

Narayana Aluru

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277
papers

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298
ext. papers

15,217
ext. citations

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avg, IF

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L-index

#	Paper	IF	Citations
277	Size and chirality dependent elastic properties of graphene nanoribbons under uniaxial tension. <i>Nano Letters</i> , 2009 , 9, 3012-5	11.5	653
276	Why are carbon nanotubes fast transporters of water?. <i>Nano Letters</i> , 2008 , 8, 452-8	11.5	629
275	Single-layer MoS2 nanopores as nanopower generators. <i>Nature</i> , 2016 , 536, 197-200	50.4	560
274	Water desalination with a single-layer MoS2 nanopore. <i>Nature Communications</i> , 2015 , 6, 8616	17.4	435
273	Water Transport through Ultrathin Graphene. <i>Journal of Physical Chemistry Letters</i> , 2010 , 1, 1590-1594	6.4	399
272	Anomalously Immobilized Water: A New Water Phase Induced by Confinement in Nanotubes. <i>Nano Letters</i> , 2003 , 3, 589-592	11.5	377
271	Calculation of pull-in voltages for carbon-nanotube-based nanoelectromechanical switches. <i>Nanotechnology</i> , 2002 , 13, 120-131	3.4	360
270	Equilibrium swelling and kinetics of pH-responsive hydrogels: models, experiments, and simulations. <i>Journal of Microelectromechanical Systems</i> , 2002 , 11, 544-555	2.5	322
269	Ion concentrations and velocity profiles in nanochannel electroosmotic flows. <i>Journal of Chemical Physics</i> , 2003 , 118, 4692-4701	3.9	263
268	Temperature and strain-rate dependent fracture strength of graphene. <i>Journal of Applied Physics</i> , 2010 , 108, 064321	2.5	258
267	DNA base detection using a single-layer MoS2. <i>ACS Nano</i> , 2014 , 8, 7914-22	16.7	251
266	Mechanical properties of graphene under shear deformation. <i>Applied Physics Letters</i> , 2011 , 98, 013113	3.4	243
265	Electrolytic transport through a synthetic nanometer-diameter pore. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 10445-50	11.5	198
264	Charge inversion and flow reversal in a nanochannel electro-osmotic flow. <i>Physical Review Letters</i> , 2004 , 92, 198301	7.4	182
263	Stacked graphene-Al2O3 nanopore sensors for sensitive detection of DNA and DNA-protein complexes. <i>ACS Nano</i> , 2012 , 6, 441-50	16.7	173
262	Water permeation through a subnanometer boron nitride nanotube. <i>Journal of the American Chemical Society</i> , 2007 , 129, 2748-9	16.4	169
261	A point collocation method based on reproducing kernel approximations. <i>International Journal for Numerical Methods in Engineering</i> , 2000 , 47, 1083-1121	2.4	167

