Huinan Liu

List of Publications by Year
in descending order

123 papers	4,635 citations	87843 38 h-index	106281 65 g-index
126 all docs	126 docs citations	126 times ranked	5856 citing authors

#	Article	IF	Citations
1	Nanomedicine for implants: A review of studies and necessary experimental tools. Biomaterials, 2007, 28, 354-369.	5.7	513
2	An in vitro evaluation of the Ca/P ratio for the cytocompatibility of nano-to-micron particulate calcium phosphates for bone regeneration. Acta Biomaterialia, 2008, 4, 1472-1479.	4.1	206
3	Mimicking the nanofeatures of bone increases bone-forming cell adhesion and proliferation. Nanotechnology, 2005, 16, 1828-1835.	1.3	194
4	Antimicrobial Activities and Mechanisms of Magnesium Oxide Nanoparticles (nMgO) against Pathogenic Bacteria, Yeasts, and Biofilms. Scientific Reports, 2018, 8, 16260.	1.6	188
5	Less harmful acidic degradation of poly(lactic-co-glycolic acid) bone tissue engineering scaffolds through titania nanoparticle addition. International Journal of Nanomedicine, 2006, 1, 541-545.	3.3	179
6	Label-Free SERS Selective Detection of Dopamine and Serotonin Using Graphene-Au Nanopyramid Heterostructure. Analytical Chemistry, 2015, 87, 10255-10261.	3.2	146
7	Degradation and antibacterial properties of magnesium alloys in artificial urine for potential resorbable ureteral stent applications. Journal of Biomedical Materials Research - Part A, 2014, 102, 781-792.	2.1	128
8	Magnetic Nanocomposite Hydrogel for Potential Cartilage Tissue Engineering: Synthesis, Characterization, and Cytocompatibility with Bone Marrow Derived Mesenchymal Stem Cells. ACS Applied Materials & Interfaces, 2015, 7, 20987-20998.	4.0	123
9	Increased osteoblast functions among nanophase titania/poly(lactideâ€•co â€glycolide) composites of the highest nanometer surface roughness. Journal of Biomedical Materials Research - Part A, 2006, 78A, 798-807.	2.1	100
10	Development and evaluation of a magnesiumâ€“zincâ€“strontium alloy for biomedical applications â€” Alloy processing, microstructure, mechanical properties, and biodegradation. Materials Science and Engineering C, 2013, 33, 3661-3669.	3.8	91
11	Electrodeposition of hydroxyapatite coating on Mgâ€4.0Znâ€1.0Caâ€0.6Zr alloy and <i>in vitro</i> evaluation of degradation, hemolysis, and cytotoxicity. Journal of Biomedical Materials Research - Part A, 2012, 100A, 999-1015.	2.1	90
12	An in vivo study on the metabolism and osteogenic activity of bioabsorbable Mgâ€“1Sr alloy. Acta Biomaterialia, 2016, 29, 455-467.	4.1	85
13	Mechanical properties of dispersed ceramic nanoparticles in polymer composites for orthopedic applications. International Journal of Nanomedicine, 2010, 5, 299.	3.3	84
14	Nanomaterials for treating cardiovascular diseases: A review. Bioactive Materials, 2017, 2, 185-198.	8.6	82
15	Cytocompatibility and early inflammatory response of human endothelial cells in direct culture with Mg-Zn-Sr alloys. Acta Biomaterialia, 2017, 48, 499-520.	4.1	74
16	The effects of nanostructured hydroxyapatite coating on the biodegradation and cytocompatibility of magnesium implants. Journal of Biomedical Materials Research - Part A, 2013, 101A, 2340-2354.	2.1	72
17	Investigation of magnesiumâ€“zincâ€“calcium alloys and bone marrow derived mesenchymal stem cell response in direct culture. Acta Biomaterialia, 2015, 12, 298-321.	4.1	71
18	Nanomaterials enhance osteogenic differentiation of human mesenchymal stem cells similar to a short peptide of BMP-7. International Journal of Nanomedicine, 2011, 6, 2769.	3.3	66

