Kazuaki Matsumura

List of Publications by Year
in descending order

107 papers	2,605 citations	147801 31 h-index	233421 45 g-index
109 all docs	109 docs citations	109 times ranked	2579 citing authors

#	Article	IF	Citations
1	Design of an Ice Recrystallization-Inhibiting Polyampholyte-Containing Graft Polymer for Inhibition of Protein Aggregation. Biomacromolecules, 2022, 23, 487-496.	5.4	15
2	Elucidating the degradation mechanism of a self-degradable dextran-based medical adhesive. Carbohydrate Polymers, 2022, 278, 118949.	10.2	11
3	Quick and Mild Isolation of Intact Lysosomes Using Magneticâ€"Plasmonic Hybrid Nanoparticles. ACS Nano, 2022, 16, 885-896.	14.6	13
4	Cellular Flocculation Using Concentrated Polymer Brush-Modified Cellulose Nanofibers with Different Fiber Lengths. Biomacromolecules, 2022, , .	5.4	1
5	Development and structural analysis of dual-thermo-responsive self-assembled zwitterionic micelles. Materials Advances, 2022, 3, 4252-4261.	5.4	2
6	Facile Photolithographic Fabrication of Zwitterionic Polymer Microneedles with Protein Aggregation Inhibition for Transdermal Drug Delivery. Biomacromolecules, 2022, 23, 365-376.	5.4	13
7	Enhanced proliferation and differentiation of human mesenchymal stem cells in the gravityâ€controlled environment. Artificial Organs, 2022, , .	1.9	4
8	Polyethylene-glycol-modified zwitterionic polymer assisted protein aggregation arrest and refolding. Molecular Systems Design and Engineering, 2022, 7, 1327-1335.	3.4	3
9	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
10	Molecular mechanisms of cell cryopreservation with polyampholytes studied by solid-state NMR. Communications Materials, 2021, 2, .	6.9	48
11	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
12	Oxidized Polysaccharides as Green and Sustainable Biomaterials. Current Organic Chemistry, 2021, 25, 1483-1496.	1.6	12
13	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
14	Avengers against cancer: A new era of nano-biomaterial-based therapeutics. Materials Today, 2021, 51, 317-349.	14.2	24
15	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
16	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
17	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
18	Controlling the degradation of cellulose scaffolds with Malaprade oxidation for tissue engineering. Journal of Materials Chemistry B, 2020, 8, 7904-7913.	5.8	21

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19	Design of Stimuli-Responsive Polyampholytes and Their Transformation into Micro-Hydrogels for Drug Delivery. ACS Symposium Series, 2020, , 47-62.	0.5	2
20	Development of an efficient vitrification method for chondrocyte sheets for clinical application. Regenerative Therapy, 2020, 14, 215-221.	3.0	14
21	Novel anti-biofouling and drug releasing materials for contact lenses. Colloids and Surfaces B: Biointerfaces, 2020, 189, 110859.	5.0	7
22	Hydrophobic Polyampholytes and Nonfreezing Cold Temperature Stimulate Internalization of Au Nanoparticles to Zwitterionic Liposomes. Langmuir, 2019, 35, 1740-1748.	3.5	2
23	pH-Responsive Polyion Complex Vesicle with Polyphosphobetaine Shells. Langmuir, 2019, 35, 1249-1256.	3.5	15
24	Comparative Study of Protein Aggregation Arrest by Zwitterionic Polysulfobetaines: Using Contrasting Raft Agents. ACS Omega, 2019, 4, 12186-12193.	3.5	15
25	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
26	Effect of dualâ€drugâ€releasing micelleâ€“hydrogel composite on wound healing <i>in vivo</i> in fullâ€thickness excision wound rat model. Journal of Biomedical Materials Research - Part A, 2019, 107, 1094-1106.	4.0	19
27	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
28	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
29	Controlling the degradation of an oxidized dextran-based hydrogel independent of the mechanical properties. Carbohydrate Polymers, 2019, 204, 131-141.	10.2	52
30	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
31	Zwitterionic Polymer Design that Inhibits Aggregation and Facilitates Insulin Refolding: Mechanistic Insights and Importance of Hydrophobicity. Macromolecular Bioscience, 2018, 18, e1800016.	4.1	18
32	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
33	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
34	Micropatterned Cell Orientation of Cyanobacterial Liquid-Crystalline Hydrogels. ACS Applied Materials & Interfaces, 2018, 10, 44834-44843.	8.0	8
35	Development and Application of Cryoprotectants. Advances in Experimental Medicine and Biology, 2018, 1081, 339-354.	1.6	27
36	Surface-Selective Control of Cell Orientation on Cyanobacterial Liquid Crystalline Gels. ACS Omega, 2018, 3, 6554-6559.	3.5	7

