Luca Businaro

List of Publications by Year
in descending order

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113 papers	3,731 citations	159525 30 h-index	138417 58 g-index
114 all docs	114 docs citations	114 times ranked	5967 citing authors

#	Article	IF	Citations
1	Chemotherapy-induced antitumor immunity requires formyl peptide receptor 1. Science, 2015, 350, 972-978.	6.0	367
2	Interfacing Neurons with Carbon Nanotubes: Electrical Signal Transfer and Synaptic Stimulation in Cultured Brain Circuits. Journal of Neuroscience, 2007, 27, 6931-6936.	1.7	329
3	A Hybrid Plasmonicâ˜Photonic Nanodevice for Label-Free Detection of a Few Molecules. Nano Letters, 2008, 8, 2321-2327.	4.5	215
4	Classification of M1/M2-polarized human macrophages by label-free hyperspectral reflectance confocal microscopy and multivariate analysis. Scientific Reports, 2017, 7, 8965.	1.6	158
5	Investigating Nonalcoholic Fatty Liver Disease in a Liver-on-a-Chip Microfluidic Device. PLoS ONE, 2016, 11, e0159729.	1.1	131
6	3D Microfluidic model for evaluating immunotherapy efficacy by tracking dendritic cell behaviour toward tumor cells. Scientific Reports, 2017, 7, 1093.	1.6	130
7	Cross talk between cancer and immune cells: exploring complex dynamics in a microfluidic environment. Lab on A Chip, 2013, 13, 229-239.	3.1	126
8	Dissecting Effects of Anti-cancer Drugs and Cancer-Associated Fibroblasts by On-Chip Reconstitution of Immunocompetent Tumor Microenvironments. Cell Reports, 2018, 25, 3884-3893.e3.	2.9	118
9	Laser trapping and micro-manipulation using optical vortices. Microelectronic Engineering, 2005, 78-79, 125-131.	1.1	80
10	Acetylated tubulin is essential for touch sensation in mice. ELife, 2016, 5, .	2.8	78
11	CaMKK2 in myeloid cells is a key regulator of the immune-suppressive microenvironment in breast cancer. Nature Communications, 2019, 10, 2450.	5.8	72
12	Infrared Microspectroscopy of Live Cells in Microfluidic Devices (MD-IRMS): Toward a Powerful Label-Free Cell-Based Assay. Analytical Chemistry, 2012, 84, 4768-4775.	3.2	71
13	Organs on chip approach: a tool to evaluate cancer -immune cells interactions. Scientific Reports, 2017, 7, 12737.	1.6	69
14	Cancer-driven dynamics of immune cells in a microfluidic environment. Scientific Reports, 2014, 4, 6639.	1.6	68
15	Growth by molecular beam epitaxy and electrical characterization of GaAs nanowires. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 37, 134-137.	1.3	66
16	Coplanar electrode microfluidic chip enabling accurate sheathless impedance cytometry. Lab on A Chip, 2017, 17, 1158-1166.	3.1	65
17	Focused ion beam lithography for two dimensional array structures for photonic applications. Microelectronic Engineering, 2005, 78-79, 11-15.	1.1	62
18	Manganese-Induced Growth of GaAs Nanowires. Nano Letters, 2006, 6, 2130-2134.	4.5	61

