Yoji Shibutani

List of Publications by Year
in descending order

102	1,075	567144 15	414303 32
papers	citations	h-index	g-index

102	102	102	1009
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Relationship between local geometrical factors and mechanical properties for Cuâ€“Zr amorphous alloys. Intermetallics, 2007, 15, 139-144.	1.8	201
2	Atomistic simulation of shear localization in Cuâ€“Zr bulk metallic glass. Intermetallics, 2006, 14, 1033-1037.	1.8	124
3	Origin of the plasticity in bulk amorphous alloys. Journal of Materials Research, 2007, 22, 3087-3097.	1.2	98
4	Complete set of elastic constants ofÎ±-quartz at high pressure: A first-principles study. Physical Review B, 2007, 75, .	1.1	59
5	Structural disordering process of an amorphous alloy driven by the elastostatic compression at room temperature. Applied Physics Letters, 2008, 92, .	1.5	55
6	Surface roughness effects on the displacement bursts observed in nanoindentation. Journal of Materials Research, 2004, 19, 183-188.	1.2	54
7	Nanoplastic deformation of nanoindentation: Crystallographic dependence of displacement bursts. Acta Materialia, 2007, 55, 1813-1822.	3.8	52
8	Atomistic simulations of elastic deformation and dislocation nucleation in Al under indentation-induced stress distribution. Modelling and Simulation in Materials Science and Engineering, 2006, 14, S55-S62.	0.8	44
9	Plastic deformation behaviors of amorphous-Cu50Zr50/crystalline-Cu nanolaminated structures by molecular dynamics simulations. Journal of Alloys and Compounds, 2017, 693, 285-290.	2.8	44
10	Atomistic characterization of structural and elastic properties of auxetic crystalline SiO2. Physica Status Solidi (B): Basic Research, 2007, 244, 900-909.	0.7	30
11	Grain growth prediction with inclination dependence of ã€ˆ110ã€‰ tilt grain boundary using multi-phase-field model with penalty for multiple junctions. Computational Materials Science, 2012, 53, 474-482.	1.4	26
12	An ab initio study of the ideal tensile and shear strength of single-crystal Î²â€“Si₃N₄. Journal of Materials Research, 2003, 18, 1168-1172.	1.2	25
13	In-plane mechanical behaviors of 2D repetitive frameworks with four-coordinate flexible joints and elbowed beam members. Journal of the Mechanics and Physics of Solids, 2009, 57, 1485-1499.	2.3	23
14	Effect of the Atomic Packing Density on the Structural Change Rate of Amorphous Alloys under Elastostatic Stress. Metals and Materials International, 2008, 14, 159-163.	1.8	20
15	Mechanical Responses of Copper Bicrystalline Micro Pillars with Σ3 Coherent Twin Boundaries by Uniaxial Compression Tests. Materials Transactions, 2014, 55, 52-57.	0.4	16
16	Orthotropic Laminated Open-cell Frameworks Retaining Strong Auxeticity under Large Uniaxial Loading. Scientific Reports, 2017, 7, 39816.	1.6	14
17	Energetic Analysis of Deformation Twins and Twinning Dislocations in Magnesium. Materials Transactions, 2013, 54, 1524-1527.	0.4	12
18	Irreversible Deformation of Carbon Nanotubes under Bending. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 1999, 63, 1262-1268.	0.2	11

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19	Effects of Atomic Size for Voronoi Tessellation Technique on Binary and Ternary Systems of Metallic Glasses. Materials Transactions, 2006, 47, 2904-2909.	0.4	11
20	Large Deformability of 2D Framed Structures Connected by Flexible Joints. Journal of Solid Mechanics and Materials Engineering, 2008, 2, 1037-1048.	0.5	11
21	Switching between two types of auxetic behavior of two-dimensional periodic cells with square rotation. Physica Status Solidi (B): Basic Research, 2016, 253, 718-725.	0.7	9
