

Vicente Torres-Costa

List of Publications by Year in descending order

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104
papers

1,576
citations

331670

21
h-index

377865

34
g-index

106
all docs

106
docs citations

106
times ranked

1698
citing authors

#	ARTICLE	IF	CITATIONS
1	Application of nanostructured porous silicon in the field of optics. A review. Journal of Materials Science, 2010, 45, 2823-2838.	3.7	134
2	Biomedical applications of nanostructured porous silicon: a review. Journal of Nanophotonics, 2010, 4, 042502.	1.0	69
3	Adhesion and Proliferation of Human Mesenchymal Stem Cells from Dental Pulp on Porous Silicon Scaffolds. ACS Applied Materials & Interfaces, 2014, 6, 1719-1728.	8.0	62
4	Porous silicon optical devices for sensing applications. Optical Materials, 2005, 27, 1084-1087.	3.6	61
5	Optical Biosensors Based on Semiconductor Nanostructures. Sensors, 2009, 9, 5149-5172.	3.8	61
6	Optical gas sensing properties of thermally hydrocarbonized porous silicon Bragg reflectors. Optics Express, 2009, 17, 5446.	3.4	60
7	Porous silicon-cyclodextrin based polymer composites for drug delivery applications. Carbohydrate Polymers, 2014, 110, 238-252.	10.2	58
8	Nanostructured Porous Silicon: The Winding Road from Photonics to Cell Scaffolds – A Review. Frontiers in Bioengineering and Biotechnology, 2015, 3, 60.	4.1	42
9	Optical constants of porous silicon films and multilayers determined by genetic algorithms. Journal of Applied Physics, 2004, 96, 4197-4203.	2.5	40
10	Optical characterization of porous silicon films and multilayer filters. Applied Physics A: Materials Science and Processing, 2004, 79, 1919-1923.	2.3	38
11	Optical and electrical properties of MoO ₂ and MoO ₃ thin films prepared from the chemically driven isothermal close space vapor transport technique. Journal of Physics Condensed Matter, 2019, 31, 295703.	1.8	35
12	Porous silicon multilayer stacks for optical biosensing applications. Microelectronics Journal, 2004, 35, 45-48.	2.0	29
13	Chemical stabilization of porous silicon for enhanced biofunctionalization with immunoglobulin. Science and Technology of Advanced Materials, 2012, 13, 045009.	6.1	26
14	Functionality of porous silicon particles: Surface modification for biomedical applications. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2010, 169, 123-127.	3.5	25
15	Aging of porous silicon in physiological conditions: Cell adhesion modes on scaled 1D micropatterns. Journal of Biomedical Materials Research - Part A, 2012, 100A, 1615-1622.	4.0	25
16	Effective passivation of porous silicon optical devices by thermal carbonization. Journal of Applied Physics, 2008, 103, 083124.	2.5	24
17	Hybrid luminescent/magnetic nanostructured porous silicon particles for biomedical applications. Journal of Biomedical Optics, 2011, 16, 025002.	2.6	24
18	Porous silicon optical filters for biosensing applications. Journal of Non-Crystalline Solids, 2006, 352, 2457-2460.	3.1	23

