Andreas Fissel

List of Publications by Year
in descending order

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142	2,657	218381	223531
papers	citations	26 h-index	46 g-index

146	146	146	1535
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Integration of MoSe₂ Monolayers with Epitaxial High-Îš Gd₂O₃ Substrate: Implication for High-Quality Emission and Modulation of Excitonic Quasiparticles. ACS Applied Nano Materials, 2022, 5, 9567-9575.	2.4	4
2	Formation of self-assembled Gd₂O₃nanowire-like structures during epitaxial growth on Si(001). RSC Advances, 2021, 11, 17526-17536.	1.7	2
3	Corrigendum to â€œInfluence of (7â€¯Ã—â€¯7)â€“â€œ1â€¯Ã—â€¯1â€•phase transition on step-free area formation in molecular beam epitaxial growth of Si on Si(1â€¯1â€¯1)â€• [J. Cryst. Growth 425 (2015) 154â€“157]. Journal of Crystal Growth, 2019, 524, 125155.	1.7	0
4	Growth and Dielectric Properties of Monoclinic Gd2O3 on Si(001). ECS Transactions, 2019, 93, 57-60.	0.3	3
5	Influence of nanostructure formation on the crystal structure and morphology of epitaxially grown Gd2O3 on Si(001). Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2019, 75, 59-70.	0.5	5
6	Epitaxial lanthanide oxide thin films on Si for high-k gate dielectric application: Growth optimization and defect passivation. Journal of Materials Research, 2017, 32, 699-716.	1.2	9
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19	Epitaxial Gd2O3 on strained Si1âˆ’xGex layers for next generation complementary metal oxide semiconductor device application. Applied Physics Letters, 2013, 103, 153501.	1.5	8
20	Investigation of band offsets and direct current leakage properties of nitrogen doped epitaxial Gd2O3 thin films on Si. Journal of Applied Physics, 2013, 113, 184108.	1.1	6
21	Conduction and material transport phenomena of degradation in electrically stressed ultra low-k dielectric before breakdown. Journal of Applied Physics, 2012, 112, .	1.1	12
22	Preparation of large step-free mesas on Si(111) by molecular beam epitaxy. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 2050-2053.	0.8	4
23	Towards controlled molecular beam epitaxial growth of artificially stacked Si: Study of boron adsorption and surface segregation on Si(111). Journal of Crystal Growth, 2011, 323, 144-149.	0.7	1
24	Impact of carbon incorporation into epitaxial Gd2O3 thin films on silicon: An experimental study on electrical properties. Applied Physics Letters, 2011, 99, .	1.5	8
25	Ultraviolet photoelectron spectroscopic study of boron adsorption and surface segregation on Si(111). Physical Review B, 2011, 83, .	1.1	9
26	Enhanced Electrical Properties of Carbon Doped Epitaxial Gd2O3 Thin Films on Si Substrates. ECS Transactions, 2011, 41, 101-107.	0.3	2
27	Epitaxial multi-component rare-earth oxide: A high-k material with ultralow mismatch to Si. Materials Letters, 2010, 64, 866-868.	1.3	8
28	Single-crystalline Si grown on single-crystalline Gd2O3 by modified solid-phase epitaxy. Thin Solid Films, 2010, 518, 2546-2550.	0.8	21
29	Epitaxial growth and thermal stability of silicon layers on crystalline gadolinium oxide. Vacuum, 2010, 85, 523-526.	1.6	11
30	Role of boron and (âˆš3â€‰Ã—â€‰âˆš3)â€B surface defects on the growth mode of Si on Si(111): A photoemission and electron diffraction study. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 245-253.	0.8	3
31	Effect of Ge passivation on interfacial properties of crystalline Gd2O3 thin films grown on Si substrates. Applied Physics Letters, 2010, 96, .	1.5	12
32	Si Nanostructures Embedded into Crystalline Rare Earth Oxide Matrix for Opto and Nano Electronic Devices. , 2010, , .		0
33	Semiconductor nanostructures in crystalline rare earth oxide for nanoelectronic device applications. , 2010, , .		0
34	Effect of domain boundaries on dielectric properties of lanthanide oxide based gate dielectrics. , 2009, , .		0
35	Size-dependent interface band alignment between Si nanocrystals and lattice-matched Gd2O3. Applied Physics Letters, 2009, 95, 102107.	1.5	12
36	Encapsulated solid phase epitaxy of a Ge quantum well embedded in an epitaxial rare earth oxide. Nanotechnology, 2009, 20, 475604.	1.3	11

