

# James M Chen

## List of Publications by Year in descending order

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48  
papers

869  
citations

840776

11  
h-index

477307

29  
g-index

49  
all docs

49  
docs citations

49  
times ranked

847  
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of the Electric Field on DNA Bases as Pigments for Nanodevices: A First-Principles Study. Journal of Nanoscience and Nanotechnology, 2020, 20, 2603-2610.	0.9	1
2	Nonlinear potential field in contact electrification. Journal of Electrostatics, 2020, 108, 103511.	1.9	6
3	Boltzmannâ€Curtiss Description for Flows Under Translational Nonequilibrium. Journal of Fluids Engineering, Transactions of the ASME, 2020, 142, .	1.5	1
4	Separation and Quantum Tunneling of Photo-generated Carriers Using a Tribo-Induced Field. Matter, 2019, 1, 650-660.	10.0	56
5	Mode II adhesion energy analysis of stiction-failed poly-Si $\mu$ cantilevers using a MEMS load cell. Journal of Micromechanics and Microengineering, 2019, 29, 075013.	2.6	8
6	Triboâ€Tunneling DC Generator with Carbon Aerogel/Silicon Multiâ€Nanocontacts. Advanced Electronic Materials, 2019, 5, 1900464.	5.1	46
7	Scaled-up Direct-Current Generation in MoS <sub>2</sub> Multilayer-Based Moving Heterojunctions. ACS Applied Materials & Interfaces, 2019, 11, 35404-35409.	8.0	55
8	Verification and Validation of a Morphing Continuum Approach to Hypersonic Flow Simulations. , 2019, , .		1
9	A monolithic algorithm for the flow simulation of flexible flapping wings. International Journal of Micro Air Vehicles, 2019, 11, 175682931984612.	1.3	6
10	First-order approximation to the Boltzmannâ€Curtiss equation for flows with local spin. Journal of Engineering Mathematics, 2019, 114, 43-64.	1.2	3
11	Particle-Turbulence Interaction In Homogeneous Isotropic Turbulence. , 2019, , .		0
12	Small-scale energy cascade in homogeneous isotropic turbulence. Physical Review Fluids, 2019, 4, .	2.5	8
13	Morphing Continuum Simulation of Transonic Flow over Axisymmetric Hill. AIAA Journal, 2018, 56, 4321-4330.	2.6	5
14	DFT and canonical ensemble investigations of gasoline additives at the gas phase: ETBE, MTBE, DIPE, ethanol and methanol. Theoretical Chemistry Accounts, 2018, 137, 1.	1.4	3
15	Atomistic Field Theory for contact electrification of dielectrics. Journal of Electrostatics, 2018, 96, 10-15.	1.9	15
16	Morphing continuum analysis of energy transfer in compressible turbulence. Physical Review Fluids, 2018, 3, .	2.5	7
17	A Morphing Continuum Approach to Supersonic Flow Over a Compression Ramp. , 2017, , .		2
18	Extension of Morphing Continuum Theory to Numerical Simulations of Transonic Flow over a Bump. , 2017, , .		1

