

Angel Rodriguez

List of Publications by Year in descending order

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112
papers

1,581
citations

257357

24
h-index

360920

35
g-index

112
all docs

112
docs citations

112
times ranked

1575
citing authors

#	ARTICLE	IF	CITATIONS
1	An impedimetric immunosensor based on interdigitated microelectrodes (ID ^{1/4} E) for the determination of atrazine residues in food samples. <i>Biosensors and Bioelectronics</i> , 2008, 23, 1367-1373.	5.3	86
2	First use of macroporous silicon loaded with catalyst film for a chemical reaction: A microreformer for producing hydrogen from ethanol steam reforming. <i>Journal of Catalysis</i> , 2008, 255, 228-233.	3.1	74
3	Bio-ethanol steam reforming and autothermal reforming in 3- $\hat{1}$ / ₄ m channels coated with RhPd/CeO ₂ for hydrogen generation. <i>Chemical Engineering and Processing: Process Intensification</i> , 2013, 64, 31-37.	1.8	59
4	Fabrication of silicon oxide microneedles from macroporous silicon. <i>Sensors and Actuators B: Chemical</i> , 2005, 109, 135-140.	4.0	58
5	Colloidal Crystal Wires. <i>Advanced Materials</i> , 2008, 20, 2315-2318.	11.1	58
6	Voltage and pull-in time in current drive of electrostatic actuators. <i>Journal of Microelectromechanical Systems</i> , 2002, 11, 196-205.	1.7	56
7	Analysis of the extended operation range of electrostatic actuators by current-pulse drive. <i>Sensors and Actuators A: Physical</i> , 2001, 90, 181-190.	2.0	55
8	Impedimetric immunosensor for atrazine detection using interdigitated $\hat{1}$ / ₄ -electrodes (ID ^{1/4} E's). <i>Sensors and Actuators B: Chemical</i> , 2007, 125, 526-537.	4.0	53
9	Conductimetric immunosensor for atrazine detection based on antibodies labelled with gold nanoparticles. <i>Sensors and Actuators B: Chemical</i> , 2008, 134, 95-103.	4.0	50
10	Effects of symmetry reduction in two-dimensional square and triangular lattices. <i>Physical Review B</i> , 2004, 69, .	1.1	46
11	BiCMOS technology improvements for microwave application. , 2008, , .		45
12	Macroporous silicon: A versatile material for 3D structure fabrication. <i>Sensors and Actuators A: Physical</i> , 2008, 141, 662-669.	2.0	41
13	A million-channel reformer on a fingertip: Moving down the scale in hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2010, 35, 3472-3479.	3.8	37
14	Synthesis and characterisation of metal suboxides for gas sensors. <i>Microelectronics Reliability</i> , 2000, 40, 807-810.	0.9	36
15	Micromachined silicon microcantilevers for gas sensing applications with capacitive read-out. <i>Sensors and Actuators B: Chemical</i> , 2005, 111-112, 247-253.	4.0	35
16	Determination of atrazine residues in red wine samples. A conductimetric solution. <i>Food Chemistry</i> , 2010, 122, 888-894.	4.2	33
17	Coulombimetric immunosensor for paraquat based on electrochemical nanoprobos. <i>Sensors and Actuators B: Chemical</i> , 2014, 194, 353-360.	4.0	33
18	X-ray characterization of dislocation density asymmetries in heteroepitaxial semiconductors. <i>Applied Physics Letters</i> , 2008, 92, .	1.5	30

