Jae Young Lee

List of Publications by Year
in descending order

85 papers	4,197 citations	126907 33 h-index	118850 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. Biomaterials, 2009, 30, 4325-4335.	11.4	659
2	Micropatterned Polypyrrole: A Combination of Electrical and Topographical Characteristics for the Stimulation of Cells. Advanced Functional Materials, 2007, 17, 1645-1653.	14.9	185
3	Electrically conductive graphene/polyacrylamide hydrogels produced by mild chemical reduction for enhanced myoblast growth and differentiation. Acta Biomaterialia, 2017, 48, 100-109.	8.3	142
4	Polypyrrole/Alginate Hybrid Hydrogels: Electrically Conductive and Soft Biomaterials for Human Mesenchymal Stem Cell Culture and Potential Neural Tissue Engineering Applications. Macromolecular Bioscience, 2016, 16, 1653-1661.	4.1	133
5	Graphene oxide/alginate composites as novel bioinks for three-dimensional mesenchymal stem cell printing and bone regeneration applications. Nanoscale, 2019, 11, 23275-23285.	5.6	129
6	Cell-laden 3D bioprinting hydrogel matrix depending on different compositions for soft tissue engineering: Characterization and evaluation. Materials Science and Engineering C, 2017, 71, 678-684.	7.3	120
7	Electrically Conductive Hydrogel Nerve Guidance Conduits for Peripheral Nerve Regeneration. Advanced Functional Materials, 2020, 30, 2003759.	14.9	118
8	The crystal structure of the 1212 nonsuperconductor phase (Pb_{0.71}Cu_{0.29})Sr₂(Y_{0.73}Ca_{0.27})Cu₂O₇. Journal of Materials Research, 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. Biomaterials, 2019, 225, 119513.	11.4	110
10	Hydrogel Biomaterials for Stem Cell Microencapsulation. Polymers, 2018, 10, 997.	4.5	101
11	Neuroactive conducting scaffolds: nerve growth factor conjugation on active ester-functionalized polypyrrole. Journal of the Royal Society Interface, 2009, 6, 801-810.	3.4	95
12	Synthesis of Magnetic Ferrite Nanoparticles with High Hyperthermia Performance via a Controlled Co-Precipitation Method. Nanomaterials, 2019, 9, 1176.	4.1	89
13	Electrochemical deposition of conductive and adhesive polypyrrole-dopamine films. Scientific Reports, 2016, 6, 30475.	3.3	86
14	Electrically Conductive Polydopamineâ€"Polypyrrole as High Performance Biomaterials for Cell Stimulation in Vitro and Electrical Signal Recording in Vivo. ACS Applied Materials & Interfaces, 2018, 10, 33032-33042.	8.0	84
15	Fabrication and characterization of 3D-printed bone-like Î²-tricalcium phosphate/polycaprolactone scaffolds for dental tissue engineering. Journal of Industrial and Engineering Chemistry, 2017, 46, 175-181.	5.8	83
16	Facilitated Transdermal Drug Delivery Using Nanocarriers-Embedded Electroconductive Hydrogel Coupled with Reverse Electrodialysis-Driven Iontophoresis. ACS Nano, 2020, 14, 4523-4535.	14.6	83
17	Magnetic field-inducible drug-eluting nanoparticles for image-guided thermo-chemotherapy. Biomaterials, 2018, 180, 240-252.	11.4	82
18	Graphene oxide-incorporated hydrogels for biomedical applications. Polymer Journal, 2020, 52, 823-837.	2.7	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. Carbohydrate Polymers, 2018, 196, 217-224.	10.2	77
20	A chemically polymerized electrically conducting composite of polypyrrole nanoparticles and polyurethane for tissue engineering. Journal of Biomedical Materials Research - Part A, 2011, 98A, 509-516.	4.0	72
21	Micropatterned conductive hydrogels as multifunctional muscle-mimicking biomaterials: Graphene-incorporated hydrogels directly patterned with femtosecond laser ablation. Acta Biomaterialia, 2019, 97, 141-153.	8.3	67
22	Antioxidant and anti-inflammatory activities of Prussian blue nanozyme promotes full-thickness skin wound healing. Materials Science and Engineering C, 2021, 119, 111596.	7.3	63
23	Hippocampal neurons respond uniquely to topographies of various sizes and shapes. Biofabrication, 2010, 2, 035005.	7.1	57
24	Polypyrrole-incorporated conductive hyaluronic acid hydrogels. Biomaterials Research, 2016, 20, 31.	6.9	52
25	Single-Step LRET Aptasensor for Rapid Mycotoxin Detection. Analytical Chemistry, 2018, 90, 716-722.	6.5	49
26	ZOT-derived peptide and chitosan functionalized nanocarrier for oral delivery of protein drug. Biomaterials, 2016, 103, 160-169.	11.4	45
27	A Novel Conductive and Micropatterned PEG-Based Hydrogel Enabling the Topographical and Electrical Stimulation of Myoblasts. ACS Applied Materials & Interfaces, 2019, 11, 47695-47706.	8.0	44
