

Naotsugu Nagasawa

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

87 papers	2,789 citations	28 h-index	51 g-index
89 ext. papers	2,998 ext. citations	3 avg, IF	4.53 L-index

#	Paper	IF	Citations
87	Degradation of chitosan and sodium alginate by gamma radiation, sonochemical and ultraviolet methods. <i>Radiation Physics and Chemistry</i> , 2005 , 73, 287-295	2.5	207
86	Synthesis of antibacterial PVA/CM-chitosan blend hydrogels with electron beam irradiation. <i>Carbohydrate Polymers</i> , 2003 , 53, 439-446	10.3	189
85	Radiation-induced degradation of sodium alginate. <i>Polymer Degradation and Stability</i> , 2000 , 69, 279-285	4.7	173
84	Growth-promotion of plants with depolymerized alginates by irradiation. <i>Radiation Physics and Chemistry</i> , 2000 , 59, 97-101	2.5	114
83	Hydrogels of polysaccharide derivatives crosslinked with irradiation at paste-like condition. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2003 , 208, 320-324	1.2	106
82	Radiation synthesis and characteristic of the hydrogels based on carboxymethylated chitin derivatives. <i>Carbohydrate Polymers</i> , 2003 , 51, 169-175	10.3	106
81	Improvement of heat stability of poly(L-lactic acid) by radiation-induced crosslinking. <i>Polymer</i> , 2005 , 46, 4695-4703	3.9	106
80	Properties of crosslinked polylactides (PLLA & PDLA) by radiation and its biodegradability. <i>European Polymer Journal</i> , 2007 , 43, 1779-1785	5.2	101
79	Radiation crosslinking of carboxymethyl starch. <i>Carbohydrate Polymers</i> , 2004 , 58, 109-113	10.3	99
78	Radiation crosslinking of carboxymethylcellulose of various degree of substitution at high concentration in aqueous solutions of natural pH. <i>Radiation Physics and Chemistry</i> , 2003 , 68, 771-779	2.5	94
77	Utilization of carbohydrates by radiation processing. <i>Radiation Physics and Chemistry</i> , 2002 , 63, 625-627	2.5	91
76	Synthesis and characterization of carboxymethyl derivatives of kappa-carrageenan. <i>Carbohydrate Polymers</i> , 2012 , 87, 1810-1816	10.3	85
75	Degradation of carrageenan by radiation. <i>Polymer Degradation and Stability</i> , 2005 , 87, 403-410	4.7	84
74	Application of poly(lactic acid) modified by radiation crosslinking. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2005 , 236, 611-616	1.2	77
73	Adsorption of humic acid from aqueous solution onto irradiation-crosslinked carboxymethylchitosan. <i>Bioresource Technology</i> , 2008 , 99, 1911-7	11	62
72	Radiation depolymerization of chitosan to prepare oligomers. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2003 , 208, 466-470	1.2	62
71	Radiation crosslinking of methylcellulose and hydroxyethylcellulose in concentrated aqueous solutions. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2003 , 211, 533-544	1.2	58