22	Parameter-free method for the shape optimization of stiffeners on thin-walled structures to minimize stress concentration. Journal of Mechanical Science and Technology, 2015, 29, 1383-1390.	0.7	8
23	First-principles study of interfacial interaction between carbon nanotube and Al2O3(0001). Journal of Applied Physics, 2017, 121, 025304.	1.1	7
24	Effects of Atomic Deviatoric Distortion on Local Glass Transition of Metallic Glasses. Materials Transactions, 2005, 46, 2848-2855.	0.4	6
25	Influence of Size and Number of Nanocrystals on Shear Band Formation in Amorphous Alloys. Materials Transactions, 2007, 48, 1001-1006.	0.4	6
26	Equivalent Stiffness Evaluations of Clamped Plates in Bolted Joints under Loading. Journal of Solid Mechanics and Materials Engineering, 2010, 4, 1791-1805.	0.5	6
27	Nonlinear Bending Stiffness of Plates Clamped by Bolted Joints under Bending Moment. Journal of Solid Mechanics and Materials Engineering, 2012, 6, 832-843.	0.5	6
28	Nanoindentation-Induced Collective Dislocation Behavior and Nanoplasticity. Key Engineering Materials, 2007, 340-341, 39-48.	0.4	5
29	Nonlinear large deflection of nanopillars fabricated by focused ion-beam induced chemical vapor deposition using double-cantilever testing. Journal of Vacuum Science & Technology B, 2009, 27, 2161.	1.3	5
30	Minimum Energy Motion and Core Structure of Pure Edge and Screw Dislocations in Aluminum. Journal of Computational Science and Technology, 2010, 4, 185-193.	0.4	5
31	Formation of Prismatic Dislocation Loop around a Spherical Inclusion Using Level Set Dislocation Dynamics. Journal of Solid Mechanics and Materials Engineering, 2012, 6, 913-924.	0.5	5
32	Transfer and Incorporation of Dislocations to Î£3 Tilt Grain Boundaries under Uniaxial Compression. Journal of Solid Mechanics and Materials Engineering, 2013, 7, 571-584.	0.5	5
33	Interface shape design of multi-material structures for delamination strength. Mechanical Engineering Journal, 2016, 3, 15-00360-15-00360.	0.2	5
34	Molecular dynamic simulation approach to understand the physical and proton transport properties of chitosan/sulfonated Poly(Vinyl alcohol) composite membranes. Polymer, 2021, 217, 123458.	1.8	5
35	Formation of Atomistic Island in Al Film Growth by Kinetic Monte Carlo. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2007, 73, 490-497.	0.2	4
36	Higher Accurate Estimation of Axial and Bending Stiffnesses of Plates Clamped by Bolts. Journal of Solid Mechanics and Materials Engineering, 2012, 6, 397-406.	0.5	4

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37	Explicit Distinctions between 2D MPF Grain Growth Simulations and EBSD Analyses to Determine Driving Mechanism of Grain Growth. Materials Transactions, 2013, 54, 1884-1893.	0.4	4
38	Failure Criteria of Adhesive Joints between Aluminum Circular Pipes under Multiaxial Stress State. Key Engineering Materials, 0, 725, 383-388.	0.4	4
39	Simple evaluation method of adhesive failure criterion in multiaxial stress states by uniaxial tensile tests. Mechanical Engineering Journal, 2018, 5, 17-00577-17-00577.	0.2	4
40	Segregation of Carbon in Î±-Fe Symmetrical Tilt Grain Boundaries Studied by First-Principles Based Interatomic Potential. Materials Transactions, 2021, 62, 1057-1063.	0.4	4
41	Dislocation Emission and Formation of Prismatic Loop in Single Crystalline Aluminum under Indentation (Simulations by Molecular Dynamics). Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2004, 70, 947-952.	0.2	3
42	Inelastic deformability of nanopillar by focused-ion-beam chemical vapor deposition. Journal of Vacuum Science & Technology B, 2008, 26, 201.	1.3	3