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19	Optical and compositional analysis of functional SiO _x Cy:H coatings on polymers. <i>Thin Solid Films</i> , 2006, 515, 2493-2496.	1.8	23
20	All-silicon color-sensitive photodetectors in the visible. <i>Materials Science and Engineering C</i> , 2007, 27, 954-956.	7.3	22
21	Silicon-based photonic crystals fabricated using proton beam writing combined with electrochemical etching method. <i>Nanoscale Research Letters</i> , 2012, 7, 416.	5.7	22
22	Near ambient pressure X-ray photoelectron spectroscopy monitoring of the surface immobilization cascade on a porous silicon-gold nanoparticle FET biosensor. <i>Applied Surface Science</i> , 2019, 492, 362-368.	6.1	22
23	Nanostructured porous silicon-mediated drug delivery. <i>Expert Opinion on Drug Delivery</i> , 2014, 11, 1273-1283.	5.0	21
24	Surface Functionalization of Nanostructured Porous Silicon by APTS: Toward the Fabrication of Electrical Biosensors of Bacterium <i>Escherichia coli</i> . <i>Current Nanoscience</i> , 2011, 7, 178-182.	1.2	20
25	Gold nanoparticle triggered dual optoplasmonic-impedimetric sensing of prostate-specific antigen on interdigitated porous silicon platforms. <i>Sensors and Actuators B: Chemical</i> , 2018, 267, 559-564.	7.8	20
26	Chemically driven isothermal closed space vapor transport of MoO ₂ : thin films, flakes and <i>in situ</i> tellurization. <i>Journal of Materials Chemistry C</i> , 2018, 6, 6799-6807.	5.5	19
27	Self-powered broadband hybrid organic-inorganic photodetectors based on PEDOT:PSS and silicon micro-nanostructures. <i>Journal of Materials Chemistry C</i> , 2021, 9, 4682-4694.	5.5	19
28	Selective Optical Response of Hydrolytically Stable Stratified Si Rugate Mirrors to Liquid Infiltration. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 2884-2892.	8.0	18
29	Development of interference filters based on multilayer porous silicon structures. <i>Materials Science and Engineering C</i> , 2003, 23, 1043-1046.	7.3	17
30	Towards the Development of Electrical Biosensors Based on Nanostructured Porous Silicon. <i>Materials</i> , 2010, 3, 755-763.	2.9	17
31	Fabrication and characterization of a chemically oxidized-nanostructured porous silicon based biosensor implementing orienting protein A. <i>Colloids and Surfaces B: Biointerfaces</i> , 2014, 115, 310-316.	5.0	17
32	Structural considerations on multistopband mesoporous silicon rugate filters prepared for gas sensing purposes. <i>Optics Express</i> , 2011, 19, 13291.	3.4	15
33	Nanostructured porous silicon micropatterns as a tool for substrate-conditioned cell research. <i>Nanoscale Research Letters</i> , 2012, 7, 396.	5.7	15
34	Hybrid gold/porous silicon thin films for plasmonic solar cells. <i>Scripta Materialia</i> , 2014, 74, 33-37.	5.2	15
35	Nanostructured-porous-silicon-based two-dimensional photonic crystals. <i>Applied Physics Letters</i> , 2006, 89, 053126.	3.3	14
36	Design and characterization of biofunctional magnetic porous silicon flakes. <i>Acta Biomaterialia</i> , 2013, 9, 6169-6176.	8.3	14

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37	Calcium phosphate/porous silicon biocomposites prepared by cyclic deposition methods: Spin coating vs electrochemical activation. <i>Materials Science and Engineering C</i> , 2014, 34, 245-251.	7.3	14
38	RBS Characterization of Porous Silicon Multilayer Interference Filters. <i>Electrochemical and Solid-State Letters</i> , 2004, 7, G244.	2.2	13
39	Distributed Bragg reflectors based on chalcogenide glasses for chemical optical sensing. <i>Journal Physics D: Applied Physics</i> , 2009, 42, 055109.	2.8	13
40	Carbonization of porous silicon optical gas sensors for enhanced stability and sensitivity. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009, 206, 1306-1308.	1.8	13
41	Planar polar liquid crystalline alignment in nanostructured porous silicon one-dimensional photonic crystals. <i>Applied Physics Letters</i> , 2010, 97, 113106.	3.3	13
42	Highly flexible method for the fabrication of photonic crystal slabs based on the selective formation of porous silicon. <i>Nanoscale Research Letters</i> , 2012, 7, 449.	5.7	13
43	Engineering of silicon surfaces at the micro- and nanoscales for cell adhesion and migration control. <i>International Journal of Nanomedicine</i> , 2012, 7, 623.	6.7	13
44	Hydrophobic perfluoro-silane functionalization of porous silicon photoluminescent films and particles. <i>Applied Surface Science</i> , 2016, 380, 243-248.	6.1	13
45	Controlling the Epitaxial Growth of Bi ₂ Te ₃ , BiTe, and Bi ₄ Te ₃ Pure Phases by Physical Vapor Transport. <i>Inorganic Chemistry</i> , 2018, 57, 10090-10099.	4.0	13
46	Tunnel conduction regimes, white-light emission and band diagram of porous silicon-zinc oxide nanocomposites. <i>Journal of Luminescence</i> , 2017, 191, 107-111.	3.1	12
47	Passivation of nanostructured silicon optical devices by thermal carbonization. <i>Microporous and Mesoporous Materials</i> , 2008, 111, 636-638.	4.4	11
48	High Surface Water Interaction in Superhydrophobic Nanostructured Silicon Surfaces: Convergence between Nanoscopic and Macroscopic Scale Phenomena. <i>Langmuir</i> , 2012, 28, 1909-1913.	3.5	11
49	Synaptic and Fast Switching Memristance in Porous Silicon-Based Structures. <i>Nanomaterials</i> , 2019, 9, 825.	4.1	11
50	Porosity profile determination of porous silicon interference filters by RBS. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005, 2, 3208-3212.	0.8	10
51	Optical and In-Depth RBS Characterization of Porous Silicon Interference Filters. <i>Journal of the Electrochemical Society</i> , 2005, 152, G846.	2.9	10
52	Laser fabrication of porous silicon-based platforms for cell culturing. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2013, 101, 1463-1468.	3.4	10
53	Nanotopography enhanced mobility determines mesenchymal stem cell distribution on micropatterned semiconductors bearing nanorough areas. <i>Colloids and Surfaces B: Biointerfaces</i> , 2015, 126, 146-153.	5.0	10
54	Luminescence and fine structure correlation in ZnO permeated porous silicon nanocomposites. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 20597-20604.	2.8	10

