

Wendy L Sarney

List of Publications by Year in descending order

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105
papers

1,868
citations

279487

23
h-index

288905

40
g-index

105
all docs

105
docs citations

105
times ranked

1537
citing authors

#	ARTICLE	IF	CITATIONS
1	Growth of large-scale GaN nanowires and tubes by direct reaction of Ga with NH ₃ . Applied Physics Letters, 2000, 77, 3731-3733.	1.5	199
2	Inversion of wurtzite GaN(0001) by exposure to magnesium. Applied Physics Letters, 1999, 75, 808-810.	1.5	187
3	Growth of GaN nanowires by direct reaction of Ga with NH ₃ . Journal of Crystal Growth, 2001, 231, 357-365.	0.7	113
4	Enhanced room-temperature luminescence efficiency through carrier localization in Al _x Ga _{1-x} N alloys. Applied Physics Letters, 2005, 86, 031916.	1.5	90
5	Band gap of InAs $\langle \text{http://www.w3.org/1998/Math/MathML} \rangle$ $\langle \text{display="inline"} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 1 \langle \text{mml:mn} \rangle \langle \text{mml:mo} \rangle \hat{\wedge} \langle \text{mml:mo} \rangle \langle \text{mml:mi} \rangle x \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:math} \rangle \text{Sb} \langle \text{mml:mi} \rangle x \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:math} \rangle$ with native lattice constant. Physical Review B, 2012, 86, .	1.1	76
6	Interband absorption strength in long-wave infrared type-II superlattices with small and large superlattice periods compared to bulk materials. Applied Physics Letters, 2016, 108, .	1.5	71
7	Properties of unrelaxed InAs _{1-x} Sb _x alloys grown on compositionally graded buffers. Applied Physics Letters, 2011, 99, .	1.5	60
8	Role of Ga flux in dislocation reduction in GaN films grown on SiC(0001). Applied Physics Letters, 2001, 79, 3428-3430.	1.5	59
9	The Effects of Multiphase Formation on Strain Relaxation and Magnetization in Multiferroic BiFeO ₃ Thin Films. Advanced Functional Materials, 2007, 17, 2594-2599.	7.8	42
10	Molecular beam epitaxy control and photoluminescence properties of InAsBi. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2012, 30, 02B109.	0.6	42
11	Properties of GaN epitaxial layers grown on 6H-SiC(0001) by plasma-assisted molecular beam epitaxy. Journal of Electronic Materials, 2001, 30, 162-169.	1.0	34
12	Molecular beam epitaxial growth and characterization of Cd-based II-VI wide-bandgap compounds on Si substrates. Journal of Electronic Materials, 2005, 34, 655-661.	1.0	31
13	Pulsed laser deposition and processing of wide band gap semiconductors and related materials. Journal of Electronic Materials, 1999, 28, 275-286.	1.0	30
14	Metamorphic InAsSb-based barrier photodetectors for the long wave infrared region. Applied Physics Letters, 2013, 103, .	1.5	30
15	Growth of AlGaIn alloys exhibiting enhanced luminescence efficiency. Journal of Electronic Materials, 2006, 35, 641-646.	1.0	28
16	Metamorphic InAsSb/AlInAsSb heterostructures for optoelectronic applications. Applied Physics Letters, 2013, 102, .	1.5	28
17	Enhanced dielectric properties from barium strontium titanate films with strontium titanate buffer layers. Journal of Applied Physics, 2013, 114, 164107.	1.1	28
18	Development of Bulk InAsSb Alloys and Barrier Heterostructures for Long-Wave Infrared Detectors. Journal of Electronic Materials, 2015, 44, 3360-3366.	1.0	27