43	Dislocation Nucleation and Interaction under Nanoindentation in Single Crystalline Al and Cu: Molecular Dynamics Simulations. Journal of Computational Science and Technology, 2008, 2, 459-467.	0.4	3
44	Non-Destructive Observations of Internal Micro-Defects Using Scanning Electron-Induced Acoustic Microscope. Journal of Solid Mechanics and Materials Engineering, 2012, 6, 512-518.	0.5	3
45	Non-Destructive Observations of Internal Microstructures of Materials by Scanning Electron-Induced Acoustic Microscopy. Zairyo/Journal of the Society of Materials Science, Japan, 2006, 55, 95-100.	0.1	3
46	Formation and Critical Shear Stresses of Prismatic Dislocation Loops Observed around Spherical Precipitate in Single Crystalline Aluminum and Copper Matrices (Simulations by Molecular Dynamics). Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2005, 71, 1445-1450.	0.2	2
47	Theoretical Investigation of the Displacement Burst Observed in Nanoindentation by Collective Dislocation Loops Nucleation Model. Journal of Computational Science and Technology, 2008, 2, 559-567.	0.4	2
48	Some remarks on the range of Poisson's ratio in isotropic linear elasticity. Philosophical Magazine, 2012, 92, 1287-1299.	0.7	2
49	Mechanics of Amorphous Metals (Elastic-Plastic Finite Element Analyses Using Inhomogeneous Defects) Tj ETQq1 1 0.784314 rgBT /Ov Engineers, Part A, 2013, 79, 1807-1817.	0.2	2
50	Interface-Related Shear Banding Deformation of Amorphous/Crystalline CuZr/Cu Nanolaminates by Molecular Dynamics Simulations. Materials Transactions, 2018, 59, 230-236.	0.4	2
51	Size-dependent yield function for single crystals with a consideration of defect effects. Acta Mechanica, 2019, 230, 4259-4271.	1.1	2
52	Plastic behaviours during tempering by crystal plasticity analyses using fast Fourier transform. Materials Science and Technology, 2020, 36, 750-758.	0.8	2
53	Evaluation of Mechanical Properties and Negative Poisson's Ratio Behavior in Crystalline SiO2 Materials: An Atomistic Approach. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2006, 72, 823-829.	0.2	1
54	Enhancement of Plasticity of Highly Density-Fluctuated Cu-Zr Amorphous Alloy. Materials Transactions, 2010, 51, 1504-1509.	0.4	1

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55	Nonlinear Elastic Deformation Behaviors of Four-Coordinate Flexibly Jointed Structures from Views on Poisson's Ratio. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2010, 76, 1025-1031.	0.2	1
56	Multiphysically coupled thermalâ€“acoustic axisymmetric wave propagation for electron acoustic nondestructive observations. Acta Mechanica, 2017, 228, 2835-2848.	1.1	1
57	Shape optimization analysis of adhesive interface under multiaxial stress state using failure function with stress invariants. Transactions of the JSME (in Japanese), 2019, 85, 18-00409-18-00409.	0.1	1
58	Surface roughness effects on the displacement bursts observed in nanoindentation. Journal of Materials Research, 2004, 19, 183-188.	1.2	1
59	ATOMIC-LEVEL DESCRIPTION OF MATERIAL STRENGTH OF Î±-Fe. Zairyo/Journal of the Society of Materials Science, Japan, 1999, 48, 225-233.	0.1	1
60	Shape optimization of adhesives of multi-materials under multiaxial stress failure criteria. Journal of Adhesion, 0, , 1-26.	1.8	1
61	Interaction of Carbon and Extended Defects in Î±-Fe Studied by First-Principles Based Interatomic Potential. Materials Transactions, 2022, 63, 475-483.	0.4	1
62	Electronic Structure of Single-walled Carbon Nanotubes under Tensile Deformation. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2004, 70, 678-683.	0.2	0
