Julien Barjon

List of Publications by Year
in descending order

128 papers	3,224 citations	159585 30 h-index	182427 51 g-index
132 all docs	132 docs citations	132 times ranked	3815 citing authors

#	ARTICLE	IF	CITATIONS
1	Production and processing of graphene and related materials. 2D Materials, 2020, 7, 022001.	4.4	333
2	Luminescence properties of hexagonal boron nitride: Cathodoluminescence and photoluminescence spectroscopy measurements. Physical Review B, 2007, 75, .	3.2	136
3	High quality, large surface area, homoepitaxial MPACVD diamond growth. Diamond and Related Materials, 2009, 18, 683-697.	3.9	105
4	Insight into boron-doped diamond Raman spectra characteristic features. Carbon, 2017, 115, 279-284.	10.3	103
5	Origin of the excitonic recombinations in hexagonal boron nitride by spatially resolved cathodoluminescence spectroscopy. Journal of Applied Physics, 2007, 102, .	2.5	91
6	Position-controlled quantum emitters with reproducible emission wavelength in hexagonal boron nitride. Nature Communications, 2021, 12, 3779.	12.8	89
7	Low frequency Raman spectroscopy of few-atomic-layer thick hBN crystals. 2D Materials, 2017, 4, 031003.	4.4	80
8	Impact of Reabsorption on the Emission Spectra and Recombination Dynamics of Hybrid Perovskite Single Crystals. Journal of Physical Chemistry Letters, 2017, 8, 2977-2983.	4.6	79
9	Near-band-edge recombinations in multiwalled boron nitride nanotubes: Cathodoluminescence and photoluminescence spectroscopy measurements. Physical Review B, 2008, 77, .	3.2	78
10	Surfactant effect of In for AlGaN growth by plasma-assisted molecular beam epitaxy. Journal of Applied Physics, 2003, 93, 1550-1556.	2.5	77
11	Bright Luminescence from Indirect and Strongly Bound Excitons in h-BN. Physical Review Letters, 2019, 122, 067401.	7.8	77
12	Optical properties of multiwall boron nitride nanotubes. Physica Status Solidi (B): Basic Research, 2007, 244, 4147-4151.	1.5	63
13	Excitonic recombinations in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>h</mml:mi><mml:mo>â^'</mml:mo><mml:mi>BN</mml:mi></mml:ma From bulk to exfoliated layers. Physical Review B, 2014, 89, .	3.2	58
14	Exciton optical transitions in a hexagonal boron nitride single crystal. Physica Status Solidi - Rapid Research Letters, 2011, 5, 214-216.	2.4	56
15	Identification of Dislocations in Synthetic Chemically Vapor Deposited Diamond Single Crystals. Crystal Growth and Design, 2016, 16, 2741-2746.	3.0	52
16	Dimensionality effects on the luminescence properties of hBN. Nanoscale, 2016, 8, 6986-6993.	5.6	50
17	Cathodoluminescence imaging and spectroscopy on a single multiwall boron nitride nanotube. Chemical Physics Letters, 2007, 442, 372-375.	2.6	49
18	Characterization methods dedicated to nanometer-thick hBN layers. 2D Materials, 2017, 4, 015028.	4.4	46

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19	Boron acceptor concentration in diamond from excitonic recombination intensities. Physical Review B, 2011, 83, .	3.2	44
20	High quality thick CVD diamond films homoepitaxially grown on (111)-oriented substrates. Diamond and Related Materials, 2014, 41, 34-40.	3.9	44
21	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
22	Impurity-to-band activation energy in phosphorus doped diamond. Journal of Applied Physics, 2013, 114, .	2.5	39
23	Determination of the phosphorus content in diamond using cathodoluminescence spectroscopy. Journal of Applied Physics, 2007, 101, 113701.	2.5	38
24	Resistivity of boron doped diamond. Physica Status Solidi - Rapid Research Letters, 2009, 3, 202-204.	2.4	36
25	The n-type doping of diamond: Present status and pending questions. Physica B: Condensed Matter, 2007, 401-402, 51-56.	2.7	35
26	Silicon incorporation in CVD diamond layers. Physica Status Solidi A, 2005, 202, 2177-2181.	1.7	34
27	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
28	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
29	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
30	Homoepitaxial boronâ€doped diamond with very low compensation. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1750-1753.	1.8	32
31	Metal organic chemical vapor deposition growth and luminescence of ZnO micro- and nanowires. Journal of Vacuum Science & Technology B, 2009, 27, 1662.	1.3	30
32	High fraction of substitutional phosphorus in a (100) diamond epilayer with low surface roughness. Applied Physics Letters, 2012, 100, .	3.3	30
33	Properties of boron-doped epitaxial diamond layers grown on (110) oriented single crystal substrates. Diamond and Related Materials, 2015, 53, 29-34.	3.9	29
34	Reduction of dislocation densities in single crystal CVD diamond by using self-assembled metallic masks. Diamond and Related Materials, 2015, 58, 62-68.	3.9	29
35	P-doped diamond grown on (110)-textured microcrystalline diamond: growth, characterization and devices. Journal of Physics Condensed Matter, 2009, 21, 364204.	1.8	28
36	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

