

Sten Vollebregt

List of Publications by Year in descending order

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79
papers

1,107
citations

471371

17
h-index

454834

30
g-index

79
all docs

79
docs citations

79
times ranked

1334
citing authors

#	ARTICLE	IF	CITATIONS
1	Influence of the growth temperature on the first and second-order Raman band ratios and widths of carbon nanotubes and fibers. Carbon, 2012, 50, 3542-3554.	5.4	177
2	Recent advances in 2D/nanostructured metal sulfide-based gas sensors: mechanisms, applications, and perspectives. Journal of Materials Chemistry A, 2020, 8, 24943-24976.	5.2	115
3	Effects of graphene defects on gas sensing properties towards NO ₂ detection. Nanoscale, 2017, 9, 6085-6093.	2.8	78
4	Carbon nanotube vertical interconnects fabricated at temperatures as low as 350°C. Carbon, 2014, 71, 249-256.	5.4	54
5	Tailoring the Mechanical Properties of High Aspect Ratio Carbon Nanotube Arrays using Amorphous Silicon Carbide Coatings. Advanced Functional Materials, 2014, 24, 5737-5744.	7.8	53
6	Effect of temperature and humidity on the sensing performance of TiO ₂ nanowire-based ethanol vapor sensors. Nanotechnology, 2021, 32, 325501.	1.3	35
7	Effect of Humidity on Gas Sensing Performance of Carbon Nanotube Gas Sensors Operated at Room Temperature. IEEE Sensors Journal, 2021, 21, 5763-5770.	2.4	33
8	Thermal characterization of carbon nanotube foam using MEMS microhotplates and thermographic analysis. Nanoscale, 2016, 8, 8266-8275.	2.8	26
9	Size-Dependent Effects on the Temperature Coefficient of Resistance of Carbon Nanotube Vias. IEEE Transactions on Electron Devices, 2013, 60, 4085-4089.	1.6	25
10	Stretchable Binary Fresnel Lens for Focus Tuning. Scientific Reports, 2016, 6, 25348.	1.6	24
11	Impact of the atomic layer deposition precursors diffusion on solid-state carbon nanotube based supercapacitors performances. Nanotechnology, 2015, 26, 064002.	1.3	20
12	Integrated Digital and Analog Circuit Blocks in a Scalable Silicon Carbide CMOS Technology. IEEE Transactions on Electron Devices, 2022, 69, 4-10.	1.6	20
13	Effects of Conformal Nanoscale Coatings on Thermal Performance of Vertically Aligned Carbon Nanotubes. Small, 2018, 14, e1800614.	5.2	19
14	Monolithic integration of a smart temperature sensor on a modular silicon-based organ-on-a-chip device. Sensors and Actuators A: Physical, 2021, 317, 112439.	2.0	19
15	Surface-Micromachined Silicon Carbide Pirani Gauges for Harsh Environments. IEEE Sensors Journal, 2021, 21, 1350-1358.	2.4	19
16	Sensitive Transfer-Free Wafer-Scale Graphene Microphones. ACS Applied Materials & Interfaces, 2022, 14, 21705-21712.	4.0	18
17	High Quality Wafer-scale CVD Graphene on Molybdenum Thin Film for Sensing Application. Procedia Engineering, 2014, 87, 1501-1504.	1.2	17
18	A transfer-free wafer-scale CVD graphene fabrication process for MEMS/NEMS sensors. , 2016, , .		17

