

Kazuto Arakawa

List of Publications by Year in descending order

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82
papers

2,318
citations

257450

24
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214800

47
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docs citations

82
times ranked

1550
citing authors

#	ARTICLE	IF	CITATIONS
1	In-situ WB-STEM observation of dislocation loop behavior in reactor pressure vessel steel during post-irradiation annealing. <i>Materialia</i> , 2020, 12, 100778.	2.7	12
2	Quantum de-trapping and transport of heavy defects in tungsten. <i>Nature Materials</i> , 2020, 19, 508-511.	27.5	20
3	Experimental Validation of Models: In Situ TEM for Radiation Damage. , 2020, , 1-14.		0
4	Experimental Validation of Models: In Situ TEM for Radiation Damage. , 2020, , 2503-2516.		1
5	High-temperature defect recovery in self-ion irradiated W-5 wt% Ta. <i>Nuclear Materials and Energy</i> , 2019, 18, 93-98.	1.3	9
6	Improving Fatigue Performance of Laser-Welded 2024-T3 Aluminum Alloy Using Dry Laser Peening. <i>Metals</i> , 2019, 9, 1192.	2.3	19
7	Experimental Validation of Models: In Situ TEM for Radiation Damage. , 2019, , 1-14.		0
8	Femtosecond Laser Peening of Friction Stir Welded 7075-T73 Aluminum Alloys. <i>Journal of Materials Processing Technology</i> , 2018, 262, 111-122.	6.3	48
9	High-temperature damage evolution in 10 keV He+ irradiated W and W-5Re. <i>Materials Characterization</i> , 2018, 145, 77-86.	4.4	11
10	A study of helium bubble production in 10 keV He+ irradiated tungsten. <i>Fusion Engineering and Design</i> , 2017, 125, 454-457.	1.9	20
11	Dynamic behaviour of nanometre-sized defect clusters emitted from an atomic displacement cascade in Au at 50 ÅK. <i>Philosophical Magazine</i> , 2017, 97, 2196-2206.	1.6	1
12	Femtosecond laser peening of 2024 aluminum alloy without a sacrificial overlay under atmospheric conditions. <i>Journal of Laser Applications</i> , 2017, 29, .	1.7	58
13	$1/2$ Dislocation Junction Formation via the Coalescence between Nanoscale $1/11$ Prismatic Dislocation Loops in Iron. <i>ISIJ International</i> , 2017, 57, 2065-2069.	1.4	8
14	OM-III-1TEM Observation of Dynamic Behavior of Lattice Defects in Metals. <i>Microscopy (Oxford)</i> , 2017, 15, 101-110.	1.5	8
15	Ab initio scaling laws for the formation energy of nanosized interstitial defect clusters in iron, tungsten, and vanadium. <i>Physical Review B</i> , 2016, 94, .	3.2	84
16	Fast, vacancy-free climb of prismatic dislocation loops in bcc metals. <i>Scientific Reports</i> , 2016, 6, 30596.	3.3	56
17	Detection of one-dimensional migration of single self-interstitial atoms in tungsten using high-voltage electron microscopy. <i>Scientific Reports</i> , 2016, 6, 26099.	3.3	30
18	High temperature annealing of ion irradiated tungsten. <i>Acta Materialia</i> , 2015, 90, 380-393.	7.9	162

