Hiro Amekura

List of Publications by Year
in descending order

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100 papers	1,690 citations	304743 22 h-index	345221 36 g-index
102 all docs	102 docs citations	102 times ranked	1368 citing authors

#	Article	IF	Citations
1	Incident Angle Dependent Formation of Ion Tracks in Quartz Crystal with C60+ Ions: Big Ions in Small Channels. Quantum Beam Science, 2022, 6, 4.	1.2	2
2	Blue-shift in optical bandgap of sprayed nanocrystalline Cu2ZnSnS4 thin films induced by 200ÂMeV Xe swift heavy ions irradiation. Journal of Materials Science: Materials in Electronics, 2021, 32, 25516.	2.2	0
3	Ion tracks in silicon formed by much lower energy deposition than the track formation threshold. Scientific Reports, 2021, 11, 185.	3.3	12
4	Swift heavy ion irradiation to non-amorphizable CaF2 and amorphizable Y3Al5O12 (YAG) crystals. Nuclear Instruments & Methods in Physics Research B, 2020, 474, 78-82.	1.4	6
5	Irradiation Effects of Swift Heavy Ions Detected by Refractive Index Depth Profiling. Quantum Beam Science, 2020, 4, 39.	1.2	2
6	On the mechanism of the shape elongation of embedded nanoparticles. Nuclear Instruments & Methods in Physics Research B, 2020, 475, 44-48.	1.4	8
7	Matrix-material dependence on the elongation of embedded gold nanoparticles induced by 4 MeV C₆₀ and 200 MeV Xe ion irradiation. Nanotechnology, 2020, 31, 265606.	2.6	6
8	Fused Silica with Embedded 2Dâ€Like Ag Nanoparticle Monolayer: Tunable Saturable Absorbers by Interparticle Spacing Manipulation. Laser and Photonics Reviews, 2020, 14, 1900302.	8.7	30
9	Ultrafast Saturable Absorbers: Fused Silica with Embedded 2Dâ€Like Ag Nanoparticle Monolayer: Tunable Saturable Absorbers by Interparticle Spacing Manipulation (Laser Photonics Rev. 14(2)/2020). Laser and Photonics Reviews, 2020, 14, 2070014.	8.7	3
10	Shape Elongation of Nanoparticles Induced by Swift Heavy Ion Irradiation. Springer Series in Optical Sciences, 2020, , 109-173.	0.7	2
11	Control of optical absorption of silica glass by Ag ion implantation and subsequent heavy ion irradiation. Nanotechnology, 2020, 31, 455706.	2.6	9
12	Tailoring of Optical Properties by Metallic Nanoparticles. Springer Series in Optical Sciences, 2020, , 263-282.	0.7	0
13	Nanoparticles Synthesized by Ion Implantation. Springer Series in Optical Sciences, 2020, , 61-107.	0.7	3
14	Copper Nanoparticles Embedded in Lithium Tantalate Crystals for Multi-GHz Lasers. ACS Applied Nano Materials, 2019, 2, 5871-5877.	5.0	15
15	C60 ions of 1â€‰MeV are slow but elongate nanoparticles like swift heavy ions of hundreds MeV. Scientific Reports, 2019, 9, 14980.	3.3	15
16	Ultravioletâ€“Visible Spectrophotometry. , 2018, , 791-799.		1
17	Nonlinear Absorption Response Correlated to Embedded Ag Nanoparticles in BGO Single Crystal: From Two-Photon to Three-Photon Absorption. Scientific Reports, 2018, 8, 1977.	3.3	23
18	Plasmonic nanoparticles embedded in single crystals synthesized by gold ion implantation for enhanced optical nonlinearity and efficient Q-switched lasing. Nanoscale, 2018, 10, 4228-4236.	5.6	53

