Patrick Desjardins

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/5025460/publications.pdf Version: 2024-02-01



PATRICK DESIARDING

#	Article	IF	CITATIONS
1	Carbon nanotube sheets as electrodes in organic light-emitting diodes. Applied Physics Letters, 2006, 88, 183104.	3.3	218
2	Thin film reaction of transition metals with germanium. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2006, 24, 474-485.	2.1	208
3	Direct oriented growth of armchair graphene nanoribbons on germanium. Nature Communications, 2015, 6, 8006.	12.8	157
4	Atmospheric Pressure Deposition of Micropatterned Nitrogen-Rich Plasma-Polymer Films for Tissue Engineering. Plasma Processes and Polymers, 2005, 2, 263-270.	3.0	150
5	Electronic structure of ScN determined using optical spectroscopy, photoemission, andab initiocalculations. Physical Review B, 2001, 63, .	3.2	139
6	Low-temperature growth and critical epitaxial thicknesses of fully strained metastable Ge1â^'xSnx (x≲0.26) alloys on Ge(001)2×1. Journal of Applied Physics, 1998, 83, 162-170.	2.5	124
7	Metalorganic vapor phase epitaxy of coherent self-assembled InAs nanometer-sized islands in InP(001). Applied Physics Letters, 1997, 71, 527-529.	3.3	97
8	Epitaxial NaCl structure δ-TaNx(001): Electronic transport properties, elastic modulus, and hardness versus N/Ta ratio. Journal of Applied Physics, 2001, 90, 2879-2885.	2.5	88
9	Chemical Characterisation of Nitrogenâ€Rich Plasmaâ€Polymer Films Deposited in Dielectric Barrier Discharges at Atmospheric Pressure. Plasma Processes and Polymers, 2008, 5, 631-644.	3.0	78
10	Mechanism of the Far-Infrared Absorption of Carbon-Nanotube Films. Physical Review Letters, 2008, 101, 267403.	7.8	76
11	No Graphene Etching in Purified Hydrogen. Journal of Physical Chemistry Letters, 2013, 4, 1100-1103.	4.6	76
12	Electroluminescence from Single-Wall Carbon Nanotube Network Transistors. Nano Letters, 2008, 8, 2351-2355.	9.1	74
13	Carbon Nanotubes as Injection Electrodes for Organic Thin Film Transistors. Nano Letters, 2009, 9, 1457-1461.	9.1	71
14	Microstructural evolution and Poisson ratio of epitaxial ScN grown on TiN(001)/MgO(001) by ultrahigh vacuum reactive magnetron sputter deposition. Journal of Applied Physics, 1999, 86, 5524-5529.	2.5	68
15	Strain and composition effects on Raman vibrational modes of silicon-germanium-tin ternary alloys. Applied Physics Letters, 2013, 103, .	3.3	63
16	Reaction of thin Ni films with Ge: Phase formation and texture. Journal of Applied Physics, 2006, 100, 034306.	2.5	62
17	Graphene CVD: Interplay Between Growth and Etching on Morphology and Stacking by Hydrogen and Oxidizing Impurities. Journal of Physical Chemistry C, 2014, 118, 21532-21540.	3.1	60
18	Polarization-Resolved Raman Study of Bulk-like and Davydov-Induced Vibrational Modes of Exfoliated Black Phosphorus. Nano Letters, 2016, 16, 7761-7767.	9.1	59

#	Article	IF	CITATIONS
19	Self-consistent determination of the band offsets inInAsxP1â^'x/InPstrained-layer quantum wells and the bowing parameter of bulkInAsxP1â^'x. Physical Review B, 1996, 53, 1990-1996.	3.2	53
20	Metastable phase formation during the reaction of Ni films with Si(001): The role of texture inheritance. Journal of Applied Physics, 2010, 107, .	2.5	50
21	In Situ Measure of Interfacial Tensions in Ternary and Quaternary Immiscible Polymer Blends Demonstrating Partial Wetting. Macromolecules, 2009, 42, 7518-7529.	4.8	49