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19	Combining Type I Interferons and 5-Aza-2â€²-Deoxycitidine to Improve Anti-Tumor Response against Melanoma. Journal of Investigative Dermatology, 2017, 137, 159-169.	0.3	60
20	Free jet micromixer to study fast chemical reactions by small angle X-ray scattering. Lab on A Chip, 2009, 9, 2063.	3.1	56
21	Infrared microspectroscopy of biochemical response of living cells in microfabricated devices. Vibrational Spectroscopy, 2010, 53, 6-11.	1.2	54
22	High-throughput label-free characterization of viable, necrotic and apoptotic human lymphoma cells in a coplanar-electrode microfluidic impedance chip. Biosensors and Bioelectronics, 2020, 150, 111887.	5.3	51
23	Mitigating positional dependence in coplanar electrode Coulter-type microfluidic devices. Sensors and Actuators B: Chemical, 2017, 247, 580-586.	4.0	50
24	A multidisciplinary study usingin vivotumor models and microfluidic cell-on-chip approach to explore the cross-talk between cancer and immune cells. Journal of Immunotoxicology, 2014, 11, 337-346.	0.9	48
25	A novel wiring scheme for standard chips enabling high-accuracy impedance cytometry. Sensors and Actuators B: Chemical, 2018, 256, 580-589.	4.0	48
26	IL-33 Promotes CD11b/CD18-Mediated Adhesion of Eosinophils to Cancer Cells and Synapse-Polarized Degranulation Leading to Tumor Cell Killing. Cancers, 2019, 11, 1664.	1.7	45
27	Resonant second-harmonic generation in a GaAs photonic crystal waveguide. Physical Review B, 2003, 68, .	1.1	44
28	Recent advances in superhydrophobic surfaces and their relevance to biology and medicine. Bioinspiration and Biomimetics, 2016, 11, 011001.	1.5	44
29	Fabrication of a microfluidic platform for investigating dynamic biochemical processes in living samples by FTIR microspectroscopy. Microelectronic Engineering, 2010, 87, 806-809.	1.1	41
30	Fabrication of 3D metallic photonic crystals by X-ray lithography. Microelectronic Engineering, 2003, 67-68, 479-486.	1.1	38
31	High-throughput electrical position detection of single flowing particles/cells with non-spherical shape. Lab on A Chip, 2019, 19, 1818-1827.	3.1	31
32	Second-harmonic generation in reflection and diffraction by a GaAs photonic-crystal waveguide. Journal of the Optical Society of America B: Optical Physics, 2002, 19, 2122.	0.9	30
33	Design and fabrication of on-fiber diffractive elements for fiber-waveguide coupling by means of e-beam lithography. Microelectronic Engineering, 2003, 67-68, 169-174.	1.1	30
34	Self-assembling of large ordered DNA arrays using superhydrophobic patterned surfaces. Nanotechnology, 2013, 24, 495302.	1.3	30
35	Design, fabrication and evaluation of nanoscale surface topography as a tool in directing differentiation and organisation of embryonic stem-cell-derived neural precursors. Microelectronic Engineering, 2009, 86, 1435-1438.	1.1	28
36	X-ray vortices with high topological charge. Microelectronic Engineering, 2006, 83, 1360-1363.	1.1	27

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37	An integrated superhydrophobic-plasmonic biosensor for mid-infrared protein detection at the femtomole level. Physical Chemistry Chemical Physics, 2015, 17, 21337-21342.	1.3	27
38	From Petri Dishes to Organ on Chip Platform: The Increasing Importance of Machine Learning and Image Analysis. Frontiers in Pharmacology, 2019, 10, 100.	1.6	26
39	LILIT beamline for soft and deep X-ray lithography at Elettra. Microelectronic Engineering, 2001, 57-58, 101-107.	1.1	25
40	Synchrotron radiation infrared microspectroscopy of single living cells in microfluidic devices: advantages, disadvantages and future perspectives. Journal of Physics: Conference Series, 2012, 359, 012007.	0.3	25
41	Optimization of microfluidic systems for IRMS long term measurement of living cells. Microelectronic Engineering, 2012, 98, 698-702.	1.1	23
42	Siteâ€Controlled Singleâ€Photon Emitters Fabricated by Nearâ€Field Illumination. Advanced Materials, 2018, 30, e1705450.	11.1	23
43	X-ray lithography for micro- and nano-fabrication at ELETTRA for interdisciplinary applications. Journal of Physics Condensed Matter, 2004, 16, S3517-S3535.	0.7	22
44	Electrical measurement of cross-sectional position of particles flowing through a microchannel. Microfluidics and Nanofluidics, 2018, 22, 1.	1.0	22
45	Mid-infrared nanoantenna arrays on silicon and CaF2 substrates for sensing applications. Microelectronic Engineering, 2012, 97, 197-200.	1.1	21
46	Plasticity of primary microglia on micropatterned geometries and spontaneous long-distance migration in microfluidic channels. BMC Neuroscience, 2013, 14, 121.	0.8	21
47	Oncoimmunology Meets Organs-on-Chip. Frontiers in Molecular Biosciences, 2021, 8, 627454.	1.6	21
48	Design and fabrication of diffractive optical elements for optical tweezer arrays by means of e-beam lithography. Microelectronic Engineering, 2002, 61-62, 963-969.	1.1	20
49	A Bayesian Approach for Coincidence Resolution in Microfluidic Impedance Cytometry. IEEE Transactions on Biomedical Engineering, 2021, 68, 340-349.	2.5	20
50	Organ-on-chip model shows that ATP release through connexin hemichannels drives spontaneous Ca²⁺ signaling in non-sensory cells of the greater epithelial ridge in the developing cochlea. Lab on A Chip, 2020, 20, 3011-3023.	3.1	19
51	Electro-Optical Classification of Pollen Grains via Microfluidics and Machine Learning. IEEE Transactions on Biomedical Engineering, 2022, 69, 921-931.	2.5	18
52	All-optical nano modulator on a silicon chip. Optics Express, 2007, 15, 9029.	1.7	17
53	Wet sample confinement by superhydrophobic patterned surfaces for combined X-ray fluorescence and X-ray phase contrast imaging. Microelectronic Engineering, 2013, 111, 304-309.	1.1	17
54	Fabrication by means of x-ray lithography of two-dimensional GaAs/AlGaAs photonic crystals with an unconventional unit cell. Nanotechnology, 2002, 13, 644-652.	1.3	16

