

# Satoshi Izumi

## List of Publications by Citations

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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.

98  
papers

551  
citations

11  
h-index

21  
g-index

100  
ext. papers

630  
ext. citations

1.5  
avg, IF

3.61  
L-index

#	Paper	IF	Citations
98	Three-dimensional finite element analysis of tightening and loosening mechanism of threaded fastener. <i>Engineering Failure Analysis</i> , <b>2005</b> , 12, 604-615	3.2	122
97	Dislocation nucleation from a sharp corner in silicon. <i>Journal of Applied Physics</i> , <b>2008</b> , 104, 033513	2.5	45
96	Investigation into the self-loosening behavior of bolted joint subjected to rotational loading. <i>Engineering Failure Analysis</i> , <b>2012</b> , 23, 35-43	3.2	42
95	Loosening-resistance evaluation of double-nut tightening method and spring washer by three-dimensional finite element analysis. <i>Engineering Failure Analysis</i> , <b>2009</b> , 16, 1510-1519	3.2	31
94	Reaction pathway analysis for dislocation nucleation from a sharp corner in silicon: Glide set versus shuffle set. <i>Journal of Applied Physics</i> , <b>2010</b> , 108, 063504	2.5	29
93	Three-dimensional Finite Element Analysis on Tightening and Loosening Mechanism of Bolted Joint. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2005</b> , 71, 204-212		29
92	Small Loosening of Bolt-nut Fastener Due to Micro Bearing-Surface Slip: A Finite Element Method Study. <i>Journal of Solid Mechanics and Materials Engineering</i> , <b>2007</b> , 1, 1374-1384		21
91	Shuffle-set dislocation nucleation in semiconductor silicon device. <i>Philosophical Magazine Letters</i> , <b>2010</b> , 90, 707-714	1	17
90	Reaction pathway analysis for dislocation nucleation from a Ni surface step. <i>Journal of Applied Physics</i> , <b>2009</b> , 106, 093507	2.5	16
89	Internal Displacement and Elastic Properties of the Silicon Tersoff Model. <i>JSME International Journal Series A-Solid Mechanics and Material Engineering</i> , <b>2004</b> , 47, 54-61		14
88	Saddle-shape warpage of thick 3C-SiC wafer: Effect of nonuniform intrinsic stress and stacking faults. <i>Physica Status Solidi (B): Basic Research</i> , <b>2012</b> , 249, 555-559	1.3	12
87	Core element effects on dislocation nucleation in 3C <sub>2</sub> SiC: Reaction pathway analysis. <i>Computational Materials Science</i> , <b>2013</b> , 79, 216-222	3.2	10
86	Development of a method to evaluate the stress distribution in 4H-SiC power devices. <i>Japanese Journal of Applied Physics</i> , <b>2018</b> , 57, 106602	1.4	9
85	Evaluation of Loosening Resistance Performance of Conical Spring Washer by Three-dimensional Finite Element Analysis. <i>Journal of Solid Mechanics and Materials Engineering</i> , <b>2008</b> , 2, 38-46		8
84	Self-Loosening Analysis of Bolt-Nut Tightening System Subjected to Axial Loading by Three-Dimensional Finite Element Method. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2007</b> , 73, 869-876		8
83	Modeling the effect of mechanical stress on bipolar degradation in 4H-SiC power devices. <i>Journal of Applied Physics</i> , <b>2020</b> , 128, 025701	2.5	7
82	Temperature-dependent stacking fault energies of 4H-SiC: A first-principles study. <i>Journal of Applied Physics</i> , <b>2020</b> , 127, 125703	2.5	7

