

Jae Young Lee

List of Publications by Year in descending order

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85
papers

4,197
citations

126708

33
h-index

118652

62
g-index

86
all docs

86
docs citations

86
times ranked

5931
citing authors

#	ARTICLE	IF	CITATIONS
1	Polypyrrole-coated electrospun PLGA nanofibers for neural tissue applications. <i>Biomaterials</i> , 2009, 30, 4325-4335.	5.7	659
2	Micropatterned Polypyrrole: A Combination of Electrical and Topographical Characteristics for the Stimulation of Cells. <i>Advanced Functional Materials</i> , 2007, 17, 1645-1653.	7.8	185
3	Electrically conductive graphene/polyacrylamide hydrogels produced by mild chemical reduction for enhanced myoblast growth and differentiation. <i>Acta Biomaterialia</i> , 2017, 48, 100-109.	4.1	142
4	Polypyrrole/Alginate Hybrid Hydrogels: Electrically Conductive and Soft Biomaterials for Human Mesenchymal Stem Cell Culture and Potential Neural Tissue Engineering Applications. <i>Macromolecular Bioscience</i> , 2016, 16, 1653-1661.	2.1	133
5	Graphene oxide/alginate composites as novel bioinks for three-dimensional mesenchymal stem cell printing and bone regeneration applications. <i>Nanoscale</i> , 2019, 11, 23275-23285.	2.8	129
6	Cell-laden 3D bioprinting hydrogel matrix depending on different compositions for soft tissue engineering: Characterization and evaluation. <i>Materials Science and Engineering C</i> , 2017, 71, 678-684.	3.8	120
7	Electrically Conductive Hydrogel Nerve Guidance Conduits for Peripheral Nerve Regeneration. <i>Advanced Functional Materials</i> , 2020, 30, 2003759.	7.8	118
8	The crystal structure of the 1212 nonsuperconductor phase $(\text{Pb}_{0.71}\text{Cu}_{0.29}\text{Sr}_2)(\text{Y}_{0.73}\text{Ca}_{0.27})\text{Cu}_2\text{O}_{7.1}$. <i>Journal of Materials Research</i> , 1989, 4, 763-766.	2.0	111
9	Anti-oxidant activity reinforced reduced graphene oxide/alginate microgels: Mesenchymal stem cell encapsulation and regeneration of infarcted hearts. <i>Biomaterials</i> , 2019, 225, 119513.	5.7	110
10	Hydrogel Biomaterials for Stem Cell Microencapsulation. <i>Polymers</i> , 2018, 10, 997.	2.0	101
11	Neuroactive conducting scaffolds: nerve growth factor conjugation on active ester-functionalized polypyrrole. <i>Journal of the Royal Society Interface</i> , 2009, 6, 801-810.	1.5	95
12	Synthesis of Magnetic Ferrite Nanoparticles with High Hyperthermia Performance via a Controlled Co-Precipitation Method. <i>Nanomaterials</i> , 2019, 9, 1176.	1.9	89
13	Electrochemical deposition of conductive and adhesive polypyrrole-dopamine films. <i>Scientific Reports</i> , 2016, 6, 30475.	1.6	86
14	Electrically Conductive Polydopamineâ€“Polypyrrole as High Performance Biomaterials for Cell Stimulation in Vitro and Electrical Signal Recording in Vivo. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 33032-33042.	4.0	84
15	Fabrication and characterization of 3D-printed bone-like β -tricalcium phosphate/polycaprolactone scaffolds for dental tissue engineering. <i>Journal of Industrial and Engineering Chemistry</i> , 2017, 46, 175-181.	2.9	83
16	Facilitated Transdermal Drug Delivery Using Nanocarriers-Embedded Electroconductive Hydrogel Coupled with Reverse Electrodialysis-Driven Iontophoresis. <i>ACS Nano</i> , 2020, 14, 4523-4535.	7.3	83
17	Magnetic field-inducible drug-eluting nanoparticles for image-guided thermo-chemotherapy. <i>Biomaterials</i> , 2018, 180, 240-252.	5.7	82
18	Graphene oxide-incorporated hydrogels for biomedical applications. <i>Polymer Journal</i> , 2020, 52, 823-837.	1.3	78

