Shiv Govind Singh

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1110280/publications.pdf

Version: 2024-02-01

136	2,521	185998	253896
papers	citations	28 h-index	43 g-index

137	137	137	2793
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cuâ€“Cu diffusion bonding enhancement at low temperature by surface passivation using self-assembled monolayer of alkane-thiol. Applied Physics Letters, 2009, 95, .	1.5	147
2	Recent advances in biosensors for diagnosis and detection of sepsis: A comprehensive review. Biosensors and Bioelectronics, 2019, 124-125, 205-215.	5.3	108
3	Chemiresistive Sensor Based on Zinc Oxide Nanoflakes for CO₂ Detection. ACS Applied Nano Materials, 2019, 2, 700-706.	2.4	94
4	Electrospun manganese (III) oxide nanofiber based electrochemical DNA-nanobiosensor for zeptomolar detection of dengue consensus primer. Biosensors and Bioelectronics, 2017, 90, 378-387.	5.3	89
5	One step biofunctionalized electrospun multiwalled carbon nanotubes embedded zinc oxide nanowire interface for highly sensitive detection of carcinoma antigen-125. Biosensors and Bioelectronics, 2017, 88, 144-152.	5.3	84
6	Kv1.3 inhibition as a potential microglia-targeted therapy for Alzheimerâ€™s disease: preclinical proof of concept. Brain, 2018, 141, 596-612.	3.7	79
7	A highly sensitive self assembled monolayer modified copper doped zinc oxide nanofiber interface for detection of Plasmodium falciparum histidine-rich protein-2: Targeted towards rapid, early diagnosis of malaria. Biosensors and Bioelectronics, 2016, 80, 39-46.	5.3	73
8	Electrospun CNT embedded ZnO nanofiber based biosensor for electrochemical detection of Atrazine: a step closure to single molecule detection. Microsystems and Nanoengineering, 2020, 6, 3.	3.4	61
9	A multi-walled carbon nanotubeâ€“zinc oxide nanofiber based flexible chemiresistive biosensor for malaria biomarker detection. Analyst, The, 2017, 142, 2128-2135.	1.7	53
10	Highly sensitive and ultra-fast responsive ammonia gas sensor based on 2D ZnO nanoflakes. Materials Science for Energy Technologies, 2020, 3, 91-96.	1.0	51
11	Label-Free Electrochemical Detection of DNA Hybridization: A Method for COVID-19 Diagnosis. , 2020, 5, 205-209.		51
12	New Positive Ca²⁺-Activated K⁺ Channel Gating Modulators with Selectivity for K_{Ca}3.1. Molecular Pharmacology, 2014, 86, 342-357.	1.0	50
13	Label free, electrochemical detection of atrazine using electrospun Mn2O3 nanofibers: Towards ultrasensitive small molecule detection. Sensors and Actuators B: Chemical, 2019, 285, 317-325.	4.0	50
14	Kv1.3 modulates neuroinflammation and neurodegeneration in Parkinsonâ€™s disease. Journal of Clinical Investigation, 2020, 130, 4195-4212.	3.9	50
15	Ultra-thin Ti passivation mediated breakthrough in high quality Cu-Cu bonding at low temperature and pressure. Materials Letters, 2016, 169, 269-272.	1.3	45
16	Electrospun tin (IV) oxide nanofiber based electrochemical sensor for ultra-sensitive and selective detection of atrazine in water at trace levels. Biosensors and Bioelectronics, 2019, 141, 111441.	5.3	45
17	Demonstration of sub 150 Â°C Cu-Cu thermocompression bonding for 3D IC applications, utilizing an ultra-thin layer of Manganin alloy as an effective surface passivation layer. Materials Letters, 2017, 194, 86-89.	1.3	40
18	Structural Insights into the Atomistic Mechanisms of Action of Small Molecule Inhibitors Targeting the KCa3.1 Channel Pore. Molecular Pharmacology, 2017, 91, 392-402.	1.0	39

