

# Shuyong Jiang

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4992848/publications.pdf>

Version: 2024-02-01

69  
papers

1,060  
citations

394421

19  
h-index

501196

28  
g-index

69  
all docs

69  
docs citations

69  
times ranked

702  
citing authors

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 1  | Deformation mechanism of NiTi shape memory alloy subjected to severe plastic deformation at low temperature. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 559, 607-614.                    | 5.6 | 55        |
| 2  | Atomistic investigation on superelasticity of NiTi shape memory alloy with complex microstructures based on molecular dynamics simulation. <i>International Journal of Plasticity</i> , 2020, 125, 27-51.   | 8.8 | 55        |
| 3  | Influence of annealing on NiTi shape memory alloy subjected to severe plastic deformation. <i>Intermetallics</i> , 2013, 32, 344-351.   | 3.9 | 48        |
| 4  | Nanocrystallization and amorphization of NiTi shape memory alloy under severe plastic deformation based on local canning compression. <i>Journal of Non-Crystalline Solids</i> , 2013, 367, 23-29.  | 3.1 | 48        |
| 5  | Multiple plastic deformation mechanisms of NiTi shape memory alloy based on local canning compression at various temperatures. <i>Intermetallics</i> , 2016, 70, 45-52.   | 3.9 | 48        |
| 6  | Simulation of dynamic recrystallization of NiTi shape memory alloy during hot compression deformation based on cellular automaton. <i>Computational Materials Science</i> , 2013, 71, 124-134.  | 3.0 | 46        |
| 7  | Application of BPANN for prediction of backward ball spinning of thin-walled tubular part with longitudinal inner ribs. <i>Journal of Materials Processing Technology</i> , 2008, 196, 190-196.   | 6.3 | 44        |
| 8  | Transformation twinning and deformation twinning of NiTi shape memory alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 660, 1-10.   | 5.6 | 41        |
| 9  | Influence of void density on dislocation mechanisms of void shrinkage in nickel single crystal based on molecular dynamics simulation. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2017, 90, 90-97.  | 2.7 | 32        |
| 10 | Role of ball size in backward ball spinning of thin-walled tubular part with longitudinal inner ribs. <i>Journal of Materials Processing Technology</i> , 2009, 209, 2167-2174.   | 6.3 | 30        |
| 11 | Phase Transformation, Twinning, and Detwinning of NiTi Shape-Memory Alloy Subject to a Shock Wave Based on Molecular-Dynamics Simulation. <i>Materials</i> , 2018, 11, 2334.  | 2.9 | 29        |
| 12 | Mechanisms of crack propagation in nanoscale single crystal, bicrystal and tricrystal nickels based on molecular dynamics simulation. <i>Results in Physics</i> , 2017, 7, 1722-1733.   | 4.1 | 28        |
| 13 | Multiscale investigation of inhomogeneous plastic deformation of NiTi shape memory alloy based on local canning compression. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 569, 117-123.    | 5.6 | 27        |
| 14 | Isothermal precision forging of complex-shape rotating disk of aluminum alloy based on processing map and digitized technology. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 580, 294-304. | 5.6 | 25        |
| 15 | Investigation on dislocation-based mechanisms of void growth and coalescence in single crystal and nanotwinned nickels by molecular dynamics simulation. <i>Philosophical Magazine</i> , 2017, 97, 2772-2794.   | 1.6 | 25        |
| 16 | Dislocation mechanism of void growth at twin boundary of nanotwinned nickel based on molecular dynamics simulation. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2016, 380, 2757-2761.  | 2.1 | 24        |
| 17 | Isothermal precision forging of aluminum alloy ring seats with different preforms using FEM and experimental investigation. <i>International Journal of Advanced Manufacturing Technology</i> , 2014, 72, 1693-1703.  | 3.0 | 21        |
