Kazuaki Matsumura

List of Publications by Year
in descending order

107	2,605	147801	233421
papers	citations	31 h-index	45 g-index

109	109	109	2579
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Polyampholytes as low toxic efficient cryoprotective agents with antifreeze protein properties. Biomaterials, 2009, 30, 4842-4849.	11.4	186
2	Toward a Molecular Understanding of the Mechanism of Cryopreservation by Polyampholytes: Cell Membrane Interactions and Hydrophobicity. Biomacromolecules, 2016, 17, 1882-1893.	5.4	109
3	Biobased Polyimides from 4-Aminocinnamic Acid Photodimer. Macromolecules, 2014, 47, 1586-1593.	4.8	91
4	Review of the current state of protein aggregation inhibition from a materials chemistry perspective: special focus on polymeric materials. Materials Advances, 2021, 2, 1139-1176.	5.4	83
5	Polyampholytes as Cryoprotective Agents for Mammalian Cell Cryopreservation. Cell Transplantation, 2010, 19, 691-699.	2.5	80
6	Low cytotoxic tissue adhesive based on oxidized dextran and epsilonâ€polyâ€<scp>l</scp>â€lysine. Journal of Biomedical Materials Research - Part A, 2014, 102, 2511-2520.	4.0	69
7	Long-term cryopreservation of human mesenchymal stem cells using carboxylated poly-l-lysine without the addition of proteins or dimethyl sulfoxide. Journal of Biomaterials Science, Polymer Edition, 2013, 24, 1484-1497.	3.5	67
8	The behavior of vascular smooth muscle cells and platelets onto epigallocatechin gallate-releasing poly(l-lactide-co-Îµ-caprolactone) as stent-coating materials. Biomaterials, 2008, 29, 884-893.	11.4	66
9	Cryoprotective properties of completely synthetic polyampholytes via reversible addition-fragmentation chain transfer (RAFT) polymerization and the effects of hydrophobicity. Journal of Biomaterials Science, Polymer Edition, 2013, 24, 1767-1780.	3.5	58
10	Effective vitrification of human induced pluripotent stem cells using carboxylated Îµ-poly-l-lysine. Cryobiology, 2011, 63, 76-83.	0.7	56
11	Self-degradation of tissue adhesive based on oxidized dextran and poly-l-lysine. Carbohydrate Polymers, 2014, 113, 32-38.	10.2	52
12	Controlling the degradation of an oxidized dextran-based hydrogel independent of the mechanical properties. Carbohydrate Polymers, 2019, 204, 131-141.	10.2	52
13	Antifreeze Effect of Carboxylated Îµ-Poly-<scp>l</scp>-lysine on the Growth Kinetics of Ice Crystals. Journal of Physical Chemistry B, 2014, 118, 10240-10249.	2.6	51
14	Type I atelocollagen grafting onto ozone-treated polyurethane films: Cell attachment, proliferation, and collagen synthesis. Journal of Biomedical Materials Research Part B, 2000, 52, 669-677.	3.1	49
15	Molecular mechanisms of cell cryopreservation with polyampholytes studied by solid-state NMR. Communications Materials, 2021, 2, .	6.9	48
16	Time-dependent intracellular trafficking of FITC-conjugated epigallocatechin-3-O-gallate in L-929 cells. Bioorganic and Medicinal Chemistry, 2008, 16, 9652-9659.	3.0	47
17	Hydrogelation of dextran-based polyampholytes with cryoprotective properties via click chemistry. Biomaterials Science, 2014, 2, 308-317.	5.4	47
18	Cryopreservation of a Two-Dimensional Monolayer Using a Slow Vitrification Method with Polyampholyte to Inhibit Ice Crystal Formation. ACS Biomaterials Science and Engineering, 2016, 2, 1023-1029.	5.2	47

#	Article	IF	Citations
19	Epigallocatechin-3-gallate protects kidneys from ischemia reperfusion injury by HO-1 upregulation and inhibition of macrophage infiltration. Transplant International, 2011, 24, 514-522.	1.6	44
20	A zwitterionic polymer as a novel inhibitor of protein aggregation. Journal of Materials Chemistry B, 2015, 3, 5683-5689.	5.8	43