70	Effect of radiation-degraded chitosan on plants stressed with vanadium. <i>Radiation Physics and Chemistry</i> , 2001 , 61, 171-175	2.5	58
69	Radiation degradation studies of carrageenans. <i>Carbohydrate Polymers</i> , 2009 , 78, 100-106	10.3	55
68	Metal adsorption of carboxymethyl cellulose/carboxymethyl chitosan blend hydrogels prepared by Gamma irradiation. <i>Radiation Physics and Chemistry</i> , 2009 , 78, 1076-1080	2.5	48
67	Adsorption of metal ions by carboxymethylchitin and carboxymethylchitosan hydrogels. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2005 , 236, 617-623	1.2	45
66	Biological effect of radiation-degraded alginate on flower plants in tissue culture. <i>Biotechnology and Applied Biochemistry</i> , 2003 , 38, 283-8	2.8	42
65	Biological effect of irradiated chitosan on plants in vitro. <i>Biotechnology and Applied Biochemistry</i> , 2005 , 41, 49-57	2.8	39
64	Preparation and Properties of CMC Gel. <i>Transactions of the Materials Research Society of Japan</i> , 2007 , 32, 713-716	0.2	39
63	Radiation crosslinking of poly(butylene succinate) in the presence of low concentrations of trimethyllyl isocyanurate and its properties. <i>Journal of Applied Polymer Science</i> , 2003 , 88, 2238-2246	2.9	38
62	Nanometer-sized gelatin particles prepared by means of gamma-ray irradiation. <i>Colloid and Polymer Science</i> , 2004 , 283, 229-233	2.4	33
61	Reagent-free crosslinking of aqueous gelatin: manufacture and characteristics of gelatin gels irradiated with gamma-ray and electron beam. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2003 , 14, 1197-208	3.5	31
60	Effect of gamma radiation on dilute aqueous solutions and thin films of N-succinyl chitosan. <i>Polymer Degradation and Stability</i> , 2010 , 95, 234-244	4.7	28
59	Control of biodegradability of poly(3-hydroxybutyric acid) film with grafting acrylic acid and thermal remolding. <i>Journal of Applied Polymer Science</i> , 2006 , 101, 3856-3861	2.9	25
58	Crosslinking structure of keratin. VI. Number, type, and location of disulfide crosslinkages in low-sulfur protein of wool fiber and their relation to permanent set. <i>Journal of Applied Polymer Science</i> , 1996 , 60, 169-179	2.9	25
57	Radiation-induced crosslinking and mechanical properties of blends of poly(lactic acid) and poly(butylene terephthalate-co-adipate). <i>Journal of Applied Polymer Science</i> , 2008 , 109, 3321-3328	2.9	23
56	Radiation crosslinking of biodegradable carboxymethylchitin and carboxymethylchitosan. <i>Journal of Applied Polymer Science</i> , 2006 , 102, 758-767	2.9	22
55	Biodegradability of poly(3-hydroxybutyrate) film grafted with vinyl acetate: Effect of grafting and saponification. <i>Radiation Physics and Chemistry</i> , 2007 , 76, 1075-1083	2.5	21
54	Radiation Crosslinking of Poly(Butylene Succinate) in the Presence of Inorganic Material and Its Biodegradability. <i>Journal of Polymers and the Environment</i> , 2001 , 9, 163-171	4.5	21
53	Rate constants of reactions of carboxymethylcellulose with hydrated electron, hydroxyl radical and the decay of CMC macroradicals. A pulse radiolysis study. <i>Polymer</i> , 2004 , 45, 8165-8171	3.9	19

