Donghui Zhu

List of Publications by Year
in descending order

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85 papers	5,238 citations	94269 37 h-index	88477 70 g-index
89 all docs	89 docs citations	89 times ranked	5737 citing authors

#	Article	IF	Citations
1	Central role for PICALM in amyloid-Î² blood-brain barrier transcytosis and clearance. Nature Neuroscience, 2015, 18, 978-987.	7.1	334
2	Alloying design of biodegradable zinc as promising bone implants for load-bearing applications. Nature Communications, 2020, 11, 401.	5.8	290
3	Evolution of the degradation mechanism of pure zinc stent in the one-year study of rabbit abdominal aorta model. Biomaterials, 2017, 145, 92-105.	5.7	257
4	Zinc-Based Biomaterials for Regeneration and Therapy. Trends in Biotechnology, 2019, 37, 428-441.	4.9	243
5	Fundamental Theory of Biodegradable Metalsâ€"Definition, Criteria, and Design. Advanced Functional Materials, 2019, 29, 1805402.	7.8	226
6	Hydrogen peroxide alters membrane and cytoskeleton properties and increases intercellular connections in astrocytes. Journal of Cell Science, 2005, 118, 3695-3703.	1.2	216
7	In vitro and in vivo studies on zinc-hydroxyapatite composites as novel biodegradable metal matrix composite for orthopedic applications. Acta Biomaterialia, 2018, 71, 200-214.	4.1	197
8	Biofunctionalization of metallic implants by calcium phosphate coatings. Bioactive Materials, 2019, 4, 196-206.	8.6	173
9	Challenges in the use of zinc and its alloys as biodegradable metals: Perspective from biomechanical compatibility. Acta Biomaterialia, 2019, 97, 23-45.	4.1	170
10	Endothelial Cellular Responses to Biodegradable Metal Zinc. ACS Biomaterials Science and Engineering, 2015, 1, 1174-1182.	2.6	166
11	Biological Responses and Mechanisms of Human Bone Marrow Mesenchymal Stem Cells to Zn and Mg Biomaterials. ACS Applied Materials & Interfaces, 2017, 9, 27453-27461.	4.0	162
12	Enhanced cytocompatibility and antibacterial property of zinc phosphate coating on biodegradable zinc materials. Acta Biomaterialia, 2019, 98, 174-185.	4.1	148
13	Bioinspired surface functionalization of metallic biomaterials. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 77, 90-105.	1.5	146
14	Bioactive glass coatings on metallic implants for biomedical applications. Bioactive Materials, 2019, 4, 261-270.	8.6	130
15	Evolution of metallic cardiovascular stent materials: A comparative study among stainless steel, magnesium and zinc. Biomaterials, 2020, 230, 119641.	5.7	113
16	Mechanical Strength, Biodegradation, and in Vitro and in Vivo Biocompatibility of Zn Biomaterials. ACS Applied Materials & Interfaces, 2019, 11, 6809-6819.	4.0	111
17	Phospholipases A2 Mediate Amyloid-beta Peptide-Induced Mitochondrial Dysfunction. Journal of Neuroscience, 2006, 26, 11111-11119.	1.7	109
18	Protein S controls hypoxic/ischemic blood-brain barrier disruption through the TAM receptor Tyro3 and sphingosine 1-phosphate receptor. Blood, 2010, 115, 4963-4972.	0.6	95

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19	Interfacial Zinc Phosphate is the Key to Controlling Biocompatibility of Metallic Zinc Implants. Advanced Science, 2019, 6, 1900112.	5.6	95
20	Bioabsorbable zinc ion induced biphasic cellular responses in vascular smooth muscle cells. Scientific Reports, 2016, 6, 26661.	1.6	91
21	Endothelial responses of magnesium and other alloying elements in magnesium-based stent materials. Metallomics, 2015, 7, 118-128.	1.0	83
22	Alzheimerâ€™s pathogenic mechanisms and underlying sex difference. Cellular and Molecular Life Sciences, 2021, 78, 4907-4920.	2.4	82
23	Porous zinc scaffolds for bone tissue engineering applications: A novel additive manufacturing and casting approach. Materials Science and Engineering C, 2020, 110, 110738.	3.8	75
24	Toward a Better Regeneration through Implantâ€Mediated Immunomodulation: Harnessing the Immune Responses. Advanced Science, 2021, 8, e2100446.	5.6	71
25	Enhanced Osseointegration of Zn-Mg Composites by Tuning the Release of Zn Ions with Sacrificial Mg-Rich Anode Design. ACS Biomaterials Science and Engineering, 2019, 5, 453-467.	2.6	70
26	Orthopedic implants and devices for bone fractures and defects: Past, present and perspective. Engineered Regeneration, 2020, 1, 6-18.	3.0	70
27	Biphasic responses of human vascular smooth muscle cells to magnesium ion. Journal of Biomedical Materials Research - Part A, 2016, 104, 347-356.	2.1	68
28	Bio-Adaption between Magnesium Alloy Stent and the Blood Vessel: A Review. Journal of Materials Science and Technology, 2016, 32, 815-826.	5.6	64
29	Zinc regulates vascular endothelial cell activity through zinc-sensing receptor ZnR/GPR39. American Journal of Physiology - Cell Physiology, 2018, 314, C404-C414.	2.1	64
30	Micro-/Nanotopography on Bioresorbable Zinc Dictates Cytocompatibility, Bone Cell Differentiation, and Macrophage Polarization. Nano Letters, 2020, 20, 4594-4602.	4.5	55
31	Formation Mechanism, Corrosion Behavior, and Cytocompatibility of Microarc Oxidation Coating on Absorbable High-Purity Zinc. ACS Biomaterials Science and Engineering, 2019, 5, 487-497.	2.6	52
32	Designing Better Cardiovascular Stent Materials: A Learning Curve. Advanced Functional Materials, 2021, 31, .	7.8	50
33	Magnesium Reduces Blood-Brain Barrier Permeability and Regulates Amyloid-Î² Transcytosis. Molecular Neurobiology, 2018, 55, 7118-7131.	1.9	47
34	Patchable micro/nanodevices interacting with skin. Biosensors and Bioelectronics, 2018, 122, 189-204.	5.3	47
35	Controllable biodegradation and enhanced osseointegration of ZrO2-nanofilm coated Zn-Li alloy: In vitro and in vivo studies. Acta Biomaterialia, 2020, 105, 290-303.	4.1	47
36	Similarities and differences in coatings for magnesium-based stents and orthopaedic implants. Journal of Orthopaedic Translation, 2014, 2, 118-130.	1.9	45