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19	Electronic properties of unstrained unrelaxed narrow gap InAs _x Sb _{1-x} alloys. Journal Physics D: Applied Physics, 2016, 49, 105101.	1.3	27
20	Conduction- and Valence-Band Energies in Bulk InAs _{1-x} Sb _x and Type-II InAs _{1-x} Sb _x /InAs Strained-Layer Superlattices. Journal of Electronic Materials, 2013, 42, 918-926.	1.0	26
21	Highly mismatched N-rich GaN _{1-x} Sb _x films grown by low temperature molecular beam epitaxy. Applied Physics Letters, 2013, 102, .	1.5	26
22	Electronic band structure of highly mismatched GaN _{1-x} Sb _x alloys in a broad composition range. Applied Physics Letters, 2015, 107, .	1.5	25
23	Effects of carrier concentration and phonon energy on carrier lifetime in type-2 SLS and properties of InAs _{1-x} Sb _x alloys. Proceedings of SPIE, 2011, , .	0.8	24
24	Superconducting Proximity Effect in InAsSb Surface Quantum Wells with In Situ Al Contacts. ACS Applied Electronic Materials, 2020, 2, 2351-2356.	2.0	22
25	Optimized structural properties of wurtzite GaN on SiC(0001) grown by molecular beam epitaxy. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2000, 18, 1915-1918.	0.9	21
26	High-Power 2.2- μ m Diode Lasers With Metamorphic Arsenic-Free Heterostructures. IEEE Photonics Technology Letters, 2011, 23, 317-319.	1.3	21
27	Structural and luminescent properties of bulk InAsSb. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2012, 30, 02B105.	0.6	21
28	Engineering Dirac Materials: Metamorphic InAs _{1-x} Sb _x /InAs _{1-y} Sb _y Superlattices with Ultralow Bandgap. Nano Letters, 2018, 18, 412-417.	4.5	21
29	Growth and characterization of highly mismatched GaN _{1-x} Sb _x alloys. Journal of Applied Physics, 2014, 116, .	1.1	20
30	Bulk InAsSb with 0.1 eV bandgap on GaAs. Journal of Applied Physics, 2017, 122, .	1.1	19
31	3 μ m diode lasers grown on (Al)GaInSb compositionally graded metamorphic buffer layers. Semiconductor Science and Technology, 2012, 27, 055011.	1.0	18
32	Background and interface electron populations in InAs _{0.58} Sb _{0.42} . Semiconductor Science and Technology, 2015, 30, 035018.	1.0	17
33	Highly mismatched GaN _{1-x} Sb _x alloys: synthesis, structure and electronic properties. Semiconductor Science and Technology, 2016, 31, 083001.	1.0	16
34	Materials design parameters for infrared device applications based on III-V semiconductors. Applied Optics, 2017, 56, B58.	2.1	15
35	GaN _{1-x} Sb _x highly mismatched alloys grown by low temperature molecular beam epitaxy under Ga-rich conditions. Journal of Crystal Growth, 2013, 383, 95-99.	0.7	14
36	Role of Ge on film quality of SiC grown on Si. Journal of Applied Physics, 2002, 91, 668-671.	1.1	13