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19	<i>In vitro</i> evaluation of the surface effects on magnesiumâ€yttrium alloy degradation and mesenchymal stem cell adhesion. Journal of Biomedical Materials Research - Part A, 2012, 100A, 477-485.	2.1	66
20	Concentration-dependent behaviors of bone marrow derived mesenchymal stem cells and infectious bacteria toward magnesium oxide nanoparticles. Acta Biomaterialia, 2016, 35, 341-356.	4.1	63
21	A Study on Factors Affecting the Degradation of Magnesium and a Magnesium-Yttrium Alloy for Biomedical Applications. PLoS ONE, 2013, 8, e65603.	1.1	61
22	Increased osteoblast adhesion on nanoparticulate calcium phosphates with higher Ca/P ratios. Journal of Biomedical Materials Research - Part A, 2008, 85A, 236-241.	2.1	60
23	Increased osteoblast functions on nanophase titania dispersed in poly-lactic-co-glycolic acid composites. Nanotechnology, 2005, 16, S601-S608.	1.3	59
24	The effects of surface and biomolecules on magnesium degradation and mesenchymal stem cell adhesion. Journal of Biomedical Materials Research - Part A, 2011, 99A, 249-260.	2.1	59
25	Anodization of magnesium for biomedical applications â€" Processing, characterization, degradation and cytocompatibility. Acta Biomaterialia, 2017, 62, 397-417.	4.1	57
26	Nanostructured hydroxyapatite/poly(lactic-<i>co</i>-glycolic acid) composite coating for controlling magnesium degradation in simulated body fluid. Nanotechnology, 2013, 24, 375103.	1.3	56
27	Comparison Study on Four Biodegradable Polymer Coatings for Controlling Magnesium Degradation and Human Endothelial Cell Adhesion and Spreading. ACS Biomaterials Science and Engineering, 2017, 3, 936-950.	2.6	56
28	Increased osteoblast adhesion on nanograined hydroxyapatite and tricalcium phosphate containing calcium titanate. Journal of Biomedical Materials Research - Part A, 2007, 80A, 990-997.	2.1	54
29	In vitro degradation of four magnesiumâ€"zincâ€"strontium alloys and their cytocompatibility with human embryonic stem cells. Journal of Materials Science: Materials in Medicine, 2013, 24, 989-1003.	1.7	54
30	Nanophase hydroxyapatite and poly(lactide-co-glycolide) composites promote human mesenchymal stem cell adhesion and osteogenic differentiation in vitro. Journal of Materials Science: Materials in Medicine, 2012, 23, 2543-2552.	1.7	53
31	Anodic Growth and Biomedical Applications of TiO₂ Nanotubes. Journal of Biomedical Nanotechnology, 2014, 10, 2977-3003.	0.5	53
32	In vitro evaluation of MgSr and MgCaSr alloys via direct culture with bone marrow derived mesenchymal stem cells. Acta Biomaterialia, 2018, 72, 407-423.	4.1	48
33	Dissociation of magnesium oxide and magnesium hydroxide nanoparticles in physiologically relevant fluids. Journal of Nanoparticle Research, 2018, 20, 1.	0.8	45
34	Graphene and carbon nanotubeâ€"graphene hybrid nanomaterials for human embryonic stem cell culture. Materials Letters, 2013, 92, 122-125.	1.3	44
35	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.	2.0	44
36	Bone Marrow Stromal Cell Adhesion and Morphology on Micro- and Sub-Micropatterned Titanium. Journal of Biomedical Nanotechnology, 2014, 10, 660-668.	0.5	41

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37	Ultra-fine-grained Zn-0.5Mn alloy processed by multi-pass hot extrusion: Grain refinement mechanism and room-temperature superplasticity. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 748, 262-266.	2.6	41
38	Enhanced biological and mechanical properties of well-dispersed nanophase ceramics in polymer composites: From 2D to 3D printed structures. Materials Science and Engineering C, 2011, 31, 77-89.	3.8	38
