

Hak-Joon Sung

List of Publications by Year in descending order

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93
papers

3,283
citations

201385

27
h-index

155451

55
g-index

94
all docs

94
docs citations

94
times ranked

6006
citing authors

#	ARTICLE	IF	CITATIONS
1	The effect of scaffold degradation rate on three-dimensional cell growth and angiogenesis. <i>Biomaterials</i> , 2004, 25, 5735-5742.	5.7	686
2	Current Progress in Reactive Oxygen Species (ROS)-Responsive Materials for Biomedical Applications. <i>Advanced Healthcare Materials</i> , 2013, 2, 908-915.	3.9	291
3	Microengineered human blood-brain barrier platform for understanding nanoparticle transport mechanisms. <i>Nature Communications</i> , 2020, 11, 175.	5.8	236
4	Three-dimensional graphene foams promote osteogenic differentiation of human mesenchymal stem cells. <i>Nanoscale</i> , 2013, 5, 4171.	2.8	221
5	In situ forming gelatin-based tissue adhesives and their phenolic content-driven properties. <i>Journal of Materials Chemistry B</i> , 2013, 1, 2407.	2.9	108
6	Physiologically Relevant Oxidative Degradation of Oligo(proline) Cross-Linked Polymeric Scaffolds. <i>Biomacromolecules</i> , 2011, 12, 4357-4366.	2.6	98
7	Development of 3D Microvascular Networks Within Gelatin Hydrogels Using Thermoresponsive Sacrificial Microfibers. <i>Advanced Healthcare Materials</i> , 2016, 5, 781-785.	3.9	81
8	Combinatorial polymer matrices enhance in vitro maturation of human induced pluripotent stem cell-derived cardiomyocytes. <i>Biomaterials</i> , 2015, 67, 52-64.	5.7	71
9	In Situ Crosslinkable Gelatin Hydrogels for Vasculogenic Induction and Delivery of Mesenchymal Stem Cells. <i>Advanced Functional Materials</i> , 2014, 24, 6771-6781.	7.8	69
10	Neurovascular unit on a chip: implications for translational applications. <i>Stem Cell Research and Therapy</i> , 2013, 4, S18.	2.4	56
11	ROS-cleavable proline oligomer crosslinking of polycaprolactone for pro-angiogenic host response. <i>Journal of Materials Chemistry B</i> , 2014, 2, 7109-7113.	2.9	50
12	Combinatorial Polymer Electrospun Matrices Promote Physiologically-Relevant Cardiomyogenic Stem Cell Differentiation. <i>PLoS ONE</i> , 2011, 6, e28935.	1.1	48
13	Oxidative Stress Produced with Cell Migration Increases Synthetic Phenotype of Vascular Smooth Muscle Cells. <i>Annals of Biomedical Engineering</i> , 2005, 33, 1546-1554.	1.3	47
14	Cancer Stem Cells Under Hypoxia as a Chemoresistance Factor in the Breast and Brain. <i>Current Pathobiology Reports</i> , 2014, 2, 33-40.	1.6	45
15	Poly(L-lactic Acid)/Gelatin Fibrous Scaffold Loaded with Simvastatin/Beta-Cyclodextrin-Modified Hydroxyapatite Inclusion Complex for Bone Tissue Regeneration. <i>Macromolecular Bioscience</i> , 2016, 16, 1027-1038.	2.1	44
16	Microchannel network hydrogel induced ischemic blood perfusion connection. <i>Nature Communications</i> , 2020, 11, 615.	5.8	43
17	Matrix Metalloproteinase 9 Facilitates Collagen Remodeling and Angiogenesis for Vascular Constructs. <i>Tissue Engineering</i> , 2005, 11, 267-276.	4.9	40
18	Directing lineage specification of human mesenchymal stem cells by decoupling electrical stimulation and physical patterning on unmodified graphene. <i>Nanoscale</i> , 2016, 8, 13730-13739.	2.8	39

