Wilfried Vandervorst

List of Publications by Year
in descending order

55	1,484	304743	315739
papers	citations	22 h-index	38 g-index

57	57	57	2277
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Imaging the Three-Dimensional Conductive Channel in Filamentary-Based Oxide Resistive Switching Memory. Nano Letters, 2015, 15, 7970-7975.	9.1	165
2	Cellulose Nanofiber Paper as an Ultra Flexible Nonvolatile Memory. Scientific Reports, 2014, 4, 5532.	3.3	122
3	Evolution of metastable phases in silicon during nanoindentation: mechanism analysis and experimental verification. Nanotechnology, 2009, 20, 305705.	2.6	109
4	Scanning spreading resistance microscopy and spectroscopy for routine and quantitative two-dimensional carrier profiling. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2002, 20, 471.	1.6	99
5	Plasma-Enhanced Atomic Layer Deposition of Two-Dimensional WS₂ from WF₆, H₂ Plasma, and H₂S. Chemistry of Materials, 2017, 29, 2927-2938.	6.7	74
6	Controlled Sulfurization Process for the Synthesis of Large Area MoS₂ Films and MoS₂/WS₂ Heterostructures. Advanced Materials Interfaces, 2016, 3, 1500635.	3.7	61
7	Two-Dimensional Crystal Grain Size Tuning in WS₂ Atomic Layer Deposition: An Insight in the Nucleation Mechanism. Chemistry of Materials, 2018, 30, 7648-7663.	6.7	57
8	One- and two-dimensional carrier profiling in semiconductors by nanospreading resistance profiling. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1996, 14, 380.	1.6	56
9	Direct Probing of the Dielectric Scavenging-Layer Interface in Oxide Filamentary-Based Valence Change Memory. ACS Applied Materials & Interfaces, 2017, 9, 10820-10824.	8.0	50
10	Progress towards a physical contact model for scanning spreading resistance microscopy. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2003, 102, 132-137.	3.5	47
11	Evaluation of the electrical contact area in contact-mode scanning probe microscopy. Journal of Applied Physics, 2015, 117, .	2.5	46
12	Nanoscopic structural rearrangements of the Cu-filament in conductive-bridge memories. Nanoscale, 2016, 8, 13915-13923.	5.6	44
13	Nucleation and growth mechanisms of Al2O3 atomic layer deposition on synthetic polycrystalline MoS2. Journal of Chemical Physics, 2017, 146, 052810.	3.0	41
14	RRAMs based on anionic and cationic switching: a short overview. Physica Status Solidi - Rapid Research Letters, 2014, 8, 501-511.	2.4	38
15	Dopant, composition and carrier profiling for 3D structures. Materials Science in Semiconductor Processing, 2017, 62, 31-48.	4.0	36
16	High-throughput ion beam analysis at imec. Nuclear Instruments & Methods in Physics Research B, 2017, 406, 25-29.	1.4	31
17	Mesoscopic physical removal of material using sliding nano-diamond contacts. Scientific Reports, 2018, 8, 2994.	3.3	30
18	Nucleation mechanism during WS2 plasma enhanced atomic layer deposition on amorphous Al2O3 and sapphire substrates. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	2.1	30

