Elisabeth Blanquet

List of Publications by Year
in descending order

131 papers	1,913 citations	257450 24 h-index	345221 36 g-index
132 all docs	132 docs citations	132 times ranked	2025 citing authors

#	Article	IF	Citations
1	Thermodynamic Calculations as the Basis for CVD Production of Silicide Coatings. MRS Bulletin, 1999, 24, 27-31.	3.5	119
2	A thermodynamic evaluation of four Si-M (M = Mo, Ta, Ti, W) binary systems. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 1989, 13, 273-292.	1.6	89
3	Preferential orientation of fluorine-doped SnO2 thin films: The effects of growth temperature. Acta Materialia, 2013, 61, 22-31.	7.9	74
4	Thermodynamic Heat Transfer and Mass Transport Modeling of the Sublimation Growth of Silicon Carbide Crystals. Journal of the Electrochemical Society, 1996, 143, 3727-3735.	2.9	67
5	Superconducting properties of very high quality NbN thin films grown by high temperature chemical vapor deposition. Superconductor Science and Technology, 2016, 29, 105011.	3.5	55
6	Modeling and simulation of SiC CVD in the horizontal hot-wall reactor concept. Journal of Crystal Growth, 2004, 267, 436-451.	1.5	52
7	State of the art in the modelling of SiC sublimation growth. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1999, 61-62, 18-28.	3.5	50
8	Low-Temperature Low-Resistivity PEALD TiN Using TDMAT under Hydrogen Reducing Ambient. Journal of the Electrochemical Society, 2008, 155, H625.	2.9	44
9	Effects of AlN nucleation layers on the growth of AlN films using high temperature hydride vapor phase epitaxy. Journal of Alloys and Compounds, 2012, 526, 103-109.	5.5	42
10	Atomic layer deposition of tantalum oxide thin films for their use as diffusion barriers in microelectronic devices. Microelectronic Engineering, 2010, 87, 373-378.	2.4	36
11	Characterization of Al2O3 Thin Films Prepared by Thermal ALD. Energy Procedia, 2015, 77, 558-564.	1.8	36
12	Application of equilibrium thermodynamics to the development of diffusion barriers for copper metallization (invited). Microelectronic Engineering, 2000, 50, 357-368.	2.4	35
13	SiC single crystal growth by a modified physical vapor transport technique. Journal of Crystal Growth, 2005, 275, e555-e560.	1.5	35
14	Al2O3 thin films deposited by thermal atomic layer deposition: Characterization for photovoltaic applications. Thin Solid Films, 2016, 617, 108-113.	1.8	35
15	Niobium nitride thin films deposited by high temperature chemical vapor deposition. Surface and Coatings Technology, 2014, 260, 126-132.	4.8	33
16	Evolution of Crystal Structure During the Initial Stages of ZnO Atomic Layer Deposition. Chemistry of Materials, 2016, 28, 592-600.	6.7	31
17	Evaluation of LPCVD Meî—¸Siî—¸N (Meî—»Ta, Ti, W, Re) diffusion barriers for Cu metallizations. Microelectronic Engineering, 1997, 37-38, 189-195.	2.4	29
18	Epitaxial and polycrystalline growth of AlN by high temperature CVD: Experimental results and simulation. Surface and Coatings Technology, 2010, 205, 1294-1301.	4.8	29

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19	Thermodynamic and experimental study of UC powders ignition. Journal of Nuclear Materials, 2009, 393, 333-342.	2.7	28
20	Plasma etching of HfO2 at elevated temperatures in chlorine-based chemistry. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2006, 24, 30-40.	2.1	27
21	Influence of the V/III ratio in the gas phase on thin epitaxial AlN layers grown on (0001) sapphire by high temperature hydride vapor phase epitaxy. Thin Solid Films, 2014, 573, 140-147.	1.8	27