21	Development of a novel vitrification method for chondrocyte sheets. BMC Biotechnology, 2013, 13, 58.	3.3	40
22	Oral pretreatment with a green tea polyphenol for cardioprotection against ischemiaâ€“reperfusion injury in an isolated rat heart model. Journal of Thoracic and Cardiovascular Surgery, 2011, 141, 511-517.	0.8	39
23	Inhibition of protein aggregation by zwitterionic polymer-based core-shell nanogels. Scientific Reports, 2017, 7, 45777.	3.3	38
24	Tunable Dualâ€Thermoresponsive Coreâ€“Shell Nanogels Exhibiting UCST and LCST Behavior. Macromolecular Rapid Communications, 2017, 38, 1700478.	3.9	38
25	Enhanced antitumor activities of (â^')-epigallocatechin-3-O-gallate fatty acid monoester derivatives in vitro and in vivo. Biochemical and Biophysical Research Communications, 2008, 377, 1118-1122.	2.1	36
26	Attachment of artificial cartilage to underlying bone. Journal of Biomedical Materials Research Part B, 2004, 68B, 59-68.	3.1	33
27	Surface modification of poly(ethylene-co-vinyl alcohol): hydroxyapatite immobilization and control of periodontal ligament cells differentiation. Biomaterials, 2004, 25, 4817-4824.	11.4	33
28	Enhanced protein internalization and efficient endosomal escape using polyampholyte-modified liposomes and freeze concentration. Nanoscale, 2016, 8, 15888-15901.	5.6	33
29	Dual Thermo- and pH-Responsive Behavior of Double Zwitterionic Graft Copolymers for Suppression of Protein Aggregation and Protein Release. ACS Applied Materials & Interfaces, 2019, 11, 39459-39469.	8.0	33
30	Imparting cell adhesion to poly(vinyl alcohol) hydrogel by coating with hydroxyapatite thin film. Materials Letters, 2007, 61, 2667-2670.	2.6	31
31	Protein cytoplasmic delivery using polyampholyte nanoparticles and freeze concentration. Biomaterials, 2014, 35, 6508-6518.	11.4	31
32	Ag/FeCo/Ag Core/Shell/Shell Magnetic Nanoparticles with Plasmonic Imaging Capability. Langmuir, 2015, 31, 2228-2236.	3.5	31
33	Tea Polyphenol Inhibits Allostimulation in Mixed Lymphocyte Culture. Cell Transplantation, 2007, 16, 75-83.	2.5	30
34	Efficient Production of Live Offspring from Mouse Oocytes Vitrified with a Novel Cryoprotective Agent, Carboxylated Îµ-poly-L-lysine. PLoS ONE, 2013, 8, e83613.	2.5	30
35	Surface modification of poly(ethylene-co-vinyl alcohol) (EVA). Part I. Introduction of carboxyl groups and immobilization of collagen. Journal of Biomedical Materials Research Part B, 2000, 50, 512-517.	3.1	28
36	Cell encapsulation and cryostorage in PVA-gelatin cryogels: incorporation of carboxylated Îµ-poly-L-lysine as cryoprotectant. Journal of Tissue Engineering and Regenerative Medicine, 2012, 6, 280-290.	2.7	27

#	Article	IF	Citations
37	Switchable release nano-reservoirs for co-delivery of drugs via a facile micelleâ€“hydrogel composite. Journal of Materials Chemistry B, 2017, 5, 3488-3497.	5.8	27
38	Facile preparation of transparent poly(vinyl alcohol) hydrogels with uniform microcrystalline structure by hot-pressing without using organic solvents. Polymer Journal, 2017, 49, 535-542.	2.7	27
39	Development and Application of Cryoprotectants. Advances in Experimental Medicine and Biology, 2018, 1081, 339-354.	1.6	27
40	Successful vitrification of pronuclear-stage pig embryos with a novel cryoprotective agent, carboxylated Îµ-poly-L-lysine. PLoS ONE, 2017, 12, e0176711.	2.5	24
41	Avengers against cancer: A new era of nano-biomaterial-based therapeutics. Materials Today, 2021, 51, 317-349.	14.2	24
42	Molecular Design of Polyampholytes for Vitrification-Induced Preservation of Three-Dimensional Cell Constructs without Using Liquid Nitrogen. Biomacromolecules, 2020, 21, 3017-3025.	5.4	23