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37	Epitaxy of iridium on SrTiO3/Si (001): A promising scalable substrate for diamond heteroepitaxy. Diamond and Related Materials, 2016, 66, 67-76.	3.9	26
38	Reduction of dislocation densities in single crystal CVD diamond by confinement in the lateral sector. Diamond and Related Materials, 2018, 83, 162-169.	3.9	26
39	Phosphorus-doped (113) CVD diamond: A breakthrough towards bipolar diamond devices. Applied Physics Letters, 2019, 114, 112106.	3.3	26
40	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
41	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
42	Cathodoluminescence study of carrier diffusion in AlGaN. Journal of Applied Physics, 2003, 94, 2755-2757.	2.5	23
43	Excellent electronic transport in heterostructures of graphene and monoisotopic boron-nitride grown at atmospheric pressure. 2D Materials, 2020, 7, 031009.	4.4	23
44	Hexagonal boron nitride nanowalls: physical vapour deposition, 2D/3D morphology and spectroscopic analysis. Journal Physics D: Applied Physics, 2012, 45, 135302.	2.8	22
45	Surface investigations on different nucleation pathways for diamond heteroepitaxial growth on iridium. Diamond and Related Materials, 2012, 22, 52-58.	3.9	22
46	Substitutional phosphorus incorporation in nanocrystalline CVD diamond thin films. Physica Status Solidi - Rapid Research Letters, 2014, 8, 705-709.	2.4	22
47	Thick homoepitaxial (110)-oriented phosphorus-doped <i>n</i>-type diamond. Applied Physics Letters, 2016, 109, .	3.3	22
48	Growth of thick and heavily boron-doped (113)-oriented CVD diamond films. Diamond and Related Materials, 2016, 66, 61-66.	3.9	22
49	Self-Assembled GaN Quantum Dots Grown by Plasma-Assisted Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 2001, 40, 1892-1895.	1.5	21
50	Energy level of compensator states in (001) phosphorus-doped diamond. Diamond and Related Materials, 2011, 20, 1016-1019.	3.9	20
51	Role of compositional fluctuations and their suppression on the strain and luminescence of InGaN alloys. Journal of Applied Physics, 2015, 117, 055705.	2.5	20
52	Enhanced Ultraviolet Luminescence of ZnO Nanorods Treated by High-Pressure Water Vapor Annealing (HWA). Journal of Physical Chemistry C, 2016, 120, 4571-4580.	3.1	20
53	Electron-beam-induced dissociation of Bâ€“D complexes in diamond. Applied Physics Letters, 2006, 89, 232111.	3.3	19
54	Morphology transition of one-dimensional ZnO grown by metal organic vapour phase epitaxy on (0001)-ZnO substrate. Journal of Crystal Growth, 2009, 311, 4311-4316.	1.5	18

