

Alain C Diebold

List of Publications by Year in descending order

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44
all docs

44
docs citations

44
times ranked

904
citing authors

#	ARTICLE	IF	CITATIONS
1	Guest Editorial Process-Level Machine Learning Applications in Semiconductor Manufacturing. IEEE Transactions on Semiconductor Manufacturing, 2022, 35, 155-157.	1.7	0
2	Ferroelectric Phase Content in 7-nm Hf _{1-x} Zr _x O ₂ Thin Films Determined by X-Ray Based Methods. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2100024.	1.8	6
3	Optical second harmonic generation from silicon (100) crystals with process tailored surface and embedded silver nanostructures for silicon nonlinear nanophotonics. Journal of Applied Physics, 2020, 128, 165106.	2.5	6
4	Nondestructive characterization of nanoscale subsurface features fabricated by selective etching of multilayered nanowire test structures using Mueller matrix spectroscopic ellipsometry based scatterometry. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2020, 38, .	1.2	11
5	Quantifying non-centrosymmetric orthorhombic phase fraction in 10-nm ferroelectric Hf _{0.5} Zr _{0.5} O ₂ films. Applied Physics Letters, 2020, 117, .	3.3	14
6	Structural Correlation of Ferroelectric Behavior in Mixed Hafnia-Zirconia High-k Dielectrics for FeRAM and NCFET Applications. MRS Advances, 2019, 4, 545-551.	0.9	8
7	Perspective: Optical measurement of feature dimensions and shapes by scatterometry. APL Materials, 2018, 6, .	5.1	34
8	Fermi Level Manipulation through Native Doping in the Topological Insulator Bi ₂ Se ₃ . ACS Nano, 2018, 12, 6310-6318.	14.6	37
9	Rapid optical determination of topological insulator nanoplate thickness and oxidation. AIP Advances, 2017, 7, .	1.3	3
10	Atomic layer deposited ultrathin metal nitride barrier layers for ruthenium interconnect applications. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	2.1	18
11	Role of Ge and Si substrates in higher-k tetragonal phase formation and interfacial properties in cyclical atomic layer deposition-anneal Hf _{1-x} Zr _x O ₂ /Al ₂ O ₃ thin film stacks. Journal of Applied Physics, 2016, 120, 125304.	2.5	11
12	Modeling ellipsometric measurement of three-dimensional structures with rigorous coupled wave analysis and finite element method simulations. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2016, 15, 044003.	0.9	6
13	Surface oxidation of the topological insulator Bi ₂ Se ₃ . Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	2.1	41
14	Higher-k Tetragonal Phase Stabilization in Atomic Layer Deposited Hf _{1-x} Zr _x O ₂ (<math>0 < x < 1</math>) Thin Films on Al ₂ O ₃ Passivated Epitaxial-Ge. MRS Advances, 2016, 1, 269-274.	0.9	4
15	Optical critical dimension metrology for directed self-assembly assisted contact hole shrink. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2016, 15, 014004.	0.9	17
16	Pulsed-N ₂ assisted growth of 5-20 nm thick W films. AIP Advances, 2015, 5, .	1.3	4
17	Mueller matrix optical scatterometry of Si fins patterned using directed self-assembly block copolymer line arrays. , 2014, , .		3
18	Measurement of periodicity and strain in arrays of single crystal silicon and pseudomorphic Si _{1-x} Ge _x /Si fin structures using x-ray reciprocal space maps. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2014, 32, 021804.	1.2	12

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19	Enhancing one dimensional sensitivity with plasmonic coupling. Optics Express, 2014, 22, 26246.	3.4	10
20	Engineering crystallinity of atomic layer deposited gate stacks containing ultrathin HfO ₂ and a Ti-based metal gate: Effects of postmetal gate anneal and integration schemes. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2014, 32, 03D122.	1.2	1
21	Optical properties of pseudomorphic Ge _{1-x} Sn _x (x=0 to 0.11) alloys on Ge(001). Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2014, 32, .	1.2	13
22	Optical second-harmonic generation induced by electric current in graphene on Si and SiC substrates. Physical Review B, 2014, 89, .	3.2	64
23	Fabrication of 5-20 nm thick W films. AIP Advances, 2014, 4, .	1.3	21
24	Thickness and Rotational Effects in Simulated HRTEM Images of Graphene on Hexagonal Boron Nitride. Microscopy and Microanalysis, 2014, 20, 1753-1763.	0.4	3
25	Multi-technique x-ray and optical characterization of crystalline phase, texture, and electronic structure of atomic layer deposited Hf _{1-x} Zr _x O ₂ gate dielectrics deposited by a cyclical deposition and annealing scheme. Journal of Applied Physics, 2013, 113, .	2.5	14
26	Semiconductor Manufacturing. , 2013, , 121-132.		2
27	Optical and structural characterization of thermal oxidation effects of erbium thin films deposited by electron beam on silicon. Journal of Applied Physics, 2012, 111, .	2.5	24
28	Texturing and Tetragonal Phase Stabilization of ALD Hf _x Zr _{1-x} O ₂ Using a Cyclical Deposition and Annealing Scheme. ECS Transactions, 2012, 45, 411-420.	0.5	13
29	Effects of stress on the dielectric function of strained pseudomorphic Si _{1-x} Ge _x alloys from 0 to 75% Ge grown on Si (001). Journal of Applied Physics, 2012, 112, .	2.5	19
30	Optical and structural characterization of epitaxial graphene on vicinal 6H-SiC(0001) on Si by spectroscopic ellipsometry, Auger spectroscopy, and STM. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2012, 30, .	1.2	21
31	Comparison of methods to determine bandgaps of ultrathin HfO ₂ films using spectroscopic ellipsometry. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2011, 29, .	2.1	34
32	Advances in CD-Metrology (CD-SAXS, Mueller Matrix based Scatterometry, and SEM). AIP Conference Proceedings, 2011, , .	0.4	6
33	Formation of optical barriers with excellent thermal stability in single-crystal sapphire by hydrogen ion implantation and thermal annealing. Applied Physics Letters, 2011, 99, .	3.3	17
34	Effects of Hydrogen Ion Implantation and Thermal Annealing on Structural and Optical Properties of Single-crystal Sapphire.. Materials Research Society Symposia Proceedings, 2011, 1354, 97.	0.1	3
35	A Path Toward Non-Destructive 3D Metrology for Through-Silicon Vias. International Symposium on Microelectronics, 2011, 2011, 000017-000024.	0.0	5
36	Graphene metrology and devices. International Journal of Materials Research, 2010, 101, 175-181.	0.3	1

#	ARTICLE	IF	CITATIONS
37	Systematic study of the effect of La ₂ O ₃ incorporation on the flatband voltage and Si band bending in the TiN/HfO ₂ /SiO ₂ /p-Si stack. Journal of Applied Physics, 2010, 108, .	2.5	14
38	An Optimized 300mm BCB Wafer Bonding Process for 3D Integration. Materials Research Society Symposia Proceedings, 2010, 1249, 1.	0.1	0
39	The ITRS metrology roadmap. , 2009, , .		4
40	Spectroscopic Ellipsometry Characterization of High-k films on SiO ₂ /Si. , 2009, , .		0
41	Photoreflectance Spectroscopic Characterization of Si with SiO ₂ and HfO ₂ Dielectric Layers. , 2009, , .		3
42	Survey of characterization and metrology for nanoelectronics. , 2008, , .		0