28	Pyrroleâ€“hyaluronic acid conjugates for decreasing cell binding to metals and conducting polymers. Acta Biomaterialia, 2010, 6, 4396-4404.	8.3	42
29	Improved near infrared-mediated hydrogel formation using diacrylated Pluronic F127-coated upconversion nanoparticles. Materials Science and Engineering C, 2018, 90, 77-84.	7.3	42
30	Facile Synthesis of Conductive Polypyrrole Wrinkle Topographies on Polydimethylsiloxane via a Swellingâ€“Deswelling Process and Their Potential Uses in Tissue Engineering. ACS Applied Materials & Interfaces, 2015, 7, 23454-23463.	8.0	39
31	Gamma Ray-Induced Polymerization and Cross-Linking for Optimization of PPy/PVP Hydrogel as Biomaterial. Polymers, 2020, 12, 111.	4.5	38
32	From Low to High Saturation Magnetization in Magnetite Nanoparticles: The Crucial Role of the Molar Ratios Between the Chemicals. ACS Omega, 2022, 7, 15996-16012.	3.5	34
33	Electrically Conducting Polymer-Based Nanofibrous Scaffolds for Tissue Engineering Applications. Polymer Reviews, 2013, 53, 443-459.	10.9	33
34	Versatile biomimetic conductive polypyrrole films doped with hyaluronic acid of different molecular weights. Acta Biomaterialia, 2018, 80, 258-268.	8.3	33
35	Engineering Core-Shell Structures of Magnetic Ferrite Nanoparticles for High Hyperthermia Performance. Nanomaterials, 2020, 10, 991.	4.1	33
36	An osteogenic bioink composed of alginate, cellulose nanofibrils, and polydopamine nanoparticles for 3D bioprinting and bone tissue engineering. International Journal of Biological Macromolecules, 2022, 205, 520-529.	7.5	33

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37	Enhanced polarization of embryonic hippocampal neurons on micron scale electrospun fibers. Journal of Biomedical Materials Research - Part A, 2010, 92A, 1398-1406.	4.0	32
38	Electrochemical deposition of dopamineâ€"hyaluronic acid conjugates for anti-biofouling bioelectrodes. Journal of Materials Chemistry B, 2017, 5, 4507-4513.	5.8	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. International Journal of Biological Macromolecules, 2019, 123, 512-520.	7.5	32
40	Preparation of Radiation Cross-Linked Poly(Acrylic Acid) Hydrogel Containing Metronidazole with Enhanced Antibacterial Activity. International Journal of Molecular Sciences, 2020, 21, 187.	4.1	32
41	Amineâ€functionalized polypyrrole: Inherently cell adhesive conducting polymer. Journal of Biomedical Materials Research - Part A, 2015, 103, 2126-2132.	4.0	31
42	Effective gamma-ray sterilization and characterization of conductive polypyrrole biomaterials. Scientific Reports, 2018, 8, 3721.	3.3	31
43	Towards the translation of electroconductive organic materials for regeneration of neural tissues. Acta Biomaterialia, 2022, 139, 22-42.	8.3	31
44	Effect of a global regulatory gene, afsR2, from Streptomyces lividans on avermectin production in Streptomyces avermitilis. Journal of Bioscience and Bioengineering, 2000, 89, 606-608.	2.2	30
45	Surface modification of a three-dimensional polycaprolactone scaffold by polydopamine, biomineralization, and BMP-2 immobilization for potential bone tissue applications. Colloids and Surfaces B: Biointerfaces, 2021, 199, 111528.	5.0	30
46	Biodegradable Nerve Guidance Conduit with Microporous and Micropatterned Poly(lacticâ€coâ€glycolic acid)â€Accelerated Sciatic Nerve Regeneration. Macromolecular Bioscience, 2018, 18, e1800290.	4.1	29
47	Universal surface modification using dopamine-hyaluronic acid conjugates for anti-biofouling. International Journal of Biological Macromolecules, 2020, 151, 1314-1321.	7.5	29
48	Conductive hydrogel constructs with three-dimensionally connected graphene networks for biomedical applications. Chemical Engineering Journal, 2022, 446, 137344.	12.7	29
49	Transdermal thiolâ€"acrylate polyethylene glycol hydrogel synthesis using near infrared light. Nanoscale, 2016, 8, 14213-14221.	5.6	27
50	Reduction of graphene oxide/alginate composite hydrogels for enhanced adsorption of hydrophobic compounds. Nanotechnology, 2015, 26, 405602.	2.6	26
51	Nearâ€Infraredâ€Lightâ€Assisted Photothermal Polymerization for Transdermal Hydrogelation and Cell Delivery. Advanced Healthcare Materials, 2016, 5, 1638-1645.	7.6	25
52	Formulation of glutathione responsive anti-proliferative nanoparticles from thiolated Akt1 siRNA and disulfide-crosslinked PEI for efficient anti-cancer gene therapy. Colloids and Surfaces B: Biointerfaces, 2015, 126, 322-327.	5.0	24
53	Asymmetric Nanocrescent Antenna on Upconversion Nanocrystal. Nano Letters, 2017, 17, 6583-6590.	9.1	24