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55	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
56	Luminescence Spectroscopy of Bound Excitons in Diamond. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1700402.	1.8	18
57	Angle-resolved electron energy loss spectroscopy in hexagonal boron nitride. Physical Review B, 2017, 96, .	3.2	18
58	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
59	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
60	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
61	Determination of exciton diffusion lengths in isotopically engineered diamond junctions. Applied Physics Letters, 2012, 100, .	3.3	17
62	Injection and temperature dependent carrier recombination rate and diffusion length in freestanding <scp>CVD</scp> diamond. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 2016-2021.	1.8	17
63	Growth and in situ annealing conditions for long-wavelength (Ga, In)(N, As)/GaAs lasers. Applied Physics Letters, 2005, 86, 071105.	3.3	16
64	Hydrogen-induced passivation of boron acceptors in monocrystalline and polycrystalline diamond. Physical Chemistry Chemical Physics, 2011, 13, 11511.	2.8	16
65	Impact of N on the lasing characteristics of GaInNAsâˆ•GaAs quantum well lasers emitting from 1.29 to 1.52Î¼m. Applied Physics Letters, 2005, 87, 251109.	3.3	15
66	Stress in (110)-textured phosphorus-doped polycrystalline diamond studied by Raman and cathodoluminescence spectroscopies. Journal of Applied Physics, 2010, 107, .	2.5	15
67	Electrical activity of (100) nâ€type diamond with full donor site incorporation of phosphorus. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2454-2459.	1.8	15
68	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
69	Stability of Bâ€“H and Bâ€“D complexes in diamond under electron beam excitation. Applied Physics Letters, 2008, 93, 062108.	3.3	14
70	Mosaicity, dislocations and strain in heteroepitaxial diamond grown on iridium. Diamond and Related Materials, 2016, 66, 188-195.	3.9	14
71	Amplitude modulated step scan Fourier transform photocurrent spectroscopy of partly compensated Bâ€doped CVD diamond thin films. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 2950-2956.	1.8	13
72	New columnar texture of carbonado: Cathodoluminescence study. Diamond and Related Materials, 2008, 17, 1897-1901.	3.9	13

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73	Performance improvement of 1.52â€…[micro sign]m (Ga,In)(N,As)âˆ•GaAs quantum well lasers on GaAs substrates. Electronics Letters, 2005, 41, 595.	1.0	12
74	Role of structural defects in the ultraviolet luminescence of multiwall boron nitride nanotubes. Journal of Applied Physics, 2015, 118, 234307.	2.5	12
75	Attractive electron mobility in (113) n-type phosphorus-doped homoepitaxial diamond. Carbon, 2021, 175, 254-258.	10.3	12
76	Excitons in bulk black phosphorus evidenced by photoluminescence at low temperature. 2D Materials, 2021, 8, 021001.	4.4	12
77	Comparison of carrier dynamics in GaN quantum dots and GaN quantum wells embedded in low-Al-content AlGaN waveguides. Applied Physics Letters, 2006, 89, 251914.	3.3	11
78	Quantitative analysis of electronic absorption of phosphorus donors in diamond. Diamond and Related Materials, 2017, 74, 24-30.	3.9	10
79	Advanced synthesis of highly crystallized hexagonal boron nitride by coupling polymer-derived ceramics and spark plasma sintering processesâ€"influence of the crystallization promoter and sintering temperature. Nanotechnology, 2019, 30, 035604.	2.6	10
80	Heteroepitaxial growth of sp2-hybridized boron nitride multilayer on nickel substrates by CVD: the key role of the substrate orientation. 2D Materials, 2020, 7, 045018.	4.4	10
81	(Ga,In)(N,As)-based solar cells grown by molecular beam epitaxy. IEE Proceedings: Optoelectronics, 2004, 151, 433-436.	0.8	9
82	Phosphorus incorporation and activity in (100)â€oriented homoepitaxial diamond layers. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 2000-2003.	1.8	9
83	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
84	Electron-beam-induced dissociation of (B,D) complexes in diamond mediated by multiple vibrational excitations. Physical Review B, 2010, 81, .	3.2	9
85	Boron-deuterium complexes in diamond: How inhomogeneity leads to incorrect carrier type identification. Journal of Applied Physics, 2011, 110, 033718.	2.5	9
86	Characterization of the chargeâ€carrier transport properties of IIaâ€Tech SC diamond for radiation detection applications. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2553-2558.	1.8	9
87	Quantitative relevance of substitutional impurities to carrier dynamics in diamond. Physical Review Materials, 2018, 2, .	2.4	9
88	Optical Characterization of MBE Grown Zinc-Blende AlGaN. Physica Status Solidi A, 2001, 188, 695-698.	1.7	8
89	Incorporation of phosphorus donors in (110)-textured polycrystalline diamond. Journal of Applied Physics, 2009, 105, .	2.5	8
90	Arsenic-bound excitons in diamond. Physical Review B, 2014, 89, .	3.2	8

