

Hyung-Seop Han

List of Publications by Year in descending order

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43
papers

1,838
citations

430442

18
h-index

264894

42
g-index

45
all docs

45
docs citations

45
times ranked

2763
citing authors

#	ARTICLE	IF	CITATIONS
1	Long-term clinical study and multiscale analysis of in vivo biodegradation mechanism of Mg alloy. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 716-721.	3.3	337
2	Electrospun Fibrous Scaffolds for Tissue Engineering: Viewpoints on Architecture and Fabrication. International Journal of Molecular Sciences, 2018, 19, 745.	1.8	327
3	Current status and outlook on the clinical translation of biodegradable metals. Materials Today, 2019, 23, 57-71.	8.3	271
4	Biodegradability engineering of biodegradable Mg alloys: Tailoring the electrochemical properties and microstructure of constituent phases. Scientific Reports, 2013, 3, 2367.	1.6	160
5	Preferred crystallographic pitting corrosion of pure magnesium in Hanks's™ solution. Corrosion Science, 2012, 63, 316-322.	3.0	78
6	Biodegradable Magnesium Alloys Promote Angiogenesis to Enhance Bone Repair. Advanced Science, 2020, 7, 2000800.	5.6	72
7	Corrosion behavior of biodegradable Mg-based alloys via femtosecond laser surface melting. Applied Surface Science, 2018, 448, 424-434.	3.1	60
8	Creating Hierarchical Topographies on Fibrous Platforms Using Femtosecond Laser Ablation for Directing Myoblasts Behavior. ACS Applied Materials & Interfaces, 2016, 8, 3407-3417.	4.0	42
9	Conformable microneedle pH sensors via the integration of two different siloxane polymers for mapping peripheral artery disease. Science Advances, 2021, 7, eabi6290.	4.7	36
10	Facile Solvothermal Preparation of Monodisperse Gold Nanoparticles and Their Engineered Assembly of Ferritin-Gold Nanoclusters. Langmuir, 2013, 29, 15698-15703.	1.6	35
11	Comprehensive study on the roles of released ions from biodegradable Mg-5wt% Ca-1wt% Zn alloy in bone regeneration. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 2710-2724.	1.3	33
12	Robust Hydroxyapatite Coating by Laser-Induced Hydrothermal Synthesis. Advanced Functional Materials, 2020, 30, 2005233.	7.8	29
13	The modification of microstructure to improve the biodegradation and mechanical properties of a biodegradable Mg alloy. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 20, 54-60.	1.5	28
14	Direct and accurate measurement of size dependent wetting behaviors for sessile water droplets. Scientific Reports, 2015, 5, 18150.	1.6	27
15	Mussel Adhesion-Inspired Reverse Transfection Platform Enhances Osteogenic Differentiation and Bone Formation of Human Adipose-Derived Stem Cells. Small, 2016, 12, 6266-6278.	5.2	25
16	Magnesium Corrosion Triggered Spontaneous Generation of H ₂ O ₂ on Oxidized Titanium for Promoting Angiogenesis. Angewandte Chemie - International Edition, 2015, 54, 14753-14757.	7.2	22
17	<i>In vivo</i> corrosion mechanism by elemental interdiffusion of biodegradable Mg-Ca alloy. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2012, 100B, 2251-2260.	1.6	21
18	Multifunctional Composite Coating as a Wear-Resistant Layer for the Bearing in Total Hip Joint Replacement. ACS Applied Materials & Interfaces, 2013, 5, 395-403.	4.0	21