63	205 First-principles Study of Effects of Oxygen Vacancies on Metal/Oxide interface. The Proceedings of the Computational Mechanics Conference, 2008, 2008.21, 139-140.	0.0	0
64	Grain Boundary Characteristics Evaluation by Atomistic Investigation Methods. Materials Research Society Symposia Proceedings, 2009, 1215, 1.	0.1	0
65	Formation of Atomistic Island in Al Film Growth by Kinetic Monte Carlo. Journal of Computational Science and Technology, 2009, 3, 148-158.	0.4	0
66	Short Wave-Length Buckling Modes of Periodic Square Cell Structures Based on the Rotational Characteristics of Flexible Joints. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2009, 75, 1649-1656.	0.2	0
67	Size Effect on Bending Properties of Diamond-Like Carbon Nanopillar Fabricated by Focused Ion-Beam Assisted Chemical Vapor Deposition. Materials Research Society Symposia Proceedings, 2011, 1297, 149.	0.1	0
68	Internal Stress Field of Double Cross-slip using Level Set Dislocation Dynamics. Journal of Solid Mechanics and Materials Engineering, 2012, 6, 61-70.	0.5	0
69	Size effects on deformation mechanism of nanopillars by FIB-CVD using double-cantilever testing. Journal of Materials Research, 2012, 27, 521-527.	1.2	0
70	Tooth Profile: Mechanical Linkage between Local Teeth and Global Body. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2012, 78, 137-141.	0.2	0
71	Special Issue on Annual Meeting 2012 of the JSME Materials & Mechanics Division. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2013, 79, 691-691.	0.2	0
72	Numerical Study on Shear Deformation of Cu-Zr Metallic Glass - Molecular Dynamics Simulation and Radial Basis Function Analysis -. Zairyo/Journal of the Society of Materials Science, Japan, 2015, 64, 163-168.	0.1	0

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73	Dislocation-based constitutive model of crystal plasticity for the size effect of single crystalline micropillar samples. Mechanical Engineering Journal, 2016, 3, 15-00602-15-00602.	0.2	0
74	Non-destructive observations of small crack using scanning laser-induced acoustic microscope. Mechanical Engineering Journal, 2016, 3, 16-00147-16-00147.	0.2	0
75	Atomic and Effective Pair Interactions in FeC Alloy with Point Defects: A Cluster Expansion Study. ISIJ International, 2019, 59, 2343-2351.	0.6	0
76	K-0640 Estimation of Strength of DLC Thin Film under Indentation. The Proceedings of the JSME Annual Meeting, 2001, I.01.1, 275-276.	0.0	0
77	Estimation of Microhardness and FIB-TEM Observation of Internal Structure under Nano-indentation. Proceedings of the 1992 Annual Meeting of JSME/MMD, 2002, 2002, 155-156.	0.0	0
78	Development of Scanning Electron Acoustic Microscopic System and Application to Non-destructive Observation of the Defective field. Proceedings of the 1992 Annual Meeting of JSME/MMD, 2003, 2003, 867-868.	0.0	0
79	267 Atomistic Analyses of Metal Layers Deposited on Organic Polymer Substrate. The Proceedings of the Computational Mechanics Conference, 2006, 2006.19, 619-620.	0.0	0
80	634 First-principles Calculations of Electronic States at Metal/Oxide Interface. The Proceedings of the Materials and Mechanics Conference, 2007, 2007, 493-494.	0.0	0
81	1031 First-principles Calculations of Catalytic Reaction of NO on Nobel Metal Surfaces. The Proceedings of the Computational Mechanics Conference, 2009, 2009.22, 294-295.	0.0	0
82	1113 Cross Slip Descriptions using Level Set Dislocation Dynamics. The Proceedings of the Computational Mechanics Conference, 2010, 2010.23, 145-146.	0.0	0
83	1001 Energetically Analyses of Interaction between Grain Boundary and Dislocation using First-principles Calculations. The Proceedings of the Computational Mechanics Conference, 2010, 2010.23, 497-498.	0.0	0
