Maria A Surmeneva

List of Publications by Year
in descending order

78 papers	3,065 citations	147801 31 h-index	168389 53 g-index
81 all docs	81 docs citations	81 times ranked	3781 citing authors

#	Article	IF	Citations
1	Significance of calcium phosphate coatings for the enhancement of new bone osteogenesis â€“ A review. Acta Biomaterialia, 2014, 10, 557-579.	8.3	597
2	A review on piezo- and pyroelectric responses of flexible nano- and micropatterned polymer surfaces for biomedical sensing and energy harvesting applications. Nano Energy, 2021, 79, 105442.	16.0	140
3	A comparison study between electrospun polycaprolactone and piezoelectric poly(3-hydroxybutyrate-co-3-hydroxyvalerate) scaffolds for bone tissue engineering. Colloids and Surfaces B: Biointerfaces, 2017, 160, 48-59.	5.0	103
4	The influence of the deposition parameters on the properties of an rf-magnetron-deposited nanostructured calcium phosphate coating and a possible growth mechanism. Surface and Coatings Technology, 2011, 205, 3600-3606.	4.8	94
5	3D biodegradable scaffolds of polycaprolactone with silicate-containing hydroxyapatite microparticles for bone tissue engineering: high-resolution tomography and in vitro study. Scientific Reports, 2018, 8, 8907.	3.3	88
6	Piezoelectric 3-D Fibrous Poly(3-hydroxybutyrate)-Based Scaffolds Ultrasound-Mineralized with Calcium Carbonate for Bone Tissue Engineering: Inorganic Phase Formation, Osteoblast Cell Adhesion, and Proliferation. ACS Applied Materials & Interfaces, 2019, 11, 19522-19533.	8.0	88
7	The structure of an RF-magnetron sputter-deposited silicate-containing hydroxyapatite-based coating investigated by high-resolution techniques. Surface and Coatings Technology, 2013, 218, 39-46.	4.8	83
8	Multifunctional Scaffolds with Improved Antimicrobial Properties and Osteogenicity Based on Piezoelectric Electrospun Fibers Decorated with Bioactive Composite Microcapsules. ACS Applied Materials & Interfaces, 2018, 10, 34849-34868.	8.0	79
9	Electrodeposited Hydroxyapatite-Based Biocoatings: Recent Progress and Future Challenges. Coatings, 2021, 11, 110.	2.6	74
10	Fabrication, ultra-structure characterization and in vitro studies of RF magnetron sputter deposited nano-hydroxyapatite thin films for biomedical applications. Applied Surface Science, 2014, 317, 172-180.	6.1	69
11	A biodegradable AZ91 magnesium alloy coated with a thin nanostructured hydroxyapatite for improving the corrosion resistance. Materials Science and Engineering C, 2017, 75, 95-103.	7.3	61
12	Incorporation of silver nanoparticles into magnetron-sputtered calcium phosphate layers on titanium as an antibacterial coating. Colloids and Surfaces B: Biointerfaces, 2017, 156, 104-113.	5.0	61
13	RF-magnetron sputter deposited hydroxyapatite-based composite & multilayer coatings: A systematic review from mechanical, corrosion, and biological points of view. Ceramics International, 2021, 47, 3031-3053.	4.8	60
14	Enhancement of the mechanical properties of AZ31 magnesium alloy via nanostructured hydroxyapatite thin films fabricated via radio-frequency magnetron sputtering. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 46, 127-136.	3.1	59
15	Ultrathin film coating of hydroxyapatite (HA) on a magnesiumâ€“calcium alloy using RF magnetron sputtering for bioimplant applications. Materials Letters, 2015, 152, 280-282.	2.6	59
16	A critical review of decades of research on calcium phosphateâ€“based coatings: How far are we from their widespread clinical application?. Current Opinion in Biomedical Engineering, 2019, 10, 35-44.	3.4	55
17	Hybrid biocomposites based on titania nanotubes and a hydroxyapatite coating deposited by RF-magnetron sputtering: Surface topography, structure, and mechanical properties. Applied Surface Science, 2017, 426, 229-237.	6.1	51
18	RF magnetron sputtering of a hydroxyapatite target: A comparison study on polytetrafluorethylene and titanium substrates. Applied Surface Science, 2017, 414, 335-344.	6.1	49