260	Electrolytic Transport in Modified Carbon Nanotubes. <i>Nano Letters</i> , 2003 , 3, 1399-1403	11.5	164
259	Measurement of adherent cell mass and growth. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 20691-6	11.5	153
258	Structure and Dynamics of Water Confined in a Boron Nitride Nanotube. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 1812-1818	3.8	136
257	Ultrathin, transferred layers of thermally grown silicon dioxide as biofluid barriers for biointegrated flexible electronic systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 11682-11687	11.5	133
256	Effect of cross-linking on the diffusion of water, ions, and small molecules in hydrogels. <i>Journal of Physical Chemistry B</i> , 2009 , 113, 3512-20	3.4	132
255	Pumping of confined water in carbon nanotubes by rotation-translation coupling. <i>Physical Review Letters</i> , 2008 , 101, 064502	7.4	126
254	Ultrasensitive detection of nucleic acids using deformed graphene channel field effect biosensors. <i>Nature Communications</i> , 2020 , 11, 1543	17.4	123
253	Critical Knowledge Gaps in Mass Transport through Single-Digit Nanopores: A Review and Perspective. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 21309-21326	3.8	121
252	Finite cloud method: a true meshless technique based on a fixed reproducing kernel approximation. <i>International Journal for Numerical Methods in Engineering</i> , 2001 , 50, 2373-2410	2.4	118
251	Spatial diffusion of water in carbon nanotubes: from fickian to ballistic motion. <i>Journal of Physical Chemistry B</i> , 2011 , 115, 12145-9	3.4	115
250	Graphitic carbon-water nonbonded interaction parameters. <i>Journal of Physical Chemistry B</i> , 2013 , 117, 8802-13	3.4	109
249	Fast reverse osmosis using boron nitride and carbon nanotubes. <i>Applied Physics Letters</i> , 2008 , 92, 133120	3.4	108
248	The role of external defects in chemical sensing of graphene field-effect transistors. <i>Nano Letters</i> , 2013 , 13, 1962-8	11.5	107
247	Full-Lagrangian schemes for dynamic analysis of electrostatic MEMS. <i>Journal of Microelectromechanical Systems</i> , 2004 , 13, 737-758	2.5	106
246	Effect of quantum partial charges on the structure and dynamics of water in single-walled carbon nanotubes. <i>Journal of Chemical Physics</i> , 2006 , 125, 114701	3.9	102
245	DNA translocation through an array of kinked nanopores. <i>Nature Materials</i> , 2010 , 9, 667-75	27	98
244	Doping-Induced Tunable Wettability and Adhesion of Graphene. <i>Nano Letters</i> , 2016 , 16, 4708-12	11.5	97
243	Electrochemistry at the edge of a single graphene layer in a nanopore. <i>ACS Nano</i> , 2013 , 7, 834-43	16.7	95

242	Simulating the behavior of MEMS devices: computational methods and needs. <i>IEEE Computational Science and Engineering</i> , 1997 , 4, 30-43		93
241	Ion separation using a Y-junction carbon nanotube. <i>Nanotechnology</i> , 2006 , 17, 895-900	3.4	91
240	Molecular and continuum hydrodynamics in graphene nanopores. <i>RSC Advances</i> , 2013 , 3, 9365	3.7	89
239	A chemo-electro-mechanical mathematical model for simulation of pH sensitive hydrogels. <i>Mechanics of Materials</i> , 2004 , 36, 395-410	3.3	85
238	Static and Dynamic Analysis of Carbon Nanotube-Based Switches. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2004 , 126, 230-237	1.8	84
237	Laterally extended atomically precise graphene nanoribbons with improved electrical conductivity for efficient gas sensing. <i>Nature Communications</i> , 2017 , 8, 820	17.4	79
236	Finite-temperature quasicontinuum method for multiscale analysis of silicon nanostructures. <i>Physical Review B</i> , 2006 , 74,	3.3	79
235	Atomistic simulation of KCl transport in charged silicon nanochannels: Interfacial effects. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2005 , 267, 103-109	5.1	79
234	An efficient numerical technique for electrochemical simulation of complicated microelectromechanical structures. <i>Sensors and Actuators A: Physical</i> , 1997 , 58, 1-11	3.9	78
233	Atypical Dependence of Electroosmotic Transport on Surface Charge in a Single-wall Carbon Nanotube. <i>Nano Letters</i> , 2003 , 3, 1013-1017	11.5	78
232	Mechanisms for hydrolysis of silicon nanomembranes as used in bioresorbable electronics. <i>Advanced Materials</i> , 2015 , 27, 1857-64	24	77
231	Ion transport in sub-5-nm graphene nanopores. <i>Journal of Chemical Physics</i> , 2014 , 140, 084707	3.9	75
230	Spectroscopic investigation of the wettability of multilayer graphene using highly ordered pyrolytic graphite as a model material. <i>Langmuir</i> , 2014 , 30, 12827-36	4	73
229	Induced electrokinetic transport in micro-nanofluidic interconnect devices. <i>Langmuir</i> , 2007 , 23, 13209-224		73
228	DNA Origami-Graphene Hybrid Nanopore for DNA Detection. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 92-100	9.5	67
227	A Combined Continuum/DSMC Technique for Multiscale Analysis of Microfluidic Filters. <i>Journal of Computational Physics</i> , 2002 , 178, 342-372	4.1	67
226	Complex nonlinear oscillations in electrostatically actuated microstructures. <i>Journal of Microelectromechanical Systems</i> , 2006 , 15, 355-369	2.5	66
225	A domain adaptive stochastic collocation approach for analysis of MEMS under uncertainties. <i>Journal of Computational Physics</i> , 2009 , 228, 7662-7688	4.1	65

