L J Brillson

List of Publications by Year
in descending order

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191 papers	7,992 citations	50276 46 h-index	56724 83 g-index
223 all docs	223 docs citations	223 times ranked	7128 citing authors

#	Article	IF	Citations
1	The structure and properties of metal-semiconductor interfaces. Surface Science Reports, 1982, 2, 123-326.	7.2	890
2	ZnO Schottky barriers and Ohmic contacts. Journal of Applied Physics, 2011, 109, .	2.5	622
3	Transition in Schottky Barrier Formation with Chemical Reactivity. Physical Review Letters, 1978, 40, 260-263.	7.8	268
4	Role of near-surface states in ohmic-Schottky conversion of Au contacts to ZnO. Applied Physics Letters, 2005, 87, 012102.	3.3	233
5	Characterization of electronic structure and defect states of thin epitaxial BiFeO3 films by UV-visible absorption and cathodoluminescence spectroscopies. Applied Physics Letters, 2008, 92, .	3.3	176
6	Self-compensation in semiconductors: The Zn vacancy in Ga-doped ZnO. Physical Review B, 2011, 84, .	3.2	169
7	Direct observation of a two-dimensional hole gas at oxide interfaces. Nature Materials, 2018, 17, 231-236.	27.5	151
8	Observation of 4Hâ€“SiC to 3Câ€“SiC polytypic transformation during oxidation. Applied Physics Letters, 2001, 79, 3056-3058.	3.3	148
9	Dominant effect of near-interface native point defects on ZnO Schottky barriers. Applied Physics Letters, 2007, 90, 102116.	3.3	144
10	Electronic Structure of Tantalum Oxynitride Perovskite Photocatalysts. Chemistry of Materials, 2013, 25, 3337-3343.	6.7	144
11	Chemically Induced Charge Redistribution at Al-GaAs Interfaces. Physical Review Letters, 1979, 42, 397-401.	7.8	132
12	Direct observation of copper depletion and potential changes at copper indium gallium diselenide grain boundaries. Applied Physics Letters, 2005, 86, 162105.	3.3	129
13	Remote hydrogen plasma doping of single crystal ZnO. Applied Physics Letters, 2004, 84, 2545-2547.	3.3	124
14	Vacancy defect and defect cluster energetics in ion-implanted ZnO. Physical Review B, 2010, 81, .	3.2	121
15	Electron energy loss spectroscopy and the optical properties of polymethylmethacrylate from 1 to 300 eV. Journal of Chemical Physics, 1978, 69, 3931-3939.	3.0	113
16	Optical signatures of deep level defects in Ga2O3. Applied Physics Letters, 2018, 112, .	3.3	113
17	Chemical reaction and charge redistribution at metalâ€“semiconductor interfaces. Journal of Vacuum Science and Technology, 1978, 15, 1378-1383.	1.9	112
18	Abruptness of Semiconductor-Metal Interfaces. Physical Review Letters, 1981, 46, 838-841.	7.8	108

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19	Fermiâ€level pinning and chemical structure of InPâ€“metal interfaces. Journal of Vacuum Science and Technology, 1982, 21, 564-569.	1.9	91
20	Chemical reactions and local charge redistribution at metal-CdS and CdSe interfaces. Physical Review B, 1978, 18, 2431-2446.	3.2	90
21	Chemical mechanisms of Schottky barrier formation. Journal of Vacuum Science and Technology, 1979, 16, 1137-1142.	1.9	90
22	Au and Al interface reactions with SiO2. Applied Physics Letters, 1980, 37, 1006-1008.	3.3	82
23	Nanoscale luminescence spectroscopy of defects at buried interfaces and ultrathin films. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2001, 19, 1762.	1.6	81
24	Inhomogeneities in Niâ•4H-SiC Schottky barriers: Localized Fermi-level pinning by defect states. Journal of Applied Physics, 2007, 101, 114514.	2.5	80
25	Chemical basis for InPâ€metal Schottkyâ€barrier formation. Applied Physics Letters, 1981, 38, 784-786.	3.3	75
26	Raman observation of the ferroelectric phase transition in SnTe. Physical Review B, 1974, 9, 1547-1551.	3.2	73