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19	Swift heavy ion irradiation to ZnO nanoparticles: Steep degradation at low fluences and stable tolerance at high fluences. Journal of Applied Physics, 2018, 124, .	2.5	10
20	Ag nanoparticles embedded in Nd:YAG crystals irradiated with tilted beam of 200 MeV Xe ions: optical dichroism correlated to particle reshaping. Nanotechnology, 2018, 29, 424001.	2.6	5
21	Vaporlike phase of amorphous <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Si</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> is not a prerequisite for the core/shell ion tracks or ion shaping. Physical Review Materials, 2018, 2, .	2.4	9
22	Are the triple surface plasmon resonances in Zn nanoparticles true?. Nanotechnology, 2017, 28, 495712.	2.6	3
23	Counterevidence to the ion hammering scenario as a driving force for the shape elongation of embedded nanoparticles. AIP Advances, 2017, 7, .	1.3	11
24	Period-thickness dependent responses of Cu/W multilayered nanofilms to ions irradiation under different ion energies. Journal of Nuclear Materials, 2017, 497, 117-127.	2.7	18
25	Room-temperature single-photon emission from zinc oxide nanoparticle defects and their <i>in vitro</i> photostable intrinsic fluorescence. Nanophotonics, 2017, 6, 269-278.	6.0	18
26	A possible new origin of long absorption tail in Nd-doped yttrium aluminum garnet induced by 15â€‰MeV gold-ion irradiation and heat treatment. Journal of Applied Physics, 2016, 119, 173104.	2.5	4
27	Irradiation resistance, microstructure and mechanical properties of nanostructured (TiZrHfVNbTa)N coatings. Journal of Alloys and Compounds, 2016, 679, 155-163.	5.5	137
28	Recrystallization and formation of spheroidal gold particles in amorphous-like AlNâ€“TiB2â€“TiSi2 coatings after annealing and subsequent implantation. Physics of the Solid State, 2016, 58, 1453-1457.	0.6	0
29	Does swift heavy ion beam mixing in metal/a-Ge interface result from transient thermal process?. Transactions of the Materials Research Society of Japan, 2016, 41, 325-328.	0.2	0
30	The microstructure of a multielement nanostructured (TiZrHfVNbTa)N coating and its resistance to irradiation with Auâ€“ ions. Technical Physics Letters, 2015, 41, 1054-1057.	0.7	11
31	Waveguideâ€Plasmon Polariton Enhanced Photochemistry. Advanced Optical Materials, 2015, 3, 1582-1590.	7.3	21
32	Shape elongation of embedded Zn nanoparticles induced by swift heavy ion irradiation: A SAXS study. Physica Status Solidi (B): Basic Research, 2015, 252, 165-169.	1.5	11
33	Influence of implantation of Auâˆ' ions on the microstructure and mechanical properties of the nanostructured multielement (TiZrHf VNbTa)N coating. Physics of the Solid State, 2015, 57, 1559-1564.	0.6	24
34	Structural features and physico-mechanical properties of AlN-TiB2-TiSi2 amorphous-like coatings. Journal of Superhard Materials, 2015, 37, 310-321.	1.2	4
35	The inelastic thermal spike model applied to metal/insulator interfaces. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 102-106.	0.8	7
36	Synthesis of embedded Au nanostructures by ion irradiation: influence of ion induced viscous flow and sputtering. Beilstein Journal of Nanotechnology, 2014, 5, 105-110.	2.8	15

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37	Optical birefringence of Zn nanoparticles embedded in silica induced by swift heavy-ion irradiation. Optics Express, 2014, 22, 29888.	3.4	9
38	Shape elongation of Zn nanoparticles in silica irradiated with swift heavy ions of different species and energies: scaling law and some insights on the elongation mechanism. Nanotechnology, 2014, 25, 435301.	2.6	32
39	Controlled shape modification of embedded Au nanoparticles by 3 MeV Au2+-ion irradiation. Applied Surface Science, 2014, 310, 164-168.	6.1	14
40	Room temperature single photon emission from zinc oxide nanoparticles formed by ion implantation in silica. , 2013, , .		1
41	Effect of Cu Negative Ion Implantation on Physical Properties of Zn1-xMnxTe Films. Acta Physica Polonica A, 2013, 123, 939-942.	0.5	6
42	Swift heavy ion irradiation of ZnO nanoparticles embedded in silica: Radiation-induced deoxidation and shape elongation. Applied Physics Letters, 2013, 103, .	3.3	23
43	Fluorescent nanoparticles for biosensing applications. , 2013, , .		0
44	Thermal stability of embedded metal nanoparticles elongated by swift heavy ion irradiation: Zn nanoparticles in a molten state but preserving elongated shapes. Nanotechnology, 2012, 23, 095704.	2.6	13
45	Formation of metallic vanadium nanoparticles in SiO2 by ion implantation and of vanadium oxide nanoparticles by additional thermal oxidation. Thin Solid Films, 2012, 520, 5528-5533.	1.8	4
46	Amorphization of Cu nanoparticles: Effects on surface plasmon resonance. Applied Physics Letters, 2011, 99, .	3.3	16
47	Melting of Metal Nanoparticles and Effects on the Surface Plasmon Resonance. , 2011, , .		1
48	Vacuum fluorescent displays utilizing ZnO nanoparticles. Journal of Applied Physics, 2011, 109, .	2.5	12
49	Development and irradiation performance of stencil masks for heavy-ion patterned implantation. Surface and Coatings Technology, 2011, 206, 806-811.	4.8	0
50	Asynchronous melting of embedded metal nanoparticles and silica matrix for shape elongation induced by swift heavy ion irradiation. Nuclear Instruments & Methods in Physics Research B, 2011, 269, 2730-2733.	1.4	13
51	Role of Thermodynamics in the Shape Transformation of Embedded Metal Nanoparticles Induced by Swift Heavy-Ion Irradiation. Physical Review Letters, 2011, 106, 095505.	7.8	100
52	Zn nanoparticles irradiated with swift heavy ions at low fluences: Optically-detected shape elongation induced by nonoverlapping ion tracks. Physical Review B, 2011, 83, .	3.2	35
53	Melting-solidification transition of Zn nanoparticles embedded in SiO2: Observation by synchrotron x-ray and ultraviolet-visible-near-infrared light. Journal of Applied Physics, 2010, 108, 104302.	2.5	7
54	RADIATION PHOTONICS: A CASE OF METAL-NANOPARTICLE COMPOSITES. Journal of Nonlinear Optical Physics and Materials, 2010, 19, 737-744.	1.8	1