#	ARTICLE	IF	CITATIONS
19	Stability of biodegradable metal (Mg-Ca-Zn alloy) screws compared with absorbable polymer and titanium screws for sagittal split ramus osteotomy of the mandible using the finite element analysis model. <i>Journal of Cranio-Maxillo-Facial Surgery</i> , 2017, 45, 1639-1646.	0.7	19
20	<i>In vitro</i> dynamic degradation behavior of new magnesium alloy for orthopedic applications. , 2015, 103, 807-815.		18
21	Regulation of cell locomotion by nanosecond-laser-induced hydroxyapatite patterning. <i>Bioactive Materials</i> , 2021, 6, 3608-3619.	8.6	17
22	Computational design of Mg alloys with minimal galvanic corrosion. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 1972-1980.	5.5	15
23	Effect of surface area on corrosion properties of magnesium for biomaterials. <i>Metals and Materials International</i> , 2013, 19, 1131-1137.	1.8	14
24	Bone formation within the vicinity of biodegradable magnesium alloy implant in a rat femur model. <i>Metals and Materials International</i> , 2012, 18, 243-247.	1.8	12
25	Ultrathin Metal Films with Defined Topographical Structures as In Vitro Cell Culture Platforms for Unveiling Vascular Cell Behaviors. <i>Advanced Healthcare Materials</i> , 2016, 5, 2396-2405.	3.9	11
26	Femtosecond laser-mediated anchoring of polymer layers on the surface of a biodegradable metal. <i>Journal of Magnesium and Alloys</i> , 2021, 9, 1373-1373.	5.5	11
27	Conventional and improved cytotoxicity test methods of newly developed biodegradable magnesium alloys. <i>Metals and Materials International</i> , 2015, 21, 1108-1117.	1.8	10
28	Improving hydroxyapatite coating ability on biodegradable metal through laser-induced hydrothermal coating in liquid precursor: Application in orthopedic implants. <i>Bioactive Materials</i> , 2023, 25, 796-806.	8.6	10
29	Detection of Acidic Pharmaceutical Compounds Using Virus-Based Molecularly Imprinted Polymers. <i>Polymers</i> , 2018, 10, 974.	2.0	9
30	Electrochemical Synthesis of Red Fluorescent Silicon Nanoparticles. <i>Bulletin of the Korean Chemical Society</i> , 2014, 35, 35-38.	1.0	9
31	Transgenic zebrafish model for quantification and visualization of tissue toxicity caused by alloying elements in newly developed biodegradable metal. <i>Scientific Reports</i> , 2018, 8, 13818.	1.6	7
32	Reduction of initial corrosion rate and improvement of cell adhesion through surface modification of biodegradable Mg alloy. <i>Metals and Materials International</i> , 2015, 21, 194-201.	1.8	6
33	A new corrosion-inhibiting strategy for biodegradable magnesium: reduced nicotinamide adenine dinucleotide (NADH). <i>Scientific Reports</i> , 2018, 8, 17743.	1.6	6
34	Interface Engineering of Fully Metallic Stents Enabling Controllable H ₂ O ₂ Generation for Antirestenosis. <i>Langmuir</i> , 2019, 35, 3634-3642.	1.6	6
35	Evaluation of porous β -calcium pyrophosphate as bioresorbable bone graft substitute material. <i>Materials Research Innovations</i> , 2015, 19, 86-90.	1.0	5
36	Effect of spatial arrangement and structure of hierarchically patterned fibrous scaffolds generated by a femtosecond laser on cardiomyoblast behavior. <i>Journal of Biomedical Materials Research - Part A</i> , 2018, 106, 1732-1742.	2.1	5

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37	Synergistic stimulation of surface topography and biphasic electric current promotes muscle regeneration. <i>Bioactive Materials</i> , 2022, 11, 118-129.	8.6	5
38	Microdevices for examining immunological responses of single cells to HIV. <i>Bioscience Reports</i> , 2014, 34, .	1.1	4
39	Tailoring H ₂ O ₂ generation kinetics with magnesium alloys for efficient disinfection on titanium surface. <i>Scientific Reports</i> , 2020, 10, 6536.	1.6	4
40	Reassessing the atomic size effect on glass forming ability: Effect of atomic size difference on thermodynamics and kinetics. <i>Intermetallics</i> , 2016, 69, 123-127.	1.8	3
41	On/off switchable physical stimuli regulate the future direction of adherent cellular fate. <i>Journal of Materials Chemistry B</i> , 2021, 9, 5560-5571.	2.9	3
42	Rapid In Vitro Corrosion Induced by Crack-Like Pathway in Biodegradable Mg-10% Ca Alloy. <i>Microscopy and Microanalysis</i> , 2013, 19, 210-214.	0.2	1
43	Finite element analysis of newly developed endosseous root-form dental implant utilizing biodegradable magnesium alloy. , 2016, , .		1