

# Marco Balucani

## List of Publications by Year in descending order

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106  
papers

715  
citations

623188

14  
h-index

676716

22  
g-index

106  
all docs

106  
docs citations

106  
times ranked

591  
citing authors

#	ARTICLE	IF	CITATIONS
1	Development of Micro-Grippers for Tissue and Cell Manipulation with Direct Morphological Comparison. <i>Micromachines</i> , 2015, 6, 1710-1728.	1.4	61
2	MEMS-Based Conjugate Surfaces Flexure Hinge. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2015, 137, .	1.7	54
3	Operational characterization of CSFH MEMS technology based hinges. <i>Journal of Micromechanics and Microengineering</i> , 2018, 28, 055012.	1.5	32
4	Electrochemical Deposition and Characterization of Ni in Mesoporous Silicon. <i>Journal of the Electrochemical Society</i> , 2012, 159, D623-D627.	1.3	27
5	Electrochemical and hydrothermal deposition of ZnO on silicon: from continuous films to nanocrystals. <i>Journal of Nanoparticle Research</i> , 2011, 13, 5985-5997.	0.8	25
6	Aluminum-silicon Interdiffusion in Screen Printed Metal Contacts for Silicon based Solar Cells Applications. <i>Energy Procedia</i> , 2013, 43, 100-110.	1.8	24
7	Multilayer structures induced by plasma and laser beam treatments on a-Si:H and a-SiC:H thin films. <i>Thin Solid Films</i> , 2001, 383, 230-234.	0.8	23
8	Comparative study of initial stages of copper immersion deposition on bulk and porous silicon. <i>Nanoscale Research Letters</i> , 2013, 8, 85.	3.1	20
9	Oxidized Porous Silicon: From Dielectric Isolation to Integrated Optical Waveguides. <i>Journal of Porous Materials</i> , 2000, 7, 215-222.	1.3	19
10	Nanostructures formed by displacement of porous silicon with copper: from nanoparticles to porous membranes. <i>Nanoscale Research Letters</i> , 2012, 7, 477.	3.1	18
11	Self-aligned oxidised porous silicon optical waveguides with reduced loss. <i>Electronics Letters</i> , 2000, 36, 722.	0.5	17
12	Mechanical strength of porous silicon and its possible applications. <i>Superlattices and Microstructures</i> , 2008, 44, 374-377.	1.4	17
13	Formation of composite nanostructures by corrosive deposition of copper into porous silicon. <i>Superlattices and Microstructures</i> , 2008, 44, 583-587.	1.4	15
14	On-chip THz 3D antennas. , 2012, , .		15
15	Porous Silicon: A Buffer Layer for PbS Heteroepitaxy. <i>Physica Status Solidi A</i> , 2000, 182, 195-199.	1.7	14
16	Electrochemical Deposition of Ni into Mesoporous Silicon. <i>ECS Transactions</i> , 2012, 41, 111-118.	0.3	14
17	Electroplated contacts and porous silicon for silicon based solar cells applications. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2015, 194, 78-85.	1.7	13
18	Properties of ZrO <sub>2</sub> thin films prepared by laser ablation. <i>Materials Science in Semiconductor Processing</i> , 2002, 5, 253-257.	1.9	12

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19	Properties of zirconium silicate thin films prepared by laser ablation. <i>Materials Science in Semiconductor Processing</i> , 2004, 7, 209-214.	1.9	12
20	Recent progress in integrated waveguides based on oxidized porous silicon. <i>Optical Materials</i> , 2005, 27, 776-780.	1.7	12
21	A Class-AB/D Audio Power Amplifier for Mobile Applications Integrated Into a 2.5G/3G Baseband Processor. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2010, 57, 1003-1016.	3.5	12
22	New Selective Processing Technique for Solar Cells. <i>Energy Procedia</i> , 2013, 43, 54-65.	1.8	12
23	Electric Field Enhancement in 3-D Tapered Helix Antenna for Terahertz Applications. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2014, 4, 360-367.	2.0	12
24	Kinetostatic optimization of a MEMS-based compliant 3 DOF plane parallel platform. , 2013, , .		11
25	Fine structure of photoluminescence spectra from erbium incorporated with iron in oxidized porous silicon. <i>Physica Status Solidi A</i> , 2003, 197, 441-445.	1.7	10
26	The development of a MEMS/NEMS-based 3 D.O.F. compliant micro robot. , 2010, , .		10
27	Design, optimization and construction of MEMS-based micro grippers for cell manipulation. , 2013, , .		10
28	200 MHz optical signal modulation from a porous silicon light emitting device. <i>Applied Physics Letters</i> , 1998, 72, 639-640.	1.5	9
29	Bending properties in oxidized porous silicon waveguides. <i>Materials Science in Semiconductor Processing</i> , 2000, 3, 351-355.	1.9	9
30	Formation of intermediate SiCN interlayer during deposition of CN <sub>x</sub> on a-Si:H or a-SiC:H thin films. <i>Applied Surface Science</i> , 2001, 184, 96-100.	3.1	9
31	Optimization of Chemical Displacement Deposition of Copper on Porous Silicon. <i>Journal of Nanoscience and Nanotechnology</i> , 2012, 12, 8725-8731.	0.9	9
32	A model of radiative recombination in n-type porous siliconâ€“aluminum Schottky junction. <i>Applied Physics Letters</i> , 1999, 74, 1960-1962.	1.5	8
33	Er-doped oxidised porous silicon waveguides. <i>Thin Solid Films</i> , 2001, 396, 202-204.	0.8	7
34	Microthrusters in silicon for aerospace application. <i>IEEE Aerospace and Electronic Systems Magazine</i> , 2002, 17, 22-27.	2.3	7
35	Performance Analysis of Compliant MEMS Parallel Robots Through Pseudo-Rigid-Body Model Synthesis. , 2012, , .		7
36	Luminescence from porous silicon doped with erbiumâ€“ytterbium complexes. <i>Journal of Luminescence</i> , 1998, 80, 395-398.	1.5	6

