Kazuto Arakawa

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1639378/publications.pdf

Version: 2024-02-01

82 papers	2,318 citations	257450 24 h-index	214800 47 g-index
82 all docs	82 docs citations	82 times ranked	1550 citing authors

#	Article	IF	Citations
1	Observation of the One-Dimensional Diffusion of Nanometer-Sized Dislocation Loops. Science, 2007, 318, 956-959.	12.6	303
2	High temperature annealing of ion irradiated tungsten. Acta Materialia, 2015, 90, 380-393.	7.9	162
3	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
4	Changes in the Burgers Vector of Perfect Dislocation Loops without Contact with the External Dislocations. Physical Review Letters, 2006, 96, 125506.	7.8	119
5	Direct observation of the coalescence process between nanoscale dislocation loops with different Burgers vectors. Acta Materialia, 2011, 59, 141-145.	7.9	92
6	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
7	Ab initioscaling laws for the formation energy of nanosized interstitial defect clusters in iron, tungsten, and vanadium. Physical Review B, 2016, 94, .	3.2	84
8	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
9	Langevin model for real-time Brownian dynamics of interacting nanodefects in irradiated metals. Physical Review B, 2010, 81, .	3.2	65
10	Detection andIn SituSwitching of Unreversed Interfacial Antiferromagnetic Spins in a Perpendicular-Exchange-Biased System. Physical Review Letters, 2012, 109, 077202.	7.8	65
11	Formation and migration of helium bubbles in Fe and Feâ€“9Cr ferritic alloy. Journal of Nuclear Materials, 2002, 307-311, 1507-1512.	2.7	63
12	Cluster-dynamics modelling of defects in Î±-iron under cascade damage conditions. Journal of Nuclear Materials, 2008, 382, 190-196.	2.7	62
13	Spatial ordering of nano-dislocation loops in ion-irradiated materials. Journal of Nuclear Materials, 2014, 455, 16-20.	2.7	58
14	Femtosecond laser peening of 2024 aluminum alloy without a sacrificial overlay under atmospheric conditions. Journal of Laser Applications, 2017, 29, .	1.7	58
15	Fast, vacancy-free climb of prismatic dislocation loops in bcc metals. Scientific Reports, 2016, 6, 30596.	3.3	56
16	Evolution of point defect clusters in pure iron under low-energy He+ irradiation. Journal of Applied Physics, 2001, 89, 4752-4757.	2.5	50
17	Femtosecond Laser Peening of Friction Stir Welded 7075-T73 Aluminum Alloys. Journal of Materials Processing Technology, 2018, 262, 111-122.	6.3	48
18	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

#	Article	IF	Citations
19	Release of helium from irradiation damage in Feâ€“9Cr ferritic alloy. Journal of Nuclear Materials, 2004, 329-333, 933-937.	2.7	41
20	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
21	Detection of one-dimensional migration of single self-interstitial atoms in tungsten using high-voltage electron microscopy. Scientific Reports, 2016, 6, 26099.	3.3	30
22	Quantitative study of Brownian motion of helium bubbles in fcc metals. Journal of Electron Microscopy, 2002, 51, S245-S251.	0.9	29
23	Activation energy for long-range migration of self-interstitial atoms in tungsten obtained by direct measurement of radiation-induced point-defect clusters. Philosophical Magazine Letters, 2011, 91, 86-96.	1.2	26
24	New Primary Energy Source by Thorium Molten-Salt Reactor Technology. Electrochemistry, 2005, 73, 552-563.	1.4	25
25	Formation and migration of helium bubbles in Feâ€“16Crâ€“17Ni austenitic alloy at high temperature. Journal of Nuclear Materials, 2000, 283-287, 210-214.	2.7	23
26	Dynamical interaction of helium bubbles with grain boundaries in Fe and Feâ€“9Cr ferritic alloy. Journal of Nuclear Materials, 2007, 367-370, 522-526.	2.7	22
27	Dislocation structure produced by an ultrashort shock pulse. Journal of Applied Physics, 2014, 116, .	2.5	20
28	A study of helium bubble production in 10 keV He+ irradiated tungsten. Fusion Engineering and Design, 2017, 125, 454-457.	1.9	20
29	Quantum de-trapping and transport of heavy defects in tungsten. Nature Materials, 2020, 19, 508-511.	27.5	20
30	In situ observations of crystalline-to-liquid and crystalline-to-gas transitions of substrate-supported Ag nanoparticles. Applied Physics Letters, 2010, 96, .	3.3	19
31	Quantitative analysis on size dependence of eutectic temperature of alloy nanoparticles in the Agâ€“Pb system. Applied Physics Letters, 2011, 98, 083108.	3.3	19
32	Improving Fatigue Performance of Laser-Welded 2024-T3 Aluminum Alloy Using Dry Laser Peening. Metals, 2019, 9, 1192.	2.3	19
33	Electron-irradiation-induced phase transformation in alumina. Scripta Materialia, 2010, 63, 1013-1016.	5.2	18
34	Multiple-shocks induced nanocrystallization in iron. Applied Physics Letters, 2014, 105, 021902.	3.3	18
35	Comparative study on size dependence of melting temperatures of pure metal and alloy nanoparticles. Applied Physics Letters, 2011, 99, .	3.3	17
36	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