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37	Magnesium Regulates Endothelial Barrier Functions through TRPM7, MagT1, and S1P1. Advanced Science, 2019, 6, 1901166.	5.6	44
38	NAD(P)H oxidase-mediated reactive oxygen species production alters astrocyte membrane molecular order via phospholipase A2. Biochemical Journal, 2009, 421, 201-210.	1.7	39
39	Hydroxyapatite/Titania Composite Coatings on Biodegradable Magnesium Alloy for Enhanced Corrosion Resistance, Cytocompatibility and Antibacterial Properties. Journal of the Electrochemical Society, 2018, 165, C962-C972.	1.3	38
40	Blood-Brain Barrier Integrity and Clearance of Amyloid-Î² from the BBB. Advances in Experimental Medicine and Biology, 2018, 1097, 261-278.	0.8	36
41	Hernia Mesh and Hernia Repair: A Review. Engineered Regeneration, 2020, 1, 19-33.	3.0	36
42	Application of Molecular Rotors to the Determination of the Molecular Weight Dependence of Viscosity in Polymer Melts. Macromolecules, 2007, 40, 7730-7732.	2.2	35
43	Amyloid-Î² peptide induces temporal membrane biphasic changes in astrocytes through cytosolic phospholipase A2. Biochimica Et Biophysica Acta - Biomembranes, 2008, 1778, 2512-2519.	1.4	34
44	Collagen Self-Assembly on Orthopedic Magnesium Biomaterials Surface and Subsequent Bone Cell Attachment. PLoS ONE, 2014, 9, e110420.	1.1	31
45	Endothelialization of Novel Magnesium-Rare Earth Alloys with Fluoride and Collagen Coating. International Journal of Molecular Sciences, 2014, 15, 5263-5276.	1.8	31
46	Combined Tribological and Bactericidal Effect of Nanodiamonds as a Potential Lubricant for Artificial Joints. ACS Applied Materials & Interfaces, 2019, 11, 43500-43508.	4.0	30
47	In Vitro Biocompatibility and Endothelialization of Novel Magnesium-Rare Earth Alloys for Improved Stent Applications. PLoS ONE, 2014, 9, e98674.	1.1	29
48	Role of membrane biophysics in Alzheimer'sÃ¢â‚¬â€œrelated cell pathways. Frontiers in Neuroscience, 2015, 9, 186.	1.4	29
49	Nanoparticles as delivery vehicles for antiviral therapeutic drugs. Engineered Regeneration, 2021, 2, 31-46.	3.0	29
50	Alloying design strategy for biodegradable zinc alloys based on first-principles study of solid solution strengthening. Materials and Design, 2021, 204, 109676.	3.3	27
51	Vascular Dementia and Underlying Sex Differences. Frontiers in Aging Neuroscience, 2021, 13, 720715.	1.7	27
52	Additive manufacturing and 3D printing of metallic biomaterials. Engineered Regeneration, 2021, 2, 288-299.	3.0	27
53	EMuS Muon Facility and Its Application in the Study of Magnetism. Quantum Beam Science, 2018, 2, 23.	0.6	22
54	Mathematical modeling of blood coagulation cascade: kinetics of intrinsic and extrinsic pathways in normal and deficient conditions. Blood Coagulation and Fibrinolysis, 2007, 18, 637-646.	0.5	20

