Miguel Manso SilvÃ¡n

List of Publications by Year
in descending order

132 papers	2,250 citations	279487 23 h-index	301761 39 g-index
133 all docs	133 docs citations	133 times ranked	2762 citing authors

#	Article	IF	Citations
1	Electrodeposition of hydroxyapatite coatings in basic conditions. Biomaterials, 2000, 21, 1755-1761.	5.7	221
2	Surface micro- and nano-texturing of stainless steel by femtosecond laser for the control of cell migration. Scientific Reports, 2016, 6, 36296.	1.6	94
3	Title is missing!. Journal of Sol-Gel Science and Technology, 2001, 22, 139-150.	1.1	91
4	Fabrication of Nanostructured Polymeric Surfaces for Biosensing Devices. Nano Letters, 2004, 4, 1047-1050.	4.5	90
5	Testing solâ€“gel CaTiO3 coatings for biocompatible applications. Materials Science and Engineering C, 2003, 23, 447-450.	3.8	62
6	Optical Biosensors Based on Semiconductor Nanostructures. Sensors, 2009, 9, 5149-5172.	2.1	61
7	Porous silicon-cyclodextrin based polymer composites for drug delivery applications. Carbohydrate Polymers, 2014, 110, 238-252.	5.1	58
8	Tailoring surface properties of biomedical polymers by implantation of Ar and He ions. Acta Biomaterialia, 2005, 1, 431-440.	4.1	44
9	Gold Nanostructures for Surface-Enhanced Raman Spectroscopy, Prepared by Electrodeposition in Porous Silicon. Materials, 2011, 4, 791-800.	1.3	42
10	Nanostructured Porous Silicon: The Winding Road from Photonics to Cell Scaffolds Ã¢â‚¬â€œ A Review. Frontiers in Bioengineering and Biotechnology, 2015, 3, 60.	2.0	42
11	Hybrid porous silicon/silver nanostructures for the development of enhanced photovoltaic devices. Journal of Materials Science, 2020, 55, 5458-5470.	1.7	39
12	Mechanical and in vitro testing of aerosolâ€“gel deposited titania coatings for biocompatible applications. Biomaterials, 2002, 23, 349-356.	5.7	35
13	Surface biofunctionalization of materials by amine groups. Journal of Materials Research, 2004, 19, 2415-2420.	1.2	32
14	Biological evaluation of aerosolâ€“gel-derived hydroxyapatite coatings with human mesenchymal stem cells. Biomaterials, 2002, 23, 3985-3990.	5.7	30
15	Monodisperse Î±-Fe2O3 nanoplatelets: Synthesis and characterization. Ceramics International, 2015, 41, 2228-2233.	2.3	30
16	BaTiO3 thin films obtained by solâ€“gel spin coating. Surface and Coatings Technology, 2002, 151-152, 118-121.	2.2	29
17	Porous silicon multilayer stacks for optical biosensing applications. Microelectronics Journal, 2004, 35, 45-48.	1.1	29
18	Recent developments in surface science and engineering, thin films, nanoscience, biomaterials, plasma science, and vacuum technology. Thin Solid Films, 2018, 660, 120-160.	0.8	27