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19	Three dimensional cell printing with sulfated alginate for improved bone morphogenetic protein-2 delivery and osteogenesis in bone tissue engineering. <i>Carbohydrate Polymers</i> , 2018, 196, 217-224.	5.1	77
20	A chemically polymerized electrically conducting composite of polypyrrole nanoparticles and polyurethane for tissue engineering. <i>Journal of Biomedical Materials Research - Part A</i> , 2011, 98A, 509-516.	2.1	72
21	Micropatterned conductive hydrogels as multifunctional muscle-mimicking biomaterials: Graphene-incorporated hydrogels directly patterned with femtosecond laser ablation. <i>Acta Biomaterialia</i> , 2019, 97, 141-153.	4.1	67
22	Antioxidant and anti-inflammatory activities of Prussian blue nanozyme promotes full-thickness skin wound healing. <i>Materials Science and Engineering C</i> , 2021, 119, 111596.	3.8	63
23	Hippocampal neurons respond uniquely to topographies of various sizes and shapes. <i>Biofabrication</i> , 2010, 2, 035005.	3.7	57
24	Polypyrrole-incorporated conductive hyaluronic acid hydrogels. <i>Biomaterials Research</i> , 2016, 20, 31.	3.2	52
25	Single-Step LRET Aptasensor for Rapid Mycotoxin Detection. <i>Analytical Chemistry</i> , 2018, 90, 716-722.	3.2	49
26	ZOT-derived peptide and chitosan functionalized nanocarrier for oral delivery of protein drug. <i>Biomaterials</i> , 2016, 103, 160-169.	5.7	45
27	A Novel Conductive and Micropatterned PEG-Based Hydrogel Enabling the Topographical and Electrical Stimulation of Myoblasts. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 47695-47706.	4.0	44
28	Pyrrole-hyaluronic acid conjugates for decreasing cell binding to metals and conducting polymers. <i>Acta Biomaterialia</i> , 2010, 6, 4396-4404.	4.1	42
29	Improved near infrared-mediated hydrogel formation using diacrylated Pluronic F127-coated upconversion nanoparticles. <i>Materials Science and Engineering C</i> , 2018, 90, 77-84.	3.8	42
30	Facile Synthesis of Conductive Polypyrrole Wrinkle Topographies on Polydimethylsiloxane via a Swelling-Deswelling Process and Their Potential Uses in Tissue Engineering. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 23454-23463.	4.0	39
31	Gamma Ray-Induced Polymerization and Cross-Linking for Optimization of PPy/PVP Hydrogel as Biomaterial. <i>Polymers</i> , 2020, 12, 111.	2.0	38
32	From Low to High Saturation Magnetization in Magnetite Nanoparticles: The Crucial Role of the Molar Ratios Between the Chemicals. <i>ACS Omega</i> , 2022, 7, 15996-16012.	1.6	34
33	Electrically Conducting Polymer-Based Nanofibrous Scaffolds for Tissue Engineering Applications. <i>Polymer Reviews</i> , 2013, 53, 443-459.	5.3	33
34	Versatile biomimetic conductive polypyrrole films doped with hyaluronic acid of different molecular weights. <i>Acta Biomaterialia</i> , 2018, 80, 258-268.	4.1	33
35	Engineering Core-Shell Structures of Magnetic Ferrite Nanoparticles for High Hyperthermia Performance. <i>Nanomaterials</i> , 2020, 10, 991.	1.9	33
36	An osteogenic bioink composed of alginate, cellulose nanofibrils, and polydopamine nanoparticles for 3D bioprinting and bone tissue engineering. <i>International Journal of Biological Macromolecules</i> , 2022, 205, 520-529.	3.6	33

