

# Silvia Spriano

## List of Publications by Year in descending order

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103  
papers

3,471  
citations

147726

31  
h-index

155592

55  
g-index

107  
all docs

107  
docs citations

107  
times ranked

4190  
citing authors

#	ARTICLE	IF	CITATIONS
1	Antibacterial titanium surfaces for medical implants. <i>Materials Science and Engineering C</i> , 2016, 61, 965-978.	3.8	331
2	A critical review of multifunctional titanium surfaces: New frontiers for improving osseointegration and host response, avoiding bacteria contamination. <i>Acta Biomaterialia</i> , 2018, 79, 1-22.	4.1	293
3	How do wettability, zeta potential and hydroxylation degree affect the biological response of biomaterials?. <i>Materials Science and Engineering C</i> , 2017, 74, 542-555.	3.8	117
4	Bioactive materials: In vitro investigation of different mechanisms of hydroxyapatite precipitation. <i>Acta Biomaterialia</i> , 2020, 102, 468-480.	4.1	115
5	Surface potential and roughness controlled cell adhesion and collagen formation in electrospun PCL fibers for bone regeneration. <i>Materials and Design</i> , 2020, 194, 108915.	3.3	112
6	The influence of crystallised Fe <sub>3</sub> O <sub>4</sub> on the magnetic properties of coprecipitation-derived ferrimagnetic glass-ceramics. <i>Acta Biomaterialia</i> , 2005, 1, 421-429.	4.1	105
7	Antibacterial and bioactive nanostructured titanium surfaces for bone integration. <i>Applied Surface Science</i> , 2014, 311, 279-291.	3.1	91
8	Surface modification of Ti-6Al-4V alloy for biomineralization and specific biological response: Part I, inorganic modification. <i>Journal of Materials Science: Materials in Medicine</i> , 2011, 22, 533-545.	1.7	89
9	Zeta Potential Measurements on Solid Surfaces for in Vitro Biomaterials Testing: Surface Charge, Reactivity Upon Contact With Fluids and Protein Absorption. <i>Frontiers in Bioengineering and Biotechnology</i> , 2018, 6, 60.	2.0	86
10	Titanium and Protein Adsorption: An Overview of Mechanisms and Effects of Surface Features. <i>Materials</i> , 2021, 14, 1590.	1.3	84
11	Synthesis and characterization of coprecipitation-derived ferrimagnetic glass-ceramic. <i>Journal of Materials Science</i> , 2006, 41, 1029-1037.	1.7	81
12	Micro- and nano-textured, hydrophilic and bioactive titanium dental implants. <i>Surface and Coatings Technology</i> , 2015, 276, 374-383.	2.2	79
13	Alkaline phosphatase grafting on bioactive glasses and glass ceramics. <i>Acta Biomaterialia</i> , 2010, 6, 229-240.	4.1	74
14	Characterization of Co-Cr-Mo alloys after a thermal treatment for high wear resistance. <i>Materials Science and Engineering C</i> , 2012, 32, 1868-1877.	3.8	69
15	Silver containing bioactive glasses prepared by molten salt ion-exchange. <i>Journal of the European Ceramic Society</i> , 2004, 24, 2935-2942.	2.8	68
16	Nanogrooves and keratin nanofibers on titanium surfaces aimed at driving gingival fibroblasts alignment and proliferation without increasing bacterial adhesion. <i>Materials Science and Engineering C</i> , 2017, 76, 1-12.	3.8	66
17	Cytocompatible and Anti-bacterial Adhesion Nanotextured Titanium Oxide Layer on Titanium Surfaces for Dental and Orthopedic Implants. <i>Frontiers in Bioengineering and Biotechnology</i> , 2019, 7, 103.	2.0	64
18	Modelling of the strength-porosity relationship in glass-ceramic foam scaffolds for bone repair. <i>Journal of the European Ceramic Society</i> , 2014, 34, 2663-2673.	2.8	62