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37	The influence of growth temperature on Sb incorporation in InAsSb, and the temperature-dependent impact of Bi surfactants. <i>Journal of Crystal Growth</i> , 2014, 406, 8-11.	0.7	13
38	Dislocations and stacking faults in hexagonal GaN. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2011, 208, 1566-1568.	0.8	12
39	Molecular beam epitaxy of highly mismatched N-rich GaN _{1-x} Sbx and InN _{1-x} Asx alloys. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2013, 31, .	0.6	12
40	Flux dependent Sb-incorporation during molecular beam epitaxy of InAsSb. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2015, 33, .	0.6	12
41	Ultrasound-assisted micro-emulsion for synthesis of Pt and PtCo nano-particles. <i>Electrochimica Acta</i> , 2010, 55, 6872-6878.	2.6	11
42	Plasma enhanced atomic layer deposition of textured aluminum nitride on platinized substrates for MEMS. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2022, 40, .	0.9	11
43	Growth of GaN on SiC(0001) by Molecular Beam Epitaxy. <i>Physica Status Solidi A</i> , 2001, 188, 595-599.	1.7	10
44	Incorporation kinetics in mixed anion compound semiconductor alloys. <i>Journal of Applied Physics</i> , 2013, 114, 234907.	1.1	10
45	Extremely small bandgaps, engineered by controlled multi-scale ordering in InAsSb. <i>Journal of Applied Physics</i> , 2016, 119, 215704.	1.1	10
46	Reactivity studies and structural properties of Al on compound semiconductor surfaces. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2018, 36, 062903.	0.6	10
47	Growth and characterization of hexagonal (Zn,Mg)(S,Se) bulk substrates. <i>Journal of Crystal Growth</i> , 2000, 212, 83-91.	0.7	9
48	Deep UV light emitting diodes grown by gas source molecular beam epitaxy. <i>Journal of Materials Science: Materials in Electronics</i> , 2008, 19, 764-769.	1.1	9
49	Unrelaxed bulk InAsSb with novel absorption, carrier transport, and recombination properties for MWIR and LWIR photodetectors. <i>Proceedings of SPIE</i> , 2012, , .	0.8	9
50	Composition and optical properties of dilute-Sb GaN _{1-x} Sb _x highly mismatched alloys grown by MBE. <i>Journal Physics D: Applied Physics</i> , 2014, 47, 465102.	1.3	9
51	Temperature dependent Hall effect in InAsSb with a 0.11 eV 77 K-bandgap. <i>Applied Physics Letters</i> , 2019, 114, 122102.	1.5	9
52	Minority Carrier Lifetime in Beryllium-Doped InAs/InAsSb Strained Layer Superlattices. <i>Journal of Electronic Materials</i> , 2014, 43, 3184-3190.	1.0	8
53	Exploration of the growth parameter space for MBE-grown GaN _{1-x} Sb highly mismatched alloys. <i>Journal of Crystal Growth</i> , 2015, 425, 255-257.	0.7	8
54	Ultra-short period Ga-free superlattice growth on GaSb. <i>Journal of Applied Physics</i> , 2018, 124, .	1.1	8

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55	A microstructural study of the CdTe/ZnTe film morphology as related to the Si substrate orientation. Solid-State Electronics, 2004, 48, 1917-1920.	0.8	7
56	Defect density dependence of luminescence efficiency and lifetimes in AlGaIn active regions exhibiting enhanced emission from nanoscale compositional inhomogeneities. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 2125-2128.	0.8	7
57	Influence of a Bi surfactant on Sb incorporation in InAsSb alloys. Journal of Applied Physics, 2014, 116, .	1.1	7
58	AlInAsSb for M-LWIR detectors. Journal of Crystal Growth, 2015, 425, 357-359.	0.7	7
59	Aluminum metallization of III-V semiconductors for the study of proximity superconductivity. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2020, 38, 032212.	0.6	7
60	Strain relaxation in AlSb/GaSb heterostructures. Solid-State Electronics, 2002, 46, 1643-1649.	0.8	6
61	Bio-inspired synthesis and laser processing of nanostructured barium titanate thin films: implications for uncooled IR sensor development. , 2009, , .		6
62	Effects of native defects on properties of low temperature grown, non-stoichiometric gallium nitride. Journal Physics D: Applied Physics, 2015, 48, 385101.	1.3	6
63	Undoped p-type GaIn _{1-x} Sb _x alloys: Effects of annealing. Applied Physics Letters, 2016, 109, .	1.5	6
64	Metamorphic narrow-gap InSb/InAsSb superlattices with ultra-thin layers. Applied Physics Letters, 2018, 113, .	1.5	6
65	Time-resolved reflectivity studies of coherent longitudinal acoustic phonon pulses in bulk III-nitride semiconductors. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 790-794.	0.8	5
66	Luminescence properties of Al _x Ga _{1-x} N (0.4 < x < 0.5)/Al _y Ga _{1-y} N (0.6 < y < 1) quantum structures grown by gas source molecular beam epitaxy. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1852-1854.	0.8	5
67	Dirac energy spectrum and inverted bandgap in metamorphic InAsSb/InSb superlattices. Applied Physics Letters, 2020, 116, 032101.	1.5	5
68	SiC/Si(111) film quality as a function of GeH ₄ flow in an MOCVD reactor. Journal of Electronic Materials, 2000, 29, 359-363.	1.0	4
69	Characterization of compositional oscillations in InGaAs films induced by MBE cell configuration and substrate rotation. Materials Characterization, 2007, 58, 284-288.	1.9	4
70	Infrared emitters and photodetectors with InAsSb bulk active region. Proceedings of SPIE, 2013, , .	0.8	4
71	InAsSb-based heterostructures for infrared light modulation. Applied Physics Letters, 2019, 115, .	1.5	4
72	Tailoring superconducting phases observed in hyperdoped Si:Ga for cryogenic circuit applications. Applied Physics Letters, 2021, 118, .	1.5	4

