

Julien Barjon

List of Publications by Year in descending order

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128
papers

3,224
citations

159585

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132
all docs

132
docs citations

132
times ranked

3815
citing authors

#	ARTICLE	IF	CITATIONS
1	Fabrication of n-type Doped V-shaped Structures on (100) Diamond. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000502.	1.8	4
2	Electron mobility in (100) homoepitaxial layers of phosphorus-doped diamond. Journal of Applied Physics, 2021, 129, 105701.	2.5	4
3	Identification by deuterium diffusion of a nitrogen-related deep donor preventing the p-type doping of ZnO. Applied Physics Letters, 2021, 118, .	3.3	6
4	Attractive electron mobility in (113) n-type phosphorus-doped homoepitaxial diamond. Carbon, 2021, 175, 254-258.	10.3	12
5	Position-controlled quantum emitters with reproducible emission wavelength in hexagonal boron nitride. Nature Communications, 2021, 12, 3779.	12.8	89
6	Excitons in bulk black phosphorus evidenced by photoluminescence at low temperature. 2D Materials, 2021, 8, 021001.	4.4	12
7	Radiative lifetime of free excitons in hexagonal boron nitride. Physical Review B, 2021, 104, .	3.2	7
8	Phonon-assisted transitions of bound excitons in diamond: Analysis by mirror symmetry. Physical Review B, 2020, 101, .	3.2	4
9	Epitaxial diamond on Ir/ SrTiO3/Si (001): From sequential material characterizations to fabrication of lateral Schottky diodes. Diamond and Related Materials, 2020, 105, 107768.	3.9	18
10	Production and processing of graphene and related materials. 2D Materials, 2020, 7, 022001.	4.4	333
11	Evidence of O-polar (0001) ZnO Surfaces Induced by In Situ Ga Doping. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000037.	2.4	1
12	Excellent electronic transport in heterostructures of graphene and monoisotopic boron-nitride grown at atmospheric pressure. 2D Materials, 2020, 7, 031009.	4.4	23
13	Heteroepitaxial growth of sp ² -hybridized boron nitride multilayer on nickel substrates by CVD: the key role of the substrate orientation. 2D Materials, 2020, 7, 045018.	4.4	10
14	Dislocations imaging in low boron doped diamond epilayers using Field Emission Scanning Electron Microscopy (FE-SEM). Applied Surface Science, 2019, 495, 143564.	6.1	4
15	Exciton-exciton annihilation in hBN. Applied Physics Letters, 2019, 114, 232103.	3.3	5
16	Phosphorus-doped (113) CVD diamond: A breakthrough towards bipolar diamond devices. Applied Physics Letters, 2019, 114, 112106.	3.3	26
17	Radiative lifetime of boron-bound excitons in diamond. Applied Physics Letters, 2019, 114, .	3.3	7
18	Bright Luminescence from Indirect and Strongly Bound Excitons in h-BN. Physical Review Letters, 2019, 122, 067401.	7.8	77