81	Atomistic mechanism of graphene growth on a SiC substrate: Large-scale molecular dynamics simulations based on a new charge-transfer bond-order type potential. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	7
80	Nanostructural interpretation for elastic softening of amorphous carbon induced by the incorporation of silicon and hydrogen atoms. <i>Journal of Applied Physics</i> , <b>2010</b> , 107, 124315	2.5	7
79	Elucidation of the atomic-scale mechanism of the anisotropic oxidation rate of 4H-SiC between the (0001) Si-face and (0001) C-face by using a new Si-O-C interatomic potential. <i>Journal of Applied Physics</i> , <b>2018</b> , 123, 185303	2.5	7
78	Reaction pathway analysis for differences in motion between C-core and Si-core partial dislocation in 3C-SiC. <i>Mechanical Engineering Journal</i> , <b>2015</b> , 2, 15-00183-15-00183	0.5	6
77	Onset of Wiggling in a Microscopic Patterned Structure Induced by Intrinsic Stress During the Dry Etching Process. <i>Journal of Applied Mechanics, Transactions ASME</i> , <b>2014</b> , 81,	2.7	6
76	Evaluation of Loosening Proof Performance of Plain Washer and Flange Nut by Three-Dimensional Finite Element Analysis. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2006</b> , 72, 1292-1295		6
75	Small Loosening of Bolt-Nut Tightening System due to Micro Bearing-Surface Slip: Finite Element Method Study. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2006</b> , 72, 780-786		6
74	Study of a Combined FEM-MD Method for Silicon.. <i>JSME International Journal Series A-Solid Mechanics and Material Engineering</i> , <b>2001</b> , 44, 152-159		6
73	Thermal-mechanical coupling effect on initial stage oxidation of Si(100) surface. <i>Journal of Applied Physics</i> , <b>2018</b> , 123, 135104	2.5	5
72	Prediction of the friction coefficient of filled rubber sliding on dry and wet surfaces with self-affine large roughness. <i>Mechanical Engineering Journal</i> , <b>2016</b> , 3, 15-00084-15-00084	0.5	5
71	Evaluation of Effect of Mechanical Stress on Stacking Fault Expansion in 4H-SiC P-i-N Diode. <i>Materials Science Forum</i> , <b>2019</b> , 963, 288-293	0.4	4
70	Reaction pathway analysis for the conversion of perfect screw basal plane dislocation to threading edge dislocation in 4H-SiC. <i>Japanese Journal of Applied Physics</i> , <b>2019</b> , 58, 081005	1.4	4
69	Atomic-Level Modelling for Predicting Interface Strength in Resin Molded Structures. <i>Journal of Solid Mechanics and Materials Engineering</i> , <b>2011</b> , 5, 54-63		4
68	New Method of Analyzing Adhesion/Friction in Resin-molded Structures and its Application to Insulated Rods. <i>Journal of Solid Mechanics and Materials Engineering</i> , <b>2010</b> , 4, 533-544		4
67	Tightening and Self-loosening Behavior of Double-nut Tightening System by Three-dimensional Finite Element Method. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2006</b> , 72, 967-973		4
66	Development of specimen and test method for strength analysis of MEMS micromirror. <i>Engineering Fracture Mechanics</i> , <b>2005</b> , 72, 2672-2685	4.2	4
65	Finite element modelling for the wear prediction of front rod of railroad switch due to the impact vibration caused by train passage. <i>Transactions of the JSME (in Japanese)</i> , <b>2015</b> , 81, 15-00286-15-00286	0.2	3
64	Effect of machined surface condition on fatigue strength of Ni based superalloy Alloy 718. <i>Transactions of the JSME (in Japanese)</i> , <b>2015</b> , 81, 15-00328-15-00328	0.2	3