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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	Inhibition of protein aggregation by zwitterionic polymer-based core-shell nanogels. Scientific Reports, 2017, 7, 45777.	3.3	38
39	A Freezeâ€Concentration and Polyampholyteâ€Modified Liposomeâ€Based Antigenâ€Delivery System for Effective Immunotherapy. Advanced Healthcare Materials, 2017, 6, 1700207.	7.6	9
40	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
41	Tunable Dualâ€Thermoresponsive Coreâ€“Shell Nanogels Exhibiting UCST and LCST Behavior. Macromolecular Rapid Communications, 2017, 38, 1700478.	3.9	38
42	StemCell Keepâ„¢ is Effective for Cryopreservation of Human Embryonic Stem Cells by Vitrification. Cell Transplantation, 2017, 26, 773-787.	2.5	15
43	Magnetic Separation of Autophagosomes from Mammalian Cells Using Magneticâ€“Plasmonic Hybrid Nanobeads. ACS Omega, 2017, 2, 4929-4937.	3.5	6
44	Freezing-Assisted Gene Delivery Combined with Polyampholyte Nanocarriers. ACS Biomaterials Science and Engineering, 2017, 3, 1677-1689.	5.2	6
45	Tunable phaseâ€separation behavior of thermoresponsive polyampholytes through molecular design. Journal of Polymer Science Part A, 2017, 55, 876-884.	2.3	17
46	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
47	Enhanced protein internalization and efficient endosomal escape using polyampholyte-modified liposomes and freeze concentration. Nanoscale, 2016, 8, 15888-15901.	5.6	33
48	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
49	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
50	Toward a Molecular Understanding of the Mechanism of Cryopreservation by Polyampholytes: Cell Membrane Interactions and Hydrophobicity. Biomacromolecules, 2016, 17, 1882-1893.	5.4	109
51	Thixotropic injectable hydrogel using a polyampholyte and nanosilicate prepared directly after cryopreservation. Materials Science and Engineering C, 2016, 69, 1273-1281.	7.3	16
52	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
53	Medical Application of Polyampholytes. , 2016, , 165-182.		4
54	Ag/FeCo/Ag Core/Shell/Shell Magnetic Nanoparticles with Plasmonic Imaging Capability. Langmuir, 2015, 31, 2228-2236.	3.5	31

