Yutaka Ohno

List of Publications by Year
in descending order

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139	1,513	394421	434195
papers	citations	19 h-index	31 g-index

141	141	141	1287
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Growth rate of silicon nanowires. Applied Physics Letters, 2005, 86, 123109.	3.3	128
2	Silicon nanowhiskers grown on a hydrogen-terminated silicon {111} surface. Applied Physics Letters, 1998, 73, 3700-3702.	3.3	123
3	Control of Grain Boundary Propagation in Mono-Like Si: Utilization of Functional Grain Boundaries. Applied Physics Express, 2013, 6, 025505.	2.4	50
4	Mono-Like Silicon Growth Using Functional Grain Boundaries to Limit Area of Multicrystalline Grains. IEEE Journal of Photovoltaics, 2014, 4, 84-87.	2.5	48
5	Fabrication of GaN/Diamond Heterointerface and Interfacial Chemical Bonding State for Highly Efficient Device Design. Advanced Materials, 2021, 33, e2104564.	21.0	41
6	A new apparatus for in situ photoluminescence spectroscopy in a transmission electron microscope. Review of Scientific Instruments, 1995, 66, 4866-4869.	1.3	37
7	Optical properties of dislocations in wurtzite ZnO single crystals introduced at elevated temperatures. Journal of Applied Physics, 2008, 104, .	2.5	32
8	Fe-catalytic growth of ZnSe nanowires on a ZnSe(001) surface at low temperatures by molecular-beam epitaxy. Applied Physics Letters, 2005, 87, 043105.	3.3	28
9	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
10	Recombination activity of nickel, copper, and oxygen atoms segregating at grain boundaries in mono-like silicon crystals. Applied Physics Letters, 2016, 109, .	3.3	24
11	Transformation of a SiC nanowire into a carbon nanotube. Nanoscale, 2009, 1, 344.	5.6	23
12	Interaction of dopant atoms with stacking faults in silicon crystals. Journal of Applied Physics, 2010, 108, .	2.5	23
13	In-situtransmission electron microscopy of partial-dislocation glide in 4H-SiC under electron radiation. Applied Physics Letters, 2012, 101, 042102.	3.3	23
14	Nanoindentation measurements of a highly oriented wurtzite-type boron nitride bulk crystal. Japanese Journal of Applied Physics, 2017, 56, 030301.	1.5	22
15	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
16	Impurity effects on the generation and velocity of dislocations in Ge. Journal of Applied Physics, 2011, 109, .	2.5	21
17	Czochralski-growth of germanium crystals containing high concentrations of oxygen impurities. Journal of Crystal Growth, 2010, 312, 2783-2787.	1.5	20
18	Chemical bonding at room temperature via surface activation to fabricate low-resistance GaAs/Si heterointerfaces. Applied Surface Science, 2020, 525, 146610.	6.1	20

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19	Formation mechanism of nanocatalysts for the growth of silicon nanowires on a hydrogen-terminated Si {111} surface template. Applied Physics Letters, 2003, 82, 979-981.	3.3	19
20	Optical and electrical properties of dislocations in plastically deformed GaN. Journal of Crystal Growth, 2014, 403, 72-76.	1.5	19
21	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
22	Recent knowledge of strength and dislocation mobility in wide band-gap semiconductors. Physica B: Condensed Matter, 2009, 404, 4999-5001.	2.7	18
23	Cellular structures in Czochralski-grown SiGe bulk crystal. Journal of Crystal Growth, 2010, 312, 1065-1068.	1.5	18
24	Nanoscopic mechanism of Cu precipitation at small-angle tilt boundaries in Si. Physical Review B, 2015, 91, .	3.2	18
25	Analysis of polarization by means of polarized cathodoluminescence spectroscopy in a TEM. Journal of Electron Microscopy, 2002, 51, 281-290.	0.9	17
26	Oxygen defects in langasite (La3Ga5SiO14) single crystal grown by vertical Bridgman (VB) method. Physica B: Condensed Matter, 2007, 401-402, 437-440.	2.7	17
27	Impact of local atomic stress on oxygen segregation at tilt boundaries in silicon. Applied Physics Letters, 2017, 110, .	3.3	17
28	Origin of a pair of stacking faults in pseudomorphic ZnSe epitaxial layers on GaAs. Applied Physics Letters, 2003, 83, 54-56.	3.3	16
29	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
30	Modeling of incorporation of oxygen and carbon impurities into multicrystalline silicon ingot during one-directional growth. Journal of Crystal Growth, 2012, 352, 173-176.	1.5	16
31	Fabrication of high-quality GaAs/diamond heterointerface for thermal management applications. Diamond and Related Materials, 2021, 111, 108207.	3.9	16
32	Reduction of grown-in dislocation density in Ge Czochralski-grown from the B2O3-partially-covered melt. Journal of Crystal Growth, 2009, 311, 4615-4618.	1.5	15
33	Intrinsic microstructure of Si/GaAs heterointerfaces fabricated by surface-activated bonding at room temperature. Japanese Journal of Applied Physics, 2018, 57, 02BA01.	1.5	15
34	Recovery process of photochromism of H2 and H3 centres in diamond. Diamond and Related Materials, 1993, 2, 768-772.	3.9	14
35	Interaction of phosphorus with dislocations in heavily phosphorus doped silicon. Applied Physics Letters, 2009, 95, 091915.	3.3	14
36	Dislocation structure in AlN films induced by in situ transmission electron microscope nanoindentation. Journal of Applied Physics, 2012, 112, 093526.	2.5	14

