

# Yoji Shibutani

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

101  
papers

896  
citations

14  
h-index

29  
g-index

102  
ext. papers

974  
ext. citations

1.7  
avg, IF

4.01  
L-index

#	Paper	IF	Citations
101	Interaction of Carbon and Extended Defects in $\alpha$ -Fe Studied by First-Principles Based Interatomic Potential. <i>Materials Transactions</i> , <b>2022</b> , 63, 475-483	1.3	0
100	Molecular dynamic simulation approach to understand the physical and proton transport properties of chitosan/sulfonated Poly(Vinyl alcohol) composite membranes. <i>Polymer</i> , <b>2021</b> , 217, 123458	3.9	0
99	Segregation of Carbon in $\alpha$ -Fe Symmetrical Tilt Grain Boundaries Studied by First-Principles Based Interatomic Potential. <i>Materials Transactions</i> , <b>2021</b> , 62, 1057-1063	1.3	1
98	Plastic behaviours during tempering by crystal plasticity analyses using fast Fourier transform. <i>Materials Science and Technology</i> , <b>2020</b> , 36, 750-758	1.5	0
97	Size-dependent yield function for single crystals with a consideration of defect effects. <i>Acta Mechanica</i> , <b>2019</b> , 230, 4259-4271	2.1	2
96	Atomic and Effective Pair Interactions in FeC Alloy with Point Defects: A Cluster Expansion Study. <i>ISIJ International</i> , <b>2019</b> , 59, 2343-2351	1.7	0
95	Shape optimization analysis of adhesive interface under multiaxial stress state using failure function with stress invariants. <i>Transactions of the JSME (in Japanese)</i> , <b>2019</b> , 85, 18-00409-18-00409	0.2	1
94	Simple evaluation method of adhesive failure criterion in multiaxial stress states by uniaxial tensile tests. <i>Mechanical Engineering Journal</i> , <b>2018</b> , 5, 17-00577-17-00577	0.5	2
93	Nondestructive Observations using Scanning Electron-induced Thermal and Acoustic Wave Microscope. <i>Materia Japan</i> , <b>2018</b> , 57, 597-597	0.1	0
92	Interface-Related Shear Banding Deformation of Amorphous/Crystalline CuZr/Cu Nanolaminates by Molecular Dynamics Simulations. <i>Materials Transactions</i> , <b>2018</b> , 59, 230-236	1.3	1
91	Multiphysically coupled thermal-acoustic axisymmetric wave propagation for electron acoustic nondestructive observations. <i>Acta Mechanica</i> , <b>2017</b> , 228, 2835-2848	2.1	1
90	First-principles study of interfacial interaction between carbon nanotube and Al <sub>2</sub> O <sub>3</sub> (0001). <i>Journal of Applied Physics</i> , <b>2017</b> , 121, 025304	2.5	5
89	Orthotropic Laminated Open-cell Frameworks Retaining Strong Auxeticity under Large Uniaxial Loading. <i>Scientific Reports</i> , <b>2017</b> , 7, 39816	4.9	12
88	Plastic deformation behaviors of amorphous-Cu <sub>50</sub> Zr <sub>50</sub> /crystalline-Cu nanolaminated structures by molecular dynamics simulations. <i>Journal of Alloys and Compounds</i> , <b>2017</b> , 693, 285-290	5.7	33
87	Molecular Dynamics Study of Fracture Behavior of Magnesium. <i>Materia Japan</i> , <b>2017</b> , 56, 493-497	0.1	0
86	Interface shape design of multi-material structures for delamination strength. <i>Mechanical Engineering Journal</i> , <b>2016</b> , 3, 15-00360-15-00360	0.5	4
85	Failure Criteria of Adhesive Joints between Aluminum Circular Pipes under Multiaxial Stress State. <i>Key Engineering Materials</i> , <b>2016</b> , 725, 383-388	0.4	3

