Etienne Gheeraert

List of Publications by Year
in descending order

149	3,854	126858	161767
papers	citations	33 h-index	54 g-index

153	153	153	3119
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dependence of the Superconducting Transition Temperature on the Doping Level in Single-Crystalline Diamond Films. Physical Review Letters, 2004, 93, 237005.	2.9	184
2	Activation energy in low compensated homoepitaxial boron-doped diamond films. Diamond and Related Materials, 1998, 7, 1390-1393.	1.8	177
3	Characterization of heavily Bâ€doped polycrystalline diamond films using Raman spectroscopy and electron spin resonance. Journal of Applied Physics, 1995, 78, 7059-7062.	1.1	136
4	Hydrogen-boron interactions inp-type diamond. Physical Review B, 1998, 58, 7966-7969.	1.1	123
5	Zr/oxidized diamond interface for high power Schottky diodes. Applied Physics Letters, 2014, 104, .	1.5	114
6	Optical and electronic properties of heavily boron-doped homo-epitaxial diamond. Physica Status Solidi A, 2003, 199, 9-18.	1.7	100
7	Effect of boron incorporation on the â€œqualityâ€•of MPCVD diamond films. Diamond and Related Materials, 1993, 2, 742-745.	1.8	87
8	Electronic transitions of electrons bound to phosphorus donors in diamond. Solid State Communications, 2000, 113, 577-580.	0.9	75
9	Electronic States of Boron and Phosphorus in Diamond. Physica Status Solidi A, 1999, 174, 39-51.	1.7	74
10	Hall electron mobility in diamond. Applied Physics Letters, 2006, 89, 122111.	1.5	69
11	A large range of boron doping with low compensation ratio for homoepitaxial diamond films. Carbon, 1999, 37, 807-810.	5.4	67
12	Electronic states of phosphorus in diamond. Diamond and Related Materials, 2000, 9, 948-951.	1.8	66
13	Electrical conduction and deep levels in polycrystalline diamond films. Journal of Applied Physics, 1995, 78, 6633-6638.	1.1	65
14	n-Type doping of diamond by sulfur and phosphorus. Diamond and Related Materials, 2002, 11, 289-295.	1.8	62
15	Proton irradiation of CVD diamond detectors for high-luminosity experiments at the LHC. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1999, 426, 173-180.	0.7	61
16	Review of the development of diamond radiation sensors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1999, 434, 131-145.	0.7	60
17	Boron-related infra-red absorption in homoepitaxial diamond films. Diamond and Related Materials, 1998, 7, 1509-1512.	1.8	58
18	Etching mechanism of diamond by Ni nanoparticles for fabrication of nanopores. Carbon, 2013, 59, 448-456.	5.4	55

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19	Defects and stress analysis of the Raman spectrum of diamond films. Diamond and Related Materials, 1992, 1, 525-528.	1.8	54
20	Deep-Depletion Mode Boron-Doped Monocrystalline Diamond Metal Oxide Semiconductor Field Effect Transistor. IEEE Electron Device Letters, 2017, 38, 1571-1574.	2.2	53
21	Hydrogen-acceptor interactions in diamond. Diamond and Related Materials, 2001, 10, 399-404.	1.8	52
22	Metal oxide semiconductor structure using oxygen-terminated diamond. Applied Physics Letters, 2013, 102, .	1.5	52
23	Nitrogen doping of diamond by ion implantation. Diamond and Related Materials, 1997, 6, 516-520.	1.8	50
24	Doping and interface of homoepitaxial diamond for electronic applications. MRS Bulletin, 2014, 39, 499-503.	1.7	49
25	Deep depletion concept for diamond MOSFET. Applied Physics Letters, 2017, 111, .	1.5	46
26	The effect of boron doping on the lattice parameter of homoepitaxial diamond films. Diamond and Related Materials, 1998, 7, 869-873.	1.8	44
27	Hydrogen in Monocrystalline CVD Boron Doped Diamond. Physica Status Solidi A, 1999, 174, 73-81.	1.7	41
28	Hydrogen diffusion in B-ion-implanted and B-doped homo-epitaxial diamond: passivation of defects vs. passivation of B acceptors. Diamond and Related Materials, 2001, 10, 453-458.	1.8	40
29	Low temperature excitation spectrum of phosphorus in diamond. Diamond and Related Materials, 2001, 10, 444-448.	1.8	37
30	CVD diamond films for radiation detection. IEEE Transactions on Nuclear Science, 1994, 41, 927-932.	1.2	36
31	Pulse height distribution and radiation tolerance of CVD diamond detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 447, 244-250.	0.7	36
32	Micro-Raman scattering from undoped and phosphorous-doped (111) homoepitaxial diamond films: Stress imaging of cracks. Journal of Applied Physics, 2005, 97, 043530.	1.1	35
33	Energy-band diagram configuration of Al2O3/oxygen-terminated p-diamond metal-oxide-semiconductor. Applied Physics Letters, 2015, 107, .	1.5	35
34	Formation of oriented nanostructures in diamond using metallic nanoparticles. Nanotechnology, 2012, 23, 455302.	1.3	32
35	Comprehensive electrical analysis of metal/Al2O3/O-terminated diamond capacitance. Journal of Applied Physics, 2018, 123, .	1.1	32
36	Variation of the cell parameter of polycrystalline boron doped diamond films. Journal of Applied Physics, 1997, 81, 1120-1125.	1.1	31