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19	Tantalum-based multilayer coating on cobalt alloys in total hip and knee replacement. <i>Materials Science and Engineering C</i> , 2012, 32, 887-895.	3.8	61
20	Synthesis of magnetic hydroxyapatite by hydrothermal "microwave technique: Dielectric, protein adsorption, blood compatibility and drug release studies. <i>Ceramics International</i> , 2015, 41, 13153-13163.	2.3	60
21	Surface properties and cell response of low metal ion release Ti-6Al-7Nb alloy after multi-step chemical and thermal treatments. <i>Biomaterials</i> , 2005, 26, 1219-1229.	5.7	54
22	Surface treatment on an implant cobalt alloy for high biocompatibility and wear resistance. <i>Wear</i> , 2005, 259, 919-925.	1.5	52
23	Low content and free cobalt matrixes for diamond tools. <i>Wear</i> , 2005, 259, 1190-1196.	1.5	46
24	Double-layer glass-ceramic coatings on Ti6Al4V for dental implants. <i>Journal of the European Ceramic Society</i> , 2004, 24, 2699-2705.	2.8	42
25	"Big cube" phase formation in Zr-based metallic glasses. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001, 304-306, 305-310.	2.6	40
26	Silver-doped keratin nanofibers preserve a titanium surface from biofilm contamination and favor soft-tissue healing. <i>Journal of Materials Chemistry B</i> , 2017, 5, 8366-8377.	2.9	39
27	Competitive Surface Colonization of Antibacterial and Bioactive Materials Doped with Strontium and/or Silver Ions. <i>Nanomaterials</i> , 2020, 10, 120.	1.9	38
28	Static mechanical characterization of a bulk amorphous and nanocrystalline Zr <sub>40</sub> Ti <sub>14</sub> Ni <sub>11</sub> Cu <sub>10</sub> Be <sub>25</sub> alloy. <i>Scripta Materialia</i> , 1997, 8, 447-456.	0.5	36
29	3D Printing of PDMS-Like Polymer Nanocomposites with Enhanced Thermal Conductivity: Boron Nitride Based Photocuring System. <i>Nanomaterials</i> , 2021, 11, 373.	1.9	34
30	Fluoroapatite glass-ceramic coatings on alumina: structural, mechanical and biological characterisation. <i>Biomaterials</i> , 2002, 23, 3395-3403.	5.7	33
31	Surface modification of Ti-6Al-4V alloy for biomineralization and specific biological response: part II, alkaline phosphatase grafting. <i>Journal of Materials Science: Materials in Medicine</i> , 2011, 22, 1835-1842.	1.7	32
32	The response of osteoblastic MC3T3-E1 cells to micro- and nano-textured, hydrophilic and bioactive titanium surfaces. <i>Journal of Materials Science: Materials in Medicine</i> , 2016, 27, 68.	1.7	32
33	Multifunctional commercially pure titanium for the improvement of bone integration: Multiscale topography, wettability, corrosion resistance and biological functionalization. <i>Materials Science and Engineering C</i> , 2016, 60, 384-393.	3.8	32
34	Studies on Cell Compatibility, Antibacterial Behavior, and Zeta Potential of Ag-Containing Polydopamine-Coated Bioactive Glass-Ceramic. <i>Materials</i> , 2019, 12, 500.	1.3	31
35	Crystallization and mechanical behaviour of bulk Zr-Ti-Ni-Cu-Be metallic glasses. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1997, 76, 529-540.	0.6	29
36	Bone healing at bicortically installed implants with different surface configurations. An experimental study in rabbits. <i>Clinical Oral Implants Research</i> , 2015, 26, 293-299.	1.9	29

