Rosa Villa

List of Publications by Year
in descending order

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114 papers	2,881 citations	126858 33 h-index	206029 48 g-index
118 all docs	118 docs citations	118 times ranked	3702 citing authors

#	Article	IF	Citations
1	Elastic Plasmonicâ€Enhanced Fabryâ€“PÃ©rot Cavities with Ultrasensitive Stretching Tunability. Advanced Materials, 2022, 34, e2106731.	11.1	7
2	Direct Color Observation of Lightâ€Driven Molecular Conformationâ€Induced Stress. Small Methods, 2022, 6, 2101283.	4.6	2
3	Full-bandwidth electrophysiology of seizures and epileptiform activity enabled by flexible graphene microtransistor depth neural probes. Nature Nanotechnology, 2022, 17, 301-309.	15.6	49
4	Reliable Paper Surface Treatments for the Development of Inkjetâ€Printed Electrochemical Sensors. Advanced Materials Interfaces, 2022, 9, .	1.9	7
5	Engineering Tissue Barrier Models on Hydrogel Microfluidic Platforms. ACS Applied Materials & Interfaces, 2021, 13, 13920-13933.	4.0	42
6	Characterization of optogenetically-induced cortical spreading depression in awake mice using graphene micro-transistor arrays. Journal of Neural Engineering, 2021, 18, 055002.	1.8	13
7	Gut-on-a-chip: Mimicking and monitoring the human intestine. Biosensors and Bioelectronics, 2021, 181, 113156.	5.3	58
8	Fully Inkjet-Printed Biosensors Fabricated with a Highly Stable Ink Based on Carbon Nanotubes and Enzyme-Functionalized Nanoparticles. Nanomaterials, 2021, 11, 1645.	1.9	20
9	Ultrabroadband light absorbing Fe/polymer flexible metamaterial for soft opto-mechanical devices. Applied Materials Today, 2021, 23, 101052.	2.3	8
10	Specially Designed Polyaniline/Polypyrrole Ink for a Fully Printed Highly Sensitive pH Microsensor. ACS Applied Materials & Interfaces, 2021, 13, 33524-33535.	4.0	14
11	Mechanochromic Detection for Soft Opto-Magnetic Actuators. ACS Applied Materials & Interfaces, 2021, 13, 47871-47881.	4.0	10
12	A Microwave Microfluidic Reflective-Mode Phase-Variation Sensor. , 2021, , .		5
13	Electrochemical sensors for cortisol detections: Almost there. TrAC - Trends in Analytical Chemistry, 2020, 132, 116058.	5.8	62
14	Nanomechanical Sensors as a Tool for Bacteria Detection and Antibiotic Susceptibility Testing. Frontiers in Mechanical Engineering, 2020, 6, .	0.8	25
15	Distortionâ€Free Sensing of Neural Activity Using Graphene Transistors. Small, 2020, 16, 1906640.	5.2	20
16	Switchless Multiplexing of Graphene Active Sensor Arrays for Brain Mapping. Nano Letters, 2020, 20, 3528-3537.	4.5	42
17	Multiplexed neural sensor array of graphene solution-gated field-effect transistors. 2D Materials, 2020, 7, 025046.	2.0	23
18	Improved metal-graphene contacts for low-noise, high-density microtransistor arrays for neural sensing. Carbon, 2020, 161, 647-655.	5.4	19