22	Mechanism for epitaxial breakdown during low-temperature Ge(001) molecular beam epitaxy. Physical Review B, 2003, 67, .	3.2	48
23	Empirical tight-binding model for the electronic structure of dilute GaNAs alloys. Physical Review B, 2003, 67, .	3.2	45
24	Sn-mediated Geâ^•Ge(001) growth by low-temperature molecular-beam epitaxy: Surface smoothening and enhanced epitaxial thickness. Journal of Applied Physics, 2005, 97, 044904.	2.5	45
25	Study of TiO2 film growth mechanisms in low-pressure plasma by in situ real-time spectroscopic ellipsometry. Thin Solid Films, 2004, 447-448, 40-45.	1.8	43
26	Tuning of the electronic properties of self-assembled InAs/InP(001) quantum dots by rapid thermal annealing. Applied Physics Letters, 2004, 84, 3382-3384.	3.3	42
27	Raman scattering from fully strained Ge1â^'xSnx (x⩽0.22) alloys grown on Ge(001)2×1 by low-temperature molecular beam epitaxy. Journal of Applied Physics, 1998, 84, 2219-2223.	2.5	40
28	Ultrafast Dynamics of Delocalized and Localized Electrons in Carbon Nanotubes. Physical Review Letters, 2006, 96, 027401.	7.8	39
29	Adhesion of Human U937 Monocytes to Nitrogenâ€Rich Organic Thin Films: Novel Insights into the Mechanism of Cellular Adhesion. Macromolecular Bioscience, 2009, 9, 911-921.	4.1	39
30	High Contrast Imaging of Interphases in Ternary Polymer Blends Using Focused Ion Beam Preparation and Atomic Force Microscopy. Macromolecules, 2005, 38, 2368-2375.	4.8	38
31	The thermally-induced reaction of thin Ni films with Si: Effect of the substrate orientation. Journal of Applied Physics, 2011, 110, .	2.5	35
32	Ultrahigh B doping(<~1022cmâ^'3)during Si(001) gas-source molecular-beam epitaxy: B incorporation, electrical activation, and hole transport. Physical Review B, 2000, 61, 7628-7644.	3.2	34
33	In situ scanning tunneling microscopy studies of the evolution of surface morphology and microstructure in epitaxial TiN(001) grown by ultra-high-vacuum reactive magnetron sputtering. Surface and Coatings Technology, 1997, 94-95, 403-408.	4.8	31
34	Pathways for hydrogen desorption fromSi1â^'xGex(001)during gas-source molecular-beam epitaxy and ultrahigh-vacuum chemical vapor deposition. Physical Review B, 1998, 58, 4803-4808.	3.2	30
35	Alignment of semiconducting graphene nanoribbons on vicinal Ge(001). Nanoscale, 2019, 11, 4864-4875.	5.6	26
36	Modified interfacial tensions measured in situ in ternary polymer blends demonstrating partial wetting. Polymer, 2010, 51, 1472-1484.	3.8	23

#	Article	IF	CITATIONS
37	Interfacial reactions in epitaxial Al/TiN(111) model diffusion barriers: Formation of an impervious self-limited wurtzite-structure AIN(0001) blocking layer. Journal of Applied Physics, 2001, 89, 7841-7845.	2.5	22
38	Electronic states of ultrathin InAs/InP (001) quantum wells: A tight-binding study of the effects of band offset, strain, and intermixing. Physical Review B, 2002, 66, .	3.2	22
39	Intermixing during growth of InAs self-assembled quantum dots in InP: A photoluminescence and tight-binding investigation. Physical Review B, 2008, 77, .	3.2	22
40	Evidence for large configuration-induced band-gap fluctuations inGaAs1â^'xNxalloys. Physical Review B, 2004, 70, .	3.2	21
41	Influence of statistical distributions on the electrical properties of disordered and aligned carbon nanotube networks. Journal of Applied Physics, 2013, 114, 114312.	2.5	21
42	Interfacial reaction pathways and kinetics during annealing of epitaxial Al/TiN(001) model diffusion barrier systems. Thin Solid Films, 2001, 391, 69-80.	1.8	19