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37	Topographical and Biomechanical Guidance of Electrospun Fibers for Biomedical Applications. <i>Polymers</i> , 2020, 12, 2896.	2.0	29
38	Green Tea Polyphenols Coupled with a Bioactive Titanium Alloy Surface: In Vitro Characterization of Osteoinductive Behavior through a KUSA A1 Cell Study. <i>International Journal of Molecular Sciences</i> , 2018, 19, 2255.	1.8	28
39	The mechanical and chemical stability of the interfaces in bioactive materials: The substrate-bioactive surface layer and hydroxyapatite-bioactive surface layer interfaces. <i>Materials Science and Engineering C</i> , 2020, 116, 111238.	3.8	27
40	Surface reactivity and silanization ability of borosilicate and Mg-Sr-based bioactive glasses. <i>Applied Surface Science</i> , 2019, 475, 43-55.	3.1	26
41	Surface structuring by Electron Beam for improved soft tissues adhesion and reduced bacterial contamination on Ti-grade 2. <i>Journal of Materials Processing Technology</i> , 2019, 266, 518-529.	3.1	26
42	Microstructure and transformation temperatures in rapid solidified Ni–Ti alloys. Part I: The effect of cooling rate. <i>Journal of Alloys and Compounds</i> , 2014, 589, 628-632.	2.8	25
43	Surface modification of titanium surfaces through a modified oxide layer and embedded silver nanoparticles: Effect of reducing/stabilizing agents on precipitation and properties of the nanoparticles. <i>Surface and Coatings Technology</i> , 2018, 344, 177-189.	2.2	25
44	Aligned keratin submicrometric-fibers for fibroblasts guidance onto nanogrooved titanium surfaces for transmucosal implants. <i>Materials Letters</i> , 2018, 229, 1-4.	1.3	24
45	Grafting of the peppermint essential oil to a chemically treated Ti6Al4V alloy to counteract the bacterial adhesion. <i>Surface and Coatings Technology</i> , 2019, 378, 125011.	2.2	22
46	Tribological behavior of a Ta-based coating on a Co–Cr–Mo alloy. <i>Surface and Coatings Technology</i> , 2014, 258, 1159-1170.	2.2	21
47	Time-dependent effects on physicochemical and surface properties of PHBV fibers and films in relation to their interactions with fibroblasts. <i>Applied Surface Science</i> , 2021, 545, 148983.	3.1	21
48	Surface functionalization of Ti6Al4V with an extract of polyphenols from red grape pomace. <i>Materials and Design</i> , 2021, 206, 109776.	3.3	21
49	Surface treatments for boriding of Ti6Al4V alloy in view of applications as a biomaterial. <i>Tribology International</i> , 2018, 126, 21-28.	3.0	20
50	Electro-sinter-forged Ni–Ti alloy. <i>Intermetallics</i> , 2016, 68, 31-41.	1.8	18
51	Surface Functionalization of Bioactive Glasses with Polyphenols from <i>Padina pavonica</i> Algae and In Situ Reduction of Silver Ions: Physico-Chemical Characterization and Biological Response. <i>Coatings</i> , 2019, 9, 394.	1.2	17
52	Controlling porous titanium/soft tissue interactions with an innovative surface chemical treatment: Responses of macrophages and fibroblasts. <i>Materials Science and Engineering C</i> , 2020, 112, 110845.	3.8	17
53	Vitamin E: A Review of Its Application and Methods of Detection When Combined with Implant Biomaterials. <i>Materials</i> , 2021, 14, 3691.	1.3	17
54	New chemical treatment for bioactive titanium alloy with high corrosion resistance. <i>Journal of Materials Science: Materials in Medicine</i> , 2005, 16, 203-211.	1.7	15