| 18 | A molecular dynamics study of intercrystalline crack propagation in nano-nickel bicrystal films with (0 1 0) twist boundary. <i>Engineering Fracture Mechanics</i> , 2016, 168, 147-159.  | 4.3 | 21        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 19 | Role of Severe Plastic Deformation in Suppressing Formation of R Phase and Ni <sub>4</sub> Ti <sub>3</sub> Precipitate of NiTi Shape Memory Alloy. <i>Metals</i> , 2017, 7, 145.  | 2.3 | 21        |
| 20 | Processing Map of NiTiNb Shape Memory Alloy Subjected to Plastic Deformation at High Temperatures. <i>Metals</i> , 2017, 7, 328.  | 2.3 | 19        |
| 21 | Plastic deformation mechanisms of equiatomic Ni <sub>20</sub> Ti <sub>20</sub> Fe <sub>20</sub> Al <sub>20</sub> Cu <sub>20</sub> high-entropy alloy at high temperatures. <i>Journal of Materials Science</i> , 2017, 52, 3199-3207. | 3.7 | 18        |
| 22 | Influence of annealing on incomplete detwinning and deformation twinning in equiatomic NiTi shape memory alloy undergoing severe plastic deformation. <i>Journal of Alloys and Compounds</i> , 2021, 871, 159550.                     | 5.5 | 17        |
| 23 | Influence of partial static recrystallization on microstructures and mechanical properties of NiTiFe shape memory alloy subjected to severe plastic deformation. <i>Materials Research Bulletin</i> , 2017, 88, 226-233.              | 5.2 | 15        |
| 24 | Atomistic mechanisms for temperature-induced crystallization of amorphous copper based on molecular dynamics simulation. <i>Computational Materials Science</i> , 2018, 151, 25-33.   | 3.0 | 15        |
| 25 | Investigation of interface compatibility during ball spinning of composite tube of copper and aluminum. <i>International Journal of Advanced Manufacturing Technology</i> , 2017, 88, 683-690.  | 3.0 | 14        |
| 26 | Crystal plasticity finite element simulation of NiTi shape memory alloy under canning compression based on constitutive model containing dislocation density. <i>Mechanics of Materials</i> , 2021, 157, 103830.                      | 3.2 | 14        |
| 27 | Influence of Addition of Nb on Phase Transformation, Microstructure and Mechanical Properties of Equiatomic NiTi SMA. <i>Journal of Materials Engineering and Performance</i> , 2016, 25, 4341-4351.                                  | 2.5 | 13        |
| 28 | Physical mechanisms of nanocrystallization of a novel Ni-based alloy under uniaxial compression at cryogenic temperature. <i>Materials Characterization</i> , 2016, 116, 18-23.   | 4.4 | 13        |
| 29 | Microstructure, Mechanical Property, and Phase Transformation of Quaternary NiTiFeNb and NiTiFeTa Shape Memory Alloys. <i>Metals</i> , 2017, 7, 309.  | 2.3 | 13        |
| 30 | Microstructure evolution and deformation mechanism of NiTiFe shape memory alloy based on plane strain compression and subsequent annealing. <i>Materials Chemistry and Physics</i> , 2018, 215, 112-120.                              | 4.0 | 13        |
| 31 | Orientation dependence of void growth at triple junction of grain boundaries in nanoscale tricrystal nickel film subjected to uniaxial tensile loading. <i>Journal of Physics and Chemistry of Solids</i> , 2016, 98, 220-232.        | 4.0 | 12        |
| 32 | Molecular Dynamics Simulation of Crack Propagation in Nanoscale Polycrystal Nickel Based on Different Strain Rates. <i>Metals</i> , 2017, 7, 432.   | 2.3 | 12        |
| 33 | Mechanisms of nanocrystallization and amorphization of NiTiNb shape memory alloy subjected to severe plastic deformation. <i>Procedia Engineering</i> , 2017, 207, 1493-1498.   | 1.2 | 11        |
| 34 | Mechanical properties and fracture mechanisms of martensitic NiTi shape memory alloy based on various thermomechanical-processing microstructures. <i>Journal of Alloys and Compounds</i> , 2021, 883, 160797.                        | 5.5 | 11        |
| 35 | Influence of twist angle on crack propagation of nanoscale bicrystal nickel film based on molecular dynamics simulation. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2017, 87, 281-294.                            | 2.7 | 10        |
| 36 | Atomistic Investigation on Diffusion Welding between Stainless Steel and Pure Ni Based on Molecular Dynamics Simulation. <i>Materials</i> , 2018, 11, 1957.   | 2.9 | 10        |