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37	Crystal structure and strain state of molecular beam epitaxial grown Gd₂O₃on Si(1â€‰1â€‰1) substrates: a diffraction study. Semiconductor Science and Technology, 2009, 24, 045021.	1.0	26
38	Epitaxial Lanthanide Oxide based Gate Dielectrics. Materials Research Society Symposia Proceedings, 2009, 1155, 1.	0.1	0
39	Integration of low dimensional crystalline Si into functional epitaxial oxides. Microelectronics Journal, 2009, 40, 633-637.	1.1	5
40	Epitaxial growth of Gd2O3 on surfactant-mediated grown Ge films on Si(001) substrates. Solid-State Electronics, 2009, 53, 833-836.	0.8	11
41	Influence of boron on the initial stages of Si molecular beam epitaxy on Si(111) studied by reflection high-energy electron diffraction. Surface Science, 2009, 603, 477-481.	0.8	4
42	Driving mechanisms for the formation of nanocrystals by annealing of ultrathin Ge layers in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>SiO</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:msu Physical Review B, 2009, 79, .	1.1	21
43	Structural and strain relaxation study of epitaxially grown nano-thick Nd<inf>2</inf>O<inf>3</inf>/Si(111) heterostructure. , 2009, , .		1
44	Growth of epitaxial lanthanide oxide based gate dielectrics. , 2009, , .		0
45	Development of Multi-Step Procedure for Epitaxial Growth of Crystalline Silicon on Rare-Earth-Metal Oxide for SOI-Applications. E-Journal of Surface Science and Nanotechnology, 2009, 7, 405-408.	0.1	0
46	Introducing crystalline rareâ€earth oxides into Si technologies. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 695-707.	0.8	81
47	Electronic structure at interfaces of cubic Gd2O3 with embedded Si nanocrystals. Microelectronic Engineering, 2008, 85, 2382-2384.	1.1	3
48	Silicon in functional epitaxial oxides: A new group of nanostructures. Microelectronics Journal, 2008, 39, 512-517.	1.1	11
49	Si-nanoclusters embedded into epitaxial rare earth oxides: Potential candidate for nonvolatile memory applications. Microelectronic Engineering, 2008, 85, 2350-2353.	1.1	8
50	Integration of low dimensional crystalline Si into functional epitaxial oxides for next generation solar cell application. , 2008, , .		0
51	Molecular beam epitaxial growth of Si on heavily boron-doped Si(111) surface: From initial stages to the growth of Si polytypes. Optoelectronic and Microelectronic Materials and Devices (COMMAD), Conference on, 2008, , .	0.0	0
52	Embedding silicon nanoclusters into epitaxial rare earth oxide for nonvolatile memory applications. Semiconductor Science and Technology, 2008, 23, 085015.	1.0	6
53	Observation of near interface oxide traps in single crystalline Nd2O3 on Si(111) by quasistatic C-V method. Applied Physics Letters, 2008, 93, .	1.5	6
54	Band offsets between Si and epitaxial rare earth sesquioxides (RE2O3, RE=La,Nd,Gd,Lu): Effect of 4f-shell occupancy. Applied Physics Letters, 2008, 93, 192105.	1.5	18