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55	Experimental set-up for time resolved small angle X-ray scattering studies of nanoparticles formation using a free-jet micromixer. Nuclear Instruments & Methods in Physics Research B, 2010, 268, 329-333.	0.6	16
56	Spin-wave frequency discretization in submicron rectangular prisms. Journal of Applied Physics, 2003, 93, 7595-7597.	1.1	15
57	X-ray lithography fabrication of a zone plate for X-rays in the range from 15 to 30 keV. Microelectronic Engineering, 2002, 61-62, 173-177.	1.1	14
58	Controlling the Cassie-to-Wenzel Transition: an Easy Route towards the Realization of Tridimensional Arrays of Biological Objects. Nano-Micro Letters, 2014, 6, 280-286.	14.4	14
59	Broadband enhancement of light-matter interaction in photonic crystal cavities integrating site-controlled quantum dots. Physical Review B, 2020, 101, .	1.1	14
60	Cross beam lithography (FIB+EBL) and dip pen nanolithography for nanoparticle conductivity measurements. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 2806.	1.6	13
61	Optical properties and photonic bands of GaAs photonic crystal waveguides with tilted square lattice. European Physical Journal B, 2002, 27, 79-87.	0.6	12
62	Three-dimensional micro- and nanostructuring by combination of nanoimprint and x-ray lithography. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 766.	1.6	12
63	Fabrication of electro optical nano modulator on silicon chip. Microelectronic Engineering, 2009, 86, 1099-1102.	1.1	12
64	Nanofabrication of high refractive index contrast two-dimensional photonic crystal waveguides. Microelectronic Engineering, 2003, 67-68, 670-675.	1.1	11
65	Fabrication of 3D micro and nanostructures for MEMS and MOEMS: an approach based on combined lithographies.. Journal of Physics: Conference Series, 2006, 34, 904-911.	0.3	10
66	A lithographic approach for quantum dot-photonic crystal nanocavity coupling in dilute nitrides. Microelectronic Engineering, 2017, 174, 16-19.	1.1	10
67	A simple electrical approach to monitor dielectrophoretic focusing of particles flowing in a microchannel. Electrophoresis, 2019, 40, 1400-1407.	1.3	10
68	Fabrication of Diffractive Optical Elements On-Fiber for Photonic Applications by Nanolitography. Japanese Journal of Applied Physics, 2003, 42, 4177-4180.	0.8	9
69	Wide-band transmittance of one-dimensional photonic crystals carved in Si3N4âˆ•SiO2 channel waveguides. Applied Physics Letters, 2005, 87, 211116.	1.5	9
70	Controlling DNA Bundle Size and Spatial Arrangement in Self-assembled Arrays on Superhydrophobic Surface. Nano-Micro Letters, 2015, 7, 146-151.	14.4	9
71	Aryl Sulfonates as Initiators for Extreme Ultraviolet Lithography: Applications in Epoxyâ€Based Hybrid Materials. ChemPhotoChem, 2018, 2, 425-432.	1.5	9
72	Collective behavior of evaporating droplets on superhydrophobic surfaces. AICHE Journal, 2020, 66, e16284.	1.8	9