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19	Preferential void formation at crystallographically ordered grain boundaries in nanotwinned copper thin films. <i>Acta Materialia</i> , 2015, 96, 284-291.	7.9	16
20	Dislocation structure produced by an ultrashort shock pulse. <i>Journal of Applied Physics</i> , 2014, 116, .	2.5	20
21	Femtosecond laser-driven shock-induced dislocation structures in iron. <i>Applied Physics Express</i> , 2014, 7, 122704.	2.4	15
22	Spatial ordering of nano-dislocation loops in ion-irradiated materials. <i>Journal of Nuclear Materials</i> , 2014, 455, 16-20.	2.7	58
23	Multiple-shocks induced nanocrystallization in iron. <i>Applied Physics Letters</i> , 2014, 105, 021902.	3.3	18
24	Effects of precipitated helium, deuterium or alloy elements on glissile motion of dislocation loops in Fe-9Cr-2W ferritic alloy. <i>Journal of Nuclear Materials</i> , 2014, 455, 162-166.	2.7	5
25	One-Dimensional Glide Motion of "Naked" Nanoscale $1/2^{111}$ Prismatic Dislocation Loops in Iron. <i>ISIJ International</i> , 2014, 54, 2421-2424.	1.4	11
26	Lorentzian-like image blur of gold nanoparticles on thick amorphous silicon films in ultra-high-voltage transmission electron microscopy. <i>Microscopy (Oxford, England)</i> , 2013, 62, 521-531.	1.5	11
27	Detection and In Situ Switching of Unreversed Interfacial Antiferromagnetic Spins in a Perpendicular-Exchange-Biased System. <i>Physical Review Letters</i> , 2012, 109, 077202.	7.8	65
28	In-situ transmission electron microscopy studies on the dynamic behaviors of materials. , 2011, , .		0
29	Quantitative analysis on size dependence of eutectic temperature of alloy nanoparticles in the Ag-Pb system. <i>Applied Physics Letters</i> , 2011, 98, 083108.	3.3	19
30	Activation energy for long-range migration of self-interstitial atoms in tungsten obtained by direct measurement of radiation-induced point-defect clusters. <i>Philosophical Magazine Letters</i> , 2011, 91, 86-96.	1.2	26
31	Reaction rate between 1D migrating self-interstitial atoms: an examination by kinetic Monte Carlo simulation. <i>Philosophical Magazine</i> , 2011, 91, 3276-3289.	1.6	15
32	Verification of Rate Equation for Recombination between Self-Interstitial Atoms and Vacancies. <i>Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals</i> , 2011, 75, 460-464.	0.4	0
33	Modulation of nanotube formation in apatite single crystal via organic molecule incorporation. <i>Materials Chemistry and Physics</i> , 2011, 128, 495-499.	4.0	13
34	Direct observation of the coalescence process between nanoscale dislocation loops with different Burgers vectors. <i>Acta Materialia</i> , 2011, 59, 141-145.	7.9	92
35	Effect of crystallinity of Co layer on perpendicular exchange bias in Au-capped ultrathin Co film on Cr ₂ O ₃ (0001) thin film. <i>Journal of Magnetism and Magnetic Materials</i> , 2011, 323, 579-586.	2.3	7
36	Comparative study on size dependence of melting temperatures of pure metal and alloy nanoparticles. <i>Applied Physics Letters</i> , 2011, 99, .	3.3	17

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37	A Model for Nucleation and Growth Processes of Tin Whisker. Materials Science Forum, 2010, 638-642, 2688-2693.	0.3	4
38	Effect of Pt on the electron-irradiation-induced decomposition of sapphire. Scripta Materialia, 2010, 63, 355-358.	5.2	8
39	Electron-irradiation-induced phase transformation in alumina. Scripta Materialia, 2010, 63, 1013-1016.	5.2	18
40	Langevin model for real-time Brownian dynamics of interacting nanodefects in irradiated metals. Physical Review B, 2010, 81, .	3.2	65
41	<i>In situ</i> observations of crystalline-to-liquid and crystalline-to-gas transitions of substrate-supported Ag nanoparticles. Applied Physics Letters, 2010, 96, .	3.3	19
42	Two-dimensional metallic tungsten nanowire network fabricated by electron-beam-induced deposition. Nanotechnology, 2010, 21, 285304.	2.6	9
43	Dynamical interaction of helium bubbles with cascade damage in Fe-9Cr ferritic alloy. Journal of Nuclear Materials, 2009, 386-388, 177-180.	2.7	8
44	Dynamical response of helium bubble motion to irradiation with high-energy self-ions in aluminum at high temperature. Philosophical Magazine, 2009, 89, 513-524.	1.6	9
45	Energetics of formation process of a <001> prismatic dislocation loop via the collision between two 1/2<111> loops in δ -iron. Journal of Physics: Conference Series, 2009, 165, 012005.	0.4	4
46	Cluster-dynamics modelling of defects in δ -iron under cascade damage conditions. Journal of Nuclear Materials, 2008, 382, 190-196.	2.7	62
47	A road map for the realization of global-scale thorium breeding fuel cycle by single molten-fluoride flow. Energy Conversion and Management, 2008, 49, 1832-1848.	9.2	91
48	In-Situ Transmission Electron Microscopy of the Dynamics of Point-Defect Clusters in Metals. AIP Conference Proceedings, 2008, , .	0.4	2
49	In-situ Observation of Behaviors of Nanometer-Sized Dislocation Loops Upon Heating. Microscopy and Microanalysis, 2008, 14, 1334-1335.	0.4	0
50	Dynamical Interaction of Helium Bubbles with Grain Boundaries and Boundary Dislocations in Fe. Materia Japan, 2008, 47, 604-604.	0.1	0
51	Observation of the One-Dimensional Diffusion of Nanometer-Sized Dislocation Loops. Science, 2007, 318, 956-959.	12.6	303
52	Effects of cascade damages on the dynamical behavior of helium bubbles in Cu. Journal of Nuclear Materials, 2007, 367-370, 350-354.	2.7	16
53	Dynamical interaction of helium bubbles with grain boundaries in Fe and Fe-9Cr ferritic alloy. Journal of Nuclear Materials, 2007, 367-370, 522-526.	2.7	22
54	Drastic Decrease in Dislocations during Liquid Phase Epitaxy Growth of GaN Single Crystals Using Na flux Method without Any Artificial Processes. Japanese Journal of Applied Physics, 2006, 45, 2528-2530.	1.5	46