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55	Effects of sterilization and storage on the properties of ALP-grafted biomaterials for prosthetic and bone tissue engineering applications. <i>Biomedical Materials (Bristol)</i> , 2012, 7, 054102.	1.7	15
56	Grafting of Gallic Acid onto a Bioactive Ti6Al4V Alloy: A Physico-Chemical Characterization. <i>Coatings</i> , 2019, 9, 302.	1.2	15
57	Polyphenols from Grape Pomace: Functionalization of Chitosan-Coated Hydroxyapatite for Modulated Swelling and Release of Polyphenols. <i>Langmuir</i> , 2021, 37, 14793-14804.	1.6	15
58	Characterization of surface modified Ti-6Al-7Nb alloy. <i>Journal of Materials Science: Materials in Medicine</i> , 2005, 16, 301-312.	1.7	14
59	Texture, hardening and mechanical anisotropy in A.A. 8090-T851 plate. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1998, 257, 134-138.	2.6	13
60	Tantalum-Based Thin Film Coatings for Wear Resistant Arthroprostheses. <i>Journal of Nanoscience and Nanotechnology</i> , 2011, 11, 8994-9002.	0.9	13
61	Electron Beam Structuring of Ti6Al4V: New Insights on the Metal Surface Properties Influencing the Bacterial Adhesion. <i>Materials</i> , 2020, 13, 409.	1.3	13
62	Electrocatalytic behaviour of Zr <sub>64</sub> Ni <sub>36</sub> and Zr <sub>48</sub> Ni <sub>27</sub> Al <sub>25</sub> amorphous alloys. <i>Electrochimica Acta</i> , 1994, 39, 1781-1786.	2.6	12
63	Phase separation in multicomponent amorphous alloys. <i>Journal of Non-Crystalline Solids</i> , 1998, 232-234, 127-132.	1.5	12
64	Preliminary investigations on stone cutting sludge processing for a future recovery. <i>Journal of Cleaner Production</i> , 2018, 178, 866-876.	4.6	12
65	Grafting of gallic acid to metallic surfaces. <i>Applied Surface Science</i> , 2020, 511, 145615.	3.1	12
66	Surface modified Ti6Al4V for enhanced bone bonding ability “ Effects of silver and corrosivity at simulated physiological conditions from a corrosion and metal release perspective. <i>Corrosion Science</i> , 2020, 168, 108566.	3.0	12
67	Iodine-Loaded Calcium Titanate for Bone Repair with Sustainable Antibacterial Activity Prepared by Solution and Heat Treatment. <i>Nanomaterials</i> , 2021, 11, 2199.	1.9	12
68	Porous Titanium by Additive Manufacturing: A Focus on Surfaces for Bone Integration. <i>Metals</i> , 2021, 11, 1343.	1.0	12
69	Albumin and fibronectin adsorption on treated titanium surfaces for osseointegration: An advanced investigation. <i>Applied Surface Science</i> , 2022, 599, 154023.	3.1	12
70	MULTIFUNCTIONAL TITANIUM: SURFACE MODIFICATION PROCESS AND BIOLOGICAL RESPONSE. <i>Journal of Mechanics in Medicine and Biology</i> , 2015, 15, 1540001.	0.3	11
71	Antibacterial inorganic coatings on metallic surfaces for temporary fixation devices. <i>Applied Surface Science</i> , 2020, 508, 144707.	3.1	11
72	Surface functionalization of bioactive glasses and hydroxyapatite with polyphenols from organic red grape pomace. <i>Journal of the American Ceramic Society</i> , 2022, 105, 1697-1710.	1.9	11