84	OS02F037 Non-destructive Observations of Internal Micro-defects using Scanning Electron-induced Acoustic Microscope. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2011, 2011.10, _OS02F037-_OS02F037-.	0.0	0
85	OS02-3-3 Non-destructive Observations of Internal Micro-defects using Scanning Electron-induced Acoustic Microscope. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2011, 2011.10, _OS02-3-3-.	0.0	0
86	1108 Mechanical Properties of Internal Structures on Grain Growth Process by Phase-field Method : Evolution of Elastic Properties. The Proceedings of the Computational Mechanics Conference, 2012, 2012.25, 62-63.	0.0	0
87	OS0104 Slip Transfer Easiness of Dislocation to Grain Boundary using Boundary Interaction Conditions. The Proceedings of the Materials and Mechanics Conference, 2012, 2012, _OS0104-1_-_OS0104-3_.	0.0	0
88	317 Comparison of CSL Grain Boundary Distributions in Grain Growth by MPF Model with Higher-order Term and in Microstructure by EBSD. The Proceedings of Conference of Kansai Branch, 2012, 2012.87, _3-28_.	0.0	0
89	8A45 Mechanical Field Analyses of Musculoskeletal System in Upper Body under Abnormal Occlusion.. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2012, 2012.24, _8A45-1_-_8A45-2_.	0.0	0
90	CM-KR-3 Comparison of Ordinary and Weighted Voronoi Analysis for Metallic glasses. The Proceedings of Mechanical Engineering Congress Japan, 2012, 2012, _CM-KR-3-1-_CM-KR-3-2.	0.0	0

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91	1008 Prismatic Dislocation Loop Formation by Level Set Dislocation Dynamics. The Proceedings of the Computational Mechanics Conference, 2012, 2012.25, 506-507.	0.0	0
92	OS0420 Crack Propagation Analyses in Magnesium by Molecular Dynamics Simulations. The Proceedings of the Materials and Mechanics Conference, 2013, 2013, _OS0420-1_-_OS0420-2_.	0.0	0
93	OS0516 Compressive Plastic Deformation of Bicrystalline Micropillars. The Proceedings of the Materials and Mechanics Conference, 2014, 2014, _OS0516-1_-_OS0516-2_.	0.0	0
94	MOLECULAR DYNAMICS STUDY ON DUCTILE CRACK PROCESS. Zairyo/Journal of the Society of Materials Science, Japan, 1995, 44, 11-16.	0.1	0
95	MESOSCOPIC DYNAMICS ON DISLOCATION PATTERNING IN FATIGUED MATERIAL BY CELLULAR AUTOMATA. Zairyo/Journal of the Society of Materials Science, Japan, 1999, 48, 258-263.	0.1	0
96	OS1334-194 Free-vibration Acoustic Resonance of Two-dimensional Periodic Structure : Theory and Numerical Analysis. The Proceedings of the Materials and Mechanics Conference, 2015, 2015, _OS1334-19-_OS1334-19.	0.0	0
97	OS6-9 Non-destructive Observations of Small Crack using Scanning Laser-induced Acoustic Microscope(Ultrasonic NDT of Cracks and Damages (1),OS6 Ultrasonic non-destructive testing and) Tj ETQq1 1 0.784314 rgBT /Over Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2015, 2015.14, 80.	0.0	0
98	Mechanical Stability Analysis on Ideal Body-Centered Cubic Crystals under Finite Deformation. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2015, 101, 435-444.	0.1	0
99	Molecular Dynamics Analyses of Fracture Toughness of Magnesium. Zairyo/Journal of the Society of Materials Science, Japan, 2016, 65, 141-147.	0.1	0
100	Non-destructive Observation of Internal Micro-defects Using Cyclic Irradiation Beam-induced Acoustic Microscope. Materia Japan, 2016, 55, 578-578.	0.1	0
101	Molecular Dynamics Study of Fracture Behavior of Magnesium. Materia Japan, 2017, 56, 493-497.	0.1	0
102	Nondestructive Observations using Scanning Electron-induced Thermal and Acoustic Wave Microscope. Materia Japan, 2018, 57, 597-597.	0.1	0