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55	Sirolimus-eluting dextran and polyglutamic acid hybrid coatings on AZ31 for stent applications. Journal of Biomaterials Applications, 2015, 30, 579-588.	1.2	18
56	Application of Mg-based alloys for cardiovascular stents. International Journal of Biomedical Engineering and Technology, 2013, 12, 382.	0.2	16
57	3D Printing of Ceramic Biomaterials. Engineered Regeneration, 2022, 3, 41-52.	3.0	16
58	PP2CÎ´ inhibits p300-mediated p53 acetylation via ATM/BRCA1 pathway to impede DNA damage response in breast cancer. Science Advances, 2019, 5, eaaw8417.	4.7	13
59	Targeting of PP2CÎ´ By a Small Molecule C23 Inhibits High Glucose-Induced Breast Cancer Progression In Vivo. Antioxidants and Redox Signaling, 2019, 30, 1983-1998.	2.5	12
60	Biodegradable Znâ€“Sr alloys with enhanced mechanical and biocompatibility for biomedical applications. Smart Materials in Medicine, 2022, 3, 117-127.	3.7	12
61	Comp34 displays potent preclinical antitumor efficacy in triple-negative breast cancer via inhibition of NUDT3-AS4, a novel oncogenic long noncoding RNA. Cell Death and Disease, 2020, 11, 1052.	2.7	11
62	Salt Preform Texturing of Absorbable Zn Substrates for Bone-Implant Applications. Jom, 2020, 72, 1902-1909.	0.9	9
63	Hydrogen generating patch improves skin cell viability, migration activity, and collagen expression. Engineered Regeneration, 2020, 1, 1-5.	3.0	9
64	General Synthesis of Thioxo-1,8-naphthalimides via Thioxo-1,8-naphthalic Anhydrides. Synthesis, 1999, 1999, 1109-1111.	1.2	8
65	Bioscaffolds development for small-diameter vascular grafts. International Journal of Biomedical Engineering and Technology, 2013, 12, 113.	0.2	8
66	Blood-Brain Barrier (BBB) Permeability and Transport Measurement In Vitro and In Vivo. Methods in Molecular Biology, 2020, 2367, 105-122.	0.4	8
67	Cellular mechanisms of biodegradable zinc and magnesium materials on promoting angiogenesis. , 2022, 139, 213023.		8
68	Brownian Diffusion and Surface Kinetics of Liposome and Viral Particle Uptake by Human Lung Cancer Cells In-Vitro. Annals of Biomedical Engineering, 2006, 34, 1573-1586.	1.3	7
69	miR-5195-3p Suppresses Cell Proliferation and Induces Apoptosis by Directly Targeting NEDD9 in Osteosarcoma. Cancer Biotherapy and Radiopharmaceuticals, 2019, 34, 405-412.	0.7	7
70	Improved mechanical, degradation, and biological performances of Znâ€“Fe alloys as bioresorbable implants. Bioactive Materials, 2022, 17, 334-343.	8.6	7
71	Energy-dependence of vibrational relaxation between highly vibrationally excited KH (X1Î£+, Î½â€³=14â€“23) and H2, and N2. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2012, 96, 517-525.	2.0	6
72	Cyclic microchip assay for measurement of hundreds of functional proteins in single neurons. Nature Communications, 2022, 13, .	5.8	6

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73	The Extraction and Evaluation of Skeleton in Sensor Networks. , 2013, , .		4
74	Boundary-free skeleton extraction and its evaluation in sensor networks. Wireless Networks, 2015, 21, 269-280.	2.0	4
75	Metabolic Syndrome, Inflammation, and Cancer. Mediators of Inflammation, 2017, 2017, 1-2.	1.4	4
76	A synthesized semiâ€aromatic copolyamaide through synergy of three different kinds of monomers: Toward high transparency, excellent heat resistance and melt flowing property. Journal of Applied Polymer Science, 2021, 138, 49678.	1.3	4
77	Calcium Phosphate Coatings for Metallic Orthopedic Biomaterials. , 2017, , 167-183.		3
78	Development of Biodegradable Zn-Based Medical Implants. , 2017, , 311-329.		2
79	Design of imaging system for CSNS near-target beam diagnostics. Radiation Detection Technology and Methods, 2018, 2, 1.	0.4	2
80	Applications of 3D printed chimeric DNA biomaterials. Engineered Regeneration, 2022, 3, 13-23.	3.0	2
81	Bioactive Glasses in Orthopedic Applications. , 2020, , 557-575.		1
82	The Influence of Oscillatory Fractions on Mass Transfer of Non-Newtonian Fluid in Wavy-Walled Tubes for Pulsatile Flow. IOP Conference Series: Materials Science and Engineering, 2018, 317, 012005.	0.3	0
83	A comparative study of in vitro biocompatibility of Zn and AZ31 for cardiovascular stent application. Frontiers in Bioengineering and Biotechnology, 0, 4, .	2.0	0
84	Recent Developments of Zn-based Medical Implants. , 2020, , 677-691.		0
85	Additive Manufacturing of Bioscaffolds for Bone Regeneration. , 2020, , 313-332.		0