Sten Vollebregt

List of Publications by Year in descending order

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79 papers	1,107 citations	471509 17 h-index	454955 30 g-index
79 all docs	79 docs citations	79 times ranked	1334 citing authors

#	Article	IF	Citations
1	Technology Development for MEMS: A Tutorial. IEEE Sensors Journal, 2022, 22, 10106-10125.	4.7	2
2	Effects of temperature and grain size on diffusivity of aluminium: electromigration experiment and molecular dynamic simulation. Journal of Physics Condensed Matter, 2022, 34, 175401.	1.8	4
3	Integrated Digital and Analog Circuit Blocks in a Scalable Silicon Carbide CMOS Technology. IEEE Transactions on Electron Devices, 2022, 69, 4-10.	3.0	20
4	Visible Blind Quadrant Sun Position Sensor in a Silicon Carbide Technology. , 2022, , .		5
5	Enhancement of Room Temperature Ethanol Sensing by Optimizing the Density of Vertically Aligned Carbon Nanofibers Decorated with Gold Nanoparticles. Materials, 2022, 15, 1383.	2.9	12
6	Sensitive Transfer-Free Wafer-Scale Graphene Microphones. ACS Applied Materials & Interfaces, 2022, 14, 21705-21712.	8.0	18
7	Direct Wafer-Scale CVD Graphene Growth under Platinum Thin-Films. Materials, 2022, 15, 3723.	2.9	3
8	Angle Sensitive Optical Sensor for Light Source Tracker Miniaturization. , 2022, 6, 1-4.		2
9	Characterization of low-loss hydrogenated amorphous silicon films for superconducting resonators. Journal of Astronomical Telescopes, Instruments, and Systems, 2022, 8, .	1.8	2
10	Mass and density determination of porous nanoparticle films using a quartz crystal microbalance. Nanotechnology, 2022, 33, 485704.	2.6	3
11	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.	4.1	19
12	Surface-Micromachined Silicon Carbide Pirani Gauges for Harsh Environments. IEEE Sensors Journal, 2021, 21, 1350-1358.	4.7	19
13	Towards a Scalable Sun Position Sensor with Monolithic Integration of the 3d Optics for Miniaturized Satellite Attitude Control. , 2021, , .		3
14	Effect of Humidity on Gas Sensing Performance of Carbon Nanotube Gas Sensors Operated at Room Temperature. IEEE Sensors Journal, 2021, 21, 5763-5770.	4.7	33
15	Influence of defect density on the gas sensing properties of multi-layered graphene grown by chemical vapor deposition. Carbon Trends, 2021, 3, 100024.	3.0	7
16	Effect of temperature and humidity on the sensing performance of TiO₂ nanowire-based ethanol vapor sensors. Nanotechnology, 2021, 32, 325501.	2.6	35
17	Multi-layer graphene pirani pressure sensors. Nanotechnology, 2021, 32, 335501.	2.6	12
18	Room temperature ppt-level NO₂ gas sensor based on SnO _x /SnS nanostructures with rich oxygen vacancies. 2D Materials, 2021, 8, 045006.	4.4	13

