# Yujie Wei

## List of Publications by Year in descending order

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Version: 2024-02-01

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|---|---|---|---|
| 119 papers | 9,031 citations | 61945 43 h-index | 39638 94 g-index |
| 121 all docs | 121 docs citations | 121 times ranked | 9483 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Grain boundary diffusion and viscous flow governed mechanical relaxation in polycrystalline materials. Science China Materials, 2022, 65, 1403. | 3.5 | 1 |
| 2 | Slipâ€Lineâ€Guided Growth of Graphene. Advanced Materials, 2022, 34, e2201188. | 11.1 | 7 |
| 3 | The scaling of charging rate and cycle number of commercial batteries. Acta Mechanica Sinica/Lixue Xuebao, 2022, 38, . | 1.5 | 11 |
| 4 | Fatigue endurance limit and crack front evolution in metallic glass. International Journal of Fatigue, 2021, 143, 106004. | 2.8 | 4 |
| 5 | Roughening for Strengthening and Toughening in Monolayer Carbon Based Composites. Nano Letters, 2021, 21, 4823-4829. | 4.5 | 18 |
| 6 | An analytical solution to the stress fields of kinked cracks. Journal of the Mechanics and Physics of Solids, 2021, 156, 104619. | 2.3 | 18 |
| 7 | Tension-compression asymmetry of the stress-strain behavior of the stacked graphene assembly: Experimental measurement and theoretical interpretation. Journal of the Mechanics and Physics of Solids, 2021, 157, 104642. | 2.3 | 2 |
| 8 | A multi-scale algorithm for dislocation creep at elevated temperatures. Theoretical and Applied Mechanics Letters, 2021, 11, 100230. | 1.3 | 4 |
| 9 | The Influence of Metastable Cellular Structure on Deformation Behavior in Laser Additively Manufactured 316L Stainless Steel. Nanomaterials, 2021, 11, 2859. | 1.9 | 4 |
| 10 | Scaling of internal dissipation of polycrystalline solids on grain-size and frequency. Acta Materialia, 2020, 201, 350-363. | 3.8 | 9 |
| 11 | Large Singleâ€Crystal Cu Foils with Highâ€Index Facets by Strainâ€Engineered Anomalous Grain Growth. Advanced Materials, 2020, 32, e2002034. | 11.1 | 45 |
| 12 | Nanoscale precipitates as sustainable dislocation sources for enhanced ductility and high strength. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 5204-5209. | 3.3 | 87 |
| 13 | Nanomechanics of graphene. National Science Review, 2019, 6, 324-348. | 4.6 | 75 |
| 14 | The linear-dependence of adhesion strength and adhesion range on temperature in soft membranes. Journal of the Mechanics and Physics of Solids, 2019, 132, 103697. | 2.3 | 17 |
| 15 | Supersonic Screw Dislocations Gliding at the Shear Wave Speed. Physical Review Letters, 2019, 122, 045501. | 2.9 | 33 |
| 16 | Anisotropic expansion and size-dependent fracture of silicon nanotubes during lithiation. Journal of Materials Chemistry A, 2019, 7, 15113-15122. | 5.2 | 41 |
| 17 | The formation of discontinuous gradient regimes during crack initiation in high strength steels under very high cycle fatigue. International Journal of Fatigue, 2019, 124, 483-492. | 2.8 | 38 |
| 18 | Metal ductility evaluation by flattening test: The geometry dependence. International Journal of Pressure Vessels and Piping, 2019, 170, 40-48. | 1.2 | 4 |