#	Article	IF	Citations
19	Ge_{1-x}Sn_xMaterials: Challenges and Applications. ECS Journal of Solid State Science and Technology, 2013, 2, N35-N40.	1.8	29
20	MoS₂ Functionalization with a Sub-nm Thin SiO₂ Layer for Atomic Layer Deposition of High-Î¹ Dielectrics. Chemistry of Materials, 2017, 29, 6772-6780.	6.7	27
21	Spinâ€seeding approach for diamond growth on large area siliconâ€wafer substrates. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1659-1663.	1.8	26
22	Scanning probe microscopy as a scalpel to probe filament formation in conductive bridging memory devices. Microelectronic Engineering, 2014, 120, 67-70.	2.4	26
23	Nucleation and growth mechanism of 2D SnS ₂ by chemical vapor deposition: initial 3D growth followed by 2D lateral growth. 2D Materials, 2018, 5, 035006.	4.4	23
24	Non-destructive characterization of extended crystalline defects in confined semiconductor device structures. Nanoscale, 2018, 10, 7058-7066.	5.6	22
25	New aspects of nanopotentiometry for complementary metalâ€“oxideâ€“semiconductor transistors. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 586.	1.6	21
26	Conductive-AFM tomography for 3D filament observation in resistive switching devices. , 2013, , .		19
27	Outwitting the series resistance in scanning spreading resistance microscopy. Ultramicroscopy, 2016, 161, 59-65.	1.9	14
28	Evolution of phosphorus-vacancy clusters in epitaxial germanium. Journal of Applied Physics, 2019, 125, .	2.5	13
29	Chemical vapor deposition of monolayer-thin WS2 crystals from the WF6 and H2S precursors at low deposition temperature. Journal of Chemical Physics, 2019, 150, 104703.	3.0	11
30	Potential sources of compositional inaccuracy in the atom probe tomography of InxGa1-xAs. Ultramicroscopy, 2020, 210, 112918.	1.9	10
31	Electrical probing of Bâ€doped diamond seeds embedded into the interfacial layer of a conductive diamond film. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 2284-2289.	1.8	9
32	Suppression of boron incorporation at the early growth phases of boronâ€doped diamond thin films. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2595-2599.	1.8	9
33	Widthâ€Dependent Sheet Resistance of Nanometerâ€Wide Si Fins as Measured with Micro Fourâ€Point Probe. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700857.	1.8	7
34	Understanding the effect of confinement in scanning spreading resistance microscopy measurements. Journal of Applied Physics, 2020, 128, .	2.5	7
35	Strained Ge FinFET structures fabricated by selective epitaxial growth. , 2014, , .		6
36	Scanning spreading resistance microscopy for electrical characterization of diamond interfacial layers. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2578-2582.	1.8	6

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37	Heavily phosphorus doped germanium: Strong interaction of phosphorus with vacancies and impact of tin alloying on doping activation. Journal of Applied Physics, 2019, 125, .	2.5	6
38	Enhancing the defect contrast in ECCI through angular filtering of BSEs. Ultramicroscopy, 2020, 210, 112922.	1.9	6
39	Application of electron channeling contrast imaging to 3D semiconductor structures through proper detector configurations. Ultramicroscopy, 2020, 210, 112928.	1.9	6
40	Diamond nanoprobes for electrical probing of nanoelectronics device structures. Microelectronic Engineering, 2014, 121, 19-23.	2.4	5
41	Electrical characterization of single nanometer-wide Si fins in dense arrays. Beilstein Journal of Nanotechnology, 2018, 9, 1863-1867.	2.8	5
42	Initial growth stages of heavily boronâ€doped <scp>HFCVD</scp> diamond for electrical probe application. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 2002-2007.	1.8	4
43	Nano-scale feature analysis achieving high effective lateral resolution with micro-scale material characterization techniques: Application to back-end processing. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 506-511.	1.8	4
44	Minimizing the size of force-controlled point contacts on silicon for carrier profiling. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1996, 14, 1513.	1.6	3
45	Orbitrapâ„¢-SIMS analysis of advanced semiconductor inorganic structures. Vacuum, 2022, 202, 111182.	3.5	3
46	Performance Enhancement of PFET Planar Devices by Plasma Immersion Ion Implantation (P3I). , 2008, , .		2
47	Epitaxy of III–V based channels on Si and transistor integration for 12-10nm node CMOS. , 2012, , .		2
48	Scaning probe tomography for advanced material characterization. , 2014, , .		2
49	A demonstration of donor passivation through direct formation of V-Asi complexes in As-doped Ge1â^'xSnx. Journal of Applied Physics, 2020, 127, .	2.5	2
50	Stoichiometric analysis of superficial Ba doped Strontium Titanium Oxide layers using APT: the case of the missing Oxygen!. Microscopy and Microanalysis, 2021, 27, 2480-2481.	0.4	2
51	The Prospect of Spatially Accurate Reconstructed Atom Probe Data Using Experimental Emitter Shapes. Microscopy and Microanalysis, 2022, 28, 1141-1149.	0.4	2
52	Electrical Contact Formation in Micro Fourâ€Point Probe Measurements. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900579.	1.8	1
53	Apparent size effects on dopant activation in nanometer-wide Si fins. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2021, 39, 023202.	1.2	1
54	Evaporation Dynamics of Boron Dopants in Silicon. Microscopy and Microanalysis, 2021, 27, 418-420.	0.4	1

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55	A scheme to correct for inaccuracies in the compositional analysis of SixGe1-x by Atom Probe Tomography. Microscopy and Microanalysis, 2021, 27, 178-179.	0.4	0