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19	Insights into the high-sulphur aging of sintered silver nanoparticles: An experimental and ReaxFF study. Corrosion Science, 2021, 192, 109846.	6.6	5
20	Resistive and CTAT Temperature Sensors in a Silicon Carbide CMOS Technology. , 2021, , .		4
21	Low-friction, wear-resistant, and electrically homogeneous multilayer graphene grown by chemical vapor deposition on molybdenum. Applied Surface Science, 2020, 509, 144792.	6.1	14
22	Low power AlGaN/GaN MEMS pressure sensor for high vacuum application. Sensors and Actuators A: Physical, 2020, 314, 112217.	4.1	7
23	Recent advances in 2D/nanostructured metal sulfide-based gas sensors: mechanisms, applications, and perspectives. Journal of Materials Chemistry A, 2020, 8, 24943-24976.	10.3	115
24	Toward a Self-Sensing Piezoresistive Pressure Sensor for All-SiC Monolithic Integration. IEEE Sensors Journal, 2020, 20, 11265-11274.	4.7	17
25	Wafer-Scale Graphene-Based Soft Electrode Array with Optogenetic Compatibility. , 2020, , .		1
26	Infrared absorbance of vertically-aligned multi-walled CNT forest as a function of synthesis temperature and time. Materials Research Bulletin, 2020, 126, 110821.	5.2	11
27	Low-Humidity Sensing Properties of Multi-Layered Graphene Grown by Chemical Vapor Deposition. Sensors, 2020, 20, 3174.	3.8	5
28	Vertically-Aligned Multi-Walled Carbon Nano Tube Pillars with Various Diameters under Compression: Pristine and NbTiN Coated. Nanomaterials, 2020, 10, 1189.	4.1	4
29	Wafer-scale transfer-free process of multi-layered graphene grown by chemical vapor deposition. Materials Research Express, 2020, 7, 035001.	1.6	3
30	A Wafer-Scale Process for the Monolithic Integration of CVD Graphene and CMOS Logic for Smart MEMS/NEMS Sensors. , 2019, , .		2
31	Mass measurement of graphene using quartz crystal microbalances. Applied Physics Letters, 2019, 115, .	3.3	10
32	Analysis of a calibration method for non-stationary CVD multi-layered graphene-based gas sensors. Nanotechnology, 2019, 30, 385501.	2.6	3
33	Growth of multi-layered graphene on molybdenum catalyst by solid phase reaction with amorphous carbon. 2D Materials, 2019, 6, 035012.	4.4	3
34	Transfer-free Graphene-based Differential Pressure Sensor. , 2019, , .		1
35	Wafer Level Through Polymer Optical Vias (TPOV) Enabling High Throughput of Optical Windows Manufacturing. , 2018, , .		0
36	A Miniaturized Low Power Pirani Pressure Sensor Based on Suspended Graphene. , 2018, , .		14

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37	Effects of Conformal Nanoscale Coatings on Thermal Performance of Vertically Aligned Carbon Nanotubes. Small, 2018, 14, e1800614.	10.0	19
38	Horizontally aligned carbon nanotube scaffolds for freestanding structures with enhanced conductivity. , 2017, , .		1
39	Effects of graphene defects on gas sensing properties towards NO₂ detection. Nanoscale, 2017, 9, 6085-6093.	5.6	78
40	Effect of droplet shrinking on surface acoustic wave response in microfluidic applications. Applied Surface Science, 2017, 426, 253-261.	6.1	11
41	Suspended graphene beams with tunable gap for squeeze-film pressure sensing. , 2017, , .		9
42	Carbon Nanotubes as Vertical Interconnects for 3D Integrated Circuits. , 2017, , 195-213.		1
43	An innovative approach to overcome saturation and recovery issues of CVD graphene-based gas sensors. , 2017, , .		3
44	Low Temperature CVD Grown Graphene for Highly Selective Gas Sensors Working under Ambient Conditions. Proceedings (mdpi), 2017, 1, 445.	0.2	6
45	CVD transfer-free graphene for sensing applications. Beilstein Journal of Nanotechnology, 2017, 8, 1015-1022.	2.8	6
46	High sensitive gas sensors realized by a transfer-free process of CVD graphene. , 2016, , .		7
47	Thermal characterization of carbon nanotube foam using MEMS microhotplates and thermographic analysis. Nanoscale, 2016, 8, 8266-8275.	5.6	26
48	A transfer-free wafer-scale CVD graphene fabrication process for MEMS/NEMS sensors. , 2016, , .		17
49	Stretchable Binary Fresnel Lens for Focus Tuning. Scientific Reports, 2016, 6, 25348.	3.3	24
50	Fabrication and Characterization of an Upside-Down Carbon Nanotube Microelectrode Array. IEEE Sensors Journal, 2016, 16, 8685-8691.	4.7	8
51	The growth of carbon nanotubes on electrically conductive ZrN support layers for through-silicon vias. Microelectronic Engineering, 2016, 156, 126-130.	2.4	3
52	The direct growth of carbon nanotubes as vertical interconnects in 3D integrated circuits. Carbon, 2016, 96, 332-338.	10.3	11
53	Fabrication of Low Temperature Carbon Nanotube Vertical Interconnects Compatible with Semiconductor Technology. Journal of Visualized Experiments, 2015, , e53260.	0.3	1
54	Tunable binary Fresnel lens based on stretchable PDMS/CNT composite. , 2015, , .		3

