

Qiming Wang

List of Publications by Year in descending order

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Version: 2024-02-01

55
papers

4,172
citations

172457

29
h-index

161849

54
g-index

55
all docs

55
docs citations

55
times ranked

5933
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 1 | Multifunctionality and control of the crumpling and unfolding of large-area graphene. <i>Nature Materials</i> , 2013, 12, 321-325. | 27.5 | 735 |
| 2 | Lightweight Mechanical Metamaterials with Tunable Negative Thermal Expansion. <i>Physical Review Letters</i> , 2016, 117, 175901. | 7.8 | 337 |
| 3 | Mechanochemical Activation of Covalent Bonds in Polymers with Full and Repeatable Macroscopic Shape Recovery. <i>ACS Macro Letters</i> , 2014, 3, 216-219. | 4.8 | 309 |
| 4 | Electrically assisted 3D printing of nacre-inspired structures with self-sensing capability. <i>Science Advances</i> , 2019, 5, eaau9490. | 10.3 | 214 |
| 5 | Cephalopod-inspired design of electro-mechano-chemically responsive elastomers for on-demand fluorescent patterning. <i>Nature Communications</i> , 2014, 5, 4899. | 12.8 | 202 |
| 6 | A three-dimensional phase diagram of growth-induced surface instabilities. <i>Scientific Reports</i> , 2015, 5, 8887. | 3.3 | 175 |
| 7 | Design of stiff, tough and stretchy hydrogel composites via nanoscale hybrid crosslinking and macroscale fiber reinforcement. <i>Soft Matter</i> , 2014, 10, 7519-7527. | 2.7 | 155 |
| 8 | Harnessing large deformation and instabilities of soft dielectrics: Theory, experiment, and application. <i>Applied Physics Reviews</i> , 2014, 1, 021304. | 11.3 | 144 |
| 9 | Magnetoactive Acoustic Metamaterials. <i>Advanced Materials</i> , 2018, 30, e1706348. | 21.0 | 142 |
| 10 | Bioinspired Surfaces with Dynamic Topography for Active Control of Biofouling. <i>Advanced Materials</i> , 2013, 25, 1430-1434. | 21.0 | 140 |
| 11 | Highly-stretchable 3D-architected Mechanical Metamaterials. <i>Scientific Reports</i> , 2016, 6, 34147. | 3.3 | 116 |
| 12 | Beyond wrinkles: Multimodal surface instabilities for multifunctional patterning. <i>MRS Bulletin</i> , 2016, 41, 115-122. | 3.5 | 111 |
| 13 | Additive manufacturing of self-healing elastomers. <i>NPG Asia Materials</i> , 2019, 11, . | 7.9 | 111 |
| 14 | Creasing to Cratering Instability in Polymers under Ultrahigh Electric Fields. <i>Physical Review Letters</i> , 2011, 106, 118301. | 7.8 | 104 |
| 15 | Phase Diagrams of Instabilities in Compressed Film-Substrate Systems. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2014, 81, 0510041-5100410. | 2.2 | 92 |
| 16 | Separating viscoelasticity and poroelasticity of gels with different length and time scales. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2014, 30, 20-27. | 3.4 | 90 |
| 17 | Mechanics of self-healing polymer networks crosslinked by dynamic bonds. <i>Journal of the Mechanics and Physics of Solids</i> , 2018, 121, 409-431. | 4.8 | 89 |
| 18 | Mechanics of mechanochemically responsive elastomers. <i>Journal of the Mechanics and Physics of Solids</i> , 2015, 82, 320-344. | 4.8 | 82 |

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|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 19 | A constitutive model of nanocomposite hydrogels with nanoparticle crosslinkers. Journal of the Mechanics and Physics of Solids, 2016, 94, 127-147. | 4.8 | 82 |
| 20 | Bursting drops in solid dielectrics caused by high voltages. Nature Communications, 2012, 3, 1157. | 12.8 | 60 |
| 21 | Creasing-wrinkling transition in elastomer films under electric fields. Physical Review E, 2013, 88, 042403. | 2.1 | 51 |
| 22 | Soft Robotic Concepts in Catheter Design: an On-Demand Fouling-Release Urinary Catheter. Advanced Healthcare Materials, 2014, 3, 1588-1596. | 7.6 | 50 |
| 23 | Dynamic Electrostatic Lithography: Multiscale On-Demand Patterning on Large-Area Curved Surfaces. Advanced Materials, 2012, 24, 1947-1951. | 21.0 | 49 |
| 24 | Electro-creasing instability in deformed polymers: experiment and theory. Soft Matter, 2011, 7, 6583. | 2.7 | 44 |
| 25 | Electromechanical instability on dielectric polymer surface: Modeling and experiment. Computer Methods in Applied Mechanics and Engineering, 2013, 260, 40-49. | 6.6 | 38 |
| 26 | Growing Living Composites with Ordered Microstructures and Exceptional Mechanical Properties. Advanced Materials, 2021, 33, e2006946. | 21.0 | 37 |
| 27 | Mechanics of self-healing thermoplastic elastomers. Journal of the Mechanics and Physics of Solids, 2020, 137, 103831. | 4.8 | 36 |
| 28 | Dynamic surface deformation of silicone elastomers for management of marine biofouling: laboratory and field studies using pneumatic actuation. Biofouling, 2015, 31, 265-274. | 2.2 | 32 |
| 29 | Interfacial self-healing of nanocomposite hydrogels: Theory and experiment. Journal of the Mechanics and Physics of Solids, 2017, 109, 288-306. | 4.8 | 30 |
| 30 | Mechanics of light-activated self-healing polymer networks. Journal of the Mechanics and Physics of Solids, 2019, 124, 643-662. | 4.8 | 26 |
| 31 | Mechanics of electrophoresis-induced reversible hydrogel adhesion. Journal of the Mechanics and Physics of Solids, 2019, 125, 1-21. | 4.8 | 26 |
| 32 | Sharkskin-Inspired Magnetoactive Reconfigurable Acoustic Metamaterials. Research, 2020, 2020, 4825185. | 5.7 | 23 |
| 33 | Mechanical constraints enhance electrical energy densities of soft dielectrics. Applied Physics Letters, 2011, 99, . | 3.3 | 22 |
| 34 | Tough and Self-Healable Nanocomposite Hydrogels for Repeatable Water Treatment. Polymers, 2018, 10, 880. | 4.5 | 22 |
| 35 | Photosynthesis-assisted remodeling of three-dimensional printed structures. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 7.1 | 20 |
| 36 | Healable, memorizable, and transformable lattice structures made of stiff polymers. NPG Asia Materials, 2020, 12, . | 7.9 | 18 |

