Ichiro Yonenaga

List of Publications by Year
in descending order

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134	2,870	159585	223800
papers	citations	30 h-index	46 g-index

134	134	134	1725
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dislocation dynamics in the plastic deformation of silicon crystals I. Experiments. Physica Status Solidi A, 1978, 50, 685-693.	1.7	151
2	Impurity effects on the generation, velocity, and immobilization of dislocations in GaAs. Journal of Applied Physics, 1989, 65, 85-92.	2.5	116
3	Mechanical strength of silicon crystals as a function of the oxygen concentration. Journal of Applied Physics, 1984, 56, 2346-2350.	2.5	101
4	Thermo-mechanical stability of wide-bandgap semiconductors: high temperature hardness of SiC, AlN, GaN, ZnO and ZnSe. Physica B: Condensed Matter, 2001, 308-310, 1150-1152.	2.7	100
5	Hardness, Yield Strength, and Dislocation Velocity in Elemental and Compound Semiconductors. Materials Transactions, 2005, 46, 1979-1985.	1.2	75
6	Growth and fundamental properties of SiGe bulk crystals. Journal of Crystal Growth, 2005, 275, 91-98.	1.5	74
7	Influence of oxygen precipitation along dislocations on the strength of silicon crystals. Journal of Applied Physics, 1996, 80, 734-738.	2.5	73
8	Nano-Indentation Hardness and Elastic Moduli of Bulk Single-Crystal AlN. Japanese Journal of Applied Physics, 2002, 41, 4620-4621.	1.5	70
9	Czochralski growth of Ge1 â^' xSix alloy crystals. Journal of Crystal Growth, 1995, 154, 275-279.	1.5	69
10	Indentation hardnesses of semiconductors and a scaling rule. Philosophical Magazine Letters, 2002, 82, 535-542.	1.2	62
11	Mechanical properties of GaAs crystals. Journal of Materials Research, 1987, 2, 252-261.	2.6	59
12	Plasticity of IIIâ€"V Compounds at Low Temperatures. Physica Status Solidi A, 1999, 171, 47-52.	1.7	54
13	Czochralski growth of bulk crystals of Ge1-xSix alloys. Journal of Crystal Growth, 1998, 183, 109-116.	1.5	53
14	Yield strength and dislocation mobility in plastically deformed bulk single-crystal GaN. Journal of Applied Physics, 2001, 90, 6539-6541.	2.5	52
15	Control of Grain Boundary Propagation in Mono-Like Si: Utilization of Functional Grain Boundaries. Applied Physics Express, 2013, 6, 025505.	2.4	50
16	Mechanical Properties and Dislocation Dynamics in III-V Compounds. Journal De Physique III, 1997, 7, 1435-1450.	0.3	49
17	Dynamic behavior of dislocations in InAs: In comparison with IIIâ€"V compounds and other semiconductors. Journal of Applied Physics, 1998, 84, 4209-4213.	2.5	45
18	Behaviour of dislocations in GaAs revealed by etch pit technique and X-ray topography. Journal of Crystal Growth, 1993, 126, 19-29.	1.5	40