#	Article	IF	Citations
19	Solvent-free fabrication of a room temperature ammonia gas sensor by frictional deposition of a conducting polymer on paper. Organic Electronics, 2019, 68, 108-112.	1.4	38
20	Liquid flow through a diverging microchannel. Microfluidics and Nanofluidics, 2013, 14, 53-67.	1.0	36
21	Interface and Reliability Analysis of Au-Passivated Cuâ€“Cu Fine-Pitch Thermocompression Bonding for 3-D IC Applications. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2019, 9, 1227-1234.	1.4	36
22	Ambient Temperature-Induced Device Self-Heating Effects on Multi-Fin Si n-FinFET Performance. IEEE Transactions on Electron Devices, 2018, 65, 2721-2728.	1.6	35
23	Susceptibility of larval zebrafish to the seizurogenic activity of GABA type A receptor antagonists. NeuroToxicology, 2020, 76, 220-234.	1.4	35
24	Diisopropylfluorophosphate Impairs the Transport of Membrane-Bound Organelles in Rat Cortical Axons. Journal of Pharmacology and Experimental Therapeutics, 2016, 356, 645-655.	1.3	34
25	An ultrasensitive label free nanobiosensor platform for the detection of cardiac biomarkers. Biomedical Microdevices, 2016, 18, 111.	1.4	32
26	A comprehensive approach for milk adulteration detection using inherent bio-physical properties as â€˜Universal Markersâ€™: Towards a miniaturized adulteration detection platform. Food Chemistry, 2017, 217, 756-765.	4.2	32
27	Chemiresistive DNA hybridization sensor with electrospun nanofibers: A method to minimize inter-device variability. Biosensors and Bioelectronics, 2019, 133, 24-31.	5.3	32
28	Graphene Doped Mn₂O₃ Nanofibers as a Facile Electroanalytical DNA Point Mutation Detection Platform for Early Diagnosis of Breast/Ovarian Cancer. Electroanalysis, 2018, 30, 2110-2120.	1.5	31
29	Piezoelectric Micromachined Ultrasonic Transducer Using Silk Piezoelectric Thin Film. IEEE Electron Device Letters, 2018, 39, 749-752.	2.2	30
30	Oxidation Resistive, CMOS Compatible Copper-Based Alloy Ultrathin Films as a Superior Passivation Mechanism for Achieving 150 Â°C Cuâ€“Cu Wafer on Wafer Thermocompression Bonding. IEEE Transactions on Electron Devices, 2017, 64, 1239-1245.	1.6	29
31	Two-Phase Flow Pressure Drop Characteristics in Trapezoidal Silicon Microchannels. IEEE Transactions on Components and Packaging Technologies, 2009, 32, 887-900.	1.4	28
32	Leveraging Innate Piezoelectricity of Ultra-Smooth Silk Thin Films for Flexible and Wearable Sensor Applications. IEEE Sensors Journal, 2017, 17, 8306-8313.	2.4	28
33	Single-Cell Profiling Identifies Key Pathways Expressed by iPSCs Cultured in Different Commercial Media. IScience, 2018, 7, 30-39.	1.9	28
34	Label free electrochemical detection of cardiac biomarker troponin T using ZnSnO₃ perovskite nanomaterials. Analytical Methods, 2019, 11, 744-751.	1.3	27
35	Facile non thermal plasma based desorption of self assembled monolayers for achieving low temperature and low pressure Cuâ€“Cu thermo-compression bonding. RSC Advances, 2015, 5, 103643-103648.	1.7	26
36	Discrimination of gases with a single chemiresistive multi-gas sensor using temperature sweeping and machine learning. Sensors and Actuators B: Chemical, 2021, 348, 130725.	4.0	26