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73	Characterization of InGaAs self-mixing detectors for chirp amplitude-modulated ladar (CAML). , 2004, , .		3
74	Enhanced luminescence from Al _x Ga _{1-x} N/Al _y Ga _{1-y} N quantum wells grown by gas source molecular beam epitaxy with ammonia. , 2007, , .		3
75	Correlations between the Growth Modes and Luminescence Properties of AlGa _N Quantum Structures. Japanese Journal of Applied Physics, 2008, 47, 1556-1558.	0.8	3
76	New Approaches to Direct Bandgap III-V Materials for LWIR Detector Applications. AIP Conference Proceedings, 2011, , .	0.3	3
77	Discrepancies in the nature of nitrogen incorporation in dilute-nitride GaSbN and GaAsN films. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2013, 31, .	0.6	3
78	Tellurium n-type doping of highly mismatched amorphous GaN _{1-x} As alloys in plasma-assisted molecular beam epitaxy. Journal of Crystal Growth, 2014, 404, 9-13.	0.7	3
79	Determination of N/Ga-rich growth conditions, using in-situ auger electron spectroscopy. Journal of Crystal Growth, 2015, 425, 2-4.	0.7	3
80	Intermixing studies in GaN _{1-x} Sb _x highly mismatched alloys. Applied Optics, 2017, 56, B64.	2.1	3
81	Electrical modulation of the LWIR absorption and refractive index in InAsSb-based strained layer superlattice heterostructures. Journal of Applied Physics, 2020, 128, 083101.	1.1	3
82	TEM Study of Bulk AlN Growth by Physical Vapor Transport. Materials Research Society Symposia Proceedings, 1999, 595, 1.	0.1	2
83	Microstructural characterization of quantum dots with type-II band alignments. Solid-State Electronics, 2006, 50, 1124-1127.	0.8	2
84	Antimony-assisted carbonization of Si(111) with solid source molecular beam epitaxy. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2013, 31, 061511.	0.9	2
85	Growth temperature and surfactant effects on the properties of mixed group V alloys. Journal of Crystal Growth, 2015, 425, 234-236.	0.7	2
86	Composition modulated InAsSb superlattice induced by non-incorporating Bismuth. Journal of Crystal Growth, 2015, 432, 105-107.	0.7	2
87	A comparison of indium arsenide antimonide and mercury cadmium telluride as long wavelength infrared detector materials. Journal of Applied Physics, 2020, 128, .	1.1	2
88	Materials Study of the Competing Group-V Element Incorporation Process in Dilute-Nitride Films. Materials Research Society Symposia Proceedings, 2009, 1202, 126.	0.1	1
89	Formation of periodic nanotube array through the Kirkendall effect in epitaxial heterostructures. Applied Physics Letters, 2010, 97, 203105.	1.5	1
90	Effect of As Passivation on Vapor-Phase Epitaxial Growth of Ge on (211)Si as a Buffer Layer for CdTe Epitaxy. Journal of Electronic Materials, 2011, 40, 1637-1641.	1.0	1