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 37 | Microstructures and Mechanical Properties of Equiatomic NiTi Shape Memory Alloy Undergoing Local Canning Compression and Subsequent Annealing. <i>Metals and Materials International</i> , 2021, 27, 4901-4910.  | 3.4 | 10        |
| 38 | Plastic deformation mechanisms of NiCuCrMoTiAlNb Ni-based alloys at cryogenic temperature. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 664, 135-145.   | 5.6 | 9         |
| 39 | Microstructures and Mechanical Properties of NiTiFeAlCu High-Entropy Alloys with Exceptional Nano-precipitates. <i>Journal of Materials Engineering and Performance</i> , 2017, 26, 41-50.   | 2.5 | 9         |
| 40 | A Combined Experimental-Numerical Approach for Investigating Texture Evolution of NiTi Shape Memory Alloy under Uniaxial Compression. <i>Metals</i> , 2017, 7, 356.  | 2.3 | 9         |
| 41 | Influence of Heat Treatment on Microstructures and Mechanical Properties of NiCuCrMoTiAlNb Nickel-Based Alloy. <i>Metals</i> , 2018, 8, 217.   | 2.3 | 9         |
| 42 | Crystal plasticity finite element simulation of NiTi shape memory alloy based on representative volume element. <i>Metals and Materials International</i> , 2017, 23, 1075-1086.   | 3.4 | 8         |
| 43 | Molecular dynamics investigation on mechanical behaviour and phase transition of nanocrystalline NiTi shape memory alloy containing amorphous surface. <i>Applied Surface Science</i> , 2022, 587, 152871.   | 6.1 | 8         |
| 44 | Influence of slip system combination models on crystal plasticity finite element simulation of NiTi shape memory alloy undergoing uniaxial compression. <i>Progress in Natural Science: Materials International</i> , 2017, 27, 598-605.   | 4.4 | 7         |
| 45 | Investigation of primary static recrystallization in a NiTiFe shape memory alloy subjected to cold canning compression using the coupling crystal plasticity finite element method with cellular automaton. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2017, 25, 075008. | 2.0 | 7         |
| 46 | Investigation on Deformation Mechanisms of NiTi Shape Memory Alloy Tube under Radial Loading. <i>Metals</i> , 2017, 7, 268.  | 2.3 | 7         |
| 47 | Deformation Behavior and Microstructure Evolution of NiTiCu Shape Memory Alloy Subjected to Plastic Deformation at High Temperatures. <i>Metals</i> , 2017, 7, 294.  | 2.3 | 7         |
| 48 | Molecular dynamics simulation of mechanical behavior and phase transformation of nanocrystalline NiTi shape memory alloy with gradient structure. <i>Computational Materials Science</i> , 2022, 204, 111186.  | 3.0 | 7         |
| 49 | Investigation of Dynamic Recrystallization of NiTi Shape Memory Alloy Subjected to Local Canning Compression. <i>Metals</i> , 2017, 7, 208.  | 2.3 | 6         |
| 50 | Orientation dependence of mechanical behavior and phase transformation of NiTi shape memory alloy with multilayer structures by molecular dynamics simulation. <i>Journal of Materials Research and Technology</i> , 2022, 18, 943-961.  | 5.8 | 6         |
| 51 | Prediction of mechanical properties of 50CrVA tempered steel strip for horn diaphragm based on BPANN. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , 2009, 24, 791-795.  | 1.0 | 5         |
| 52 | Deformation Heterogeneity and Texture Evolution of NiTiFe Shape Memory Alloy Under Uniaxial Compression Based on Crystal Plasticity Finite Element Method. <i>Journal of Materials Engineering and Performance</i> , 2017, 26, 2671-2682.  | 2.5 | 5         |
| 53 | Subgrain Effect on Grain Scale Plasticity of NiTi Shape Memory Alloy Under Canning Compression: A Crystal Plasticity Finite Element Analysis. <i>Metals and Materials International</i> , 2019, 25, 333-342.   | 3.4 | 5         |
| 54 | Correlation of mechanical properties and electronic structures for NdFeB permanent magnet under hydrostatic pressure based on first-principle calculation. <i>Journal of Materials Research and Technology</i> , 2022, 18, 3410-3427.  | 5.8 | 5         |