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19	Oxidized cyclodextrin-functionalized injectable gelatin hydrogels as a new platform for tissue-adhesive hydrophobic drug delivery. <i>RSC Advances</i> , 2017, 7, 34053-34062.	1.7	39
20	Development of a Shape-Memory Tube to Prevent Vascular Stenosis. <i>Advanced Materials</i> , 2019, 31, e1904476.	11.1	38
21	The use of temperature-composition combinatorial libraries to study the effects of biodegradable polymer blend surfaces on vascular cells. <i>Biomaterials</i> , 2005, 26, 4557-4567.	5.7	37
22	Cyclic strain and motion control produce opposite oxidative responses in two human endothelial cell types. <i>American Journal of Physiology - Cell Physiology</i> , 2007, 293, C87-C94.	2.1	34
23	Hydrogel cross-linking-programmed release of nitric oxide regulates source-dependent angiogenic behaviors of human mesenchymal stem cell. <i>Science Advances</i> , 2020, 6, eaay5413.	4.7	33
24	Pro-angiogenic and Anti-inflammatory Regulation by Functional Peptides Loaded in Polymeric Implants for Soft Tissue Regeneration. <i>Tissue Engineering - Part A</i> , 2013, 19, 437-447.	1.6	32
25	Pendant allyl crosslinking as a tunable shape memory actuator for vascular applications. <i>Acta Biomaterialia</i> , 2015, 24, 53-63.	4.1	32
26	Oligoproline-derived nanocarrier for dual stimuli-responsive gene delivery. <i>Journal of Materials Chemistry B</i> , 2015, 3, 7271-7280.	2.9	32
27	Passage-dependent cancerous transformation of human mesenchymal stem cells under carcinogenic hypoxia. <i>FASEB Journal</i> , 2013, 27, 2788-2798.	0.2	29
28	Angiogenic and Osteogenic Synergy of Human Mesenchymal Stem Cells and Human Umbilical Vein Endothelial Cells Cocultured on a Nanomatrix. <i>Scientific Reports</i> , 2018, 8, 15749.	1.6	29
29	Uncoupling angiogenesis and inflammation in peripheral artery disease with therapeutic peptide-loaded microgels. <i>Biomaterials</i> , 2014, 35, 9635-9648.	5.7	28
30	Implantable Vascularized Liver Chip for Cross-Validation of Disease Treatment with Animal Model. <i>Advanced Functional Materials</i> , 2019, 29, 1900075.	7.8	28
31	Phage-Display-Guided Nanocarrier Targeting to Atheroprone Vasculature. <i>ACS Nano</i> , 2015, 9, 4435-4446.	7.3	27
32	Recent strategies to design vascular theranostic nanoparticles. <i>Nanotheranostics</i> , 2017, 1, 166-177.	2.7	27
33	Noncovalent π - π Stacking at the Carbon-Electrolyte Interface: Controlling the Voltage Window of Electrochemical Supercapacitors. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 19558-19566.	4.0	26
34	A temperature-sensitive, self-adhesive hydrogel to deliver iPSC-derived cardiomyocytes for heart repair. <i>International Journal of Cardiology</i> , 2015, 190, 177-180.	0.8	23
35	Serum glucose excretion after Roux-en-Y gastric bypass: a potential target for diabetes treatment. <i>Gut</i> , 2021, 70, 1847-1856.	6.1	19
36	Hormone autocrination by vascularized hydrogel delivery of ovary spheroids to rescue ovarian dysfunctions. <i>Science Advances</i> , 2021, 7, .	4.7	19

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37	Current Progress in Nanotechnology Applications for Diagnosis and Treatment of Kidney Diseases. <i>Advanced Healthcare Materials</i> , 2015, 4, 2037-2045.	3.9	18
38	Development of Poly(ϵ -caprolactone) Scaffold Loaded with Simvastatin and Beta-Cyclodextrin Modified Hydroxyapatite Inclusion Complex for Bone Tissue Engineering. <i>Polymers</i> , 2016, 8, 49.	2.0	18
39	Decoupling Polymer Properties to Elucidate Mechanisms Governing Cell Behavior. <i>Tissue Engineering - Part B: Reviews</i> , 2012, 18, 396-404.	2.5	17
40	MG-63 cells proliferation following various types of mechanical stimulation on cells by auxetic hybrid scaffolds. <i>Biomaterials Research</i> , 2016, 20, 32.	3.2	16
41	Tunable Surface Repellency Maintains Stemness and Redox Capacity of Human Mesenchymal Stem Cells. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 22994-23006.	4.0	16
42	The nesprin-cytoskeleton interface probed directly on single nuclei is a mechanically rich system. <i>Nucleus</i> , 2017, 8, 534-547.	0.6	16
43	Patterned polymer matrix promotes stemness and cell-cell interaction of adult stem cells. <i>Journal of Biological Engineering</i> , 2015, 9, 18.	2.0	15
44	MG-63 osteoblast-like cell proliferation on auxetic PLGA scaffold with mechanical stimulation for bone tissue regeneration. <i>Biomaterials Research</i> , 2016, 20, 33.	3.2	15
45	Modular polymer design to regulate phenotype and oxidative response of human coronary artery cells for potential stent coating applications. <i>Acta Biomaterialia</i> , 2012, 8, 559-569.	4.1	14
46	Cationic Nanocylinders Promote Angiogenic Activities of Endothelial Cells. <i>Polymers</i> , 2016, 8, 15.	2.0	14
47	In Situ Forming Gelatin Hydrogels-Directed Angiogenic Differentiation and Activity of Patient-Derived Human Mesenchymal Stem Cells. <i>International Journal of Molecular Sciences</i> , 2017, 18, 1705.	1.8	14
48	Anti-Atherogenic Effect of Stem Cell Nanovesicles Targeting Disturbed Flow Sites. <i>Small</i> , 2020, 16, e2000012.	5.2	14
49	Immunomodulatory Scaffolds Derived from Lymph Node Extracellular Matrices. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 14037-14049.	4.0	14
50	THERAPEUTIC APPLICATION OF NANOTECHNOLOGY IN CARDIOVASCULAR AND PULMONARY REGENERATION. <i>Computational and Structural Biotechnology Journal</i> , 2013, 7, e201304005.	1.9	13
51	Differential responses of induced pluripotent stem cell-derived cardiomyocytes to anisotropic strain depends on disease status. <i>Journal of Biomechanics</i> , 2015, 48, 3890-3896.	0.9	13
52	Direct Control of Stem Cell Behavior Using Biomaterials and Genetic Factors. <i>Stem Cells International</i> , 2018, 2018, 1-17.	1.2	13
53	Specific Determination of Endothelial Cell Viability in the Whole Cell Fraction from Cryopreserved Canine Femoral Veins Using Flow Cytometry. <i>Artificial Organs</i> , 2000, 24, 829-833.	1.0	12
54	Heparin-functionalized polymer graft surface eluting MK2 inhibitory peptide to improve hemocompatibility and anti-neointimal activity. <i>Journal of Controlled Release</i> , 2017, 266, 321-330.	4.8	12