52	Cellulose gels produced in room temperature ionic liquids by ionizing radiation. <i>Radiation Physics and Chemistry</i> , 2014 , 103, 216-221	2.5	18
51	Modification of biodegradable polymers by radiation crosslinking technique with polyfunctional monomers. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2003 , 208, 370-373	1.2	17
50	Preparation of polymer gel dosimeters based on less toxic monomers and gellan gum. <i>Physics in Medicine and Biology</i> , 2013 , 58, 7131-41	3.8	15
49	Enhancement of plant growth stimulation activity of irradiated alginate by fractionation. <i>Radiation Physics and Chemistry</i> , 2009 , 78, 796-799	2.5	15
48	Radiolysis studies of aqueous κ -carrageenan. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2010 , 268, 1607-1612	1.2	15
47	Effect of radiation and fungal treatment on lignocelluloses and their biological activity. <i>Radiation Physics and Chemistry</i> , 2000 , 59, 393-398	2.5	15
46	ESR study on radiation-induced radicals in carboxymethyl cellulose aqueous solution. <i>Radiation Physics and Chemistry</i> , 2011 , 80, 149-152	2.5	14
45	Laser photolysis of carboxymethylated chitin derivatives in aqueous solution. Part 1. Formation of hydrated electron and a long-lived radical. <i>Biomacromolecules</i> , 2004 , 5, 453-7	6.9	14
44	Synthesis of poly(butylene succinate)/glass fiber composite by irradiation and its biodegradability. <i>Journal of Applied Polymer Science</i> , 2004 , 91, 2122-2127	2.9	13
43	Preparation and characterization of core-shell nanoparticles hardened by gamma-ray. <i>Colloids and Surfaces B: Biointerfaces</i> , 2004 , 38, 187-90	6	12
42	A Study of Degradation Mechanism of Alginate by Gamma-irradiation. <i>Radioisotopes</i> , 2009 , 58, 1-11	0.1	11
41	NMR analysis of fractionated irradiated κ -carrageenan oligomers as plant growth promoter. <i>Radiation Physics and Chemistry</i> , 2011 , 80, 977-982	2.5	11
40	ESR study on carboxymethyl chitosan radicals in an aqueous solution. <i>Radiation Physics and Chemistry</i> , 2010 , 79, 276-278	2.5	11
39	Effect of heavy ion irradiation on optical property of radiation-crosslinked hydroxypropyl cellulose gel containing methacrylate monomers. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2015 , 365, 583-586	1.2	10
38	Micro/nanofabrication of poly(L-lactic acid) using focused ion beam direct etching. <i>Applied Physics Letters</i> , 2013 , 103, 163105	3.4	10
37	Radiation-induced crosslinking and post-processing of poly(L-lactic acid) composite. <i>Radiation Physics and Chemistry</i> , 2011 , 80, 145-148	2.5	10
36	Radiation Effects on Blends of Poly(ϵ -Caprolactone) and Diatomites. <i>Journal of Polymers and the Environment</i> , 2004 , 12, 95-103	4.5	10
35	Laser photolysis of carboxymethylated chitin derivatives in aqueous solution. Part 2. Reaction of OH* and SO ₄ *- radicals with carboxymethylated chitin derivatives. <i>Biomacromolecules</i> , 2004 , 5, 458-62	6.9	10

34	Gelatin microspheres crosslinked with E-ray: Preparation, sorption of proteins, and biodegradability. <i>Journal of Applied Polymer Science</i> , 2004 , 91, 3083-3087	2.9	9
33	Effect of Gamma Ray Irradiation on Friction Property of Poly(vinyl alcohol) Cast-Drying on Freeze-Thawed Hybrid Gel. <i>Gels</i> , 2018 , 4,	4.2	8
32	Crosslinking structure of keratin. V. Number and type of crosslinks in microstructures of untreated and potassium cyanide treated human hair. <i>Journal of Applied Polymer Science</i> , 1996 , 61, 1913-1925	2.9	8
31	Radiation-synthesized polysaccharides/polyacrylate super water absorbents and their biodegradabilities. <i>Radiation Physics and Chemistry</i> , 2020 , 170, 108618	2.5	8
30	On-line rapid purification of [N]N gas for visualization of nitrogen fixation and translocation in nodulated soybean. <i>Applied Radiation and Isotopes</i> , 2019 , 151, 7-12	1.7	7
29	Syntheses of hydroxypropyl methylcellulose phthalate hydrogels in Na ₂ CO ₃ aqueous solutions with electron-beam irradiation. <i>Journal of Applied Polymer Science</i> , 2003 , 89, 2123-2130	2.9	7
28	Microfabrication of biocompatible hydrogels by proton beam writing. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2017 , 409, 102-106	1.2	6
27	Development of Advanced Biodevices Using Quantum Beam Microfabrication Technology. <i>Quantum Beam Science</i> , 2020 , 4, 14	1.6	6
26	New polymer gel dosimeters consisting of less toxic monomers with radiation-crosslinked gel matrix. <i>Journal of Physics: Conference Series</i> , 2013 , 444, 012028	0.3	6
25	Preparation and adsorption behavior for metal ions and humic acid of chitosan derivatives crosslinked by irradiation. <i>Nuclear Science and Techniques/Hewuli</i> , 2007 , 18, 42-49	2.1	6
24	Structural and kinetic modification of aqueous hydroxypropylmethylcellulose (HPMC) induced by electron beam irradiation. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2005 , 353, 9-20	3.3	6
23	Synthesis of polysaccharide hybrid gel in ionic liquids via radiation-induced crosslinking. <i>Polymer Degradation and Stability</i> , 2019 , 159, 133-138	4.7	6
22	Fabrication of thermo-responsive PNIPAAm-g-ETFE for cell culture dishes by pre-irradiation grafting. <i>Radiation Physics and Chemistry</i> , 2018 , 142, 88-93	2.5	5
21	Crosslinking of polysaccharides in room temperature ionic liquids by ionizing radiation. <i>Radiation Physics and Chemistry</i> , 2016 , 124, 130-134	2.5	5
20	Radiation-induced crosslinking of polyamide11 in the presence of triallylisocyanurate. <i>Polymer Degradation and Stability</i> , 2017 , 136, 98-102	4.7	4
19	Micro-fabrication of Biodegradable Polymers using Focused Ion Beam. <i>Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi]</i> , 2010 , 23, 393-397	0.7	4
18	Biodegradability of Blend Hydrogels Based on Carboxymethyl Cellulose and Carboxymethyl Starch. <i>Transactions of the Materials Research Society of Japan</i> , 2011 , 36, 397-400	0.2	4
17	Thermosensitive Micelles Composed of Poly(lactide)-g-Poly(NIPAM-co-HEMA) Graft Copolymers. <i>Key Engineering Materials</i> , 2010 , 459, 51-56	0.4	3