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55	A zwitterionic polymer as a novel inhibitor of protein aggregation. Journal of Materials Chemistry B, 2015, 3, 5683-5689.	5.8	43
56	Phase Separation of Carboxylated Poly-L-lysine. Materials Research Society Symposia Proceedings, 2014, 1622, 129-133.	0.1	0
57	Degradation control of cellulose scaffold by Malaprade oxidation. Materials Research Society Symposia Proceedings, 2014, 1621, 191-196.	0.1	0
58	Hydrogel formation from the concentrated aqueous solution of polyvinyl alcohol. Materials Research Society Symposia Proceedings, 2014, 1622, 37-40.	0.1	1
59	Freezing Assisted Protein Delivery by Using Polymeric Cryoprotectant. Materials Research Society Symposia Proceedings, 2014, 1622, 123-127.	0.1	0
60	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
61	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
62	Hydrogelation of dextran-based polyampholytes with cryoprotective properties via click chemistry. Biomaterials Science, 2014, 2, 308-317.	5.4	47
63	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
64	Biobased Polyimides from 4-Aminocinnamic Acid Photodimer. Macromolecules, 2014, 47, 1586-1593.	4.8	91
65	Self-degradation of tissue adhesive based on oxidized dextran and poly-l-lysine. Carbohydrate Polymers, 2014, 113, 32-38.	10.2	52
66	Protein cytoplasmic delivery using polyampholyte nanoparticles and freeze concentration. Biomaterials, 2014, 35, 6508-6518.	11.4	31
67	Hypothermicpreservation of Mouse Induced Pluripotent Stem Cells by Polyampholytes. Current Nanoscience, 2014, 10, 222-226.	1.2	2
68	Development of a novel vitrification method for chondrocyte sheets. BMC Biotechnology, 2013, 13, 58.	3.3	40
69	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
70	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
71	Dextran Based Polyampholyte Having Cryoprotective Properties. Materials Research Society Symposia Proceedings, 2013, 1498, 33-38.	0.1	1
72	Synthetic Polyampholytes Based Cryoprotective Agents by Reversible Addition Fragmentation Chain Transfer Polymerisation. Materials Research Society Symposia Proceedings, 2013, 1499, 1.	0.1	1

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73	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
74	Attenuation of Murine Graft-Versus-Host Disease by a Tea Polyphenol. Cell Transplantation, 2012, 21, 909-918.	2.5	5
75	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
76	Development of Artificial Intra-articular Polyethylene Glycol (PEG) Lubricant for Survival of Total Knee Joint Patient (Preliminary Study for Clinical Application). , 2011, , .		0
77	Effective vitrification of human induced pluripotent stem cells using carboxylated Îµ-poly-l-lysine. Cryobiology, 2011, 63, 76-83.	0.7	56
78	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
79	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
80	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
81	Polyampholytes as Cryoprotective Agents for Mammalian Cell Cryopreservation. Cell Transplantation, 2010, 19, 691-699.	2.5	80
82	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
83	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
84	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
85	Preservation of Platelets by Adding Epigallocatechin-3-<i>O</i>-Gallate to Platelet Concentrates. Cell Transplantation, 2009, 18, 521-528.	2.5	13
86	Polyampholytes as low toxic efficient cryoprotective agents with antifreeze protein properties. Biomaterials, 2009, 30, 4842-4849.	11.4	186
87	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
88	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
89	Long-Term Preservation of Rat Skin Tissue by Epigallocatechin-3-<i>O</i>-Gallate. Cell Transplantation, 2009, 18, 513-520.	2.5	8
90	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

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91	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
92	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
93	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
94	Degradation Control of Collagen by Epigallocatechin-3-O-Gallate. Key Engineering Materials, 2007, 342-343, 781-784.	0.4	1
95	Tea Polyphenol Inhibits Allostimulation in Mixed Lymphocyte Culture. Cell Transplantation, 2007, 16, 75-83.	2.5	30
96	Hibernation, reversible cell growth inhibition by epigallocatechin-3-O-gallate. Journal of Biotechnology, 2007, 127, 758-764.	3.8	14
97	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
98	Imparting cell adhesion to poly(vinyl alcohol) hydrogel by coating with hydroxyapatite thin film. Materials Letters, 2007, 61, 2667-2670.	2.6	31
99	Attachment of artificial cartilage to underlying bone. Journal of Biomedical Materials Research Part B, 2004, 68B, 59-68.	3.1	33
100	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
101	Adhesion between poly(ethylene-co-vinyl alcohol) (EVA) and titanium. Journal of Biomedical Materials Research Part B, 2002, 60, 309-315.	3.1	13
102	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
103	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
104	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
105	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
106	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
107	Cell-adhesive gels made of sacran/collagen complexes. Polymer Journal, 0, , .	2.7	2