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55	Dynamical behavior of helium bubbles in gold during irradiation with high-energy self-ions. Nuclear Instruments & Methods in Physics Research B, 2006, 242, 455-457.	1.4	7
56	Process of the One-Dimensional Motion of Small Interstitial-Type Dislocation Loops in Iron. Materials Science Forum, 2006, 512, 103-106.	0.3	2
57	Changes in the Burgers Vector of Perfect Dislocation Loops without Contact with the External Dislocations. Physical Review Letters, 2006, 96, 125506.	7.8	119
58	TEM observation of the one-dimensional motion of interstitial-type dislocation loops in iron. Materia Japan, 2006, 45, 106-113.	0.1	3
59	Brownian Motion of Helium Bubbles in Aluminum. Materia Japan, 2006, 45, 907-907.	0.1	0
60	Plasma-carburization of nickel-based self-fluxing alloy. Vacuum, 2005, 78, 27-32.	3.5	14
61	New Primary Energy Source by Thorium Molten-Salt Reactor Technology. Electrochemistry, 2005, 73, 552-563.	1.4	25
62	Release of helium from irradiation damage in Fe-9Cr ferritic alloy. Journal of Nuclear Materials, 2004, 329-333, 933-937.	2.7	41
63	Effects of chromium on the one-dimensional motion of interstitial-type dislocation loops in iron. Journal of Nuclear Materials, 2004, 329-333, 1194-1198.	2.7	77
64	Localized electron irradiation methods and their application to detection of flow-field of point defects. Journal of Electron Microscopy, 2004, 53, 21-27.	0.9	3
65	Dynamic Observation of the Growth Process of Planar Extended Defects in Germanium under Hydrogen-ion Irradiation. Materia Japan, 2004, 43, 995-995.	0.1	0
66	Comparison among the formation processes of extended defects in Si under irradiation with low-energy H ⁺ , He ⁺ ions and high-energy electrons. Nuclear Instruments & Methods in Physics Research B, 2003, 206, 76-80.	1.4	2
67	Intermittent rapid motion of helium bubbles in Cu during irradiation with high energy self-ions. Nuclear Instruments & Methods in Physics Research B, 2003, 206, 114-117.	1.4	10
68	Deformation of thin foil of fcc and bcc metals containing pre-introduced He bubbles. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 350, 53-56.	5.6	3
69	Study on Plasma-Carburization Process of Ni-Base Self-Fluxing Alloy Coating. Materials Science Forum, 2003, 423-425, 561-564.	0.3	1
70	Elongation Fracture of Metals Containing Pre-introduced Secondary Defects. Radiation Effects and Defects in Solids, 2002, 157, 25-30.	1.2	7
71	Quantitative study of Brownian motion of helium bubbles in fcc metals. Journal of Electron Microscopy, 2002, 51, S245-S251.	0.9	29
72	A study of the mechanism of the growth and shrinkage of stacking fault tetrahedra using the fluctuation of their size under electron irradiation. Journal of Electron Microscopy, 2002, 51, S225-S229.	0.9	9

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73	Formation and migration of helium bubbles in Fe and Fe ⁹⁰ Cr ferritic alloy. Journal of Nuclear Materials, 2002, 307-311, 1507-1512.	2.7	63
74	Formation process of dislocation loops in iron under irradiations with low-energy helium, hydrogen ions or high-energy electrons. Journal of Nuclear Materials, 2002, 307-311, 272-277.	2.7	34
75	Evolution of point defect clusters in pure iron under low-energy He ⁺ irradiation. Journal of Applied Physics, 2001, 89, 4752-4757.	2.5	50
76	Fluctuation of point defect reactions observed during the growth of dislocation loops under electron irradiation. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2000, 80, 2041-2055.	0.6	8
77	Formation and migration of helium bubbles in Fe ¹⁶ Cr ¹⁷ Ni austenitic alloy at high temperature. Journal of Nuclear Materials, 2000, 283-287, 210-214.	2.7	23
78	Dynamical process of defect clustering in Ni under the irradiation with low energy helium ions. Journal of Nuclear Materials, 1999, 271-272, 214-219.	2.7	10
79	Anomalous production of vacancy clusters and the possibility of plastic deformation of crystalline metals without dislocations. Philosophical Magazine Letters, 1999, 79, 797-804.	1.2	125
80	In-situ observation of the microstructural evolution in germanium under the low-energy helium ion irradiation. Journal of Electron Microscopy, 1999, 48, 399-405.	0.9	15
81	Spatial distribution of nucleation of point defect clusters in irradiated metals. Journal of Nuclear Materials, 1996, 239, 1-6.	2.7	4
82	Improvement and Application of Intermittent Electron Irradiation Technique with a High Voltage Electron Microscope. Journal of Electron Microscopy, 1995, , .	0.9	1