224	Hexagonal boron nitride and water interaction parameters. <i>Journal of Chemical Physics</i> , 2016 , 144, 16411-16418	3.9	65
223	. <i>IEEE Transactions on Antennas and Propagation</i> , 2012 , 60, 301-309	4.9	63
222	Theory of thermoelastic damping in electrostatically actuated microstructures. <i>Physical Review B</i> , 2006 , 74,	3.3	63
221	Dissolution of Monocrystalline Silicon Nanomembranes and Their Use as Encapsulation Layers and Electrical Interfaces in Water-Soluble Electronics. <i>ACS Nano</i> , 2017 , 11, 12562-12572	16.7	61
220	Molecular understanding of osmosis in semipermeable membranes. <i>Physical Review Letters</i> , 2006 , 97, 024501	7.4	61
219	Hierarchical multiscale simulation of electrokinetic transport in silica nanochannels at the point of zero charge. <i>Langmuir</i> , 2006 , 22, 9041-51	4	60
218	Curved neuromorphic image sensor array using a MoS-organic heterostructure inspired by the human visual recognition system. <i>Nature Communications</i> , 2020 , 11, 5934	17.4	60
217	Development and modeling of electrically triggered hydrogels for microfluidic applications. <i>Journal of Microelectromechanical Systems</i> , 2005 , 14, 1198-1207	2.5	58
216	Meshless analysis of piezoelectric devices. <i>Computational Mechanics</i> , 2001 , 27, 23-36	4	58
215	Scaling of electrokinetic transport in nanometer channels. <i>Langmuir</i> , 2005 , 21, 8972-7	4	57
214	Positivity conditions in meshless collocation methods. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2004 , 193, 1171-1202	5.7	56
213	Mechanism for stamp collapse in soft lithography. <i>Applied Physics Letters</i> , 2005 , 87, 251925	3.4	53
212	Quasiharmonic models for the calculation of thermodynamic properties of crystalline silicon under strain. <i>Journal of Applied Physics</i> , 2006 , 99, 064314	2.5	51
211	Inducing electronic changes in graphene through silicon (100) substrate modification. <i>Nano Letters</i> , 2011 , 11, 2735-42	11.5	50
210	Modeling and Simulation of Ionic Currents in Three-Dimensional Microfluidic Devices with Nanofluidic Interconnects. <i>Journal of Nanoparticle Research</i> , 2005 , 7, 507-516	2.3	50
209	A reproducing kernel particle method for meshless analysis of microelectromechanical systems. <i>Computational Mechanics</i> , 1999 , 23, 324-338	4	50
208	Rotational motion of a single water molecule in a buckyball. <i>Physical Chemistry Chemical Physics</i> , 2013 , 15, 17993-8000	3.6	49
207	Adsorption Kinetics Dictate Monolayer Self-Assembly for Both Lipid-In and Lipid-Out Approaches to Droplet Interface Bilayer Formation. <i>Langmuir</i> , 2015 , 31, 12883-93	4	48