43	Control of proliferation and differentiation of osteoblasts on apatiteâ€coated poly(vinyl alcohol) hydrogel as an artificial articular cartilage material. Journal of Biomedical Materials Research - Part A, 2010, 92A, 1225-1232.	4.0	21
44	Controlling the degradation of cellulose scaffolds with Malaprade oxidation for tissue engineering. Journal of Materials Chemistry B, 2020, 8, 7904-7913.	5.8	21
45	Morphologic study and syntheses of type I collagen and fibronectin of human periodontal ligament cells cultured on poly(ethylene-co-vinyl alcohol) (EVA) with collagen immobilization. Journal of Biomedical Materials Research Part B, 2001, 54, 241-246.	3.1	19
46	Dextran oxidized by a malaprade reaction shows main chain scission through a maillard reaction triggered by schiff base formation between aldehydes and amines. Journal of Polymer Science Part A, 2016, 54, 2254-2260.	2.3	19
47	Effect of dualâ€drugâ€releasing micelleâ€“hydrogel composite on wound healing in vivo in fullâ€thickness excision wound rat model. Journal of Biomedical Materials Research - Part A, 2019, 107, 1094-1106.	4.0	19
48	Beneficial Storage Effects of Epigallocatechin-3-O-Gallate on the Articular Cartilage of Rabbit Osteochondral Allografts. Cell Transplantation, 2009, 18, 505-512.	2.5	18
49	Zwitterionic Polymer Design that Inhibits Aggregation and Facilitates Insulin Refolding: Mechanistic Insights and Importance of Hydrophobicity. Macromolecular Bioscience, 2018, 18, e1800016.	4.1	18
50	Reversible Regulation of Cell Cycle-Related Genes by Epigallocatechin Gallate for Hibernation of Neonatal Human Tarsal Fibroblasts. Cell Transplantation, 2009, 18, 459-469.	2.5	17
51	The effect of a novel cryoprotective agent, carboxylated Îµ-poly-l-lysine, on the developmental ability of re-vitrified mouse embryos at the pronuclear stage. Cryobiology, 2014, 68, 200-204.	0.7	17
52	Tunable phaseâ€separation behavior of thermoresponsive polyampholytes through molecular design. Journal of Polymer Science Part A, 2017, 55, 876-884.	2.3	17
53	Development and Characterization of a Poly (Vinyl Alcohol)/Graphene Oxide Composite Hydrogel as An Artificial Cartilage Material. Applied Sciences (Switzerland), 2018, 8, 2272.	2.5	17
54	Thixotropic injectable hydrogel using a polyampholyte and nanosilicate prepared directly after cryopreservation. Materials Science and Engineering C, 2016, 69, 1273-1281.	7.3	16

#	Article	IF	Citations
55	StemCell Keepâ„¢ is Effective for Cryopreservation of Human Embryonic Stem Cells by Vitrification. Cell Transplantation, 2017, 26, 773-787.	2.5	15
56	pH-Responsive Polyion Complex Vesicle with Polyphosphobetaine Shells. Langmuir, 2019, 35, 1249-1256.	3.5	15
57	Comparative Study of Protein Aggregation Arrest by Zwitterionic Polysulfobetaines: Using Contrasting Raft Agents. ACS Omega, 2019, 4, 12186-12193.	3.5	15
58	Design of an Ice Recrystallization-Inhibiting Polyampholyte-Containing Graft Polymer for Inhibition of Protein Aggregation. Biomacromolecules, 2022, 23, 487-496.	5.4	15
59	Hibernation, reversible cell growth inhibition by epigallocatechin-3-O-gallate. Journal of Biotechnology, 2007, 127, 758-764.	3.8	14
60	Amino-Carrageenan@Polydopamine Microcomposites as Initiators for the Degradation of Hydrogel by near-Infrared Irradiation for Controlled Drug Release. ACS Applied Polymer Materials, 2019, 1, 286-297.	4.4	14
61	Development of an efficient vitrification method for chondrocyte sheets for clinical application. Regenerative Therapy, 2020, 14, 215-221.	3.0	14