#	ARTICLE	IF	CITATIONS
19	Morphing Continuum Theory: Incorporating the Physics of Microstructures to Capture the Transition to Turbulence Within a Boundary Layer. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2017, 139, .	1.5	11
20	Morphing continuum theory for turbulence: Theory, computation, and visualization. <i>Physical Review E</i> , 2017, 96, 043108.	2.1	9
21	An advanced kinetic theory for morphing continuum with inner structures. <i>Reports on Mathematical Physics</i> , 2017, 80, 317-332.	0.8	5
22	A Molecular Dynamics-Based Model for Knudsen Number and Slip Velocity. , 2017, , .		0
23	Effects of thermal boundary conditions on the joule heating of electrolyte in a microchannel. <i>Journal of Hydrodynamics</i> , 2016, 28, 850-862.	3.2	2
24	A multiscale study of the boundary layer development for microfluidic system. <i>Molecular Simulation</i> , 2016, 42, 1370-1378.	2.0	2
25	A Morphing Continuum Approach to Compressible Flows: Shock Wave-Turbulent Boundary Layer Interaction. , 2016, , .		7
26	Advanced Kinetic Theory for Polyatomic Gases at Equilibrium. , 2016, , .		1
27	Modulation of dendritic patterns during electrodeposition: A nonlinear phase-field model. <i>Journal of Power Sources</i> , 2015, 300, 376-385.	7.8	235
28	Theoretical Thermodynamics Study of Polyamidoamine Deposited Around a Nanotube as Motor Controlled by Light and Under Temperature Effect. <i>Journal of Nanoscience and Nanotechnology</i> , 2015, 15, 2840-2844.	0.9	0
29	A Molecular Dynamics of Cold Neutral Atoms Captured by Carbon Nanotube Under Electric Field and Thermal Effect as a Selective Atoms Sensor. <i>Journal of Nanoscience and Nanotechnology</i> , 2015, 15, 3677-3680.	0.9	7
30	An integrated fast Fourier transform-based phase-field and crystal plasticity approach to model recrystallization of three dimensional polycrystals. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2015, 285, 829-848.	6.6	96
31	Multiscale modeling of fracture in Barium Titanate: fracture toughness estimation and modified Gâ€Criterion. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 2015, 95, 165-172.	1.6	1
32	Selective-Area Atomic Layer Deposition of Copper Nanostructures for Direct Electro-Optical Solar Energy Conversion. <i>ECS Transactions</i> , 2014, 64, 253-263.	0.5	3
33	A Phase-Field Model Coupled with Large Elasto-Plastic Deformation: Application to Lithiated Silicon Electrodes. <i>Journal of the Electrochemical Society</i> , 2014, 161, F3164-F3172.	2.9	99
34	Special Issue on Multiscale Modeling and Simulation of Physical Phenomena of Material Systems. <i>Journal of Nanomechanics &amp; Micromechanics</i> , 2014, 4, .	1.4	1
35	Extension of nonlinear Onsager theory of irreversibility. <i>Acta Mechanica</i> , 2013, 224, 3153-3158.	2.1	5
36	The role of geometry in nanoscale rectennas for rectification and energy conversion. , 2013, , .		2

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37	Numerical simulation for unsteady compressible Micropolar fluid flow. Computers and Fluids, 2012, 66, 1-9.	2.5	32
38	Spectral Difference Solution of Two-dimensional Unsteady Compressible Micropolar Equations on Moving and Deformable Grids. , 2012, , .		5
39	Micropolar Electromagnetic Fluids: Control of Vortex Shedding Using Imposed Transverse Magnetic Field. Journal of Advanced Mathematics and Applications, 2012, 1, 151-162.	0.5	8
40	Micropolar Theory of Flexoelectricity. Journal of Advanced Mathematics and Applications, 2012, 1, 269-274.	0.5	6
41	The Buckingham Catastrophe in multiscale modelling of fracture. International Journal of Theoretical and Applied Multiscale Mechanics, 2011, 2, 3.	0.6	4
42	Atomistic Field Theory of Nano Energy Harvesting. Journal of Computational and Theoretical Nanoscience, 2011, 8, 722-728.	0.4	8
43	Constitutive equations of Micropolar electromagnetic fluids. Journal of Non-Newtonian Fluid Mechanics, 2011, 166, 867-874.	2.4	28
44	Multiscale modeling of dynamic crack propagation. Engineering Fracture Mechanics, 2010, 77, 736-743.	4.3	18
45	Multiscale modeling of fracture of MgO: Sensitivity of interatomic potentials. Theoretical and Applied Fracture Mechanics, 2010, 53, 74-79.	4.7	7
46	Atomic Formulation of Nano-Piezoelectricity in Barium Titanate. Nanoscience and Nanotechnology Letters, 2010, 2, 26-29.	0.4	8
47	Atomistic analysis of nano/micro biosensors. Interaction and Multiscale Mechanics, 2010, 3, 111-121.	0.4	6
48	A travelling wave dielectrophoretic pump for blood delivery. Lab on A Chip, 2009, 9, 1349.	6.0	29