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37	Three-dimensional evaluation of gettering ability for oxygen atoms at small-angle tilt boundaries in Czochralski-grown silicon crystals. Applied Physics Letters, 2015, 106, .	3.3	14
38	Characterization of silicon ingots: Mono-like versus high-performance multicrystalline. Japanese Journal of Applied Physics, 2015, 54, 08KD10.	1.5	14
39	Intense Monochromatic Light Emission from Multiple Nanoscale Twin Boundaries in Indirect-gap AlGaAs Epilayers. Japanese Journal of Applied Physics, 2007, 46, L830-L832.	1.5	13
40	Converting an insulating silicon nanochain to a conducting carbon nanotube by electrical breakdown. Nanotechnology, 2009, 20, 335602.	2.6	13
41	Constitutional supercooling in heavily As-doped Czochralski Si crystal growth. Journal of Crystal Growth, 2014, 393, 42-44.	1.5	13
42	Nanoscopic analysis of oxygen segregation at tilt boundaries in silicon ingots using atom probe tomography combined with TEM and ab initio calculations. Journal of Microscopy, 2017, 268, 230-238.	1.8	13
43	Characterization of femtosecond-laser-induced periodic structures on SiC substrates. Japanese Journal of Applied Physics, 2018, 57, 025602.	1.5	13
44	Characterization of Nanoscopic Cu/Diamond Interfaces Prepared by Surface-Activated Bonding: Implications for Thermal Management. ACS Applied Nano Materials, 2020, 3, 2455-2462.	5.0	13
45	Room temperature direct bonding of diamond and InGaP in atmospheric air. Functional Diamond, 2021, 1, 110-116.	3.8	13
46	Vacancy-migration-mediated disordering in CuPt-ordered (Ga,In)P studied byin situoptical spectroscopy in a transmission electron microscope. Physical Review B, 1999, 59, 2694-2699.	3.2	12
47	Photoinduced stress in a ZnSeâ•GaAs epilayer containing 90Â°Î± partial dislocations. Applied Physics Letters, 2005, 87, 181909.	3.3	12
48	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
49	Observation of silicon surface nanoholes by scanning tunneling microscopy. Surface Science, 2001, 493, 547-554.	1.9	11
50	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
51	Fabrication of diamond/Cu direct bonding interface for power device applications. Japanese Journal of Applied Physics, 2020, 59, SBBB03.	1.5	11
52	Segregation of boron in germanium crystal. Journal of Crystal Growth, 2008, 311, 59-61.	1.5	10
53	Optical properties of fresh dislocations in GaN. Journal of Crystal Growth, 2011, 318, 415-417.	1.5	10
54	Development of an Apparatus forIn-situNear-Field Photoexcitation in a Transmission Electron Microscope. Applied Physics Express, 2012, 5, 125204.	2.4	10