206	Relative Entropy and Optimization-Driven Coarse-Graining Methods in VOTCA. <i>PLoS ONE</i> , 2015 , 10, e0131754	48
205	A compact model for electroosmotic flows in microfluidic devices. <i>Journal of Micromechanics and Microengineering</i> , 2002 , 12, 625-635	2 47
204	Combined circuit/device modeling and simulation of integrated microfluidic systems. <i>Journal of Microelectromechanical Systems</i> , 2005 , 14, 81-95	2.5 46
203	Boundary cloud method: a combined scattered point/boundary integral approach for boundary-only analysis. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2002 , 191, 2337-2370	5.7 46
202	Meshless analysis of steady-state electro-osmotic transport. <i>Journal of Microelectromechanical Systems</i> , 2000 , 9, 435-449	2.5 46
201	Modeling Water Flow Through Carbon Nanotube Membranes with Entrance/Exit Effects. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2017 , 21, 247-262	3.7 45
200	Surface-charge-induced asymmetric electrokinetic transport in confined silicon nanochannels. <i>Applied Physics Letters</i> , 2005 , 86, 143105	3.4 45
199	Complex oscillations and chaos in electrostatic microelectromechanical systems under superharmonic excitations. <i>Physical Review Letters</i> , 2005 , 94, 204101	7.4 45
198	Water-solubility-driven separation of gases using graphene membrane. <i>Journal of Membrane Science</i> , 2013 , 428, 546-553	9.6 44
197	Ordering-Induced Fast Diffusion of Nanoscale Water Film on Graphene. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 2595-2599	3.8 43
196	Solution-Synthesized Chevron Graphene Nanoribbons Exfoliated onto H:Si(100). <i>Nano Letters</i> , 2017 , 17, 170-178	11.5 42
195	Strain Modulation of Graphene by Nanoscale Substrate Curvatures: A Molecular View. <i>Nano Letters</i> , 2018 , 18, 2098-2104	11.5 42
194	Akhiezer damping in nanostructures. <i>Physical Review B</i> , 2011 , 84,	3.3 42
193	Linear, nonlinear and mixed-regime analysis of electrostatic MEMS. <i>Sensors and Actuators A: Physical</i> , 2001 , 91, 278-291	3.9 42
192	Modeling mechanophore activation within a crosslinked glassy matrix. <i>Journal of Applied Physics</i> , 2013 , 114, 023504	2.5 41
191	Existence of Multiple Phases of Water at Nanotube Interfaces. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 23763-23771	3.8 41
190	Resonant MEMS Mass Sensors for Measurement of Microdroplet Evaporation. <i>Journal of Microelectromechanical Systems</i> , 2012 , 21, 702-711	2.5 40
189	Gated transport in nanofluidic devices. <i>Microfluidics and Nanofluidics</i> , 2011 , 11, 297-306	2.8 40

188	A Lagrangian approach for electrostatic analysis of deformable conductors. <i>Journal of Microelectromechanical Systems</i> , 2002 , 11, 245-254	2.5	39
187	Temperature-dependent wettability on a titanium dioxide surface. <i>Molecular Simulation</i> , 2009 , 35, 31-37		38
186	Effect of induced electric field on single-file reverse osmosis. <i>Physical Chemistry Chemical Physics</i> , 2009 , 11, 8614-9	3.6	38
185	A quasi-continuum hydrodynamic model for slit shaped nanochannel flow. <i>Journal of Chemical Physics</i> , 2013 , 139, 074109	3.9	36
184	Efficient mixed-domain analysis of electrostatic MEMS. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2003 , 22, 1228-1242	2.5	35
183	Interatomic potential-based semiclassical theory for Lennard-Jones fluids. <i>Journal of Chemical Physics</i> , 2007 , 127, 174701	3.9	33
182	Kirigami-inspired strain-insensitive sensors based on atomically-thin materials. <i>Materials Today</i> , 2020 , 34, 58-65	21.8	33
181	Stochastic Analysis of Electrostatic MEMS Subjected to Parameter Variations. <i>Journal of Microelectromechanical Systems</i> , 2009 , 18, 1454-1468	2.5	32
180	Simulating Ion Permeation Through the ompF Porin Ion Channel Using Three-Dimensional Drift-Diffusion Theory. <i>Journal of Computational Electronics</i> , 2003 , 2, 29-47	1.8	32
179	Coarse-Grained Potential Model for Structural Prediction of Confined Water. <i>Journal of Chemical Theory and Computation</i> , 2012 , 8, 1828-40	6.4	31
178	Physical models for coupled electromechanical analysis of silicon nanoelectromechanical systems. <i>Journal of Applied Physics</i> , 2005 , 97, 114304	2.5	31
177	Differential ion transport induced electroosmosis and internal recirculation in heterogeneous osmosis membranes. <i>Nano Letters</i> , 2006 , 6, 995-9	11.5	31
176	Identification of amino acids with sensitive nanoporous MoS ₂ : towards machine learning-based prediction. <i>Npj 2D Materials and Applications</i> , 2018 , 2,	8.8	29
175	Separation of gases from gas/water mixtures using carbon nanotubes. <i>Applied Physics Letters</i> , 2010 , 96, 133108	3.4	28
174	A chloride ion-selective boron nitride nanotube. <i>Chemical Physics Letters</i> , 2009 , 478, 185-190	2.5	28
173	Highly Efficient Solar-Driven Carbon Dioxide Reduction on Molybdenum Disulfide Catalyst Using Choline Chloride-Based Electrolyte. <i>Advanced Energy Materials</i> , 2019 , 9, 1803536	21.8	26
172	Capacitive Sensing of Intercalated H ₂ O Molecules Using Graphene. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 25804-12	9.5	26
171	A multilevel Newton method for mixed-energy domain simulation of MEMS. <i>Journal of Microelectromechanical Systems</i> , 1999 , 8, 299-308	2.5	26

