

# Didier Chaussende

## List of Publications by Year in descending order

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137  
papers

1,517  
citations

361045

20  
h-index

414034

32  
g-index

137  
all docs

137  
docs citations

137  
times ranked

1450  
citing authors

#	ARTICLE	IF	CITATIONS
1	Characterization and modelling of the ion-irradiation induced disorder in 6H-SiC and 3C-SiC single crystals. Journal Physics D: Applied Physics, 2010, 43, 455408.	1.3	86
2	Combined experimental and computational study of the recrystallization process induced by electronic interactions of swift heavy ions with silicon carbide crystals. Physical Review B, 2012, 86, .	1.1	80
3	Revealing the electronic band structure of trilayer graphene on SiC: An angle-resolved photoemission study. Physical Review B, 2013, 88, .	1.1	73
4	Large area quasi-free standing monolayer graphene on 3C-SiC(111). Applied Physics Letters, 2011, 99, .	1.5	62
5	Coupled heat transfer and fluid dynamics modeling of high-temperature SiC solution growth. Journal of Crystal Growth, 2010, 312, 155-163.	0.7	59
6	Raman scattering from Ti <sub>3</sub> SiC <sub>2</sub> single crystals. Applied Physics Letters, 2011, 98, 081912.	1.5	49
7	A comprehensive study of SiC growth processes in a VPE reactor. Thin Solid Films, 2002, 402, 83-89.	0.8	46
8	High temperature solution growth and characterization of Cr <sub>2</sub> AlC single crystals. Journal of Crystal Growth, 2013, 384, 88-95.	0.7	46
9	Control of the Supersaturation in the CF-PVT Process for the Growth of Silicon Carbide Crystals: Research and Applications. Crystal Growth and Design, 2005, 5, 1539-1544.	1.4	40
10	Prospects for 3C-SiC bulk crystal growth. Journal of Crystal Growth, 2008, 310, 976-981.	0.7	38
11	Characterization of a 3C-SiC Single Domain Grown on 6H-SiC(0001) by a Vapor-Liquid-Solid Mechanism. Crystal Growth and Design, 2006, 6, 2598-2602.	1.4	30
12	X-ray diffuse scattering from stacking faults in thick 3C-SiC single crystals. Applied Physics Letters, 2006, 89, 091902.	1.5	28
13	High-Temperature Nucleation of Cubic Silicon Carbide on (0001) Hexagonal-SiC Nominal Surfaces. Crystal Growth and Design, 2006, 6, 2788-2794.	1.4	27
14	Continuous Feed Physical Vapor Transport. Journal of the Electrochemical Society, 2003, 150, G653.	1.3	26
15	Status of SiC bulk growth processes. Journal Physics D: Applied Physics, 2007, 40, 6150-6158.	1.3	26
16	Thermodynamic and experimental investigations on the growth of thick aluminum nitride layers by high temperature CVD. Journal of Crystal Growth, 2009, 311, 3371-3379.	0.7	26
17	Modeling of the Growth Rate during Top Seeded Solution Growth of SiC Using Pure Silicon as a Solvent. Crystal Growth and Design, 2012, 12, 909-913.	1.4	25
18	Large Area DPB Free (111) $\beta$ -SiC Thick Layer Grown on (0001) $\beta$ -SiC Nominal Surfaces by the CF-PVT Method. Materials Science Forum, 2005, 483-485, 225-228.	0.3	24