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37	Diamond nanophotonics. Beilstein Journal of Nanotechnology, 2012, 3, 895-908.	1.5	31
38	Carbon nanotube forest based electrostatic capacitor with excellent dielectric performances. Carbon, 2017, 116, 648-654.	5.4	30
39	IR characterization of diamond films on Si substrates. Diamond and Related Materials, 1992, 1, 584-587.	1.8	29
40	Study of aluminium nitride/freestanding diamond surface acoustic waves filters. Diamond and Related Materials, 2003, 12, 723-727.	1.8	29
41	Magneto-optical spectroscopy of(Ga,Mn)Nepilayers. Physical Review B, 2006, 74, .	1.1	29
42	Dry etching of diamond nanowires using self-organized metal droplet masks. Diamond and Related Materials, 2011, 20, 389-394.	1.8	29
43	Hole transport in boron delta-doped diamond structures. Applied Physics Letters, 2012, 101, .	1.5	29
44	Phonon-assisted electronic transitions in phosphorus-doped n-type chemical vapor deposition diamond films. Diamond and Related Materials, 2001, 10, 439-443.	1.8	27
45	Radiation tolerance of CVD diamond detectors for pions and protons. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2002, 476, 686-693.	0.7	27
46	Homoepitaxial{111}-oriented diamond pn junctions grown on B-doped Ib synthetic diamond. Physica Status Solidi A, 2004, 201, 2462-2466.	1.7	27
47	Recent results on CVD diamond radiation sensors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1998, 409, 264-270.	0.7	26
48	CVD diamond detectors for ionizing radiation. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1999, 435, 194-201.	0.7	26
49	Model implementation towards the prediction of J(V) characteristics in diamond bipolar device simulations. Diamond and Related Materials, 2014, 43, 34-42.	1.8	26
50	The influence of oxygen, in gas mixtures and various substrate positions, on the broad cathodoluminescence bands of MPCVD diamond films. Diamond and Related Materials, 1993, 2, 737-741.	1.8	23
51	Characterization of n-Type Doped Homoepitaxial Diamond Thin Films. Physica Status Solidi A, 2002, 193, 541-545.	1.7	23
52	Mechanism of reverse current increase of vertical-type diamond Schottky diodes. Journal of Applied Physics, 2017, 122, .	1.1	23
53	Conduction mechanisms in boron implanted diamond films. Diamond and Related Materials, 1996, 5, 752-756.	1.8	22
54	Thermally Stimulated Conductivity and Luminescence in Polycrystalline Diamond Films. Physica Status Solidi A, 1999, 172, 183-192.	1.7	22