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55	Effective passivation of slow interface states at the interface of single crystalline Gd2O3 and Si(100). Applied Physics Letters, 2008, 92, .	1.5	34
56	Effect of domain boundaries on the electrical properties of crystalline Gd2O3 thin films. Applied Physics Letters, 2008, 93, .	1.5	18
57	Integration of functional epitaxial oxides into silicon: From high-K application to nanostructures. Journal of Vacuum Science & Technology B, 2007, 25, 1039.	1.3	11
58	Influence of interface layer composition on the electrical properties of epitaxial Gd2O3 thin films for high-K application. Applied Physics Letters, 2007, 90, 113508.	1.5	61
59	Crystalline Rare-Earth Oxides as High-k Materials for Future CMOS Technologies. ECS Transactions, 2007, 11, 287-297.	0.3	3
60	Epitaxial multi-component rare earth oxide for high-K application. Thin Solid Films, 2007, 515, 6512-6517.	0.8	19
61	Integration of functional epitaxial oxides into silicon: from high-k application to nanostructures. Microelectronic Engineering, 2007, 84, 2222-2225.	1.1	15
62	Engineering the interface between epitaxial lanthanide oxide thin films and Si substrates: a route towards tuning the electrical properties. Microelectronic Engineering, 2007, 84, 2282-2285.	1.1	2
63	Fabrication of single-crystalline insulator/Si/insulator double-barrier nanostructure using cooperative vaporâ€“solid-phase epitaxy. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 38, 6-10.	1.3	4
64	Investigation of the electronic structure at interfaces of crystalline and amorphous Gd2O3 thin layers with silicon substrates of different orientations. Applied Physics Letters, 2007, 90, 252101.	1.5	59
65	0.86-nm CET Gate Stacks With Epitaxial$hboxGd_2hboxO_3$High-kDielectrics and FUSI NiSi Metal Electrodes. IEEE Electron Device Letters, 2006, 27, 814-816.	2.2	43
66	Impact of Si substrate orientations on electrical properties of crystalline Gd2O3 thin films for high-K application. Applied Physics Letters, 2006, 89, 143514.	1.5	54
67	Formation of twinning-superlattice regions by artificial stacking of Si layers. Journal of Crystal Growth, 2006, 290, 392-397.	0.7	25
68	CMOS integration of epitaxial Gd2O3 high-k gate dielectrics. Solid-State Electronics, 2006, 50, 979-985.	0.8	41
69	Growth and characterization of crystalline gadolinium oxide on silicon carbide for high- application. Superlattices and Microstructures, 2006, 40, 551-556.	1.4	28
70	Formation of Si twinning-superlattice: First step towards Si polytype growth. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2006, 134, 138-141.	1.7	14
71	Fabrication of single-crystalline insulatorâˆ•Siâˆ•insulator nanostructures. Journal of Vacuum Science & Technology B, 2006, 24, 2041.	1.3	23
72	Characterization of crystalline rare-earth oxide high-K dielectrics grown by molecular beam epitaxy on silicon carbide. Journal of Vacuum Science & Technology B, 2006, 24, 2115.	1.3	29

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73	Interface Engineering During Epitaxial Growth of High-K Lanthanide Oxides on Silicon. Materials Research Society Symposia Proceedings, 2006, 917, 1.	0.1	1
74	Novel Approach for Fabrication of Single-Crystalline Insulator/Si/Insulator Nanostructures. Materials Research Society Symposia Proceedings, 2006, 928, 1.	0.1	1
75	Cooperative solid-vapor-phase epitaxy: An approach for fabrication of single-crystalline insulator/Si/insulator nanostructures. Applied Physics Letters, 2006, 88, 153105.	1.5	34
76	Interface formation during molecular beam epitaxial growth of neodymium oxide on silicon. Journal of Applied Physics, 2006, 99, 074105.	1.1	90
77	Crystalline ternary rare earth oxide with capacitance equivalent thickness below 1nm for high-K application. Applied Physics Letters, 2006, 88, 172107.	1.5	46
78	Impact of oxygen supply during growth on the electrical properties of crystalline Gd2O3 thin films on Si(001). Applied Physics Letters, 2006, 88, 152905.	1.5	94
79	INTERFACE FORMATION DURING EPITAXIAL GROWTH OF BINARY METAL OXIDES ON SILICON. , 2006, , 361-372.		2
80	Epitaxial growth of non-cubic silicon. Microelectronics Journal, 2005, 36, 506-509.	1.1	3
81	MBE growth and properties of epitaxial metal oxides for high- dielectrics. Journal of Crystal Growth, 2005, 278, 18-24.	0.7	20
82	Molecular Beam Epitaxy of Semiconductor Nanostructures Based on SiC. Materials Science Forum, 2005, 483-485, 163-168.	0.3	2
83	Quantum structures in SiC. Applied Surface Science, 2003, 212-213, 820-825.	3.1	15
84	Artificially layered heteropolytypic structures based on SiC polytypes: molecular beam epitaxy, characterization and properties. Physics Reports, 2003, 379, 149-255.	10.3	165
85	Si ADSORPTION ON SiC(0001) SURFACES. Surface Review and Letters, 2003, 10, 849-860.	0.5	10
86	Towards understanding epitaxial growth of alternative high-K dielectrics on Si(001): Application to praseodymium oxide. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 1765.	1.6	65
87	Towards Quantum Structures in SiC. Materials Science Forum, 2002, 389-393, 737-742.	0.3	14
88	Photoemission andab initiotheoretical study of interface and film formation during epitaxial growth and annealing of praseodymium oxide on Si(001). Journal of Applied Physics, 2002, 91, 8986-8991.	1.1	101
89	Structure of SiC-Quantum Wells Studied by TEM and CBED. Crystal Research and Technology, 2002, 37, 466.	0.6	11
90	Relationship between growth conditions, thermodynamic properties and crystal structure of SiC. Solid State Sciences, 2001, 3, 1273-1275.	0.8	6

