# 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 | Modulation of dendritic patterns during electrodeposition: A nonlinear phase-field model. Journal of Power Sources, 2015, 300, 376-385. | 7.8 | 235 |
| 2 | A Phase-Field Model Coupled with Large Elasto-Plastic Deformation: Application to Lithiated Silicon Electrodes. Journal of the Electrochemical Society, 2014, 161, F3164-F3172. | 2.9 | 99 |
| 3 | An integrated fast Fourier transform-based phase-field and crystal plasticity approach to model recrystallization of three dimensional polycrystals. Computer Methods in Applied Mechanics and Engineering, 2015, 285, 829-848. | 6.6 | 96 |
| 4 | Separation and Quantum Tunneling of Photo-generated Carriers Using a Tribo-Induced Field. Matter, 2019, 1, 650-660. | 10.0 | 56 |
| 5 | Scaled-up Direct-Current Generation in $MoS_2$ Multilayer-Based Moving Heterojunctions. ACS Applied Materials &amp; Interfaces, 2019, 11, 35404-35409. | 8.0 | 55 |
| 6 | Tribo‐Tunneling DC Generator with Carbon Aerogel/Silicon Multi‐Nanocontacts. Advanced Electronic Materials, 2019, 5, 1900464. | 5.1 | 46 |
| 7 | Numerical simulation for unsteady compressible Micropolar fluid flow. Computers and Fluids, 2012, 66, 1-9. | 2.5 | 32 |
| 8 | A travelling wave dielectrophoretic pump for blood delivery. Lab on A Chip, 2009, 9, 1349. | 6.0 | 29 |
| 9 | Constitutive equations of Micropolar electromagnetic fluids. Journal of Non-Newtonian Fluid Mechanics, 2011, 166, 867-874. | 2.4 | 28 |
| 10 | Multiscale modeling of dynamic crack propagation. Engineering Fracture Mechanics, 2010, 77, 736-743. | 4.3 | 18 |
| 11 | Atomistic Field Theory for contact electrification of dielectrics. Journal of Electrostatics, 2018, 96, 10-15. | 1.9 | 15 |
| 12 | Morphing Continuum Theory: Incorporating the Physics of Microstructures to Capture the Transition to Turbulence Within a Boundary Layer. Journal of Fluids Engineering, Transactions of the ASME, 2017, 139, . | 1.5 | 11 |
| 13 | Morphing continuum theory for turbulence: Theory, computation, and visualization. Physical Review E, 2017, 96, 043108. | 2.1 | 9 |
| 14 | Atomic Formulation of Nano-Piezoelectricity in Barium Titanate. Nanoscience and Nanotechnology Letters, 2010, 2, 26-29. | 0.4 | 8 |
| 15 | Atomistic Field Theory of Nano Energy Harvesting. Journal of Computational and Theoretical Nanoscience, 2011, 8, 722-728. | 0.4 | 8 |
| 16 | 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 |
| 17 | Small-scale energy cascade in homogeneous isotropic turbulence. Physical Review Fluids, 2019, 4, . | 2.5 | 8 |
| 18 | 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 |

| # | ARTICLE | IF | CITATIONS |
|---|---------|----|-----------|
| 19 | Multiscale modeling of fracture of MgO: Sensitivity of interatomic potentials. Theoretical and Applied Fracture Mechanics, 2010, 53, 74-79. | 4.7 | 7 |
| 20 | A Molecular Dynamics of Cold Neutral Atoms Captured by Carbon Nanotube Under Electric Field and Thermal Effect as a Selective Atoms Sensor. Journal of Nanoscience and Nanotechnology, 2015, 15, 3677-3680. | 0.9 | 7 |
| 21 | A Morphing Continuum Approach to Compressible Flows: Shock Wave-Turbulent Boundary Layer Interaction. , 2016, , . | | 7 |
| 22 | Morphing continuum analysis of energy transfer in compressible turbulence. Physical Review Fluids, 2018, 3, . | 2.5 | 7 |
| 23 | A monolithic algorithm for the flow simulation of flexible flapping wings. International Journal of Micro Air Vehicles, 2019, 11, 175682931984612. | 1.3 | 6 |
