Optimization-Driven Coarse-Graining Methods in VOTCA. *PLoS ONE*, **2015**, 10, e0131754	3.7	48
173	Thermal noise in confined fluids. *Journal of Chemical Physics*, **2014**, 141, 174707	3.9	6
172	Effect of intermolecular force on the static/dynamic behaviour of M/NEM devices. *Nanotechnology*, **2014**, 25, 485204	3.4	3
171	DNA base detection using a single-layer MoS2. *ACS Nano*, **2014**, 8, 7914-22	16.7	251

170	Ion transport in sub-5-nm graphene nanopores. *Journal of Chemical Physics*, **2014**, 140, 084707	3.9	75
169	Intrinsic dissipation in a nano-mechanical resonator. *Journal of Applied Physics*, **2014**, 116, 094304	2.5	10
168	Spectroscopic investigation of the wettability of multilayer graphene using highly ordered pyrolytic graphite as a model material. *Langmuir*, **2014**, 30, 12827-36	4	73
167	Crosslinking PMMA: Molecular dynamics investigation of the shear response. *Journal of Polymer Science, Part B: Polymer Physics*, **2014**, 52, 444-449	2.6	25
166	Thermodynamic insight into spontaneous hydration and rapid water permeation in aquaporins. *Applied Physics Letters*, **2014**, 105, 083702	3.4	19
165	Scanning tunneling spectroscopy and density functional calculation of silicon dangling bonds on the Si(100)-2×1:H surface. *Surface Science*, **2013**, 609, 147-151	1.8	17
164	Mechanical properties of a silicon nanofilm covered with defective graphene. *Surface Science*, **2013**, 611, 80-85	1.8	9
163	Improved statistical models for limited datasets in uncertainty quantification using stochastic collocation. *Journal of Computational Physics*, **2013**, 255, 521-539	4.1	3
162	Intrinsic loss due to unstable modes in graphene. *Nanotechnology*, **2013**, 24, 275701	3.4	4
161	Rotational motion of a single water molecule in a buckyball. *Physical Chemistry Chemical Physics*, **2013**, 15, 17993-8000	3.6	49
160	Water-solubility-driven separation of gases using graphene membrane. *Journal of Membrane Science*, **2013**, 428, 546-553	9.6	44
159	Characterization of electrochemical properties of a micro–nanochannel integrated system using computational impedance spectroscopy (CIS). *Electrochimica Acta*, **2013**, 105, 514-523	6.7	15
158	A quasi-continuum hydrodynamic model for slit shaped nanochannel flow. *Journal of Chemical Physics*, **2013**, 139, 074109	3.9	36
157	The role of external defects in chemical sensing of graphene field-effect transistors. *Nano Letters*, **2013**, 13, 1962-8	11.5	107
156	Simulation and experiment of substrate aluminum grain orientation dependent self-ordering in anodic porous alumina. *Journal of Applied Physics*, **2013**, 113, 204903	2.5	15
155	Molecular and continuum hydrodynamics in graphene nanopores. *RSC Advances*, **2013**, 3, 9365	3.7	89
154	Electrochemistry at the edge of a single graphene layer in a nanopore. *ACS Nano*, **2013**, 7, 834-43	16.7	95
153	A combined quasi-continuum/Langevin equation approach to study the self-diffusion dynamics of confined fluids. *Journal of Chemical Physics*, **2013**, 138, 124109	3.9	5