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19	Chemical stabilization of porous silicon for enhanced biofunctionalization with immunoglobulin. Science and Technology of Advanced Materials, 2012, 13, 045009.	2.8	26
20	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.	1.7	25
21	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.	2.1	25
22	Porous silicon based structures for the electrical biosensing of glucose. Sensors and Actuators B: Chemical, 2007, 126, 82-85.	4.0	24
23	Hybrid luminescent/magnetic nanostructured porous silicon particles for biomedical applications. Journal of Biomedical Optics, 2011, 16, 025002.	1.4	24
24	Microstructural and photocatalytic characterization of cement-paste sol-gel synthesized titanium dioxide. Frontiers of Structural and Civil Engineering, 2016, 10, 189-197.	1.2	23
25	Calcium phosphate coatings prepared by aerosol-gel. Journal of the European Ceramic Society, 2003, 23, 243-246.	2.8	22
26	Near ambient pressure X-ray photoelectron spectroscopy monitoring of the surface immobilization cascade on a porous silicon-gold nanoparticle FET biosensor. Applied Surface Science, 2019, 492, 362-368.	3.1	22
27	Microstructural study of aerosolâ€“gel derived hydroxyapatite coatings. New Biotechnology, 2002, 19, 63-66.	2.7	21
28	Surface and interface analysis of hydroxyapatite/TiO2 biocompatible structures. Materials Science and Engineering C, 2003, 23, 451-454.	3.8	21
29	Nanostructured porous silicon-mediated drug delivery. Expert Opinion on Drug Delivery, 2014, 11, 1273-1283.	2.4	21
30	Nanostructuring surfaces with conjugated silica colloids deposited using silicon-based microcantilevers. Nanotechnology, 2005, 16, 525-531.	1.3	20
31	One step processing of aminofunctionalized gate oxides. Biosensors and Bioelectronics, 2007, 22, 2786-2789.	5.3	20
32	Surface Functionalization of Nanostructured Porous Silicon by APTS: Toward the Fabrication of Electrical Biosensors of Bacterium Escherichia coli. Current Nanoscience, 2011, 7, 178-182.	0.7	20
33	Gold nanoparticle triggered dual optoplasmonic-impedimetric sensing of prostate-specific antigen on interdigitated porous silicon platforms. Sensors and Actuators B: Chemical, 2018, 267, 559-564.	4.0	20
34	Acid/base Micropatterned Devices for pH-Dependent Biosensors. Plasma Processes and Polymers, 2005, 2, 334-339.	1.6	19
35	Chemically driven isothermal closed space vapor transport of MoO₂: thin films, flakes and in situ tellurization. Journal of Materials Chemistry C, 2018, 6, 6799-6807.	2.7	19
36	Solâ€“Gel-Deposited Ti-Doped ZnO: Toward Cell Fouling Transparent Conductive Oxides. ACS Omega, 2019, 4, 11354-11363.	1.6	19

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37	Testing biomaterials by the in-situ evaluation of cell response. New Biotechnology, 2002, 19, 239-242.	2.7	18
38	Development of human mesenchymal stem cells on DC sputtered titanium nitride thin films. Journal of Materials Science: Materials in Medicine, 2002, 13, 289-293.	1.7	18
39	Experimental and density functional theory study of the Li+ desorption in spinel/layered lithium manganese oxide nanocomposites using HCl. Chemical Engineering Journal, 2022, 441, 136019.	6.6	18
40	Ion-beam treatment of PEO; towards a physically stabilized anti-fouling film. Surface and Interface Analysis, 2004, 36, 733-736.	0.8	17
41	Structured porous silicon sub-micrometer wells grown by colloidal lithography. Europhysics Letters, 2006, 76, 690-695.	0.7	17
42	Preparation of interfaces for TEM cross-section observation. Nuclear Instruments & Methods in Physics Research B, 2007, 257, 623-626.	0.6	17
43	Towards the Development of Electrical Biosensors Based on Nanostructured Porous Silicon. Materials, 2010, 3, 755-763.	1.3	17
44	Characterization and cytocompatibility of hybrid aminosilane-agarose hydrogel scaffolds. Biointerphases, 2010, 5, 23-29.	0.6	17
45	Fabrication and characterization of a chemically oxidized-nanostructured porous silicon based biosensor implementing orienting protein A. Colloids and Surfaces B: Biointerfaces, 2014, 115, 310-316.	2.5	17
46	Ion beam induced nanometric structure and oligopeptide adsorption on patterned polymer surfaces. Materials Science and Engineering C, 2003, 23, 779-786.	3.8	16
47	Aminofunctionalization and sub-micrometer patterning on silicon through silane doped agarose hydrogels. Journal of Materials Chemistry, 2009, 19, 5226.	6.7	16
48	Boosting the Near-Infrared Emission of Ag₂S Nanoparticles by a Controllable Surface Treatment for Bioimaging Applications. ACS Applied Materials & Interfaces, 2022, 14, 4871-4881.	4.0	16
49	Hydroxyapatite coatings obtained by the thermal activation of polymeric sols. Solid State Sciences, 2001, 3, 1153-1155.	0.8	15
50	Cellular response to oxygen containing biomedical polymers modified by Ar and He implantation. Acta Biomaterialia, 2007, 3, 735-743.	4.1	15
51	Nanostructured porous silicon micropatterns as a tool for substrate-conditioned cell research. Nanoscale Research Letters, 2012, 7, 396.	3.1	15
52	Biomimetic hierarchical micro/nano texturing of TiAlV alloys by femtosecond laser processing for the control of cell adhesion and migration. Physical Review Materials, 2020, 4, .	0.9	15
53	Nanostructured-porous-silicon-based two-dimensional photonic crystals. Applied Physics Letters, 2006, 89, 053126.	1.5	14
54	Design and characterization of biofunctional magnetic porous silicon flakes. Acta Biomaterialia, 2013, 9, 6169-6176.	4.1	14

