Masahiro Ohshima

List of Publications by Year
in descending order

118 papers	3,922 citations	101496 36 h-index	138417 58 g-index
118 all docs	118 docs citations	118 times ranked	2609 citing authors

#	Article	IF	Citations
1	Biaxial Flow-Induced Alignment of Silicate Layers in Polypropylene/Clay Nanocomposite Foam. Nano Letters, 2001, 1, 503-505.	4.5	268
2	Foam processing and cellular structure of polypropylene/clay nanocomposites. Polymer Engineering and Science, 2002, 42, 1907-1918.	1.5	240
3	Crystallization kinetics of poly(L-lactide) in contact with pressurized CO2. Polymer Engineering and Science, 2004, 44, 186-196.	1.5	144
4	Effect of Growing Crystalline Phase on Bubble Nucleation in Poly(<scp>L</scp>-Lactide)/CO₂ Batch Foaming. Industrial & Engineering Chemistry Research, 2011, 50, 3247-3252.	1.8	140
5	Measurement and prediction of diffusion coefficients of supercritical CO2 in molten polymers. Polymer Engineering and Science, 2004, 44, 1915-1924.	1.5	126
6	Quality control of polymer production processes. Journal of Process Control, 2000, 10, 135-148.	1.7	105
7	A Microcellular Foaming Simulation System with a High Pressure-Drop Rate. Industrial & Engineering Chemistry Research, 2006, 45, 6153-6161.	1.8	95
8	Effects of CO2 on crystallization kinetics of polypropylene. Polymer Engineering and Science, 2001, 41, 1938-1946.	1.5	88
9	Effects of hydrophobic-modified cellulose nanofibers (CNFs) on cell morphology and mechanical properties of high void fraction polypropylene nanocomposite foams. Composites Part A: Applied Science and Manufacturing, 2017, 98, 166-173.	3.8	87
10	Nanocellular Foams of PS/PMMA Polymer Blends. Macromolecular Materials and Engineering, 2008, 293, 78-82.	1.7	81
11	Visual Observations of Batch and Continuous Foaming Processes. Journal of Cellular Plastics, 2003, 39, 155-169.	1.2	80
12	Industrial application of a nonlinear model predictive control to polymerization reactors. Control Engineering Practice, 2001, 9, 819-828.	3.2	79
13	Fabrication of High Expansion Microcellular Injection-Molded Polypropylene Foams by Adding Long-Chain Branches. Industrial & Engineering Chemistry Research, 2016, 55, 11970-11982.	1.8	75
14	Unprecedented Development of Ultrahigh Expansion Injection-Molded Polypropylene Foams by Introducing Hydrophobic-Modified Cellulose Nanofibers. ACS Applied Materials & Interfaces, 2017, 9, 9250-9254.	4.0	72
15	Bubble coalescence in foaming process of polymers. Polymer Engineering and Science, 2006, 46, 680-690.	1.5	68
16	Fabrication of lightweight microcellular foams in injection-molded polypropylene using the synergy of long-chain branches and crystal nucleating agents. Polymer, 2017, 128, 119-127.	1.8	68
17	Measurement and prediction of LDPE/CO2 solution viscosity. Polymer Engineering and Science, 2002, 42, 2234-2245.	1.5	66
18	Preparation of micro/nanocellular polypropylene foam with crystal nucleating agents. Polymer Engineering and Science, 2014, 54, 2075-2085.	1.5	66