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19	Advanced synthesis of highly crystallized hexagonal boron nitride by coupling polymer-derived ceramics and spark plasma sintering processes— influence of the crystallization promoter and sintering temperature. <i>Nanotechnology</i> , 2019, 30, 035604.	2.6	10
20	Luminescence efficiency of hexagonal boron nitride. , 2019, , .		0
21	Reduction of dislocation densities in single crystal CVD diamond by confinement in the lateral sector. <i>Diamond and Related Materials</i> , 2018, 83, 162-169.	3.9	26
22	Quantitative relevance of substitutional impurities to carrier dynamics in diamond. <i>Physical Review Materials</i> , 2018, 2, .	2.4	9
23	Insight into boron-doped diamond Raman spectra characteristic features. <i>Carbon</i> , 2017, 115, 279-284.	10.3	103
24	Quantitative analysis of electronic absorption of phosphorus donors in diamond. <i>Diamond and Related Materials</i> , 2017, 74, 24-30.	3.9	10
25	Characterization methods dedicated to nanometer-thick hBN layers. <i>2D Materials</i> , 2017, 4, 015028.	4.4	46
26	Low frequency Raman spectroscopy of few-atomic-layer thick hBN crystals. <i>2D Materials</i> , 2017, 4, 031003.	4.4	80
27	Impact of Reabsorption on the Emission Spectra and Recombination Dynamics of Hybrid Perovskite Single Crystals. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 2977-2983.	4.6	79
28	Luminescence Spectroscopy of Bound Excitons in Diamond. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2017, 214, 1700402.	1.8	18
29	New Process for Electrical Contacts on (100) N-type Diamond. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2017, 214, 1700466.	1.8	7
30	Angle-resolved electron energy loss spectroscopy in hexagonal boron nitride. <i>Physical Review B</i> , 2017, 96, .	3.2	18
31	Surface effects on exciton diffusion in non polar ZnO/ZnMgO heterostructures. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 485706.	1.8	2
32	Luminescence Spectroscopy of Bound Excitons in Diamond (Phys. Status Solidi A 11â•2017). <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2017, 214, 1770169.	1.8	1
33	Thick homoepitaxial (110)-oriented phosphorus-doped n-type diamond. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	22
34	Identification of Dislocations in Synthetic Chemically Vapor Deposited Diamond Single Crystals. <i>Crystal Growth and Design</i> , 2016, 16, 2741-2746.	3.0	52
35	Mosaicity, dislocations and strain in heteroepitaxial diamond grown on iridium. <i>Diamond and Related Materials</i> , 2016, 66, 188-195.	3.9	14
36	Picosecond dynamics of free and bound excitons in doped diamond. <i>Physical Review B</i> , 2016, 93, .	3.2	8

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37	Epitaxy of iridium on SrTiO ₃ /Si (001): A promising scalable substrate for diamond heteroepitaxy. <i>Diamond and Related Materials</i> , 2016, 66, 67-76.	3.9	26
38	Growth of thick and heavily boron-doped (113)-oriented CVD diamond films. <i>Diamond and Related Materials</i> , 2016, 66, 61-66.	3.9	22
39	Enhanced Ultraviolet Luminescence of ZnO Nanorods Treated by High-Pressure Water Vapor Annealing (HWA). <i>Journal of Physical Chemistry C</i> , 2016, 120, 4571-4580.	3.1	20
40	Dimensionality effects on the luminescence properties of hBN. <i>Nanoscale</i> , 2016, 8, 6986-6993.	5.6	50
41	Role of structural defects in the ultraviolet luminescence of multiwall boron nitride nanotubes. <i>Journal of Applied Physics</i> , 2015, 118, 234307.	2.5	12
42	Electrical activity of (100) n-type diamond with full donor site incorporation of phosphorus. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2015, 212, 2454-2459.	1.8	15
43	Characterization of the charge-carrier transport properties of IIa Tech SC diamond for radiation detection applications. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2015, 212, 2553-2558.	1.8	9
44	Role of compositional fluctuations and their suppression on the strain and luminescence of InGaN alloys. <i>Journal of Applied Physics</i> , 2015, 117, 055705.	2.5	20
45	Properties of boron-doped epitaxial diamond layers grown on (110) oriented single crystal substrates. <i>Diamond and Related Materials</i> , 2015, 53, 29-34.	3.9	29
46	Reduction of dislocation densities in single crystal CVD diamond by using self-assembled metallic masks. <i>Diamond and Related Materials</i> , 2015, 58, 62-68.	3.9	29
47	Excitonic recombinations in hBN. From bulk to exfoliated layers. <i>Physical Review B</i> , 2014, 89, .	3.2	8
48	Arsenic-bound excitons in diamond. <i>Physical Review B</i> , 2014, 89, .	3.2	8
49	High quality thick CVD diamond films homoepitaxially grown on (111)-oriented substrates. <i>Diamond and Related Materials</i> , 2014, 41, 34-40.	3.9	44
50	Substitutional phosphorus incorporation in nanocrystalline CVD diamond thin films. <i>Physica Status Solidi - Rapid Research Letters</i> , 2014, 8, 705-709.	2.4	22
51	Impurity-to-band activation energy in phosphorus doped diamond. <i>Journal of Applied Physics</i> , 2013, 114, .	2.5	39
52	Injection and temperature dependent carrier recombination rate and diffusion length in freestanding CVD diamond. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013, 210, 2016-2021.	1.8	17
53	Hexagonal boron nitride nanowalls: physical vapour deposition, 2D/3D morphology and spectroscopic analysis. <i>Journal Physics D: Applied Physics</i> , 2012, 45, 135302.	2.8	22
54	Surface investigations on different nucleation pathways for diamond heteroepitaxial growth on iridium. <i>Diamond and Related Materials</i> , 2012, 22, 52-58.	3.9	22