22	Thermodynamic and experimental investigations on the growth of thick aluminum nitride layers by high temperature CVD. Journal of Crystal Growth, 2009, 311, 3371-3379.	1.5	26
23	Analysis of the iodine gas phase produced by interaction of CsI and MoO3 vapours in flowing steam. Nuclear Engineering and Design, 2013, 263, 462-472.	1.7	25
24	Elaboration of Ta2O5Thin Films Using Electrostatic Spray Deposition for Microelectronic Applications. Journal of Physical Chemistry C, 2007, 111, 5708-5714.	3.1	24
25	High temperature chemical vapor deposition of aluminum nitride, growth and evaluation. Surface and Coatings Technology, 2013, 230, 111-118.	4.8	24
26	XPS studies of the ALD-growth of TaN diffusion barriers: Impact of the dielectric surface chemistry on the growth mechanism. Microelectronic Engineering, 2008, 85, 2068-2070.	2.4	23
27	Aluminum nitride thin films deposited by hydrogen plasma enhanced and thermal atomic layer deposition. Surface and Coatings Technology, 2018, 347, 181-190.	4.8	23
28	Density functional study of the stability and electronic properties of TaxNy compounds used as copper diffusion barriers. Microelectronic Engineering, 2006, 83, 2077-2081.	2.4	22
29	Chemical vapor deposition of titanium nitride thin films: kinetics and experiments. CrystEngComm, 2019, 21, 3974-3981.	2.6	22
30	LPCVD WSi2 Films Using Tungsten Chlorides and Silane. Journal of the Electrochemical Society, 1993, 140, 475-484.	2.9	21
31	Different macroscopic approaches to the modelling of the sublimation growth of SiC single crystals. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1997, 46, 308-312.	3.5	20
32	LPCVD and PACVD (Ti,Al)N films: morphology and mechanical properties. Surface and Coatings Technology, 1999, 115, 103-110.	4.8	20
33	ESD and ALD Depositions of Ta[sub 2]O[sub 5] Thin Films Investigated as Barriers to Copper Diffusion for Advanced Metallization. Journal of the Electrochemical Society, 2009, 156, H311.	2.9	18
34	Gaseous Phase Study of the Zr-Organometallic ALD Precursor TEMAZ by Mass Spectrometry. Journal of the Electrochemical Society, 2009, 156, H71.	2.9	18
35	Investigation on AlN epitaxial growth and related etching phenomenon at high temperature using high temperature chemical vapor deposition process. Journal of Crystal Growth, 2011, 335, 17-24.	1.5	18
36	Experimental study of uranium carbide pyrophoricity. Powder Technology, 2011, 208, 312-317.	4.2	18

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37	DNA microarrays on silicon nanostructures: Optimization of the multilayer stack for fluorescence detection. Biosensors and Bioelectronics, 2007, 22, 2086-2092.	10.1	17
38	Thermodynamic Aspects of the Growth of SiC Single Crystals using the CF-PVT Process. Chemical Vapor Deposition, 2006, 12, 541-548.	1.3	16
39	Chlorinated silicon carbide CVD revisited for polycrystalline bulk growth. Surface and Coatings Technology, 2007, 201, 8888-8892.	4.8	15
40	Experimental thermodynamics for the evaluation of ALD growth processes. Surface and Coatings Technology, 2009, 204, 882-886.	4.8	15
41	Growth of Boron Nitride on (0001) AlN Templates by High Temperature-Hydride Vapor Phase Epitaxy (HT-HVPE). Physics Procedia, 2013, 46, 102-106.	1.2	15
42	Epitaxial growth of AlN on c-plane sapphire by High Temperature Hydride Vapor Phase Epitaxy: Influence of the gas phase N/Al ratio and low temperature protective layer. Surface and Coatings Technology, 2013, 237, 118-125.	4.8	15
43	Defects formation in sublimation grown 6H-SiC single crystal boules. Diamond and Related Materials, 1997, 6, 1249-1261.	3.9	14