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55	Association Between Impairment of DNA Double Strand Break Repair and Decreased Ovarian Reserve in Patients With Endometriosis. <i>Frontiers in Endocrinology</i> , 2018, 9, 772.	1.5	12
56	Nasolacrimal stent with shape memory as an advanced alternative to silicone products. <i>Acta Biomaterialia</i> , 2020, 101, 273-284.	4.1	12
57	<i>In Vitro</i> Bioassay of Endotoxin Using Fluorescein as a pH Indicator in a Macrophage Cell Culture System. <i>Yonsei Medical Journal</i> , 2005, 46, 268.	0.9	11
58	Reprint of: Pendant allyl crosslinking as a tunable shape memory actuator for vascular applications. <i>Acta Biomaterialia</i> , 2016, 34, 73-83.	4.1	11
59	Granulocyte-colony stimulating factor as a treatment for diabetic neuropathy in rat. <i>Molecular and Cellular Endocrinology</i> , 2015, 414, 64-72.	1.6	10
60	High-content image informatics of the structural nuclear protein NuMA parses trajectories for stem/progenitor cell lineages and oncogenic transformation. <i>Experimental Cell Research</i> , 2017, 351, 11-23.	1.2	10
61	Polymeric stent materials dysregulate macrophage and endothelial cell functions: Implications for coronary artery stent. <i>International Journal of Cardiology</i> , 2014, 174, 688-695.	0.8	9
62	Biomaterial-Based Approaches to Address Vein Graft and Hemodialysis Access Failures. <i>Macromolecular Rapid Communications</i> , 2016, 37, 1860-1880.	2.0	9
63	Biomimetic Microstructure Morphology in Electrospun Fiber Mats is Critical for Maintaining Healthy Cardiomyocyte Phenotype. <i>Cellular and Molecular Bioengineering</i> , 2016, 9, 107-115.	1.0	8
64	MG-63 Cell Proliferation with Static or Dynamic Compressive Stimulation on an Auxetic PLGA Scaffold. <i>International Journal of Polymer Science</i> , 2017, 2017, 1-6.	1.2	8
65	Tracheal reconstruction with a free vascularized myofascial flap: preclinical investigation in a porcine model to human clinical application. <i>Scientific Reports</i> , 2017, 7, 10022.	1.6	8
66	Sprayable nanomicelle hydrogels and inflammatory bowel disease patient cell chips for development of intestinal lesion-specific therapy. <i>Bioactive Materials</i> , 2022, 18, 433-445.	8.6	8
67	Spatial Organization of Superparamagnetic Iron Oxide Nanoparticles in/on Nano/Microsized Carriers Modulates the Magnetic Resonance Signal. <i>Langmuir</i> , 2018, 34, 15276-15282.	1.6	7
68	Aging Donor-Derived Human Mesenchymal Stem Cells Exhibit Reduced Reactive Oxygen Species Loads and Increased Differentiation Potential Following Serial Expansion on a PEG-PCL Copolymer Substrate. <i>International Journal of Molecular Sciences</i> , 2018, 19, 359.	1.8	7
69	Dilation-Responsive Microshape Programming Prevents Vascular Graft Stenosis. <i>Small</i> , 2021, 17, e2007297.	5.2	7
70	Gradient release of cardiac morphogens by photo-responsive polymer micelles for gradient-mediated variation of embryoid body differentiation. <i>Journal of Materials Chemistry B</i> , 2017, 5, 5206-5217.	2.9	6
71	Three-Dimensionally Printed Breast Reconstruction Devices Facilitate Nanostructure Surface-Guided Healthy Lipogenesis. <i>ACS Biomaterials Science and Engineering</i> , 2019, 5, 4962-4969.	2.6	6
72	Shape Memory Tube Plug for Fine-control of Intraocular Pressure by Glaucoma Devices. <i>ACS Biomaterials Science and Engineering</i> , 2020, 6, 3784-3790.	2.6	6