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19	All Inkjet Printing Sensor Device on Paper: for Immunosensors Applications. , 2019, , .		3
20	A Minimally Invasive Microsensor Specially Designed for Simultaneous Dissolved Oxygen and pH Biofilm Profiling. Sensors, 2019, 19, 4747.	2.1	8
21	3D printed polyamide macroencapsulation devices combined with alginate hydrogels for insulin-producing cell-based therapies. International Journal of Pharmaceutics, 2019, 566, 604-614.	2.6	14
22	Enhanced Performance Stability of Iridium Oxide-Based pH Sensors Fabricated on Rough Inkjet-Printed Platinum. ACS Applied Materials & Interfaces, 2019, 11, 15160-15169.	4.0	39
23	Color tunable pressure sensors based on polymer nanostructured membranes for optofluidic applications. Scientific Reports, 2019, 9, 3259.	1.6	35
24	Electrochromic biosensors based on screen-printed Prussian Blue electrodes. Sensors and Actuators B: Chemical, 2019, 290, 591-597.	4.0	46
25	Versatile Graphene-Based Platform for Robust Nanobiohybrid Interfaces. ACS Omega, 2019, 4, 3287-3297.	1.6	9
26	Neural interfaces based on flexible graphene transistors: A new tool for electrophysiology. , 2019, , .		1
27	Stable Full-Inkjet-Printed Solid-State Ag/AgCl Reference Electrode. Analytical Chemistry, 2019, 91, 15539-15546.	3.2	42
28	High-resolution mapping of infraslow cortical brain activity enabled by graphene microtransistors. Nature Materials, 2019, 18, 280-288.	13.3	121
29	Nanoengineered Biomaterials for the treatment of liver diseases. , 2019, , 417-441.		0
30	A perfusion chamber for monitoring transepithelial NaCl transport in an in vitro model of the renal tubule. Biotechnology and Bioengineering, 2018, 115, 1604-1613.	1.7	8
31	iR Drop Effects in Self-Powered and Electrochromic Biosensors. Journal of Physical Chemistry C, 2018, 122, 2596-2607.	1.5	19
32	Inkjet printed flexible non-enzymatic glucose sensor for tear fluid analysis. Applied Materials Today, 2018, 10, 133-141.	2.3	57
33	Bistability, Causality, and Complexity in Cortical Networks: An In Vitro Perturbational Study. Cerebral Cortex, 2018, 28, 2233-2242.	1.6	58
34	Characterization of an encapsulated insulin secreting human pancreatic beta cell line in a modular microfluidic device. Journal of Drug Targeting, 2018, 26, 36-44.	2.1	15
35	Miniaturized multiparametric flexible platform for the simultaneous monitoring of ionic: Application in real urine. Sensors and Actuators B: Chemical, 2018, 255, 2861-2870.	4.0	10
36	A compartmentalized microfluidic chip with crisscross microgrooves and electrophysiological electrodes for modeling the bloodâ€“retinal barrier. Lab on A Chip, 2018, 18, 95-105.	3.1	61

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37	Flexible Graphene Solutionâ€Gated Fieldâ€Effect Transistors: Efficient Transducers for Microâ€Electrocorticography. Advanced Functional Materials, 2018, 28, 1703976.	7.8	97
38	Quantification of Signal-to-Noise Ratio in Cerebral Cortex Recordings Using Flexible MEAs With Co-localized Platinum Black, Carbon Nanotubes, and Gold Electrodes. Frontiers in Neuroscience, 2018, 12, 862.	1.4	28
39	Engineering and monitoring cellular barrier models. Journal of Biological Engineering, 2018, 12, 18.	2.0	52
40	3D Printed porous polyamide macrocapsule combined with alginate microcapsules for safer cell-based therapies. Scientific Reports, 2018, 8, 8512.	1.6	25
41	Online oxygen monitoring using integrated inkjet-printed sensors in a liver-on-a-chip system. Lab on A Chip, 2018, 18, 2023-2035.	3.1	100
42	Antimony tin oxide (ATO) screen-printed electrodes and their application to spectroelectrochemistry. Electrochemistry Communications, 2018, 93, 123-127.	2.3	9
43	Resemblance of the human liver sinusoid in a fluidic device with biomedical and pharmaceutical applications. Biotechnology and Bioengineering, 2018, 115, 2585-2594.	1.7	38
44	Mapping brain activity with flexible graphene micro-transistors. 2D Materials, 2017, 4, 025040.	2.0	72
45	Quantitative self-powered electrochromic biosensors. Chemical Science, 2017, 8, 1995-2002.	3.7	58
46	Inkjet-printed electrochemical sensors. Current Opinion in Electrochemistry, 2017, 3, 29-39.	2.5	133
47	Low cost nanomechanical surfaces stress based sensors fabricated by hybrid materials. , 2017, , .		2
48	Inkjet-printed dissolved oxygen and pH sensors on flexible plastic substrates. , 2017, , .		0
49	All-inkjet-printed dissolved oxygen sensors on flexible plastic substrates. Organic Electronics, 2016, 39, 168-176.	1.4	53
50	Maintenance of Hepatocyte Phenotype in Vitro: The Sinusoidal Milieu is the Key. Journal of Hepatology, 2016, 64, S307-S308.	1.8	0
51	Geometric correction factor for transepithelial electrical resistance measurements in transwell and microfluidic cell cultures. Journal Physics D: Applied Physics, 2016, 49, 375401.	1.3	53
52	Key Points for Transferring Graphene Grown by Chemical Vapor Deposition. , 2016, , 3-18.		1
53	P0104 : The liver sinusoid within a microfluidic chamber: A new tool for vascular biology research. Journal of Hepatology, 2015, 62, S339-S340.	1.8	0
54	A SU-8-based flexible microprobe for close and distal recordings from the cortical network. Proceedings of SPIE, 2015, , .	0.8	3