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55	Impact of focused ion beam on structural and compositional analysis of interfaces fabricated by surface activated bonding. Japanese Journal of Applied Physics, 2020, 59, SBBB05.	1.5	10
56	Study of Electron-Irradiation-Induced Defects in GaP by In-situ Optical Spectroscopy in a Transmission Electron Microscope. Journal of Electron Microscopy, 1996, 45, 73-78.	0.9	9
57	Polarized light emission from antiphase boundaries acting as slanting quantum wells inGaPâ•InPshort-period superlattices. Physical Review B, 2005, 72, .	3.2	9
58	How to best measure atomic segregation to grain boundaries by analytical transmission electron microscopy. Journal of Materials Science, 2014, 49, 3898-3908.	3.7	9
59	Fabrication of Î²-Ga₂O₃/Si heterointerface and characterization of interfacial structures for high-power device applications. Japanese Journal of Applied Physics, 2022, 61, SF1001.	1.5	9
60	Formation of silicon/silicide/oxide nanochains and their properties studied by electron holography. Thin Solid Films, 2004, 464-465, 204-207.	1.8	8
61	Influence of seed/crystal interface shape on dislocation generation in Czochralski Si crystal growth. Physica B: Condensed Matter, 2007, 401-402, 560-563.	2.7	8
62	Interaction of dopant atoms with stacking faults in silicon. Physica B: Condensed Matter, 2012, 407, 3006-3008.	2.7	8
63	Vacancy-type defects introduced by plastic deformation of GaN studied using monoenergetic positron beams. Journal of Applied Physics, 2013, 114, .	2.5	8
64	Generation of dislocation clusters at triple junctions of random angle grain boundaries during cast growth of silicon ingots. Applied Physics Express, 2020, 13, 105505.	2.4	8
65	Growth of silicon nanowires on H-terminated Si {111} surface templates studied by transmission electron microscopy. Microscopy (Oxford, England), 2005, 54, i25-i29.	1.5	7
66	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
67	In situTransmission Electron Microscopy Observation of the Graphitization of Silicon Carbide Nanowires Induced by Joule Heating. Applied Physics Express, 2010, 3, 055001.	2.4	7
68	In-situ analysis of optoelectronic properties of twin boundaries in AlGaAs by polarized cathodoluminescence spectroscopy in a TEM. Journal of Electron Microscopy, 2010, 59, S141-S147.	0.9	7
69	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
70	Origin of recombination activity of non-coherent Î£3{111} grain boundaries with a positive deviation in the tilt angle in cast-grown silicon ingots. Applied Physics Express, 2021, 14, 011002.	2.4	7
71	Mechanism of the growth of ZnSe nanowires with Fe catalysts. Solid State Communications, 2007, 141, 228-232.	1.9	6
72	Influence of high-magnetic-field on dislocationâ€“oxygen interaction in silicon. Physica B: Condensed Matter, 2007, 401-402, 148-150.	2.7	6

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73	Mechanical Properties of Cubicâ€BN(111) Bulk Single Crystal Evaluated by Nanoindentation. Physica Status Solidi (B): Basic Research, 2018, 255, 1700473.	1.5	6
74	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
75	Insight into segregation sites for oxygen impurities at grain boundaries in silicon. Applied Physics Express, 2021, 14, 041003.	2.4	6
76	Equilibrium segregation coefficient and solid solubility of B in Czochralski Ge crystal growth. Thin Solid Films, 2010, 518, 2409-2412.	1.8	5
77	Oxygen in Ge crystals grown by the B2O3 encapsulated Czochralski method. Physica B: Condensed Matter, 2012, 407, 2932-2934.	2.7	5
78	2â€‰MeV eâ€irradiation UHVEM study on the impact of O and Ge doping on {113}â€defect formation in Si. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1902-1907.	1.8	5
79	Interstitial oxygen behavior for thermal double donor formation in germanium: Infrared absorption studies. Journal of Applied Physics, 2013, 113, 073501.	2.5	5
80	Interaction of sodium atoms with stacking faults in silicon with different Fermi levels. Applied Physics Express, 2018, 11, 061303.	2.4	5
81	Optical properties of Si nanowires on a Si {111} surface. Materials Research Society Symposia Proceedings, 1999, 588, 98.	0.1	4
82	Extended vacancy-type defects in silicon induced at low temperatures by electron irradiation. Philosophical Magazine, 2003, 83, 151-163.	1.6	4
83	Atomistic structure of stacking faults in a commercial GaAs:Si wafer revealed by cross-sectional scanning tunneling microscopy. Physica B: Condensed Matter, 2007, 401-402, 230-233.	2.7	4
84	Behaviour of oxygen-related thermal donors in Ge crystals Czochralski-grown from the melt covered fully by B₂O₃. Journal of Physics: Conference Series, 2011, 281, 012011.	0.4	4
85	In-situ micro and near-field photo-excitation under transmission electron microscopy. Applied Surface Science, 2014, 302, 29-31.	6.1	4
86	Atomic Structure of a Defect Colony in Silicon Introduced during Neutron Irradiation in the JOYO Reactor. Journal of Electron Microscopy, 1996, 45, 380-387.	0.9	3
87	Clustering process of interstitial atoms in gallium phosphide studied by transmission electron microscopy. Physical Review B, 1996, 54, 4642-4649.	3.2	3
88	Arrangement of gold nanoparticles on rough surfaces introduced by electron irradiation with high flux. Physica B: Condensed Matter, 2006, 376-377, 916-919.	2.7	3
89	Microstructure of a CuPt-Ordered GaInP Alloy Revealed by Cross-Sectional Scanning Tunneling Microscopy. Japanese Journal of Applied Physics, 2006, 45, 2357-2360.	1.5	3
90	Formation of multiple nanoscale twin boundaries that emit intense light in indirect-gap AlGaAs epilayers. Applied Surface Science, 2008, 254, 7633-7637.	6.1	3