63	Structures and phonon properties of nanoscale fractional graphitic structures in amorphous carbon determined by molecular simulations. <i>Journal of Applied Physics</i> , <b>2010</b> , 107, 104307	2.5	3
62	Damage and Fault Diagnosis of In-service Structure via Statistical Comparison of Relation between Sensor measurements (Damage Diagnosis of in-service Structure under High Noise Environment using Multiple Reference Data). <i>Journal of Solid Mechanics and Materials Engineering</i> , <b>2008</b> , 2, 1114-1125		3
61	Self-loosening Behaviour of a Spring Washer: Three-dimensional Finite Element Method Study. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2007</b> , 73, 1105-1110		3
60	Sensitivity Analysis of Fitness-for-Service Assessment Based on Reliability for Cylindrical Pressure Vessels With Local Metal Loss. <i>Journal of Pressure Vessel Technology, Transactions of the ASME</i> , <b>2013</b> , 135, 0612021-612028	1.2	2
59	Analytical Modelling of the Mechanical Behavior of Bolted Joint Subjected to Transverse Loading. <i>Journal of Solid Mechanics and Materials Engineering</i> , <b>2010</b> , 4, 1427-1443		2
58	Loosening Resistance Evaluation of Double-Nut Tightening Method, Spring Washers, and Conical Spring Washers: Finite Element Study <b>2008</b> ,		2
57	Strength Evaluation for Notching Damage of MEMS Micromirror by Dual-Direction Bending Test. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2006</b> , 72, 720-727		2
56	Reaction pathway analysis for shuffle-set 60° perfect dislocation in Si. <i>Philosophical Magazine</i> , <b>2016</b> , 96, 2902-2918	1.6	2
55	Anisotropy Behavior of Dislocation Nucleation from a Sharp Corner in Copper. <i>Journal of Computational Science and Technology</i> , <b>2011</b> , 5, 54-61		1
54	Reaction Pathway Analysis of Homogeneous Dislocation Nucleation in a Perfect Molybdenum Crystal. <i>Materials Research Society Symposia Proceedings</i> , <b>2011</b> , 1297, 105		1
53	Simulations of an Interface Crack Nucleation During Nanoindentation : Molecular Dynamics and Finite Element Coupling Approach. <i>Materials Research Society Symposia Proceedings</i> , <b>2008</b> , 1086, 1		1
52	Development of a Simple Test Method for Torsional Strength of MEMS Micromirror. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2006</b> , 72, 728-734		1
51	Application of a Multiobjective Optimization to Risk-Based Inservice Testing. <i>Journal of Pressure Vessel Technology, Transactions of the ASME</i> , <b>2005</b> , 127, 13-19	1.2	1
50	Structural and Mechanical Properties of Well-relaxed Amorphous-Crystal Interface in Silicon: A Molecular Dynamics Approach. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2005</b> , 71, 23-29		1
49	Development of Specimen and Test Method for Strength Analysis of MEMS Micromirror. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2005</b> , 71, 387-393		1
48	Isolation and reconstruction of cardiac mitochondria from SBEM images using a deep learning-based method. <i>Journal of Structural Biology</i> , <b>2021</b> , 214, 107806	3.4	1
47	Strength and reliability analysis of MEMS micromirror. <i>Proceedings of the 1992 Annual Meeting of JSME/MMD</i> , <b>2004</b> , 2004, 273-274		1
46	Finite element modelling for the wear prediction of front rod of special layout railroad switch due to the vibration caused by train passage. <i>Transactions of the JSME (in Japanese)</i> , <b>2019</b> , 85, 18-00414-18-00414	0.2	1