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91	On the nature of the D1-defect center in SiC: A photoluminescence study of layers grown by solid-source molecular-beam epitaxy. Applied Physics Letters, 2001, 78, 2512-2514.	1.5	39
92	MBE growth and properties of SiC multi-quantum well structures. Applied Surface Science, 2001, 184, 37-42.	3.1	80
93	MBE growth of Si on SiC(0001): from superstructures to islands. Journal of Crystal Growth, 2001, 227-228, 777-781.	0.7	12
94	High-quality SiC epitaxial layers and low-dimensional heteropolytypic SiC structures grown by solid-source MBE. Journal of Crystal Growth, 2001, 227-228, 805-810.	0.7	8
95	Epitaxial Growth and Properties of SiC Layers Grown on Î±-SiC(0001) by Solid-Source MBE: A Photoluminescence Study. Materials Science Forum, 2001, 353-356, 409-412.	0.3	0
96	Interplay of Surface Structure, Bond Stacking and Heteropolytypic Growth of SiC. Materials Science Forum, 2001, 353-356, 211-214.	0.3	6
97	Polytype and Polarity of Silicon Carbide and Aluminium Nitride Films Growing by MBE: A Nondestructive Identification. Materials Science Forum, 2001, 353-356, 227-230.	0.3	6
98	Native defects and complexes in SiC. Journal of Physics Condensed Matter, 2001, 13, 9027-9037.	0.7	18
99	Thermodynamic considerations of the epitaxial growth of SiC polytypes. Journal of Crystal Growth, 2000, 212, 438-450.	0.7	85
100	MBE-growth of heteropolytypic low-dimensional structures of SiC. Thin Solid Films, 2000, 380, 89-91.	0.8	10
101	Stranskiâ€“Krastanov growth of Si on SiC(0001). Thin Solid Films, 2000, 380, 42-45.	0.8	19
102	Si/Ge-nanocrystals on SiC(0001). Thin Solid Films, 2000, 380, 86-88.	0.8	13
103	MBE growth kinetics of Si on heavily-doped Si(111):P: a self-surfactant effect. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2000, 73, 163-167.	1.7	6
104	Advances in the molecular-beam epitaxial growth of artificially layered heteropolytypic structures of SiC. Applied Physics Letters, 2000, 77, 2418-2420.	1.5	49
105	Thermodynamical Consideration of the Epitaxial Growth of SiC Polytypes. Materials Science Forum, 2000, 338-342, 209-212.	0.3	4
106	Molecular Beam Epitaxial Growth of Heteropolytypic and Low-Dimensional Structures of SiC. Materials Science Forum, 2000, 338-342, 205-208.	0.3	1
107	Growth mechanisms of SiC on Î±-SiC(0001) prepared by solid-source molecular beam epitaxy. FestkÃ¶rperprobleme, 1999, , 87-100.	0.7	11
108	A transmission electron microscopy investigation of SiC films grown on SiC substrates by solid-source molecular beam epitaxy. Journal of Materials Research, 1999, 14, 3226-3236.	1.2	5