#	ARTICLE	IF	CITATIONS
19	From Si nanowire to SiC nanotube. Journal of Nanoparticle Research, 2011, 13, 5425-5433.	0.8	23
20	Micropipe-induced birefringence in 6H silicon carbide. Journal of Applied Crystallography, 2010, 43, 122-133.	1.9	22
21	Formation process of 3C-SiC on 6H-SiC (0001) by low-temperature solution growth in Si-Sc-C system. Journal of Crystal Growth, 2011, 335, 94-99.	0.7	21
22	Double-Position-Boundaries Free 3C-SiC Epitaxial Layers Grown on On-Axis 4H-SiC. ECS Journal of Solid State Science and Technology, 2014, 3, P75-P81.	0.9	21
23	The (001) 3C SiC surface termination and band structure after common wet chemical etching procedures, stated by XPS, LEED, and HREELS. Applied Surface Science, 2018, 427, 480-485.	3.1	21
24	Study of the 3C-SiC nucleation from a liquid phase on a C face 6H-SiC substrate. Journal of Crystal Growth, 2009, 311, 2385-2390.	0.7	19
25	Morphological instabilities induced by foreign particles and Ehrlich-Schwoebel effect during the two-dimensional growth of crystalline Ti <sub>3</sub> SiC <sub>2</sub> . Physical Review B, 2011, 83, .	1.1	19
26	A new model for in situ nitrogen incorporation into 4H-SiC during epitaxy. Scientific Reports, 2017, 7, 43069.	1.6	19
27	Title is missing!. Journal of Materials Science, 2002, 37, 3299-3306.	1.7	18
28	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.	0.7	18
29	Thermodynamic Aspects of the Growth of SiC Single Crystals using the CF-PVT Process. Chemical Vapor Deposition, 2006, 12, 541-548.	1.4	16
30	Nucleation and Growth of 3C-SiC Single Crystals from the Vapor Phase. Materials Science Forum, 2009, 615-617, 31-36.	0.3	15
31	Analysis of Macrostep Formation during Top Seeded Solution Growth of 4H-SiC. Crystal Growth and Design, 2016, 16, 3231-3236.	1.4	15
32	Aluminum nitride homoepitaxial growth on polar and non-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
33	Study of 3C-SiC nucleation on (0001) 6H-SiC nominal surfaces by the CF-PVT method. Journal of Crystal Growth, 2005, 275, e609-e613.	0.7	13
34	The 3C-6H polytypic transition in SiC as revealed by diffuse x-ray scattering. Applied Physics Letters, 2009, 94, 201904.	1.5	13
35	Kinetics of the 3C-6H polytypic transition in 3C-SiC single crystals: A diffuse X-ray scattering study. Journal of Applied Physics, 2011, 110, .	1.1	13
36	(001) 3C SiC/Ni contact interface: In situ XPS observation of annealing induced Ni <sub>2</sub> Si formation and the resulting barrier height changes. Applied Surface Science, 2017, 400, 6-13.	3.1	13

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37	Aluminium-Silicon as a Melt for the Low Temperature Growth of SiC Crystals. Materials Science Forum, 2001, 353-356, 85-90.	0.3	12
38	Atomic-Step Observations on 6H- and 15R-SiC Polished Surfaces. Materials Science Forum, 2002, 389-393, 729-732.	0.3	12
39	Vapour-liquid-solid mechanism for the growth of SiC homoepitaxial layers by VPE. Journal of Crystal Growth, 2002, 234, 63-69.	0.7	12
40	Characterization of Bulk $\langle 111 \rangle$ 3C-SiC Single Crystals Grown on 4H-SiC by the CF-PVT Method. Materials Science Forum, 2006, 527-529, 99-102.	0.3	12
41	SiC Homoepitaxial Growth at Low Temperature by Vapor-Liquid-Solid Mechanism in Al-Si Melt. Crystal Growth and Design, 2003, 3, 285-287.	1.4	11
42	Electron Back Scattering Diffraction (EBSD) as a Tool for the Investigation of 3C-SiC Nucleation and Growth on 6H or 4H. Materials Science Forum, 2004, 457-460, 387-390.	0.3	11
43	Quantitative analysis of diffuse X-ray scattering in partially transformed 3C-SiC single crystals. Journal of Applied Crystallography, 2010, 43, 867-875.	1.9	11
44	A first step toward bridging silicon carbide crystal properties and physical chemistry of crystal growth. CrystEngComm, 2016, 18, 2119-2124.	1.3	11
45	Vaporization and condensation in the Al <sub>4</sub> C <sub>3</sub> -SiC system. Journal of the European Ceramic Society, 2017, 37, 4475-4482.	2.8	11
46	Silicon carbide. , 2019, , 129-179.		11
47	Effect of the Si Droplet Size on the VLS Growth Mechanism of SiC Homoepitaxial Layers. Materials Science Forum, 2002, 389-393, 287-290.	0.3	10
48	Ge Mediated Surface Preparation for Twin Free 3C-SiC Nucleation and Growth on Low Off-Axis 4H-SiC Substrate. ECS Journal of Solid State Science and Technology, 2014, 3, P285-P292.	0.9	10
49	Growth Mode and Kinetics of Atmospheric Pressure Chemical Vapour Deposition of $\beta$ -SiC on Si(100) Substrate. Materials Science Forum, 1998, 264-268, 227-230.	0.3	9
50	A TEM study of in-grown stacking faults in 3C-SiC layers grown by CF-PVT on 4H-SiC substrates. Physica B: Condensed Matter, 2009, 404, 4749-4751.	1.3	9
51	Characterization of stacking faults in thick 3C-SiC crystals using high-resolution diffuse X-ray scattering. Journal of Crystal Growth, 2008, 310, 982-987.	0.7	8
52	Optical Investigation of Electronic Properties in Bulk and Surface Region of Sublimation-Grown 3C-SiC Crystals. Materials Science Forum, 0, 615-617, 303-306.	0.3	8
53	Critical assessment of birefringence imaging of dislocations in 6H silicon carbide. Journal of Crystal Growth, 2012, 354, 202-207.	0.7	8
54	Electromagnetic Enhancement of Carbon Transport in SiC Solution Growth Process: A Numerical Modeling Approach. Materials Science Forum, 0, 778-780, 71-74.	0.3	8