170	Measurements of the size and correlations between ions using an electrolytic point contact. <i>Nature Communications</i> , 2019 , 10, 2382	17.4	25
169	Strong Electroosmotic Coupling Dominates Ion Conductance of 1.5 nm Diameter Carbon Nanotube Porins. <i>ACS Nano</i> , 2019 , 13, 12851-12859	16.7	25
168	Crosslinking PMMA: Molecular dynamics investigation of the shear response. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2014 , 52, 444-449	2.6	25
167	Parameterization of Continuum Theories for Single Wall Carbon Nanotube Switches by Molecular Dynamics Simulations. <i>Journal of Computational Electronics</i> , 2002 , 1, 313-316	1.8	25
166	A boundary cloud method with a cloud-by-cloud polynomial basis. <i>Engineering Analysis With Boundary Elements</i> , 2003 , 27, 57-71	2.6	25
165	New approximations and collocation schemes in the finite cloud method. <i>Computers and Structures</i> , 2005 , 83, 1366-1385	4.5	25
164	Multiscale Simulation of Electroosmotic Transport Using Embedding Techniques. <i>International Journal for Multiscale Computational Engineering</i> , 2004 , 2, 173-188	2.4	24
163	The interaction between hexagonal boron nitride and water from first principles. <i>Journal of Chemical Physics</i> , 2015 , 142, 234702	3.9	23
162	Coarse-grained potential models for structural prediction of carbon dioxide (CO ₂) in confined environments. <i>Journal of Chemical Physics</i> , 2012 , 136, 024102	3.9	23
161	A stochastic Lagrangian approach for geometrical uncertainties in electrostatics. <i>Journal of Computational Physics</i> , 2007 , 226, 156-179	4.1	23
160	Coupling of hierarchical fluid models with electrostatic and mechanical models for the dynamic analysis of MEMS. <i>Journal of Micromechanics and Microengineering</i> , 2006 , 16, 1705-1719	2	23
159	Calculation of thermodynamic and mechanical properties of silicon nanostructures using the local phonon density of states. <i>Physical Review B</i> , 2006 , 74,	3.3	23
158	Coarse-Grained Force Field for Imidazolium-Based Ionic Liquids. <i>Journal of Chemical Theory and Computation</i> , 2018 , 14, 3252-3261	6.4	23
157	Antibody Subclass Detection Using Graphene Nanopores. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 1670-1676	6.4	22
156	Thermodynamic state-dependent structure-based coarse-graining of confined water. <i>Journal of Chemical Physics</i> , 2012 , 137, 214707	3.9	21
155	Water phase transition induced by a Stone-Wales defect in a boron nitride nanotube. <i>Journal of the American Chemical Society</i> , 2008 , 130, 13649-52	16.4	21
154	Self-consistent molecular dynamics formulation for electric-field-mediated electrolyte transport through nanochannels. <i>Physical Review E</i> , 2007 , 76, 011202	2.4	21
153	Multiscale modeling of electroosmotic flow: Effects of discrete ion, enhanced viscosity, and surface friction. <i>Journal of Chemical Physics</i> , 2017 , 146, 184106	3.9	20