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37	Enhanced polarization of embryonic hippocampal neurons on micron scale electrospun fibers. <i>Journal of Biomedical Materials Research - Part A</i> , 2010, 92A, 1398-1406.	2.1	32
38	Electrochemical deposition of dopamine-hyaluronic acid conjugates for anti-biofouling bioelectrodes. <i>Journal of Materials Chemistry B</i> , 2017, 5, 4507-4513.	2.9	32
39	Studies on the effects of microencapsulated human mesenchymal stem cells in RGD-modified alginate on cardiomyocytes under oxidative stress conditions using in vitro biomimetic co-culture system. <i>International Journal of Biological Macromolecules</i> , 2019, 123, 512-520.	3.6	32
40	Preparation of Radiation Cross-Linked Poly(Acrylic Acid) Hydrogel Containing Metronidazole with Enhanced Antibacterial Activity. <i>International Journal of Molecular Sciences</i> , 2020, 21, 187.	1.8	32
41	Amine-functionalized polypyrrole: Inherently cell adhesive conducting polymer. <i>Journal of Biomedical Materials Research - Part A</i> , 2015, 103, 2126-2132.	2.1	31
42	Effective gamma-ray sterilization and characterization of conductive polypyrrole biomaterials. <i>Scientific Reports</i> , 2018, 8, 3721.	1.6	31
43	Towards the translation of electroconductive organic materials for regeneration of neural tissues. <i>Acta Biomaterialia</i> , 2022, 139, 22-42.	4.1	31
44	Effect of a global regulatory gene, <i>afsR2</i> , from <i>Streptomyces lividans</i> on avermectin production in <i>Streptomyces avermitilis</i> . <i>Journal of Bioscience and Bioengineering</i> , 2000, 89, 606-608.	1.1	30
45	Surface modification of a three-dimensional polycaprolactone scaffold by polydopamine, biom mineralization, and BMP-2 immobilization for potential bone tissue applications. <i>Colloids and Surfaces B: Biointerfaces</i> , 2021, 199, 111528.	2.5	30
46	Biodegradable Nerve Guidance Conduit with Microporous and Micropatterned Poly(lactic-co-glycolic acid)-Accelerated Sciatic Nerve Regeneration. <i>Macromolecular Bioscience</i> , 2018, 18, e1800290.	2.1	29
47	Universal surface modification using dopamine-hyaluronic acid conjugates for anti-biofouling. <i>International Journal of Biological Macromolecules</i> , 2020, 151, 1314-1321.	3.6	29
48	Conductive hydrogel constructs with three-dimensionally connected graphene networks for biomedical applications. <i>Chemical Engineering Journal</i> , 2022, 446, 137344.	6.6	29
49	Transdermal thiol-acrylate polyethylene glycol hydrogel synthesis using near infrared light. <i>Nanoscale</i> , 2016, 8, 14213-14221.	2.8	27
50	Reduction of graphene oxide/alginate composite hydrogels for enhanced adsorption of hydrophobic compounds. <i>Nanotechnology</i> , 2015, 26, 405602.	1.3	26
51	Near-Infrared-Light-Assisted Photothermal Polymerization for Transdermal Hydrogelation and Cell Delivery. <i>Advanced Healthcare Materials</i> , 2016, 5, 1638-1645.	3.9	25
52	Formulation of glutathione responsive anti-proliferative nanoparticles from thiolated Akt1 siRNA and disulfide-crosslinked PEI for efficient anti-cancer gene therapy. <i>Colloids and Surfaces B: Biointerfaces</i> , 2015, 126, 322-327.	2.5	24
53	Asymmetric Nanocrescent Antenna on Upconversion Nanocrystal. <i>Nano Letters</i> , 2017, 17, 6583-6590.	4.5	24
54	Electrochemical Co-deposition of Polydopamine/Hyaluronic Acid for Anti-biofouling Bioelectrodes. <i>Frontiers in Chemistry</i> , 2019, 7, 262.	1.8	24

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55	Dual transcript and protein quantification in a massive single cell array. Lab on A Chip, 2016, 16, 3682-3688.	3.1	22
56	Hyaluronan-Stabilized Redox-Sensitive Nanoassembly for Chemo-Gene Therapy and Dual T1/T2 MR Imaging in Drug-Resistant Breast Cancer Cells. Molecular Pharmaceutics, 2019, 16, 2226-2234.	2.3	21
57	Development and characterization of heparin-immobilized polycaprolactone nanofibrous scaffolds for tissue engineering using gamma-irradiation. RSC Advances, 2017, 7, 8963-8972.	1.7	20
58	Surface modification of neural electrodes with a pyrrole-hyaluronic acid conjugate to attenuate reactive astroglia in vivo. RSC Advances, 2015, 5, 39228-39231.	1.7	19
59	Three-dimensional bioprinting of mesenchymal stem cells using an osteoinductive bioink containing alginate and BMP-2-loaded PLGA nanoparticles for bone tissue engineering. , 2022, 136, 212789.		18
60	Remote induction of in situ hydrogelation in a deep tissue, using an alternating magnetic field and superparamagnetic nanoparticles. Nano Research, 2018, 11, 5997-6009.	5.8	17
61	Hyaluronan-coated Prussian blue nanoparticles relieve LPS-induced peritonitis by suppressing oxidative species generation in tissue-resident macrophages. Biomaterials Science, 2022, 10, 1248-1256.	2.6	16
62	Biomimetic nonbiofouling polypyrrole electrodes grafted with zwitterionic polymer using gamma rays. Journal of Materials Chemistry B, 2020, 8, 7225-7232.	2.9	15
63	Real-time investigation of cytochrome c release profiles in living neuronal cells undergoing amyloid beta oligomer-induced apoptosis. Nanoscale, 2015, 7, 10340-10343.	2.8	14
64	Facile and controllable electrochemical fabrication of cell-adhesive polypyrrole electrodes using pyrrole-RGD peptides. Biofabrication, 2017, 9, 045007.	3.7	13
65	On-demand generation of heat and free radicals for dual cancer therapy using thermal initiator- and gold nanorod-embedded PLGA nanocomplexes. Journal of Industrial and Engineering Chemistry, 2019, 69, 405-413.	2.9	13
66	One-Pot electrochemical fabrication of high performance amperometric enzymatic biosensors using polypyrrole and polydopamine. Journal of Industrial and Engineering Chemistry, 2021, 97, 316-325.	2.9	13
67	High-Performance Implantable Bioelectrodes with Immunocompatible Topography for Modulation of Macrophage Responses. ACS Nano, 2022, 16, 7471-7485.	7.3	13
68	Novel reverse electrodialysis-driven iontophoretic system for topical and transdermal delivery of poorly permeable therapeutic agents. Drug Delivery, 2017, 24, 1204-1215.	2.5	12
69	<i>In Situ</i> Formation of Proangiogenic Mesenchymal Stem Cell Spheroids in Hyaluronic Acid/Alginate Core-Shell Microcapsules. ACS Biomaterials Science and Engineering, 2020, 6, 6938-6948.	2.6	12
70	Enhanced three-dimensional printing scaffold for osteogenesis using a mussel-inspired graphene oxide coating. Materials and Design, 2021, 209, 109941.	3.3	11
71	The Heating Efficiency and Imaging Performance of Magnesium Iron Oxide@tetramethyl Ammonium Hydroxide Nanoparticles for Biomedical Applications. Nanomaterials, 2021, 11, 1096.	1.9	10
72	Nano-opto-mechanical characterization of neuron membrane mechanics under cellular growth and differentiation. Biomedical Microdevices, 2008, 10, 611-622.	1.4	9