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55	High-speed Growth and Characterization of Polycrystalline AlN Layers by High Temperature Chemical Vapor Deposition (HTCVD). ECS Transactions, 2009, 25, 323-326.	0.3	7
56	Top Seeded Solution Growth of 3C-SiC Single Crystals. Materials Science Forum, 2009, 615-617, 41-44.	0.3	7
57	Growth and Characterization of Thick Polycrystalline AlN Layers by HTCVD. Journal of the Electrochemical Society, 2011, 158, H328.	1.3	7
58	3C-SiC Heteroepitaxy on Hexagonal SiC Substrates. Materials Science Forum, 2013, 740-742, 257-262.	0.3	7
59	Comparison of the spiral growth modes of silicon-face and carbon-face silicon carbide crystals. Journal of Crystal Growth, 2013, 384, 129-134.	0.7	7
60	Epitaxial graphene morphologies probed by weak (anti)-localization. Journal of Applied Physics, 2013, 113, .	1.1	7
61	A sessile drop approach for studying 4H-SiC/liquid silicon high-temperature interface reconstructions. Journal of Materials Science, 2022, 57, 972-982.	1.7	7
62	Characterization of Thick 2-Inch 4H-SiC Layers Grown by the Continuous Feed-Physical Vapor Transport Method. Materials Science Forum, 2004, 457-460, 91-94.	0.3	6
63	Single-Domain 3C-SiC Epitaxially Grown on 6H-SiC by the VLS Mechanism. Materials Science Forum, 2006, 527-529, 287-290.	0.3	6
64	Polytypic transformations in SiC: Diffuse x-ray scattering and Monte Carlo simulations. Physical Review B, 2013, 88, .	1.1	6
65	Synthesis and Characterization of Al <sub>4</sub> SiC <sub>4</sub> : A <i>New</i> Wide Band Gap Semiconductor Material. Materials Science Forum, 0, 821-823, 974-977.	0.3	6
66	Growth of Thick AlN Layers by High Temperature CVD (HTCVD). Materials Science Forum, 0, 600-603, 1269-1272.	0.3	5
67	Evolution of 3C-SiC islands nucleated from a liquid phase on Si face $\pm$ -SiC substrates. Thin Solid Films, 2010, 518, 4234-4241.	0.8	5
68	Is the Liquid Phase a Viable Approach for Bulk Growth of 3C-SiC?. Materials Science Forum, 2010, 645-648, 67-70.	0.3	5
69	Ge Assisted SiC Epitaxial Growth by CVD on SiC Substrate. Materials Science Forum, 0, 778-780, 187-192.	0.3	5
70	Structural, Electronic and Vibrational Properties of Al <sub>4</sub> C <sub>3</sub> . Physica Status Solidi (B): Basic Research, 2019, 256, 1900037.	0.7	5
71	3C <sup>+</sup> , 4H <sup>+</sup> , and 6H <sup>+</sup> SiC crystal habitus and interfacial behaviours in high temperature Si-based solvents. CrystEngComm, 2020, 22, 3489-3496.	1.3	5
72	Thermochemistry of silicon carbide growth by chemical transport reactions. Journal of Materials Science, 2001, 36, 335-342.	1.7	4