27	Review of using gallium nitride for ionizing radiation detection. Applied Physics Reviews, 2015, 2, .	11.3	73
28	Remote hydrogen plasma processing of ZnO single crystal surfaces. Journal of Applied Physics, 2003, 94, 4256-4262.	2.5	71
29	Tailoring the Electronic Structure of Covalently Functionalized Germanane via the Interplay of Ligand Strain and Electronegativity. Chemistry of Materials, 2016, 28, 8071-8077.	6.7	71
30	Atomic and electronic structure of InPâ€“metal interfaces: A prototypical IIIâ€“V compound semiconductor. Journal of Vacuum Science and Technology, 1981, 19, 661-666.	1.9	66
31	Applications of depth-resolved cathodoluminescence spectroscopy. Journal Physics D: Applied Physics, 2012, 45, 183001.	2.8	65
32	Geometric ordering, surface chemistry, band bending, and work function at decapped GaAs(100) surfaces. Physical Review B, 1992, 46, 13293-13302.	3.2	63
33	Resonant Light Scattering by Single-Particle Electronic Excitations innâ”GaAs. Physical Review Letters, 1971, 27, 317-320.	7.8	60
34	Atomic Modulation of Interdiffusion at Au-GaAs Interfaces. Physical Review Letters, 1980, 44, 667-670.	7.8	60
35	Zn- and O-face polarity effects at ZnO surfaces and metal interfaces. Applied Physics Letters, 2008, 93, 072111.	3.3	58
36	Compositional modulation and optical emission in AlGaN epitaxial films. Journal of Applied Physics, 2006, 100, 103512.	2.5	57

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37	Selection and characteristics of peptides that bind thermally grown silicon dioxide films. New Biotechnology, 2005, 22, 201-204.	2.7	55
38	Optical-Emission Properties of Interface States for Metals on III-V Semiconductor Compounds. Physical Review Letters, 1986, 57, 487-490.	7.8	53
39	Effect of reduced dimensionality on the optical band gap of SrTiO3. Applied Physics Letters, 2013, 102, .	3.3	52
40	Coupled Interface Plasmons of Al Films on CdSe and CdS. Physical Review Letters, 1977, 38, 245-248.	7.8	51
41	Orientation-dependent chemistry and Schottky-barrier formation at metal-GaAs interfaces. Physical Review Letters, 1990, 64, 2551-2554.	7.8	51
42	Detection of clinically relevant levels of protein analyte under physiologic buffer using planar field effect transistors. Biosensors and Bioelectronics, 2008, 24, 505-511.	10.1	50
43	Reactive interdiffusion and electronic barriers at metalâ€“CdS and metalâ€“CdSe interfaces: Control of Schottky barrier height using reactive interlayers. Journal of Vacuum Science and Technology, 1981, 19, 617-622.	1.9	48
44	New method for control of Schottkyâ€barrier height. Applied Physics Letters, 1981, 39, 67-69.	3.3	47
45	Deep level defects and doping in high Al mole fraction AlGaN. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 2558.	1.6	47
46	Defect segregation and optical emission in ZnO nano- and microwires. Nanoscale, 2016, 8, 7631-7637.	5.6	47
47	Surface point defects and Schottky barrier formation on ZnO(101Ì„0). Journal of Vacuum Science and Technology, 1980, 17, 894-898.	1.9	46
48	Atomic geometry of Alâ€'GaAs interfaces: GaAs (110)â€“p(1â€‰Ã—â€‰1)â€“Al(ï¿½), 0?ï¿½8.5 monolayers. Journal of Vacuum Science and Technology, 1981, 19, 331-334.	1.9	45
49	Photoemission studies of atomic redistribution at goldâ€“silicon and aluminumâ€“silicon interfaces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1984, 2, 551-555.	2.1	45
50	Band bending and interface states for metals on GaAs. Applied Physics Letters, 1988, 52, 2052-2054.	3.3	45
51	Defect-driven inhomogeneities in Niâ€•4Hâ€“SiC Schottky barriers. Applied Physics Letters, 2005, 87, 242106.	3.3	45
52	Confirmation of the temperature-dependent photovoltaic effect on Fermi-level measurements by photoemission spectroscopy. Physical Review B, 1990, 41, 12299-12302.	3.2	43