16	Micro-/Nanofabrication of Cross-linked Poly(L-lactic acid) Using Electron Beam Nanoimprint Lithography. <i>Applied Physics Express</i> , 2012 , 5, 027303	2.4	3
15	Effects of CMC Molar Mass on Mechanical Properties of CMC-Acid Gel. <i>Transactions of the Materials Research Society of Japan</i> , 2009 , 34, 391-394	0.2	3
14	Syntheses of hydroxypropyl methylcellulose phthalate gels in organic solvents by radiation crosslinking. <i>Journal of Applied Polymer Science</i> , 2004 , 92, 3002-3007	2.9	3
13	Preparation of Stable CMC-ACID Gel. <i>Special Publication - Royal Society of Chemistry</i> , 2012 , 175-182	0.1	3
12	LET and dose rate effect on radiation-induced copolymerization in physical gel. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2014 , 334, 64-68	1.2	2
11	Carcinogen adsorbent prepared from DNA complex by gamma-ray irradiation. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2008 , 19, 1159-70	3.5	2
10	Structural development of dynamically asymmetric polymer blends under uniaxial stretching. <i>Journal of Applied Crystallography</i> , 2007 , 40, s656-s661	3.8	2
9	Radiation-induced enhancement of nitrite reducing activity of cytochrome c. <i>Journal of Agricultural and Food Chemistry</i> , 2003 , 51, 6835-43	5.7	2
8	Decolorization of Secondary Treated Water from Livestock Urine Waste. <i>Transactions of the Materials Research Society of Japan</i> , 2010 , 35, 647-650	0.2	1
7	Improvement of Heat Stability of Poly(Lactic Acid) by Radiation Crosslinking. <i>Journal of the Adhesion Society of Japan</i> , 2005 , 41, 420-426	0.1	1
6	Human organ phantoms for catheterization using the radiation crosslinking technique. <i>Journal of Applied Polymer Science</i> , 2021 , 138, 50818	2.9	1
5	Absorption of Phosphate Ion in Swine Urine Using CMC Gel. <i>Transactions of the Materials Research Society of Japan</i> , 2008 , 33, 849-852	0.2	
4	Pulse Radiolysis Study on Aqueous Solutions of Polysaccharide Derivatives. <i>ACS Symposium Series</i> , 2007 , 166-179	0.4	
3	Preparation and Characterization of CMC-Konjac Mannan Mixture Gel. <i>Transactions of the Materials Research Society of Japan</i> , 2008 , 33, 927-930	0.2	
2	Radiation Irradiation of Biomax and Its Biodegradability. <i>Journal of Fiber Science and Technology</i> , 2008 , 64, 132-135	0	
1	Structure of the Gamma Ray Irradiation-Curable Liquid Silk 3D Scaffold with Cell-Adhesive Property. <i>Journal of Macromolecular Science - Physics</i> , 1-16	1.4	