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19	AgSbSe ₂ and AgSb(S,Se) ₂ thin films for photovoltaic applications. Applied Surface Science, 2011, 257, 10834-10838.	3.1	29
20	Zeolite-coated interdigital capacitors for humidity sensing. Sensors and Actuators B: Chemical, 2011, 157, 450-459.	4.0	28
21	Fabrication of two- and three-dimensional photonic crystals by electrochemical etching of silicon. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 3104-3107.	0.8	27
22	High-aspect-ratio silicon dioxide pillars. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 1634-1638.	0.8	27
23	Fabrication of flexible interdigitated $\frac{1}{4}$ -electrodes (FID $\frac{1}{4}$ Es) for the development of a conductimetric immunosensor for atrazine detection based on antibodies labelled with gold nanoparticles. Microelectronic Engineering, 2010, 87, 167-173.	1.1	26
24	Pull-in time \times energy product of electrostatic actuators: comparison of experiments with simulation. Sensors and Actuators A: Physical, 2000, 83, 263-269.	2.0	25
25	A million-channel CO-PrOx microreactor on a fingertip for fuel cell application. Chemical Engineering Journal, 2011, 167, 597-602.	6.6	25
26	Analysis of photonic band gaps in two-dimensional photonic crystals with rods covered by a thin interfacial layer. Physical Review B, 2004, 70, .	1.1	23
27	Larger absolute photonic band gap in two-dimensional air \times silicon structures. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 16, 580-585.	1.3	21
28	Tuning the shape of macroporous silicon. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 3237-3242.	0.8	21
29	Model for the anomalous off-current of polysilicon thin-film transistors and diodes. IEEE Transactions on Electron Devices, 1993, 40, 938-943.	1.6	18
30	Single frequency impedimetric immunosensor for atrazine detection. Sensors and Actuators B: Chemical, 2008, 129, 921-928.	4.0	18
31	Application of pulsed digital oscillators to volatile organic compounds sensing. Sensors and Actuators B: Chemical, 2008, 134, 773-779.	4.0	18
32	Thermosensitive Macroporous Cryogels Functionalized With Bioactive Chitosan/ α -emiparin Nanoparticles. Macromolecular Bioscience, 2013, 13, 1556-1567.	2.1	18
33	Enhanced geometries of macroporous silicon photonic crystals for optical gas sensing applications. Photonics and Nanostructures - Fundamentals and Applications, 2017, 25, 46-51.	1.0	17
34	Low-cost thermal ΔT air flow sensor. IEEE Sensors Journal, 2002, 2, 453-462.	2.4	16
35	Development of microstructured zeolite films as highly accessible catalytic coatings for microreactors. Journal of Catalysis, 2007, 250, 190-194.	3.1	16
36	Catalytic reforming of dimethyl ether in microchannels. Catalysis Today, 2019, 323, 209-215.	2.2	16

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37	AC impedance analysis of Au/porous silicon contacts. <i>Microelectronic Engineering</i> , 2006, 83, 2381-2385.	1.1	15
38	Polymer microfibers obtained using porous silicon templates. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2008, 205, 2437-2440.	0.8	13
39	Improving selective thermal emission properties of three-dimensional macroporous silicon through porosity tuning. <i>Applied Physics Letters</i> , 2008, 93, 081913.	1.5	13
40	Optical properties of 3D macroporous silicon structures. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2008, 149, 275-280.	1.7	12
41	Macroporous Silicon Filters, a Versatile Platform for NDIR Spectroscopic Gas Sensing in the MIR. <i>Journal of the Electrochemical Society</i> , 2019, 166, B1010-B1015.	1.3	12
42	Macroporous silicon coated with M/TiO ₂ (M=Au,Pt) as a highly efficient photoreactor for hydrogen production. <i>Chemical Engineering Journal</i> , 2020, 393, 124701.	6.6	12
43	Allergy to grape: A case report. <i>Pediatric Allergy and Immunology</i> , 2001, 12, 289-290.	1.1	11
44	Thermal emission of macroporous silicon chirped photonic crystals. <i>Optics Letters</i> , 2010, 35, 3348.	1.7	11
45	Macroporous Silicon. , 0, , 183-205.		10
46	Visible light emission from macroporous Si. <i>Optical Materials</i> , 2006, 29, 262-267.	1.7	10
47	A conduction-convection design for liquid flow sensing. <i>Sensors and Actuators A: Physical</i> , 1998, 66, 131-137.	2.0	9
48	A Two-Dimensional KTiOPO ₄ Photonic Crystal Grown Using a Macroporous Silicon Template. <i>Advanced Materials</i> , 2006, 18, 2220-2225.	11.1	9
49	Infrared thermal emission in macroporous silicon three-dimensional photonic crystals. <i>Applied Physics Letters</i> , 2007, 91, .	1.5	9
50	3D metallo-dielectric structures combining electrochemical and electroplating techniques. <i>Microelectronic Engineering</i> , 2010, 87, 1458-1462.	1.1	9
51	Flow measurement hits home. <i>IEEE Circuits and Devices: the Magazine of Electronic and Photonic Systems</i> , 1997, 13, 14-18.	0.8	8
52	Microporous silicon for CMOS compatible MST. , 0, , .		8
53	Macroporous silicon: efficient antireflective layer on crystalline silicon. <i>Journal of Materials Science: Materials in Electronics</i> , 2011, 22, 895-900.	1.1	8
54	High-Density Capacitor Devices Based on Macroporous Silicon and Metal Electroplating. <i>IEEE Transactions on Electron Devices</i> , 2014, 61, 116-122.	1.6	8