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19	Czochralski growth of GeSi bulk alloy crystals. Journal of Crystal Growth, 1999, 198-199, 404-408.	1.5	40
20	Dislocationâ€“impurity interaction in Si. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2005, 124-125, 293-296.	3.5	39
21	Thermal and electrical properties of Czochralski grown GeSi single crystals. Journal of Physics and Chemistry of Solids, 2001, 62, 1313-1317.	4.0	37
22	Bond lengths inGe1âˆ’xSixcrystalline alloys grown by the Czochralski method. Physical Review B, 2001, 64, .	3.2	36
23	Nitrogen effects on generation and velocity of dislocations in Czochralski-grown silicon. Journal of Applied Physics, 2005, 98, 023517.	2.5	36
24	Czochralski growth of bulk crystals of Ge1âˆ’xSix alloys. Journal of Crystal Growth, 1998, 191, 393-398.	1.5	35
25	Dynamic characteristics of dislocations in Ge-doped and (Ge+B) codoped silicon. Journal of Applied Physics, 2003, 93, 265-269.	2.5	35
26	An overview of plasticity of Si crystals governed by dislocation motion. Engineering Fracture Mechanics, 2015, 147, 468-479.	4.3	33
27	Effects of dopants on dynamic behavior of dislocations and mechanical strength in InP. Journal of Applied Physics, 1993, 74, 917-924.	2.5	32
28	Growth and mechanical properties of GeSi bulk crystals. Journal of Materials Science: Materials in Electronics, 1999, 10, 329-333.	2.2	32
29	Optical properties of dislocations in wurtzite ZnO single crystals introduced at elevated temperatures. Journal of Applied Physics, 2008, 104, .	2.5	32
30	Mechanical properties and dislocation dynamics of IIIâ€“V compound semiconductors. Physica Status Solidi A, 1992, 131, 663-670.	1.7	31
31	Segregation during the seeding process in the Czochralski growth of GeSi alloys. Journal of Crystal Growth, 1998, 191, 399-404.	1.5	30
32	Upper Yield Stress of Si Crystals at High Temperatures. Journal of the Electrochemical Society, 1996, 143, L176-L178.	2.9	29
33	Hardness of Bulk Single-Crystal Gallium Nitride at High Temperatures. Japanese Journal of Applied Physics, 2000, 39, L200-L201.	1.5	29
34	Interstitial oxygen in GeSi alloys. Physica B: Condensed Matter, 2001, 308-310, 539-541.	2.7	29
35	Three-dimensional evaluation of gettering ability of Î£3{111} grain boundaries in silicon by atom probe tomography combined with transmission electron microscopy. Applied Physics Letters, 2013, 103, .	3.3	28
36	Interactions of Impurities with Dislocations: Mechanical Effects. Solid State Phenomena, 2002, 85-86, 145-176.	0.3	26

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37	Czochralski growth of heavily impurity doped crystals of GeSi alloys. Journal of Crystal Growth, 2001, 226, 47-51.	1.5	25
38	Dislocation-Free Czochralski Silicon Crystal Growth without Dash Necking. Japanese Journal of Applied Physics, 2001, 40, 12-17.	1.5	25
39	Dislocation velocity in GeSi alloy. Applied Physics Letters, 1996, 69, 1264-1266.	3.3	24
40	Dislocation-free B-doped Si crystal growth without Dash necking in Czochralski method: influence of B concentration. Journal of Crystal Growth, 2000, 213, 283-287.	1.5	24
41	High-Temperature Hardness of Bulk Single-Crystal AlN. Japanese Journal of Applied Physics, 2001, 40, L426-L427.	1.5	24
42	Mechanical strength of GeSi alloy. Journal of Applied Physics, 1996, 80, 3244-3247.	2.5	23
43	Interaction of dopant atoms with stacking faults in silicon crystals. Journal of Applied Physics, 2010, 108, .	2.5	23
44	Generation mechanism of dislocations and their clusters in multicrystalline silicon during two-dimensional growth. Journal of Applied Physics, 2011, 110, 083530.	2.5	23
45	Dynamic characteristics of dislocations in highly boron-doped silicon. Journal of Applied Physics, 2001, 89, 5788-5790.	2.5	22
46	Nanoindentation measurements of a highly oriented wurtzite-type boron nitride bulk crystal. Japanese Journal of Applied Physics, 2017, 56, 030301.	1.5	22
47	Recombination-Enhanced Dislocation Motion in SiGe and Ge. Physica Status Solidi A, 1999, 171, 35-40.	1.7	21
48	Dislocation-Free Czochralski Si Crystal Growth without Dash Necking Using a Heavily B and Ge Codoped Si Seed. Japanese Journal of Applied Physics, 2000, 39, L1115-L1117.	1.5	21
49	High-temperature strength and dislocation mobility in the wide band-gap ZnO: Comparison with various semiconductors. Journal of Applied Physics, 2008, 103, 093502.	2.5	21
50	Impurity effects on the generation and velocity of dislocations in Ge. Journal of Applied Physics, 2011, 109, .	2.5	21
51	On the impact of germanium doping on the vacancy formation energy in Czochralski-grown silicon. Journal of Applied Physics, 2010, 108, 016105.	2.5	19
52	Optical and electrical properties of dislocations in plastically deformed GaN. Journal of Crystal Growth, 2014, 403, 72-76.	1.5	19
53	Light emission due to dislocations in wurtzite ZnO bulk single crystals freshly introduced by plastic deformation. Applied Physics Letters, 2008, 92, 011922.	3.3	18
54	Recent knowledge of strength and dislocation mobility in wide band-gap semiconductors. Physica B: Condensed Matter, 2009, 404, 4999-5001.	2.7	18