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55	Reality of doping by boron implantation of CVD polycrystalline diamond from a comparison of Raman and electrical measurements. Diamond and Related Materials, 1994, 3, 623-627.	1.8	21
56	Chemical vapor deposition of Bâ€doped polycrystalline diamond films: Growth rate and incorporation efficiency of dopants. Journal of Applied Physics, 1995, 78, 7404-7406.	1.1	21
57	Minimization of the defects concentration from boron incorporation in polycrystalline diamond films. Diamond and Related Materials, 1997, 6, 778-782.	1.8	21
58	Microstructure evolution of boron doped homoepitaxial diamond films. Journal of Applied Physics, 1998, 83, 181-186.	1.1	21
59	The first bump-bonded pixel detectors on CVD diamond. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1999, 436, 326-335.	0.7	21
60	Carbide contacts on homoepitaxial diamond films. Diamond and Related Materials, 1999, 8, 961-965.	1.8	21
61	Electric field distribution using floating metal guard rings edge-termination for Schottky diodes. Diamond and Related Materials, 2018, 82, 160-164.	1.8	21
62	Characterization of defects in boron implanted chemically vapour deposited diamond films by electron paramagnetic resonance and cathodoluminescence. Diamond and Related Materials, 1994, 3, 737-740.	1.8	20
63	Influence of diborane on the growth rate and phase stability of diamond films. Carbon, 1999, 37, 107-111.	5.4	20
64	Simulations of carrier confinement in boron Î´-doped diamond devices. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 2084-2087.	0.8	20
65	Tungsten incorporation in diamond thin films prepared by the hotfilament technique. Diamond and Related Materials, 1992, 1, 504-507.	1.8	19
66	Electrical and optical measurements of CVD diamond doped with sulfur. Physical Review B, 2002, 65, .	1.1	19
67	Superconductivity in boron-doped homoepitaxial (001)-oriented diamond layers. Physica Status Solidi A, 2005, 202, 2160-2165.	1.7	19
68	In situ etching-back processes for a sharper top interface in boron delta-doped diamond structures. Diamond and Related Materials, 2012, 24, 175-178.	1.8	19
69	Defect and field-enhancement characterization through electron-beam-induced current analysis. Applied Physics Letters, 2017, 110, .	1.5	19
70	High quality Al2O3/(100) oxygen-terminated diamond interface for MOSFETs fabrication. Applied Physics Letters, 2018, 112, .	1.5	19
71	Effect of boron incorporation on the structure of polycrystalline diamond films. Diamond and Related Materials, 1997, 6, 774-777.	1.8	18
72	Temperature dependent spectroscopic study of the electronic structure of phosphorus in n-type CVD diamond films. Diamond and Related Materials, 2000, 9, 952-955.	1.8	18

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73	Low Temperature Photoconductivity Detection of Phosphorus in Diamond. Physica Status Solidi A, 1999, 174, 53-58.	1.7	17
74	Photocapacitance study of boron-doped chemical-vapor-deposited diamond. Physical Review B, 1999, 60, 2476-2479.	1.1	17
75	Micro-strip sensors based on CVD diamond. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 453, 141-148.	0.7	17
76	Strains and cracks in undoped and phosphorus-doped{111} homoepitaxial diamond films. Physica Status Solidi A, 2003, 199, 87-91.	1.7	17
77	A composite material made of carbon nanotubes partially embedded in a nanocrystalline diamond film. Carbon, 2013, 52, 408-417.	5.4	17
78	Synchronized B and¹³C Diamond Delta Structures for an Ultimate In-Depth Chemical Characterization. Applied Physics Express, 2013, 6, 045801.	1.1	17
79	Bottomâ€“up fabrication of diamond nanowire arrays. Diamond and Related Materials, 2011, 20, 779-781.	1.8	16
80	Raman study of diamond films deposited by MPCVD: effect of the substrate position. Thin Solid Films, 1995, 256, 13-22.	0.8	15
81	Tracking with CVD diamond radiation sensors at high luminosity colliders. IEEE Transactions on Nuclear Science, 1999, 46, 193-200.	1.2	15
82	Epitaxial growth of phosphorus doped diamond on {111} substrate. Diamond and Related Materials, 2002, 11, 328-331.	1.8	15
83	Spin Carrier Exchange Interactions in (Ga,Mn)N and (Zn,Co)O Wide Band Gap Diluted Magnetic Semiconductor Epilayers. Journal of Superconductivity and Novel Magnetism, 2005, 18, 15-21.	0.5	15
84	Effects of high-power laser irradiation on sub-superficial graphitic layers in single-crystal diamond. Acta Materialia, 2016, 103, 665-671.	3.8	15
85	Characterisation by thermoluminescence of boron doped polycrystalline diamond films. Diamond and Related Materials, 2000, 9, 56-60.	1.8	14
86	A new acceptor state in CVD-diamond. Diamond and Related Materials, 2002, 11, 347-350.	1.8	14
87	Comparative study of two atomic layer etching processes for GaN. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	0.9	14
88	Diamond/Î³-alumina band offset determination by XPS. Applied Surface Science, 2021, 535, 146301.	3.1	14
89	Effect of boron incorporation on the lattice parameter and texture of diamond films deposited by chemical vapour deposition on silicon. Journal of Crystal Growth, 1995, 148, 110-115.	0.7	13
90	ESR Study of Phosphorus Implanted Type IIa Diamond. Physica Status Solidi A, 2000, 181, 5-10.	1.7	13