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55	Highly-focused boron implantation in diamond and imaging using the nuclear reaction $^{11}\text{B}(p, \hat{1}\pm)^8\text{Be}$. Nuclear Instruments & Methods in Physics Research B, 2015, 348, 174-177.	1.4	10
56	Microwave plasma and rapid thermal processing of indium-tin oxide thin films for enhancing their performance as transparent electrodes. Journal of Photonics for Energy, 2019, 9, 1.	1.3	10
57	MeV Si ion beam implantation as an effective patterning tool for the localized formation of porous silicon. Nuclear Instruments & Methods in Physics Research B, 2012, 282, 25-28.	1.4	9
58	Fabrication of Zinc Oxide and Nanostructured Porous Silicon Composite Micropatterns on Silicon. Coatings, 2020, 10, 529.	2.6	9
59	Spatially resolved MoO_x phases by the laser oxidation of MoO_2 : a possible route for all-molybdenum oxide devices. Journal of Materials Chemistry C, 2021, 9, 6579-6588.	5.5	9
60	Nanostructured Porous Silicon Photonic Crystal for Applications in the Infrared. Journal of Nanotechnology, 2012, 2012, 1-6.	3.4	8
61	Properties of bilayer contacts to porous silicon. Applied Physics A: Materials Science and Processing, 2012, 107, 293-300.	2.3	8
62	Electroless nanoworm Au films on columnar porous silicon layers. Materials Chemistry and Physics, 2012, 134, 664-669.	4.0	8
63	Reprogramming hMSCs morphology with silicon/porous silicon geometric micro-patterns. Biomedical Microdevices, 2014, 16, 229-236.	2.8	8
64	$\text{TiN}_x\text{O}_y/\text{TiN}$ dielectric contrasts obtained by ion implantation of ; structural, optical and electrical properties. Journal Physics D: Applied Physics, 2011, 44, 235501.	2.8	7
65	Visible Light Assisted Organosilane Assembly on Mesoporous Silicon Films and Particles. Materials, 2019, 12, 131.	2.9	7
66	Characterization of hybrid cobalt-porous silicon systems: protective effect of the Matrix in the metal oxidation. Nanoscale Research Letters, 2012, 7, 495.	5.7	6
67	Optical properties of porous silicon materials for biomedical applications. , 2014, , 185-222.		6
68	Interfacial strain defines the self-organization of epitaxial MoO_2 flakes and porous films on sapphire: experiments and modelling. Applied Surface Science, 2020, 514, 145875.	6.1	6
69	Finite-thickness photonic crystals based on nanostructured porous silicon for optical sensing. Journal of Nanophotonics, 2009, 3, 031504.	1.0	5
70	Silicon-based hybrid luminescent/magnetic porous nanoparticles for biomedical applications. Journal of Nanophotonics, 2011, 5, 051505.	1.0	5
71	Conditioned bio-interfaces of silicon/porous silicon micro-patterns lead to the chondrogenesis of hMSCs. RSC Advances, 2015, 5, 92263-92269.	3.6	5
72	Interface between cement paste and thin TiN film for corrosion resistance enhancement; structural, morphological and electrochemical properties. Construction and Building Materials, 2015, 80, 48-55.	7.2	5