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73	Vapor phase techniques for the fabrication of homoepitaxial layers of silicon carbide: process modeling and characterization. Applied Surface Science, 2003, 212-213, 177-183.	3.1	4
74	Wettability Study of SiC in Correlation with XPS Analysis. Materials Science Forum, 2004, 457-460, 423-426.	0.3	4
75	High temperature processing of poly-SiC substrates from the vapor phase for wafer-bonding. Surface and Coatings Technology, 2006, 201, 4014-4020.	2.2	4
76	High SiC Growth Rate Obtained by Vapour-Liquid-Solid Mechanism. Materials Science Forum, 2007, 556-557, 105-108.	0.3	4
77	Defect-induced polytype transformations in LPE grown SiC epilayers on (111) 3C-SiC seeds grown by VLS on 6H-SiC. Physica B: Condensed Matter, 2009, 404, 4727-4730.	1.3	4
78	Further Evidence of Nitrogen Induced Stabilization of 3C-SiC Polytype during Growth from a Si-Ge Liquid Phase. Materials Science Forum, 0, 645-648, 163-166.	0.3	4
79	Large Area Quasi-Free Standing Monolayer Graphene on 3C-SiC(111). Materials Science Forum, 2012, 717-720, 617-620.	0.3	4
80	Application of an axial next-nearest-neighbor Ising model to the description of Mn+1AX <sub>n</sub> phases. Physical Review B, 2012, 85, .	1.1	4
81	Interface Shape: A Possible Cause of Polytypes Destabilization during Seeded Sublimation Growth of 15R-SiC. Materials Science Forum, 2014, 806, 61-64.	0.3	4
82	Open Issues in SiC Bulk Growth. Materials Science Forum, 2014, 778-780, 3-8.	0.3	4
83	Effect of Facet Occurrence on Polytype Destabilization during Bulk Crystal Growth of SiC by Seeded Sublimation. Materials Science Forum, 2014, 778-780, 13-16.	0.3	4
84	Nitrogen Incorporation during Seeded Sublimation Growth of 4H-SiC and 6H-SiC. Materials Science Forum, 0, 821-823, 60-63.	0.3	4
85	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
86	How to Grow 3C-SiC Single Domain on $\hat{1}\bar{1}$ -SiC(0001) by Vapor-Liquid-Solid Mechanism. Materials Science Forum, 2007, 556-557, 187-190.	0.3	3
87	Improvements of the Continuous Feed-Physical Vapor Transport Technique (CF-PVT) for the Seeded Growth of 3C-SiC Crystals. Materials Science Forum, 2010, 645-648, 63-66.	0.3	3
88	Study of the Spontaneous Nucleation of 3C-SiC Single Crystals Using CF-PVT Technique. Materials Science Forum, 0, 645-648, 55-58.	0.3	3
89	Heavily p-Type Doping of Bulk 6H-SiC and 3C-SiC Grown from Al-Si Melts. Materials Science Forum, 2010, 645-648, 59-62.	0.3	3
90	On Photoelectrical Properties of 6H-SiC Bulk Crystals PVT-Grown on 6H- and 4H-SiC Substrates. Materials Science Forum, 0, 778-780, 305-308.	0.3	3