84	Switching between two types of auxetic behavior of two-dimensional periodic cells with square rotation. <i>Physica Status Solidi (B): Basic Research</i> , <b>2016</b> , 253, 718-725	1.3	8
83	Molecular Dynamics Analyses of Fracture Toughness of Magnesium. <i>Zairyo/Journal of the Society of Materials Science, Japan</i> , <b>2016</b> , 65, 141-147	0.1	
82	Non-destructive Observation of Internal Micro-defects Using Cyclic Irradiation Beam-induced Acoustic Microscope. <i>Materia Japan</i> , <b>2016</b> , 55, 578-578	0.1	
81	Dislocation-based constitutive model of crystal plasticity for the size effect of single crystalline micropillar samples. <i>Mechanical Engineering Journal</i> , <b>2016</b> , 3, 15-00602-15-00602	0.5	
80	Non-destructive observations of small crack using scanning laser-induced acoustic microscope. <i>Mechanical Engineering Journal</i> , <b>2016</b> , 3, 16-00147-16-00147	0.5	
79	Parameter-free method for the shape optimization of stiffeners on thin-walled structures to minimize stress concentration. <i>Journal of Mechanical Science and Technology</i> , <b>2015</b> , 29, 1383-1390	1.6	7
78	Numerical Study on Shear Deformation of Cu-Zr Metallic Glass - Molecular Dynamics Simulation and Radial Basis Function Analysis -. <i>Zairyo/Journal of the Society of Materials Science, Japan</i> , <b>2015</b> , 64, 163-168	0.1	
77	OS1334-194 Free-vibration Acoustic Resonance of Two-dimensional Periodic Structure : Theory and Numerical Analysis. <i>The Proceedings of the Materials and Mechanics Conference</i> , <b>2015</b> , 2015, _OS1334-19- <sup>0</sup> _OS1334-19		
76	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 evaluation,MEASUREMENT METHODS). <i>The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics</i> , <b>2015</b> ,	0	
75	Mechanical Stability Analysis on Ideal Body-Centered Cubic Crystals under Finite Deformation. <i>Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan</i> , <b>2015</b> , 101, 435-444	0.5	
74	Mechanical Responses of Copper Bicrystalline Micro Pillars with $\Sigma$ 3 Coherent Twin Boundaries by Uniaxial Compression Tests. <i>Materials Transactions</i> , <b>2014</b> , 55, 52-57	1.3	14
73	OS0516 Compressive Plastic Deformation of Bicrystalline Micropillars. <i>The Proceedings of the Materials and Mechanics Conference</i> , <b>2014</b> , 2014, _OS0516-1_-_OS0516-2_	0	
72	Mechanics of Amorphous Metals (Elastic-Plastic Finite Element Analyses Using Inhomogeneous Defects Theory). <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2013</b> , 79, 1807-1817		1
71	Special Issue on Annual Meeting 2012 of the JSME Materials & Mechanics Division. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2013</b> , 79, 691-691		
70	Explicit Distinctions between 2D MPF Grain Growth Simulations and EBSD Analyses to Determine Driving Mechanism of Grain Growth. <i>Materials Transactions</i> , <b>2013</b> , 54, 1884-1893	1.3	4
69	Transfer and Incorporation of Dislocations to $\beta$ Tilt Grain Boundaries under Uniaxial Compression. <i>Journal of Solid Mechanics and Materials Engineering</i> , <b>2013</b> , 7, 571-584		5
68	Energetic Analysis of Deformation Twins and Twinning Dislocations in Magnesium. <i>Materials Transactions</i> , <b>2013</b> , 54, 1524-1527	1.3	10
67	OS0420 Crack Propagation Analyses in Magnesium by Molecular Dynamics Simulations. <i>The Proceedings of the Materials and Mechanics Conference</i> , <b>2013</b> , 2013, _OS0420-1_-_OS0420-2_	0	