45	Effect of machined surface condition on fatigue strength of Ni based superalloy Alloy718 (2nd report, investigation of the residual stress relaxation using crystal plasticity FEM). <i>Transactions of the JSME (in Japanese)</i> , <b>2017</b> , 83, 16-00264-16-00264	0.2	1
44	Crew safety evaluation and injury mechanism at Launch Abort System based on multibody simulation. <i>Transactions of the JSME (in Japanese)</i> , <b>2016</b> , 82, 16-00085-16-00085	0.2	1
43	Reaction pathway analysis for the contraction of 4H-SiC partial-dislocations pair in the vicinity of surface. <i>Japanese Journal of Applied Physics</i> , <b>2021</b> , 60, 085502	1.4	1
42	Comparative study of the effect of van der Waals interactions on stacking fault energies in SiC. <i>Journal of Applied Physics</i> , <b>2021</b> , 130, 215701	2.5	0
41	Molecular Dynamics Simulation for Intrinsic Stress Caused by Surface Oxidation on Hydrogenated Amorphous Silicon. <i>Zairyo/Journal of the Society of Materials Science, Japan</i> , <b>2017</b> , 66, 950-956	0.1	
40	Finite Element Analyses for the Plastic Deformation on the Bearing Surfaces of Bolted Hollow Cylindrical Aluminum. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2012</b> , 78, 1583-1592		
39	Loosening Analysis for Swing Circle Tightening Body of Excavator Subjected to Impact Loading: Explicit Finite Element Approach. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2012</b> , 78, 1593-1601		
38	Sensitivity Analysis of Partial Safety Factors in Structural Integrity Evaluation with Failure Assessment Diagram. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2009</b> , 75, 1112-1117		
37	Transition Pathway Analysis of Homogeneous Dislocation Nucleation in a Perfect Silicon Crystal. <i>Materials Research Society Symposia Proceedings</i> , <b>2009</b> , 1224, 1		
36	Analytical Modelling of the Mechanical Behavior of Bolted Joint Subjected to Transverse Loading : 1st Report, Modelling of Load-Displacement Relation. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2010</b> , 76, 351-360		
35	Analytical Modelling of the Mechanical Behavior of Bolted Joint Subjected to Transverse Loading : 2nd Report, Modelling of Self-Loosening Mechanisms. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2010</b> , 76, 637-644		
34	Introduction of Hierarchical Bayes Model for the Evaluation of Pipe Failure Rate Using Cross-Industry Database of Pipe Failure. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2008</b> , 74, 741-748		
33	The development of the ion shower etching simulator with the molecular dynamics method. <i>The Proceedings of the Computational Mechanics Conference</i> , <b>2000</b> , 2000.13, 613-614	0	
32	416 The development of Si-H potential for the molecular dynamics. <i>The Proceedings of the Computational Mechanics Conference</i> , <b>2001</b> , 2001.14, 435-436	0	
31	Application of three-dimensional dislocation dynamics simulation to STI structure. <i>Proceedings of the 1992 Annual Meeting of JSME/MMD</i> , <b>2004</b> , 2004, 237-238		
30	Finite element analysis of loosening mechanism of bolted joint and its application to super slit nut. <i>The Reference Collection of Annual Meeting</i> , <b>2004</b> , 2004.8, 263-264		
29	Finite element analysis of loosening mechanism of bolted joint and its application to super slit nut. <i>Proceedings of the 1992 Annual Meeting of JSME/MMD</i> , <b>2004</b> , 2004, 197-198		
28	Finite element analysis of loosening mechanism of bolted joint and its application to super slit nut. <i>The Proceedings of the JSME Annual Meeting</i> , <b>2004</b> , 2004.1, 523-524		