39	Influence of Mg on the mechanical properties and degradation performance of as-extruded Zn Mg Ca alloys: In vitro and in vivo behavior. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 95, 220-231.	1.5	38
40	In vivo assessment of biodegradable magnesium alloy ureteral stents in a pig model. Acta Biomaterialia, 2020, 116, 415-425.	4.1	38
41	The Effects of Serum Proteins on Magnesium Alloy Degradation in Vitro. Scientific Reports, 2017, 7, 14335.	1.6	37
42	Photo-assisted green synthesis of silver doped silk fibroin/carboxymethyl cellulose nanocomposite hydrogels for biomedical applications. Materials Science and Engineering C, 2020, 107, 110219.	3.8	37
43	An In Vitro Mechanism Study on the Proliferation and Pluripotency of Human Embryonic Stems Cells in Response to Magnesium Degradation. PLoS ONE, 2013, 8, e76547.	1.1	36
44	Grain refinement in an Al Er alloy during accumulative continuous extrusion forming. Journal of Alloys and Compounds, 2016, 680, 283-290.	2.8	35
45	Electrophoretic deposition and characterization of nanocomposites and nanoparticles on magnesium substrates. Nanotechnology, 2015, 26, 175102.	1.3	34
46	Degradation of Bioresorbable Mgâ€“4Znâ€“1Sr Intramedullary Pins and Associated Biological Responses in Vitro and in Vivo. ACS Applied Materials & Interfaces, 2017, 9, 44332-44355.	4.0	34
47	Ceramic/polymer nanocomposites with tunable drug delivery capability at specific disease sites. Journal of Biomedical Materials Research - Part A, 2010, 93A, 1180-1192.	2.1	33
48	Evaluation of asâ€extruded ternary Znâ€“Mgâ€“Zr alloys for biomedical implantation material: <i>In vitro</i> and <i>in vivo</i> behavior. Materials and Corrosion - Werkstoffe Und Korrosion, 2019, 70, 1056-1070.	0.8	32
49	Electrochemical deposition and evaluation of electrically conductive polymer coating on biodegradable magnesium implants for neural applications. Journal of Materials Science: Materials in Medicine, 2013, 24, 307-316.	1.7	31
50	Antimicrobial Bioresorbable Mgâ€“Znâ€“Ca Alloy for Bone Repair in a Comparison Study with Mgâ€“Znâ€“Sr Alloy and Pure Mg. ACS Biomaterials Science and Engineering, 2020, 6, 517-538.	2.6	31
51	Nano-to-Submicron Hydroxyapatite Coatings for Magnesium-based Bioresorbable Implants â€“ Deposition, Characterization, Degradation, Mechanical Properties, and Cytocompatibility. Scientific Reports, 2019, 9, 810.	1.6	29
52	Antimicrobial Properties of MgO Nanostructures on Magnesium Substrates. ACS Omega, 2020, 5, 24613-24627.	1.6	29
53	Angiogenic Hyaluronic Acid Hydrogels with Curcumin-Coated Magnetic Nanoparticles for Tissue Repair. ACS Applied Materials & Interfaces, 2022, 14, 11051-11067.	4.0	29
54	Superhydrophobic fluoride conversion coating on bioresorbable magnesium alloy â€“ fabrication, characterization, degradation and cytocompatibility with BMSCs. Journal of Magnesium and Alloys, 2021, 9, 1246-1260.	5.5	28

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55	Cytocompatibility of Magnesium Alloys with Human Urothelial Cells: A Comparison of Three Culture Methodologies. ACS Biomaterials Science and Engineering, 2016, 2, 1559-1571.	2.6	27
56	Label-free distinction between p53+/+ and p53 -/- colon cancer cells using a graphene based SERS platform. Biosensors and Bioelectronics, 2018, 118, 108-114.	5.3	25
57	A systemic study on key parameters affecting nanocomposite coatings on magnesium substrates. Acta Biomaterialia, 2016, 36, 332-349.	4.1	23