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19	Preparation of a silicate-containing hydroxyapatite-based coating by magnetron sputtering: structure and osteoblast-like MG63 cells in vitro study. RSC Advances, 2013, 3, 11240.	3.6	48
20	Functionalization of titania nanotubes with electrophoretically deposited silver and calcium phosphate nanoparticles: Structure, composition and antibacterial assay. Materials Science and Engineering C, 2019, 97, 420-430.	7.3	48
21	Bone marrow derived mesenchymal stem cell response to the RF magnetron sputter deposited hydroxyapatite coating on AZ91 magnesium alloy. Materials Chemistry and Physics, 2019, 221, 89-98.	4.0	44
22	Review of Hybrid Materials Based on Polyhydroxyalkanoates for Tissue Engineering Applications. Polymers, 2021, 13, 1738.	4.5	44
23	Influence of the substrate bias on the stoichiometry and structure of RFâ€magnetron sputterâ€deposited silverâ€containing calcium phosphate coatings. Materialwissenschaft Und Werkstofftechnik, 2013, 44, 218-225.	0.9	42
24	Nano-hydroxyapatite-coated metal-ceramic composite of iron-tricalcium phosphate: Improving the surface wettability, adhesion and proliferation of mesenchymal stem cells in vitro. Colloids and Surfaces B: Biointerfaces, 2015, 135, 386-393.	5.0	41
25	Adhesion, proliferation, and osteogenic differentiation of human mesenchymal stem cells on additively manufactured Ti6Al4V alloy scaffolds modified with calcium phosphate nanoparticles. Colloids and Surfaces B: Biointerfaces, 2019, 176, 130-139.	5.0	37
26	Novel selfâ€gelling injectable hydrogel/alphaâ€tricalcium phosphate composites for bone regeneration: Physiochemical and microcomputer tomographical characterization. Journal of Biomedical Materials Research - Part A, 2018, 106, 822-828.	4.0	36
27	The effect of patterned titanium substrates on the properties of silver-doped hydroxyapatite coatings. Surface and Coatings Technology, 2015, 276, 595-601.	4.8	35
28	Effect of low-temperature plasma treatment of electrospun polycaprolactone fibrous scaffolds on calcium carbonate mineralisation. RSC Advances, 2018, 8, 39106-39114.	3.6	35
29	Comprehensive Characterization of Titania Nanotubes Fabricated on Tiâ€"Nb Alloys: Surface Topography, Structure, Physicomechanical Behavior, and a Cell Culture Assay. ACS Biomaterials Science and Engineering, 2020, 6, 1487-1499.	5.2	35
30	Emerging Trends for ZnO Nanoparticles and Their Applications in Food Packaging. ACS Food Science & Technology, 2022, 2, 763-781.	2.7	34
31	Surface wettability and energy effects on the biological performance of poly-3-hydroxybutyrate films treated with RF plasma. Materials Science and Engineering C, 2016, 62, 450-457.	7.3	33
32	Development of Optimized Strategies for Growth Factor Incorporation onto Electrospun Fibrous Scaffolds To Promote Prolonged Release. ACS Applied Materials & Interfaces, 2020, 12, 5578-5592.	8.0	33
33	Novel injectable gellan gum hydrogel composites incorporating Zn- and Sr-enriched bioactive glass microparticles: High-resolution X-ray microcomputed tomography, antibacterial and in vitro testing. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, 1313-1326.	2.7	31
34	Study on a hydrophobic Ti-doped hydroxyapatite coating for corrosion protection of a titanium based alloy. RSC Advances, 2016, 6, 87665-87674.	3.6	30
35	Deposition of Ultrathin Nano-Hydroxyapatite Films on Laser Micro-Textured Titanium Surfaces to Prepare a Multiscale Surface Topography for Improved Surface Wettability/Energy. Materials, 2016, 9, 862.	2.9	29
36	Tribological behaviour of RF-magnetron sputter deposited hydroxyapatite coatings in physiological solution. Ceramics International, 2017, 43, 6858-6867.	4.8	29