66	Tooth Profile: Mechanical Linkage between Local Teeth and Global Body. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2012</b> , 78, 137-141		
65	Higher Accurate Estimation of Axial and Bending Stiffnesses of Plates Clamped by Bolts. <i>Journal of Solid Mechanics and Materials Engineering</i> , <b>2012</b> , 6, 397-406		3
64	Non-Destructive Observations of Internal Micro-Defects Using Scanning Electron-Induced Acoustic Microscope. <i>Journal of Solid Mechanics and Materials Engineering</i> , <b>2012</b> , 6, 512-518		3
63	Nonlinear Bending Stiffness of Plates Clamped by Bolted Joints under Bending Moment. <i>Journal of Solid Mechanics and Materials Engineering</i> , <b>2012</b> , 6, 832-843		3
62	Formation of Prismatic Dislocation Loop around a Spherical Inclusion Using Level Set Dislocation Dynamics. <i>Journal of Solid Mechanics and Materials Engineering</i> , <b>2012</b> , 6, 913-924		5
61	Some remarks on the range of Poisson's ratio in isotropic linear elasticity. <i>Philosophical Magazine</i> , <b>2012</b> , 92, 1287-1299	1.6	2
60	Grain growth prediction with inclination dependence of <1 1 0> tilt grain boundary using multi-phase-field model with penalty for multiple junctions. <i>Computational Materials Science</i> , <b>2012</b> , 53, 474-482	3.2	22
59	Internal Stress Field of Double Cross-slip using Level Set Dislocation Dynamics. <i>Journal of Solid Mechanics and Materials Engineering</i> , <b>2012</b> , 6, 61-70		
58	Size effects on deformation mechanism of nanopillars by FIB-CVD using double-cantilever testing. <i>Journal of Materials Research</i> , <b>2012</b> , 27, 521-527	2.5	
57	1108 Mechanical Properties of Internal Structures on Grain Growth Process by Phase-field Method : Evolution of Elastic Properties. <i>The Proceedings of the Computational Mechanics Conference</i> , <b>2012</b> , 2012.25, 62-63	0	
56	OS0104 Slip Transfer Easiness of Dislocation to Grain Boundary using Boundary Interaction Conditions. <i>The Proceedings of the Materials and Mechanics Conference</i> , <b>2012</b> , 2012, _OS0104-1_-_OS0104-3_		
55	317 Comparison of CSL Grain Boundary Distributions in Grain Growth by MPF Model with Higher-order Term and in Microstructure by EBSD. <i>The Proceedings of Conference of Kansai Branch</i> , <b>2012</b> , 2012.87, _3-28_	0	
54	8A45 Mechanical Field Analyses of Musculoskeletal System in Upper Body under Abnormal Occlusion.. <i>The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME</i> , <b>2012</b> , 2012.24, _8A45-1_-_8A45-2_	0	
53	1008 Prismatic Dislocation Loop Formation by Level Set Dislocation Dynamics. <i>The Proceedings of the Computational Mechanics Conference</i> , <b>2012</b> , 2012.25, 506-507	0	
52	Size Effect on Bending Properties of Diamond-Like Carbon Nanopillar Fabricated by Focused Ion-Beam Assisted Chemical Vapor Deposition. <i>Materials Research Society Symposia Proceedings</i> , <b>2011</b> , 1297, 149		
51	OS02F037 Non-destructive Observations of Internal Micro-defects using Scanning Electron-induced Acoustic Microscope. <i>The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics</i> , <b>2011</b> , 2011.10, _OS02F037--_OS02F037-	0	
50	OS02-3-3 Non-destructive Observations of Internal Micro-defects using Scanning Electron-induced Acoustic Microscope. <i>The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics</i> , <b>2011</b> , 2011.10, _OS02-3-3-	0	
49	Nonlinear Elastic Deformation Behaviors of Four-Coordinate Flexibly Jointed Structures From Views on Poisson's Ratio. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2010</b> , 76, 1025-1031		1