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 55 | Effect of Plane Strain Compression and Subsequent Recrystallization Annealing on Microstructures and Phase Transformation of NiTiFe Shape Memory Alloy. Journal of Materials Engineering and Performance, 2018, 27, 4514-4524.   | 2.5 | 4         |
| 56 | Investigation on Texture Evolution Mechanism of NiTiFe Shape Memory Alloy Under Plane Strain Compression. Metals and Materials International, 2020, 27, 4047.  | 3.4 | 4         |
| 57 | Multiscale Modeling of Polycrystalline NiTi Shape Memory Alloy under Various Plastic Deformation Conditions by Coupling Microstructure Evolution and Macroscopic Mechanical Response. Materials, 2017, 10, 1172.   | 2.9 | 3         |
| 58 | Investigation of the Dynamic Recrystallization of FeMnSiCrNi Shape Memory Alloy under Hot Compression Based on Cellular Automaton. Metals, 2019, 9, 469.   | 2.3 | 3         |
| 59 | Investigation on Hot Workability of Ti-37 At Pct Nb Alloy Based on Processing Map and Microstructural Evolution. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 2830-2844.   | 2.2 | 3         |
| 60 | Comparison for Grain Growth Dynamics of Severely Deformed Austenite and Martensite NiTi Shape Memory Alloys after Complete Crystallization of Amorphous Phase. Journal of Materials Engineering and Performance, 2021, 30, 6191-6202.                                      | 2.5 | 3         |
| 61 | STUDY ON THE INFLUENCE LAWS OF MECHANICAL PROPERTIES ON STIFFNESS OF AUTOMOTIVE BODY PANELS. International Journal of Modern Physics B, 2009, 23, 1634-1639.   | 2.0 | 2         |
| 62 | Microstructural evolution of plastic deformation of NiTi shape memory alloy at low temperature. Journal Wuhan University of Technology, Materials Science Edition, 2013, 28, 1034-1037.  | 1.0 | 2         |
| 63 | Influence of heat treatment on complex-shape rotating disk subjected to isothermal precision forging. Journal of Mechanical Science and Technology, 2017, 31, 141-147.   | 1.5 | 2         |
| 64 | A Coupled Finite Element and Crystal Plasticity Study of Friction Effect on Texture Evolution in Uniaxial Compression of NiTi Shape Memory Alloy. Materials, 2018, 11, 2162.   | 2.9 | 2         |
| 65 | Influence of Degree of Deformation on Static Recrystallization Texture and Compressive Strength of NiTiFe Shape Memory Alloy Subjected to Canning Compression. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 6277-6289. | 2.2 | 2         |
| 66 | Influence of Fire Times on the Microstructure and Mechanical Properties of Forgings with Complex Shape. Advanced Science Letters, 2011, 4, 1027-1031.  | 0.2 | 2         |
| 67 | Deformation mechanism of hot spinning of NiTi shape memory alloy tube based on FEM. Journal Wuhan University of Technology, Materials Science Edition, 2012, 27, 811-814.  | 1.0 | 1         |
| 68 | Inhomogeneous Plastic Deformation Mechanisms of NiTiFe Shape Memory Alloy Subjected to Local Canning Compression. Journal of Materials Engineering and Performance, 2021, 30, 1808-1815.   | 2.5 | 0         |
| 69 | Atomic Simulation of Crystallographic Orientation Effect on Void Shrinkage and Collapse in Single-Crystal Copper under Shock Compression. Journal of Materials Engineering and Performance, 0, , 1.  | 2.5 | 0         |