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55	Melting of Zn nanoparticles embedded in SiO2 at high temperatures: Effects on surface plasmon resonances. Applied Physics Letters, 2010, 96, .	3.3	24
56	Microstrip structures of ZnO nanoparticle aggregates of millimetric length formed by selected-area ion implantation and thermal oxidation. Nanotechnology, 2009, 20, 065303.	2.6	7
57	Fabrication of Oxide Nanoparticles by Ion Implantation and Thermal Oxidation. , 2009, , 1-75.		9
58	Optical propagation modified by Cu nanoparticle grating fabricated by heavy ion implantation. Vacuum, 2008, 82, 1168-1171.	3.5	2
59	Void formation in silica glass induced by thermal oxidation after Zn+ ion implantation. Vacuum, 2008, 83, 645-648.	3.5	11
60	Fluence-dependent formation of Zn and ZnO nanoparticles by ion implantation and thermal oxidation: An attempt to control nanoparticle size. Journal of Applied Physics, 2008, 104, .	2.5	21
61	Saturation of nonlinear optical absorption of metal-nanoparticle composites. Journal of Applied Physics, 2008, 103, 114302.	2.5	14
62	Implantation-induced nonequilibrium reaction between Zn ions of 60keV and SiO2 target. Applied Physics Letters, 2007, 91, 063113.	3.3	7
63	Embedment of ZnO nanoparticles in SiO2 by ion implantation and low-temperature oxidation. Applied Physics Letters, 2007, 90, 083102.	3.3	21
64	Dual surface plasmon resonances in Zn nanoparticles in SiO₂: an experimental study based on optical absorption and thermal stability. Nanotechnology, 2007, 18, 395707.	2.6	44
65	Annealing atmosphere effects on Zn nanoparticles in SiO2 and transformation to ZnO nanoparticles. Surface and Coatings Technology, 2007, 201, 8215-8219.	4.8	9
66	Defect-band-free luminescence from ZnO nanoparticles fabricated by ion implantation and thermal oxidation. Nuclear Instruments & Methods in Physics Research B, 2007, 257, 64-67.	1.4	8
67	Zn and ZnO nanoparticles fabricated by ion implantation combined with thermal oxidation, and the defect-free luminescence. Applied Physics Letters, 2006, 88, 153119.	3.3	63
68	Luminescence from ZnO nanoparticles/SiO2 fabricated by ion implantation and thermal oxidation. Physica B: Condensed Matter, 2006, 376-377, 760-763.	2.7	20
69	Formation of zinc-oxide nanoparticles in SiO2 by ion implantation combined with thermal oxidation. Nuclear Instruments & Methods in Physics Research B, 2006, 242, 96-99.	1.4	25
70	Formation processes of zinc-oxide nanoparticles by ion implantation combined with thermal oxidation. Journal of Crystal Growth, 2006, 287, 2-6.	1.5	23
71	Concentration profiles of Zn ions implanted with 60keV for nanoparticle formation in silica glass. Vacuum, 2006, 80, 802-805.	3.5	6
72	Production of Cu2O nanoparticles in SiO2by ion implantation and two-step annealing at different oxygen pressures. Journal Physics D: Applied Physics, 2006, 39, 3659-3664.	2.8	20