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|---|---|---|---|
| 19 | The effective fracture strength and fracture toughness of solids with energy dissipation confined to localized strips. International Journal of Plasticity, 2019, 120, 47-63. | 4.1 | 3 |
| 20 | The influence of combined gradient structure with residual stress on crack-growth behavior in medium carbon steel. Engineering Fracture Mechanics, 2019, 209, 369-381. | 2.0 | 33 |
| 21 | Defects guided wrinkling in graphene on copper substrate. Carbon, 2019, 143, 736-742. | 5.4 | 27 |
| 22 | Statistical analysis on rolling contact fatigue in railroad axle bearing steel. Fatigue and Fracture of Engineering Materials and Structures, 2019, 42, 651-663. | 1.7 | 3 |
| 23 | A dislocation-based solution for stress introduced by arbitrary volume expansion in cylinders. Mathematics and Mechanics of Solids, 2019, 24, 598-615. | 1.5 | 1 |
| 24 | Examining the validity of Stoney-equation for in-situ stress measurements in thin film electrodes using a large-deformation finite-element procedure. Journal of Power Sources, 2018, 387, 126-134. | 4.0 | 13 |
| 25 | Stress evolution in elastic-plastic electrodes during electrochemical processes: A numerical method and its applications. Journal of the Mechanics and Physics of Solids, 2018, 116, 403-415. | 2.3 | 46 |
| 26 | Failure mechanisms of 2D silicon film anodes: in situ observations and simulations on crack evolution. Chemical Communications, 2018, 54, 3997-4000. | 2.2 | 47 |
| 27 | Case study: The effect of running distance on the microstructure and properties of railroad axle bearings. Wear, 2018, 394-395, 159-165. | 1.5 | 11 |
| 28 | Cryogenic temperature toughening and strengthening due to gradient phase structure. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 712, 358-364. | 2.6 | 12 |
| 29 | Entropy Power, Autoregressive Models, and Mutual Information. Entropy, 2018, 20, 750. | 1.1 | 12 |
| 30 | Colloquium: Phononic thermal properties of two-dimensional materials. Reviews of Modern Physics, 2018, 90, . | 16.4 | 238 |
| 31 | Unconventional Deformation Behaviours of Nanoscaled High-Entropy Alloys. Entropy, 2018, 20, 778. | 1.1 | 6 |
| 32 | Fast Growth of Strain-Free AlN on Graphene-Buffered Sapphire. Journal of the American Chemical Society, 2018, 140, 11935-11941. | 6.6 | 75 |
| 33 | Effects of intermittent loading on fatigue life of a high strength steel in very high cycle fatigue regime. International Journal of Fatigue, 2018, 117, 9-12. | 2.8 | 20 |
| 34 | Electronic band structure of carbon honeycombs. Materials Today Physics, 2018, 5, 72-77. | 2.9 | 5 |
| 35 | Response of an infinite beam on a bilinear elastic foundation: Bridging the gap between the Winkler and tensionless foundation models. European Journal of Mechanics, A/Solids, 2018, 71, 394-403. | 2.1 | 11 |
| 36 | Crack deflection in brittle media with heterogeneous interfaces and its application in shale fracking. Journal of the Mechanics and Physics of Solids, 2017, 101, 235-249. | 2.3 | 57 |

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|---|---|---|---|
| 37 | Geometric design of micron-sized crystalline silicon anodes through in situ observation of deformation and fracture behaviors. Journal of Materials Chemistry A, 2017, 5, 12793-12802. | 5.2 | 38 |
| 38 | On the influence of junction structures on the mechanical and thermal properties of carbon honeycombs. Carbon, 2017, 119, 278-286. | 5.4 | 56 |
| 39 | Bottom-up Design of Three-Dimensional Carbon-Honeycomb with Superb Specific Strength and High Thermal Conductivity. Nano Letters, 2017, 17, 179-185. | 4.5 | 95 |
| 40 | Theory on Bending in Cantilever Beams With Adsorbed Islands. Journal of Applied Mechanics, Transactions ASME, 2017, 84, . | 1.1 | 1 |
| 41 | Optimal stress and deformation partition in gradient materials for better strength and tensile ductility: A numerical investigation. Scientific Reports, 2017, 7, 10954. | 1.6 | 38 |
| 42 | Wrinkle-Free Single-Crystal Graphene Wafer Grown on Strain-Engineered Substrates. ACS Nano, 2017, 11, 12337-12345. | 7.3 | 172 |
| 43 | The stress-velocity relationship of twinning partial dislocations and the phonon-based physical interpretation. Science China: Physics, Mechanics and Astronomy, 2017, 60, 1. | 2.0 | 12 |
| 44 | The Gaussian distribution of lattice size and atomic level heterogeneity in high entropy alloys. Extreme Mechanics Letters, 2017, 11, 84-88. | 2.0 | 36 |
| 45 | Atomistic simulation for deforming complex alloys with application toward TWIP steel and associated physical insights. Journal of the Mechanics and Physics of Solids, 2017, 98, 290-308. | 2.3 | 46 |
| 46 | Extraction of Anisotropic Mechanical Properties From Nanoindentation of SiC-6H Single Crystals. Journal of Applied Mechanics, Transactions ASME, 2016, 83, . | 1.1 | 30 |
| 47 | Super-stretchable borophene. Europhysics Letters, 2016, 116, 36001. | 0.7 | 22 |
| 48 | Dislocation Strengthening without Ductility Trade-off in Metastable Austenitic Steels. Scientific Reports, 2016, 6, 35345. | 1.6 | 27 |
| 49 | On the influence of interfacial properties to the bending rigidity of layered structures. Journal of the Mechanics and Physics of Solids, 2016, 92, 278-296. | 2.3 | 23 |
| 50 | Gradient driven anomalous reversible plasticity in conventional magnesium alloys. Extreme Mechanics Letters, 2016, 9, 158-164. | 2.0 | 7 |
| 51 | Strength gradient enhances fatigue resistance of steels. Scientific Reports, 2016, 6, 22156. | 1.6 | 43 |
| 52 | The influence of crack-orientation distribution on the mechanical properties of pre-cracked brittle media. International Journal of Solids and Structures, 2016, 96, 64-73. | 1.3 | 9 |
| 53 | Grain boundary and curvature enhanced lithium adsorption on carbon. Carbon, 2016, 107, 557-563. | 5.4 | 17 |
| 54 | Research on the mechanics of high speed rails. Acta Mechanica Sinica/Lixue Xuebao, 2016, 32, 189-190. | 1.5 | 2 |