#	Article	IF	Citations
37	In Situ Impact Analysis of Very High Heat Flux Transients on Nonlinear p-n Diode Characteristics and Mitigation Using On-Chip Single- and Two-Phase Microfluidics. Journal of Microelectromechanical Systems, 2009, 18, 1208-1219.	1.7	25
38	A Step Towards Miniaturized Milk Adulteration Detection System: Smartphone-Based Accurate pH Sensing Using Electrospun Halochromic Nanofibers. Food Analytical Methods, 2019, 12, 612-624.	1.3	25
39	Towards point-of-care diagnosis of Alzheimerâ€™s disease: Multi-analyte based portable chemiresistive platform for simultaneous detection of Î²-amyloid (1â€“40) and (1â€“42) in plasma. Biosensors and Bioelectronics, 2021, 186, 113294.	5.3	25
40	Electrochemical Detection of Cardiac Biomarkers Utilizing Electrospun Multiwalled Carbon Nanotubes Embedded SUâ€8 Nanofibers. Electroanalysis, 2017, 29, 380-386.	1.5	22
41	Nonlithographic Fabrication of Plastic-Based Nanofibers Integrated Microfluidic Biochip for Sensitive Detection of Infectious Biomarker. ACS Applied Materials & Interfaces, 2017, 9, 39994-40005.	4.0	21
42	Acute administration of diazepam or midazolam minimally alters long-term neuropathological effects in the rat brain following acute intoxication with diisopropylfluorophosphate. European Journal of Pharmacology, 2020, 886, 173538.	1.7	21
43	Ultrasensitive, Label Free, Chemiresistive Nanobiosensor Using Multiwalled Carbon Nanotubes Embedded Electrospun SU-8 Nanofibers. Sensors, 2016, 16, 1354.	2.1	20
44	Kv1.3 activity perturbs the homeostatic properties of astrocytes in glioma. Scientific Reports, 2018, 8, 7654.	1.6	19
45	BDE-47 and BDE-49 Inhibit Axonal Growth in Primary Rat Hippocampal Neuron-Glia Co-Cultures via Ryanodine Receptor-Dependent Mechanisms. Toxicological Sciences, 2017, 156, kfw259.	1.4	18
46	Rapid Throughput Analysis of GABA_A Receptor Subtype Modulators and Blockers Using DiSBAC₁(3) Membrane Potential Red Dye. Molecular Pharmacology, 2017, 92, 88-99.	1.0	18
47	Single-phase high-entropy oxide-based chemiresistor: Toward selective and sensitive detection of methane gas for real-time applications. Sensors and Actuators B: Chemical, 2022, 357, 131426.	4.0	18
48	Low temperature, low pressure CMOS compatible Cu -Cu thermo-compression bonding with Ti passivation for 3D IC integration. , 2015, , .		17
49	A multi-tiered, in vivo, quantitative assay suite for environmental disruptors of thyroid hormone signaling. Aquatic Toxicology, 2017, 190, 1-10.	1.9	17
50	Surface Density Gradient Engineering Precedes Enhanced Diffusion; Drives CMOS In-Line Process Flow Compatible Cuâ€“Cu Thermocompression Bonding at 75 Â°C. IEEE Transactions on Device and Materials Reliability, 2019, 19, 791-795.	1.5	17
51	Direct, CMOS In-Line Process Flow Compatible, Sub 100ÂÂ°C Cuâ€“Cu Thermocompression Bonding Using Stress Engineering. Electronic Materials Letters, 2018, 14, 328-335.	1.0	16
52	Cerium oxide nanofiber based electroanalytical sensor for TNF-Î± detection: Improved interfacial stability with Nafion. Bioelectrochemistry, 2021, 138, 107725.	2.4	16
53	Measurement and modeling of pulsatile flow in microchannel. Microfluidics and Nanofluidics, 2010, 9, 1225-1240.	1.0	15
54	Achieving low temperature Cu to Cu diffusion bonding with self assembly monolayer (SAM) passivation. , 2009, , .		14