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73	Shaping X-rays by diffractive coded nano-optics. Microelectronic Engineering, 2003, 67-68, 87-95.	1.1	8
74	Computationally Informed Design of a Multi-Axial Actuated Microfluidic Chip Device. Scientific Reports, 2017, 7, 5489.	1.6	8
75	Focused ion beam fabrication of one-dimensional photonic crystals on Si3N4/SiO2channel waveguides. Journal of Optics, 2006, 8, S550-S553.	1.5	7
76	Light confinement in thin film organic photovoltaic cells. , 2006, , .		7
77	High-throughput analysis of cell-cell crosstalk in ad hoc designed microfluidic chips for oncoimmunology applications. Methods in Enzymology, 2020, 632, 479-502.	0.4	7
78	Surface decoration of electrospun scaffolds by microcontact printing. Asia-Pacific Journal of Chemical Engineering, 2014, 9, 401-406.	0.8	6
79	X-ray lithography for 3D microfluidic applications. Microelectronic Engineering, 2004, 73-74, 870-875.	1.1	6
80	High-resolution complex structures for two-dimensional photonic crystals realized by x-ray diffraction lithography. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 748.	1.6	5
81	Progress towards tubes with regular nanopatterned inner surfaces. Journal of Vacuum Science & Technology B, 2006, 24, 3258.	1.3	5
82	All-optical integrated micro logic gate. Microelectronics Journal, 2011, 42, 472-476.	1.1	5
83	Optically reconfigurable structures based on surface enhanced Raman scattering in nanorods. Microelectronic Engineering, 2013, 111, 251-255.	1.1	5
84	Fabrication of an electro-optical Bragg modulator based on plasma dispersion effect in silicon. Microelectronic Engineering, 2013, 105, 107-112.	1.1	5
85	a-Si:H based two-dimensional photonic crystals. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 16, 539-543.	1.3	4
86	Nano-optical elements fabricated by e-beam and x-ray lithography. , 2003, , .		4
87	X-Ray Lithography Patterning of Magnetic Materials and Their Characterization. Japanese Journal of Applied Physics, 2003, 42, 3802-3806.	0.8	4
88	Design and fabrication of large area nano-structured substrates for use in pancreatic beta-cell engineering. Microelectronic Engineering, 2009, 86, 1468-1472.	1.1	4
89	<title>Laser diagnostics developed for conservation and restoration of cultural inheritance</title>. , 2000, 4070, 2.		3
90	Second-harmonic generation measured on a GaAs photonic crystal planar waveguide. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 17, 402-405.	1.3	3

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91	Electromagnetically Actuated Surface Micromachined Free Standing Torsion Beam Micromirror Made by Electroplated Nickel. Japanese Journal of Applied Physics, 2004, 43, 418-423.	0.8	3
92	Metal-oxide semiconductor, field effect transistor-based microscale electro-optical multimode interference modulator on a silicon chip. Journal of Nanophotonics, 2007, 1, 011660.	0.4	3
93	Miniaturized Bragg modulator on a silicon chip. Journal of Nanophotonics, 2009, 3, 031760.	0.4	3
94	The Gas Sensing Properties of Porphyrins-coated Laterally Grown ZnO Nanorods. Procedia Engineering, 2014, 87, 1039-1042.	1.2	3
95	Linear optical properties and photonic mode dispersion in GaAs/AlGaAs photonic crystal slabs. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 17, 418-419.	1.3	2
96	Resonant second-harmonic generation and mode dispersion in photonic crystal waveguides. Physica Status Solidi (B): Basic Research, 2003, 238, 428-431.	0.7	2
97	Three-dimensional digital scanner based on micromachined micromirror for the metrological measurement of the human ear canal. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 2990.	1.6	2
98	The ENEA discharge produced plasma extreme ultraviolet source and its patterning applications. , 2019, , .		2
99	<title>Wave front engineering by means of diffractive optical elements for applications in microscopy</title>. , 2006, , .		1
100	Nanoscale chemical mapping through plasmonic tips on AFM-based cantilevers. , 2012, , .		1
101	Controlling the Cassie-to-Wenzel Transition: an Easy Route towards the Realization of Tridimensional Arrays of Biological Objects. Nano-Micro Letters, 2014, 6, 280.	14.4	1
102	Coherent laser sensor for robotic applications. , 1998, , .		0
103	Gaussian to rectangular light beam redistribution using computer-generated phase elements. , 2001, , .		0
104	Nonlinear optical response in patterned planar waveguides. , 0, , .		0
105	<title>Design and implementation of optical tweezer arrays using diffractive optical elements</title>. , 2004, , .		0
106	Fabrication And Characterization Of Mn-catalyzed GaAs Nanowires. AIP Conference Proceedings, 2007, , .	0.3	0
107	New perspectives in the generation of entangled qudit states. Journal of Modern Optics, 2009, 56, 190-195.	0.6	0
108	Integrated Photonic Micro Logic Gate. Lecture Notes in Computer Science, 2011, , 1-9.	1.0	0

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109	Single photon emitters in dilute nitrides: Towards a determinist approach of quantum dot-photonic crystal nanocavity coupling. , 2015, , .		0
110	Quantum Dots: Site-Controlled Single-Photon Emitters Fabricated by Near-Field Illumination (Adv.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	11.1	0
111	Investigation of Bacterial Interactions Using Lab on Chips. , 2020, , .		0
112	Dissecting Effects of Anti-cancer Drugs and of Cancer-associated Fibroblasts by On-chip Reconstitution of Immunocompetent Tumor Microenvironments. SSRN Electronic Journal, 0, , .	0.4	0
113	Silicon single mode waveguide modulator based upon switchable Bragg reflector. , 2018, , .		0