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55	Calcium phosphate/porous silicon biocomposites prepared by cyclic deposition methods: Spin coating vs electrochemical activation. Materials Science and Engineering C, 2014, 34, 245-251.	3.8	14
56	Nanoporous silicon microparticles embedded into oxidized hyaluronic acid/adipic acid dihydrazide hydrogel for enhanced controlled drug delivery. Microporous and Mesoporous Materials, 2021, 310, 110634.	2.2	14
57	Characterization of biofunctional thin films deposited by activated vapor silanization. Journal of Materials Research, 2008, 23, 1931-1939.	1.2	13
58	Engineering of silicon surfaces at the micro- and nanoscales for cell adhesion and migration control. International Journal of Nanomedicine, 2012, 7, 623.	3.3	13
59	Hydrophobic perfluoro-silane functionalization of porous silicon photoluminescent films and particles. Applied Surface Science, 2016, 380, 243-248.	3.1	13
60	Controlling the Epitaxial Growth of Bi₂Te₃, BiTe, and Bi₄Te₃ Pure Phases by Physical Vapor Transport. Inorganic Chemistry, 2018, 57, 10090-10099.	1.9	13
61	An evaluation of poly(ethylene-glycol) films stabilized by plasma and ion beam methods. Applied Surface Science, 2004, 235, 119-125.	3.1	12
62	Micro-spot, UV and wetting patterning pathways for applications of biofunctional aminosilane-titanate coatings. Biomedical Microdevices, 2007, 9, 287-294.	1.4	12
63	Tunnel conduction regimes, white-light emission and band diagram of porous siliconâ€“zinc oxide nanocomposites. Journal of Luminescence, 2017, 191, 107-111.	1.5	12
64	Structural, optical and electrical properties of SnO2 doped TiO2 synthesized by the Solâ€“Gel method. Journal of Materials Science: Materials in Electronics, 2018, 29, 3095-3103.	1.1	12
65	Polypropylene glycol is a selective binding inhibitor for LTA and other structurally related TLR2 agonists. European Journal of Immunology, 2008, 38, 797-808.	1.6	11
66	High Surface Water Interaction in Superhydrophobic Nanostructured Silicon Surfaces: Convergence between Nanoscopic and Macroscopic Scale Phenomena. Langmuir, 2012, 28, 1909-1913.	1.6	11
67	Synthesis and Characterization of SnO2-TiO2 Nanocomposites Photocatalysts. Current Nanoscience, 2019, 15, 398-406.	0.7	11
68	Evaluation of Plasma Modified Polycaprolactone Honeycomb Scaffolds by Human Mesenchymal Stem Cells Cultured in Vitamin D Differentiation Medium. Plasma Processes and Polymers, 2010, 7, 794-801.	1.6	10
69	Laser fabrication of porous siliconâ€based platforms for cell culturing. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2013, 101, 1463-1468.	1.6	10
70	Nanotopography enhanced mobility determines mesenchymal stem cell distribution on micropatterned semiconductors bearing nanorough areas. Colloids and Surfaces B: Biointerfaces, 2015, 126, 146-153.	2.5	10
71	Luminescence and fine structure correlation in ZnO permeated porous silicon nanocomposites. Physical Chemistry Chemical Physics, 2015, 17, 20597-20604.	1.3	10
72	Microwave plasma annealing of sol-gel deposited tantalum oxide and zinc oxide films. Vacuum, 2018, 149, 336-342.	1.6	10