#	Article	IF	Citations
55	Inhibition of Soluble Epoxide Hydrolase as a Novel Approach to High Dose Diazepam Induced Hypotension. , 2016, 6, .		14
56	A miniaturized electrochemical platform with an integrated PDMS reservoir for label-free DNA hybridization detection using nanostructured Au electrodes. Analyst, The, 2019, 144, 6953-6961.	1.7	14
57	Label-free detection of Î²-Amyloid (1-42) in plasma using electrospun SnO2 nanofiber based electro-analytical sensor. Sensors and Actuators B: Chemical, 2021, 346, 130522.	4.0	14
58	Optimized ultra-thin manganin alloy passivated fine-pitch damascene compatible bump-less Cuâ€“Cu bonding at sub 200 Â°C for three-dimensional Integration applications. Japanese Journal of Applied Physics, 2018, 57, 02BC04.	0.8	13
59	MoS₂ Chemiresistive Sensor Array on Paper Patterned with Toner Lithography for Simultaneous Detection of NH₃ and H₂S Gases. ACS Sustainable Chemistry and Engineering, 2021, 9, 14735-14743.	3.2	13
60	The Trials and Tribulations of Structure Assisted Design of KCa Channel Activators. Frontiers in Pharmacology, 2019, 10, 972.	1.6	12
61	Drift independent discrimination of H2S from other interfering gases with a metal oxide gas sensor using extracted adsorption-desorption noise. Sensors and Actuators B: Chemical, 2021, 344, 130146.	4.0	12
62	Single-Phase High-Entropy Oxide Nanoparticles for Wide Dynamic Range Detection of CO₂. ACS Applied Nano Materials, 2022, 5, 4524-4536.	2.4	12
63	Preparation and optimization of PVDF thin films for miniaturized sensor and actuator applications. Smart Materials and Structures, 2021, 30, 075013.	1.8	11
64	Ultra-smooth e-beam evaporated amorphous silicon thin films â€“ A viable alternative for PECVD amorphous silicon thin films for MEMS applications. Materials Letters, 2017, 197, 52-55.	1.3	10
65	Comparison of the toxicokinetics of the convulsants picrotoxinin and tetramethylenedisulfotetramine (TETS) in mice. Archives of Toxicology, 2020, 94, 1995-2007.	1.9	10
66	New capsaicin analogs as molecular rulers to define the permissive conformation of the mouse TRPV1 ligand-binding pocket. ELife, 2020, 9, .	2.8	10
67	Artificial Intelligence-Based Portable Bioelectronics Platform for SARS-CoV-2 Diagnosis with Multi-nucleotide Probe Assay for Clinical Decisions. Analytical Chemistry, 2021, 93, 14955-14965.	3.2	10
68	Electrodeposition as a facile way for the preparation of piezoelectric ultrathin silk filmâ€“based flexible nanogenerators. International Journal of Energy Research, 2022, 46, 3443-3457.	2.2	10
69	Reduction of the Measurement Time of a Chemiresistive Gas Sensor Using Transient Analysis and the Cantor Pairing Function. ACS Measurement Science Au, 2022, 2, 113-119.	1.9	10
70	Simultaneous Detection of CO and NH₃ Gases at Room Temperature with an Array of ZnS Chemiresistive Sensors and the Superposition Principle. Analytical Chemistry, 2022, 94, 4602-4609.	3.2	10
71	TSV noise coupling in 3D IC using guard ring. , 2015, , .		9
72	Silk piezoelectric thin films: Materials to devices. , 2016, , .		9

#	Article	IF	Citations
73	Flexible ITO Electrode With Gold Nanostructures for Femtomolar DNA Hybridization Detection. , 2018, 2, 1-4.		9
74	A Facile, Sensitive and Rapid Sensing Platform Based on CoZnO for Detection of Fipronil; an Environmental Toxin. Electroanalysis, 2020, 32, 2056-2064.	1.5	9
75	Neonatal sepsis at point of care. Clinica Chimica Acta, 2021, 521, 45-58.	0.5	9
76	2-D material enhanced ultrasensitive electrochemical sensing of Pro-BNP peptide towards the risk-assessment of human heart. Sensors and Actuators B: Chemical, 2022, 357, 131382.	4.0	9
77	A 1.5–7.5GHz low power low noise amplifier (LNA) design using subthreshold technique for Wireless Sensor Network (WSN) application. , 2012, , .		8
78	High Quality Fine-Pitch Cu-Cu Wafer-on-Wafer Bonding with Optimized Ti Passivation at 160Â°C. , 2016, , .		8
79	A low-cost multi-phase 3A buck converter with improved ripple cancellation for wide supply range. , 2016, , .		8
80	Metal-Alloy Cu Surface Passivation Leads to High Quality Fine-Pitch Bump-Less Cu-Cu Bonding for 3D IC and Heterogeneous Integration Applications. , 2018, , .		8
81	Electrospun Mnâ„Oâ‚ƒ Nanofiber Networks as Bio-Transducers: Electrical Characterization, Modeling, and DNA Sensing. IEEE Transactions on Electron Devices, 2021, 68, 1892-1898.	1.6	8
82	Sweetcorn husk derived porous carbon with inherent silica for ultrasensitive detection of ovarian cancer in blood plasma. Electrochimica Acta, 2021, 397, 139258.	2.6	8
83	Analysis of graphene and CNT based finned TTSV and spreaders for thermal management in 3D IC. , 2016, , .		7
84	A Highly Flexible Tactile Sensor with Self-Poled Electrospun PVDF Nanofiber. , 2018, , .		7
85	Simple and facile microfabrication of a flexible interdigitated capacitor for sensing applications. Flexible and Printed Electronics, 2019, 4, 015005.	1.5	7
86	Fabrication and characterization of SU-8-based capacitive micromachined ultrasonic transducer for airborne applications. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2018, 17, 1.	1.0	7
87	Boiling flow through diverging microchannel. Sadhana - Academy Proceedings in Engineering Sciences, 2013, 38, 1067-1082.	0.8	6
88	Long term efficacy of ultra-thin Ti passivation layer for achieving low temperature, low pressure Cu-Cu Wafer-on-Wafer bonding. , 2015, , .		6
89	Facile Synthesis of Electrospun Nickel (II) Oxide Nanofibers and Its Application for Hydrogen Peroxide Sensing. ChemistrySelect, 2018, 3, 12263-12268.	0.7	6
90	Electrospun polyaniline nanofiber based chemiresistive nanobiosensor platform for DNA Hybridization detection. , 2017, , .		5