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73	Optical transitions of Cu2O nanocrystals in SiO2 fabricated by ion implantation and two-step annealing. Applied Physics Letters, 2006, 89, 223120.	3.3	14
74	Electronic excitation and optical responses of metal-nanoparticle composites under heavy-ion implantation. Journal of Applied Physics, 2006, 99, 044307.	2.5	13
75	Radiation-induced differential optical absorption of metal nanoparticles. Applied Physics Letters, 2006, 88, 201915.	3.3	8
76	Formation processes of nickel oxide nanoparticles in SiO2 by metal-ion implantation combined with thermal oxidation. Nuclear Instruments & Methods in Physics Research B, 2005, 230, 193-197.	1.4	20
77	Cupric oxide nanoparticles in SiO2 fabricated by copper-ion implantation combined with thermal oxidation. Applied Physics Letters, 2005, 87, 153105.	3.3	31
78	Fabrication of ZnO nanoparticles in SiO2 by ion implantation combined with thermal oxidation. Applied Physics Letters, 2005, 87, 013109.	3.3	67
79	Curie transition of superparamagnetic nickel nanoparticles in silica glass: A phase transition in a finite size system. Physical Review B, 2005, 71, .	3.2	23
80	Fabrication of nickel oxide nanoparticles in SiO2 by metal-ion implantation combined with thermal oxidation. Applied Physics Letters, 2004, 85, 1015-1017.	3.3	43
81	Criteria for surface plasmon resonance energy of metal nanoparticles in silica glass. Nuclear Instruments & Methods in Physics Research B, 2004, 222, 96-104.	1.4	66
82	Non-magnetic to magnetic and non-metal to metal transitions in nickel nanoparticles in SiO2 under heat treatment. Nuclear Instruments & Methods in Physics Research B, 2004, 219-220, 825-829.	1.4	12
83	Nickel nanoparticles in silica glass fabricated by 60 keV negative-ion implantation. Nuclear Instruments & Methods in Physics Research B, 2004, 222, 114-122.	1.4	47
84	Near-surface sensitive infrared reflection spectroscopy on SiO2 implanted with high-flux negative ions. Vacuum, 2004, 74, 549-553.	3.5	2
85	Magneto-optical Kerr spectra of nickel nanoparticles in silica glass fabricated by negative-ion implantation. Thin Solid Films, 2004, 464-465, 268-272.	1.8	14
86	Ion-induced frequency shift of â^¼1100 cmâ^'1 IR vibration in implanted SiO2: Compaction versus bond-breaking. Nuclear Instruments & Methods in Physics Research B, 2003, 206, 1101-1105.	1.4	13
87	Resonance energy of surface plasmon of nickel nanoparticles in silica glasses. , 2003, , .		10
88	Implantation of 60 keV copper negative ion into thin SiO2 films on Si: Thermal stability of Cu nanoparticles and recovery of radiation damage. Journal of Applied Physics, 2003, 94, 2585-2589.	2.5	14
89	Nickel nanoparticles dispersed in SiO 2 fabricated by high-flux negative-ion implantation of 60 keV. , 2002, , .		3
90	Microstructural changes in silicon thermal oxide induced by high-flux copper negative-ion implantation. Nuclear Instruments & Methods in Physics Research B, 2001, 175-177, 345-349.	1.4	6

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91	X-Ray Emission Induced by 60 keV High-Flux Copper Negative-Ion Implantation. Japanese Journal of Applied Physics, 2001, 40, 1094-1096.	1.5	7
92	In situ photodetection in strong radiation fields: Simultaneous irradiation of Si by photons and high-energy protons. Journal of Applied Physics, 2000, 88, 2497-2502.	2.5	2
93	Radiation-induced Conductivity and Simultaneous Photoconductivity Suppression in 6H-SiC under 17 MeV Proton Irradiation. Materials Science Forum, 2000, 338-342, 977-980.	0.3	2
94	Particle-induced conductivity and photoconductivity of silicon under 17 MeV proton irradiation. Journal of Applied Physics, 1998, 84, 4834-4841.	2.5	11
95	Room-temperature photoluminescence from Tb ions implanted in SiO2 on Si. Journal of Applied Physics, 1998, 84, 3867-3871.	2.5	93
96	Persistent Excited Conductivity Induced by Proton Irradiation in a-Si:H. Materials Science Forum, 1997, 258-263, 599-604.	0.3	6
97	Reconfirmation with Discussion of Anomalies in Photoconductivity of Cu2O at Low Temperatures. Journal of the Physical Society of Japan, 1995, 64, 2684-2696.	1.6	8
98	Resonant creep enhancement in austenitic stainless steels due to pulsed irradiation at low doses. Fusion Engineering and Design, 1995, 29, 391-398.	1.9	1
99	Photoconductivity evolution due to carrier trapping by defects in 17 MeVâ€proton irradiated silicon. Journal of Applied Physics, 1995, 77, 4984-4992.	2.5	25
100	Irradiation Temperature Dependence of Residual Defects in 17MeV-Proton Bombarded Silicon. Materials Science Forum, 1995, 196-201, 1159-1164.	0.3	9