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91	Etching of p- and n-type doped monocrystalline diamond using an ECR oxygen plasma source. Diamond and Related Materials, 2002, 11, 828-832.	1.8	13
92	Performance of irradiated CVD diamond micro-strip sensors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2002, 476, 706-712.	0.7	13
93	Thermoluminescence of nickel-doped synthetic diamond crystals. Journal of Applied Physics, 2000, 88, 4648.	1.1	12
94	CVD diamond sensors for charged particle detection. Diamond and Related Materials, 2001, 10, 1778-1782.	1.8	12
95	Gate Oxide Electrical Stability of p-type Diamond MOS Capacitors. IEEE Transactions on Electron Devices, 2018, 65, 3361-3364.	1.6	12
96	Status of diamond particle detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1998, 418, 196-202.	0.7	11
97	DC current and AC impedance measurements on boron-doped single crystalline diamond films. Physica Status Solidi A, 2003, 199, 92-96.	1.7	11
98	Spectral response of the photoconductivity of polycrystalline chemically vapor deposited diamond films. Diamond and Related Materials, 1994, 3, 836-839.	1.8	10
99	Concentration of paramagnetic centers in boron doped polycrystalline diamond films. Applied Physics Letters, 1996, 68, 2123-2125.	1.5	10
100	Diamond Pixel Detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2001, 465, 88-91.	0.7	10
101	Thermoluminescent Properties of Ni and Co Doped Synthetic, High Pressure, High Temperature Diamonds: Application to Ionising Radiation Dosimetry. Radiation Protection Dosimetry, 2002, 100, 329-332.	0.4	10
102	{111}-oriented diamond films and p/n junctions grown on B-doped type Ib substrates. Diamond and Related Materials, 2005, 14, 522-525.	1.8	10
103	Doping of single crystalline diamond with nickel. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 2054-2057.	0.8	10
104	Characterization of breakdown behavior of diamond Schottky barrier diodes using impact ionization coefficients. Japanese Journal of Applied Physics, 2017, 56, 04CR12.	0.8	10
105	Metal/insulator/semiconductor tunnel diodes formed by the oxidation of polycrystalline diamond films. Journal of Applied Physics, 1994, 76, 3929-3931.	1.1	9
106	Deep Level Spectroscopy in Homoepitaxial Diamond Films Studied from Current Transients in Schottky Junctions. Physica Status Solidi A, 1999, 174, 129-135.	1.7	9
107	Internal stresses in {111} homoepitaxial CVD diamond. Diamond and Related Materials, 2004, 13, 329-334.	1.8	9
108	Characterization of ã€˜111ã€‰ diamond thin films by micro-Raman spectroscopy. Diamond and Related Materials, 2004, 13, 886-890.	1.8	9

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109	Influence of annealing on the resistance of polycrystalline chemically vapour deposited diamond films: a surface chemical effect. Diamond and Related Materials, 1994, 3, 654-657.	1.8	8
110	Evidence of hydrogenâ€“boron interactions in diamond from deuterium diffusion and infrared spectroscopy experiments. Diamond and Related Materials, 1999, 8, 278-282.	1.8	8
111	Charge-based deep level transient spectroscopy of phosphorous-doped homoepitaxial diamond. Journal of Applied Physics, 2003, 94, 5832-5843.	1.1	8
112	Study of the phosphorus incorporation in n-doped diamond films by cathodoluminescence. Journal of Physics Condensed Matter, 2004, 16, S287-S292.	0.7	8
113	Ultra-smooth single crystal diamond surfaces resulting from implantation and lift-off processes. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 2057-2061.	0.8	8
114	Investigation of nickel lattice sites in diamond: Density functional theory and x-ray absorption near-edge structure experiments. Physical Review B, 2012, 86, .	1.1	8
115	Formation and resistivity of Mo2C on polycrystalline diamond according to the preparation conditions. Diamond and Related Materials, 1996, 5, 779-783.	1.8	7
116	Recent progress on diamond Schottky diode. , 2016, , .		7
117	200V, 4MV/cm lateral diamond MOSFET. , 2017, , .		7
118	Determination of weak optical absorption coefficients in polycrystalline diamond thin films by photothermal deflection spectroscopy. Diamond and Related Materials, 1995, 4, 684-687.	1.8	6
119	Hydrogen Diffusion in Boron Doped Diamond: Evidence of Hydrogen-Boron Interactions. Materials Research Society Symposia Proceedings, 1998, 510, 169.	0.1	6
120	Parameterisation of radiation effects on CVD diamond for proton irradiation. Nuclear Physics, Section B, Proceedings Supplements, 1999, 78, 675-682.	0.5	6
121	Study of the Electronic Structure of the Phosphorus Level in n-Type CVD Diamond. Physica Status Solidi A, 1999, 174, R1-R2.	1.7	6
122	Phosphorus site after CIRA implantation of type IIa diamond. Diamond and Related Materials, 2001, 10, 580-584.	1.8	6
123	Effect of Magnetic Field on Phosphorus Centre in Diamond. Physica Status Solidi A, 2001, 186, 291-295.	1.7	6
124	Impact of Nonhomoepitaxial Defects in Depleted Diamond MOS Capacitors. IEEE Transactions on Electron Devices, 2018, 65, 1830-1837.	1.6	6
125	Hole injection contribution to transport mechanisms in metal/pâ^'/p++ and metal/oxide/pâ^'/p++ diamond structures. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2501-2506.	0.8	5
126	Normally-OFF Diamond Reverse Blocking MESFET. IEEE Transactions on Electron Devices, 2021, 68, 6279-6285.	1.6	5