53	Surface Electric-Fieldâ€”Induced Raman Scattering in PbTe and SnTe. Physical Review Letters, 1971, 27, 808-811.	7.8	42
54	Localized states at InGaN/GaN quantum well interfaces. Applied Physics Letters, 1999, 75, 3835-3837.	3.3	41

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55	Depth-dependent investigation of defects and impurity doping in GaN/sapphire using scanning electron microscopy and cathodoluminescence spectroscopy. Journal of Applied Physics, 2002, 91, 6729.	2.5	41
56	Thermally driven defect formation and blocking layers at metal-ZnO interfaces. Applied Physics Letters, 2007, 91, .	3.3	41
57	Process-dependent defects in Siâˆ•HfO2âˆ•Mo gate oxide heterostructures. Applied Physics Letters, 2007, 90, 052901.	3.3	40
58	Reactive interdiffusion at metalâ€“CdS and metalâ€“CdSe interfaces. Journal of Vacuum Science and Technology, 1981, 18, 787-791.	1.9	38
59	Origin and microscopic mechanism for suppression of leakage currents in Schottky contacts to GaN grown by molecular-beam epitaxy. Journal of Applied Physics, 2003, 94, 7611.	2.5	37
60	Chemical and electronic structure of compound semiconductorâ€“metal interfaces. Journal of Vacuum Science and Technology, 1982, 20, 652-658.	1.9	36
61	Atomic diffusionâ€induced deep levels near ZnSe/GaAs(100) interfaces. Applied Physics Letters, 1995, 66, 3301-3303.	3.3	36
62	Depth-dependent spectroscopic defect characterization of the interface between plasma-deposited SiO2 and silicon. Applied Physics Letters, 1998, 73, 791-793.	3.3	36
63	Depth-resolved subsurface defects in chemically etched SrTiO3. Applied Physics Letters, 2009, 94, .	3.3	36
64	Surface cleaning and annealing effects on Niâˆ•AlGaN interface atomic composition and Schottky barrier height. Applied Physics Letters, 2004, 85, 1368-1370.	3.3	35
65	Nearâ€ideal Schottky barrier formation at metalâ€GaP interfaces. Applied Physics Letters, 1987, 50, 1379-1381.	3.3	34
66	Characterization of 1.8-MeV proton-irradiated AlGaN/GaN field-effect transistor structures by nanoscale depth-resolved luminescence spectroscopy. IEEE Transactions on Nuclear Science, 2002, 49, 2695-2701.	2.0	33
67	Thermal process dependence of Li configuration and electrical properties of Li-doped ZnO. Applied Physics Letters, 2012, 100, 042107.	3.3	33
68	Reduction of siliconâ€aluminum interdiffusion by improved semiconductor surface ordering. Applied Physics Letters, 1984, 44, 110-112.	3.3	32
69	Thermal and doping dependence of 4H-SiC polytype transformation. Applied Physics Letters, 2002, 81, 2785-2787.	3.3	32
70	Si doping of high-Al-mole fraction AlxGa1â^'xN alloys with rf plasma-induced molecular-beam-epitaxy. Applied Physics Letters, 2002, 81, 5192-5194.	3.3	32
71	Role of Interface Layers and Localized States in TiAl-Based Ohmic Contacts to p-Type 4H-SiC. Journal of Electronic Materials, 2007, 36, 277-284.	2.2	32
72	Absence of Fermi level pinning at metalâ€InxGa1â^'xAs(100) interfaces. Applied Physics Letters, 1986, 48, 1458-1460.	3.3	31

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73	Defects at oxygen plasma cleaned ZnO polar surfaces. Journal of Applied Physics, 2010, 108, .	2.5	29
74	Heterojunction band offsets and dipole formation at BaTiO3/SrTiO3 interfaces. Journal of Applied Physics, 2013, 114, .	2.5	29
75	Role of subsurface defects in metal-ZnO(0001) Schottky barrier formation. Journal of Vacuum Science & Technology B, 2007, 25, 1405.	1.3	28
76	Cathodoluminescence spectroscopy of metalâ€“semiconductor interface structures. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1988, 6, 1437-1445.	2.1	27
77	Arsenic- and metal-induced GaAs interface states by low-energy cathodoluminescence spectroscopy. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1988, 6, 1397.	1.6	26