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91	Macroscopic Approach to the Nucleation and Propagation of Foreign Polytype Inclusions during Seeded Sublimation Growth of Silicon Carbide. <i>Crystal Growth and Design</i> , 2015, 15, 156-163.	1.4	3
92	Effect of Aluminum during the High Temperature Solution Growth of Si-Face 4H-SiC. <i>Materials Science Forum</i> , 0, 858, 37-40.	0.3	3
93	Understanding Al incorporation into 4H-SiC during epitaxy. <i>Journal of Crystal Growth</i> , 2019, 507, 338-343.	0.7	3
94	Single-Domain 3C-SiC Epitaxially Grown on 6H-SiC by the VLS Mechanism. <i>Materials Science Forum</i> , 0, , 287-290.	0.3	3
95	Investigation of Defects in 4H-SiC by Synchrotron Topography, Raman Spectroscopy Imaging and Photoluminescence Spectroscopy Imaging. <i>Materials Science Forum</i> , 2003, 433-436, 265-268.	0.3	2
96	Towards a Continuous Feeding of the PVT Growth Process: an Experimental Investigation. <i>Materials Science Forum</i> , 2003, 433-436, 25-28.	0.3	2
97	Comparison between Various Chemical Systems for the CVD Step in the CF-PVT Crystal Growth Method. <i>Materials Science Forum</i> , 2004, 457-460, 135-138.	0.3	2
98	Gas Fed Top-Seeded Solution Growth of Silicon Carbide. <i>Materials Science Forum</i> , 2006, 527-529, 111-114.	0.3	2
99	In Situ Observation of Mass Transfer in the CF-PVT Growth Process by X-Ray Imaging. <i>Materials Science Forum</i> , 2006, 527-529, 63-66.	0.3	2
100	Comparative Study of Differently Grown 3C-SiC Single Crystals with Birefringence Microscopy. <i>Materials Science Forum</i> , 0, 600-603, 71-74.	0.3	2
101	Influence of the N/Al Ratio in the Gas Phase on the Growth of AlN by High Temperature Chemical Vapor Deposition (HTCVD). <i>Materials Science Forum</i> , 2009, 615-617, 987-990.	0.3	2
102	Nitrogen Doping of 3C-SiC Single Crystals Grown by CF-PVT. <i>Materials Science Forum</i> , 0, 615-617, 45-48.	0.3	2
103	TEM and LTPL Investigations of 3C-SiC Layers Grown by LPE on (100) and (111) 3C-SiC Seeds. <i>Materials Science Forum</i> , 0, 645-648, 383-386.	0.3	2
104	Fabrication of SiC Nanopillars by Inductively Coupled SF <sub>6</sub> /O <sub>2</sub> Plasma. <i>Materials Science Forum</i> , 2012, 711, 66-69.	0.3	2
105	Growth Rate Prediction in SiC Solution Growth Using Silicon as Solvent. <i>Materials Science Forum</i> , 2012, 717-720, 69-72.	0.3	2
106	Diffuse X-ray scattering from partially transformed 3C-SiC single crystals. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2012, 284, 19-22.	0.6	2
107	Experimental Investigation of the Seeding Stage during SiC Solution Growth Using Si and Al-Si Solvents. <i>Materials Science Forum</i> , 2016, 858, 81-84.	0.3	2
108	Monte Carlo Simulations of Electron Transport Characteristics of Ternary Carbide Al <sub>4</sub> SiC <sub>4</sub> . <i>ACS Applied Energy Materials</i> , 2019, 2, 715-720.	2.5	2

