Simone Sprio

List of Publications by Year
in descending order

98 papers	4,458 citations	136740 32 h-index	106150 65 g-index
99 all docs	99 docs citations	99 times ranked	4843 citing authors

#	Article	IF	Citations
1	Densification behaviour and mechanisms of synthetic hydroxyapatites. Journal of the European Ceramic Society, 2000, 20, 2377-2387.	2.8	644
2	Biomimetic Mg-substituted hydroxyapatite: from synthesis to inÂvivo behaviour. Journal of Materials Science: Materials in Medicine, 2008, 19, 239-247.	1.7	337
3	Porosity-graded hydroxyapatite ceramics to replace natural bone. Biomaterials, 2001, 22, 1365-1370.	5.7	261
4	Intrinsic magnetism and hyperthermia in bioactive Fe-doped hydroxyapatite. Acta Biomaterialia, 2012, 8, 843-851.	4.1	253
5	Sr-substituted hydroxyapatites for osteoporotic bone replacement. Acta Biomaterialia, 2007, 3, 961-969.	4.1	231
6	Adult Stem Cells for Bone Regeneration and Repair. Frontiers in Cell and Developmental Biology, 2019, 7, 268.	1.8	146
7	From wood to bone: multi-step process to convert wood hierarchical structures into biomimetic hydroxyapatite scaffolds for bone tissue engineering. Journal of Materials Chemistry, 2009, 19, 4973.	6.7	140
8	Physico-chemical properties and solubility behaviour of multi-substituted hydroxyapatite powders containing silicon. Materials Science and Engineering C, 2008, 28, 179-187.	3.8	126
9	Magnetic Bioinspired Hybrid Nanostructured Collagenâ€“Hydroxyapatite Scaffolds Supporting Cell Proliferation and Tuning Regenerative Process. ACS Applied Materials & Interfaces, 2014, 6, 15697-15707.	4.0	119
10	Development of Sr and CO3 co-substituted hydroxyapatites for biomedical applications. Acta Biomaterialia, 2008, 4, 656-663.	4.1	111
11	Mimicking natural bio-mineralization processes: A new tool for osteochondral scaffold development. Trends in Biotechnology, 2011, 29, 526-535.	4.9	111
12	Nucleation of biomimetic apatite in synthetic body fluids: dense and porous scaffold development. Biomaterials, 2005, 26, 2835-2845.	5.7	91
13	Biomimetic magnesiumâ€“carbonate-apatite nanocrystals endowed with strontium ions as anti-osteoporotic trigger. Materials Science and Engineering C, 2014, 35, 212-219.	3.8	64
14	Effects of manganese doping on properties of solâ€“gel derived biphasic calcium phosphate ceramics. Ceramics International, 2011, 37, 3703-3715.	2.3	60
15	Fe-Doping-Induced Magnetism in Nano-Hydroxyapatites. Inorganic Chemistry, 2017, 56, 4446-4458.	1.9	60
16	Bioactive Materials for Soft Tissue Repair. Frontiers in Bioengineering and Biotechnology, 2021, 9, 613787.	2.0	58
17	Investigation of different cross-linking approaches on 3D gelatin scaffolds for tissue engineering application: A comparative analysis. International Journal of Biological Macromolecules, 2017, 95, 1199-1209.	3.6	56
18	Ribose mediated crosslinking of collagen-hydroxyapatite hybrid scaffolds for bone tissue regeneration using biomimetic strategies. Materials Science and Engineering C, 2017, 77, 594-605.	3.8	51

