Shiro Hara

List of Publications by Year
in descending order

82 papers	1,117 citations	430874 18 h-index	434195 31 g-index
82 all docs	82 docs citations	82 times ranked	616 citing authors

#	Article	IF	Citations
1	Fabrication of nano-capillary emitter arrays for ionic liquid electrospray thrusters. Japanese Journal of Applied Physics, 2021, 60, SCCF07.	1.5	2
2	Quartz crystal microbalance for real-time monitoring chlorosilane gas transport in slim vertical cold wall chemical vapor deposition reactor. Materials Science in Semiconductor Processing, 2020, 106, 104759.	4.0	2
3	Minimal multi-target plasma sputtering tool. Vacuum, 2020, 171, 109000.	3.5	7
4	Via Interconnections for Half-Inch Packaging of Electronic Devices Using Minimal Fab Process Tools. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2020, 32, 763-768.	0.3	0
5	A method to deposit a known number of polystyrene latex particles on a flat surface. Aerosol Science and Technology, 2019, 53, 1353-1366.	3.1	1
6	Fabrication of a high-density emitter array for electrospray thrusters using field emitter array process. Japanese Journal of Applied Physics, 2019, 58, SEEG04.	1.5	6
7	Enhancement of downstream plasma density by a stepped-diameter radiofrequency plasma source under a static magnetic field for a compact sputtering reactor. Vacuum, 2019, 163, 269-274.	3.5	1
8	Small Plasma Space with a Small Plasma Source and Its Advantage in Minimal Fab. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2019, 32, 747-752.	0.3	1
9	Ultra-Compact Device-Manufacturing-System â€œMinimal Fabâ€•Integrating Wafer and Packaging Process for High-Mix Low-Volume Productions and Its Packaging Applications. Journal of Japan Institute of Electronics Packaging, 2019, 22, 507-513.	0.1	1
10	New Compact Electron Cyclotron Resonance Plasma Source for Silicon Nitride Film Formation in Minimal Fab System. IEEE Journal of the Electron Devices Society, 2018, 6, 512-517.	2.1	3
11	Via Interconnections for Half-Inch Sized Package Fabricated by Minimal Fab. , 2018, , .		1
12	Development of a Minimal multi-target helicon sputtering tool. , 2018, , .		0
13	Investigation of piezoresistive effect in p-channel metalâ€"oxideâ€"semiconductor field-effect transistors fabricated on circular silicon-on-insulator diaphragms using cost-effective minimal-fab process. Japanese Journal of Applied Physics, 2018, 57, 06HD03.	1.5	6
14	Silicon Epitaxial Reactor for Minimal Fab. , 2018, , .		0
15	Inhibitation of substrate heating in a Minimal Multi-Target Helicon sputtering tool. , 2018, , .		0
16	Fabrication of Electrospray Thrusters with a High-Density Emitter Array Utilizing Minimal-Fab System. , 2018, , .		1
17	Fabrication of volcano structured Spindt-type field emitter arrays using Minimal Fab system. , 2018, , .		0
18	Diamond SAW Resonators Made by Minimal-Fab Process. , 2018, , .		1

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19	Real time evaluation of silicon epitaxial growth process by exhaust gas measurement using quartz crystal microbalance. Materials Science in Semiconductor Processing, 2018, 88, 192-197.	4.0	6
20	Process Cost and Time in Minimal Fab to Fabricate Custom-made Microneedle Array with Extraction Tool. , 2018, , .		1
21	Development of Semiconductor Manufacturing System Integrating Wafer Process and Packaging Process Using a Half-Inch Sized Package. , 2018, , .		2
22	Advantages of a slim vertical gas channel at high SiHCl3 concentrations for atmospheric pressure silicon epitaxial growth. Materials Science in Semiconductor Processing, 2018, 87, 13-18.	4.0	10
23	Process development for CMOS fabrication using minimal fab. , 2017, , .		1
24	An in-line MOSFET process with photomask fabrication process in a minimal fab. , 2017, , .		0
25	New compact ECR plasma source for silicon nitride film formation in minimal fab system. , 2017, , .		0
26	BGA packaging process for a device made by minimal fab. , 2017, , .		0
27	Transport phenomena in a slim vertical atmospheric pressure chemical vapor deposition reactor utilizing natural convection. Materials Science in Semiconductor Processing, 2017, 71, 348-351.	4.0	6
28	An experimental study of solid source diffusion by spin on dopants and its application for minimal silicon-on-insulator CMOS fabrication. Japanese Journal of Applied Physics, 2017, 56, 06GG01.	1.5	10
29	Effective performance of a tiny-chamber plasma etcher in scallop reduction. , 2017, , .		1
30	Development of a half-inch wafer for minimal fab process. , 2017, , .		1
31	Reflector Influence on Rapid Heating of Minimal Manufacturing Chemical Vapor Deposition Reactor. ECS Journal of Solid State Science and Technology, 2016, 5, P280-P284.	1.8	7
32	Fabrication of PVD-TiN metal-gate SOI-CMOS integrated circuits using minimal-fab and mega-fab hybrid process. , 2016, , .		1
33	Development of fundamental manufacturing processes for minimal fab. , 2016, , .		0
34	A MOSFET Fabrication Using a Maskless Lithography System in Clean-Localized Environment of Minimal Fab. IEEE Transactions on Semiconductor Manufacturing, 2015, 28, 393-398.	1.7	50
35	Analyses on Cleanroom-Free Performance and Transistor Manufacturing Cycle Time of Minimal Fab. IEEE Transactions on Semiconductor Manufacturing, 2015, 28, 551-556.	1.7	42
36	Practical Thermal Condition of Silicon CVD Reactor for Minimal Manufacturing. , 2015, , .		1