78	Luminescence spectroscopy of GaN in the high-temperature regime from room temperature to 900â€ŠÂ°C. Applied Physics Letters, 2000, 77, 699-701.	3.3	26
79	Depth-resolved cathodoluminescence spectroscopy study of defects in SrTiO3. Journal of Vacuum Science & Technology B, 2008, 26, 1466-1471.	1.3	26
80	Strain-driven disproportionation at a correlated oxide metal-insulator transition. Physical Review B, 2020, 101, .	3.2	26
81	Surface photovoltage and Auger spectroscopy studies of (112Ì„0) CdS surface. Journal of Vacuum Science and Technology, 1975, 12, 249-252.	1.9	25
82	Simultaneous observation of luminescence and dissociation processes of Mgâ€“H complex for Mg-doped GaN. Journal of Applied Physics, 2002, 92, 3657-3661.	2.5	25
83	Nanoscale mapping of temperature and defect evolution inside operating AlGaN/GaN high electron mobility transistors. Applied Physics Letters, 2009, 95, .	3.3	25
84	Native point defect formation in flash sintered ZnO studied by depth-resolved cathodoluminescence spectroscopy. Journal of Applied Physics, 2016, 120, .	2.5	24
85	Deep level defects and cation sublattice disorder in ZnGeN2. Journal of Applied Physics, 2020, 127, .	2.5	24
86	Surface traps in vapor-phase-grown bulk ZnO studied by deep level transient spectroscopy. Journal of Applied Physics, 2008, 104, .	2.5	23
87	Neutron irradiation effects on gallium nitride-based Schottky diodes. Applied Physics Letters, 2013, 103, .	3.3	23
88	Cathodoluminescence spectroscopy studies of laserâ€annealed metalâ€“semiconductor interfaces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1985, 3, 1011-1015.	2.1	22
89	Spontaneous compositional superlattice and band-gap reduction in Si-doped AlxGa1â^'xN epilayers. Applied Physics Letters, 2005, 87, 191906.	3.3	22
90	Optical identification of oxygen vacancy formation at SrTiO₃â€“(Ba,Sr)TiO₃heterostructures. Journal Physics D: Applied Physics, 2014, 47, 255303.	2.8	22

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91	Interface bonding, chemical reactions, and defect formation at metal-semiconductor interfaces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2007, 25, 943-949.	2.1	21
92	Impact of ultrathin Al2O3 diffusion barriers on defects in high-k LaLuO3 on Si. Applied Physics Letters, 2011, 98, 172902.	3.3	21
93	Elucidating Structural Transformations in Li_xV₂O₅ Electrochromic Thin Films by Multimodal Spectroscopies. Chemistry of Materials, 2020, 32, 7226-7236.	6.7	21
94	Schottky barrier modulation at metal contacts to CdS and CdSe. Journal of Vacuum Science and Technology, 1982, 21, 590-593.	1.9	20
95	Impact of near-surface defects and morphology on ZnO luminescence. Applied Physics Letters, 2009, 94, .	3.3	20
96	Increased range of Fermi-level stabilization energy at metal/melt-grown GaAs(100) interfaces. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1991, 9, 2129.	1.6	17
97	Role of barrier and buffer layer defect states in AlGaN/GaN HEMT structures. Journal of Electronic Materials, 2001, 30, 123-128.	2.2	17
98	Surface, bulk, and interface electronic states of epitaxial BiFeO3 films. Journal of Vacuum Science & Technology B, 2009, 27, 2012-2014.	1.3	17
99	Defect Manipulation To Control ZnO Micro-/Nanowire-Metal Contacts. Nano Letters, 2018, 18, 6974-6980.	9.1	17
100	Native Point Defect Measurement and Manipulation in ZnO Nanostructures. Materials, 2019, 12, 2242.	2.9	17
101	Pre-metallization processing effects on Schottky contacts to AlGaNâ•GaN heterostructures. Journal of Applied Physics, 2005, 97, 084502.	2.5	16
102	Native point defects at ZnO surfaces, interfaces and bulk films. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 1566-1569.	0.8	16