62	Adhesion between poly(ethylene-co-vinyl alcohol) (EVA) and titanium. Journal of Biomedical Materials Research Part B, 2002, 60, 309-315.	3.1	13
63	Preservation of Platelets by Adding Epigallocatechin-3-O-Gallate to Platelet Concentrates. Cell Transplantation, 2009, 18, 521-528.	2.5	13
64	Polyampholyteâ€•and nanosilicateâ€based soft bionanocomposites with tailorable mechanical and cell adhesion properties. Journal of Biomedical Materials Research - Part A, 2016, 104, 1379-1386.	4.0	13
65	Quick and Mild Isolation of Intact Lysosomes Using Magneticâ€“Plasmonic Hybrid Nanoparticles. ACS Nano, 2022, 16, 885-896.	14.6	13
66	Facile Photolithographic Fabrication of Zwitterionic Polymer Microneedles with Protein Aggregation Inhibition for Transdermal Drug Delivery. Biomacromolecules, 2022, 23, 365-376.	5.4	13
67	Application of the bactericidal activity of Îµâ€polyâ€<scp>l</scp>â€lysine to the storage of human platelet concentrates. Transfusion, 2010, 50, 932-940.	1.6	12
68	Oxidized Polysaccharides as Green and Sustainable Biomaterials. Current Organic Chemistry, 2021, 25, 1483-1496.	1.6	12
69	Effects on gingival cells of hydroxyapatite immobilized on poly(ethylene-co-vinyl alcohol). Journal of Biomedical Materials Research - Part A, 2007, 82A, 288-295.	4.0	11
70	Nonfrozen Preservation of Articular Cartilage by Epigallocatechin-3-Gallate Reversibly Regulating Cell Cycle and NF-ÎºB Expression. Tissue Engineering - Part A, 2010, 16, 595-603.	3.1	11
71	Elucidating the degradation mechanism of a self-degradable dextran-based medical adhesive. Carbohydrate Polymers, 2022, 278, 118949.	10.2	11
72	A Freezeâ€Concentration and Polyampholyteâ€Modified Liposomeâ€Based Antigenâ€Delivery System for Effective Immunotherapy. Advanced Healthcare Materials, 2017, 6, 1700207.	7.6	9

#	Article	IF	Citations
73	Enhanced Adsorption of a Proteinâ€“Nanocarrier Complex onto Cell Membranes through a High Freeze Concentration by a Polyampholyte Cryoprotectant. Langmuir, 2018, 34, 2352-2362.	3.5	9
74	Long-Term Preservation of Rat Skin Tissue by Epigallocatechin-3-O-Gallate. Cell Transplantation, 2009, 18, 513-520.	2.5	8
75	Micropatterned Cell Orientation of Cyanobacterial Liquid-Crystalline Hydrogels. ACS Applied Materials & Interfaces, 2018, 10, 44834-44843.	8.0	8
76	Effect of different carboxylated poly l-lysine and dimethyl sulfoxide combinations on post thaw rabbit sperm functionality and fertility. Cryobiology, 2021, 102, 127-132.	0.7	8
77	Surface-Selective Control of Cell Orientation on Cyanobacterial Liquid Crystalline Gels. ACS Omega, 2018, 3, 6554-6559.	3.5	7
78	Novel anti-biofouling and drug releasing materials for contact lenses. Colloids and Surfaces B: Biointerfaces, 2020, 189, 110859.	5.0	7
79	Magnetic Separation of Autophagosomes from Mammalian Cells Using Magneticâ€“Plasmonic Hybrid Nanobeads. ACS Omega, 2017, 2, 4929-4937.	3.5	6
80	Freezing-Assisted Gene Delivery Combined with Polyampholyte Nanocarriers. ACS Biomaterials Science and Engineering, 2017, 3, 1677-1689.	5.2	6
81	Effects of Epigallocatechin Gallate on Osteogenic Capability of Human Mesenchymal Stem Cells After Suspension in Phosphate-Buffered Saline. Tissue Engineering - Part A, 2010, 16, 91-100.	3.1	5
82	Attenuation of Murine Graft-Versus-Host Disease by a Tea Polyphenol. Cell Transplantation, 2012, 21, 909-918.	2.5	5
83	Cytosolic delivery of quantum dots mediated by freezing and hydrophobic polyampholytes in RAW 264.7 cells. Journal of Materials Chemistry B, 2019, 7, 7387-7395.	5.8	4
84	Carboxylated Îµ-poly-L-lysine, a cryoprotective agent, is an effective partner of ethylene glycol for the vitrification of embryos at various preimplantation stages. Cryobiology, 2020, 97, 245-249.	0.7	4