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55	Cellular structures in Czochralski-grown SiGe bulk crystal. Journal of Crystal Growth, 2010, 312, 1065-1068.	1.5	18
56	High-temperature strength of IIIÂV nitride crystals. Journal of Physics Condensed Matter, 2002, 14, 12947-12951.	1.8	17
57	Segregation coefficients of various dopants in SixGe1âˆ'x (0.93<x<0.96) single crystals. Journal of Crystal Growth, 2006, 297, 14-19.	1.5	17
58	Dislocation-related optical absorption in plastically deformed GaN. Journal of Applied Physics, 2007, 102, 026103.	2.5	17
59	In situ analysis of optoelectronic properties of dislocations in ZnO in TEM observations. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1904-1911.	1.8	16
60	Disorder-induced broadening of transverse acoustic phonons in SixGe1âˆ'x mixed crystals. Physica B: Condensed Matter, 2004, 350, 254-257.	2.7	15
61	Photoluminescence properties of GaN with dislocations induced by plastic deformation. Journal of Electronic Materials, 2006, 35, 717-721.	2.2	15
62	Interaction of phosphorus with dislocations in heavily phosphorus doped silicon. Applied Physics Letters, 2009, 95, 091915.	3.3	14
63	Dislocation structure in AlN films induced by in situ transmission electron microscope nanoindentation. Journal of Applied Physics, 2012, 112, 093526.	2.5	14
64	Atomic structures and dynamic properties of dislocations in semiconductors: current progress and stagnation. Semiconductor Science and Technology, 2020, 35, 043001.	2.0	14
65	Dislocation Velocities and Mechanical Strength of Bulk GeSi Crystals. Physica Status Solidi A, 1999, 171, 41-46.	1.7	13
66	Dislocation mobility and photoluminescence of plastically deformed GaN. Physica B: Condensed Matter, 2003, 340-342, 484-487.	2.7	13
67	Role of Carbon in the Strengthening of Silicon Crystals. Japanese Journal of Applied Physics, 1984, 23, L590-L592.	1.5	12
68	Growth and dislocation behavior in GeSi bulk alloys. Physica B: Condensed Matter, 1999, 273-274, 612-615.	2.7	12
69	Local strain relaxation in Czochralski-grown GeSi bulk alloys. Physica B: Condensed Matter, 2003, 340-342, 854-857.	2.7	12
70	X-ray Fluorescence Holography Study on Si_{1−}_xGe_x Single Crystal. Materials Transactions, 2004, 45, 1994-1997.	1.2	12
71	Temperature dependence of electron and hole mobilities in heavily impurity-doped SiGe single crystals. Journal of Applied Physics, 2005, 98, 063702.	2.5	12
72	Application of SiGe bulk crystal as a substrate for strain-controlled heterostructure materials. Thin Solid Films, 2008, 517, 14-16.	1.8	12