- 27 1859 Influence of Etching Damage on the Strength of MEMS Micromirror. *The Proceedings of the JSME Annual Meeting*, **2005**, 2005.6, 295-296
- 26 1421 Dislocation dynamics simulation for silicon subjected to thin-film induced stress at real time scale. *The Proceedings of the Computational Mechanics Conference*, **2005**, 2005.18, 663-664 ○
- 25 1803 Influence of impurity atoms on the rate of solid phase epitaxy : Molecular dynamics study. *The Proceedings of the JSME Annual Meeting*, **2005**, 2005.6, 203-204
- 24 1409 Structural analysis of Zr-based metallic glasses by molecular dynamics simulation : Verification of interatomic potentials. *The Proceedings of the Computational Mechanics Conference*, **2005**, 2005.18, 473-474 ○
- 23 111 Influence of ICP-Etching Damage and Loading Condition on the Strength of MEMS Micromirror. *Proceedings of the 1992 Annual Meeting of JSME/MMD*, **2005**, 2005, 21-22
- 22 259 Dislocation dynamics study for the nucleation and propagation of ion-implantation induced dislocations in silicon. *The Proceedings of the Computational Mechanics Conference*, **2006**, 2006.19, 603-604 ○
- 21 235 Effect of cutoff distance of two-body potential on stable structure and bulk modulus of metallic materials. *The Proceedings of the Computational Mechanics Conference*, **2008**, 2008.21, 454-455 ○
- 20 Phantom experiment and ALE fluid structure interaction analysis of contrast agent dynamics through an elastic stenosis after bifurcation. *Transactions of the JSME (in Japanese)*, **2018**, 84, 18-00015-18-00015 ○<sup>2</sup>
- 19 Safety evaluation and injury mechanism identification in launch abort system using finite element method. *Transactions of the JSME (in Japanese)*, **2018**, 84, 18-00126-18-00126 ○.2
- 18 Development of Hybrid Method Using Ab initio and Classical Molecular Dynamics for Calculating the Thermal Expansion Coefficient of Alloys at High Temperature. *Zairyo/Journal of the Society of Materials Science, Japan*, **2018**, 67, 197-201 ○.1
- 17 006 Investigation of the vibration behavior of the rolling bearing unit for space equipment by numerical simulation. *The Proceedings of the Computational Mechanics Conference*, **2015**, 2015.28, \_006-1\_-006-3\_ ○
- 16 074 Surface Condition Modeling using Crystal Plasticity FEM and Cyclic Deformation Simulation. *The Proceedings of the Computational Mechanics Conference*, **2015**, 2015.28, \_074-1\_-074-3\_ ○
- 15 164 Charge-transfer interatomic potential for oxidation simulation of Si/SiO<sub>2</sub> interface. *The Proceedings of the Computational Mechanics Conference*, **2015**, 2015.28, \_164-1\_-164-2\_ ○
- 14 Analysis of Oxidized Film Formation and Evaluation of Intrinsic Stress in the a-Si Layer of Semiconductor Microscopic Patterned Structures Using Molecular Dynamics Method. *Zairyo/Journal of the Society of Materials Science, Japan*, **2016**, 65, 127-134 ○.1
- 13 KN1-3 Application of multiscale simulation to materials strength issues in the field of semiconductor and electronic devices (KN1 Micro-Nano Technologies in Mechanical Engineering). *The Proceedings of the Symposium on Micro-Nano Science and Technology*, **2009**, 2009.1, 7-8 ○
- 12 OS15F114 Quantitative analysis of three-dimensional geometry of creep void observed in 1Cr-1Mo-0.25V turbine rotor steel. *The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics*, **2011**, 2011.10, \_OS15F114--\_OS15F ○
- 11 4-2 Atomistic modeling of ion transport in electrolyte materials for solid oxide fuel cell. *The Proceedings of the Symposium on Micro-Nano Science and Technology*, **2011**, 2011.3, 39-40 ○
- 10 OS15-2-4 Quantitative analysis of three-dimensional geometry of creep void observed in 1Cr-1Mo-0.25V turbine rotor steel. *The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics*, **2011**, 2011.10, \_OS15-2-4- ○

- 9 MP-2 Atomic simulation of the oxygen ions diffusion in SOFC electrolytes. *The Proceedings of the Symposium on Micro-Nano Science and Technology*, **2011**, 2011.3, 71-72 ○
- 8 806 Origin of the warpage of 3C-SiC wafer: Role of stacking fault distribution. *The Proceedings of the Computational Mechanics Conference*, **2011**, 2011.24, 235-236 ○
- 7 827 Prediction of friction coefficient between a tire and a road surface based on multiscale analysis. *The Proceedings of the Computational Mechanics Conference*, **2011**, 2011.24, 283-284 ○
- 6 W304 CAE Modeling Scheme for Bolt-nut Tightening System and Application to Industry-Academia Collaborative Researches. *The Proceedings of the Materials and Processing Conference*, **2012**, 2012.20, \_W304-1\_-\_W304-4\_ ○
- 5 OS1-2-3 Nano-meso scale simulations of microstructural evolution in solid oxide fuel cell anode. *The Proceedings of the Symposium on Micro-Nano Science and Technology*, **2012**, 2012.4, 163-164 ○
- 4 OS1010 WG activity on making CAE exercise problems And CAE Education. *The Proceedings of the Materials and Mechanics Conference*, **2013**, 2013, \_OS1010-1\_-\_OS1010-2\_ ○
- 3 OS0506 Multiscale Estimating Technique of Rubber Friction on a Road that Depends on Sliding Velocity and Temperature. *The Proceedings of the Materials and Mechanics Conference*, **2013**, 2013, \_OS0506-1\_-\_OS0506-2\_ ○
- 2 Undulation-buckling prediction in a micropatterned structure induced by intrinsic stress during dry etching. *The Proceedings of the Computational Mechanics Conference*, **2014**, 2014.27, 507-508 ○
- 1 Effect of Molecular Weight of Pressure-sensitive Adhesive to Peeling Phenomenon between Adhesive and Silicon Wafer by Molecular Dynamics Simulations. *Zairyo/Journal of the Society of Materials Science, Japan*, **2022**, 71, 143-150 ○.1