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55	Determination of exciton diffusion lengths in isotopically engineered diamond junctions. Applied Physics Letters, 2012, 100, .	3.3	17
56	Homoepitaxial boron-doped diamond with very low compensation. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1750-1753.	1.8	32
57	High fraction of substitutional phosphorus in a (100) diamond epilayer with low surface roughness. Applied Physics Letters, 2012, 100, .	3.3	30
58	Freestanding CVD boron doped diamond single crystals: A substrate for vertical power electronic devices?. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1651-1658.	1.8	33
59	Evaluation of freestanding boron-doped diamond grown by chemical vapour deposition as substrates for vertical power electronic devices. Applied Physics Letters, 2012, 100, .	3.3	25
60	Dislocations and impurities introduced from etch-pits at the epitaxial growth resumption of diamond. Diamond and Related Materials, 2011, 20, 875-881.	3.9	32
61	Energy level of compensator states in (001) phosphorus-doped diamond. Diamond and Related Materials, 2011, 20, 1016-1019.	3.9	20
62	Hydrogen-induced passivation of boron acceptors in monocrystalline and polycrystalline diamond. Physical Chemistry Chemical Physics, 2011, 13, 11511.	2.8	16
63	Boron-deuterium complexes in diamond: How inhomogeneity leads to incorrect carrier type identification. Journal of Applied Physics, 2011, 110, 033718.	2.5	9
64	Phosphorus donor incorporation in (1 0 0) homoepitaxial diamond: Role of the lateral growth. Journal of Crystal Growth, 2011, 335, 31-36.	1.5	18
65	n-Type CVD diamond: Epitaxy and doping. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2011, 176, 1401-1408.	3.5	17
66	Exciton optical transitions in a hexagonal boron nitride single crystal. Physica Status Solidi - Rapid Research Letters, 2011, 5, 214-216.	2.4	56
67	Bias-enhanced nucleation of diamond on iridium: A comprehensive study of the first stages by sequential surface analysis. Surface Science, 2011, 605, 564-569.	1.9	33
68	Boron acceptor concentration in diamond from excitonic recombination intensities. Physical Review B, 2011, 83, .	3.2	44
69	Exploring the Origin and Nature of Luminescent Regions in CVD Synthetic Diamond. Gems & Gemology, 2011, 47, 202-207.	0.6	6
70	Enhanced deuterium diffusion in boron doped monocrystalline diamond films using bias-assisted MPCVD. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 3254-3257.	2.1	9
71	Stress in (110)-textured phosphorus-doped polycrystalline diamond studied by Raman and cathodoluminescence spectroscopies. Journal of Applied Physics, 2010, 107, .	2.5	15
72	Deuterium-induced passivation of boron acceptors in polycrystalline diamond. Journal of Applied Physics, 2010, 108, 123701.	2.5	4