#	Article	IF	Citations
91	The seizureâ€inducing plastic explosive <scp>RDX</scp> inhibits the Î± 1 Î² 2 Î³ 2 <scp> GABA _A </scp> receptor. Annals of Clinical and Translational Neurology, 2022, , .	1.7	5
92	A 1V, â˜’26dBm sensitive auto configurable mixed converter mode RF energy harvesting with wide input range. , 2016, , .		4
93	Diffusion Enhanced Drive Sub 100 Â°C Wafer Level Fine-Pitch Cu-Cu Thermocompression Bonding for 3D IC Integration. , 2019, , .		4
94	Optimal Donâ€™t Care Filling for Minimizing Peak Toggles During At-Speed Stuck-At Testing. ACM Transactions on Design Automation of Electronic Systems, 2017, 23, 1-26.	1.9	4
95	Noise-cancelled subthreshold UWB LNA for Wireless Sensor Network application. , 2012, , .		3
96	Design of highly efficient charge pump for energy harvesting RFID applications. , 2012, , .		3
97	A â˜’30 dBm sensitive ultra low power RF energy harvesting front end with an efficiency of 70.1% at â˜’22 dBm. , 2015, , .		3
98	Ultra low power on-chip hybrid start-up for wireless sensor networks. , 2015, , .		3
99	Generation of a human induced pluripotent stem cell line CERAi001-A-6 using episomal vectors. Stem Cell Research, 2017, 22, 13-15.	0.3	3
100	Analytical design technique for realâ€toâ€real singleâ€and dualâ€frequency impedance matching networks in lossy passive environment. IET Microwaves, Antennas and Propagation, 2018, 12, 1013-1020.	0.7	3
101	Effect of ultrathin palladium layer in achieving a low temperature and pressure wafer level aluminum to aluminum bonding. Surface Topography: Metrology and Properties, 2020, 8, 045008.	0.9	3
102	Hybrid structured buck converter with ripple cancellation and improved efficiency. , 2013, , .		2
103	Efficient Dual Band RF Energy Harvesting Front End for Ultra Low Power Sensitive Passive Wearable Devices. , 2014, , .		2
104	Highly sensitive SAM modified electrospun zinc oxide nanofiber based label free biosensing platform. , 2015, , .		2
105	Optimized ultra-thin Manganin alloy passivated fine-pitch damascene compatible Cu-Cu bonding at sub 200Â°C for 3D IC integration. , 2017, , .		2
106	Source localization via aermod-based simulation under mean squared error criterion: Demonstration using field data. , 2017, , .		2
107	PREFACE on the Special Issue â€˜Technologies for Fighting COVID-19â€™. , 2020, 5, 91-95.		2
108	Ti/Si interface enabling complementary metal oxide semiconductor compatible, high reliable bonding for inter-die micro-fluidic cooling for future advanced 3D integrated circuit integration. Journal of Micromechanics and Microengineering, 2020, 30, 105005.	1.5	2