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19	Characteristics of synthetic hydroxyapatites and attempts to improve their thermal stability. Materials Chemistry and Physics, 2000, 64, 54-61.	2.0	49
20	Crystallinity in apatites: how can a truly disordered fraction be distinguished from nanosize crystalline domains?. Journal of Materials Science: Materials in Medicine, 2006, 17, 1079-1087.	1.7	49
21	Biomimesis and biomorphic transformations: New concepts applied to bone regeneration. Journal of Biotechnology, 2011, 156, 347-355.	1.9	48
22	Evaluation of different crosslinking agents on hybrid biomimetic collagen-hydroxyapatite composites for regenerative medicine. International Journal of Biological Macromolecules, 2018, 106, 739-748.	3.6	48
23	Effects of copper doping in MgB2 superconductor. Solid State Communications, 2002, 121, 497-500.	0.9	47
24	Development of hydroxyapatite/calcium silicate composites addressed to the design of load-bearing bone scaffolds. Journal of the Mechanical Behavior of Biomedical Materials, 2009, 2, 147-155.	1.5	47
25	Human osteoblast behavior on asâ€synthesized SiO₄ and Bâ€CO₃ coâ€substituted apatite. Journal of Biomedical Materials Research - Part A, 2010, 94A, 59-70.	2.1	46
26	Bioactive Calcium Phosphate-Based Composites for Bone Regeneration. Journal of Composites Science, 2021, 5, 227.	1.4	46
27	Scaffold-based 3D cellular models mimicking the heterogeneity of osteosarcoma stem cell niche. Scientific Reports, 2020, 10, 22294.	1.6	46
28	Sr-substituted bone cements direct mesenchymal stem cells, osteoblasts and osteoclasts fate. PLoS ONE, 2017, 12, e0172100.	1.1	40
29	Fabrication and Pilot In Vivo Study of a Collagen-BDDGE-Elastin Core-Shell Scaffold for Tendon Regeneration. Frontiers in Bioengineering and Biotechnology, 2016, 4, 52.	2.0	38
30	Strontium doped calcium phosphate coatings on poly(etheretherketone) (PEEK) by pulsed electron deposition. Surface and Coatings Technology, 2017, 319, 191-199.	2.2	38
31	Study of the sintering behaviour of MgB2 superconductor during hot-pressing. Physica C: Superconductivity and Its Applications, 2004, 400, 97-104.	0.6	35
32	Biomimetic mineralization of recombinant collagen type I derived protein to obtain hybrid matrices for bone regeneration. Journal of Structural Biology, 2016, 196, 138-146.	1.3	33
33	Enhancement of the Biological and Mechanical Performances of Sintered Hydroxyapatite by Multiple Ions Doping. Frontiers in Materials, 2020, 7, .	1.2	33
34	Synthesis and mechanical behavior of Î²-tricalcium phosphate/titania composites addressed to regeneration of long bone segments. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 17, 1-10.	1.5	32
35	New hydroxyapatite nanophases with enhanced osteogenic and antiâ€bacterial activity. Journal of Biomedical Materials Research - Part A, 2018, 106, 521-530.	2.1	31
36	Surface Phenomena Enhancing the Antibacterial and Osteogenic Ability of Nanocrystalline Hydroxyapatite, Activated by Multiple-Ion Doping. ACS Biomaterials Science and Engineering, 2019, 5, 5947-5959.	2.6	30

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37	In situ mechanical and molecular investigations of collagen/apatite biomimetic composites combining Raman spectroscopy and stress-strain analysis. Acta Biomaterialia, 2016, 46, 278-285.	4.1	29
38	Heterogeneous chemistry in the 3-D state: an original approach to generate bioactive, mechanically-competent bone scaffolds. Biomaterials Science, 2019, 7, 307-321.	2.6	29
39	Study of the hydrothermal transformation of wood-derived calcium carbonate into 3D hierarchically organized hydroxyapatite. Chemical Engineering Journal, 2013, 217, 150-158.	6.6	27
40	A Graded Multifunctional Hybrid Scaffold with Superparamagnetic Ability for Periodontal Regeneration. International Journal of Molecular Sciences, 2018, 19, 3604.	1.8	26
41	Mussel Shell-Derived Macroporous 3D Scaffold: Characterization and Optimization Study of a Bioceramic from the Circular Economy. Marine Drugs, 2020, 18, 309.	2.2	26
42	High biocompatibility and improved osteogenic potential of novel Caâ€“P/titania composite scaffolds designed for regeneration of loadâ€bearing segmental bone defects. Journal of Biomedical Materials Research - Part A, 2013, 101A, 1612-1619.	2.1	25
43	3D porous collagen scaffolds reinforced by glycation with ribose for tissue engineering application. Biomedical Materials (Bristol), 2017, 12, 055002.	1.7	25
44	Novel Osteointegrative Sr-Substituted Apatitic Cements Enriched with Alginate. Materials, 2016, 9, 763.	1.3	24
45	Bio-inspired assembling/mineralization process as a flexible approach to develop new smart scaffolds for the regeneration of complex anatomical regions. Journal of the European Ceramic Society, 2016, 36, 2857-2867.	2.8	24
46	Raman and cathodoluminescence spectroscopies of magnesium-substituted hydroxyapatite powders. Journal of Materials Research, 2005, 20, 1009-1016.	1.2	23
47	New Bio-ceramization process applied to vegetable hierarchical structures for bone regeneration: an experimental model in sheep.. Tissue Engineering - Part A, 2014, 20, 131007215556003.	1.6	23
48	Oxide Bioceramic Composites in Orthopedics and Dentistry. Journal of Composites Science, 2021, 5, 206.	1.4	23
49	Pulsed plasma deposition of zirconia thin films on UHMWPE: proof of concept of a novel approach for joint prosthetic implants. Journal of Materials Chemistry B, 2013, 1, 310-318.	2.9	22
50	Treatment of Biofilm Communities: An Update on New Tools from the Nanosized World. Applied Sciences (Switzerland), 2018, 8, 845.	1.3	22
51	Assessment of chemical species of lead accumulated in tidemarks of human articular cartilage by X-ray absorption near-edge structure analysis. Journal of Synchrotron Radiation, 2011, 18, 238-244.	1.0	21
52	A novel route for the synthesis of macroporous bioceramics for bone regeneration. Journal of the European Ceramic Society, 2016, 36, 2383-2388.	2.8	21
53	Biomineralization of a titanium-modified hydroxyapatite semiconductor on conductive wool fibers. Journal of Materials Chemistry B, 2017, 5, 7608-7621.	2.9	21
54	<sup /><sup />Biomineralized Recombinant Collagen-Based Scaffold Mimicking Native Bone Enhances Mesenchymal Stem Cell Interaction and Differentiation. Tissue Engineering - Part A, 2017, 23, 1423-1435.	1.6	21

