Donggaang Yao

List of Publications by Year
in descending order

100 papers	1,867 citations	279701 23 h-index	302012 39 g-index
104 all docs	104 docs citations	104 times ranked	1529 citing authors

#	ARTICLE	IF	CITATIONS
1	Simulation of the filling process in micro channels for polymeric materials. Journal of Micromechanics and Microengineering, 2002, 12, 604-610.	1.5	155
2	Development of rapid heating and cooling systems for injection molding applications. Polymer Engineering and Science, 2002, 42, 2471-2481.	1.5	131
3	High-frequency proximity heating for injection molding applications. Polymer Engineering and Science, 2006, 46, 938-945.	1.5	102
4	Rapid thermal cycling of injection molds: An overview on technical approaches and applications. Advances in Polymer Technology, 2008, 27, 233-255.	0.8	90
5	Preparation of single poly(lactic acid) composites. Journal of Applied Polymer Science, 2008, 107, 2909-2916.	1.3	76
6	Scaling Issues in Miniaturization of Injection Molded Parts. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2004, 126, 733-739.	1.3	71
7	Rapid hot embossing of polymer microfeatures. Microsystem Technologies, 2006, 12, 730-735.	1.2	64
8	Chondrogenic Derivatives of Embryonic Stem Cells Seeded into 3D Polycaprolactone Scaffolds Generated Cartilage Tissue<i>In Vivo</i>. Tissue Engineering - Part A, 2008, 14, 1403-1413.	1.6	62
9	Controllable Growth of Gradient Porous Structures. Biomacromolecules, 2009, 10, 1282-1286.	2.6	57
10	INCREASING FLOW LENGTH IN THIN WALL INJECTION MOLDING USING A RAPIDLY HEATED MOLD. Polymer-Plastics Technology and Engineering, 2002, 41, 819-832.	1.9	55
11	Single-polymer composites based on slowly crystallizing polymers. Polymer Engineering and Science, 2006, 46, 1223-1230.	1.5	54
12	Study on squeezing flow during nonisothermal embossing of polymer microstructures. Polymer Engineering and Science, 2005, 45, 652-660.	1.5	45
13	A novel process for continuous thermal embossing of largeâ€area nanopatterns onto polymer films. Advances in Polymer Technology, 2009, 28, 246-256.	0.8	37
14	Injection Molding Nanoscale Features with the Aid of Induction Heating. Polymer-Plastics Technology and Engineering, 2007, 46, 1031-1037.	1.9	36
15	Compression Induced Chondrogenic Differentiation of Embryonic Stem Cells in Three-Dimensional Polydimethylsiloxane Scaffolds. Tissue Engineering - Part A, 2017, 23, 426-435.	1.6	34
16	Replication of Microstructures by Roll-to-Roll UV-Curing Embossing. Polymer-Plastics Technology and Engineering, 2008, 47, 865-873.	1.9	30
17	Rapid pattern transfer of biomimetic surface structures onto thermoplastic polymers. Materials Science and Engineering C, 2007, 27, 794-797.	3.8	29
18	A microlens array on curved substrates by 3D micro projection and reflow process. Sensors and Actuators A: Physical, 2012, 179, 242-250.	2.0	28

