# Donggaang Yao

## List of Publications by Year in Descending Order



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|---|---|---|---|
| 94 papers | 1,528 citations | 20 h-index | 35 g-index |
| 104 ext. papers | 1,676 ext. citations | 3.2 avg, IF | 4.91 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 94 | 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 | 2.3 | 3 |
| 93 | Processing of viscoelastic data via a generalized fractional model. *International Journal of Engineering Science*, **2021**, 161, 103465 | 5.7 | 4 |
| 92 | 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 | 1.5 | 4 |
| 91 | Challenges and Advances in Aerosol Jet Printing of Regenerated Silk Fibroin Solutions. *Advanced Materials Interfaces*, **2020**, 7, 1902005 | 4.6 | 6 |
| 90 | A Simple Process for Making Supercontraction Fiber From Polycaprolactone/Elastomer Blends. *Polymer Engineering and Science*, **2020**, 60, 793-801 | 2.3 | 1 |
| 89 | Bicomponent Fibers **2020**, 281-313 | | 5 |
| 88 | Recycling of Polyethylene Bags into High-Strength Yarns Without Using Melt Processing. *Polymer Engineering and Science*, **2020**, 60, 281-287 | 2.3 | 4 |
| 87 | Organic/inorganic hybrid nanostructured composites of liquid nitrile rubber-based quaternary ammonium salt-modified montmorillonite and epoxy resin: preparation and tribological behaviors. *Polymer Composites*, **2020**, 41, 1711-1720 | 3 | 3 |
| 86 | Reversibly Superwettable Polyester Fabric Based on pH-Responsive Branched Polymer Nanoparticles. *Industrial & Engineering Chemistry Research*, **2020**, 59, 2899-2907 | 3.9 | 6 |
| 85 | A new method for formulating linear viscoelastic models. *International Journal of Engineering Science*, **2020**, 156, 103375 | 5.7 | 8 |
| 84 | 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 | 4.6 | 2 |
| 83 | Super stretchable chromatic polyurethane driven by anthraquinone chromogen as a chain extender.. *RSC Advances*, **2019**, 9, 2332-2342 | 3.7 | 5 |
| 82 | An effective method of processing immiscible polymer blends into strong fiber. *Polymer Engineering and Science*, **2019**, 59, 2052-2061 | 2.3 | 5 |
| 81 | Injection Molding at Multiscales **2019**, 89-136 | | 1 |
| 80 | Mechanisms and modeling of electrohydrodynamic phenomena. *International Journal of Bioprinting*, **2019**, 5, 166 | 6.2 | 9 |
| 79 | Polymer and Composite Processing **2019**, 383-417 | | |
| 78 | A fractional dashpot for nonlinear viscoelastic fluids. *Journal of Rheology*, **2018**, 62, 619-629 | 4.1 | 8 |

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| 77 | Fabrication of high-strength polyoxymethylene fibers by gel spinning. *Journal of Materials Science*, **2018**, 53, 11901-11916 | 4.3 | 4 |
| 76 | Experimental and numerical study of microchannel formation in rubber-assisted hot embossing with an open-channel mold. *Microsystem Technologies*, **2017**, 23, 1221-1227 | 1.7 | 2 |
| 75 | Study of the Curing Kinetics toward Development of Fast-Curing Epoxy Resins. *Polymer-Plastics Technology and Engineering*, **2017**, 56, 161-170 | | 12 |
| 74 | Compression Induced Chondrogenic Differentiation of Embryonic Stem Cells in Three-Dimensional Polydimethylsiloxane Scaffolds. *Tissue Engineering - Part A*, **2017**, 23, 426-435 | 3.9 | 29 |
| 73 | Dynamics and rheology of finitely extensible polymer coils: An overview **2017**, | | 1 |
| 72 | Twist-film gel spinning of large-diameter high-performance ultra-high molecular weight polyethylene monofilaments. *Textile Reseach Journal*, **2017**, 87, 2323-2336 | 1.7 | 1 |
| 71 | Melt spinning of high-strength fiber from low-molecular-weight polypropylene. *Polymer Engineering and Science*, **2016**, 56, 233-239 | 2.3 | 5 |
| 70 | Synthesis of blocked waterborne polyurethane polymeric dyes with tailored molecular weight: thermal, rheological and printing properties. *RSC Advances*, **2016**, 6, 56831-56838 | 3.7 | 17 |
| 69 | Rapid Vacuum Infusion and Curing of Epoxy Composites with a Rubber-Cushioned Mold Design. *Polymer-Plastics Technology and Engineering*, **2016**, 55, 1030-1038 | | 7 |
| 68 | A non-Newtonian fluid model with finite stretch and rotational recovery. *Journal of Non-Newtonian Fluid Mechanics*, **2016**, 230, 12-18 | 2.7 | 8 |
| 67 | Gel spinning of UHMWPE fibers with polybutene as a new spin solvent. *Polymer Engineering and Science*, **2016**, 56, 697-706 | 2.3 | 17 |
| 66 | Modeling of expandable polystyrene expansion. *Journal of Applied Polymer Science*, **2016**, 133, | 2.9 | 3 |
| 65 | Anthraquinone chromophore covalently bonded blocked waterborne polyurethanes: synthesis and application. *RSC Advances*, **2015**, 5, 30631-30639 | 3.7 | 19 |
| 64 | A non-Newtonian fluid model with an objective vorticity. *Journal of Non-Newtonian Fluid Mechanics*, **2015**, 218, 99-105 | 2.7 | 7 |
| 63 | Insert injection molding of polypropylene single-polymer composites. *Composites Science and Technology*, **2015**, 106, 47-54 | 8.6 | 14 |
| 62 | Microwave processing of syntactic foam from an expandable thermoset/thermoplastic mixture. *Polymer Engineering and Science*, **2015**, 55, 1818-1828 | 2.3 | 6 |
| 61 | Maxwell models with relaxation in logarithmic strains **2015**, | | 2 |
| 60 | Fast solvent removal by mechanical twisting for gel spinning of ultrastrong fibers. *Polymer Engineering and Science*, **2015**, 55, 745-752 | 2.3 | 6 |