58	Electrochemical deposition of conductive polymers onto magnesium microwires for neural electrode applications. Journal of Biomedical Materials Research - Part A, 2018, 106, 1887-1895.	2.1	23
59	Responses of human urothelial cells to magnesium-zinc-strontium alloys and associated insoluble degradation products for urological stent applications. Materials Science and Engineering C, 2019, 96, 248-262.	3.8	23
60	Osteoblast adhesion on novel machinable calcium phosphate/lanthanum phosphate composites for orthopedic applications. Journal of Biomedical Materials Research - Part A, 2009, 89A, 727-733.	2.1	22
61	The effects of eutectic silicon on grain refinement in an Alâ€“Si alloy processed by accumulative continuous extrusion forming. Journal of Materials Science, 2017, 52, 1137-1148.	1.7	22
62	A Comparison Study on the Degradation and Cytocompatibility of Mg-4Zn-<i>x</i>Sr Alloys in Direct Culture. ACS Biomaterials Science and Engineering, 2017, 3, 540-550.	2.6	20
63	<i>In vitro</i> interactions of blood, platelet, and fibroblast with biodegradable magnesiumâ€zincâ€strontium alloys. Journal of Biomedical Materials Research - Part A, 2015, 103, 2974-2986.	2.1	19
64	Degradation behaviors and cytocompatibility of Mg/Î²â€tricalcium phosphate composites produced by spark plasma sintering. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2019, 107, 2238-2253.	1.6	19
65	Tunable Crosslinking, Reversible Phase Transition, and 3D Printing of Hyaluronic Acid Hydrogels via Dynamic Coordination of Innate Carboxyl Groups and Metallic Ions. ACS Applied Bio Materials, 2021, 4, 2408-2428.	2.3	18
66	Optimization of nano-hydroxyapatite/poly(lactic-co-glycolic acid) coatings on magnesium substrates using one-step electrophoretic deposition. Materials Letters, 2017, 186, 12-16.	1.3	17
67	Effects of pre-precipitation of Cr2N on microstructures and properties of high nitrogen stainless steel. Journal of Central South University, 2012, 19, 1189-1195.	1.2	16
68	The effects of poly(3,4-ethylenedioxythiophene) coating on magnesium degradation and cytocompatibility with human embryonic stem cells for potential neural applications. Journal of Biomedical Materials Research - Part A, 2015, 103, 25-37.	2.1	16
69	Bioinspired Nanocomposites for Orthopedic Applications. , 2007, , 1-51.		14
70	Investigation on magnesium degradation under flow versus static conditions using a novel impedance-driven flow apparatus. Progress in Natural Science: Materials International, 2014, 24, 554-560.	1.8	13
71	Nanostructured calcium phosphate coatings on magnesium alloys: characterization and cytocompatibility with mesenchymal stem cells. Journal of Materials Science: Materials in Medicine, 2015, 26, 189.	1.7	13
72	Magnesium-based Biodegradable Materials for Biomedical Applications. MRS Advances, 2018, 3, 2359-2364.	0.5	13

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73	Novel nanostructured hydroxyapatite coating for dental and orthopedic implants. Jom, 2009, 61, 67-69.	0.9	12
74	Development of a novel loading device for studying magnesium degradation under compressive load for implant applications. Materials Letters, 2018, 217, 27-32.	1.3	12
75	Dispersibility and characterization of polyvinyl alcoholâ€"coated magnetic nanoparticles in poly(glycerol sebacate) for biomedical applications. Journal of Nanoparticle Research, 2019, 21, 1.	0.8	12
76	In vivo degradability and biocompatibility of a rheo-formed Mgâ€"Znâ€"Sr alloy for ureteral implantation. Journal of Magnesium and Alloys, 2022, 10, 1631-1639.	5.5	11
77	Measuring the mass, volume, and density of microgram-sized objects in fluid. PLoS ONE, 2017, 12, e0174068.	1.1	11