103	Polarity-related asymetry at ZnO surfaces and metal interfaces. Journal of Vacuum Science & Technology B, 2009, 27, 1710.	1.3	15
104	Neutron irradiation effects on metal-gallium nitride contacts. Journal of Applied Physics, 2014, 115, .	2.5	15
105	Atomic layer diffusion and electronic structure at In[sub 0.53]Ga[sub 0.47]As/InP interfaces. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 554.	1.6	14
106	On microscopic compositional and electrostatic properties of grain boundaries in polycrystalline CuIn[sub 1â^'x]Ga[sub x]Se[sub 2]. Journal of Vacuum Science & Technology B, 2006, 24, 1739.	1.3	14
107	Strain and Temperature Dependence of Defect Formation at AlGaN/GaN High-Electron-Mobility Transistors on a Nanometer Scale. IEEE Transactions on Electron Devices, 2012, 59, 2667-2674.	3.0	14
108	Neutron irradiation and forming gas anneal impact on Î²-Ga₂O₃ deep level defects. Journal Physics D: Applied Physics, 2020, 53, 465102.	2.8	14

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109	Identification of a functional point defect in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>SrTi</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review Materials, 2018, 2, .	2.4	14
110	Investigation of InP surface and metal interfaces by surface photovoltage and Auger electron spectroscopies. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1983, 1, 766-770.	2.1	13
111	Interfacial deepâ€level formation and its effect on band bending at metal/CdTe interfaces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1988, 6, 2752-2756.	2.1	13
112	Electronic near-surface defect states of bare and metal covered n-GaN films observed by cathodoluminescence spectroscopy. Journal of Electronic Materials, 1999, 28, 308-313.	2.2	13
113	Chemically dependent traps and polytypes at Pt/Ti contacts to 4H and 6Hâ€“SiC. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2002, 20, 554.	1.6	13
114	Single Metal Ohmic and Rectifying Contacts to ZnO Nanowires: A Defect Based Approach. Annalen Der Physik, 2018, 530, 1700335.	2.4	13
115	Recovery from plasma etching-induced nitrogen vacancies in p-type gallium nitride using UV/O3 treatments. Applied Physics Letters, 2020, 117, .	3.3	13
116	Shallow donor generation in ZnO by remote hydrogen plasma. Journal of Electronic Materials, 2005, 34, 399-403.	2.2	12
117	Impact of ultrathin Al2O3 barrier layer on electrical properties of LaLuO3 metal-oxide-semiconductor devices. Applied Physics Letters, 2011, 98, 122907.	3.3	12
118	Correlation of deep-level and chemically-active-site densities at vicinal GaAs(100)-Al interfaces. Physical Review B, 1991, 44, 1391-1394.	3.2	11
119	Effects of deep-level defects on ohmic contact and frequency performance of AlGaN/GaN high-electron-mobility transistors. Applied Physics Letters, 2003, 83, 485-487.	3.3	11
120	Atomic diffusion and band lineups at In[sub 0.53]Ga[sub 0.47]As-on-InP heterointerfaces. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 1832.	1.6	11
121	Impact of near-surface native point defects, chemical reactions, and surface morphology on ZnO interfaces. Journal of Vacuum Science & Technology B, 2008, 26, 1477-1482.	1.3	11
122	X-ray photoemission spectroscopy of Sr2FeMoO6 film stoichiometry and valence state. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2010, 28, 1240-1244.	2.1	11
123	Interplay of dopants and native point defects in ZnO. Physica Status Solidi (B): Basic Research, 2013, 250, 2110-2113.	1.5	11
124	Characterization of polishing induced defects and hydrofluoric acid passivation effect in ZnO. Applied Physics Letters, 2013, 103, .	3.3	10
125	Near-nanoscale-resolved energy band structure of LaNiO3/La2/3Sr1/3MnO3/SrTiO3 heterostructures and their interfaces. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, 04E103.	1.2	10