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73	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.	0.8	10
74	Apatite films produced by electrodeposition: characterization by TEM and AFM. Surface and Interface Analysis, 2001, 31, 1104-1109.	0.8	9
75	Textured hydroxyapatite interface onto biomedical titanium-based coatings. Journal of Biomedical Materials Research - Part A, 2003, 64A, 600-605.	2.1	9
76	Bioactivity test for amine-based functionalized meso- and macro-porous silicon substrates. Materials Science and Engineering C, 2007, 27, 1211-1214.	3.8	9
77	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.	0.6	9
78	Loading the dice: The orientation of virus-like particles adsorbed on titanate assisted organosilanized surfaces. Biointerphases, 2019, 14, 011001.	0.6	9
79	Surface functionalisation by the condensation of hybrid titanateâ€“amino sols. Thin Solid Films, 2002, 415, 253-257.	0.8	8
80	Activation of PCL Surface by Ion Beam Treatment to Enhance Protein Adsorption. Journal of Bioactive and Compatible Polymers, 2004, 19, 287-300.	0.8	8
81	Surface analysis of plasma-patterned biofunctional hybrid titanateâ€“aminosilane xerogel films. Journal of Colloid and Interface Science, 2004, 275, 577-583.	5.0	8
82	Surface Characterization of Biopolymer Micropatterns Processed by Ion-Beam Modification and PECVD. Chemical Vapor Deposition, 2007, 13, 211-218.	1.4	8
83	Nanostructured Porous Silicon Photonic Crystal for Applications in the Infrared. Journal of Nanotechnology, 2012, 2012, 1-6.	1.5	8
84	Properties of bilayer contacts to porous silicon. Applied Physics A: Materials Science and Processing, 2012, 107, 293-300.	1.1	8
85	Electroless nanoworm Au films on columnar porous silicon layers. Materials Chemistry and Physics, 2012, 134, 664-669.	2.0	8
86	Reprogramming hMSCs morphology with silicon/porous silicon geometric micro-patterns. Biomedical Microdevices, 2014, 16, 229-236.	1.4	8
87	Photoassisted Immersion Deposition of Cu Clusters onto Porous Silicon: A Langmuirâ€“Hill Ligandâ€“Locus Model Applied to the Growth Kinetics. Journal of Physical Chemistry C, 2014, 118, 14905-14912.	1.5	8
88	Hydrothermal control of the lithium-rich Li₂MnO₃ phase in lithium manganese oxide nanocomposites and their application as precursors for lithium adsorbents. Dalton Transactions, 2021, 50, 10765-10778.	1.6	8
89	Hybrid titaniaâ€“aminosilane platforms evaluated with human mesenchymal stem cells. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2007, 83B, 232-239.	1.6	7
90	TiN_xO_y/TiN dielectric contrasts obtained by ion implantation of ; structural, optical and electrical properties. Journal Physics D: Applied Physics, 2011, 44, 235501.	1.3	7

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91	Visible Light Assisted Organosilane Assembly on Mesoporous Silicon Films and Particles. Materials, 2019, 12, 131.	1.3	7
92	Surface topographic and structural characterization of plasma treated PMAAâ€“PMMA copolymer films. Surface Science, 2004, 560, 121-129.	0.8	6
93	Ordered arrays of nanocolumns grown by the oblique angle deposition technique on a self-assembled layer of polystyrene spheres. Materials Letters, 2009, 63, 197-199.	1.3	6
94	Characterization of hybrid cobalt-porous silicon systems: protective effect of the Matrix in the metal oxidation. Nanoscale Research Letters, 2012, 7, 495.	3.1	6
95	Polymerized nanoporous titania surfaces: modification of cell adhesion by acrylic acid functionalization. Composite Interfaces, 2012, 19, 251-258.	1.3	6
96	Surface Plasmon Resonance Study of Au Nanorod Structures Templated in Mesoporous Silicon. Plasmonics, 2013, 8, 35-40.	1.8	6
97	Corrosion behavior of sputter-deposited TiN thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2003, 21, 1635-1638.	0.9	5
98	Plasma functionalization, surface characterization and protein retention of multiple-sized polymer beads. Surface and Interface Analysis, 2006, 38, 322-325.	0.8	5
99	Finite-thickness photonic crystals based on nanostructured porous silicon for optical sensing. Journal of Nanophotonics, 2009, 3, 031504.	0.4	5
100	Effects of He+ ion implantation on surface properties of UV-cured Bis-GMA/TEGDMA bio-compatible resins. Nuclear Instruments & Methods in Physics Research B, 2011, 269, 111-116.	0.6	5
101	Conditioned bio-interfaces of silicon/porous silicon micro-patterns lead to the chondrogenesis of hMSCs. RSC Advances, 2015, 5, 92263-92269.	1.7	5
102	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.	3.2	5
103	Direct laser writing of nanorough cell microbarriers on anatase/Si and graphite/Si. Materials Science and Engineering C, 2016, 66, 8-15.	3.8	5
104	Compared Biocompatibility of ZnTiO3, ZnO and TiO2 Sol-Gel Films with Human Mesenchymal Stem Cells. MRS Advances, 2016, 1, 737-742.	0.5	5
105	Biofunctional porous silicon micropatterns engineered through visible light activated epoxy capping and selective plasma etching. Vacuum, 2018, 150, 232-238.	1.6	5
106	Growth of out-of-plane standing MoTe2(1-x)Se2x/MoSe2 composite flake films by solâ€“gel nucleation of MoOy and isothermal closed space telluro-selenization. Applied Surface Science, 2021, 546, 149076.	3.1	5
107	Microanalysis of Ar and He bombarded biomedical polymer films. Nuclear Instruments & Methods in Physics Research B, 2007, 257, 496-500.	0.6	4
108	Surface modification, characterization and biofunctionality of pegylated titanate films obtained by the solâ€gel method. Surface and Interface Analysis, 2008, 40, 205-209.	0.8	4