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37	Cu-Si Nanocomposites Based on Porous Silicon Matrix. Solid State Phenomena, 2009, 151, 222-226.	0.3	6
38	Terahertz Sensor for Integrated Image Detector. Procedia Engineering, 2014, 87, 1131-1134.	1.2	6
39	Silicon Emitting Device Will Knock Down Communication Bottleneck?. Solid State Phenomena, 1997, 54, 8-12.	0.3	5
40	Characterization of silicon LEDs integrated with oxidized porous silicon SOI. Microelectronic Engineering, 1997, 36, 115-118.	1.1	5
41	X-ray diffractometry of Si epilayers grown on porous silicon. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 91-92, 445-448.	1.7	5
42	Technological aspects of oxidated porous silicon waveguides. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 16, 586-590.	1.3	5
43	Photoluminescence from erbium incorporated in oxidized porous silicon. Optical Materials, 2005, 27, 894-899.	1.7	5
44	Technology and design of innovative flexible electrode for biomedical applications. , 2011, , .		5
45	Smart flexible planar electrodes for electrochemotherapy and biosensing. , 2013, , .		5
46	New selective wet processing. , 2013, , .		5
47	High-amplitude high-frequency oscillations of temperature, electron-hole pair concentration, and current in silicon-on-insulator structures. Journal of Applied Physics, 2000, 88, 6554-6559.	1.1	4
48	Buffer layer influence on guiding properties of oxidized porous silicon waveguides. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 16, 574-579.	1.3	4
49	Electroplated Nickel/Tin Solder Pads for Rear Metallization of Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 404-411.	1.5	4
50	Humidity Sensor Based on Partially Oxidized Porous Silicon. Solid State Phenomena, 1997, 54, 75-85.	0.3	3
51	Characterization of Porous Silicon Light Emitting Diodes in High Current Density Conditions. Solid State Phenomena, 1997, 54, 21-26.	0.3	3
52	Investigation of Morphology of Porous Silicon Formed on N+ Type Silicon. Journal of Porous Materials, 2000, 7, 23-26.	1.3	3
53	Gettering Technology Based on Porous Silicon. Solid State Phenomena, 2001, 82-84, 405-410.	0.3	3
54	High density compliant contacting technology for integrated high power modules in automotive applications. , 2012, , .		3

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55	Development of a MEMS technology CSFH based microgripper. , 2014, , .		3
56	Design of a Tri-Axial Surface Micromachined MEMS Vibrating Gyroscope. Sensors, 2020, 20, 2822.	2.1	3
57	Formation Features of Deposits during a Cathode Treatment of Porous Silicon in Aqueous Solutions of Erbium Salts. Journal of the Electrochemical Society, 2000, 147, 655.	1.3	2
58	Visible photoluminescence of zinc oxide films electrochemically deposited on silicon substrates. Technical Physics Letters, 2009, 35, 1160-1162.	0.2	2
59	Transfer layer technology for the packaging of high power modules. , 2010, , .		2
60	A novel micromachined loudspeaker topology. , 2011, , .		2
61	Characterization of Copper Nanostructures Grown on Porous Silicon by Displacement Deposition. ECS Transactions, 2012, 41, 13-22.	0.3	2
62	Localized metal plating on aluminum back side PV cells. , 2014, , .		2
63	High uniformity and high speed copper pillar plating technique. , 2014, , .		2
64	Porous silicon technology, a breakthrough for silicon photonics: From packaging to monolithic integration. , 2014, , .		2
65	Realization of 3D silicon structures using a DRIE technique. , 2015, , .		2
66	STRONG ROOM-TEMPERATURE PHOTOLUMINESCENCE OF Er-Yb COMPLEXES EMBEDDED IN POROUS SILICON. , 1997, , .		2
67	Visible and IR Photoluminescence of Erbium Doped Porous Silicon Films. Solid State Phenomena, 1997, 54, 94-100.	0.3	1
68	Amorphous Silicon Photodetectors for Silicon Based Optical Waveguides. Solid State Phenomena, 1997, 54, 45-49.	0.3	1
69	Optical link for digital transmissions using porous silicon light emitting diode. Journal of Non-Crystalline Solids, 2000, 266-269, 1238-1240.	1.5	1
70	Model of the drain current saturation in long-gate JFETs and MESFETs. Solid-State Electronics, 2005, 49, 1251-1254.	0.8	1
71	Power Management Unit for a Ground Referenced audio amplifier for mobile phones in 65nm CMOS. , 2010, , .		1
72	4.55GHz phase and quadrature pulsed bias VCO in 40nm CMOS technology. , 2011, , .		1