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109	Growth of atomically smooth AlN films with a 5:4 coincidence interface on Si(111) by MBE. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1999, 59, 84-87.	1.7	27
110	Epitaxial growth of SiC-heterostructures on Î±-SiC(0001) by solid-source MBE. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1999, 61-62, 139-142.	1.7	8
111	X-ray investigations of MBE-grown heteroepitaxial SiC layers on 6Hâ€“SiC substrates. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1999, 61-62, 179-182.	1.7	10
112	Molecular-beam epitaxy of a strongly lattice-mismatched heterosystem AlN/Si(111) for application in SAW devices. Semiconductors, 1999, 33, 1241-1246.	0.2	21
113	Investigation of two-dimensional growth of AlN(0001) on Si(111) by plasma-assisted molecular beam epitaxy. Journal of Crystal Growth, 1999, 200, 45-54.	0.7	32
114	Epitaxial growth of AlN and GaN on Si(111) by plasma-assisted molecular beam epitaxy. Journal of Crystal Growth, 1999, 201-202, 359-364.	0.7	33
115	Mechanisms of homo- and heteroepitaxial growth of SiC on Î±-SiC(0001) by solid-source molecular beam epitaxy. Journal of Electronic Materials, 1999, 28, 206-213.	1.0	12
116	MBE growth of quantum-size Si-dots on SiC(0001) monitored by RHEED. Thin Solid Films, 1998, 318, 88-92.	0.8	13
117	Model of the epitaxial growth of SiC-polytypes under surface-stabilized conditons. Journal of Electronic Materials, 1998, 27, 848-852.	1.0	26
118	Polytype and Surface Characterization of Silicon Carbide Thin Films. Materials Science Forum, 1998, 264-268, 355-358.	0.3	8
119	Observation of 3-Fold Periodicity in 3C-SiC Layers Grown by MBE. Materials Science Forum, 1998, 264-268, 259-264.	0.3	3
120	Improved Epitaxy of Cubic SiC Thin Films on Si(111) by Solid-Source MBE. Materials Science Forum, 1998, 264-268, 255-258.	0.3	12
121	Theory of Si-Rich SiC Surfaces: Consequences for Epitaxial Growth. Materials Science Forum, 1998, 264-268, 339-342.	0.3	2
122	A transmission electron microscopy investigation of SiC films grown on Si(111) substrates by solid-source molecular beam epitaxy. Journal of Materials Research, 1998, 13, 3571-3579.	1.2	8
123	Investigations of Stranski-Krastanov growth kinetics of Si-dots on 6H-SiC(0001). Applied Physics Letters, 1997, 71, 2981-2983.	1.5	21
124	Hexagonal and cubic SiC thin films on SiC deposited by solid source MBE. Diamond and Related Materials, 1997, 6, 1316-1320.	1.8	10
125	RHEED investigations of MBE-growth kinetics of Si on Si(111) and SiC on SiC(100). Surface Science, 1997, 383, 370-377.	0.8	12
126	Investigation of growth conditions for epitaxial growth of SiC on Si in the solid-source molecular beam epitaxy. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1997, 46, 164-167.	1.7	5

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127	Influence of growth conditions on the growth mode and layer structure in MBE-growth of SiC on SiC(0001). Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1997, 46, 324-328.	1.7	6
128	Growth of columnar aluminum nitride layers on Si(111) by molecular beam epitaxy. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1997, 50, 228-232.	1.7	27
129	Growth of 6Hâ€“SiC on 6Hâ€“SiC(0001) by migration enhanced epitaxy controlled to an atomic level using surface superstructures. Applied Physics Letters, 1996, 68, 1204-1206.	1.5	31
130	Structure of SiC films grown on Si(111) and (110) substrates by solid-source molecular beam epitaxy. Acta Crystallographica Section A: Foundations and Advances, 1996, 52, C471-C471.	0.3	0
131	Structure of SiC films grown on Si(111) and (110) substrates by solid-source molecular beam epitaxy. Acta Crystallographica Section A: Foundations and Advances, 1996, 52, C585-C585.	0.3	0
132	Preparation of SiC films by solid state source evaporation. Thin Solid Films, 1995, 258, 64-66.	0.8	6
133	Epitaxial growth of SiC thin films on Si-stabilized Î±-SiC(0001) at low temperatures by solid-source molecular beam epitaxy. Journal of Crystal Growth, 1995, 154, 72-80.	0.7	50
134	Lowâ€temperature growth of SiC thin films on Si and 6Hâ€“SiC by solidâ€source molecular beam epitaxy. Applied Physics Letters, 1995, 66, 3182-3184.	1.5	225
135	X-ray, transmission electron microscopy and atomic force microscopy characterization of SiC thin films on Si(111). Journal Physics D: Applied Physics, 1995, 28, 759-763.	1.3	4
136	Deformation characteristics and real structure around indents on {111}A-surfaces of II?VI solid solutions. Journal of Materials Science: Materials in Electronics, 1992, 3, 147-156.	1.1	11
137	Microhardness of Hg1â^'xCdxTe and Hg1â^'xZnxTe. Crystal Research and Technology, 1990, 25, 89-95.	0.6	17
138	Vickers indentation hardness of Hg1â^'xCdxTe. Crystal Research and Technology, 1989, 24, 557-565.	0.6	15
139	Microhardness of (Hg,Cd)Te. Journal of Crystal Growth, 1988, 86, 502-505.	0.7	21
140	Epitaxial praseodymium oxide: a new high-k dielectric. , 0, , .		4
141	Molecular Beam Epitaxy of Rare-Earth Oxides. , 0, , 101-114.		14
142	Interfacial layer formation during the growth of Gd2O3 on Si(001) and its thermal stability. Semiconductor Science and Technology, 0, , .	1.0	1