43	Organometallic vapor phase epitaxy of GaAs[sub 1â^'x]N[sub x] alloy layers on GaAs(001): Nitrogen incorporation and lattice parameter variation. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2004, 22, 771.	2.1	18
44	Optical response of singleâ€wall carbon nanotube sheets in the farâ€infrared spectral range from 1 THz to 40 THz. Physica Status Solidi (B): Basic Research, 2007, 244, 3950-3954.	1.5	18
45	Metal-organic vapor phase epitaxy of crystallographically oriented MnP magnetic nanoclusters embedded in GaP(001). Journal of Applied Physics, 2008, 104, 083501.	2.5	18
46	Intense terahertz field effects on photoexcited carrier dynamics in gated graphene. Applied Physics Letters, 2015, 107, .	3.3	18
47	xmlns:mml="http://www.w3.org/1998/Math/MathML"> <mml:mrow><mml:msub><mml:mi>Al</mml:mi><mml:m mathvariant="normal">N</mml:m </mml:msub></mml:mrow> : Impact of alloy configuration on the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>d</mml:mi><mml:mrow><mml:mr< td=""><td>row><mm 2.4 1>33<td>ıl:mn>0.518 ıl:mn><mmla< td=""></mmla<></td></mm </td></mml:mr<></mml:mrow></mml:msub></mml:math 	row> <mm 2.4 1>33<td>ıl:mn>0.518 ıl:mn><mmla< td=""></mmla<></td></mm 	ıl:mn>0.518 ıl:mn> <mmla< td=""></mmla<>
48	Physical Review Materials, 2017, 1, . Strain and relaxation effects in InAsP/InP multiple quantum well optical modulator devices grown by metal-organic vapor phase epitaxy. Journal of Applied Physics, 1997, 81, 1905-1915.	2.5	17
49	Synchrotron x-ray diffraction and transmission electron microscopy studies of interfacial reaction paths and kinetics during annealing of fully-002-textured Al/TiN bilayers. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2001, 19, 182-191.	2.1	17
50	Growth and Luminescence of Polytypic InP on Epitaxial Graphene. Advanced Functional Materials, 2018, 28, 1705592.	14.9	17
51	Effect of steady-state hydrogen coverage on the evolution of crosshatch morphology during Si1â^'xGex/Si(001) growth from hydride precursors. Journal of Applied Physics, 2003, 93, 1918-1925.	2.5	16
52	Interface engineering during plasma-enhanced chemical vapor deposition of porous/dense SiN1.3 optical multilayers. Thin Solid Films, 2004, 469-470, 47-53.	1.8	16
53	Tuning of the electronic properties of self-assembled InAsâ^•InP(001) quantum dots using grown-in defect mediated intermixing. Applied Physics Letters, 2006, 89, 131905.	3.3	16
54	Hybrid surface roughening modes during low-temperature heteroepitaxy: Growth of fully-strained metastableGe1â^'xSnxalloys onGe(001)2×1. Physical Review B, 1999, 60, 15993-15998.	3.2	15

#	Article	lF	CITATIONS
55	Fano Resonances in the Midinfrared Spectra of Single-Walled Carbon Nanotubes. Physical Review Letters, 2012, 109, 097402.	7.8	14
56	Tailoring the Growth Rate and Surface Facet for Synthesis of High-Quality Continuous Graphene Films from CH ₄ at 750 °C via Chemical Vapor Deposition. Journal of Physical Chemistry C, 2015, 119, 11516-11523.	3.1	14
57	Arsenic incorporation during Si(001):As gas-source molecular-beam epitaxy from Si2H6 and AsH3: Effects on film-growth kinetics. Journal of Applied Physics, 2000, 88, 7067-7078.	2.5	13
58	Quantitative C lattice site distributions in epitaxial Ge1â^'yCy/Ge(001) layers. Journal of Applied Physics, 2001, 90, 3910-3918.	2.5	13
59	C lattice site distributions in metastable Ge1â^'yCy alloys grown on Ge(001) by molecular-beam epitaxy. Journal of Applied Physics, 2002, 91, 3644-3652.	2.5	13