#	Article	IF	Citations
109	Efficient adaptive switch design for charge pumps in micro-scale energy harvesting. , 2012, , .		1
110	Modeling a IF double sampling bandpass switched capacitor ΣΔ ADC with a symmetric noise transfer function for WiMAX/WLAN. , 2012, , .		1
111	Transformer coupled novel noise cancellation technique for subthreshold UWB LNA. , 2012, , .		1
112	Design of subthreshold wide band down conversion mixer. , 2013, , .		1
113	Fabrication and characterization of zinc oxide nanowires for high-sensitivity sensing applications. , 2014, , .		1
114	Low temperature Cu-Cu thermocompression bonding assisted by electrochemical desorption of a self-assembled monolayer. , 2014, , .		1
115	Realizing Area efficient Silicon Micro Structures Using Only Front End Bulk Micromachining. International Journal of Advances in Engineering Sciences and Applied Mathematics, 2015, 7, 191-197.	0.7	1
116	A wide input voltage range start-up circuit for solar energy harvesting system. , 2015, , .		1
117	A 2μW biomedical frontend with ΣΔ ADC for self-powered U-healthcare devices in 0.18μm CMOS technology. , 2015, , .		1
118	Zinc oxide nanowire modified flexible plastic platform for immunosensing. , 2016, , .		1
119	Low temperature CMOS compatible Cu-Cu thermo-compression bonding with constantan alloy passivation for 3D IC integration. , 2016, , .		1
120	Facile, low-cost, halochromic platform using electrospun nanofibers for milk adulteration detection. , 2016, , .		1
121	Exploring the Piezoelectric Property of Electrospun Silk Nanofibers for Sensing Applications. , 2018, , .		1
122	Cerium oxide nanofiberâ€“based electrochemical immunosensor for detection of sepsis in biological fluid. Journal of Solid State Electrochemistry, 2021, 25, 2587-2598.	1.2	1
123	Electrochemical Nanoengineered Sensors in Infectious Disease Diagnosis. , 2020, , 165-180.		1
124	Phase noise reduction of an oscillator using harmonic mixing technique. , 2012, , .		0
125	Power dissipation analysis for different configurations of TSVs at high (GHz) frequencies. , 2013, , .		0
126	Transient suppression with pseudo error voltage technique for wide supply range automotive DC-DC converters. , 2016, , .		0

#	Article	IF	Citations
127	Analysis of low temperature E-beam evaporatec amorphous silicon thin films for MEMS applications. , 2016, , .		0
128	Selective Anisotropic Dry Etching of Piezoelectric Silk Microstructures Using Oxygen Plasma Ashing. , 2018, , .		0
129	Thermal and Optoelectrical Analysis of La_{0.7}Sr_{0.3}MnO₃ Thin Film Thermistor in 8â€“12 Î¼m Range for Uncooled Microbolometer Application. , 2018, , .		0
130	Dependency of f_T and f_{MAX} on Various Device Parameters of AlGaN/GaN HEMT. , 2018, , .		0
131	Modeling and Fabrication Aspects of PVDF as a Membrane Material for Air Borne PMUT Applications. , 2018, , .		0
132	Silicide Based Low Temperature and Low Pressure Bonding of TI/SI for Microfludic and Hermetic Selaling Application. , 2018, , .		0
133	Interface Analysis of High Reliable Hermitic Sealed Microfluidic Channels for Thermal Cooling in 3D ICs. , 2019, , .		0
134	Achieving of aluminumâ€“aluminum wafer bonding at low temperature and pressure using Surface passivated technique. , 2019, , .		0
135	Amorphous-Carbon/Si Heterojunction Device for Room-Temperature NH3 Sensing. , 2019, 3, 1-4.		0
136	Boron doped SiC thin film on Silicon synthesized from polycarbosilane: a new lead free material for applications in piezosensors. Journal of Materials Science: Materials in Electronics, 2021, 32, 25108.	1.1	0