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19	Gel spinning of UHMWPE fibers with polybutene as a new spin solvent. Polymer Engineering and Science, 2016, 56, 697-706.	1.5	28
20	Mechanisms and modeling of electrohydrodynamic phenomena. International Journal of Bioprinting, 2018, 5, 166.	1.7	28
21	A two-station embossing process for rapid fabrication of surface microstructures on thermoplastic polymers. Polymer Engineering and Science, 2007, 47, 530-539.	1.5	26
22	Study of the Curing Kinetics toward Development of Fast-Curing Epoxy Resins. Polymer-Plastics Technology and Engineering, 2017, 56, 161-170.	1.9	26
23	Fabrication of polycaprolactone scaffolds using a sacrificial compression-molding process. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2006, 77B, 287-295.	1.6	24
24	Anthraquinone chromophore covalently bonded blocked waterborne polyurethanes: synthesis and application. RSC Advances, 2015, 5, 30631-30639.	1.7	23
25	Numerical Simulation for Injection Molding with a Rapidly Heated Mold, Part I: Flow Simulation for Thin Wall Parts. Polymer-Plastics Technology and Engineering, 2006, 45, 897-902.	1.9	21
26	Removal of spandex from nylon/spandex blended fabrics by selective polymer degradation. Textile Reseach Journal, 2014, 84, 16-27.	1.1	21
27	Rubber-assisted micro forming of polymer thin films. Microsystem Technologies, 2009, 15, 251-257.	1.2	20
28	Synthesis of blocked waterborne polyurethane polymeric dyes with tailored molecular weight: thermal, rheological and printing properties. RSC Advances, 2016, 6, 56831-56838.	1.7	20
29	Numerical Simulation for Injection Molding with a Rapidly Heated Mold, Part II: Birefringence Prediction. Polymer-Plastics Technology and Engineering, 2006, 45, 903-909.	1.9	19
30	Insert injection molding of polypropylene single-polymer composites. Composites Science and Technology, 2015, 106, 47-54.	3.8	18
31	Development of a gel spinning process for highâ€strength poly(ethylene oxide) fibers. Polymer Engineering and Science, 2014, 54, 2839-2847.	1.5	17
32	A new method for formulating linear viscoelastic models. International Journal of Engineering Science, 2020, 156, 103375.	2.7	16
33	Developing rapid heating and cooling systems using pyrolytic graphite. Applied Thermal Engineering, 2003, 23, 341-352.	3.0	15
34	Fabrication of interconnected microporous biomaterials with high hydroxyapatite nanoparticle loading. Biofabrication, 2010, 2, 035006.	3.7	15
35	Processing of composite polystyrene foam with a honeycomb structure. Polymer Engineering and Science, 2015, 55, 1494-1503.	1.5	14
36	Synchronous degradation and decolorization of colored poly(ethylene terephthalate) fabrics for the synthesis of high purity terephthalic acid. Journal of Cleaner Production, 2022, 366, 132985.	4.6	14

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37	Geometrical Confining Effects in Compression Molding of Co-continuous Polymer Blends. Annals of Biomedical Engineering, 2010, 38, 1954-1964.	1.3	13
38	Processing of viscoelastic data via a generalized fractional model. International Journal of Engineering Science, 2021, 161, 103465.	2.7	13
39	Cold forging method for polymer microfabrication. Polymer Engineering and Science, 2004, 44, 1998-2004.	1.5	12
40	Uniform shell patterning using rubberâ€assisted hot embossing process. I. Experimental. Polymer Engineering and Science, 2011, 51, 592-600.	1.5	12
41	Porogen Templating Processes: An Overview. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2014, 136, .	1.3	12
42	A Strategy for Rapid Thermal Cycling of Molds in Thermoplastic Processing. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2006, 128, 837-843.	1.3	11
43	Hot embossing of discrete microparts. Polymer Engineering and Science, 2009, 49, 1894-1901.	1.5	11
44	Processing properties of polypropylene with a minor addition of silicone oil. Polymer Engineering and Science, 2010, 50, 1340-1349.	1.5	10
45	Uniform shell patterning using rubberâ€assisted hot embossing process. II. Process analysis. Polymer Engineering and Science, 2011, 51, 601-608.	1.5	10
46	A non-Newtonian fluid model with an objective vorticity. Journal of Non-Newtonian Fluid Mechanics, 2015, 218, 99-105.	1.0	10
47	A non-Newtonian fluid model with finite stretch and rotational recovery. Journal of Non-Newtonian Fluid Mechanics, 2016, 230, 12-18.	1.0	10
48	A fractional dashpot for nonlinear viscoelastic fluids. Journal of Rheology, 2018, 62, 619-629.	1.3	10
49	Melt spinning of continuous fibers by cold air attenuation I: experimental studies. Textile Reseach Journal, 2014, 84, 593-603.	1.1	9
50	Rapid Vacuum Infusion and Curing of Epoxy Composites with a Rubber-Cushioned Mold Design. Polymer-Plastics Technology and Engineering, 2016, 55, 1030-1038.	1.9	9
51	Fabrication of high-strength polyoxymethylene fibers by gel spinning. Journal of Materials Science, 2018, 53, 11901-11916.	1.7	9
52	Reversibly Superwettable Polyester Fabric Based on pH-Responsive Branched Polymer Nanoparticles. Industrial & Engineering Chemistry Research, 2020, 59, 2899-2907.	1.8	9
53	Thermal, mechanical, and tribological properties of epoxy polymer/EPU blends reinforced by low concentration of octaaminophenyl POSS. Polymer Engineering and Science, 2021, 61, 780-792.	1.5	9
54	An enlarged process window for hot embossing. Journal of Micromechanics and Microengineering, 2008, 18, 045023.	1.5	8