85	Small-volume vitrification and rapid warming yield high survivals of one-cell rat embryos in cryotubes. Biology of Reproduction, 2021, 105, 258-266.	2.7	4
86	Medical Application of Polyampholytes. , 2016, , 165-182.		4
87	Enhanced proliferation and differentiation of human mesenchymal stem cells in the gravityâ€controlled environment. Artificial Organs, 2022, , .	1.9	4
88	Scanning Electron Microscopy and Atomic Force Microscopy Observations of Surface Morphology for Articular Cartilages of Dog's Knee and Poly(vinyl alcohol) Hydrogels.. Kobunshi Ronbunshu, 1998, 55, 786-790.	0.2	3
89	Comparative analysis of the cellular entry of polystyrene and gold nanoparticles using the freeze concentration method. Biomaterials Science, 2018, 6, 1791-1799.	5.4	3
90	Gene expression analysis of human induced pluripotent stem cells cryopreserved by vitrification using StemCell Keep. Biochemistry and Biophysics Reports, 2021, 28, 101172.	1.3	3

#	Article	IF	Citations
91	Polyethylene-glycol-modified zwitterionic polymer assisted protein aggregation arrest and refolding. Molecular Systems Design and Engineering, 2022, 7, 1327-1335.	3.4	3
92	Hydrophobic Polyampholytes and Nonfreezing Cold Temperature Stimulate Internalization of Au Nanoparticles to Zwitterionic Liposomes. Langmuir, 2019, 35, 1740-1748.	3.5	2
93	Design of Stimuli-Responsive Polyampholytes and Their Transformation into Micro-Hydrogels for Drug Delivery. ACS Symposium Series, 2020, , 47-62.	0.5	2
94	Hypothermicpreservation of Mouse Induced Pluripotent Stem Cells by Polyampholytes. Current Nanoscience, 2014, 10, 222-226.	1.2	2
95	Cell-adhesive gels made of sacran/collagen complexes. Polymer Journal, 0, , .	2.7	2
96	Development and structural analysis of dual-thermo-responsive self-assembled zwitterionic micelles. Materials Advances, 2022, 3, 4252-4261.	5.4	2
97	Degradation Control of Collagen by Epigallocatechin-3-O-Gallate. Key Engineering Materials, 2007, 342-343, 781-784.	0.4	1
98	Dextran Based Polyampholyte Having Cryoprotective Properties. Materials Research Society Symposia Proceedings, 2013, 1498, 33-38.	0.1	1
99	Synthetic Polyampholytes Based Cryoprotective Agents by Reversible Addition Fragmentation Chain Transfer Polymerisation. Materials Research Society Symposia Proceedings, 2013, 1499, 1.	0.1	1
100	Hydrogel formation from the concentrated aqueous solution of polyvinyl alcohol. Materials Research Society Symposia Proceedings, 2014, 1622, 37-40.	0.1	1
101	Type I atelocollagen grafting onto ozoneâ€treated polyurethane films: Cell attachment, proliferation, and collagen synthesis. Journal of Biomedical Materials Research Part B, 2000, 52, 669-677.	3.1	1
102	Cellular Flocculation Using Concentrated Polymer Brush-Modified Cellulose Nanofibers with Different Fiber Lengths. Biomacromolecules, 2022, , .	5.4	1
103	Vascular Smooth Muscle Cell Behaviors onto Epigallocatechin- 3-O-Gallate-Blended L-Lactide/Îµ-Caprolactone Copolymers. Key Engineering Materials, 2007, 342-343, 189-192.	0.4	0
104	Development of Artificial Intra-articular Polyethylene Glycol (PEG) Lubricant for Survival of Total Knee Joint Patient (Preliminary Study for Clinical Application). , 2011, , .		0
105	Phase Separation of Carboxylated Poly-L-lysine. Materials Research Society Symposia Proceedings, 2014, 1622, 129-133.	0.1	0
106	Degradation control of cellulose scaffold by Malaprade oxidation. Materials Research Society Symposia Proceedings, 2014, 1621, 191-196.	0.1	0
107	Freezing Assisted Protein Delivery by Using Polymeric Cryoprotectant. Materials Research Society Symposia Proceedings, 2014, 1622, 123-127.	0.1	0