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73	Contact Guidance Effect and Prevention of Microfouling on a Beta Titanium Alloy Surface Structured by Electron-Beam Technology. <i>Nanomaterials</i> , 2021, 11, 1474.	1.9	11
74	Surface and electrochemical characterization of Ni–Zr intermetallic compounds. <i>Intermetallics</i> , 2000, 8, 299-304.	1.8	10
75	Coupling of keratin with titanium: A physico-chemical characterization of functionalized or coated surfaces. <i>Surface and Coatings Technology</i> , 2020, 397, 126057.	2.2	10
76	In vivo preclinical evaluation of the influence of osteoporosis on the anchorage of different pedicle screw designs. <i>European Spine Journal</i> , 2011, 20, 1289-1296.	1.0	9
77	Microstructure and transformation temperatures in rapid solidified Ni–Ti alloys. Part II: The effect of copper addition. <i>Journal of Alloys and Compounds</i> , 2014, 589, 633-642.	2.8	9
78	Investigation of the Thermal Conductivity of Silicon-Base Composites: The Effect of Filler Materials and Characteristic on Thermo-Mechanical Response of Silicon Composite. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 5663.	1.3	9
79	Intraoral welding of titanium dental implants: Characterization of the joints. <i>Journal of Materials Processing Technology</i> , 2016, 235, 85-91.	3.1	7
80	Effect of heat treatments on a Ni-Ti alloy sintered by Electro-Sinter-Forging. <i>Journal of Alloys and Compounds</i> , 2017, 726, 338-347.	2.8	7
81	Innovative Coatings Based on Peppermint Essential Oil on Titanium and Steel Substrates: Chemical and Mechanical Protection Ability. <i>Materials</i> , 2020, 13, 516.	1.3	7
82	The use of vitamin E as an anti-adhesive coating for cells and bacteria for temporary bone implants. <i>Surface and Coatings Technology</i> , 2022, 444, 128694.	2.2	7
83	Advanced characterization of albumin adsorption on a chemically treated surface for osseointegration: An innovative experimental approach. <i>Materials and Design</i> , 2022, 218, 110712.	3.3	6
84	Effects of crystals on the mechanical properties of Zr <sub>52.5</sub> Ti <sub>5</sub> Cu <sub>17.9</sub> Ni <sub>14.6</sub> Al <sub>10</sub> bulk metallic glasses. <i>Annales De Chimie: Science Des Materiaux</i> , 2002, 27, 125-130.	0.2	5
85	Surface Functionalization of Biomaterials with Alkaline Phosphatase. <i>Key Engineering Materials</i> , 2007, 361-363, 593-596.	0.4	5
86	The combined action of UV irradiation and chemical treatment on the titanium surface of dental implants. <i>Applied Surface Science</i> , 2015, 349, 599-608.	3.1	5
87	Processing and surface treatments for pseudoelastic wires and strands. <i>Materials and Manufacturing Processes</i> , 2017, 32, 394-403.	2.7	5
88	Tribological Behaviour of Ti or Ti Alloy vs. Zirconia in Presence of Artificial Saliva. <i>Coatings</i> , 2020, 10, 851.	1.2	5
89	Introducing biomaterials for tissue repair and regeneration. , 2020, , 1-27.		4
90	Chemical, physical, and mechanical characterization of chitosan coatings on a chemically pre-treated Ti6Al4V alloy. <i>Surface and Coatings Technology</i> , 2022, 441, 128571.	2.2	4

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91	Electrochemical behavior of Au-Gd alloys. Journal of Alloys and Compounds, 2001, 317-318, 603-606.	2.8	3
92	Electrocatalytic Properties of Ni-Zr Based Amorphous and Nanocrystalline Alloys. Materials Science Forum, 1997, 235-238, 911-916.	0.3	2
93	Surface Functionalization of a Silica-Based Bioactive Glass with Compounds from <i>Rosa canina</i> Bud Extracts. ACS Biomaterials Science and Engineering, 2021, 7, 96-104.	2.6	2
94	Coating of Sub-Micrometric Keratin Fibers on Titanium Substrates: A Successful Strategy for Stimulating Adhesion and Alignment of Fibroblasts and Reducing Bacterial Contamination. , 0, , .		2
95	Fatigue resistance of light alloy sheets undergoing eco-friendly chemical milling: metallurgical and chemical aspects. Procedia Structural Integrity, 2019, 19, 362-369.	0.3	1
96	INVESTIGATION OF SURFACE FUNCTIONALIZATION AND COATINGS FOR BIOMEDICAL APPLICATIONS BY ZETA POTENTIAL AND ADSORPTION MEASUREMENTS ON SOLID SURFACES. WIT Transactions on Engineering Sciences, 2017, , .	0.0	1
97	Bore Disruption: An Unusual Mechanical Failure of Two Hip Hemiarthroplasties. Joints, 2017, 05, 051-056.	1.5	0
98	Fast and effective osseointegration of dental, spinal, and orthopedic implants through tailored chemistry of inorganic surfaces. , 2020, , 337-377.		0
99	Natural Coatings on Titanium Surfaces to Improve Their Biological Response. , 0, , .		0
100	Surface Modification and Functionalization of Commercially Pure Titanium for Enhanced Bone Integration. , 2013, , .		0
101	Metal Surfaces in Medicine. , 2017, , 147-171.		0
102	Boride Coating on Titanium Alloys as Biomaterial in Wear and Fretting Applications. Lecture Notes in Mechanical Engineering, 2019, , 719-731.	0.3	0
103	Surface Coating and functionalization of Metallic Biomaterials with Essential Oils for Antibacterial Applications. , 0, , .		0