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19	Toward a Self-Sensing Piezoresistive Pressure Sensor for All-SiC Monolithic Integration. IEEE Sensors Journal, 2020, 20, 11265-11274.	2.4	17
20	Growth of High-Density Self-Aligned Carbon Nanotubes and Nanofibers Using Palladium Catalyst. Journal of Electronic Materials, 2010, 39, 371-375.	1.0	16
21	Integrating low temperature aligned carbon nanotubes as vertical interconnects in Si technology. , 2011, , .		14
22	A Miniaturized Low Power Pirani Pressure Sensor Based on Suspended Graphene. , 2018, , .		14
23	Low-friction, wear-resistant, and electrically homogeneous multilayer graphene grown by chemical vapor deposition on molybdenum. Applied Surface Science, 2020, 509, 144792.	3.1	14
24	Room temperature ppt-level NO ₂ gas sensor based on SnO _x /SnS nanostructures with rich oxygen vacancies. 2D Materials, 2021, 8, 045006.	2.0	13
25	Multi-layer graphene pirani pressure sensors. Nanotechnology, 2021, 32, 335501.	1.3	12
26	Enhancement of Room Temperature Ethanol Sensing by Optimizing the Density of Vertically Aligned Carbon Nanofibers Decorated with Gold Nanoparticles. Materials, 2022, 15, 1383.	1.3	12
27	The direct growth of carbon nanotubes as vertical interconnects in 3D integrated circuits. Carbon, 2016, 96, 332-338.	5.4	11
28	Effect of droplet shrinking on surface acoustic wave response in microfluidic applications. Applied Surface Science, 2017, 426, 253-261.	3.1	11
29	Infrared absorbance of vertically-aligned multi-walled CNT forest as a function of synthesis temperature and time. Materials Research Bulletin, 2020, 126, 110821.	2.7	11
30	Mass measurement of graphene using quartz crystal microbalances. Applied Physics Letters, 2019, 115, .	1.5	10
31	Suspended graphene beams with tunable gap for squeeze-film pressure sensing. , 2017, , .		9
32	Fabrication and Characterization of an Upside-Down Carbon Nanotube Microelectrode Array. IEEE Sensors Journal, 2016, 16, 8685-8691.	2.4	8
33	Electrical characterization of carbon nanotube vertical interconnects with different lengths and widths. , 2012, , .		7
34	Thermal conductivity of low temperature grown vertical carbon nanotube bundles measured using the three- ω method. Applied Physics Letters, 2013, 102, 191909.	1.5	7
35	High sensitive gas sensors realized by a transfer-free process of CVD graphene. , 2016, , .		7
36	Low power AlGaIn/GaN MEMS pressure sensor for high vacuum application. Sensors and Actuators A: Physical, 2020, 314, 112217.	2.0	7

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37	Influence of defect density on the gas sensing properties of multi-layered graphene grown by chemical vapor deposition. Carbon Trends, 2021, 3, 100024.	1.4	7
38	Towards the Integration of Carbon Nanotubes as Vias in Monolithic Three-Dimensional Integrated Circuits. Japanese Journal of Applied Physics, 2013, 52, 04CB02.	0.8	6
39	Dominant thermal boundary resistance in multi-walled carbon nanotube bundles fabricated at low temperature. Journal of Applied Physics, 2014, 116, 023514.	1.1	6
40	3D solid-state supercapacitors obtained by ALD coating of high-density carbon nanotubes bundles. , 2014, , .		6
41	CNT bundles growth on microhotplates for direct measurement of their thermal properties. , 2014, , .		6
42	Low Temperature CVD Grown Graphene for Highly Selective Gas Sensors Working under Ambient Conditions. Proceedings (mdpi), 2017, 1, 445.	0.2	6
43	CVD transfer-free graphene for sensing applications. Beilstein Journal of Nanotechnology, 2017, 8, 1015-1022.	1.5	6
44	Contact resistance of low-temperature carbon nanotube vertical interconnects. , 2012, , .		5
45	Low-Humidity Sensing Properties of Multi-Layered Graphene Grown by Chemical Vapor Deposition. Sensors, 2020, 20, 3174.	2.1	5
46	Insights into the high-sulphur aging of sintered silver nanoparticles: An experimental and ReaxFF study. Corrosion Science, 2021, 192, 109846.	3.0	5
47	Visible Blind Quadrant Sun Position Sensor in a Silicon Carbide Technology. , 2022, , .		5
48	Low-temperature bottom-up integration of carbon nanotubes for vertical interconnects in monolithic 3D integrated circuits. , 2012, , .		4
49	Carbon nanotubes TSV grown on an electrically conductive ZrN support layer. , 2015, , .		4
50	Upside-down Carbon nanotube (CNT) micro-electrode array (MEA). , 2015, , .		4
51	Vertically-Aligned Multi-Walled Carbon Nano Tube Pillars with Various Diameters under Compression: Pristine and NbTiN Coated. Nanomaterials, 2020, 10, 1189.	1.9	4
52	Resistive and CTAT Temperature Sensors in a Silicon Carbide CMOS Technology. , 2021, , .		4
53	Effects of temperature and grain size on diffusivity of aluminium: electromigration experiment and molecular dynamic simulation. Journal of Physics Condensed Matter, 2022, 34, 175401.	0.7	4
54	High performance single-grain Ge TFTs without seed substrate. , 2010, , .		3