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55	A novel strategy to monitor microfluidic in-vitro blood-brain barrier models using impedance spectroscopy. Proceedings of SPIE, 2015, , .	0.8	7
56	Effect of surface conductivity on the sensitivity of interdigitated impedimetric sensors and their design considerations. Sensors and Actuators B: Chemical, 2015, 207, 1010-1018.	4.0	23
57	Profiling of oxygen in biofilms using individually addressable disk microelectrodes on a microfabricated needle. Mikrochimica Acta, 2015, 182, 985-993.	2.5	13
58	Biofilm dynamics characterization using a novel DO-MEA sensor: mass transport and biokinetics. Applied Microbiology and Biotechnology, 2015, 99, 55-66.	1.7	11
59	Chapter 2. Development of Microelectrode-based Biosensors for Biomedical Analysis. RSC Detection Science, 2015, , 19-84.	0.0	1
60	A Novel Modular Bioreactor to In Vitro Study the Hepatic Sinusoid. PLoS ONE, 2014, 9, e111864.	1.1	31
61	Flexible Polyimide Platform based on the Integration of Potentiometric Multi-sensor for Biomedical Applications. Procedia Engineering, 2014, 87, 276-279.	1.2	2
62	Development of a three-dimensional cell culture system based on microfluidics for nuclear magnetic resonance and optical monitoring. Biomicrofluidics, 2014, 8, 064105.	1.2	6
63	New Trends in Quantitative Assessment of the Corneal Barrier Function. Sensors, 2014, 14, 8718-8727.	2.1	4
64	Flexible microfluidic bio-lab-on-a-chip multi-sensor platform for electrochemical measurements. , 2014, , .		1
65	Biofilm Oxygen Profiling using an Array of Microelectrodes on a Microfabricated Needle. Procedia Engineering, 2014, 87, 256-259.	1.2	6
66	Flexible probe for in vivo quantification of corneal epithelium permeability through non-invasive tetrapolar impedance measurements. Biomedical Microdevices, 2013, 15, 849-858.	1.4	5
67	Multi-walled carbon nanotube based multi-electrode arrays for the detection of the emergent activity in the cortical network. Microelectronic Engineering, 2013, 112, 14-20.	1.1	4
68	SU-8 based microprobes for simultaneous neural depth recording and drug delivery in the brain. Lab on A Chip, 2013, 13, 1422.	3.1	109
69	Hybrid contact lens capable of intraocular pressure monitoring in noninvasive way. , 2013, , .		2
70	In vivo assessment of corneal barrier function through non-invasive impedance measurements using a flexible probe. Journal of Physics: Conference Series, 2013, 434, 012072.	0.3	0
71	Vertically Aligned Carbon Nanotubes for Microelectrode Arrays Applications. Journal of Nanoscience and Nanotechnology, 2012, 12, 6941-6947.	0.9	5
72	Increasing biosensor response through hydrogel thin film deposition: Influence of hydrogel thickness. Vacuum, 2012, 86, 2102-2104.	1.6	18

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73	SU-8 based microprobes with integrated planar electrodes for enhanced neural depth recording. Biosensors and Bioelectronics, 2012, 37, 1-5.	5.3	60
74	Cancer Prognostics by Direct Detection of p53â€Antibodies on Gold Surfaces by Impedance Measurements. Small, 2012, 8, 2106-2115.	5.2	20
75	A non-invasive method for an in vivo assessment of corneal epithelium permeability through tetrapolar impedance measurements. Biosensors and Bioelectronics, 2012, 31, 55-61.	5.3	13
76	A simple approach for DNA detection on carbon nanotube microelectrode arrays. Sensors and Actuators B: Chemical, 2012, 162, 120-127.	4.0	13
77	Non-invasive intraocular pressure monitoring with a contact lens engineered with a nanostructured polymeric sensing film. Sensors and Actuators A: Physical, 2011, 170, 36-43.	2.0	48
78	Prototype of a Nanostructured Sensing Contact Lens for Noninvasive Intraocular Pressure Monitoring. , 2011, 52, 8310.		39
79	Discrete Portable Measuring Device for Monitoring Noninvasive Intraocular Pressure with a Nano-Structured Sensing Contact Lens Prototype. International Journal of E-Health and Medical Communications, 2011, 2, 1-19.	1.4	1
80	Total Iron-Overload Measurement in the Human Liver Region by the Magnetic Iron Detector. IEEE Transactions on Biomedical Engineering, 2010, 57, 2295-2303.	2.5	9
81	Non-invasive assessment of corneal endothelial permeability by means of electrical impedance measurements. Medical Engineering and Physics, 2010, 32, 1107-1115.	0.8	16
82	SU-8-based microneedles forin vitroneural applications. Journal of Micromechanics and Microengineering, 2010, 20, 064014.	1.5	39
83	Vertically aligned multi-walled carbon nanotube growth on platinum electrodes for bio-impedance applications. Microelectronic Engineering, 2009, 86, 806-808.	1.1	19
84	Easily made single-walled carbon nanotube surface microelectrodes for neuronal applications. Biosensors and Bioelectronics, 2009, 24, 1942-1948.	5.3	54
85	SU-8 microprobe with microelectrodes for monitoring electrical impedance in living tissues. Biosensors and Bioelectronics, 2009, 24, 2410-2416.	5.3	61
86	Study of functional viability of SU-8-based microneedles for neural applications. Journal of Micromechanics and Microengineering, 2009, 19, 025007.	1.5	64
87	A Rapid and Reliable Means of Assessing Hepatic Steatosis In Vivo Via Electrical Bioimpedance. Transplantation, 2009, 88, 716-722.	0.5	15
88	Portable 4 Wire Bioimpedance Meter with Bluetooth Link. IFMBE Proceedings, 2009, , 868-871.	0.2	7
89	Activity Modulation in Human Neuroblastoma Cultured Cells: Towards a Biological Neuroprocessor. Lecture Notes in Computer Science, 2009, , 142-154.	1.0	0
90	Single-walled carbon nanotubes deposited on surface electrodes to improve interface impedance. Physiological Measurement, 2008, 29, S203-S212.	1.2	23