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73	Electron-beam-induced dissociation of (B,D) complexes in diamond mediated by multiple vibrational excitations. <i>Physical Review B</i> , 2010, 81, .	3.2	9
74	Effect of bias voltage on diamond nucleation on iridium during BEN. <i>AIP Conference Proceedings</i> , 2010, , .	0.4	1
75	Incorporation of phosphorus donors in (110)-textured polycrystalline diamond. <i>Journal of Applied Physics</i> , 2009, 105, .	2.5	8
76	Metal organic chemical vapor deposition growth and luminescence of ZnO micro- and nanowires. <i>Journal of Vacuum Science & Technology B</i> , 2009, 27, 1662.	1.3	30
77	Phosphorus incorporation and activity in (100)-oriented homoepitaxial diamond layers. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009, 206, 2000-2003.	1.8	9
78	Influence of tertiarybutylphosphine (TBP) addition on the CVD growth of diamond. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009, 206, 1996-1999.	1.8	5
79	High surface smoothening of diamond HPHT (100) substrates. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009, 206, 1955-1959.	1.8	7
80	Morphology transition of one-dimensional ZnO grown by metal organic vapour phase epitaxy on (0001)-ZnO substrate. <i>Journal of Crystal Growth</i> , 2009, 311, 4311-4316.	1.5	18
81	Resistivity of boron doped diamond. <i>Physica Status Solidi - Rapid Research Letters</i> , 2009, 3, 202-204.	2.4	36
82	P-doped diamond grown on (110)-textured microcrystalline diamond: growth, characterization and devices. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 364204.	1.8	28
83	High quality, large surface area, homoepitaxial MPCVD diamond growth. <i>Diamond and Related Materials</i> , 2009, 18, 683-697.	3.9	105
84	Evidence of deuterium re-trapping by boron after electron beam dissociation of B ⁻ D pairs in diamond. <i>Diamond and Related Materials</i> , 2009, 18, 839-842.	3.9	5
85	Study of the passivation mechanisms of boron doped diamond using the Amplitude Modulated Step Scan Fourier Transform Photocurrent Spectroscopy. <i>Diamond and Related Materials</i> , 2009, 18, 827-830.	3.9	2
86	Substrate influence on MPCVD boron-doped homoepitaxial diamond. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2008, 205, 2169-2172.	1.8	6
87	Incorporation of arsenic in diamond grown by chemical vapor deposition. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2008, 205, 2207-2210.	1.8	6
88	Near-band-edge recombinations in multiwalled boron nitride nanotubes: Cathodoluminescence and photoluminescence spectroscopy measurements. <i>Physical Review B</i> , 2008, 77, .	3.2	78
89	New columnar texture of carbonado: Cathodoluminescence study. <i>Diamond and Related Materials</i> , 2008, 17, 1897-1901.	3.9	13
90	Stability of B ⁻ H and B ⁻ D complexes in diamond under electron beam excitation. <i>Applied Physics Letters</i> , 2008, 93, 062108.	3.3	14

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91	Correlation Between Microstructure and Optical Properties of ZnO Based Nanostructures Grown by MOCVD. Materials Research Society Symposia Proceedings, 2008, 1074, 1.	0.1	0
92	Determination of the phosphorus content in diamond using cathodoluminescence spectroscopy. Journal of Applied Physics, 2007, 101, 113701.	2.5	38
93	Origin of the excitonic recombinations in hexagonal boron nitride by spatially resolved cathodoluminescence spectroscopy. Journal of Applied Physics, 2007, 102, .	2.5	91
94	MOCVD doping technology for phosphorus incorporation in diamond: Influence of the growth temperature on the electrical properties. Diamond and Related Materials, 2007, 16, 815-818.	3.9	17
95	Different Approaches for the n-type Doping of Diamond. , 2007, , .		1
96	Luminescence properties of hexagonal boron nitride: Cathodoluminescence and photoluminescence spectroscopy measurements. Physical Review B, 2007, 75, .	3.2	136
97	Cathodoluminescence imaging and spectroscopy on a single multiwall boron nitride nanotube. Chemical Physics Letters, 2007, 442, 372-375.	2.6	49
98	The n-type doping of diamond: Present status and pending questions. Physica B: Condensed Matter, 2007, 401-402, 51-56.	2.7	35
99	Cathodoluminescence as a tool to determine the phosphorus concentration in diamond. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 2965-2970.	1.8	14
100	Amplitude modulated step scan Fourier transform photocurrent spectroscopy of partly compensated B-doped CVD diamond thin films. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 2950-2956.	1.8	13
101	Optical properties of multiwall boron nitride nanotubes. Physica Status Solidi (B): Basic Research, 2007, 244, 4147-4151.	1.5	63
102	Do We Understand Magnetic Properties of ZnMnO?. Acta Physica Polonica A, 2007, 112, 261-267.	0.5	7
103	n-type CVD diamond doped with phosphorus using the MOCVD technology for dopant incorporation. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 3136-3141.	1.8	39
104	Multiple growth and characterization of thick diamond single crystals using chemical vapour deposition working in pulsed mode. Journal of Crystal Growth, 2006, 291, 533-539.	1.5	27
105	Electron-Beam-Induced Dissociation of Boron-Deuterium Pairs in Diamond. Materials Research Society Symposia Proceedings, 2006, 956, 1.	0.1	0
106	Electron-beam-induced dissociation of B-D complexes in diamond. Applied Physics Letters, 2006, 89, 232111.	3.3	19
107	Comparison of carrier dynamics in GaN quantum dots and GaN quantum wells embedded in low-Al-content AlGaIn waveguides. Applied Physics Letters, 2006, 89, 251914.	3.3	11
108	Silicon incorporation in CVD diamond layers. Physica Status Solidi A, 2005, 202, 2177-2181.	1.7	34