| 24 | Nonlinear potential field in contact electrification. Journal of Electrostatics, 2020, 108, 103511. | 1.9 | 6 |
| 25 | Micropolar Theory of Flexoelectricity. Journal of Advanced Mathematics and Applications, 2012, 1, 269-274. | 0.5 | 6 |
| 26 | Atomistic analysis of nano/micro biosensors. Interaction and Multiscale Mechanics, 2010, 3, 111-121. | 0.4 | 6 |
| 27 | Spectral Difference Solution of Two-dimensional Unsteady Compressible Micropolar Equations on Moving and Deformable Grids. , 2012, , . | | 5 |
| 28 | Extension of nonlinear Onsager theory of irreversibility. Acta Mechanica, 2013, 224, 3153-3158. | 2.1 | 5 |
| 29 | An advanced kinetic theory for morphing continuum with inner structures. Reports on Mathematical Physics, 2017, 80, 317-332. | 0.8 | 5 |
| 30 | Morphing Continuum Simulation of Transonic Flow over Axisymmetric Hill. AIAA Journal, 2018, 56, 4321-4330. | 2.6 | 5 |
| 31 | The Buckingham Catastrophe in multiscale modelling of fracture. International Journal of Theoretical and Applied Multiscale Mechanics, 2011, 2, 3. | 0.6 | 4 |
| 32 | Selective-Area Atomic Layer Deposition of Copper Nanostructures for Direct Electro-Optical Solar Energy Conversion. ECS Transactions, 2014, 64, 253-263. | 0.5 | 3 |
| 33 | 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 |
| 34 | First-order approximation to the Boltzmann–Curtiss equation for flows with local spin. Journal of Engineering Mathematics, 2019, 114, 43-64. | 1.2 | 3 |
| 35 | The role of geometry in nanoscale rectennas for rectification and energy conversion. , 2013, , . | | 2 |
| 36 | Effects of thermal boundary conditions on the joule heating of electrolyte in a microchannel. Journal of Hydrodynamics, 2016, 28, 850-862. | 3.2 | 2 |

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|---|---------|-----|-----------|
| 37 | A multiscale study of the boundary layer development for microfluidic system. Molecular Simulation, 2016, 42, 1370-1378. | 2.0 | 2 |
| 38 | A Morphing Continuum Approach to Supersonic Flow Over a Compression Ramp. , 2017, , . | | 2 |
| 39 | Special Issue on Multiscale Modeling and Simulation of Physical Phenomena of Material Systems. Journal of Nanomechanics & Micromechanics, 2014, 4, . | 1.4 | 1 |
| 40 | Multiscale modeling of fracture in Barium Titanate: fracture toughness estimation and modified Gâ€Criterion. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2015, 95, 165-172. | 1.6 | 1 |
| 41 | Advanced Kinetic Theory for Polyatomic Gases at Equilibrium. , 2016, , . | | 1 |
| 42 | Extension of Morphing Continuum Theory to Numerical Simulations of Transonic Flow over a Bump. , 2017, , . | | 1 |
| 43 | Verification and Validation of a Morphing Continuum Approach to Hypersonic Flow Simulations. , 2019, , . | | 1 |
| 44 | 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 |
| 45 | Boltzmannâ€"Curtiss Description for Flows Under Translational Nonequilibrium. Journal of Fluids Engineering, Transactions of the ASME, 2020, 142, . | 1.5 | 1 |
| 46 | Theoretical Thermodynamics Study of Polyamidoamine Deposited Around a Nanotube as Motor Controlled by Light and Under Temperature Effect. Journal of Nanoscience and Nanotechnology, 2015, 15, 2840-2844. | 0.9 | 0 |
| 47 | A Molecular Dynamics-Based Model for Knudsen Number and Slip Velocity. , 2017, , . | | 0 |
| 48 | Particle-Turbulence Interaction In Homogeneous Isotropic Turbulence. , 2019, , . | | 0 |