44	Chemical vapor deposition of thin films and coatings: Evaluation and process modeling. Surface and Coatings Technology, 2007, 202, 790-797.	4.8	14
45	Aluminum nitride homoepitaxial growth on polar and nonâ€polar AlN PVT substrates by high temperature CVD (HTCVD). Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2019-2021.	0.8	14
46	Superconducting properties of NbTiN thin films deposited by high-temperature chemical vapor deposition. Physical Review B, 2018, 97, .	3.2	14
47	Thermodynamic Modeling of the Ti-Al-N System and Application to the Simulation of CVD Processes of the (Ti,Al)N Metastable Phase. Chemical Vapor Deposition, 1999, 5, 109-115.	1.3	13
48	SiC In-Situ Pre-Growth Etching: A Thermodynamic Study. Materials Science Forum, 2000, 338-342, 1041-1044.	0.3	13
49	CFD modeling of the high-temperature HVPE growth of aluminum nitride layers on c-plane sapphire: from theoretical chemistry to process evaluation. Theoretical Chemistry Accounts, 2014, 133, 1.	1.4	13
50	Undoped TiO2 and nitrogen-doped TiO2 thin films deposited by atomic layer deposition on planar and architectured surfaces for photovoltaic applications. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, 01A141.	2.1	13
51	Study of surface reaction during selective epitaxy growth of silicon by thermodynamic analysis and density functional theory calculation. Journal of Crystal Growth, 2017, 468, 278-282.	1.5	13
52	Synthesis of upconversion TiO2:Er3+-Yb3+ nanoparticles and deposition of thin films by spin coating technique. Ceramics International, 2020, 46, 28183-28192.	4.8	13
53	Experimental kinetic study of oxidation of uranium monocarbide powders under controlled oxygen partial pressures below 230Â°C. Journal of Nuclear Materials, 2013, 432, 505-519.	2.7	12
54	Oxidation kinetics of Si and SiGe by dry rapid thermal oxidation, in-situ steam generation oxidation and dry furnace oxidation. Journal of Applied Physics, 2017, 121, .	2.5	12

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55	Deposition and characterization of (Ti, Al)N coatings deposited by thermal LPCVD in an industrial reactor. Surface and Coatings Technology, 2019, 358, 923-933.	4.8	12
56	A thermodynamic and experimental approach to TaSi2 chemical vapour deposition. Thin Solid Films, 1989, 177, 189-206.	1.8	11
57	Evaporation Behavior of SiC Powder for Single Crystal Growth-An Experimental Study on Thermodynamics and Kinetics. Materials Science Forum, 2000, 338-342, 91-94.	0.3	11
58	Silicon nanostructures for DNA biochip applications. Materials Science and Engineering C, 2007, 27, 1500-1503.	7.3	11
59	A first step toward bridging silicon carbide crystal properties and physical chemistry of crystal growth. CrystEngComm, 2016, 18, 2119-2124.	2.6	11
60	A Chemical Vapor Deposition Route to Epitaxial Superconducting NbTiN Thin Films. Chemistry of Materials, 2017, 29, 5824-5830.	6.7	11
61	The initial stages of ZnO atomic layer deposition on atomically flat In_{0.53}Ga_{0.47}As substrates. Nanoscale, 2018, 10, 11585-11596.	5.6	11
62	Improved critical temperature of superconducting plasma-enhanced atomic layer deposition of niobium nitride thin films by thermal annealing. Thin Solid Films, 2020, 709, 138232.	1.8	11
63	Coupling powder bed additive manufacturing and vapor phase deposition methods for elaboration of coated 3D Ti-6Al-4V architectures with enhanced surface properties. Surface and Coatings Technology, 2021, 415, 127130.	4.8	11