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| 59 | Direct drawing of gel fibers enabled by twist-gel spinning process. *Polymer Engineering and Science*, **2015**, 55, 1389-1395 | 2.3 | 4 |
| 58 | Processing of composite polystyrene foam with a honeycomb structure. *Polymer Engineering and Science*, **2015**, 55, 1494-1503 | 2.3 | 12 |
| 57 | An effective and simple process for obtaining high strength silkworm (Bombyx mori) silk fiber. *Fibers and Polymers*, **2015**, 16, 2609-2616 | 2 | 4 |
| 56 | Melt spinning of continuous fibers by cold air attenuation: II. Theoretical modeling. *Textile Reseach Journal*, **2014**, 84, 604-613 | 1.7 | 3 |
| 55 | Extrusion Roller Imprinting with a Variotherm Belt Mold. *Machines*, **2014**, 2, 299-311 | 2.9 | 8 |
| 54 | Development of a gel spinning process for high-strength poly(ethylene oxide) fibers. *Polymer Engineering and Science*, **2014**, 54, 2839-2847 | 2.3 | 11 |
| 53 | Porogen Templating Processes: An Overview. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2014**, 136, | 3.3 | 11 |
| 52 | Mechanical behavior of porous polysiloxane with micropores interconnected by microchannels. *Polymer Engineering and Science*, **2014**, 54, 1512-1522 | 2.3 | 6 |
| 51 | Constant-temperature embossing of supercooled polymer films. *Polymer Engineering and Science*, **2014**, 54, 1100-1112 | 2.3 | 1 |
| 50 | Removal of spandex from nylon/spandex blended fabrics by selective polymer degradation. *Textile Reseach Journal*, **2014**, 84, 16-27 | 1.7 | 11 |
| 49 | Melt spinning of continuous fibers by cold air attenuation I: experimental studies. *Textile Reseach Journal*, **2014**, 84, 593-603 | 1.7 | 8 |
| 48 | Micropatterning of Porous Structures from Co/Continuous Polymer Blends. *Advances in Polymer Technology*, **2013**, 32, E166-E179 | 1.9 | 1 |
| 47 | Fabrication of Interconnected Porous Elastomers by a Microsphere-Templating Process. *Advances in Polymer Technology*, **2013**, 32, | 1.9 | 6 |
| 46 | Constant Temperature Embossing of PEEK Films **2013**, | | 1 |
| 45 | A microlens array on curved substrates by 3D micro projection and reflow process. *Sensors and Actuators A: Physical*, **2012**, 179, 242-250 | 3.9 | 23 |
| 44 | A visco-hyperelastic formulation for the rheology of immiscible blends. *Journal of Rheology*, **2012**, 56, 767-795 | 4.1 | 2 |
| 43 | Rubber-assisted embossing of polymer thin films using molds with through-thickness microchannels. *Microsystem Technologies*, **2012**, 18, 481-488 | 1.7 | 3 |
| 42 | Polymer Micro-Molding/Forming Processes **2011**, 197-233 | | 3 |