152	Graphitic carbon-water nonbonded interaction parameters. *Journal of Physical Chemistry B*, **2013**, 117, 8802-13	3.4	109
151	Phonon mediated loss in a graphene nanoribbon. *Journal of Applied Physics*, **2013**, 114, 084302	2.5	6
150	Modeling mechanophore activation within a crosslinked glassy matrix. *Journal of Applied Physics*, **2013**, 114, 023504	2.5	41
149	Mechanical behavior of water filled C60. *Applied Physics Letters*, **2013**, 103, 263112	3.4	6
148	Nonlinear Electrokinetic Transport Under Combined ac and dc Fields in Micro/Nanofluidic Interface Devices. *Journal of Fluids Engineering, Transactions of the ASME*, **2013**, 135,	2.1	8
147	Resonant MEMS Mass Sensors for Measurement of Microdroplet Evaporation. *Journal of Microelectromechanical Systems*, **2012**, 21, 702-711	2.5	40
146	. *IEEE Transactions on Antennas and Propagation*, **2012**, 60, 301-309	4.9	63
145	Understanding anomalous current-voltage characteristics in microchannel-nanochannel interconnect devices. *Journal of Colloid and Interface Science*, **2012**, 384, 162-71	9.3	20
144	Coarse-grained potential models for structural prediction of carbon dioxide (CO2) in confined environments. *Journal of Chemical Physics*, **2012**, 136, 024102	3.9	23
143	Stacked graphene-Al2O3 nanopore sensors for sensitive detection of DNA and DNA-protein complexes. *ACS Nano*, **2012**, 6, 441-50	16.7	173
142	Coarse-Grained Potential Model for Structural Prediction of Confined Water. *Journal of Chemical Theory and Computation*, **2012**, 8, 1828-40	6.4	31
141	Thermodynamic state-dependent structure-based coarse-graining of confined water. *Journal of Chemical Physics*, **2012**, 137, 214707	3.9	21
140	Mechanical properties of graphene under shear deformation. *Applied Physics Letters*, **2011**, 98, 013113	3.4	243
139	Spatial diffusion of water in carbon nanotubes: from fickian to ballistic motion. *Journal of Physical Chemistry B*, **2011**, 115, 12145-9	3.4	115
138	Atomistic simulations on the mechanical properties of a silicon nanofilm covered with graphene. *Computational Materials Science*, **2011**, 50, 3063-3066	3.2	17
137	Uncertainty quantification of MEMS using a data-dependent adaptive stochastic collocation method. *Computer Methods in Applied Mechanics and Engineering*, **2011**, 200, 3169-3182	5.7	4
136	Akhiezer damping in nanostructures. *Physical Review B*, **2011**, 84,	3.3	42
135	Gated transport in nanofluidic devices. *Microfluidics and Nanofluidics*, **2011**, 11, 297-306	2.8	40

134	A conformal mapping-based approach for fast two-dimensional FEM electrostatic analysis of MEMS devices. *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, **2011**, 24, 194-206	1	5
133	Weighted Smolyak algorithm for solution of stochastic differential equations on non-uniform probability measures. *International Journal for Numerical Methods in Engineering*, **2011**, 85, 1365-1389	2.4	11
132	Mechanistic Analysis of Gas Enrichment in Gas–Water Mixtures near Extended Surfaces. *Journal of Physical Chemistry C*, **2011**, 115, 17495-17502	3.8	7
131	Inducing electronic changes in graphene through silicon (100) substrate modification. *Nano Letters*, **2011**, 11, 2735-42	11.5	50
130	Self-assembly of graphenes. *Surface Science*, **2011**, 605, 1616-1620	1.8	15
129	DNA translocation through an array of kinked nanopores. *Nature Materials*, **2010**, 9, 667-75	27	98
128	Separation of gases from gas–water mixtures using carbon nanotubes. *Applied Physics Letters*, **2010**, 96, 133108	3.4	28
127	Water film thickness-dependent conformation and diffusion of single-strand DNA on poly(ethylene glycol)-silane surface. *Applied Physics Letters*, **2010**, 96, 123703	3.4	8
126	Order reduction of finite element models of passive electromagnetic structures with statistical variability **2010**,		1
125	A sparse grid based collocation method for model order reduction of finite element approximations of passive electromagnetic devices under uncertainty **2010**,		12
124	Measurement of adherent cell mass and growth. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 20691-6	11.5	153
123	A transferable coarse-grained potential to study the structure of confined, supercritical Lennard-Jones fluids. *Journal of Chemical Physics*, **2010**, 132, 044703	3.9	18
122	Temperature and strain-rate dependent fracture strength of graphene. *Journal of Applied Physics*, **2010**, 108, 064321	2.5	258
121	Water Transport through Ultrathin Graphene. *Journal of Physical Chemistry Letters*, **2010**, 1, 1590-1594	6.4	399
120	Suk and Aluru Reply:. *Physical Review Letters*, **2010**, 105,	7.4	9
119	Ordering-Induced Fast Diffusion of Nanoscale Water Film on Graphene. *Journal of Physical Chemistry C*, **2010**, 114, 2595-2599	3.8	43
118	Corrections to "Analysis of Hybrid Electrothermomechanical Microactuators With Integrated Electrothermal and Electrostatic Actuation" [Oct 09 1126-1136]. *Journal of Microelectromechanical Systems*, **2010**, 19, 430-430	2.5	
117	A data-driven stochastic collocation approach for uncertainty quantification in MEMS. *International Journal for Numerical Methods in Engineering*, **2010**, 83, 575-597	2.4	18