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37	Transport of a helicon plasma by a convergent magnetic field for high speed and compact plasma etching. Journal Physics D: Applied Physics, 2014, 47, 425201.	2.8	14
38	Silicon Chemical Vapor Deposition Process Using a Half-Inch Silicon Wafer for Minimal Manufacturing System. Physics Procedia, 2013, 46, 230-238.	1.2	9
39	Photolithography for Minimal Fab System. IEEJ Transactions on Sensors and Micromachines, 2013, 133, 272-277.	0.1	42
40	ãƒŸãƒ‹ãƒžãƒ«ãƒ•ã‚¡ãƒ–ã‚·ã‚¹ãƒ†ãƒ ã®æ§‹æƒ³ã¨å®Ÿç¾ã«å'ã'ã¦. Journal of the Japan Society for Precision Engineering, 2011, 77, 249-253	0.1	12
41	High-Power Pulsed Magnetron Sputtering Glow Plasma in Argon Gas and Pulsed Ion Extraction. IEEE Transactions on Plasma Science, 2010, 38, 3016-3027.	1.3	7
42	Encapsulated Production System and its Application to Semiconductor Surface and Interface. Hyomen Kagaku, 2008, 29, 375-381.	0.0	0
43	Control of interface states at metal/6H-SiC(0001) interfaces. Physical Review B, 2004, 70, .	3.2	61
44	Improvement of DC Characteristics in AlGaN/GaN Heterojunction Field-Effect Transistors Employing AlN Spacer Layer. Japanese Journal of Applied Physics, 2002, 41, 5563-5564.	1.5	8
45	Angle-resolved photoemission study of the hydrogenated 3C-SiC(001)-2Ã—1-H surface. Surface Science, 2001, 479, 247-254.	1.9	13
46	The Schottky limit and a charge neutrality level found on metal/6H-SiC interfaces. Surface Science, 2001, 494, L805-L810.	1.9	20
47	Optimization of GaN Growth with Ga-Polarity by Referring to Surface Reconstruction Reflection High-Energy Electron Diffraction Patterns. Japanese Journal of Applied Physics, 2001, 40, L23-L25.	1.5	10
48	Realization of Ga-polarity GaN films in radio-frequency plasma-assisted molecular beam epitaxy. Journal of Crystal Growth, 2000, 218, 155-160.	1.5	47
49	Characterization of the 6H-SiC(0001) surface and the interface with Ti layer with the Schottky limit. Applied Surface Science, 2000, 162-163, 19-24.	6.1	5
50	Characterization of Polarity of Wurtzite GaN Film Grown by Molecular Beam Epitaxy Using NH3. Japanese Journal of Applied Physics, 2000, 39, L202-L204.	1.5	28
51	High-Quality InGaN Films Grown on Ga-Polarity GaN by Plasma-Assisted Molecular-Beam Epitaxy. Japanese Journal of Applied Physics, 2000, 39, L1270-L1272.	1.5	10
52	Essential Change in Crystal Qualities of GaN Films by Controlling Lattice Polarity in Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 2000, 39, L16-L18.	1.5	56
53	Comment on â€œCarbon Atomic Chain Formation on theÎ²-SiC(100) Surface by Controlledspâ†'sp3Transformationâ€• Physical Review Letters, 2000, 85, 2649-2649.	7.8	5
54	Hydrogen-induced3Ã—1phase of the Si-rich3Câˆ'SiC(001)surface. Physical Review B, 2000, 61, R2417-R2420.	3.2	19