78	Optical and biological properties of polymerâ€based nanocomposites with improved dispersion of ceramic nanoparticles. Journal of Biomedical Materials Research - Part A, 2018, 106, 2692-2707.	2.1	10
79	Synthesis, characterization, and cytocompatibility of yttria stabilized zirconia nanopowders for creating a window to the brain. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2020, 108, 925-938.	1.6	10
80	Corrosion characteristics of zincâ€"zirconium alloy in câ€SBF and its biocompatibility in vitro/in vivo. Materials and Corrosion - Werkstoffe Und Korrosion, 2020, 71, 196-208.	0.8	10
81	Microstructure of Biodegradable Zn-Fe Alloys and Mechanical and Corrosion Properties. Jom, 2020, 72, 3661-3671.	0.9	10
82	Increased Osteoblast Functions on (Poly-lactic-co-glycolic acid) with Highly Dispersed Nanophase Titania. Journal of Biomedical Nanotechnology, 2005, 1, 83-89.	0.5	9
83	Engineering Nano-to-Micron-Patterned Polymer Coatings on Bioresorbable Magnesium for Controlling Human Endothelial Cell Adhesion and Morphology. ACS Biomaterials Science and Engineering, 2020, 6, 3878-3898.	2.6	9
84	Surface Modification and Coatings for Controlling the Degradation and Bioactivity of Magnesium Alloys for Medical Applications. , 2017, , 331-363.		8
85	Magnesium-based biodegradable microelectrodes for neural recording. Materials Science and Engineering C, 2020, 110, 110614.	3.8	8
86	In vivo urinary compatibility of Mg-Sr-Ag alloy in swine model. Bioactive Materials, 2022, 7, 254-262.	8.6	8
87	Corrosion and Biocompatibility of Pure Zn with a Micro-Arc-Oxidized Layer Coated with Calcium Phosphate. Coatings, 2021, 11, 1425.	1.2	8
88	Electrophoretic Deposition and Characterization of Biocomposites on Magnesium for Orthopedic Applications. Advanced Materials Research, 0, 922, 761-766.	0.3	7
89	Electrophoretic Deposition of Magnesium Oxide Nanoparticles on Magnesium: Processing Parameters, Microstructures, Degradation, and Cytocompatibility. ACS Applied Bio Materials, 2019, 2, 5634-5652.	2.3	7
90	Effects of magnesium on growth and proliferation of human embryonic stem cells. , 2012, 2012, 723-6.		5

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91	A Review of Current Advances in Biomaterials for Neural Tissue Regeneration. Recent Patents on Biomedical Engineering, 2013, 6, 29-39.	0.5	5
92	In vitro degradation and cytocompatibility of Magnesium-Zinc-Strontium alloys with human embryonic stem cells. , 2012, 2012, 2432-5.		4
93	A portable device for studying the effects of fluid flow on degradation properties of biomaterials inside cell incubators. International Journal of Energy Production and Management, 2019, 6, 39-48.	1.9	4
94	Improved bone marrow stromal cell adhesion on micropatterned Titanium surfaces. , 2012, 2012, 5666-9.		3
95	Antimicrobial properties of biodegradable magnesium for next generation ureteral stent applications. , 2012, 2012, 1378-81.		3
96	Nanostructured Ceramic and Ceramic-Polymer Composites as Dual Functional Interface for Bioresorbable Metallic Implants. Materials Research Society Symposia Proceedings, 2014, 1621, 39-45.	0.1	3
97	Characterization of Hydroxyapatite Coated Mg for Biomedical Applications. MRS Advances, 2018, 3, 2385-2389.	0.5	3
98	A study on calcium phosphate/barium titanate composites: phase characterization, piezoelectric property, and cytocompatibility. Journal of the Australian Ceramic Society, 2020, 56, 1197-1216.	1.1	3
99	Biodegradable Materials for Medical Applications II. Jom, 2020, 72, 1830-1832.	0.9	3