64	Knudsen cell mass spectrometry applied to the investigation of organometallic precursors vapours. Surface and Coatings Technology, 2007, 201, 8813-8817.	4.8	10
65	Chemical vapour deposition and atomic layer deposition of amorphous and nanocrystalline metallic coatings: Towards deposition of multimetallic films. Journal of Alloys and Compounds, 2010, 504, S422-S424.	5.5	10
66	Effects of the V/III ratio on the quality of aluminum nitride grown on (0001) sapphire by high temperature hydride vapor phase epitaxy. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 362-365.	0.8	10
67	A niching genetic algorithm applied to optimize a SiC-bulk crystal growth system. Journal of Crystal Growth, 2017, 468, 914-918.	1.5	9
68	Contribution to the modeling of CVD silicon carbide growth. European Physical Journal Special Topics, 1999, 09, Pr8-205-Pr8-212.	0.2	8
69	Modelling of SiC sublimation growth process: analyses of macrodefects formation. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1999, 61-62, 82-85.	3.5	8
70	X-ray photoelectron spectroscopy analysis of the effect of temperature upon surface composition of InP etched in Cl2-based inductively coupled plasma. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, 011219.	1.2	8
71	Growth of boron nitride films on wâ€AlN (0001), 4Â° offâ€cut 4Hâ€SiC (0001), W (110) and Cr (110) substrates by Chemical Vapor Deposition. Crystal Research and Technology, 2016, 51, 231-238.	1.3	8
72	A comparative study of graphene growth on SiC by hydrogen-CVD or Si sublimation through thermodynamic simulations. CrystEngComm, 2018, 20, 3702-3710.	2.6	8

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73	A thermodynamic and experimental approach to ReSi2 LPCVD. Thin Solid Films, 1995, 259, 25-31.	1.8	7
74	Les diffÃ©rentes voies de modÃ©lisation macroscopique du procÃ©dÃ© de dÃ©pÃ´t de SiC par voie gazeuse. Annales De Chimie: Science Des Materiaux, 1998, 23, 753-789.	0.4	7
75	High-speed Growth and Characterization of Polycrystalline AlN Layers by High Temperature Chemical Vapor Deposition (HTCVD). ECS Transactions, 2009, 25, 323-326.	0.5	7
76	A special reactor coupled with a high-temperature mass spectrometer for the investigation of the vaporization and cracking of organometallic compounds. Rapid Communications in Mass Spectrometry, 2009, 23, 793-800.	1.5	7
77	Growth and Characterization of Thick Polycrystalline AlN Layers by HTCVD. Journal of the Electrochemical Society, 2011, 158, H328.	2.9	7
78	In situ x-ray studies of the incipient ZnO atomic layer deposition on <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>In</mml:mi><mml:mrow><mml:mn>0.53</mml:mn> Physical Review Materials, 2020, 4, .	2.4	7
79	Combined thermodynamic and mass transport modeling for material processing from the vapor phase. Thin Solid Films, 2000, 365, 264-274.	1.8	6
80	Contribution of numerical simulation to silicon carbide bulk growth and epitaxy. Journal of Physics Condensed Matter, 2004, 16, S1579-S1595.	1.8	6
81	Detection of subnanometric layer at the Siâ•SiO2 interface and related strain measurements. Applied Physics Letters, 2004, 85, 5574-5576.	3.3	6
82	Developments of TaN ALD Process for 3D Conformal Coatings. Chemical Vapor Deposition, 2011, 17, 284-295.	1.3	6
83	Reactive chemical vapor deposition of heteroepitaxial Ti_{1â”x}Al_xN films. CrystEngComm, 2018, 20, 1711-1715.	2.6	6
84	Macroscopic modelling of silicon carbide sublimation: toward a microscopic modelling of defect formation. Surface and Coatings Technology, 1997, 94-95, 279-284.	4.8	5