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91	In vivodetection of liver steatosis in rats based on impedance spectroscopy. Physiological Measurement, 2007, 28, 813-828.	1.2	19
92	Manufacturing and full characterization of silicon carbide-based multi-sensor micro-probes for biomedical applications. Microelectronics Journal, 2007, 38, 406-415.	1.1	50
93	Interface impedance improvement with carbon nanotubes. , 2007, , 296-299.		4
94	Real-Time Direct Measurement of Human Liver Allograft Temperature from Recovery to Transplantation. Transplantation, 2006, 81, 483-486.	0.5	21
95	A SiC microdevice for the minimally invasive monitoring of ischemia in living tissues. Biomedical Microdevices, 2006, 8, 43-49.	1.4	23
96	Electrical bioimpedance measurement during hypothermic rat kidney preservation for assessing ischemic injury. Biosensors and Bioelectronics, 2005, 20, 1866-1871.	5.3	17
97	Bioimpedance dispersion width as a parameter to monitor living tissues. Physiological Measurement, 2005, 26, S165-S173.	1.2	53
98	Minimally invasive silicon probe for electrical impedance measurements in small animals. Biosensors and Bioelectronics, 2003, 19, 391-399.	5.3	60
99	Multiparametric monitoring of ischemia-reperfusion in rat kidney: effect of ischemic preconditioning. Transplantation, 2003, 75, 744-749.	0.5	32
100	COBRA: An Evolved Online Tool for Mammography Interpretation. Lecture Notes in Computer Science, 2003, , 726-733.	1.0	2
101	An Integrated Implantable Electrical Sacral Root Stimulator for Bladder Control. Neuromodulation, 2002, 5, 238-247.	0.4	4
102	New technology for multi-sensor silicon needles for biomedical applications. Sensors and Actuators B: Chemical, 2001, 78, 279-284.	4.0	57
103	Silicon microsystem passivation for high-voltage applications in DNA chips. Microelectronics Reliability, 2000, 40, 787-789.	0.9	3
104	Peripheral nerve regeneration through microelectrode arrays based on silicon technology. Restorative Neurology and Neuroscience, 1996, 9, 151-160.	0.4	39
105	Regenerative-type neural interface. Lecture Notes in Computer Science, 1995, , 114-120.	1.0	0
106	New perspectives in auditory coding: Bases for a new cochlear behavioural model. Lecture Notes in Computer Science, 1995, , 121-129.	1.0	0
107	111In-Oxine-labelled autologous leucocytes in inflammatory bowel disease: New scintigraphic activity index. European Journal of Nuclear Medicine and Molecular Imaging, 1986, 11, 341-344.	2.2	14
108	Multisensor silicon needle for cardiac applications. , 0, , .		3

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109	Impedance microprobes for myocardial ischemia monitoring. , 0, , .		11
110	Instrumentation system for in vivo organ studies. , 0, , .		6
111	Micro and nano technologies in medical applications: a challenge. , 0, , .		1
112	New Generation of SiC Based Biodevices Implemented on 4â€•Wafers. Materials Science Forum, 0, 645-648, 1097-1100.	0.3	9
113	Carbon Nanotubes as Suitable Electrochemical Platforms for Metalloprotein Sensors and Genosensors. , 0, , .		3
114	Discrete Portable Measuring Device for Monitoring Noninvasive Intraocular Pressure with a Nano-Structured Sensing Contact Lens Prototype. , 0, , 214-229.		0