#	Article	IF	Citations
37	Preferential void formation at crystallographically ordered grain boundaries in nanotwinned copper thin films. Acta Materialia, 2015, 96, 284-291.	7.9	16
38	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
39	Reaction rate between 1D migrating self-interstitial atoms: an examination by kinetic Monte Carlo simulation. Philosophical Magazine, 2011, 91, 3276-3289.	1.6	15
40	Femtosecond laser-driven shock-induced dislocation structures in iron. Applied Physics Express, 2014, 7, 122704.	2.4	15
41	Plasma-carburization of nickel-based self-fluxing alloy. Vacuum, 2005, 78, 27-32.	3.5	14
42	Modulation of nanotube formation in apatite single crystal via organic molecule incorporation. Materials Chemistry and Physics, 2011, 128, 495-499.	4.0	13
43	In-situ WB-STEM observation of dislocation loop behavior in reactor pressure vessel steel during post-irradiation annealing. Materialia, 2020, 12, 100778.	2.7	12
44	Lorentzian-like image blur of gold nanoparticles on thick amorphous silicon films in ultra-high-voltage transmission electron microscopy. Microscopy (Oxford, England), 2013, 62, 521-531.	1.5	11
45	High-temperature damage evolution in 10â€¯keV He+ irradiated W and W-5Re. Materials Characterization, 2018, 145, 77-86.	4.4	11
46	One-Dimensional Glide Motion of â€œNakedâ€•Nanoscale 1/2^|^lt;111^|^gt; Prismatic Dislocation Loops in Iron. ISIJ International, 2014, 54, 2421-2424.	1.4	11
47	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
48	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
49	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
50	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
51	Two-dimensional metallic tungsten nanowire network fabricated by electron-beam-induced deposition. Nanotechnology, 2010, 21, 285304.	2.6	9
52	High-temperature defect recovery in self-ion irradiated W-5 wt% Ta. Nuclear Materials and Energy, 2019, 18, 93-98.	1.3	9
53	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
54	Dynamical interaction of helium bubbles with cascade damage in Feâ€“9Cr ferritic alloy. Journal of Nuclear Materials, 2009, 386-388, 177-180.	2.7	8

#	Article	IF	Citations
55	Effect of Pt on the electron-irradiation-induced decomposition of sapphire. Scripta Materialia, 2010, 63, 355-358.	5.2	8
56	<110> Dislocation Junction Formation via the Coalescence between Nanoscale 1/2<111> Prismatic Dislocation Loops in Iron. ISIJ International, 2017, 57, 2065-2069.	1.4	8
57	Elongation Fracture of Metals Containing Pre-introduced Secondary Defects. Radiation Effects and Defects in Solids, 2002, 157, 25-30.	1.2	7
58	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
59	Effect of crystallinity of Co layer on perpendicular exchange bias in Au-capped ultrathin Co film on Cr2O3(0001) thin film. Journal of Magnetism and Magnetic Materials, 2011, 323, 579-586.	2.3	7
60	Effects of precipitated helium, deuterium or alloy elements on glissile motion of dislocation loops in Feâ€“9Crâ€“2W ferritic alloy. Journal of Nuclear Materials, 2014, 455, 162-166.	2.7	5
61	Spatial distribution of nucleation of point defect clusters in irradiated metals. Journal of Nuclear Materials, 1996, 239, 1-6.	2.7	4
62	Energetics of formation process of a <001> prismatic dislocation loop via the collision between two 1/2<111> loops in Î±-iron. Journal of Physics: Conference Series, 2009, 165, 012005.	0.4	4
63	A Model for Nucleation and Growth Processes of Tin Whisker. Materials Science Forum, 2010, 638-642, 2688-2693.	0.3	4
64	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
65	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
66	TEMã®å´è¦³å¯Ÿã«ã‚ˆã‚‹ãƒ€ãƒ¡ãƒ¼ã‚¸ãƒ—ãƒã‚»ã‚¹ã®å‹•çš„æŒ™å‹•ã®ç”°©¶. Materia Japan, 2006, 45, 106-113.	0.1	3
67	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
68	Process of the One-Dimensional Motion of Small Interstitial-Type Dislocation Loops in Iron. Materials Science Forum, 2006, 512, 103-106.	0.3	2
69	In-Situ Transmission Electron Microscopy of the Dynamics of Point-Defect Clusters in Metals. AIP Conference Proceedings, 2008, , .	0.4	2
70	Improvement and Application of Intermittent Electron Irradiation Technique with a High Voltage Electron Microscope. Journal of Electron Microscopy, 1995, , .	0.9	1
71	Study on Plasma-Carburization Process of Ni-Base Self-Fluxing Alloy Coating. Materials Science Forum, 2003, 423-425, 561-564.	0.3	1
72	Dynamic behaviour of nanometre-sized defect clusters emitted from an atomic displacement cascade in Au at 50ÂK. Philosophical Magazine, 2017, 97, 2196-2206.	1.6	1

#	Article	IF	Citations
73	Experimental Validation of Models: In Situ TEM for Radiation Damage. , 2020, , 2503-2516.		1
74	In-situ Observation of Behaviors of Nanometer-Sized Dislocation Loops Upon Heating. Microscopy and Microanalysis, 2008, 14, 1334-1335.	0.4	0
75	In-situ transmission electron microscopy studies on the dynamic behaviors of materials. , 2011, , .		0
76	Verification of Rate Equation for Recombination between Self-Interstitial Atoms and Vacancies. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2011, 75, 460-464.	0.4	0
77	OM-III-1TEM Observation of Dynamic Behavior of Lattice Defects in Metals. Microscopy (Oxford,) Tj ETQq1 1 0.784314 rgBT /Overloc	1.5	0
78	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
79	Brownian Motion of Helium Bubbles in Aluminum. Materia Japan, 2006, 45, 907-907.	0.1	0
80	Dynamical Interaction of Helium Bubbles with Grain Boundaries and Boundary Dislocations in Fe. Materia Japan, 2008, 47, 604-604.	0.1	0
81	Experimental Validation of Models: In Situ TEM for Radiation Damage. , 2019, , 1-14.		0
82	Experimental Validation of Models: In Situ TEM for Radiation Damage. , 2020, , 1-14.		0