100	Biodegradable Metals and Responsive Biosensors for Musculoskeletal Applications. , 2011, , 115-137.		3
101	Bioceramics for Orthopaedic Device Applications: Hydroxyapatite. , 2017, , 49-77.		2
102	Fabrication and Characterization of Biodegradable Metal Based Microelectrodes for In Vivo Neural Recording. MRS Advances, 2019, 4, 2471-2477.	0.5	2
103	Ceramic/Polymer Nanocomposite Tissue Engineering Scaffolds for More Effective Orthopedic Applications: From 2D Surfaces to Novel 3D Architectures. Materials Research Society Symposia Proceedings, 2006, 950, 1.	0.1	1
104	Controlling the Biodegradation of Magnesium Implants Through Nanostructured Coatings. , 2011, , .		1
105	Interactions between aggressive ions and the surface of a magnesium-yttrium alloy. , 2012, 2012, 5670-3.		1
106	Surface Characterization of Magnesium Anodized in a 10M KOH Electrolyte. Advanced Materials Research, 0, 922, 513-518.	0.3	1
107	Nanomaterials as Improved Implants: a of Review Recent Studies. Ceramic Engineering and Science Proceedings, 0, , 165-180.	0.1	1
108	Direct and Indirect Culture Methods for Studying Biodegradable Implant Materials In Vitro. Journal of Visualized Experiments, 2022, , .	0.2	1

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109	Enhanced Osteoblast Functions on Nanophase Titania in Poly-lactic-co-glycolic Acid (PLGA) Composites. Materials Research Society Symposia Proceedings, 2004, 845, 175.	0.1	0
110	Surface Roughness Values Closer to Bone for Titania Nanoparticle/Poly-lactic-co-glycolic Acid (PLGA) Composites Increases Bone Cell Adhesion. Materials Research Society Symposia Proceedings, 2005, 873, 1.	0.1	0
111	Increased Osteoblast Adhesion on Nanograined Hydroxyapatite and Tricalcium Phosphate Calcium Titanate Composites. Materials Research Society Symposia Proceedings, 2006, 950, 1.	0.1	0
112	Nano-dispersed Particulate Ceramics in Poly-Lactide-Co-Glycolide Composites Improve Implantable Bone Substitute Properties. Materials Research Society Symposia Proceedings, 2007, 1056, 1.	0.1	0
113	Nanophase ceramic/polymer composite scaffolds for bone regeneration: From 2D to 3D. , 2007, , .		0
114	Electrochemical Deposition and Evaluation of Conductive Polymer Coating on Biodegradable Magnesium Implants for Neural Applications. Materials Research Society Symposia Proceedings, 2012, 1466, 44.	0.1	0
115	Nanotechnology Enabled Drug Delivery Systems for Bone and Cartilage Regeneration. Recent Patents on Biomedical Engineering, 2012, 5, 51-56.	0.5	0
116	Characterization of Magnesium Alloy Degradation in Whole Blood and Platelet Rich Plasma. Advanced Materials Research, 0, 922, 543-548.	0.3	0
117	Cytocompatibility of Magnesium-Zinc-Calcium Alloys with Bone Marrow Derived Mesenchymal Stem Cells. Advanced Materials Research, 0, 922, 1-6.	0.3	0
118	Investigation of Biodegradable Composite Coated Magnesium Alloy Using Optical Coherence Tomography. Advanced Materials Research, 0, 922, 292-297.	0.3	0
119	Improved Mechanical Properties of Nanocrystalline Hydroxyapatite Coating for Dental and Orthopedic Implants. , 2008, , .		0
120	Nanophase Hydroxyapatite in Biodegradable Polymer Composites as Novel Drug-Carrying Implants for Treating Bone Diseases at Targeted Sites. Ceramic Transactions, 0, , 183-191.	0.1	0
121	Synthesis and Characterization of Al, Ag, Ti, Cu, and B Substituted Hydroxylapatite. , 0, , 131-137.		0
122	A review on the 3D printing of composite scaffolds for bone tissue engineering. , 2022, , 201-241.		0
123	Nanocrystalline Yttria-Stabilized Zirconia Ceramics for Cranial Window Applications. ACS Applied Bio Materials, 2022, 5, 2664-2675.	2.3	0