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|---|---|---|---|
| 55 | Molecular dynamics studying on welding behavior in thermosetting polymers due to bond exchange reactions. RSC Advances, 2016, 6, 22476-22487. | 1.7 | 44 |
| 56 | Reformation Capability of Short-Range Order and Their Medium-Range Connections Regulates Deformability of Bulk Metallic Glasses. Scientific Reports, 2015, 5, 12177. | 1.6 | 3 |
| 57 | Notch strengthening or weakening governed by transition of shear failure to normal mode fracture. Scientific Reports, 2015, 5, 10537. | 1.6 | 44 |
| 58 | Griffith Criterion for Brittle Fracture in Graphene. Nano Letters, 2015, 15, 1918-1924. | 4.5 | 180 |
| 59 | Crack instability of ferroelectric solids under alternative electric loading. Journal of the Mechanics and Physics of Solids, 2015, 81, 75-90. | 2.3 | 16 |
| 60 | A molecular dynamics study of bond exchange reactions in covalent adaptable networks. Soft Matter, 2015, 11, 6305-6317. | 1.2 | 71 |
| 61 | Spiral fracture in metallic glasses and its correlation with failure criterion. Acta Materialia, 2015, 99, 206-212. | 3.8 | 25 |
| 62 | Microfluidic Synthesis of Hybrid Nanoparticles with Controlled Lipid Layers: Understanding Flexibility-Regulated Cellâ€“Nanoparticle Interaction. ACS Nano, 2015, 9, 9912-9921. | 7.3 | 163 |
| 63 | Heterogeneous lamella structure unites ultrafine-grain strength with coarse-grain ductility. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14501-14505. | 3.3 | 1,202 |
| 64 | Tunable Rigidity of (Polymeric Core)â€“(Lipid Shell) Nanoparticles for Regulated Cellular Uptake. Advanced Materials, 2015, 27, 1402-1407. | 11.1 | 383 |
| 65 | Preface: Current research progress on mechanics of high speed rail. Acta Mechanica Sinica/Lixue Xuebao, 2014, 30, 846-848. | 1.5 | 0 |
| 66 | Stable planar single-layer hexagonal silicene under tensile strain and its anomalous Poisson's ratio. Applied Physics Letters, 2014, 104, 081902. | 1.5 | 49 |
| 67 | Evading the strengthâ€“ductility trade-off dilemma in steel through gradient hierarchical nanotwins. Nature Communications, 2014, 5, 3580. | 5.8 | 739 |
| 68 | A polycrystal based numerical investigation on the temperature dependence of slip resistance and texture evolution in magnesium alloy AZ31B. International Journal of Plasticity, 2014, 55, 80-93. | 4.1 | 59 |
| 69 | The intrinsic and extrinsic factors for brittle-to-ductile transition in bulk metallic glasses. Theoretical and Applied Fracture Mechanics, 2014, 71, 76-78. | 2.1 | 4 |
| 70 | A stochastic description on the traction-separation law of an interface with non-covalent bonding. Journal of the Mechanics and Physics of Solids, 2014, 70, 227-241. | 2.3 | 27 |
| 71 | Cellular entry of graphene nanosheets: the role of thickness, oxidation and surface adsorption. RSC Advances, 2013, 3, 15776. | 1.7 | 118 |
| 72 | Mechanics and Mechanically Tunable Band Gap in Single-Layer Hexagonal Boron-Nitride. Materials Research Letters, 2013, 1, 200-206. | 4.1 | 141 |