#	Article	IF	Citations
19	Visual observation and numerical studies of N₂ vs. CO₂ foaming behavior in coreâ€back foam injection molding. Polymer Engineering and Science, 2012, 52, 875-883.	1.5	63
20	Preparation of a Unique Microporous Structure via Two Step Phase Separation in the Course of Drying a Ternary Polymer Solution. Langmuir, 2007, 23, 12397-12405.	1.6	61
21	Rapid Production of Ultralow Dielectric Constant Porous Polyimide Films via CO₂-<i>tert</i>-Amine Zwitterion-Induced Phase Separation and Subsequent Photopolymerization. Macromolecules, 2013, 46, 2275-2281.	2.2	61
22	Open Cell Microcellular Foams of Polylactic Acid (PLA)â€based Blends with Semiâ€Interpenetrating Polymer Networks. Macromolecular Materials and Engineering, 2011, 296, 770-777.	1.7	60
23	Solubility of carbon dioxide in polyethylene/titanium dioxide composite under high pressure and temperature. Journal of Applied Polymer Science, 2002, 86, 282-288.	1.3	59
24	Nanoscale Cellular Foams from a Poly(propylene)â€Rubber Blend. Macromolecular Materials and Engineering, 2008, 293, 991-998.	1.7	58
25	Visual observation and numerical studies of polymer foaming behavior of polypropylene/carbon dioxide system in a coreâ€back injection molding process. Polymer Engineering and Science, 2011, 51, 1617-1625.	1.5	54
26	Control of Bubble Size and Location in Nanoâ€/Microscale Cellular Poly(propylene)/Rubber Blend Foams. Macromolecular Materials and Engineering, 2008, 293, 574-580.	1.7	53
27	Effect of CO2 on crystallization kinetics of poly(ethylene terephthalate). Polymer Engineering and Science, 2003, 43, 479-489.	1.5	52
28	Preparation of Porous Poly(l-lactic acid) Honeycomb Monolith Structure by Phase Separation and Unidirectional Freezing. Langmuir, 2009, 25, 5304-5312.	1.6	49
29	Nanocellular foamsâ€"cell structure difference between immiscible and miscible PEEK/PEI polymer blends. Polymer Engineering and Science, 2010, 50, 2408-2416.	1.5	47
30	Preparation of microcellular thermoplastic elastomer foams from polystyrene<i>â€b</i>â€ethyleneâ€butyleneâ€<i>b</i>â€polystyrene (SEBS) and their blends with polystyrene. Journal of Applied Polymer Science, 2013, 128, 2245-2254.	1.3	46
31	Effect of Oxygen Inhibition on the Kinetic Constants of the UV-Radical Photopolymerization of Diurethane Dimethacrylate/Photoinitiator Systems. Macromolecules, 2014, 47, 1906-1913.	2.2	45
32	Optimal grade transition control for polymerization reactors. Computers and Chemical Engineering, 2000, 24, 1555-1561.	2.0	44
33	Thermally expandable microcapsules for polymer foaming-Relationship between expandability and viscoelasticity. Polymer Engineering and Science, 2010, 50, 835-842.	1.5	44
34	CO₂â€Induced Mechanical Reinforcement of Polyolefinâ€Based Nanocellular Foams. Macromolecular Materials and Engineering, 2011, 296, 1046-1054.	1.7	41
35	Polymeric Foaming Simulation for Extrusion Processes. Journal of Cellular Plastics, 2001, 37, 517-536.	1.2	40
36	Honeycomb Monolith-Structured Silica with Highly Ordered, Three-Dimensionally Interconnected Macroporous Walls. Chemistry of Materials, 2009, 21, 3476-3478.	3.2	37

#	Article	IF	Citations
37	Supercritical carbon dioxide assisted electroless plating on thermoplastic polymers. Journal of Supercritical Fluids, 2009, 49, 265-270.	1.6	32
38	Quality inferential control of an industrial high density polyethylene process. Journal of Process Control, 1999, 9, 51-59.	1.7	31
39	Development of a Simplified Foam Injection Molding Technique and Its Application to the Production of High Void Fraction Polypropylene Foams. Industrial & Engineering Chemistry Research, 2017, 56, 13734-13742.	1.8	31
40	Preparation of Nanowells on a PSâ€<i>b</i>â€PMMA Copolymer Thin Film by CO₂ Treatment. Macromolecular Materials and Engineering, 2008, 293, 589-597.	1.7	30
41	A new microcellular foam injectionâ€molding technology using nonâ€supercritical fluid physical blowing agents. Polymer Engineering and Science, 2017, 57, 105-113.	1.5	30
42	Polypropyleneâ€dispersed domain as potential nucleating agent in PS and PMMA solidâ€state foaming. Journal of Applied Polymer Science, 2011, 119, 1042-1051.	1.3	29
43	Environmentally benign electroless nickel plating using supercritical carbon-dioxide on hydrophilically modified acrylonitrileâ€“butadieneâ€“styrene. Applied Surface Science, 2014, 311, 189-200.	3.1	29
44	Numerical simulation of a polypropylene foam bead expansion process. Polymer Engineering and Science, 2008, 48, 107-115.	1.5	27
45	Supercritical CO2-assisted embossing for studying cell behaviour on microtextured surfaces. Biomaterials, 2008, 29, 4494-4500.	5.7	26
46	<i>In situ</i> preparation of crossâ€linked polystyrene/poly(methyl methacrylate) blend foams with a bimodal cellular structure. Polymers for Advanced Technologies, 2012, 23, 1350-1356.	1.6	26
47	Evolution of cellular morphologies and crystalline structures in high-expansion isotactic polypropylene/cellulose nanofiber nanocomposite foams. RSC Advances, 2018, 8, 15405-15416.	1.7	25
48	In-line monitoring of polyethylene density using near infrared (NIR) spectroscopy. Polymer Engineering and Science, 2000, 40, 1107-1113.	1.5	24
49	Periodic Porous Stripe Patterning in a Polymer Blend Film Induced by Phase Separation during Spin-Casting. Langmuir, 2008, 24, 8898-8903.	1.6	24
50	Electroless nickel plating on polypropylene via hydrophilic modification and supercritical carbon dioxide Pd-complex infusion. Journal of Supercritical Fluids, 2012, 69, 117-123.	1.6	24
51	On-line NIR sensing of CO2 concentration for polymer extrusion foaming processes. Polymer Engineering and Science, 2000, 40, 1843-1849.	1.5	23
52	A new technique for foaming submicron size poly(methyl methacrylate) particles. Journal of Applied Polymer Science, 2007, 106, 2825-2830.	1.3	22
53	The effect of interfacial miscibility on the cell morphology of polyethylene terephthalate/bisphenol a polycarbonate blend foams. Journal of Polymer Science, Part B: Polymer Physics, 2012, 50, 1173-1180.	2.4	22
54	Density measurement of polymer/CO2 single-phase solution at high temperature and pressure using a gravimetric method. Journal of Applied Polymer Science, 2007, 105, 3060-3068.	1.3	21