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55	Characterization of 2D macroporous silicon photonic crystals: Improving the photonic band identification in angular-dependent reflection spectroscopy in the mid-IR. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2008, 147, 179-182.	1.7	7
56	Design and fabrication of a low cost water flow meter. , 0, , .		6
57	A monolithic micro fuel cell based on a functionalized porous silicon membrane. , 2010, , .		6
58	Macroporous silicon for high-capacitance devices using metal electrodes. <i>Nanoscale Research Letters</i> , 2014, 9, 473.	3.1	6
59	Properties of oxidized porous silicon as insulator material for RF applications. , 0, , .		5
60	Mid-IR characterization of photonic bands in 2D photonic crystals on silicon. <i>Thin Solid Films</i> , 2008, 516, 8059-8063.	0.8	5
61	Emissive properties of SiO ₂ thin films through photonic windows. <i>Applied Physics Letters</i> , 2012, 100, .	1.5	5
62	Macroporous silicon for spectroscopic CO ₂ detection. , 2014, , .		5
63	Study of resonant modes in a 700 nm pitch macroporous silicon photonic crystal. <i>Infrared Physics and Technology</i> , 2017, 80, 6-10.	1.3	5
64	Steady-State and Transient Conductivity of Colloidal Solutions of Gold Nanobeads. <i>IEEE Nanotechnology Magazine</i> , 2007, 6, 504-508.	1.1	4
65	A million-microchannel multifuel steam reformer for hydrogen production. <i>Catalysis Today</i> , 2021, 362, 55-61.	2.2	4
66	Two-dimensional photonic crystals of rods with a dielectric cladding. , 2005, , .		3
67	Micro-cantilevers for gas sensing. , 0, , .		3
68	Elastic strains in heteroepitaxial ZnSe _{1-x} Te _x on InGaAs/InP (001). <i>Journal of Electronic Materials</i> , 2006, 35, 1327-1332.	1.0	3
69	Application of the 1-D silicon limit to varactors. <i>IEEE Transactions on Electron Devices</i> , 2006, 53, 1601-1607.	1.6	3
70	Fabrication and Characterization of Porous Silicon on crystalline Silicon based devices. , 2007, , .		3
71	Reflection Analysis of 2D-photonic Crystal Lattice Using Bragg-diffraction phenomena. , 2007, , .		3
72	Electrical Transport and Impedance Analysis of Au/Porous Silicon Thin Films. , 2008, , .		3