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91	Misoriented grains with a preferential orientation in a-plane oriented GaN layers. Journal of Crystal Growth, 2011, 334, 80-83.	1.5	3
92	Oxygen doped Ge crystals Czochralski-grown from the B2O3-fully-covered melt. Microelectronic Engineering, 2011, 88, 496-498.	2.4	3
93	Recombination activity of dislocations on (0001) introduced in wurtzite ZnO at elevated temperatures. Physica B: Condensed Matter, 2012, 407, 2886-2888.	2.7	3
94	Slip systems in wurtzite ZnO activated by Vickers indentation on <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0011.gif" overflow="scroll"><mml:mo>{</mml:mo><mml:mn>2</mml:mn><mml:mover accent="true"><mml:mrow><mml:mn>1</mml:mn></mml:mrow><mml:mrow><mml:mo>Â¯</mml:mo></mml:mrow></mml:mover><m accent="true"><mml:mrow><mml:mn>1</mml:mn></mml:mrow><mml:mrow><mml:mo>Â¯</mml:mo></mml:mrow></mml:mover><m and <mml:math xmlns:mml="http://www.w3. Journal of Crystal Growth, 2014, 393, 119-122.	1.5	3
95	Microstructure of striae in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0011.gif" overflow="scroll"><mml:mo>â€</mml:mo><mml:mn>0</mml:mn><mml:mover accent="true"><mml:mrow><mml:mn>4</mml:mn></mml:mrow><mml:mrow><mml:mo>Â¯</mml:mo></mml:mrow></mml:mover><m lithium niobate single crystal grown by Czochralski method. Journal of Crystal Growth, 2014, 393, 171-174.	1.5	3
96	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
97	Plane-view transmission electron microscopy of Si/GaAs interfaces fabricated by surface-activated bonding at room temperature. , 2017, , .		3
98	Twinning in Czochralski-Grown 36Â°-RY LiTaO3 Single Crystals. Crystals, 2020, 10, 1009.	2.2	3
99	Segregation mechanism of arsenic dopants at grain boundaries in silicon. Science and Technology of Advanced Materials Methods, 2021, 1, 169-180.	1.3	3
100	AlGaN/GaN/3C-SiC on diamond HEMTs with thick nitride layers prepared by bonding-first process. Applied Physics Express, 2022, 15, 041003.	2.4	3
101	Variation in atomistic structure due to annealing at diamond/silicon heterointerfaces fabricated by surface activated bonding. Japanese Journal of Applied Physics, 2022, 61, SF1006.	1.5	3
102	Study on electrical activity of grain boundaries in silicon through systematic control of structural parameters and characterization using a pretrained machine learning model. Journal of Applied Physics, 2022, 132, .	2.5	3
103	Electronic properties of antiphase boundaries in CuPt-ordered GaInP alloys. Physica B: Condensed Matter, 2006, 376-377, 845-848.	2.7	2
104	Excavation rate of silicon surface nanoholes. Journal of Applied Physics, 2006, 99, 126107.	2.5	2
105	Fabrication of Short-Range Ordered Nanoholes on Silicon Surfaces by Electron Irradiation. Japanese Journal of Applied Physics, 2007, 46, 434-439.	1.5	2
106	Electronic properties of nanoscale multiple twin boundaries in indirect-gap AlGaAs. Physica B: Condensed Matter, 2007, 401-402, 270-274.	2.7	2
107	Electrical Breakdown of Individual Si Nanochains and Silicide Nanochains. Journal of Nanoscience and Nanotechnology, 2010, 10, 6655-6658.	0.9	2
108	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