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55	Stability of N- and Ga-polarity GaN surfaces during the growth interruption studied by reflection high-energy electron diffraction. Applied Physics Letters, 2000, 77, 4013-4015.	3.3	28
56	Surface states of the3Câˆ'SiC(001)âˆ'c(4Ã—2)surface studied using angle-resolved photoemission. Physical Review B, 2000, 61, R2460-R2463.	3.2	11
57	Achievement of MBE-Grown GaN Heteroepitaxial Layer with (0001) Ga-Polarity and Improved Quality by In Exposure. Materials Science Forum, 2000, 338-342, 1459-1462.	0.3	2
58	Interface structure of face-centered-cubic-Ti thin film grown on 6Hâ€“SiC substrate. Journal of Materials Research, 2000, 15, 2121-2124.	2.6	29
59	Nitride Semiconductor Surfaces. Surface Structure of MBE-grown III-nitride Semiconductors.. Hyomen Kagaku, 2000, 21, 169-176.	0.0	0
60	ANGLE-RESOLVED PHOTOEMISSION STUDIES OF THE 3Câ€“SiC(001)(2Ã—1) SURFACE. Surface Review and Letters, 1999, 06, 1151-1157.	1.1	2
61	Atomic and Electronic-Band Structures of Anomalous Carbon Dimers on3Câˆ'SiC(001)âˆ'c(2Ã—2). Physical Review Letters, 1999, 83, 1640-1643.	7.8	45
62	Perfect cellular disorder in a two-dimensional system: Si cells on the 3C-SiC(001) surface. Surface Science, 1999, 421, L143-L149.	1.9	13
63	Surface reconstructions of 3C-SiC(001) studied by high-resolution core-level photoemission. Surface Science, 1999, 433-435, 392-396.	1.9	9
64	Si-adsorption induced phase transition on the 3Câ€“SiC(001) surface. Surface Science, 1999, 433-435, 465-469.	1.9	4
65	Surface core-level shift photoelectron diffraction study of Î²-SiC(001)-c(2Ã—2) surface. Surface Science, 1999, 438, 237-241.	1.9	12
66	Electronic structure of the 3Câ€“SiC(001)2Ã—1 surface studied with angle-resolved photoelectron spectroscopy. Surface Science, 1999, 439, 199-210.	1.9	8
67	Electronic structure of the Si-rich3Câˆ'SiC(001)3Ã—2surface. Physical Review B, 1998, 58, 10540-10550.	3.2	28
68	Ideal Ohmic contact to n-type 6H-SiC by reduction of Schottky barrier height. Applied Physics Letters, 1997, 71, 689-691.	3.3	44
69	Control of Schottky and ohmic interfaces by unpinning Fermi level. Applied Surface Science, 1997, 117-118, 394-399.	6.1	34
70	Space fluctuation of empty states on 3C-SiC(001) surface. Surface Science, 1996, 357-358, 436-440.	1.9	16
71	Pinning-controlled metal/semiconductor interfaces. , 1996, , .		2
72	Ohmic Contacts to n-Type 6H-SiC Without Post-Annealing. Materials Research Society Symposia Proceedings, 1996, 423, 149.	0.1	1

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73	New Technique for Ohmic Formation. Materials Research Society Symposia Proceedings, 1996, 427, 159.	0.1	1
74	Pinning-controlled ohmic contacts: application to SiC(0001). Applied Surface Science, 1996, 107, 218-221.	6.1	11
75	Additional dimer-row structure of 3C-SiC(001) surfaces observed by scanning tunneling microscopy. Physical Review B, 1994, 50, 4548-4553.	3.2	63
76	Microscopic mechanisms of accurate layer-by-layer growth of Î²-SiC. Thin Solid Films, 1993, 225, 240-243.	1.8	31
77	Self-limiting growth on the Î²-SiC(001) surface. Surface Science, 1992, 273, 437-441.	1.9	37
78	Si desorption from a Î²-SiC(001) surface by an oxygen flux. Surface Science, 1992, 278, L141-L146.	1.9	1
79	Si desorption from a ÃŸ-SiC(001) surface by an oxygen flux. Surface Science Letters, 1992, 278, L141-L146.	0.1	2
80	Solid State Reaction of Mo on Cubic and Hexagonal SiC. Japanese Journal of Applied Physics, 1990, 29, L394-L397.	1.5	17
81	Elemental composition of Î²-Sic(001) surface phases studied by medium energy ion scattering. Surface Science, 1990, 231, L196-L200.	1.9	103
82	Chemical trend in silicide electronic structure and Schottky-barrier heights of silicide-silicon interfaces. Physical Review B, 1988, 38, 7554-7557.	3.2	18