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73	Elastic properties of indium nitrides grown on sapphire substrates determined by nano-indentation: In comparison with other nitrides. AIP Advances, 2015, 5, .	1.3	12
74	Determination of phonon deformation potentials and strain-shift coefficients in Ge-rich Si_{1â^'} _x Ge _x using bulk Ge-rich Si_{1â^'} _x Ge _x crystals and oil-immersion Raman spectroscopy. Japanese Journal of Applied Physics, 2018, 57, 106601.	1.5	12
75	Climb of extended dislocations in silicon caused by oxygen precipitation. Materials Letters, 1991, 11, 164-170.	2.6	11
76	First principles calculations of solution energies of dopants around stacking faults in Si crystal. Japanese Journal of Applied Physics, 2014, 53, 061302.	1.5	11
77	Dislocation dissociation and stacking-fault energies in Ge1-xSixalloys. Philosophical Magazine Letters, 2000, 80, 193-197.	1.2	10
78	Dynamics and characters of dislocations in ZnSe. Journal of Materials Science, 2006, 41, 2601-2604.	3.7	10
79	Muonium defect states and ionization energies in SiGe alloys. Physica B: Condensed Matter, 2007, 401-402, 617-620.	2.7	10
80	Segregation of boron in germanium crystal. Journal of Crystal Growth, 2008, 311, 59-61.	1.5	10
81	Optical properties of fresh dislocations in GaN. Journal of Crystal Growth, 2011, 318, 415-417.	1.5	10
82	Anomalous low energy phonon dispersion in bulk silicon-germanium observed by inelastic x-ray scattering. Applied Physics Letters, 2020, 116, .	3.3	10
83	Inverse brittle-to-ductile transition in gallium-arsenide under hydrostatic pressure. Scripta Materialia, 2000, 43, 645-650.	5.2	9
84	X-ray topographic observation of dislocation generation at the seed/crystal interface of Czochralski-grown Si highly doped with B impurity. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 91-92, 192-195.	3.5	9
85	Dislocationâ€“impurity interaction in Czochralski-grown Si heavily doped with B and Ge. Journal of Crystal Growth, 2005, 275, e501-e505.	1.5	9
86	Carrier Mobility and Resistivity ofn- andp-Type SixGe1-x(0.93<x<0.96) Single Crystals. Japanese Journal of Applied Physics, 2006, 45, 2678-2679.	1.5	9
87	Local current conduction due to edge dislocations in deformed GaN studied by scanning spreading resistance microscopy. EPJ Applied Physics, 2013, 61, 10102.	0.7	9
88	Dislocationâ€“impurity interaction in Si. Materials Science in Semiconductor Processing, 2003, 6, 355-358.	4.0	8
89	Atomistic structure and strain relaxation in Czochralski-grown SixGe1â^'x bulk alloys. Journal of Materials Science: Materials in Electronics, 2005, 16, 429-432.	2.2	8
90	Characterization of hydrogen-like states in bulk Si1â^'xGexalloys through muonium observations. Journal of Physics Condensed Matter, 2005, 17, 4567-4578.	1.8	8

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91	Interaction of dopant atoms with stacking faults in silicon. Physica B: Condensed Matter, 2012, 407, 3006-3008.	2.7	8
92	Vacancy-type defects introduced by plastic deformation of GaN studied using monoenergetic positron beams. Journal of Applied Physics, 2013, 114, .	2.5	8
93	Transmission behavior of dislocations against Î£3 twin boundaries in Si. Journal of Applied Physics, 2020, 127, .	2.5	8
94	Yield strength and dislocation mobility in plastically deformed ZnSe. Physica B: Condensed Matter, 2006, 376-377, 771-774.	2.7	7
95	Control of the stacking fault areas in pseudomorphic ZnSe layers by photo-molecular beam epitaxy. Physica B: Condensed Matter, 2007, 401-402, 650-653.	2.7	7
96	Dislocations of ZnO single crystals examined by X-ray topography and photoluminescence. Journal of Materials Science: Materials in Electronics, 2008, 19, 199-201.	2.2	7
97	Optical properties of edge dislocations on (11Â¯00) prismatic planes in wurtzite ZnO introduced at elevated temperatures. Journal of Applied Physics, 2012, 111, 113514.	2.5	7
98	Impurity effects on dislocation activities in Si. Journal of Physics Condensed Matter, 2002, 14, 13179-13183.	1.8	6
99	Dislocation-Impurity Interaction in Silicon. Solid State Phenomena, 2004, 95-96, 423-432.	0.3	6
100	Local atomic structure in Czochralski-grown Ge1â^'xSix bulk alloys. Applied Surface Science, 2004, 224, 193-196.	6.1	6
101	Application of Czochralski-grown SiGe bulk crystal as a substrate for luminescent strained quantum wells. Applied Physics Letters, 2007, 90, 181914.	3.3	6
102	Direct observation of carrier depletion around a dislocation in GaP by scanning spreading resistance microscopy. Applied Physics Letters, 2009, 95, 202108.	3.3	6
103	Insight into physical processes controlling the mechanical properties of the wurtzite group-III nitride family. Journal of Crystal Growth, 2018, 500, 23-27.	1.5	6
104	Atomic arrangement of dislocation defects in GaAs by HREM. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 309-310, 125-128.	5.6	5
105	Muonium hyperfine parameters in Si1â^'xGex alloys. Physica B: Condensed Matter, 2006, 374-375, 376-378.	2.7	5
106	Dislocation dynamics in SiGe alloys. Journal of Physics: Conference Series, 2013, 471, 012002.	0.4	5
107	Germanium crystals. , 2019, , 89-127.		5
108	Hall Effect in AnisotropicSixGe1-xPolycrystals. Japanese Journal of Applied Physics, 1996, 35, 652-655.	1.5	4