152	Understanding anomalous current-voltage characteristics in microchannel-nanochannel interconnect devices. <i>Journal of Colloid and Interface Science</i> , 2012 , 384, 162-71	9.3	20
151	Three-Dimensional Continuum Simulations of Ion Transport Through Biological Ion Channels: Effect of Charge Distribution in the Constriction Region of Porin. <i>Journal of Computational Electronics</i> , 2002 , 1, 335-340	1.8	20
150	Coupling of the mesh-free finite cloud method with the boundary element method: a collocation approach. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2003 , 192, 2355-2375	5.7	20
149	. <i>Journal of Microelectromechanical Systems</i> , 2001 , 10, 538-549	2.5	20
148	Three-Dimensional Molecular Mapping of Ionic Liquids at Electrified Interfaces. <i>ACS Nano</i> , 2020 ,	16.7	20
147	Universal Reduction in Dielectric Response of Confined Fluids. <i>ACS Nano</i> , 2020 , 14, 12761-12770	16.7	20
146	Strain-resilient electrical functionality in thin-film metal electrodes using two-dimensional interlayers.. <i>Nature Electronics</i> , 2021 , 4, 126-133	28.4	20
145	Transfer-Learning-Based Coarse-Graining Method for Simple Fluids: Toward Deep Inverse Liquid-State Theory. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 1242-1250	6.4	19
144	Thermodynamic insight into spontaneous hydration and rapid water permeation in aquaporins. <i>Applied Physics Letters</i> , 2014 , 105, 083702	3.4	19
143	Mathematical Modeling and Simulation of Dissolvable Hydrogels. <i>Journal of Aerospace Engineering</i> , 2003 , 16, 55-64	1.4	19
142	ATOMISTIC CAPACITANCE OF A NANOTUBE ELECTROMECHANICAL DEVICE. <i>International Journal of Nanoscience</i> , 2002 , 01, 337-346	0.6	19
141	A finite element formulation for the hydrodynamic semiconductor device equations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1993 , 107, 269-298	5.7	19
140	Nanofluidic Transport Theory with Enhancement Factors Approaching One. <i>ACS Nano</i> , 2020 , 14, 272-281	16.7	19
139	Interfacial friction based quasi-continuum hydrodynamical model for nanofluidic transport of water. <i>Journal of Chemical Physics</i> , 2015 , 143, 174702	3.9	18
138	A transferable coarse-grained potential to study the structure of confined, supercritical Lennard-Jones fluids. <i>Journal of Chemical Physics</i> , 2010 , 132, 044703	3.9	18
137	Analysis of Hybrid Electrothermomechanical Microactuators With Integrated Electrothermal and Electrostatic Actuation. <i>Journal of Microelectromechanical Systems</i> , 2009 , 18, 1126-1136	2.5	18
136	A data-driven stochastic collocation approach for uncertainty quantification in MEMS. <i>International Journal for Numerical Methods in Engineering</i> , 2010 , 83, 575-597	2.4	18
135	Mechanistic Insights into Hydration of Solid Oxides. <i>Chemistry of Materials</i> , 2018 , 30, 138-144	9.6	18