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55	Yttria-stabilized zirconia films grown by radiofrequency magnetron sputtering: Structure, properties and residual stresses. Surface and Coatings Technology, 2006, 200, 4579-4585.	2.2	20
56	Microtopography of Immune Cells in Osteoporosis and Bone Lesions by Endocrine Disruptors. Frontiers in Immunology, 2020, 11, 1737.	2.2	20
57	Hybrid Scaffolds for Tissue Regeneration: Chemotaxis and Physical Confinement as Sources of Biomimesis. Journal of Nanomaterials, 2012, 2012, 1-10.	1.5	19
58	Osteointegration in Cranial Bone Reconstruction: A Goal to Achieve. Journal of Applied Biomaterials and Functional Materials, 2016, 14, 470-476.	0.7	19
59	Luminescent calcium phosphate bioceramics doped with europium derived from fish industry byproducts. Journal of the American Ceramic Society, 2017, 100, 3402-3414.	1.9	19
60	A Composite Chitosan-Reinforced Scaffold Fails to Provide Osteochondral Regeneration. International Journal of Molecular Sciences, 2019, 20, 2227.	1.8	19
61	Toughening of Bioceramic Composites for Bone Regeneration. Journal of Composites Science, 2021, 5, 259.	1.4	19
62	Bone Regeneration in Load-Bearing Segmental Defects, Guided by Biomorphic, Hierarchically Structured Apatitic Scaffold. Frontiers in Bioengineering and Biotechnology, 2021, 9, 734486.	2.0	19
63	Innovative Options for Bone Metastasis Treatment: An Extensive Analysis on Biomaterials-Based Strategies for Orthopedic Surgeons. Frontiers in Bioengineering and Biotechnology, 2020, 8, 589964.	2.0	18
64	Hierarchical porosity inherited by natural sources affects the mechanical and biological behaviour of bone scaffolds. Journal of the European Ceramic Society, 2020, 40, 1717-1727.	2.8	15
65	Effect of soft drinks on the physical and chemical features of nickel-titanium-based orthodontic wires. Acta Odontologica Scandinavica, 2012, 70, 49-55.	0.9	14
66	Nature-Inspired Unconventional Approaches to Develop 3D Bioceramic Scaffolds with Enhanced Regenerative Ability. Biomedicines, 2021, 9, 916.	1.4	14
67	Development of innovative hybrid and intrinsically magnetic nanobeads as a drug delivery system. Nanomedicine, 2016, 11, 2119-2130.	1.7	13
68	Bio-inspired polymeric iron-doped hydroxyapatite microspheres as a tunable carrier of rhBMP-2. Materials Science and Engineering C, 2021, 119, 111410.	3.8	12
69	New bioactive bone-like microspheres with intrinsic magnetic properties obtained by bio-inspired mineralisation process. Materials Science and Engineering C, 2017, 77, 613-623.	3.8	11
70	A New Bioinspired Collagen-Hydroxyapatite Bone Graft Substitute in Adult Scoliosis Surgery: Results at 3-Year Follow-Up. Journal of Applied Biomaterials and Functional Materials, 2017, 15, 262-270.	0.7	11
71	Vegetable hierarchical structures as template for bone regeneration: New bioâ€ceramization process for the development of a bone scaffold applied to an experimental sheep model. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2020, 108, 600-611.	1.6	10
72	Superparamagnetic hybrid microspheres affecting osteoblasts behaviour. Materials Science and Engineering C, 2019, 96, 234-247.	3.8	9