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55	Fabrication of Interconnected Porous Elastomers by a Microsphereâ€Templating Process. Advances in Polymer Technology, 2013, 32, .	0.8	8
56	Extrusion Roller Imprinting with a Variotherm Belt Mold. Machines, 2014, 2, 299-311.	1.2	8
57	Challenges and Advances in Aerosol Jet Printing of Regenerated Silk Fibroin Solutions. Advanced Materials Interfaces, 2020, 7, 1902005.	1.9	8
58	Through-thickness embossing process for fabrication of three-dimensional thermoplastic parts. Polymer Engineering and Science, 2007, 47, 2075-2084.	1.5	7
59	Mechanical behavior of porous polysiloxane with micropores interconnected by microchannels. Polymer Engineering and Science, 2014, 54, 1512-1522.	1.5	7
60	Microwave processing of syntactic foam from an expandable thermoset/thermoplastic mixture. Polymer Engineering and Science, 2015, 55, 1818-1828.	1.5	7
61	Fast solvent removal by mechanical twisting for gel spinning of ultrastrong fibers. Polymer Engineering and Science, 2015, 55, 745-752.	1.5	6
62	Melt spinning of high-strength fiber from low-molecular-weight polypropylene. Polymer Engineering and Science, 2016, 56, 233-239.	1.5	6
63	An effective method of processing immiscible polymer blends into strong fiber. Polymer Engineering and Science, 2019, 59, 2052-2061.	1.5	6
64	Super stretchable chromatic polyurethane driven by anthraquinone chromogen as a chain extender. RSC Advances, 2019, 9, 2332-2342.	1.7	6
65	Organic/inorganic hybrid nanostructured composites of liquid nitrile rubberâ€based quaternary ammonium saltâ€modified montmorillonite and epoxy resin: preparation and tribological behaviors. Polymer Composites, 2020, 41, 1711-1720.	2.3	6
66	Direct drawing of gel fibers enabled by twistâ€gel spinning process. Polymer Engineering and Science, 2015, 55, 1389-1395.	1.5	5
67	Recycling of Polyethylene Bags into Highâ€Strength Yarns Without Using Melt Processing. Polymer Engineering and Science, 2020, 60, 281-287.	1.5	5
68	Tribological and thermomechanical properties of epoxy-matrix nanocomposites containing montmorillonite nanoclay intercalated with polybutadiene-based quaternary ammonium salt. Plastics, Rubber and Composites, 2020, 49, 389-399.	0.9	5
69	Scaleâ€Up Synthesis of High Purity Calcium Terephthalate from Polyethylene Terephthalate Waste: Purification, Characterization, and Quantification. Macromolecular Materials and Engineering, 2021, 306, 2100591.	1.7	5
70	An effective and simple process for obtaining high strength silkworm (Bombyx mori) silk fiber. Fibers and Polymers, 2015, 16, 2609-2616.	1.1	4
71	Injection Molding Poly(Para-phenylene) with a Rapidly Heated Mold. Polymer-Plastics Technology and Engineering, 2009, 48, 1008-1013.	1.9	3
72	Constitutive modeling of complex interfaces based on a differential interfacial energy function. Rheologica Acta, 2011, 50, 199-206.	1.1	3