134	Scanning tunneling spectroscopy and density functional calculation of silicon dangling bonds on the Si(100)-2 \times 1:H surface. <i>Surface Science</i> , 2013 , 609, 147-151	1.8	17
133	Electromechanical Signatures for DNA Sequencing through a Mechanosensitive Nanopore. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 650-7	6.4	17
132	Atomistic simulations on the mechanical properties of a silicon nanofilm covered with graphene. <i>Computational Materials Science</i> , 2011 , 50, 3063-3066	3.2	17
131	Molybdenum disulfide and water interaction parameters. <i>Journal of Chemical Physics</i> , 2017 , 147, 104706	3.9	16
130	Diffusion of water submonolayers on hydrophilic surfaces. <i>Applied Physics Letters</i> , 2008 , 93, 253104	3.4	16
129	Modeling of dielectric charging in RF MEMS capacitive switches. <i>Microwave and Optical Technology Letters</i> , 2007 , 49, 3188-3192	1.2	16
128	Stochastic modeling of coupled electromechanical interaction for uncertainty quantification in electrostatically actuated MEMS. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008 , 197, 3456-3471	5.7	16
127	The role of A-site ion on proton diffusion in perovskite oxides (ABO ₃). <i>Journal of Power Sources</i> , 2020 , 445, 227327	8.9	16
126	Ion Transport in Electrically Imperfect Nanopores. <i>ACS Nano</i> , 2020 , 14, 10518-10526	16.7	16
125	Highly Strain-Tunable Interlayer Excitons in MoS ₂ /WSe ₂ Heterobilayers. <i>Nano Letters</i> , 2021 , 21, 3956-3964	11.5	16
124	Asymmetric-Fluidic-Reservoirs Induced High Rectification Nanofluidic Diode. <i>Scientific Reports</i> , 2018 , 8, 13941	4.9	16
123	Electrical Double Layer of Supported Atomically Thin Materials. <i>Nano Letters</i> , 2019 , 19, 4588-4593	11.5	15
122	Characterization of electrochemical properties of a microfluidic channel integrated system using computational impedance spectroscopy (CIS). <i>Electrochimica Acta</i> , 2013 , 105, 514-523	6.7	15
121	Simulation and experiment of substrate aluminum grain orientation dependent self-ordering in anodic porous alumina. <i>Journal of Applied Physics</i> , 2013 , 113, 204903	2.5	15
120	Self-assembly of graphenes. <i>Surface Science</i> , 2011 , 605, 1616-1620	1.8	15
119	Controlling the ionic current rectification factor of a nanofluidic/microfluidic interface with symmetric nanocapillary interconnects. <i>Analytical Chemistry</i> , 2015 , 87, 3598-605	7.8	14
118	Surface diffusion of n-alkanes: Mechanism and anomalous behavior. <i>Chemical Physics Letters</i> , 2007 , 447, 310-315	2.5	14
117	Numerical analysis of 3D electrostatics of deformable conductors using a Lagrangian approach. <i>Engineering Analysis With Boundary Elements</i> , 2004 , 28, 583-591	2.6	14

116	Energy Dissipation in Fluid Coupled Nanoresonators: The Effect of Phonon-Fluid Coupling. <i>ACS Nano</i> , 2018 , 12, 368-377	16.7	13
115	Hybrid techniques for electrostatic analysis of nanoelectromechanical systems. <i>Journal of Applied Physics</i> , 2004 , 96, 2221-2231	2.5	13
114	Transient analysis of electro-osmotic transport by a reduced-order modelling approach. <i>International Journal for Numerical Methods in Engineering</i> , 2003 , 56, 1023-1050	2.4	13
113	Dispersion control in nano-channel systems by localized potential variations. <i>Sensors and Actuators A: Physical</i> , 2003 , 104, 268-274	3.9	13
112	Numerical solution of two-carrier hydrodynamic semiconductor device equations employing a stabilized finite element method. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1995 , 125, 187-220	5.7	13
111	Langevin-Poisson-EQT: A dipolar solvent based quasi-continuum approach for electric double layers. <i>Journal of Chemical Physics</i> , 2017 , 146, 044108	3.9	12
110	A sparse grid based collocation method for model order reduction of finite element approximations of passive electromagnetic devices under uncertainty 2010 ,		12
109	Size and surface orientation effects on thermal expansion coefficient of one-dimensional silicon nanostructures. <i>Journal of Applied Physics</i> , 2009 , 105, 104309	2.5	12
108	Multiscale electrostatic analysis of silicon nanoelectromechanical systems (NEMS) via heterogeneous quantum models. <i>Physical Review B</i> , 2008 , 77,	3.3	12
107	Carbon nanotube screening effects on the water-ion channels. <i>Applied Physics Letters</i> , 2008 , 93, 43122	3.4	12
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