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73	Bioactive conducting scaffolds: Active ester-functionalized polyterthiophene. <i>Synthetic Metals</i> , 2013, 185-186, 66-70.	2.1	9
74	Few-layer-graphene with high yield and low sheet resistance via mild oxidation of natural graphite. <i>RSC Advances</i> , 2017, 7, 35717-35723.	1.7	8
75	Photothermal Polymerization Using Graphene Oxide for Robust Hydrogelation with Various Light Sources. <i>ACS Biomaterials Science and Engineering</i> , 2020, 6, 1931-1939.	2.6	8
76	Highly Optimized Iron Oxide Embedded Poly(Lactic Acid) Nanocomposites for Effective Magnetic Hyperthermia and Biosecurity. <i>International Journal of Nanomedicine</i> , 2022, Volume 17, 31-44.	3.3	8
77	Research trends in biomimetic medical materials for tissue engineering: commentary. <i>Biomaterials Research</i> , 2016, 20, 8.	3.2	7
78	Monolithic carbon xerogel with co-continuous hierarchical porosity <i>via</i> one-step, template- and catalyst-free hydrothermal reaction with resorcinol and formaldehyde. <i>RSC Advances</i> , 2019, 9, 9480-9485.	1.7	6
79	A $M_{1/2}$ ssbauer spectroscopy investigation of the Intergrowth Phases $LaSr_3Fe_3 \cdot xMxO_{10}$ (M = Al, Cu). <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 1992, 616, 172-176.	0.6	3
80	Effect of hydrogen partial pressure on a polymer electrolyte fuel cell performance. <i>Korean Journal of Chemical Engineering</i> , 2010, 27, 843-847.	1.2	3
81	Template-free synthesis of monolithic carbon xerogels with hierarchical porosity from resorcinol and formaldehyde via hydrothermal reaction. <i>RSC Advances</i> , 2018, 8, 21326-21331.	1.7	3
82	Biomimetic polypyrrole/hyaluronic acid electrodes integrated with hyaluronidase inhibitors offer persistent electroactivity and resistance to cell binding. <i>Journal of Materials Chemistry B</i> , 2022, 10, 1591-1600.	2.9	3
83	Self-Assembling Helical Rod-Coil Peptoid Amphiphiles. <i>Bulletin of the Korean Chemical Society</i> , 2017, 38, 38-43.	1.0	2
84	Millstone Exfoliation: a True Shear Exfoliation for Large-Size Few-Layer Graphene Oxide. <i>Nanoscale Research Letters</i> , 2018, 13, 186.	3.1	2
85	Vimentin Targeted Nano-gene Carrier for Treatment of Renal Diseases. <i>Journal of Korean Medical Science</i> , 2021, 36, e333.	1.1	1