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|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 37 | 3D Printing of Nacre-Inspired Structures with Exceptional Mechanical and Flame-Retardant Properties. <i>Research</i> , 2022, 2022, 9840574. | 5.7 | 18 |
| 38 | Electromechanical instabilities of thermoplastics: Theory and in situ observation. <i>Applied Physics Letters</i> , 2012, 101, 141911. | 3.3 | 16 |
| 39 | Mechanical behaviors of the dispersion nuclear fuel plates induced by fuel particle swelling and thermal effect II: Effects of variations of the fuel particle diameters. <i>Journal of Nuclear Materials</i> , 2010, 397, 80-91. | 2.7 | 14 |
| 40 | Research on the interfacial behaviors of plate-type dispersion nuclear fuel elements. <i>Journal of Nuclear Materials</i> , 2010, 399, 41-54. | 2.7 | 14 |
| 41 | Stretchable 3D lattice conductors. <i>Soft Matter</i> , 2017, 13, 7731-7739. | 2.7 | 13 |
| 42 | Sticky Rouse Time Features the Self-Adhesion of Supramolecular Polymer Networks. <i>Macromolecules</i> , 2021, 54, 5053-5064. | 4.8 | 12 |
| 43 | Mechanics of stretchy elastomer lattices. <i>Journal of the Mechanics and Physics of Solids</i> , 2022, 159, 104782. | 4.8 | 12 |
| 44 | Simulation of irradiation hardening of Zircaloy within plate-type dispersion nuclear fuel elements. <i>Journal of Nuclear Materials</i> , 2011, 413, 76-89. | 2.7 | 9 |
| 45 | Mechanical behaviors of the dispersion nuclear fuel plates induced by fuel particle swelling and thermal effect I: Effects of variations of the fuel particle volume fractions. <i>Journal of Nuclear Materials</i> , 2010, 400, 157-174. | 2.7 | 8 |
| 46 | Magnetoactive Acoustic Topological Transistors. <i>Advanced Science</i> , 2022, 9, e2201204. | 11.2 | 8 |
| 47 | Simulation of the coupling behaviors of particle and matrix irradiation swelling and cladding irradiation growth of plate-type dispersion nuclear fuel elements. <i>Mechanics of Materials</i> , 2011, 43, 222-241. | 3.2 | 7 |
| 48 | On-demand hierarchical patterning with electric fields. <i>Applied Physics Letters</i> , 2014, 104, 231605. | 3.3 | 7 |
| 49 | Molecular simulation-guided and physics-informed mechanistic modeling of multifunctional polymers. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2021, 37, 725-745. | 3.4 | 6 |
| 50 | Role of Extracellular Matrix in the Biomechanical Behavior of Pancreatic Tissue. <i>ACS Biomaterials Science and Engineering</i> , 2018, 4, 1916-1923. | 5.2 | 5 |
| 51 | Bone-inspired healing of 3D-printed porous ceramics. <i>Materials Horizons</i> , 2020, 7, 2130-2140. | 12.2 | 4 |
| 52 | Prediction of the micro-thermo-mechanical behaviors in dispersion nuclear fuel plates with heterogeneous particle distributions. <i>Journal of Nuclear Materials</i> , 2011, 418, 69-79. | 2.7 | 2 |
| 53 | Mechanics of photosynthesis assisted polymer strengthening. <i>Journal of the Mechanics and Physics of Solids</i> , 2021, 151, 104382. | 4.8 | 2 |
| 54 | Dynamic Electrostatic Lithography: Multiscale On-Demand Patterning on Large-Area Curved Surfaces (<i>Adv. Mater.</i> 15/2012). <i>Advanced Materials</i> , 2012, 24, 1946-1946. | 21.0 | 1 |

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|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 55 | Living Composites: Growing Living Composites with Ordered Microstructures and Exceptional Mechanical Properties (Adv. Mater. 13/2021). Advanced Materials, 2021, 33, 2170101. | 21.0 | 0 |