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|---|---|---|---|
| 73 | Grain misorientation and grain-boundary rotation dependent mechanical properties in polycrystalline graphene. Journal of the Mechanics and Physics of Solids, 2013, 61, 1421-1432. | 2.3 | 109 |
| 74 | Binder-free three-dimensional silicon/carbon nanowire networks for high performance lithium-ion battery anodes. Nano Energy, 2013, 2, 943-950. | 8.2 | 47 |
| 75 | Bending Rigidity and Gaussian Bending Stiffness of Single-Layered Graphene. Nano Letters, 2013, 13, 26-30. | 4.5 | 299 |
| 76 | On the strain hardening and texture evolution in high manganese steels: Experiments and numerical investigation. Journal of the Mechanics and Physics of Solids, 2013, 61, 2588-2604. | 2.3 | 32 |
| 77 | Response to discussion on â€œAn extended strain energy density failure criterion by differentiating volumetric and distortional deformationâ€• International Journal of Solids and Structures, 2013, 50, 1506. | 1.3 | 0 |
| 78 | Strength softening at shear bands in metallic glasses. Philosophical Magazine Letters, 2013, 93, 221-230. | 0.5 | 7 |
| 79 | Towards more uniform deformation in metallic glasses: The role of Poisson's ratio. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 560, 510-517. | 2.6 | 28 |
| 80 | Mechanisms of anisotropic friction in nanotwinned Cu revealed by atomistic simulations. Modelling and Simulation in Materials Science and Engineering, 2013, 21, 065001. | 0.8 | 18 |
| 81 | Twin boundary spacing-dependent friction in nanotwinned copper. Physical Review B, 2012, 85, . | 1.1 | 34 |
| 82 | Tunable band structures of polycrystalline graphene by external and mismatch strains. Acta Mechanica Sinica/Lixue Xuebao, 2012, 28, 1539-1544. | 1.5 | 10 |
| 83 | The nature of strength enhancement and weakening by pentagonâ€“heptagon defects inÂgraphene. Nature Materials, 2012, 11, 759-763. | 13.3 | 548 |
| 84 | A theoretical analysis of the surface dependent binding, peeling and folding of graphene on single crystal copper. Carbon, 2012, 50, 3055-3063. | 5.4 | 51 |
| 85 | An extended strain energy density failure criterion by differentiating volumetric and distortional deformation. International Journal of Solids and Structures, 2012, 49, 1117-1126. | 1.3 | 22 |
| 86 | Stable high areal capacity lithium-ion battery anodes based on three-dimensional Niâ€“Sn nanowire networks. Journal of Power Sources, 2012, 211, 46-51. | 4.0 | 79 |
| 87 | Microstructure and mechanical properties of aluminum 5083 weldments by gas tungsten arc and gas metal arc welding. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 549, 7-13. | 2.6 | 105 |
| 88 | Scaling of maximum strength with grain size in nanotwinned fcc metals. Physical Review B, 2011, 83, . | 1.1 | 68 |
| 89 | Surfactant-Induced Postsynthetic Modulation of Pd Nanoparticle Crystallinity. Nano Letters, 2011, 11, 1614-1617. | 4.5 | 98 |
| 90 | Continuum modeling of the response of a Mg alloy AZ31 rolled sheet during uniaxial deformation. International Journal of Plasticity, 2011, 27, 1739-1757. | 4.1 | 93 |