54	Electrochemical Co-deposition of Polydopamine/Hyaluronic Acid for Anti-biofouling Bioelectrodes. Frontiers in Chemistry, 2019, 7, 262.	3.6	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.	6.0	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.	4.6	21
57	Development and characterization of heparin-immobilized polycaprolactone nanofibrous scaffolds for tissue engineering using gamma-irradiation. RSC Advances, 2017, 7, 8963-8972.	3.6	20
58	Surface modification of neural electrodes with a pyrrole-hyaluronic acid conjugate to attenuate reactive astrogliosis in vivo. RSC Advances, 2015, 5, 39228-39231.	3.6	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.	10.4	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.	5.4	16
62	Biomimetic nonbiofouling polypyrrole electrodes grafted with zwitterionic polymer using gamma rays. Journal of Materials Chemistry B, 2020, 8, 7225-7232.	5.8	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.	5.6	14
64	Facile and controllable electrochemical fabrication of cell-adhesive polypyrrole electrodes using pyrrole-RGD peptides. Biofabrication, 2017, 9, 045007.	7.1	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.	5.8	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.	5.8	13
67	High-Performance Implantable Bioelectrodes with Immunocompatible Topography for Modulation of Macrophage Responses. ACS Nano, 2022, 16, 7471-7485.	14.6	13
68	Novel reverse electrodialysis-driven iontophoretic system for topical and transdermal delivery of poorly permeable therapeutic agents. Drug Delivery, 2017, 24, 1204-1215.	5.7	12
69	In Situ Formation of Proangiogenic Mesenchymal Stem Cell Spheroids in Hyaluronic Acid/Alginate Coreâ€"Shell Microcapsules. ACS Biomaterials Science and Engineering, 2020, 6, 6938-6948.	5.2	12
70	Enhanced three-dimensional printing scaffold for osteogenesis using a mussel-inspired graphene oxide coating. Materials and Design, 2021, 209, 109941.	7.0	11
71	The Heating Efficiency and Imaging Performance of Magnesium Iron Oxide@tetramethyl Ammonium Hydroxide Nanoparticles for Biomedical Applications. Nanomaterials, 2021, 11, 1096.	4.1	10
72	Nano-opto-mechanical characterization of neuron membrane mechanics under cellular growth and differentiation. Biomedical Microdevices, 2008, 10, 611-622.	2.8	9

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73	Bioactive conducting scaffolds: Active ester-functionalized polyterthiophene. Synthetic Metals, 2013, 185-186, 66-70.	3.9	9
74	Few-layer-graphene with high yield and low sheet resistance via mild oxidation of natural graphite. RSC Advances, 2017, 7, 35717-35723.	3.6	8
75	Photothermal Polymerization Using Graphene Oxide for Robust Hydrogelation with Various Light Sources. ACS Biomaterials Science and Engineering, 2020, 6, 1931-1939.	5.2	8
76	Highly Optimized Iron Oxide Embedded Poly(Lactic Acid) Nanocomposites for Effective Magnetic Hyperthermia and Biosecurity. International Journal of Nanomedicine, 2022, Volume 17, 31-44.	6.7	8
77	Research trends in biomimetic medical materials for tissue engineering: commentary. Biomaterials Research, 2016, 20, 8.	6.9	7
78	Monolithic carbon xerogel with co-continuous hierarchical porosity via one-step, template- and catalyst-free hydrothermal reaction with resorcinol and formaldehyde. RSC Advances, 2019, 9, 9480-9485.	3.6	6
79	A Mï¿½ssbauer spectroscopy investigation of the Intergrowth Phases LaSr3Fe3?xMx010?? (M = Al, Cu). Zeitschrift Fur Anorganische Und Allgemeine Chemie, 1992, 616, 172-176.	1.2	3
80	Effect of hydrogen partial pressure on a polymer electrolyte fuel cell performance. Korean Journal of Chemical Engineering, 2010, 27, 843-847.	2.7	3
81	Template-free synthesis of monolithic carbon xerogels with hierarchical porosity from resorcinol and formaldehyde via hydrothermal reaction. RSC Advances, 2018, 8, 21326-21331.	3.6	3
82	Biomimetic polypyrrole/hyaluronic acid electrodes integrated with hyaluronidase inhibitors offer persistent electroactivity and resistance to cell binding. Journal of Materials Chemistry B, 2022, 10, 1591-1600.	5.8	3
83	Selfâ€assembling Helical Rodâ€"Coil Peptoid Amphiphiles. Bulletin of the Korean Chemical Society, 2017, 38, 38-43.	1.9	2
84	Millstone Exfoliation: a True Shear Exfoliation for Large-Size Few-Layer Graphene Oxide. Nanoscale Research Letters, 2018, 13, 186.	5.7	2
85	Vimentin Targeted Nano-gene Carrier for Treatment of Renal Diseases. Journal of Korean Medical Science, 2021, 36, e333.	2.5	1