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37	Novel multicomponent organicâ€“inorganic WPI/gelatin/CaP hydrogel composites for bone tissue engineering. Journal of Biomedical Materials Research - Part A, 2019, 107, 2479-2491.	4.0	29
38	Piezoelectric Response in Hybrid Micropillar Arrays of Poly(Vinylidene Fluoride) and Reduced Graphene Oxide. Polymers, 2019, 11, 1065.	4.5	28
39	Study of physicochemical and biological properties of calcium phosphate coatings prepared by RF magnetron sputtering of silicon-substituted hydroxyapatite. Journal of Surface Investigation, 2011, 5, 863-869.	0.5	26
40	In-vitro investigation of magnetron-sputtered coatings based on silicon-substituted hydroxyapatite. Journal of Surface Investigation, 2011, 5, 1202-1207.	0.5	26
41	Different Approaches for Manufacturing Ti-6Al-4V Alloy with Triply Periodic Minimal Surface Sheet-Based Structures by Electron Beam Melting. Materials, 2021, 14, 4912.	2.9	26
42	Structural evolution and growth mechanisms of RF-magnetron sputter-deposited hydroxyapatite thin films on the basis of unified principles. Applied Surface Science, 2017, 425, 497-506.	6.1	23
43	Bacteriostatic Effect of Piezoelectric Poly-3-Hydroxybutyrate and Polyvinylidene Fluoride Polymer Films under Ultrasound Treatment. Polymers, 2020, 12, 240.	4.5	22
44	Piezoelectric hybrid scaffolds mineralized with calcium carbonate for tissue engineering: Analysis of local enzyme and small-molecule drug delivery, cell response and antibacterial performance. Materials Science and Engineering C, 2021, 122, 111909.	7.3	22
45	Core-Shell Magnetoactive PHB/Gelatin/Magnetite Composite Electrospun Scaffolds for Biomedical Applications. Polymers, 2022, 14, 529.	4.5	22
46	Osteogenic Capability of Vateriteâ€Coated Nonwoven Polycaprolactone Scaffolds for In Vivo Bone Tissue Regeneration. Macromolecular Bioscience, 2021, 21, e2100266.	4.1	21
47	Physical-Mechanical Characteristics of RF Magnetron Sputter-Deposited Coatings Based on Silver-Doped Hydroxyapatite. Russian Physics Journal, 2014, 56, 1198-1205.	0.4	17
48	Highâ€resolution synchrotron <scp>X</scp>â€ray analysis of bioglassâ€enriched hydrogels. Journal of Biomedical Materials Research - Part A, 2016, 104, 1194-1201.	4.0	17
49	X-ray Computed Tomography Procedures to Quantitatively Characterize the Morphological Features of Triply Periodic Minimal Surface Structures. Materials, 2021, 14, 3002.	2.9	17
50	Adhesion properties of a silicon-containing calcium phosphate coating deposited by RF magnetron sputtering on a heated substrate. Journal of Surface Investigation, 2013, 7, 944-951.	0.5	16
51	Density Functional Theory Study of Interface Interactions in Hydroxyapatite/Rutile Composites for Biomedical Applications. Journal of Physical Chemistry C, 2017, 121, 15687-15695.	3.1	16
52	The effect of hybrid coatings based on hydrogel, biopolymer and inorganic components on the corrosion behavior of titanium bone implants. Journal of Materials Chemistry B, 2019, 7, 6778-6788.	5.8	16
53	Phenolic-Enriched Collagen Fibrillar Coatings on Titanium Alloy to Promote Osteogenic Differentiation and Reduce Inflammation. International Journal of Molecular Sciences, 2020, 21, 6406.	4.1	16
54	Physical principles of radio-frequency magnetron sputter deposition of calcium-phosphate-based coating with tailored properties. Surface and Coatings Technology, 2021, 413, 127098.	4.8	16