48	Minimum Energy Motion and Core Structure of Pure Edge and Screw Dislocations in Aluminum. <i>Journal of Computational Science and Technology</i> , <b>2010</b> , 4, 185-193		5
47	Equivalent Stiffness Evaluations of Clamped Plates in Bolted Joints under Loading. <i>Journal of Solid Mechanics and Materials Engineering</i> , <b>2010</b> , 4, 1791-1805		4
46	Enhancement of Plasticity of Highly Density-Fluctuated Cu-Zr Amorphous Alloy. <i>Materials Transactions</i> , <b>2010</b> , 51, 1504-1509	1.3	1
45	1113 Cross Slip Descriptions using Level Set Dislocation Dynamics. <i>The Proceedings of the Computational Mechanics Conference</i> , <b>2010</b> , 2010.23, 145-146	0	
44	1001 Energetically Analyses of Interaction between Grain Boundary and Dislocation using First-principles Calculations. <i>The Proceedings of the Computational Mechanics Conference</i> , <b>2010</b> , 2010.23, 497-498	0	
43	Nonlinear large deflection of nanopillars fabricated by focused ion-beam induced chemical vapor deposition using double-cantilever testing. <i>Journal of Vacuum Science &amp; Technology B</i> , <b>2009</b> , 27, 2161		4
42	Grain Boundary Characteristics Evaluation by Atomistic Investigation Methods. <i>Materials Research Society Symposia Proceedings</i> , <b>2009</b> , 1215, 1		
41	In-plane mechanical behaviors of 2D repetitive frameworks with four-coordinate flexible joints and elbowed beam members. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2009</b> , 57, 1485-1499	5	21
40	Formation of Atomistic Island in Al Film Growth by Kinetic Monte Carlo. <i>Journal of Computational Science and Technology</i> , <b>2009</b> , 3, 148-158		
39	Short Wave-Length Buckling Modes of Periodic Square Cell Structures Based on the Rotational Characteristics of Flexible Joints. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2009</b> , 75, 1649-1656		
38	1031 First-principles Calculations of Catalytic Reaction of NO on Nobel Metal Surfaces. <i>The Proceedings of the Computational Mechanics Conference</i> , <b>2009</b> , 2009.22, 294-295	0	
37	Inelastic deformability of nanopillar by focused-ion-beam chemical vapor deposition. <i>Journal of Vacuum Science &amp; Technology B</i> , <b>2008</b> , 26, 201		3
36	Structural disordering process of an amorphous alloy driven by the elastostatic compression at room temperature. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 151906	3.4	47
35	Dislocation Nucleation and Interaction under Nanoindentation in Single Crystalline Al and Cu: Molecular Dynamics Simulations. <i>Journal of Computational Science and Technology</i> , <b>2008</b> , 2, 459-467		1
34	Theoretical Investigation of the Displacement Burst Observed in Nanoindentation by Collective Dislocation Loops Nucleation Model. <i>Journal of Computational Science and Technology</i> , <b>2008</b> , 2, 559-567		2
33	Large Deformability of 2D Framed Structures Connected by Flexible Joints. <i>Journal of Solid Mechanics and Materials Engineering</i> , <b>2008</b> , 2, 1037-1048		10
32	205 First-principles Study of Effects of Oxygen Vacancies on Metal/Oxide interface. <i>The Proceedings of the Computational Mechanics Conference</i> , <b>2008</b> , 2008.21, 139-140	0	
31	Effect of the atomic packing density on the structural change rate of amorphous alloys under elastostatic stress. <i>Metals and Materials International</i> , <b>2008</b> , 14, 159-163	2.4	15