85	Free Growth of 4H-SiC by Sublimation Method. Materials Science Forum, 2004, 457-460, 71-74.	0.3	5
86	Growth of Thick AlN Layers by High Temperature CVD (HTCVD). Materials Science Forum, 0, 600-603, 1269-1272.	0.3	5
87	Outgassing characterization of MEMS thin film packaging materials. , 2013, , .		5
88	Comparative Analysis of Growth Rate Enhancement and Ge Redistribution during Silicon-Germanium Oxidation by Rapid Thermal Oxidation. ECS Transactions, 2016, 75, 67-78.	0.5	5
89	Modelling of SiC sublimation growth process : Influence of experimental parameters on crystal shape. European Physical Journal Special Topics, 1999, 09, Pr8-213-Pr8-219.	0.2	4
90	Simulation of the Large-Area Growth of Homoepitaxial 4H-SiC by Chemical Vapor Deposition. Materials Science Forum, 2002, 389-393, 223-226.	0.3	4

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91	Vapor phase techniques for the fabrication of homoepitaxial layers of silicon carbide: process modeling and characterization. Applied Surface Science, 2003, 212-213, 177-183.	6.1	4
92	High temperature processing of poly-SiC substrates from the vapor phase for wafer-bonding. Surface and Coatings Technology, 2006, 201, 4014-4020.	4.8	4
93	PEALD ZrO₂ Films Deposition on TiN and Si Substrates. ECS Transactions, 2009, 25, 235-241.	0.5	4
94	Cracking study of pentakis(dimethylamino)tantalum vapors by Knudsen cell mass spectrometry. Rapid Communications in Mass Spectrometry, 2010, 24, 2949-2956.	1.5	4
95	Tetragonal Zirconia Stabilization by Metal Addition for Metal-Insulator-Metal Capacitor Applications. ECS Transactions, 2013, 58, 223-233.	0.5	4
96	Ti-Al-N-Based Hard Coatings: Thermodynamical Background, CVD Deposition, and Properties. A Review. , 0, , .		4
97	Morphology and Thermal Stability of Me-Si-N (Me=Re, W, Ta) for Microelectronics. European Physical Journal Special Topics, 1995, 05, C5-1141-C5-1148.	0.2	4
98	LPCVD RexSiyNz diffusion barriers in Si/SiO2/Cu metallizations. Applied Surface Science, 1995, 91, 277-284.	6.1	3
99	Heat and mass transfer simulation of SiC boule growth by sublimation. Materials Research Society Symposia Proceedings, 2000, 640, 1.	0.1	3
100	Modeling and simulation of SiC CVD in the horizontal hot-wall reactor concept. Journal of Crystal Growth, 2004, 267, 436-436.	1.5	3
101	Progress and Limits of the Numerical Simulation of SiC Bulk and Epitaxy Growth Processes. Materials Science Forum, 2005, 483-485, 3-8.	0.3	3
102	Influence of total pressure and precursors flow rates on the growth of aluminium nitride by high temperature chemical vapor deposition (HTCVD). Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, S348-S351.	0.8	3
103	High temperature chemical vapor deposition of AlN/W1â^'xRex coatings on bulk SiC. Surface and Coatings Technology, 2010, 205, 1302-1306.	4.8	3
104	Conformal Atomic Layer Deposition of TA-Based Diffusion Barrier Film Using a Novel Mono-Guanidinate Precursor. Journal of Nanoscience and Nanotechnology, 2011, 11, 8383-8386.	0.9	3
105	Significance of initial stages on the epitaxial growth of AlN using high temperature halide chemical vapor deposition. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 511-514.	0.8	3
106	New method to evaluate materials outgassing used in MEMS thin film packaging technology. Microelectronic Engineering, 2013, 107, 97-100.	2.4	3
107	Study of Ti-Rich and Al-Rich Contact Metallization for AlGaN/GaN HEMT Power Devices. ECS Transactions, 2014, 64, 263-272.	0.5	3
108	HVPE of aluminum nitride, film evaluation and multiscale modeling of the growth process. Journal of Crystal Growth, 2017, 468, 235-240.	1.5	3