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73	Direct laser writing of nanorough cell microbarriers on anatase/Si and graphite/Si. <i>Materials Science and Engineering C</i> , 2016, 66, 8-15.	7.3	5
74	Growth of out-of-plane standing MoTe ₂ (1-x)Se _{2x} /MoSe ₂ composite flake films by sol-gel nucleation of MoO _y and isothermal closed space telluro-selenization. <i>Applied Surface Science</i> , 2021, 546, 149076.	6.1	5
75	In-depth RBS study of optical layers based on nanostructured silicon. <i>Journal of Non-Crystalline Solids</i> , 2006, 352, 2521-2525.	3.1	4
76	Surface modification, characterization and biofunctionality of pegylated titanate films obtained by the sol-gel method. <i>Surface and Interface Analysis</i> , 2008, 40, 205-209.	1.8	4
77	Microstructure based optical modeling of ZnO- porous silicon permeated nanocomposites. <i>Journal Physics D: Applied Physics</i> , 2015, 48, 295102.	2.8	4
78	Porous Silicon Bragg Reflector and 2D Gold-Polymer Nanograting: A Route Towards a Hybrid Optoplasmonic Platform. <i>Nanomaterials</i> , 2019, 9, 1017.	4.1	4
79	Laser writing of nanostructured silicon arrays for the SERS detection of biomolecules with inhibited oxidation. <i>Colloids and Surfaces B: Biointerfaces</i> , 2019, 174, 174-180.	5.0	4
80	Molecular Analysis of the Mineral Phase and Examination of Possible Intramineral Proteins of Dinosaur Eggshells Collected in El Rosario, Baja California, Mexico. <i>ACS Earth and Space Chemistry</i> , 2021, 5, 1552-1563.	2.7	4
81	Porous SiGe Nanostructures Formed by Electrochemical Etching of Thin Poly-SiGe Films. <i>Journal of the Electrochemical Society</i> , 2004, 151, C326.	2.9	3
82	Photoluminescence of Naphthalimide Derivatives Deposited onto Nanostructured Porous Silicon. <i>Journal of the Electrochemical Society</i> , 2006, 153, D134.	2.9	3
83	Isothermal close space sublimation for II-VI semiconductor filling of porous matrices. <i>Nanoscale Research Letters</i> , 2012, 7, 409.	5.7	3
84	Enhanced ZnTe infiltration in porous silicon by Isothermal Close Space Sublimation. <i>Microporous and Mesoporous Materials</i> , 2014, 188, 93-98.	4.4	3
85	Porous Silicon Devices for the Electrical Biosensing of <i>Escherichia Coli</i> . <i>Sensor Letters</i> , 2010, 8, 387-391.	0.4	3
86	Study of the formation mechanism of hierarchical silicon structures produced by sequential ion beam irradiation and anodic etching. <i>Vacuum</i> , 2017, 138, 238-243.	3.5	2
87	High aspect ratio channels in glass and porous silicon. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2017, 394, 1-5.	1.4	2
88	Fabrication and characterization of nanostructured porous silicon-silver composite layers by cyclic deposition: dip-coating vs spin-coating. <i>Nanotechnology</i> , 2020, 31, 365704.	2.6	2
89	Bringing immuno-assemblies to optoelectronics: sandwich assay integration of a nanostructured porous-silicon/gold-nanoparticle phototransistor. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2021, 271, 115271.	3.5	2
90	Microscopy of Porous Silicon. , 2014, , 413-421.		2

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91	A multi-ion beam microanalysis approach for the characterization of plasma polymerized allylamine films. EPJ Applied Physics, 2011, 56, 24021.	0.7	1
92	Development of drug delivery systems based on nanostructured porous silicon loaded with the anti-tumoral drug emodin adsorbed on silver nanoparticles. , 2012, , .		1
93	Intense white luminescence in ZnTe embedded porous silicon. Applied Physics Letters, 2012, 100, 263110.	3.3	1
94	Applications of nanostructured porous silicon in the field of optical sensing. , 2008, , .		0
95	Development of electrical biosensors based on nanostructured porous silicon. , 2009, , .		0
96	Nanostructured porous silicon-based dual luminescent/magnetic particles for biomedical tracking. Proceedings of SPIE, 2010, , .	0.8	0
97	Controlled skeletal progenitor cell migration on nanostructured porous silicon/silicon micropatterns. Proceedings of SPIE, 2011, , .	0.8	0
98	Functionalization of Thermally Carbonized Porous Silicon Optical Multilayer Structures for Sensing Applications. ECS Transactions, 2013, 58, 63-70.	0.5	0
99	Microscopy of Porous Silicon. , 2014, , 1-9.		0
100	Infiltration of ZnO in Mesoporous Silicon by Isothermal Zn Annealing and Oxidation. ECS Journal of Solid State Science and Technology, 2016, 5, P6-P11.	1.8	0
101	Microscopy of Porous Silicon. , 2016, , 1-14.		0
102	Laser fabrication of porous silicon-based platforms for cell culturing. , 2013, , n/a-n/a.		0
103	Optical properties of porous silicon materials. , 2021, , 183-222.		0
104	Nanostructures for Photonics and Optoelectronics. Nanomaterials, 2022, 12, 1820.	4.1	0