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55	Use of multi-wall carbon nanotubes as an absorber in a thermal detector. <i>Procedia Engineering</i> , 2011, 25, 523-526.	1.2	3
56	Carbon Nanotube based heat-sink for solid state lighting. , 2013, , .		3
57	Tunable binary Fresnel lens based on stretchable PDMS/CNT composite. , 2015, , .		3
58	The growth of carbon nanotubes on electrically conductive ZrN support layers for through-silicon vias. <i>Microelectronic Engineering</i> , 2016, 156, 126-130.	1.1	3
59	An innovative approach to overcome saturation and recovery issues of CVD graphene-based gas sensors. , 2017, , .		3
60	Analysis of a calibration method for non-stationary CVD multi-layered graphene-based gas sensors. <i>Nanotechnology</i> , 2019, 30, 385501.	1.3	3
61	Growth of multi-layered graphene on molybdenum catalyst by solid phase reaction with amorphous carbon. <i>2D Materials</i> , 2019, 6, 035012.	2.0	3
62	Wafer-scale transfer-free process of multi-layered graphene grown by chemical vapor deposition. <i>Materials Research Express</i> , 2020, 7, 035001.	0.8	3
63	Towards a Scalable Sun Position Sensor with Monolithic Integration of the 3d Optics for Miniaturized Satellite Attitude Control. , 2021, , .		3
64	Direct Wafer-Scale CVD Graphene Growth under Platinum Thin-Films. <i>Materials</i> , 2022, 15, 3723.	1.3	3
65	Mass and density determination of porous nanoparticle films using a quartz crystal microbalance. <i>Nanotechnology</i> , 2022, 33, 485704.	1.3	3
66	Carbon nanotube vias fabricated at back-end of line compatible temperature using a novel CoAl catalyst. , 2013, , .		2
67	A Wafer-Scale Process for the Monolithic Integration of CVD Graphene and CMOS Logic for Smart MEMS/NEMS Sensors. , 2019, , .		2
68	Technology Development for MEMS: A Tutorial. <i>IEEE Sensors Journal</i> , 2022, 22, 10106-10125.	2.4	2
69	Angle Sensitive Optical Sensor for Light Source Tracker Miniaturization. , 2022, 6, 1-4.		2
70	Characterization of low-loss hydrogenated amorphous silicon films for superconducting resonators. <i>Journal of Astronomical Telescopes, Instruments, and Systems</i> , 2022, 8, .	1.0	2
71	Fabrication of Low Temperature Carbon Nanotube Vertical Interconnects Compatible with Semiconductor Technology. <i>Journal of Visualized Experiments</i> , 2015, , e53260.	0.2	1
72	Horizontally aligned carbon nanotube scaffolds for freestanding structures with enhanced conductivity. , 2017, , .		1

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73	Carbon Nanotubes as Vertical Interconnects for 3D Integrated Circuits. , 2017, , 195-213.		1
74	Transfer-free Graphene-based Differential Pressure Sensor. , 2019, , .		1
75	Wafer-Scale Graphene-Based Soft Electrode Array with Optogenetic Compatibility. , 2020, , .		1
76	Multilayer conformal coating of highly dense Multi-Walled Carbon Nanotubes bundles. , 2012, , .		0
77	Carbon Nanotubes: Tailoring the Mechanical Properties of High-Aspect-Ratio Carbon Nanotube Arrays using Amorphous Silicon Carbide Coatings (Adv. Funct. Mater. 36/2014). Advanced Functional Materials, 2014, 24, 5736-5736.	7.8	0
78	Failure Analysis and Reliability of Low-Temperature-Grown Multi-Wall Carbon Nanotube Bundles Integrated as Vias in Monolithic Three-Dimensional Integrated Circuits. Microscopy and Microanalysis, 2014, 20, 1762-1763.	0.2	0
79	Wafer Level Through Polymer Optical Vias (TPOV) Enabling High Throughput of Optical Windows Manufacturing. , 2018, , .		0