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73	Electrical and optical characterization of porous silicon ⁿ -p-crystalline silicon heterojunction diodes. AIP Conference Proceedings, 2008, , .	0.3	3
74	New approaches for the fabrication of photonic structures of nonlinear optical materials. Journal of Luminescence, 2009, 129, 1441-1447.	1.5	3
75	Novel Electronic Devices in Macroporous Silicon: Design of FET Transistors for Power Applications. IEEE Transactions on Electron Devices, 2011, 58, 3065-3071.	1.6	3
76	Macroporous silicon microreactor for the preferential oxidation of CO. , 2013, , .		3
77	Development and impedimetric evaluation of a magnetic interdigitated microelectrode. Sensors and Actuators B: Chemical, 2014, 203, 444-451.	4.0	3
78	Macroporous Silicon: Technology and Applications. , 2017, , .		3
79	Influence of the fabrication process on the light emission of macroporous silicon. , 2005, , .		2
80	Towards more complex shapes of macroporous silicon. , 2007, , .		2
81	Impact of the absorption in transmittance and reflectance on macroporous silicon photonic crystals. , 2015, , .		2
82	Improved transmission and thermal emission in macroporous silicon photonic crystals with 700 nm pitch. , 2017, , .		2
83	Immunosensors Based on Interdigitated Electrodes for the Detection and Quantification of Pesticides in Food. , 0, , .		2
84	In situ grown or solid phase recrystallized P-doped mono- and polysilicon by r.f. plasma CVD. Thin Solid Films, 1990, 184, 139-146.	0.8	1
85	Design fabrication and test of micromachined-silicon capacitive gas sensors with integrated readout. , 2003, 5116, 92.		1
86	Electromechanically coupled feedback loops for microsystems. application to volatile organic compounds (VOC) sensors. , 0, , .		1
87	<title>Adsorption induced differential surface stress versus adsorption induced resonance frequency change: a comparison</title>. , 2005, , .		1
88	Electrical properties of oxidized polycrystalline silicon as a gate insulator for n-type 4H-SiC MOS devices. Solid-State Electronics, 2005, 49, 2002-2005.	0.8	1
89	Two- and three-dimensional microstructures produced by electrochemical etching of silicon. , 0, , .		1
90	Post-etching shaping of macroporous silicon. Proceedings of SPIE, 2007, , .	0.8	1

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91	On-chip mm-Wave passives. Bipolar/BiCMOS Circuits and Technology Meeting, IEEE Proceedings of the, 2007, , .	0.0	1
92	A quantitative model for the interpretation of RAV (rocking curve azimuthal variation) results from heteroepitaxial semiconductor layers. Journal of Crystal Growth, 2010, 312, 886-891.	0.7	1
93	Macroporous silicon photonic crystals for gas sensing. , 2013, , .		1
94	Coupling defects in macroporous silicon photonic crystals. , 2017, , .		1
95	A Novel Low Cost Lead-frame Air Flow Anemometer. , 2001, , 1440-1443.		1
96	Transmission and Thermal Emission in the NO ₂ and CO Absorption Lines using Macroporous Silicon Photonic Crystals with 700 Nm Pitch. , 2017, , .		1
97	Characterisation of surface micromachined beams with floating gate transistor. , 0, , .		0
98	Injection system based on silicon oxide microneedles. , 0, , .		0
99	Micromachined silicon microstructures for gas sensors. , 0, , .		0
100	Growth of 2D KTP photonic crystals for efficient second order nonlinear optical processes. , 2006, , .		0
101	High frequency response of a novel biosensor based on interdigitated I ^{1/4} -electrodes (ID ^{1/4} E's). , 2007, , .		0
102	¼-Porous silicon (¼-PS) gas sensor based on interdigitated ¼-electrodes (ID¼-E's). , 2007, , .		0
103	Inside Front Cover: Colloidal Crystal Wires (Adv. Mater. 12/2008). Advanced Materials, 2008, 20, NA-NA.	11.1	0
104	Interdigitated ¼-electrodes for development of an impedimetric immunosensor for atrazine detection. , 2009, , .		0
105	Core–Shell Zn x Cd1–x Se/Zn y Cd1–y Se Quantum Dots for Nonvolatile Memory and Electroluminescent Device Applications. Journal of Electronic Materials, 2011, 40, 1699-1705.	1.0	0
106	Macroporous silicon FET transistors for power applications. , 2013, , .		0
107	Compact device for COɪmp;#x2013;2ɪmp;#x2013; optical sensing using macroporous silicon photonic crystals. , 2015, , .		0
108	Development of gas sensors based in photonic crystal slabs. , 2017, , .		0

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109	Macroporous Silicon for Gas Detection. , 2018, , .		0
110	MEMS Devices. The Electrical Engineering Handbook, 2011, , 1-33.	0.2	0
111	A Testing Structure to Evaluate the Surface Recombination: Photovoltaic Parameters and Optical Reflection. , 1987, , 1034-1038.		0
112	LOW POWER PHOTOVOLTAIC INSTALLATIONS FOR DISTRIBUTED SUPPLY IN RURAL ENVIRONMENT. , 1988, , 359-362.		0