60	Experimental and theoretical studies of theE+optical transition inGaAsNalloys. Physical Review B, 2006, 74, .	3.2	13
61	Experimental investigation of the variation of the absorption coefficient with nitrogen content in GaAsN and GalnAsN grown on GaAs (001). Journal of Applied Physics, 2008, 104, 083511.	2.5	13
62	MnP nanoclusters embedded in GaP epitaxial films grown by organometallic vapor-phase epitaxy: A reciprocal space mapping and transmission electron microscopy study. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, .	2.1	13
63	Ferromagnetic resonance measurements of GaP epilayers with embedded MnP nanoclusters grown on GaP(001). Physical Review B, 2013, 87, .	3.2	13
64	Interfacial reaction pathways and kinetics during annealing of 111-textured Al/TiN bilayers: A synchrotron x-ray diffraction and transmission electron microscopy study. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2001, 19, 2207-2216.	2.1	12
65	Carbon incorporation pathways and lattice sites in Si1â^'yCy alloys grown on Si(001) by molecular-beam epitaxy. Journal of Applied Physics, 2002, 91, 5716-5727.	2.5	12
66	Self-Organization ofInAs/InPQuantum Dot Multilayers: Pseudophase Diagram Describing the Transition from Aligned to Antialigned Structures. Physical Review Letters, 2008, 100, 046101.	7.8	12
67	Growth of Si1â^'xGex(011) on Si(011)16×2 by gas-source molecular beam epitaxy: Growth kinetics, Ge incorporation, and surface phase transitions. Journal of Applied Physics, 1999, 85, 501-511.	2.5	11
68	Hydrogen-mediated quenching of strain-induced surface roughening during gas-source molecular beam epitaxy of fully-coherent Si0.7Ge0.3 layers on Si(001). Journal of Applied Physics, 2002, 91, 3579-3588.	2.5	11
69	Structural properties of InAs nanocrystals formed by sequential implantation of In and As ions in the Si (100) matrix. Journal of Applied Physics, 2002, 92, 4664-4671.	2.5	11
70	C incorporation and segregation during Si1â^'yCy/Si() gas-source molecular beam epitaxy from Si2H6 and CH3SiH3. Surface Science, 2002, 513, 475-484.	1.9	11
71	Nanocavities in He implanted InP. Journal of Applied Physics, 2003, 94, 6116-6121.	2.5	11
72	Sn-enhanced epitaxial thickness during low-temperature Ge(001) molecular-beam epitaxy. Applied Physics Letters, 2003, 82, 4247-4249.	3.3	11

#	Article	IF	CITATIONS
73	Nitrogen incorporation and lattice constant of strained diluteGaAs1â^'xNxlayers on GaAs (001): Anab initiostudy. Physical Review B, 2006, 74, .	3.2	11
74	Drastic ion-implantation-induced inter-mixing during the annealing of self-assembled InAs/InP(001) quantum dots. Nanotechnology, 2007, 18, 015404.	2.6	11
75	Evidence of valence band perturbations in GaAsN/GaAs(001): Combined variable-angle spectroscopic ellipsometry and modulated photoreflectance investigation. Physical Review B, 2009, 80, .	3.2	11
76	Microstructure and strain relaxation in organometallic vapor phase epitaxy of strain-compensated GaInP/InAsP multilayers on InP(001). Journal of Applied Physics, 1997, 81, 3501-3511.	2.5	10
77	Stepâ€flow epitaxial growth on twoâ€domain surfaces. Journal of Applied Physics, 1996, 79, 1423-1434.	2.5	9
78	Role of fast sputtered particles during sputter deposition: Growth of epitaxialGe0.99C0.01/Ge(001). Physical Review B, 2000, 62, 11203-11208.	3.2	9
79	Si1â^'yCy/Si(001) gas-source molecular beam epitaxy from Si2H6 and CH3SiH3: Surface reaction paths and growth kinetics. Journal of Applied Physics, 2003, 93, 3944-3950.	2.5	9