#	Article	IF	Citations
55	Preparation of porous honeycomb monolith from UVâ€curable monomer/dioxane solution via unidirectional freezing and UV irradiation. Journal of Applied Polymer Science, 2012, 125, 2874-2881.	1.3	21
56	Fabrication of carbon-core/TiO2-sheath nanofibers by carbonization of poly(vinyl alcohol)/TiO2 composite nanofibers prepared via electrospinning and an interfacial solâ€"gel reaction. Materials Letters, 2011, 65, 3027-3029.	1.3	20
57	Fabrication of porous carbon nanofibers by phosphate-assisted carbonization of electrospun poly(vinyl alcohol) nanofibers. Materials Research Bulletin, 2016, 79, 8-13.	2.7	20
58	Preparation of Microcellular Injection-Molded Foams Using Different Types of Low-Pressure Gases via a New Foam Injection Molding Technology. Industrial & Engineering Chemistry Research, 2019, 58, 17824-17832.	1.8	20
59	Phase behavior of crosslinked polyisoprene rubber and supercritical carbon dioxide. Journal of Supercritical Fluids, 2005, 35, 175-181.	1.6	19
60	Mathematical models and numerical simulations of a thermally expandable microballoon for plastic foaming. Chemical Engineering Science, 2013, 104, 220-227.	1.9	19
61	Supercritical carbon dioxide-assisted electroless nickel plating on polypropyleneâ€"The effect of copolymer blend morphology on metalâ€"polymer adhesion. Journal of Supercritical Fluids, 2014, 85, 123-134.	1.6	19
62	Strong acid doping for the preparation of conductive polyaniline nanoflowers, nanotubes, and nanofibers. Polymer, 2019, 182, 121848.	1.8	19
63	Preparation of highly porous Î²-chitin structure through nonsolventâ€"solvent exchange-induced phase separation and supercritical CO2 drying. Journal of Supercritical Fluids, 2012, 68, 31-38.	1.6	18
64	Preparation of highly dispersed expanded graphite/polypropylene nanocomposites via low temperature processing. Journal of Applied Polymer Science, 2013, 130, 1834-1839.	1.3	18
65	Unusual Fabrication of Lightweight Injection-Molded Polypropylene Foams by Using Air as the Novel Foaming Agent. Industrial & Engineering Chemistry Research, 2018, 57, 3800-3804.	1.8	18
66	Promoted formation of stereocomplex in enantiomeric poly(lactic acid)s induced by cellulose nanofibers. Carbohydrate Polymers, 2022, 276, 118800.	5.1	17
67	Acoustic pressure pulses from laser-irradiated suspensions containing gold nanospheres in water: Experimental and theoretical study. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 430, 51-57.	2.3	16
68	Size-dependent effect of gold nanospheres on the acoustic pressure pulses from laser-irradiated suspensions. Advanced Powder Technology, 2014, 25, 733-738.	2.0	16
69	Visualization of hydrolysis in polylactide using nearâ€infrared hyperspectral imaging and chemometrics. Journal of Applied Polymer Science, 2018, 135, 45898.	1.3	16
70	New evaluation method for the curing degree of rubber and its nanocomposites using ATR-FTIR spectroscopy. Polymer Testing, 2021, 93, 106993.	2.3	16
71	Model predictive control with adaptive disturbance prediction and its application to fatty acid distillation column control. Journal of Process Control, 1995, 5, 41-48.	1.7	15
72	Preparation of a polymeric membrane with a fine porous structure by dry casting. Journal of Applied Polymer Science, 2009, 111, 2518-2526.	1.3	15