126	Impact of defect distribution on IrOx/ZnO interface doping and Schottky barriers. Applied Physics Letters, 2017, 111, .	3.3	10

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127	Nanoscale depth and lithiation dependence of V2O5 band structure by cathodoluminescence spectroscopy. Journal of Materials Chemistry A, 2020, 8, 11800-11810.	10.3	10
128	Optical guided waves in CdSxSe1â^'x diffused layers. Journal of Applied Physics, 1974, 45, 5289-5293.	2.5	9
129	Temperatureâ€dependent formation of interface states and Schottky barriers at metal/molecularâ€beam epitaxy GaAs(100) junctions. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1990, 8, 3803-3808.	2.1	9
130	Detection of trap activation by ionizing radiation in SiO2 by spatially localized cathodoluminescence spectroscopy. Journal of Applied Physics, 2002, 92, 5729-5734.	2.5	9
131	Field-induced strain degradation of AlGaN/GaN high electron mobility transistors on a nanometer scale. Applied Physics Letters, 2010, 97, .	3.3	9
132	Depth resolved studies of SrTiO3 defects using x-ray excited optical luminescence and cathodoluminescence. Applied Physics Letters, 2013, 102, .	3.3	9
133	Optical emission properties of metal/InP and GaAs interface states. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1987, 5, 1516-1520.	2.1	8
134	Uniform large-area growth of nanotemplated high-quality monolayer MoS2. Applied Physics Letters, 2017, 110, 263103.	3.3	8
135	Influence of Surface Chemistry on Water Absorption in Functionalized Germanane. Chemistry of Materials, 2020, 32, 1537-1544.	6.7	8
136	Microcathodoluminescence spectroscopy of defects in Bi2O3-doped ZnO grains. Journal of Applied Physics, 2002, 92, 5072-5076.	2.5	7
137	Electronic defect states at annealed metalâ•4Hâ€“SiC interfaces. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 594.	1.6	7
138	Metal contacts on bulk ZnO crystal treated with remote oxygen plasma. Journal of Vacuum Science & Technology B, 2009, 27, 1774.	1.3	7
139	Impact of Mg content on native point defects in Mg_xZn_{1â^'x}O (0 â‰¤ x â‰¤ 0.56). APL Materials, 2015, 3, 062801.	5.1	7
140	Defect Characterization, Imaging, and Control in Wide-Bandgap Semiconductors and Devices. Journal of Electronic Materials, 2018, 47, 4980-4986.	2.2	7
141	Identification of Ge vacancies as electronic defects in methyl- and hydrogen-terminated germanane. Applied Physics Letters, 2018, 113, 061110.	3.3	7
142	Cathodoluminescence and x-ray photoelectron spectroscopy of ScN: Dopant, defects, and band structure. APL Materials, 2020, 8, 081103.	5.1	7
143	Direct, spatially resolved observation of defect states with electromigration and degradation of single crystal SrTiO3. Journal of Applied Physics, 2020, 127, .	2.5	7
144	The effect of thermal reactor neutron irradiation on semi-insulating GaN. Radiation Effects and Defects in Solids, 2013, 168, 924-932.	1.2	6

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145	Direct measurement of defect and dopant abruptness at high electron mobility ZnO homojunctions. Applied Physics Letters, 2016, 109, .	3.3	6
146	Experimental determination of the valence band offsets of ZnGeN₂ and (ZnGe)_{0.94}Ga_{0.12}N₂ with GaN. Journal Physics D: Applied Physics, 2021, 54, 245102.	2.8	6
147	Cathodoluminescence measurements of suboxide band-tail and Si dangling bond states at ultrathin Siâ€“SiO[sub 2] interfaces. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 2177.	1.6	5
148	Low-energy cathodoluminescence spectroscopy of erbium-doped gallium nitride surfaces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1999, 17, 3437-3442.	2.1	5