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109	Influence of the N/Al Ratio in the Gas Phase on the Growth of AlN by High Temperature Chemical Vapor Deposition (HTCVD). Materials Science Forum, 2009, 615-617, 987-990.	0.3	2
110	(Invited) Developments of ALD Processes: Experiments and Thermodynamic Evaluations. ECS Transactions, 2010, 33, 321-332.	0.5	2
111	ALD TaN from PDMAT in TSV Architectures. ECS Transactions, 2010, 33, 183-193.	0.5	2
112	Atomic Layer Deposition of TiO2 ultrathin films on 3D substrates for energy applications. Materials Research Society Symposia Proceedings, 2012, 1439, 63-68.	0.1	2
113	Characterization of nitrogen-doped TiO<inf>2</inf> thin films for photovoltaic applications. , 2013, , .		2
114	SiGe oxidation kinetics and oxide density measured by resonant soft X-ray reflectivity. , 2017, , .		2
115	Impact of silica-substrate chemistry on tantalum nitride thin films deposited by atomic layer deposition: Microstructure, chemistry and electrical behaviors. Thin Solid Films, 2019, 669, 392-398.	1.8	2
116	Prediction of dislocation density in AlN or GaN films deposited on (0001) sapphire. Journal of Materials Science, 2020, 55, 9152-9162.	3.7	2
117	Diffusion Barriers for Copper Metallization: Predicting Phase Stability and Reactivity using Equilibrium Thermodynamics. Materials Research Society Symposia Proceedings, 1999, 564, 299.	0.1	1
118	Investigation into the Film Growth of AlN on SiC by Low Pressure Chemical Vapour Deposition. Materials Science Forum, 2000, 338-342, 1507-1510.	0.3	1
119	Plasma Enhanced Atomic Layer Deposition of ZrO2: A Thermodynamic Approach. ECS Transactions, 2011, 35, 497-513.	0.5	1
120	Comparison of Thermodynamic Databases for the Modeling of SiC Growth by PVT. Materials Science Forum, 0, 778-780, 35-38.	0.3	1
121	Crystal quality of SiGe films fabricated by the condensation technique and characterized by medium energy ion scattering. Semiconductor Science and Technology, 2019, 34, 065005.	2.0	1
122	CHEMICAL VAPOR DEPOSITION OF TaSi2 AND WSi2 AT ATMOSPHERIC PRESSURE FROM IN SITU PREPARED METAL CHLORIDES. Journal De Physique Colloque, 1989, 50, C5-557-C5-563.	0.2	1
123	Chemical vapor deposition of refractory metal silicides. Applied Surface Science, 1989, 38, 407.	6.1	0
124	Thermodynamic and Experimental Study of Î²-FeSi2 Lpcvd. Materials Research Society Symposia Proceedings, 1993, 320, 91.	0.1	0
125	Silicon Carbide Growth: C/Si Ratio Evaluation and Modeling. Materials Research Society Symposia Proceedings, 2006, 911, 2.	0.1	0
126	On gaseous phase of ALD precursors by means of thermodynamics. ECS Transactions, 2009, 25, 567-573.	0.5	0

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127	ALD TaN from PDMAT and a New Monoguanidinate Tantalum Molecule Precursor in TSV Architectures. ECS Meeting Abstracts, 2010, , .	0.0	0
128	Stability of High Temperature Chemical Vapor Deposited Silicon Based Structures on Metals for Solar Conversion. Journal of Nanoscience and Nanotechnology, 2011, 11, 8318-8322.	0.9	0
129	Thermodynamics Simulations Applied to Gas-Solid Materials Fabrication Processes. , 0, , .		0
130	Assessment of SiC Crystal Chemistry during the PVT Growth Process: Coupled Numerical Modeling and Thermodynamics Approach. Materials Science Forum, 0, 821-823, 96-99.	0.3	0
131	Influence of oxide density on O₂ diffusivity in thermally grown SiO₂ on Si and SiGe and on oxidation kinetics. Semiconductor Science and Technology, 2019, 34, 065023.	2.0	0