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109	Doping effects on the stability of stacking faults in silicon crystals. Thin Solid Films, 2012, 520, 3296-3299.	1.8	2
110	Czochralski growth of heavily tin-doped Si crystals. Journal of Crystal Growth, 2014, 395, 94-97.	1.5	2
111	Fabrication of GaN/SiC/diamond structure for efficient thermal management of power device. , 2021, , .		2
112	Diffusion Process of Interstitial Atoms in an Electron Irradiated InP Studied by Transmission Electron Microscopy. Japanese Journal of Applied Physics, 1997, 36, 5628-5632.	1.5	1
113	Point defect reaction in (Al)GaInP STQW lasers enhanced by laser operation. Physica B: Condensed Matter, 1999, 273-274, 1050-1053.	2.7	1
114	Formation of microcracks in cubic boron nitride. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2000, 80, 747-758.	0.6	1
115	Fabrication of periodic nanohole multilayer structure on silicon surface toward photonic crystal. Physica B: Condensed Matter, 2001, 308-310, 1222-1225.	2.7	1
116	Diffusion and condensation of adatoms on inhomogeneous rough surfaces. Surface Science, 2007, 601, 5103-5107.	1.9	1
117	Atomistic structure of Si atoms agglomerated nearby a stacking fault in a commercial GaAs:Si. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 2944-2946.	0.8	1
118	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
119	In-Situ Analysis of Optoelectronic Properties of Semiconductor Nanostructures and Defects in Transmission Electron Microscopes. , 0, , .		1
120	Formation and Evolution of Misoriented Grains in <i>a</i>-Plane Oriented Gallium Nitride Layers. Materials Transactions, 2012, 53, 1881-1884.	1.2	1
121	Cracking process at lineages in Czochralski-grown 36Â°-RY LiTaO3 ingots. Journal of Crystal Growth, 2021, 570, 126228.	1.5	1
122	Localized energy levels associated with dislocations in ZnSe revealed by polarized CL spectroscopy under light illumination. , 2005, , 507-510.		1
123	VLS Growth of Si nanowhiskers on a H-terminated Si{111} surface. Materials Research Society Symposia Proceedings, 1998, 536, 305.	0.1	1
124	Diffusion Process Of Interstitial Atoms In Inp Studied By Transmission Electron Microscopy. Materials Research Society Symposia Proceedings, 1996, 442, 435.	0.1	0
125	Mesoscopic characterization of the optical property of antiphase boundaries in CuPt-ordered GaInP2. Materials Research Society Symposia Proceedings, 1999, 588, 105.	0.1	0
126	Novel amorphization process in silicon induced by electron irradiation. Journal of Non-Crystalline Solids, 2002, 299-302, 793-797.	3.1	0

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127	Formation and Properties of Silicon/Silicide/Oxide Nanochains. Materials Research Society Symposia Proceedings, 2003, 789, 69.	0.1	0
128	Nucleation and growth processes of silicon nanowires. Materials Research Society Symposia Proceedings, 2004, 832, 353.	0.1	0
129	Analysis of growth rate of silicon nanowires. Materials Research Society Symposia Proceedings, 2004, 832, 291.	0.1	0
130	Atomistic structure of ZnSe nanowires on ZnSe(001) grown catalytically at low temperatures. AIP Conference Proceedings, 2007, , .	0.4	0
131	Optical Response of Dislocations in w-ZnO Revealed by In-situ Optical Spectroscopy in a TEM(Opto-TEM). Materia Japan, 2009, 48, 625-625.	0.1	0
132	Structural Elements of Ultrashallow Thermal Donors Formed in Silicon Crystals. Japanese Journal of Applied Physics, 2010, 49, 050203.	1.5	0
133	Effective Detection Method for Misoriented Grains in Nonpolar GaN Layers and Future Prospect. Materia Japan, 2013, 52, 273-277.	0.1	0
134	Dynamics of Au Adatoms on Electron-Irradiated Rough Si Surfaces. Springer Proceedings in Physics, 2005, , 393-396.	0.2	0
135	Atomistic structure of spontaneously-ordered GaInP alloy revealed by cross-sectional scanning tunneling microscopy and polarized cathodoluminescence spectroscopy. , 2005, , 483-486.		0
136	Structural analysis of diamond/silicon heterointerfaces fabricated by surface activated bonding at room temperature. , 2021, , .		0
137	Direct Bonding of GaAs and Diamond for High Power Device Applications. ECS Meeting Abstracts, 2020, MA2020-02, 1634-1634.	0.0	0
138	Microscopic Picture of Direct Bonding Via Surface Activation for Low-Resistance Si/Wide-Gap Semiconductor Heterointerface. ECS Meeting Abstracts, 2020, MA2020-02, 1648-1648.	0.0	0
139	Direct Bonding of Diamond and Dissimilar Materials at Room Temperature. Materia Japan, 2022, 61, 334-339.	0.1	0