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73	Cell-Membrane-Derived Nanoparticles with Notch-1 Suppressor Delivery Promote Hypoxic Cell Cell Packing and Inhibit Angiogenesis Acting as a Two-Edged Sword. <i>Advanced Materials</i> , 2021, 33, e2101558.	11.1	6
74	Liposomal Entrapment of Cefoxitin to Improve Cellular Viability and Function in Human Saphenous Veins. <i>Artificial Organs</i> , 2003, 27, 623-630.	1.0	5
75	Femtosecond laser-patterned nanopore arrays for surface-mediated peptide treatment. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2014, 10, 11-14.	1.7	5
76	Copolymer-Mediated Cell Aggregation Promotes a Proangiogenic Stem Cell Phenotype In Vitro and In Vivo. <i>Advanced Healthcare Materials</i> , 2016, 5, 2866-2871.	3.9	5
77	ROS-Responsive Biomaterial Design for Medical Applications. <i>Advances in Experimental Medicine and Biology</i> , 2018, 1064, 237-251.	0.8	5
78	Anti-atherosclerotic vaccination against <i>Porphyromonas gingivalis</i> as a potential comparator of statin in mice. <i>PeerJ</i> , 2021, 9, e11293.	0.9	5
79	Quenching Epigenetic Drug Resistance Using Antihypoxic Microparticles in Glioblastoma Patient-Derived Chips. <i>Advanced Healthcare Materials</i> , 2021, , 2102226.	3.9	5
80	Microneedle Vascular Couplers with Heparin-Immobilized Surface Improve Suture-Free Anastomosis Performance. <i>ACS Biomaterials Science and Engineering</i> , 2018, 4, 3848-3853.	2.6	4
81	Antibacterial Effect of Antibiotic Solution on Cellular Viability in Canine Veins. <i>Artificial Organs</i> , 2001, 25, 490-494.	1.0	3
82	Material considerations for optical interfacing to the nervous system. <i>MRS Bulletin</i> , 2012, 37, 599-605.	1.7	3
83	Synergistic Adhesiveness of Fibronectin with PHSRN Peptide in Gelatin Mixture Promotes the Therapeutic Potential of Human ES-Derived MSCs. <i>Cellular and Molecular Bioengineering</i> , 2020, 13, 73-86.	1.0	3
84	Cancer Patient Tissueoid with Self-Homing Nano-Targeting of Metabolic Inhibitor. <i>Advanced Science</i> , 2021, 8, 2102640.	5.6	3
85	Porcine As a Training Module for Head and Neck Microvascular Reconstruction. <i>Journal of Visualized Experiments</i> , 2018, , .	0.2	2
86	Catalytic microgelators for decoupled control of gelation rate and rigidity of the biological gels. <i>Journal of Controlled Release</i> , 2020, 317, 166-180.	4.8	2
87	External Self-Closing Tube to Occlude a Vessel Gradually as a Therapeutic Means of Portosystemic Shunt. <i>Advanced Therapeutics</i> , 2020, 3, 2000039.	1.6	2
88	Nanotheranostics of Pre-Stenotic Vessels By Target Touch-On Signaling of Peptide Navigator. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	1
89	Design of Polymeric Culture Substrates to Promote Proangiogenic Potential of Stem Cells. <i>Macromolecular Bioscience</i> , 2018, 18, 1700340.	2.1	0
90	Self-Enclosable External Support: Dilation-Responsive Microshape Programing Prevents Vascular Graft Stenosis (Small 18/2021). <i>Small</i> , 2021, 17, 2170083.	5.2	0

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91	Cellâ€Membraneâ€Derived Nanoparticles with Notchâ€1 Suppressor Delivery Promote Hypoxic Cellâ€Cell Packing and Inhibit Angiogenesis Acting as a Twoâ€Edged Sword (Adv. Mater. 40/2021). Advanced Materials, 2021, 33, 2170312.	11.1	0
92	Cardiac ECM Structureâ€Mimetic Electrospun Scaffolds Reinstate Healthy Cardiomyocyte Phenotype. FASEB Journal, 2015, 29, 946.10.	0.2	0
93	Nanotheranostics of Preâ€Stenotic Vessels By Target Touchâ€On Signaling of Peptide Navigator (Adv.) Tj ETQq1 1 0.784314 JgBT /Over	7.8	0