#	Article	IF	Citations
73	Fabrication of TiO2 hollow fibers with surface nanostructure. Materials Research Bulletin, 2011, 46, 2328-2332.	2.7	15
74	Effect of crosslinking points on bubble nucleation in the microcellular foaming of thermosets. Polymer, 2021, 216, 123414.	1.8	15
75	Synthesis, release ability and bioactivity evaluation of chitin beads incorporated with curcumin for drug delivery applications. Journal of Microencapsulation, 2012, 29, 549-558.	1.2	13
76	Silica nanofiber with hierarchical pore structure templated by a polymer blend nanofiber and surfactant micelle. Materials Research Bulletin, 2014, 50, 108-112.	2.7	13
77	Preparation of open microcellular polylactic acid foams with a microfibrillar additive using coreback foam injection molding processes. Journal of Cellular Plastics, 2018, 54, 765-784.	1.2	13
78	Reinforcement of polypropylene by cellulose microfibers modified with polydopamine and octadecylamine. Journal of Applied Polymer Science, 2021, 138, 49851.	1.3	13
79	Effects of physicochemical properties of particles and medium on acoustic pressure pulses from laser-irradiated suspensions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 487, 42-48.	2.3	12
80	Oxygen concentration and conversion distributions in a layer-by-layer UV-cured film used as a simplified model of a 3D UV inkjet printing system. Chemical Engineering Science, 2017, 158, 569-579.	1.9	12
81	Adsorption Profiles of Acid Dye Using Synthesized Polyaniline Nanostructure with Different Morphologies. Journal of Chemical Engineering of Japan, 2017, 50, 170-177.	0.3	11
82	Novel preparation of self-assembled HCl-doped polyaniline nanotubes using compressed CO2-assisted polymerization. Polymer, 2018, 156, 71-75.	1.8	11
83	Study oil/water separation property of PE foam and its improvement by <i>in situ</i> synthesis of zeoliticâ€“imidazolate framework (ZIFâ€8). Polymer Engineering and Science, 2019, 59, 1354-1361.	1.5	11
84	Near-Infrared Spectroscopic Evaluation of the Water Content of Molded Polylactide under the Effect of Crystallization. Applied Spectroscopy, 2017, 71, 1300-1309.	1.2	10
85	Thermal, rheological, and mechanical properties of cellulose nanofiber (CNF) and poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) (PHBH) biopolymer nanocomposites. Cellulose, 2022, 29, 3901-3913.	2.4	10
86	Fabrication of Hollow TiO2 Fibers Templated by Electrospun Aqueous Poly(ethylene oxide) (PEO) Solution. Chemistry Letters, 2009, 38, 258-259.	0.7	9
87	Open-cell foams of polyethylene terephthalate/bisphenol a polycarbonate blend. Polymer Engineering and Science, 2015, 55, 375-385.	1.5	8
88	Highly Ordered Nanocellular Polymeric Foams Generated by UV-Induced Chemical Foaming. ACS Macro Letters, 2020, 9, 1433-1438.	2.3	8
89	Control and design problems in material processingâ€"how can process systems engineers contribute to material processing?. Journal of Process Control, 2003, 13, 599-605.	1.7	7
90	Influence of polyethylene disperse domain on cell morphology of polystyrene-based blend foams. Journal of Cellular Plastics, 2014, 50, 241-261.	1.2	7