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109	Chemical Vapor Deposition of 3C-SiC on [100] Oriented Silicon at Low Temperature &lt; 1200Å°C for Photonic Applications. Materials Science Forum, 0, 1062, 119-124.	0.3	2
110	3C-SiC Pseudosubstrates for the Growth of Cubic GaN. Materials Science Forum, 2000, 338-342, 1467-1470.	0.3	1
111	A Study of HTCVD Renewing of the SiC Polycrystalline Source during the PVT Process. Materials Science Forum, 2003, 433-436, 87-90.	0.3	1
112	Heat Transfer Modeling of a New Crystal Growth Process. Materials Science Forum, 2003, 433-436, 103-106.	0.3	1
113	Growth of AlN and AlN-SiC Solid Solution by Sublimation Method. Materials Science Forum, 2006, 527-529, 1501-1504.	0.3	1
114	Experimental investigation of different configurations for the seeded growth of SiC crystals via a VLS mechanism. Crystal Research and Technology, 2008, 43, 374-380.	0.6	1
115	Structural Characterization of CF-PVT Grown Bulk 3C-SiC. Materials Science Forum, 0, 600-603, 67-70.	0.3	1
116	On the Microstructure and the Polytype Transformation in 3C-SiC Crystals Grown by LPE on (001) Substrates at Different Growth Conditions. , 2010, , .		1
117	Quality Investigation of 3C-SiC Crystals Grown by CF-PVT Technique. Materials Science Forum, 0, 679-680, 20-23.	0.3	1
118	Comparison of Thermodynamic Databases for the Modeling of SiC Growth by PVT. Materials Science Forum, 0, 778-780, 35-38.	0.3	1
119	Spiral Step Dissociation on PVT Grown SiC Crystals. Materials Science Forum, 0, 778-780, 39-42.	0.3	1
120	Nondestructive Evaluation of Photoelectrical Properties of a PVT Grown Bulk 15R-SiC Crystal. Materials Science Forum, 2014, 806, 65-69.	0.3	1
121	Interaction between Vapor Species and Graphite Crucible during the Growth of SiC by PVT. Materials Science Forum, 2014, 778-780, 31-34.	0.3	1
122	SiC/Al <sub>4</sub> SiC <sub>4</sub> -Based Heterostructure Transistors. ACS Applied Electronic Materials, 2020, 2, 3001-3007.	2.0	1
123	In Situ Interferometry for ppm-Order Solubility Analysis at High Temperatures: A Case Study of Carbon Solubility in Molten Silicon. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2021, 52, 2619.	1.0	1
124	In Situ SiC Feeding by Chemical Vapor Deposition for Bulk Growth. Materials Science Forum, 2004, 457-460, 139-142.	0.3	0
125	Silicon Carbide Growth: C/Si Ratio Evaluation and Modeling. Materials Research Society Symposia Proceedings, 2006, 911, 2.	0.1	0
126	Mechanism of Orientation Selection for the Growth Of (111) Twin Boundary Free 3C-SiC Single Crystals on Hexagonal Basis. Materials Science Forum, 2007, 556-557, 199-202.	0.3	0

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127	Silicon Carbide Growth:C/Si Ratio Evaluation and Modeling. Materials Science Forum, 0, 600-603, 83-88.	0.3	0
128	Dislocation-Induced Birefringence in Silicon Carbide. Materials Science Forum, 2009, 615-617, 271-274.	0.3	0
129	Effects of Temperature and Heating Rate on the Precipitation of 3C-SiC Islands on 4H-SiC(0001) from a Liquid Phase. Materials Science Forum, 2009, 615-617, 193-196.	0.3	0
130	Vapor Phase vs. Liquid Phase: What is the Best Choice for the Growth of Bulk 3C-SiC Crystals?. , 2010, , .		0
131	Optical Investigation of Defect Filtering Effects in Bulk 3C-SiC Crystals Grown by the CF-PVT Method Using a Necking Technique. Materials Science Forum, 2011, 679-680, 169-172.	0.3	0
132	On the Stability of 3C-SiC Single Crystals at High Temperatures. Materials Science Forum, 0, 717-720, 493-496.	0.3	0
133	Identification of the Basal Plane Component of the Burgers Vector of Small Dislocations in 6H SiC Using Birefringence Microscopy. Materials Science Forum, 0, 717-720, 331-334.	0.3	0
134	Absence of Back Stress Effect in the PVT Growth of 6H Silicon Carbide. Materials Science Forum, 0, 740-742, 48-51.	0.3	0
135	Photoelectrical Parameters of a PVT Grown Bulk 15R-SiC Crystal at Different Stages of Growth. Materials Science Forum, 0, 821-823, 253-256.	0.3	0
136	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
137	Revisiting the Site-Competition Doping of 4H-SiC: Cases of N and Al. Materials Science Forum, 0, 1004, 96-101.	0.3	0