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73	A novel series-parallel inverting charge pump topology in 40nm CMOS technology. , 2011, , .		1
74	ZnO Films and Crystals on Bulk Silicon and SOI Wafers: Formation, Properties and Applications. Advanced Materials Research, 0, 276, 3-19.	0.3	1
75	Electrochemical deposition of zinc oxide on a thin nickel buffer layer on silicon substrates. Electrochimica Acta, 2011, 56, 4031-4036.	2.6	1
76	Gold in Flux-less Bonding: Noble or not Noble. Materials Research Society Symposia Proceedings, 2011, 1299, 1.	0.1	1
77	Hydrogen storage materials for microthrusters: Basic performance analysis. Acta Astronautica, 2012, 80, 52-57.	1.7	1
78	60 GHz tapered-helix antenna for WPAN applications. , 2012, , .		1
79	Nano-klystron: New design and technology for THz source. , 2013, , .		1
80	Electrochemically etched TSV for porous silicon interposer technologies. , 2013, , .		1
81	Dielectric lens optimization for conical helix THz antennas. , 2014, , .		1
82	A new approach: Low cost masking material and efficient copper metallization for higher efficiency silicon solar cells. , 2015, , .		1
83	AMPERE: An European project aimed to decrease the Levelized Cost of Energy with innovative heterojunction bifacial module solution ready for the market.. , 2018, , .		1
84	INTEGRATED OPTICAL WAVEGUIDES BASED ON POROUS SILICON: STATE-OF-THE-ART AND OUTLOOK FOR PROGRESS. , 1999, , .		1
85	Light Emission Characterization of Al-Porous Silicon Schottky Junction. Solid State Phenomena, 1997, 54, 37-44.	0.3	0
86	Characterization of integrated optical waveguides based on oxidized porous silicon. , 1998, , .		0
87	Amorphous silicon photodetectors for optical integrated circuits. , 1998, , .		0
88	Laser treatment of a-SiC:H thin films for optoelectronic applications. , 1998, , .		0
89	Multilayer structures deposited by laser ablation. Sensors and Actuators A: Physical, 1999, 74, 27-30.	2.0	0
90	High-amplitude and high-frequency oscillations of temperature and current in SOI structure. Microelectronic Engineering, 1999, 48, 343-346.	1.1	0

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91	Similarity relation for $I_{d-sat}$ characteristics of FETs with different channel shape. Solid-State Electronics, 2000, 44, 1865-1867.	0.8	0
92	Influence of a-Si:H buffer layers on the properties of CN x materials. , 2001, 4430, 748.		0
93	Oxidized porous silicon waveguides losses. , 2001, , .		0
94	Propagation Losses in Curved Integrated Optical Waveguides Based on Oxidized Porous Silicon. Technical Physics Letters, 2005, 31, 225.	0.2	0
95	SEM AND XRD STUDY OF COPPER/POROUS SILICON NANOCOMPOSITES. , 2009, , .		0
96	FEATURES OF THE NICKEL ELECTROCHEMICAL DEPOSITION INTO MESOPOROUS SILICON. , 2009, , .		0
97	Editorial of the Special Issue of Microelectronics Journal on the IEEE International MOS-AK/GSA Workshop on Compact Modeling 2010 (MOS-AK/GSA Rome 2010). Microelectronics Journal, 2013, 44, 1-2.	1.1	0
98	3D Antenna for GHz application and vibration energy harvesting. , 2013, , .		0
99	Oxidized Porous Silicon Based SOI: Untapped Resources. , 2002, , 309-327.		0
100	COMPOSITE NANOSTRUCTURES BASED ON POROUS SILICON HOST. , 2003, , .		0
101	PHOTOLUMINESCENCE EXCITATION SPECTROSCOPY OF ERBIUM INCORPORATED WITH IRON IN OXIDIZED POROUS SILICON. , 2003, , .		0
102	IMMERSION DISPLACEMENT DEPOSITION OF COPPER ON POROUS SILICON FOR NANOSTRUCTURE FABRICATION. , 2011, , .		0
103	MULTILAYER STRUCTURE OF DENSE ANODIC ALUMINA FILMS. , 2013, , .		0
104	A Breakthrough in Pb-Free Solder Electroplating. ECS Meeting Abstracts, 2018, , .	0.0	0
105	Dynamic Liquid Drop/Meniscus: A New Route to Electrodeposition. ECS Meeting Abstracts, 2019, , .	0.0	0
106	A New Electrodeposition Approach for Multicomponent Solder Alloys. ECS Meeting Abstracts, 2020, MA2020-01, 1232-1232.	0.0	0