80	Empirical tight-binding calculations of the electronic structure of dilute III–V–N semiconductor alloys. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2004, 22, 776.	2.1	9
81	Magnetotransport in the insulating regime of Mn-doped GaAs. Physical Review B, 2008, 78, .	3.2	9
82	Adjusting the magnetic properties of semiconductor epilayers by the crystallographic orientation of embedded highly anisotropic magnetic nanoclusters. Journal of Applied Physics, 2009, 105, 07C119.	2.5	9
83	Si(011)16×2 gas-source molecular beam epitaxy: Growth kinetics. Applied Physics Letters, 2000, 76, 2853-2855.	3.3	8
84	Epitaxial metastable Ge1â^'yCy (y⩽0.02) alloys grown on Ge(001) from hyperthermal beams: C incorporation and lattice sites. Journal of Applied Physics, 2000, 88, 96-104.	2.5	8
85	Ultra-highly doped Si1â^'xGex(001):B gas-source molecular-beam epitaxy: Boron surface segregation and its effect on film growth kinetics. Journal of Applied Physics, 2001, 89, 194-205.	2.5	8
86	Temperature dependent contactless electroreflectance study of intersubband transitions in a self-assembled InAs/InP (001) quantum dot structure. Journal of Applied Physics, 2003, 94, 4995.	2.5	8
87	Lateral confinement and band mixing in ultrathin semiconductor quantum wells with steplike interfaces. Physical Review B, 2004, 70, .	3.2	8
88	Interface broadening due to ion mixing during thin film growth at the radio-frequency-biased electrode in a plasma-enhanced chemical vapor deposition environment. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2006, 24, 2061-2069.	2.1	8
89	Optical emission from InAs/InP self-assembled quantum dots: evidence for As/P intermixing. Semiconductor Science and Technology, 2007, 22, 1282-1286.	2.0	8
90	Magnetic anisotropy in GaP(001) epilayers containing MnP nanoclusters observed by angle dependent ferromagnetic resonance measurements. Journal of Applied Physics, 2008, 103, 07D531.	2.5	8

#	Article	IF	CITATIONS
91	Temperature dependence of the photoluminescence spectra from InAs(P)/InP multilayers containing thick quantum dots: Dot-size-dependent carrier dynamics. Physical Review B, 2011, 83, .	3.2	8
92	Double-walled carbon nanotube film as the active electrode in an electro-optical modulator for the mid-infrared and terahertz regions. Journal of Applied Physics, 2020, 128, .	2.5	8
93	Metalorganic vapor phase epitaxial growth and structural characterization of self-assembled InAs nanometer-sized Islands on InP(001). Journal of Electronic Materials, 1997, 26, 1205-1213.	2.2	7
94	Arsenic-doped Si(001) gas-source molecular-beam epitaxy: Growth kinetics and transport properties. Applied Physics Letters, 1999, 74, 1290-1292.	3.3	7
95	Low-temperature emission in dilute GaAsN alloys grown by metalorganic vapor phase epitaxy. Journal of Applied Physics, 2008, 103, 063526.	2.5	7
96	Effects of grown-in defects on interdiffusion dynamics in InAsâ^•InP(001) quantum dots subjected to rapid thermal annealing. Journal of Applied Physics, 2008, 103, 083526.	2.5	7
97	Antiresonances in the Mid-Infrared Vibrational Spectrum of Functionalized Graphene. Journal of Physical Chemistry C, 2017, 121, 9053-9062.	3.1	7
98	Electronic and optical properties of GaAsN/GaAs quantum wells: A tight-binding study. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2004, 22, 1606-1609.	2.1	6