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109	Performance improvement of 1.52-µm (Ga,In)(N,As)-GaAs quantum well lasers on GaAs substrates. Electronics Letters, 2005, 41, 595.	1.0	12
110	(Ga,In)(N,As)/GaAs quantum wells grown by molecular beam epitaxy for above 1.3-µm low threshold lasers. , 2005, , .		0
111	Growth and in situ annealing conditions for long-wavelength (Ga, In)(N, As)/GaAs lasers. Applied Physics Letters, 2005, 86, 071105.	3.3	16
112	Analysis of the room temperature performance of 1.3-1.52-µm GaInNAs/GaAs LDs grown by MBE. , 2005, 5840, 72.		0
113	Influence of carrier localization on the performance of MBE grown GaInNAs/GaAs QW light emitting diodes and laser diodes. , 2005, 5840, 81.		4
114	Impact of N on the lasing characteristics of GaInNAs-GaAs quantum well lasers emitting from 1.29 to 1.52-µm. Applied Physics Letters, 2005, 87, 251109.	3.3	15
115	Room temperature performance of low threshold 1.34-1.44-µm GaInNAs-GaAs quantum-well lasers grown by molecular beam epitaxy. IEEE Photonics Technology Letters, 2005, 17, 1142-1144.	2.5	4
116	Temporal dependence of gallium nitride quantum dot cathodoluminescence under weak electron beam excitation. Journal of Physics Condensed Matter, 2004, 16, S243-S249.	1.8	5
117	(Ga,In)(N,As)-based solar cells grown by molecular beam epitaxy. IEE Proceedings: Optoelectronics, 2004, 151, 433-436.	0.8	9
118	Optical characteristics of hexagonal and cubic GaN self-assembled quantum dots. , 2004, 5352, 8.		0
119	Optical properties of hexagonal and cubic GaN self-assembled quantum dots. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 1173-1176.	0.8	3
120	Surfactant effect of In for AlGaIn growth by plasma-assisted molecular beam epitaxy. Journal of Applied Physics, 2003, 93, 1550-1556.	2.5	77
121	Cathodoluminescence study of carrier diffusion in AlGaIn. Journal of Applied Physics, 2003, 94, 2755-2757.	2.5	23
122	Simple magnetic focusing for an electron gun based on a microtip array. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 989.	1.6	0
123	Optical characteristics of hexagonal GaN self-assembled quantum dots: Strong influence of built-in electric field and carrier localization. Applied Physics Letters, 2002, 81, 4934-4936.	3.3	23
124	In as a Surfactant for the Growth of AlGaIn/GaN Heterostructures by Plasma Assisted MBE. Materials Research Society Symposia Proceedings, 2002, 743, L6.1.1.	0.1	0
125	Laser UV Å semiconductor nitride pompé par des micropointes. European Physical Journal Special Topics, 2002, 12, 263-264.	0.2	0
126	Atomic Layer Epitaxy of Hexagonal and Cubic GaN Nanostructures. Physica Status Solidi A, 2001, 188, 673-676.	1.7	2

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127	Optical Characterization of MBE Grown Zinc-Blende AlGaIn. Physica Status Solidi A, 2001, 188, 695-698.	1.7	8
128	Self-Assembled GaN Quantum Dots Grown by Plasma-Assisted Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 2001, 40, 1892-1895.	1.5	21