116	Analysis of Hybrid Electrothermomechanical Microactuators With Integrated Electrothermal and Electrostatic Actuation. *Journal of Microelectromechanical Systems*, **2009**, 18, 1126-1136	2.5	18
115	Detection of defective DNA in carbon nanotubes by combined molecular dynamics/tight-binding technique. *Applied Physics Letters*, **2009**, 95, 113116	3.4	6
114	Size and surface orientation effects on thermal expansion coefficient of one-dimensional silicon nanostructures. *Journal of Applied Physics*, **2009**, 105, 104309	2.5	12
113	Temperature-dependent wettability on a titanium dioxide surface. *Molecular Simulation*, **2009**, 35, 31-372		38
112	An empirical potential based quasicontinuum theory for structural prediction of water. *Journal of Chemical Physics*, **2009**, 131, 184703	3.9	3
111	A node-based agglomeration AMG solver for linear elasticity in thin bodies. *Communications in Numerical Methods in Engineering*, **2009**, 25, 219-236		5
110	A compact model for dielectric charging in RF MEMS capacitive switches. *International Journal of RF and Microwave Computer-Aided Engineering*, **2009**, 19, 197-203	1.5	7
109	A methodology for fast finite element modeling of electrostatically actuated MEMS. *International Journal for Numerical Methods in Engineering*, **2009**, 77, 1789-1808	2.4	7
108	A domain adaptive stochastic collocation approach for analysis of MEMS under uncertainties. *Journal of Computational Physics*, **2009**, 228, 7662-7688	4.1	65
107	A chloride ion-selective boron nitride nanotube. *Chemical Physics Letters*, **2009**, 478, 185-190	2.5	28
106	Size and chirality dependent elastic properties of graphene nanoribbons under uniaxial tension. *Nano Letters*, **2009**, 9, 3012-5	11.5	653
105	Effect of cross-linking on the diffusion of water, ions, and small molecules in hydrogels. *Journal of Physical Chemistry B*, **2009**, 113, 3512-20	3.4	132
104	Pull-in/out analysis of nano/microelectromechanical switches with defective oxide layers. *Applied Physics Letters*, **2009**, 95, 073112	3.4	6
103	Stochastic Analysis of Electrostatic MEMS Subjected to Parameter Variations. *Journal of Microelectromechanical Systems*, **2009**, 18, 1454-1468	2.5	32
102	Effect of induced electric field on single-file reverse osmosis. *Physical Chemistry Chemical Physics*, **2009**, 11, 8614-9	3.6	38
101	Water phase transition induced by a Stone-Wales defect in a boron nitride nanotube. *Journal of the American Chemical Society*, **2008**, 130, 13649-52	16.4	21
100	Structure and Dynamics of Water Confined in a Boron Nitride Nanotube. *Journal of Physical Chemistry C*, **2008**, 112, 1812-1818	3.8	136
99	Diffusion of water submonolayers on hydrophilic surfaces. *Applied Physics Letters*, **2008**, 93, 253104	3.4	16

98	Multiscale electrostatic analysis of silicon nanoelectromechanical systems (NEMS) via heterogeneous quantum models. *Physical Review B*, **2008**, 77,	3.3	12
97	Why are carbon nanotubes fast transporters of water?. *Nano Letters*, **2008**, 8, 452-8	11.5	629
96	Fast reverse osmosis using boron nitride and carbon nanotubes. *Applied Physics Letters*, **2008**, 92, 133120	3.4	108
95	Perturbation of Microfluidic Transport Following Electrokinetic Injection through a Nanocapillary Array Membrane: Injection and Biphasic Recovery. *Journal of Physical Chemistry C*, **2008**, 112, 19242-19247	3.8	6
94	Nonlinear Dynamics of Electrostatically Actuated MEMS. *Computational and Experimental Methods in Structures*, **2008**, 235-286		
93	Carbon nanotube screening effects on the water-ion channels. *Applied Physics Letters*, **2008**, 93, 43122	3.4	12
92	Pumping of confined water in carbon nanotubes by rotation-translation coupling. *Physical Review Letters*, **2008**, 101, 064502	7.4	126
91	Multiscale mechanical analysis of silicon nanostructures by combined finite temperature models. *Computer Methods in Applied Mechanics and Engineering*, **2008**, 197, 3215-3224	5.7	6
90	Stochastic modeling of coupled electromechanical interaction for uncertainty quantification in electrostatically actuated MEMS. *Computer Methods in Applied Mechanics and Engineering*, **2008**, 197, 3456-3471	5.7	16
89	Charge distribution on thin semiconducting silicon nanowires. *Computer Methods in Applied Mechanics and Engineering*, **2008**, 197, 3366-3377	5.7	7
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