#	Article	IF	Citations
91	A study of Model Predictive Control in terms of its structure and degree of freedom.. Kagaku Kogaku Ronbunshu, 1987, 13, 71-77.	0.1	5
92	Robust stability of model predictive control.. Kagaku Kogaku Ronbunshu, 1988, 14, 517-524.	0.1	5
93	On-line inference of tube-wall temperature in an industrial olefin pyrolysis plant. Journal of Process Control, 1996, 6, 309-315.	1.7	5
94	Preparation of a unique, multihollowâ€core honeycomb structure via the unidirectional freezing of a binary solvent system. Journal of Applied Polymer Science, 2013, 130, 526-534.	1.3	5
95	A comparative study on thermomechanical and rheological characteristics of graphite/polypropylene nanocomposites: Highlighting the role of mixing. Journal of Vinyl and Additive Technology, 2015, 21, 12-17.	1.8	5
96	Development and Optimization of UV-Induced Chemical Foaming Process. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2019, 32, 693-698.	0.1	5
97	Model predictive control. Some new results on stability and a tuning guideline for SISO systems.. Kagaku Kogaku Ronbunshu, 1990, 16, 83-91.	0.1	4
98	Microstructure, mechanical and electrical characterizations of bimodal and nanocellular polypropylene/graphene nanoplatelet composite foams. Materials Today Communications, 2020, 25, 101447.	0.9	4
99	Visualization of Nonequilibrium Properties of a Crystalline Polymer: Formation of Ring-Lite Due to the Gibbsâ€"Thomson Effect and Dark-Ring Due to the Melting Point Inversion. Crystal Growth and Design, 2022, 22, 441-448.	1.4	3
100	Control of the Cell Structure of UV-Induced Chemically Blown Nanocellular Foams by Self-Assembled Block Copolymer Morphology. Macromolecules, 2022, 55, 5176-5187.	2.2	3
101	Optimal Blending Operation at Polymer Silos.. Kagaku Kogaku Ronbunshu, 1997, 23, 384-390.	0.1	2
102	Profile control of plastic sheet in an industrial polymer processing process. Polymer Engineering and Science, 1998, 38, 1740-1750.	1.5	2
103	Fabrication of ICG Dye-containing Particles by Growth of Polymer/Salt Aggregates and Measurement of Photoacoustic Signals. Chemistry Letters, 2014, 43, 495-497.	0.7	2
104	Development of a Photocatalytic Microreactor with Separated Oxidation/Reduction Channels. Journal of Chemical Engineering of Japan, 2017, 50, 268-272.	0.3	2
105	Synthesis of Photocleavable Block Copolymers for UV Induced Foaming. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2018, 31, 647-650.	0.1	2
106	Measurement and Prediction of CO2-induced Viscosity Reduction of Polypropylene.. Kagaku Kogaku Ronbunshu, 2002, 28, 739-745.	0.1	2
107	Highâ€performance thermal insulator based on polymer foam and silica xerogel. Polymer Engineering and Science, 2022, 62, 637-647.	1.5	2
108	Process Systems Engineering. Application of On-Line Inference System Based on Physical and PLS models to Tube-Wall Temperature Estimation of an Olefin Pyrolysis Plant.. Kagaku Kogaku Ronbunshu, 1996, 22, 1130-1137.	0.1	1

#	Article	IF	Citations
109	Modeling and Control of a Nonlinear Process Based on the Extended Self-Organizing Map Network. Industrial & Engineering Chemistry Research, 2002, 41, 2941-2947.	1.8	1
110	Direct Self-Assembly for Non-Periodic Designs. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2016, 29, 709-715.	0.1	1
111	Influence of different molecular weights of polyhexeneâ€1 on the morphology and rheology of cyclic olefin copolymer blends. Polymer Engineering and Science, 2021, 61, 1485-1501.	1.5	1
112	Millefeuilleâ€like cellular structures of biopolymer blend foams prepared by the foam injection molding technique. Journal of Applied Polymer Science, 2022, 139, .	1.3	1
113	Self-Assembly of Temperature Sensitive Additives in Polypropylene Melt and Its Influence on Viscoelasticity. Industrial & Engineering Chemistry Research, 2022, 61, 2783-2791.	1.8	1
114	Model predictive control. Stability conditions of multi-input multi-outputsystem.. Kagaku Kogaku Ronbunshu, 1991, 17, 371-379.	0.1	0
115	Multirate Multivariable Model Predictive Control Design.. Kagaku Kogaku Ronbunshu, 1994, 20, 240-247.	0.1	0
116	A Practical Method for Removing Ill-Conditioning in Industrial Constrained Predictive Control.. Kagaku Kogaku Ronbunshu, 1998, 24, 24-29.	0.1	0
117	Lactide Bubble Nucleation Rate Model for Degassing in Polylactic Acid Synthesis. Journal of Chemical Engineering of Japan, 2010, 43, 275-284.	0.3	0
118	Chemical engineering in Japan. AICHE Journal, 2012, 58, 1968-1978.	1.8	0