99	GaAs1â^'xNx on GaAs(001): Nitrogen incorporation kinetics from trimethylgallium, tertiarybutylarsine, and 1,1-dimethylhydrazine organometallic vapor-phase epitaxy. Journal of Crystal Growth, 2008, 310, 1040-1048.	1.5	6
100	Impact of nucleation on step-meandering instabilities during step-flow growth on vicinal surfaces. Physical Review E, 2014, 89, 032406.	2.1	6
101	Toward quantum dot laser diodes emitting at 1.5 \hat{l} 4m. , 1998, 3491, 271.		5
102	Characterization of GaAs[sub 1â^'x]N[sub x] epitaxial layers by ion beam analysis. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2004, 22, 908.	2.1	5
103	Ion-surface interactions on c-Si(001) at the radiofrequency-powered electrode in low-pressure plasmas:Ex situspectroscopic ellipsometry and Monte Carlo simulation study. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2006, 24, 45-54.	2.1	5
104	Compositional dependence of the elastic constants of dilute GaAs1â~'xNx alloys. Journal of Applied Physics, 2007, 101, 113507.	2.5	5
105	Transport in the metallic regime of Mn-doped III-V semiconductors. Physical Review B, 2008, 77, .	3.2	5
106	Dynamics of ion bombardment-induced modifications of Si(001) at the radio-frequency-biased electrode in low-pressure oxygen plasmas: In situ spectroscopic ellipsometry and Monte Carlo study. Journal of Applied Physics, 2006, 100, 063526.	2.5	4
107	Effects of long jumps, reversible aggregation, and Meyer-Neldel rule on submonolayer epitaxial growth. Physical Review E, 2008, 78, 021604.	2.1	4
108	Thin film Ni-Si solid-state reactions: Phase formation sequence on amorphized Si. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, .	1.2	4

#	Article	IF	CITATIONS
109	Ab initio piezoelectric properties of wurtzite ZnO-based alloys: Impact of the c/a cell ratio. Physical Review Materials, 2020, 4, .	2.4	4
110	Vacancy-mediated intermixing in InAs/InP(001) quantum dots subjected to ion implantation. Journal of Applied Physics, 2008, 104, 043527.	2.5	3
111	Continuum model of surface roughening and epitaxial breakdown during low-temperature Ge(001) molecular beam epitaxy. Journal of Applied Physics, 2011, 109, 063513.	2.5	3
112	Impact of applied biaxial stress on the piezoelectric, elastic, and dielectric properties of scandium aluminum nitride alloys determined by density functional perturbation theory. AIP Advances, 2021, 11, .	1.3	3
113	Temperature-modulated Si(001):As gas-source molecular beam epitaxy: Growth kinetics and As incorporation. Applied Physics Letters, 2001, 79, 3263-3265.	3.3	2
114	Lateral confinement of carriers in ultrathin semiconductor quantum wells. Microelectronics Journal, 2003, 34, 459-462.	2.0	2
115	III-V compliant substrates implemented by nanocavities introduced by ion implantation. Journal of Applied Physics, 2005, 97, 064309.	2.5	2
116	Longitudinal piezoelectric, elastic, and dielectric properties of rare-earth aluminum nitride alloys determined by density-functional perturbation theory. Physical Review Materials, 2022, 6, .	2.4	2
117	Surface induced magnetization reversal of MnP nanoclusters embedded in GaP. Journal of Applied Physics, 2016, 119, 103901.	2.5	1
118	Green's function matching method for one- and zero-dimensional heterostructures. Physical Review B, 2005, 72, .	3.2	0
119	Plasma Process. Polym. 7/2008. Plasma Processes and Polymers, 2008, 5, NA-NA.	3.0	Ο
120	Abnormal broadening of the optical transitions in (Ga,As)N/GaAs quantum wells. Physical Review B, 2012, 85, .	3.2	0
121	Optical-pump/intense-THz-probe spectroscopy of gated graphene. , 2016, , .		0