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73	Biomimetic Mineralization Promotes Viability and Differentiation of Human Mesenchymal Stem Cells in a Perfusion Bioreactor. International Journal of Molecular Sciences, 2021, 22, 1447.	1.8	9
74	Development of Multisubstituted Apatites for Bone Reconstruction. Key Engineering Materials, 2008, 361-363, 171-174.	0.4	8
75	Zirconia Implants: Is There a Future?. Current Oral Health Reports, 2018, 5, 186-193.	0.5	8
76	Growth on poly(l-lactic acid) porous scaffold preserves CD73 and CD90 immunophenotype markers of rat bone marrow mesenchymal stromal cells. Journal of Materials Science: Materials in Medicine, 2014, 25, 2421-2436.	1.7	7
77	Nanotechnological approach and bio-inspired materials to face degenerative diseases in aging. Aging Clinical and Experimental Research, 2021, 33, 805-821.	1.4	7
78	Nanostructured Strontium-Doped Calcium Phosphate Cements: A Multifactorial Design. Applied Sciences (Switzerland), 2021, 11, 2075.	1.3	7
79	In Vitro Osteoinductivity Assay of Hydroxylapatite Scaffolds, Obtained with Biomorphic Transformation Processes, Assessed Using Human Adipose Stem Cell Cultures. International Journal of Molecular Sciences, 2021, 22, 7092.	1.8	7
80	Synthesis of Nanostructured Hydroxyapatite via Controlled Hydrothermal Route. , 0, , .		6
81	Hydroxyapatite: From Nanocrystals to Hybrid Nanocomposites for Regenerative Medicine. , 2016, , 119-144.		4
82	Nature-Inspired Processes and Structures: New Paradigms to Develop Highly Bioactive Devices for Hard Tissue Regeneration. , 2019, , .		4
83	Nature-Inspired Nanotechnology and Smart Magnetic Activation: Two Groundbreaking Approaches Toward a New Generation of Biomaterials for Hard Tissue Regeneration. , 2016, , .		3
84	Composite Calcium Phosphate/Titania Scaffolds in Bone Tissue Engineering. , 0, , .		3
85	Properties of MgB/sub 2/ films grown by means of different vapor phase techniques. IEEE Transactions on Applied Superconductivity, 2003, 13, 3305-3308.	1.1	2
86	Structure and superconducting properties of pure and variously doped bulk MgB2 obtained by uniaxial and isostatic hot pressing. Journal of Materials Science: Materials in Electronics, 2008, 19, 1012-1022.	1.1	2
87	Human bone regeneration from wood: a novel hierarchically organised nanomaterial. International Journal of Healthcare Technology and Management, 2012, 13, 171.	0.1	2
88	Tissue engineering and biomimetics with bioceramics. , 2017, , 407-432.		2
89	Biomineralization process generating hybrid nano- and micro-carriers. , 2018, , 19-42.		2
90	Composite scaffolds for bone and osteochondral defects. , 2019, , 297-337.		2

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91	Bioceramics in Regenerative Medicine. , 2021, , 601-613.		2
92	Biologically Inspired Nanomaterials and Nanobiomagnetism: A Synergy among New Emerging Concepts in Regenerative Medicine. , 2016, , 1-20.		1
93	Biomorphic Transformations: A Leap Forward in Getting Nanostructured 3-D Bioceramics. Frontiers in Chemistry, 2021, 9, 728907.	1.8	1
94	Hydroxyapatite: From Nanocrystals to Hybrid Nanocomposites for Regenerative Medicine. , 2015, , 1-26.		1
95	Title is missing!. Journal of Materials Science Letters, 2002, 21, 1089-1092.	0.5	0
96	Biomateriali per la rigenerazione e la funzione endocrina dellâ€™osso. L Endocrinologo, 2013, 14, 163-168.	0.0	0
97	Unconventional, Nature-Inspired Approaches to Develop Bioceramics for Regenerative Medicine. , 2021, , 758-771.		0
98	Editorial for the Special Issue on Bioceramic Composites. Journal of Composites Science, 2022, 6, 65.	1.4	0