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55	Phase and elemental composition of silicon-containing hydroxyapatite-based coatings fabricated by RF-magnetron sputtering for medical implants. Inorganic Materials: Applied Research, 2013, 4, 227-235.	0.5	15
56	New Tiâ€"35Nbâ€"7Zrâ€"5Ta Alloy Manufacturing by Electron Beam Melting for Medical Application Followed by High Current Pulsed Electron Beam Treatment. Metals, 2021, 11, 1066.	2.3	15
57	Quanfima: An open source Python package for automated fiber analysis of biomaterials. PLoS ONE, 2019, 14, e0215137.	2.5	14
58	Effects of silicon doping on strengthening adhesion at the interface of the hydroxyapatiteâ€"titanium biocomposite: A first-principles study. Computational Materials Science, 2019, 159, 228-234.	3.0	14
59	Radio Frequency Magnetron Sputter Deposition as a Tool for Surface Modification of Medical Implants. , 0, , .		11
60	Bioceramic Coatings for Metallic Implants. , 2016, , 703-733.		10
61	Effect of Electron Beam Treatment in Air on Surface Properties of Ultra-High-Molecular-Weight Polyethylene. Journal of Medical and Biological Engineering, 2016, 36, 440-448.	1.8	9
62	Heparin Enriched-WPI Coating on Ti6Al4V Increases Hydrophilicity and Improves Proliferation and Differentiation of Human Bone Marrow Stromal Cells. International Journal of Molecular Sciences, 2022, 23, 139.	4.1	9
63	The effect of different sizes of crossâ€linked fibers of biodegradable electrospun poly(Îµâ€caprolactone) scaffolds on osteogenic behavior in a rat model in vivo. Journal of Applied Polymer Science, 2022, 139, .	2.6	8
64	Magnetoactive electrospun hybrid scaffolds based on poly(vinylidene fluorideâ€coâ€trifluoroethylene) and magnetite particles with varied sizes. Polymer Engineering and Science, 2022, 62, 1593-1607.	3.1	7
65	Wettability of Thin Silicate-Containing Hydroxyapatite Films Formed by RF-Magnetron Sputtering. Russian Physics Journal, 2014, 56, 1163-1169.	0.4	6
66	Cellular and molecular aspects of immunologic compatibility of implants with nanostructured calcium phosphate coating. Bulletin of Siberian Medicine, 2012, 11, 78-85.	0.3	6
67	Testing the in vitro performance of hydroxyapatite coated magnesium (AZ91D) and titanium concerning cell adhesion and osteogenic differentiation. BioNanoMaterials, 2015, 16, .	1.4	5
68	Nanoindentation of a hard ceramic coating formed on a soft substrate. Technical Physics, 2016, 61, 1370-1376.	0.7	3
69	<i>In Vitro</i> Assessment of Hydroxyapatite Coating on the Surface of Additive Manufactured Ti6Al4V Scaffolds. Materials Science Forum, 0, 879, 2444-2449.	0.3	3
70	Effect of van der Waals interactions on the adhesion strength at the interface of the hydroxyapatiteâ€"titanium biocomposite: a first-principles study. RSC Advances, 2020, 10, 37800-37805.	3.6	3
71	GPU-accelerated ray-casting for 3D fiber orientation analysis. PLoS ONE, 2020, 15, e0236420.	2.5	3
72	Combined effect of pulse electron beam treatment and thin hydroxyapatite film on mechanical features of biodegradable AZ31 magnesium alloy. IOP Conference Series: Materials Science and Engineering, 2015, 98, 012030.	0.6	2

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73	Bioceramic Coatings for Metallic Implants. , 2015, , 1-31.		2
74	Thin hydroxyapatite coating on AZ91D magnesium alloy fabricated via RF-magnetron sputtering. IOP Conference Series: Materials Science and Engineering, 2015, 98, 012027.	0.6	1
75	Correlation between surface properties and wettability of multi-scale structured biocompatible surfaces. IOP Conference Series: Materials Science and Engineering, 2015, 98, 012026.	0.6	1
76	Adhesion properties of a three-layer system based on RF-magnetron sputter deposited calcium-phosphate coating and silver nanoparticles. , 2016, , .		1
77	Investigation of the morphology and elemental composition of the silicon-containing calcium phosphate coating treated by intensive pulsed electron beam. , 2014, , .		0
78	Antibacterial AgNPs/CaP biocomposites. , 2014, , .		0