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55	Carbon nanotubes TSV grown on an electrically conductive ZrN support layer. , 2015, , .		4
56	Upside-down Carbon nanotube (CNT) micro-electrode array (MEA). , 2015, , .		4
57	Impact of the atomic layer deposition precursors diffusion on solid-state carbon nanotube based supercapacitors performances. Nanotechnology, 2015, 26, 064002.	2.6	20
58	Dominant thermal boundary resistance in multi-walled carbon nanotube bundles fabricated at low temperature. Journal of Applied Physics, 2014, 116, 023514.	2.5	6
59	Tailoring the Mechanical Properties of Highâ€Aspectâ€Ratio Carbon Nanotube Arrays using Amorphous Silicon Carbide Coatings. Advanced Functional Materials, 2014, 24, 5737-5744.	14.9	53
60	High Quality Wafer-scale CVD Graphene on Molybdenum Thin Film for Sensing Application. Procedia Engineering, 2014, 87, 1501-1504.	1.2	17
61	Carbon nanotube vertical interconnects fabricated at temperatures as low as 350Â°C. Carbon, 2014, 71, 249-256.	10.3	54
62	Carbon Nanotubes: Tailoring the Mechanical Properties of Highâ€Aspectâ€Ratio Carbon Nanotube Arrays using Amorphous Silicon Carbide Coatings (Adv. Funct. Mater. 36/2014). Advanced Functional Materials, 2014, 24, 5736-5736.	14.9	0
63	3D solid-state supercapacitors obtained by ALD coating of high-density carbon nanotubes bundles. , 2014, , .		6
64	CNT bundles growth on microhotplates for direct measurement of their thermal properties. , 2014, , .		6
65	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.	0.4	0
66	Size-Dependent Effects on the Temperature Coefficient of Resistance of Carbon Nanotube Vias. IEEE Transactions on Electron Devices, 2013, 60, 4085-4089.	3.0	25
67	Carbon nanotube vias fabricated at back-end of line compatible temperature using a novel CoAl catalyst. , 2013, , .		2
68	Thermal conductivity of low temperature grown vertical carbon nanotube bundles measured using the three-Ï‰ method. Applied Physics Letters, 2013, 102, 191909.	3.3	7
69	Towards the Integration of Carbon Nanotubes as Vias in Monolithic Three-Dimensional Integrated Circuits. Japanese Journal of Applied Physics, 2013, 52, 04CB02.	1.5	6
70	Carbon Nanotube based heat-sink for solid state lighting. , 2013, , .		3
71	Contact resistance of low-temperature carbon nanotube vertical interconnects. , 2012, , .		5
72	Multilayer conformal coating of highly dense Multi-Walled Carbon Nanotubes bundles. , 2012, , .		0

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73	Electrical characterization of carbon nanotube vertical interconnects with different lengths and widths. , 2012, , .		7
74	Low-temperature bottom-up integration of carbon nanotubes for vertical interconnects in monolithic 3D integrated circuits. , 2012, , .		4
75	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.	10.3	177
76	Integrating low temperature aligned carbon nanotubes as vertical interconnects in Si technology. , 2011, , .		14
77	Use of multi-wall carbon nanotubes as an absorber in a thermal detector. Procedia Engineering, 2011, 25, 523-526.	1.2	3
78	Growth of High-Density Self-Aligned Carbon Nanotubes and Nanofibers Using Palladium Catalyst. Journal of Electronic Materials, 2010, 39, 371-375.	2.2	16
79	High performance single-grain Ge TFTs without seed substrate. , 2010, , .		3