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91	Picosecond dynamics of free and bound excitons in doped diamond. Physical Review B, 2016, 93, .	3.2	8
92	High surface smoothening of diamond HPHT (100) substrates. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1955-1959.	1.8	7
93	New Process for Electrical Contacts on (100) Nâ€type Diamond. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1700466.	1.8	7
94	Radiative lifetime of boron-bound excitons in diamond. Applied Physics Letters, 2019, 114, .	3.3	7
95	Do We Understand Magnetic Properties of ZnMnO?. Acta Physica Polonica A, 2007, 112, 261-267.	0.5	7
96	Radiative lifetime of free excitons in hexagonal boron nitride. Physical Review B, 2021, 104, .	3.2	7
97	Substrate influence on MPCVD boronâ€doped homoepitaxial diamond. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2169-2172.	1.8	6
98	Incorporation of arsenic in diamond grown by chemical vapor deposition. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2207-2210.	1.8	6
99	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
100	Exploring the Origin and Nature of Luminescent Regions in CVD Synthetic Diamond. Gems & Gemology, 2011, 47, 202-207.	0.6	6
101	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
102	Influence of tertiarybutylphosphine (TBP) addition on the CVD growth of diamond. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1996-1999.	1.8	5
103	Evidence of deuterium re-trapping by boron after electron beam dissociation of Bâ€"D pairs in diamond. Diamond and Related Materials, 2009, 18, 839-842.	3.9	5
104	Exciton-exciton annihilation in hBN. Applied Physics Letters, 2019, 114, 232103.	3.3	5
105	Influence of carrier localization on the performance of MBE grown GaInNAs/GaAs QW light emitting diodes and laser diodes. , 2005, 5840, 81.		4
106	Room temperature performance of low threshold 1.34-1.44-/spl mu/m GaInNAs-GaAs quantum-well lasers grown by molecular beam epitaxy. IEEE Photonics Technology Letters, 2005, 17, 1142-1144.	2.5	4
107	Deuterium-induced passivation of boron acceptors in polycrystalline diamond. Journal of Applied Physics, 2010, 108, 123701.	2.5	4
108	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

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109	Phonon-assisted transitions of bound excitons in diamond: Analysis by mirror symmetry. Physical Review B, 2020, 101, .	3.2	4
110	Fabrication of nâ€Type Doped Vâ€Shaped Structures on (100) Diamond. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000502.	1.8	4
111	Electron mobility in (100) homoepitaxial layers of phosphorus-doped diamond. Journal of Applied Physics, 2021, 129, 105701.	2.5	4
112	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
113	Atomic Layer Epitaxy of Hexagonal and Cubic GaN Nanostructures. Physica Status Solidi A, 2001, 188, 673-676.	1.7	2
114	Study of the passivation mechanisms of boron doped diamond using the Amplitude Modulated Step Scan Fourier Transform Photocurrent Spectroscopy. Diamond and Related Materials, 2009, 18, 827-830.	3.9	2
115	Surface effects on exciton diffusion in non polar ZnO/ZnMgO heterostructures. Journal of Physics Condensed Matter, 2017, 29, 485706.	1.8	2
116	Different Approaches for the n-type Doping of Diamond. , 2007, , .		1
117	Effect of bias voltage on diamond nucleation on iridium during BEN. AIP Conference Proceedings, 2010, , .	0.4	1
118	Luminescence Spectroscopy of Bound Excitons in Diamond (Phys. Status Solidi A 11â^•2017). Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1770169.	1.8	1
119	Evidence of Oâ€Polar (0001Â¯) ZnO Surfaces Induced by In Situ Ga Doping. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000037.	2.4	1
120	In as a Surfactant for the Growth of AlGaN/GaN Heterostructures by Plasma Assisted MBE. Materials Research Society Symposia Proceedings, 2002, 743, L6.1.1.	0.1	0
121	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
122	Optical characteristics of hexagonal and cubic GaN self-assembled quantum dots. , 2004, 5352, 8.		0
123	(Ga,In)(N,As)/GaAs quantum wells grown by molecular beam epitaxy for above 1.3 Î¼m low threshold lasers. , 2005, , .		0
124	Analysis of the room temperature performance of 1.3-1.52 Î¼m GaInNAs/GaAs LDs grown by MBE. , 2005, 5840, 72.		0
125	Electron-Beam-Induced Dissociation of Boron-Deuterium Pairs in Diamond. Materials Research Society Symposia Proceedings, 2006, 956, 1.	0.1	0
126	Correlation Between Microstructure and Optical Properties of ZnO Based Nanostructures Grown by MOCVD. Materials Research Society Symposia Proceedings, 2008, 1074, 1.	0.1	0

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127	Laser UV Ã semiconducteur nitrure pompÃ© par des micropointes. European Physical Journal Special Topics, 2002, 12, 263-264.	0.2	0
128	Luminescence efficiency of hexagonal boron nitride. , 2019, , .		0