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109	Optimized allylamine deposition for improved pluripotential cell culture. Vacuum, 2011, 85, 1071-1075.	1.6	4
110	Microstructure based optical modeling of ZnO- porous silicon permeated nanocomposites. Journal Physics D: Applied Physics, 2015, 48, 295102.	1.3	4
111	Biofouling Properties of Nitroxide-Modified Amorphous Carbon Surfaces. ACS Biomaterials Science and Engineering, 2016, 2, 1976-1982.	2.6	4
112	Electrical behavior of nickel/carbon nanocomposite thin films. Carbon, 2017, 111, 878-886.	5.4	4
113	Porous Silicon Bragg Reflector and 2D Gold-Polymer Nanograting: A Route Towards a Hybrid Optoplasmonic Platform. Nanomaterials, 2019, 9, 1017.	1.9	4
114	Laser writing of nanostructured silicon arrays for the SERS detection of biomolecules with inhibited oxidation. Colloids and Surfaces B: Biointerfaces, 2019, 174, 174-180.	2.5	4
115	Plasma Fabrication and SERS Functionality of Gold Crowned Silicon Submicrometer Pillars. Materials, 2020, 13, 1244.	1.3	4
116	Engineering nanostructured cell micropatterns on Ti6Al4V by selective ion-beam inhibition of pitting. Corrosion Science, 2020, 167, 108528.	3.0	4
117	Smart modification of magnetron sputtered TiN surfaces for stimulated differentiation. Surface and Coatings Technology, 2008, 203, 905-908.	2.2	3
118	Application of hybrid agaroseâ€aminosilane gels to the biofunctionalization of honeycombâ€structured polycaprolactone scaffolds. Surface and Interface Analysis, 2010, 42, 448-451.	0.8	3
119	A fibrinogen biosensing platform based on plasmonic Ga nanoparticles and aminosilaneâ€“titanate antibody trapping. Medical Devices & Sensors, 2020, 3, e10083.	2.7	3
120	Porous Silicon Devices for the Electrical Biosensing of <I>Escherichia Coli</I>. Sensor Letters, 2010, 8, 387-391.	0.4	3
121	Ion beam induced crystal-edge nanoclusters at the origin of poly(ethylene glycol) film stabilization. Applied Surface Science, 2006, 253, 810-813.	3.1	2
122	Study of the formation mechanism of hierarchical silicon structures produced by sequential ion beam irradiation and anodic etching. Vacuum, 2017, 138, 238-243.	1.6	2
123	Bringing immuno-assemblies to optoelectronics: sandwich assay integration of a nanostructured porous-silicon/gold-nanoparticle phototransistor. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 271, 115271.	1.7	2
124	Preparation, modification and cellular evaluation of PEGâ€“PEGd supports with titania nanoparticle loads. Surface and Interface Analysis, 2010, 42, 481-485.	0.8	1
125	A multi-ion beam microanalysis approach for the characterization of plasma polymerized allylamine films. EPJ Applied Physics, 2011, 56, 24021.	0.3	1
126	Montecarlo Simulation and HAXPES Analysis of Organosilane Segregation in Titania Xerogel Films; Towards a Generic Surface Chemofunctionalization Process. Surfaces, 2020, 3, 352-365.	1.0	1

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127	Self-Organized In-Depth Gradients in Highly Ti-Doped ZnO Films: Thermal Versus MW Plasma Annealing. Coatings, 2020, 10, 418.	1.2	1
128	Nanostructured porous silicon-based dual luminescent/magnetic particles for biomedical tracking. Proceedings of SPIE, 2010, , .	0.8	0
129	A hybrid approach to the surface biofunctionalization of nanostructured porous alumina. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 206-209.	0.8	0
130	Controlled skeletal progenitor cell migration on nanostructured porous silicon/silicon micropatterns. Proceedings of SPIE, 2011, , .	0.8	0
131	Organo-Silane Self-Assembly on Porous Silicon and Silica Particle based Sensors. World Scientific Series in Nanoscience and Nanotechnology, 2019, , 305-327.	0.1	0
132	Regulating cell function through micro- and nanostructured transition metal oxides. , 2022, , 371-405.		0