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73	Fusion bonding of supercooled poly(ethylene terephthalate) between <i>T</i>_{<i>g</i>} and <i>T</i>_{<i>m</i>}. Journal of Applied Polymer Science, 2011, 119, 3101-3112.	1.3	3
74	Rubber-assisted embossing of polymer thin films using molds with through-thickness microchannels. Microsystem Technologies, 2012, 18, 481-488.	1.2	3
75	Melt spinning of continuous fibers by cold air attenuation: II. Theoretical modeling. Textile Reseach Journal, 2014, 84, 604-613.	1.1	3
76	Modeling of expandable polystyrene expansion. Journal of Applied Polymer Science, 2016, 133, .	1.3	3
77	Aerosol Jet Printing: Challenges and Advances in Aerosol Jet Printing of Regenerated Silk Fibroin Solutions (Adv. Mater. Interfaces 12/2020). Advanced Materials Interfaces, 2020, 7, 2070065.	1.9	3
78	From semisolid metal processing to thixotropic 3D printing of metallic alloys. Virtual and Physical Prototyping, 0, , 1-19.	5.3	3
79	Cold forging behavior of semicrystalline polymers. Journal of Applied Polymer Science, 2005, 96, 764-771.	1.3	2
80	Design and Verification of the Pressure-Driven Radial Flow Microrheometer. Tribology Transactions, 2008, 51, 396-402.	1.1	2
81	Polymer micro hot embossing for the fabrication of three-dimensional millimeter-wave components. Digest / IEEE Antennas and Propagation Society International Symposium, 2009, , .	0.0	2
82	A visco-hyperelastic formulation for the rheology of immiscible blends. Journal of Rheology, 2012, 56, 767-795.	1.3	2
83	Micropatterning of Porous Structures from Co/Continuous Polymer Blends. Advances in Polymer Technology, 2013, 32, .	0.8	2
84	Maxwell models with relaxation in logarithmic strains. AIP Conference Proceedings, 2015, , .	0.3	2
85	Experimental and numerical study of microchannel formation in rubber-assisted hot embossing with an open-channel mold. Microsystem Technologies, 2017, 23, 1221-1227.	1.2	2
86	Dynamics and rheology of finitely extensible polymer coils: An overview. AIP Conference Proceedings, 2017, , .	0.3	2
87	Twist-film gel spinning of large-diameter high-performance ultra-high molecular weight polyethylene monofilaments. Textile Reseach Journal, 2017, 87, 2323-2336.	1.1	2
88	A Simple Process for Making Supercontraction Fiber From Polycaprolactone/Elastomer Blends. Polymer Engineering and Science, 2020, 60, 793-801.	1.5	2
89	Toward Making Poly(ethylene terephthalate) Degradable in Aqueous Environment. Macromolecular Materials and Engineering, 0, , 2100832.	1.7	2
90	Rubber-Assisted Hot Embossing for Structuring Thin Polymer Film Polymeric Films. , 2006, , 217.		1

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91	Instantaneous Phase Separation at the Contact Surface in Compression Molding of Immiscible Polymer Blend. , 2010, , .		1
92	Constant Temperature Embossing of PEEK Films. , 2013, , .		1
93	Constant-temperature embossing of supercooled polymer films. Polymer Engineering and Science, 2014, 54, 1100-1112.	1.5	1
94	Processing of Nanodiamond Loaded Poly(Lactic Acid) Co-Continuous Porous Structures. , 2010, , .		0
95	Preparation of Interconnected Microporous Poly(glycolic-co-lactic acid) With High Hydroxyapatite Loading. , 2010, , .		0
96	Laser-induced Breakdown Spectroscopy Sensor System for Internet of Things. , 2012, , .		0
97	A framework for nonlinear viscoelasticity on the basis of logarithmic strain and projected velocity gradient. AIP Conference Proceedings, 2019, , .	0.3	0
98	Polymer and Composite Processing. , 2019, , 383-417.		0
99	Introduction to Plastics Engineering, by Vijay K. Stokes. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2020, 142, .	1.3	0
100	Modeling and Simulation of the Process for the Generation of Gradient Porous Structures From Immiscible Polymer Blends. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2020, 142, .	1.3	0