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109	Electrical conduction along dislocations in plastically deformed GaN. IOP Conference Series: Materials Science and Engineering, 2009, 3, 012010.	0.6	4
110	Deformation-Induced Defects and Their Thermal Stability in Silicon. Physica Status Solidi A, 1993, 137, 611-617.	1.7	3
111	Mechanical strength of GeSi solid solution. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1997, 234-236, 559-562.	5.6	3
112	Structure and Climb of Faulted Dipoles in GaAs. Physica Status Solidi A, 1999, 171, 53-57.	1.7	3
113	Cross-slip in GaAs and InP at elevated temperatures. Philosophical Magazine Letters, 2000, 80, 511-518.	1.2	3
114	Hydrogen behaviour in bulk Si1â^'xGex alloys as modelled by muonium. Physica B: Condensed Matter, 2003, 340-342, 835-839.	2.7	3
115	Photoluminescence study of GaN with dislocations introduced by plastic deformation. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 1817-1821.	0.8	3
116	Photoluminescence of dislocations in plastically deformed GaN. Physica B: Condensed Matter, 2006, 376-377, 455-459.	2.7	3
117	Recombination activity of dislocations on (0001) introduced in wurtzite ZnO at elevated temperatures. Physica B: Condensed Matter, 2012, 407, 2886-2888.	2.7	3
118	Czochralski growth of heavily indium-doped Si crystals and co-doping effects of group-IV elements. Journal of Crystal Growth, 2014, 393, 45-48.	1.5	3
119	Hall Effect Measurements On SixGe1â^'x Bulk Alloys. Materials Research Society Symposia Proceedings, 1996, 442, 381.	0.1	2
120	Dislocation Activities in Bulk GeSi Crystals. Materials Science Forum, 1997, 258-263, 159-164.	0.3	2
121	Photoluminescence Study of Plastically Deformed GaN. Materials Research Society Symposia Proceedings, 2004, 831, 528.	0.1	2
122	Growth of Heavily Indium Doped Si Crystals by Co-Doping of Neutral Impurity Carbon or Germanium. Key Engineering Materials, 2012, 508, 220-223.	0.4	2
123	Doping effects on the stability of stacking faults in silicon crystals. Thin Solid Films, 2012, 520, 3296-3299.	1.8	2
124	Czochralski growth of heavily tin-doped Si crystals. Journal of Crystal Growth, 2014, 395, 94-97.	1.5	2
125	Evaluation of Dislocation Mobility in Wurtzite Semiconductors. Materials Research Society Symposia Proceedings, 2015, 1741, 7.	0.1	2
126	SixGe1-x Bulk Crystals. , 2016, , .		2

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127	Plasticity of IIIâ€”V Compounds at Low Temperatures. Physica Status Solidi A, 1999, 171, 47-52.	1.7	2
128	Growth and Atomistic Structure Study of Disordered SiGe Mixed Semiconductors. Materials Science Forum, 2007, 539-543, 2043-2047.	0.3	1
129	Behavior of dislocations due to thermal shock and critical shear stress of Si in Czochralski crystal growth. Physica B: Condensed Matter, 2009, 404, 4612-4615.	2.7	1
130	Defects in Crystalline Silicon: Dislocations. , 2019, , 541-588.		1
131	Defects in Crystalline Silicon: Dislocations. , 2019, , 1-48.		1
132	Determination of carrier mobility vs resistivity relation in Czochralski-grown n- and p-type Si x Ge1â^'x (0.93Â<ÂxÂ<Â0.96) single crystals. Journal of Materials Science: Materials in Electronics, 2008, 19, 315-318.	2.2	0
133	é«˜å“è³ªSiGeçµæ™¶ã®è‚²æˆ•å¼ºçŽ‰©æ€§ã®è§£æ˜Ž. Materia Japan, 2008, 47, 3-9.	0.1	0
134	SixGe1â^'x Bulk Crystals. , 2001, , 8647-8651.		0