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127	Photoconductivity associated with deep levels in polycrystalline diamond films. Philosophical Magazine Letters, 1995, 72, 257-261.	0.5	4
128	CVD diamond pixel detectors for LHC experiments. Nuclear Physics, Section B, Proceedings Supplements, 1999, 78, 497-504.	0.5	4
129	High-field magnetospectroscopy to probe the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>1.4</mml:mn></mml:mrow></mml:math>-eV Ni color center in diamond. Physical Review B, 2012, 86, .	1.1	4
130	A two-step process for the formation of a Mo2C contact on polycrystalline diamond films. Diamond and Related Materials, 1997, 6, 843-846.	1.8	3
131	Intrinsic magnetism in wurtzite (Ga,Mn)N. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 4062-4065.	0.8	3
132	Magneto-optical spectroscopy of the wide band gap diluted magnetic semiconductor GaMnN. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2006, 126, 240-244.	1.7	3
133	Study of ion-implanted nitrogen related defects in diamond Schottky barrier diode by transient photocapacitance and photoluminescence spectroscopy. Japanese Journal of Applied Physics, 2021, 60, SBBD07.	0.8	3
134	Electronic States of Boron and Phosphorus in Diamond. , 1999, 174, 39.		3
135	Analysis of InGaN surfaces after chemical treatments and atomic layer deposition of Al2O3 for ÂµLED applications. , 2020, , .		3
136	CaractÃ©risation physicochimique et Ã©lectronique de la structure Ptâ€“a-Si: Hâ€“c-Si(n). Canadian Journal of Physics, 1991, 69, 357-360.	0.4	2
137	Characterization of CVD Diamond Films Used for Radiation Detection.. Materials Research Society Symposia Proceedings, 1994, 339, 185.	0.1	2
138	Recent results with CVD diamond trackers. Nuclear Physics, Section B, Proceedings Supplements, 1999, 78, 329-334.	0.5	2
139	High-resolution spectroscopic investigation of the Mn centre in GaN. Journal of Crystal Growth, 2005, 275, e2233-e2237.	0.7	2
140	Behavior of CVD diamond-based TL dosimeters in radiotherapy environments using photon and electron beams from treatment accelerators. Diamond and Related Materials, 2011, 20, 520-522.	1.8	2
141	Annealing of diamond above 800 Â°C: need for and results of Si3N4 encapsulation. Diamond and Related Materials, 1995, 4, 596-599.	1.8	1
142	Conductivity and photoconductivity in boron doped diamond films: Microwave measurements. Journal of Applied Physics, 2001, 90, 4251-4255.	1.1	1
143	Diamond bipolar device simulation. , 2013, , .		1
144	Thermally Stimulated Conductivity and Luminescence in Polycrystalline Diamond Films. Physica Status Solidi A, 1999, 172, 183-192.	1.7	1

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145	Electronic characterization of new c-Si/a-Si:H/Pt thin film devices. Thin Solid Films, 1989, 174, 203-207.	0.8	0
146	Characterization of âŒ©111âŒª diamond thin films by micro-Raman spectroscopy. Diamond and Related Materials, 2004, 13, 886-886.	1.8	0
147	Diamond Nanocrystals Growth on Carbon Nanotubes. , 2010, , .		0
148	Diamond as substrate for 3Câ€“SiC growth: A TEM study. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 2302-2306.	0.8	0
149	Electric Field Characterization of Diamond Metal Semiconductor Field Effect Transistors Using Electron Beam Induced Current. Materials Science Forum, 2018, 924, 935-938.	0.3	0