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| 91 | The kinetics and energetics of dislocation mediated de-twinning in nano-twinned face-centered cubic metals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 1558-1566. | 2.6 | 65 |
| 92 | Anisotropic size effect in strength in coherent nanowires with tilted twins. Physical Review B, 2011, 84, . | 1.1 | 24 |
| 93 | A Dugdale model based geometrical amplifier enables the measurement of separation-to-failure for a cohesive interface. Theoretical and Applied Mechanics Letters, 2011, 1, 011006. | 1.3 | 0 |
| 94 | Failure criterion for metallic glasses. Philosophical Magazine, 2011, 91, 4536-4554. | 0.7 | 43 |
| 95 | Dislocation nucleation governed softening and maximum strength in nano-twinned metals. Nature, 2010, 464, 877-880. | 13.7 | 956 |
| 96 | Analytical model and molecular dynamics simulations of the size dependence of flow stress in amorphous intermetallic nanowires at temperatures near the glass transition. Physical Review B, 2010, 81, . | 1.1 | 15 |
| 97 | Bending Nanowire Growth in Solution by Mechanical Disturbance. Nano Letters, 2010, 10, 2121-2125. | 4.5 | 42 |
| 98 | Transient Stress Concentration in Diffusional Creep of a Thin Foil with Heterogeneous Grain Boundary Diffusivity. Mathematics and Mechanics of Solids, 2009, 14, 179-191. | 1.5 | 3 |
| 99 | Competing grain-boundary- and dislocation-mediated mechanisms in plastic strain recovery in nanocrystalline aluminum. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 16108-16113. | 3.3 | 120 |
| 100 | Numerical simulations of crack deflection at a twist-misoriented grain boundary between two ideally brittle crystals. Journal of the Mechanics and Physics of Solids, 2009, 57, 1865-1879. | 2.3 | 18 |
| 101 | An instability index of shear band for plasticity in metallic glasses. Acta Materialia, 2009, 57, 1367-1372. | 3.8 | 182 |
| 102 | Tug-of-War in Nanoparticles: Competitive Growth of Au on Auâ^'Fe<sub>3</sub>O<sub>4</sub> Nanoparticles. Nano Letters, 2009, 9, 4544-4547. | 4.5 | 70 |
| 103 | An elasticâ€“viscoplastic model of deformation in nanocrystalline metals based on coupled mechanisms in grain boundaries and grain interiors. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 478, 16-25. | 2.6 | 59 |
| 104 | Recoverable creep deformation and transient local stress concentration due to heterogeneous grain-boundary diffusion and sliding in polycrystalline solids. Journal of the Mechanics and Physics of Solids, 2008, 56, 1460-1483. | 2.3 | 82 |
| 105 | Enhanced strain-rate sensitivity in fcc nanocrystals due to grain-boundary diffusion and sliding. Acta Materialia, 2008, 56, 1741-1752. | 3.8 | 149 |
| 106 | On micro-cracking, inelastic dilatancy, and the brittle-ductile transition in compact rocks: A micro-mechanical study. International Journal of Solids and Structures, 2008, 45, 2785-2798. | 1.3 | 28 |
| 107 | Physical Interpretation of the Maximum Receptorâ^'Ligand Bond Spacing to Ensure Cell Adhesion in Ligand-Coated Substrates. Langmuir, 2008, 24, 5644-5646. | 1.6 | 12 |
| 108 | Entropic and energetic elasticity in controlling catch-to-slip bonds in cell-adhesion molecules. Materials Research Society Symposia Proceedings, 2008, 1132, 1. | 0.1 | 0 |

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| 109 | Entropic-elasticity-controlled dissociation and energetic-elasticity-controlled rupture induce catch-to-slip bonds in cell-adhesion molecules. Physical Review E, 2008, 77, 031910. | 0.8 | 11 |
| 110 | Mechanical Behavior Associated with Heterogeneous Grain-boundary Diffusion and Sliding in Nanocrystalline Materials. , 2008, , . | | 0 |
| 111 | A constitutive model for powder-processed nanocrystalline metals. Acta Materialia, 2007, 55, 921-931. | 3.8 | 25 |
| 112 | Recoverable creep deformation due to heterogeneous grain-boundary diffusion and sliding. Scripta Materialia, 2007, 57, 933-936. | 2.6 | 28 |
| 113 | Mesoscopic Modeling of the Deformation and Fracture of Nanocrystalline Metals. , 2007, , 3-10. | | 1 |
| 114 | A computational study of the mechanical behavior of nanocrystalline fcc metals. Acta Materialia, 2006, 54, 3177-3190. | 3.8 | 97 |
| 115 | An elasticâ€“plastic interface constitutive model: application to adhesive joints. International Journal of Plasticity, 2004, 20, 2063-2081. | 4.1 | 56 |
| 116 | Grain-boundary sliding and separation in polycrystalline metals: application to nanocrystalline fcc metals. Journal of the Mechanics and Physics of Solids, 2004, 52, 2587-2616. | 2.3 | 261 |
| 117 | Critical Sensitivity and Trans-scale Fluctuations in Catastrophic Rupture. Pure and Applied Geophysics, 2002, 159, 2491-2509. | 0.8 | 27 |
| 118 | Weibull modulus for diverse strength due to sample-specificity. Theoretical and Applied Fracture Mechanics, 2000, 34, 211-216. | 2.1 | 8 |
| 119 | Evolution-induced Catastrophe and its Predictability. , 2000, 157, 1945-1957. | | 20 |