149	Influence of oxygen on luminescence and vibrational spectra of Mg-doped GaN. Physica Status Solidi (B): Basic Research, 2003, 240, 356-359.	1.5	5
150	Design of an ultrahigh vacuum transfer mechanism to interconnect an oxide molecular beam epitaxy growth chamber and an x-ray photoemission spectroscopy analysis system. Review of Scientific Instruments, 2013, 84, 065105.	1.3	5
151	Bandgap and band edge positions in compositionally graded ZnCdO. Journal of Applied Physics, 2018, 124, .	2.5	5
152	Depth-resolved cathodoluminescence and surface photovoltage spectroscopies of gallium vacancies in Î²-Ga2O3 with neutron irradiation and forming gas anneals. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2021, 39, .	1.2	5
153	Low energy electron excited nanoscale luminescence spectroscopy of erbium doped AlN. Journal of Electronic Materials, 2000, 29, 311-316.	2.2	4
154	Origins of luminescence from nitrogen-ion-implanted epitaxial GaAs. Applied Physics Letters, 2004, 85, 2774-2776.	3.3	4
155	Schottky barrier formation at nonpolar Au/GaN epilayer interfaces. Journal of Electronic Materials, 2006, 35, 581-586.	2.2	4
156	Controlled gate surface processing of AlGaNâˆ•GaN high electron mobility transistors. Applied Physics Letters, 2006, 89, 183523.	3.3	4
157	Application of high spatial resolution scanning work function spectroscopy to semiconductor surfaces and interfaces. Journal of Vacuum Science & Technology B, 2007, 25, 334.	1.3	4
158	Atomic diffusion and interface electronic structure at In[sub 0.49]Ga[sub 0.51]Pâˆ•GaAs heterojunctions. Journal of Vacuum Science & Technology B, 2008, 26, 89.	1.3	4
159	Nanoscale depth-resolved electronic properties of SiO2/SiOx/SiO2 for device-tolerant electronics. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 011027.	1.2	4
160	Topological Dirac semimetal Na3Bi films in the ultrathin limit via alternating layer molecular beam epitaxy. APL Materials, 2018, 6, 086103.	5.1	4
161	Chemical migration and dipole formation at van der Waals interfaces between magnetic transition metal chalcogenides and topological insulators. Physical Review Materials, 2020, 4, .	2.4	4
162	Ultrathin Silicon Oxide and Nitride â€“ Silicon Interface States. Materials Research Society Symposia Proceedings, 1999, 567, 549.	0.1	3

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163	Effect of Remote Hydrogen Plasma Treatment on ZnO Single Crystal Surfaces. Materials Research Society Symposia Proceedings, 2002, 744, 1.	0.1	3
164	Micro-Auger electron spectroscopy studies of chemical and electronic effects at GaN-sapphire interfaces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2004, 22, 2284-2289.	2.1	3
165	Role of native point defects and Ga diffusion on electrical properties of degenerate Gaâ€doped ZnO. Physica Status Solidi (B): Basic Research, 2013, 250, 2114-2117.	1.5	3
166	Native point defect energies, densities, and electrostatic repulsion across (Mg,Zn)O alloys. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 1448-1454.	1.8	3
167	Direct correlation and strong reduction of native point defects and microwave dielectric loss in air-annealed (Ba,Sr)TiO3. Applied Physics Letters, 2015, 106, .	3.3	3
168	Deep level defect spectroscopies of complex oxide surfaces and interfaces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	3
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170	Coherent growth and characterization of van der Waals <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>1</mml:mn><mml:mi mathvariant="normal">T</mml:mi><mml:mtext>â^'</mml:mtext><mml:msub><mml:mi>VSe</mml:mi><mml:mn>2</mml:mn></mml:m layers on GaAs(111)B using molecular beam epitaxy. Physical Review Materials, 2020, 4, .	2.4	2
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