30	Nanoplastic deformation of nanoindentation: Crystallographic dependence of displacement bursts. <i>Acta Materialia</i> , <b>2007</b> , 55, 1813-1822	8.4	44
29	Atomistic characterization of structural and elastic properties of auxetic crystalline SiO <sub>2</sub> . <i>Physica Status Solidi (B): Basic Research</i> , <b>2007</b> , 244, 900-909	1.3	24
28	Origin of the plasticity in bulk amorphous alloys. <i>Journal of Materials Research</i> , <b>2007</b> , 22, 3087-3097	2.5	83
27	Complete set of elastic constants of $\alpha$ -quartz at high pressure: A first-principles study. <i>Physical Review B</i> , <b>2007</b> , 75,	3.3	51
26	Nanoindentation-Induced Collective Dislocation Behavior and Nanoplasticity. <i>Key Engineering Materials</i> , <b>2007</b> , 340-341, 39-48	0.4	4
25	Influence of Size and Number of Nanocrystals on Shear Band Formation in Amorphous Alloys. <i>Materials Transactions</i> , <b>2007</b> , 48, 1001-1006	1.3	6
24	Formation of Atomistic Island in Al Film Growth by Kinetic Monte Carlo. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2007</b> , 73, 490-497		3
23	Relationship between local geometrical factors and mechanical properties for Cu <sub>50</sub> Zr amorphous alloys. <i>Intermetallics</i> , <b>2007</b> , 15, 139-144	3.5	168
22	634 First-principles Calculations of Electronic States at Metal/Oxide Interface. <i>The Proceedings of the Materials and Mechanics Conference</i> , <b>2007</b> , 2007, 493-494	0	
21	Atomistic simulations of elastic deformation and dislocation nucleation in Al under indentation-induced stress distribution. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2006</b> , 14, S55-S62	2	39
20	Atomistic simulation of shear localization in Cu <sub>50</sub> Zr bulk metallic glass. <i>Intermetallics</i> , <b>2006</b> , 14, 1033-1037	3.5	110
19	Evaluation of Mechanical Properties and Negative Poisson's Ratio Behavior in Crystalline SiO <sub>2</sub> Materials: An Atomistic Approach. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2006</b> , 72, 823-829		1
18	Effects of Atomic Size for Voronoi Tessellation Technique on Binary and Ternary Systems of Metallic Glasses. <i>Materials Transactions</i> , <b>2006</b> , 47, 2904-2909	1.3	8
17	Non-Destructive Observations of Internal Microstructures of Materials by Scanning Electron-Induced Acoustic Microscopy. <i>Zairyo/Journal of the Society of Materials Science, Japan</i> , <b>2006</b> , 55, 95-100	0.1	2
16	267 Atomistic Analyses of Metal Layers Deposited on Organic Polymer Substrate. <i>The Proceedings of the Computational Mechanics Conference</i> , <b>2006</b> , 2006.19, 619-620	0	
15	Effects of Atomic Deviatoric Distortion on Local Glass Transition of Metallic Glasses. <i>Materials Transactions</i> , <b>2005</b> , 46, 2848-2855	1.3	6
14	Formation and Critical Shear Stresses of Prismatic Dislocation Loops Observed around Spherical Precipitate in Single Crystalline Aluminum and Copper Matrices (Simulations by Molecular Dynamics). <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2005</b> , 71, 1445-1450		1
13	Surface roughness effects on the displacement bursts observed in nanoindentation. <i>Journal of Materials Research</i> , <b>2004</b> , 19, 183-188	2.5	46

12	Electronic Structure of Single-walled Carbon Nanotubes under Tensile Deformation. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2004</b> , 70, 678-683		
11	Dislocation Emission and Formation of Prismatic Loop in Single Crystalline Aluminum under Indentation (Simulations by Molecular Dynamics). <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2004</b> , 70, 947-952		2
10	Surface roughness effects on the displacement bursts observed in nanoindentation <b>2004</b> , 19, 183		1
9	An ab initio study of the ideal tensile and shear strength of single-crystal $\beta$ -Si <sub>3</sub> N <sub>4</sub> . <i>Journal of Materials Research</i> , <b>2003</b> , 18, 1168-1172	2.5	21
8	Development of Scanning Electron Acoustic Microscopic System and Application to Non-destructive Observation of the Defective field. <i>Proceedings of the 1992 Annual Meeting of JSME/MMD</i> , <b>2003</b> , 2003, 867-868		
7	Estimation of Microhardness and FIB-TEM Observation of Internal Structure under Nano-indentation. <i>Proceedings of the 1992 Annual Meeting of JSME/MMD</i> , <b>2002</b> , 2002, 155-156		
6	K-0640 Estimation of Strength of DLC Thin Film under Indentation. <i>The Proceedings of the JSME Annual Meeting</i> , <b>2001</b> , I.01.1, 275-276		
5	Irreversible Deformation of Carbon Nanotubes under Bending. <i>Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals</i> , <b>1999</b> , 63, 1262-1268	0.4	9
4	ATOMIC-LEVEL DESCRIPTION OF MATERIAL STRENGTH OF $\beta$ -Fe. <i>Zairyo/Journal of the Society of Materials Science, Japan</i> , <b>1999</b> , 48, 225-233	0.1	1
3	MESOSCOPIC DYNAMICS ON DISLOCATION PATTERNING IN FATIGUED MATERIAL BY CELLULAR AUTOMATA. <i>Zairyo/Journal of the Society of Materials Science, Japan</i> , <b>1999</b> , 48, 258-263	0.1	
2	MOLECULAR DYNAMICS STUDY ON DUCTILE CRACK PROCESS. <i>Zairyo/Journal of the Society of Materials Science, Japan</i> , <b>1995</b> , 44, 11-16	0.1	
1	Shape optimization of adhesives of multi-materials under multiaxial stress failure criteria1-26		