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| 41 | Constitutive modeling of complex interfaces based on a differential interfacial energy function. *Rheologica Acta*, **2011**, 50, 199-206 | 2.3 | 3 |
| 40 | Uniform shell patterning using rubber-assisted hot embossing process. II. Process analysis. *Polymer Engineering and Science*, **2011**, 51, 601-608 | 2.3 | 10 |
| 39 | Uniform shell patterning using rubber-assisted hot embossing process. I. Experimental. *Polymer Engineering and Science*, **2011**, 51, 592-600 | 2.3 | 12 |
| 38 | Fusion bonding of supercooled poly(ethylene terephthalate) between Tg and Tm. *Journal of Applied Polymer Science*, **2011**, 119, 3101-3112 | 2.9 | 3 |
| 37 | Fabrication of interconnected microporous biomaterials with high hydroxyapatite nanoparticle loading. *Biofabrication*, **2010**, 2, 035006 | 10.5 | 14 |
| 36 | Geometrical confining effects in compression molding of co-continuous polymer blends. *Annals of Biomedical Engineering*, **2010**, 38, 1954-64 | 4.7 | 12 |
| 35 | Processing properties of polypropylene with a minor addition of silicone oil. *Polymer Engineering and Science*, **2010**, 50, 1340-1349 | 2.3 | 7 |
| 34 | A novel process for continuous thermal embossing of large-area nanopatterns onto polymer films. *Advances in Polymer Technology*, **2009**, 28, 246-256 | 1.9 | 33 |
| 33 | Rubber-assisted micro forming of polymer thin films. *Microsystem Technologies*, **2009**, 15, 251-257 | 1.7 | 20 |
| 32 | Hot embossing of discrete microparts. *Polymer Engineering and Science*, **2009**, 49, 1894-1901 | 2.3 | 9 |
| 31 | Controllable growth of gradient porous structures. *Biomacromolecules*, **2009**, 10, 1282-6 | 6.9 | 50 |
| 30 | Injection Molding Poly(Para-phenylene) with a Rapidly Heated Mold. *Polymer-Plastics Technology and Engineering*, **2009**, 48, 1008-1013 | | 3 |
| 29 | Replication of Microstructures by Roll-to-Roll UV-Curing Embossing. *Polymer-Plastics Technology and Engineering*, **2008**, 47, 865-873 | | 27 |
| 28 | Chondrogenic derivatives of embryonic stem cells seeded into 3D polycaprolactone scaffolds generated cartilage tissue in vivo. *Tissue Engineering - Part A*, **2008**, 14, 1403-13 | 3.9 | 51 |
| 27 | An enlarged process window for hot embossing. *Journal of Micromechanics and Microengineering*, **2008**, 18, 045023 | 2 | 8 |
| 26 | Design and Verification of the Pressure-Driven Radial Flow Microrheometer. *Tribology Transactions*, **2008**, 51, 396-402 | 1.8 | 2 |
| 25 | Preparation of single poly(lactic acid) composites. *Journal of Applied Polymer Science*, **2008**, 107, 2909-2916 | 1.9 | 68 |
| 24 | Rapid thermal cycling of injection molds: An overview on technical approaches and applications. *Advances in Polymer Technology*, **2008**, 27, 233-255 | 1.9 | 73 |

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| 23 | Injection Molding Nanoscale Features with the Aid of Induction Heating. *Polymer-Plastics Technology and Engineering*, **2007**, 46, 1031-1037 | | 34 |
| 22 | Rapid pattern transfer of biomimetic surface structures onto thermoplastic polymers. *Materials Science and Engineering C*, **2007**, 27, 794-797 | 8.3 | 24 |
| 21 | A two-station embossing process for rapid fabrication of surface microstructures on thermoplastic polymers. *Polymer Engineering and Science*, **2007**, 47, 530-539 | 2.3 | 24 |
| 20 | Through-thickness embossing process for fabrication of three-dimensional thermoplastic parts. *Polymer Engineering and Science*, **2007**, 47, 2075-2084 | 2.3 | 6 |
| 19 | Fabrication of polycaprolactone scaffolds using a sacrificial compression-molding process. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2006**, 77, 287-95 | 3.5 | 22 |
| 18 | Numerical Simulation for Injection Molding with a Rapidly Heated Mold, Part II: Birefringence Prediction. *Polymer-Plastics Technology and Engineering*, **2006**, 45, 903-909 | | 15 |
| 17 | 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 | 3.3 | 9 |
| 16 | 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 | | 20 |
| 15 | Rubber-Assisted Hot Embossing for Structuring Thin Polymer Film Polymeric Films **2006**, 217 | | 1 |
| 14 | Single-polymer composites based on slowly crystallizing polymers. *Polymer Engineering and Science*, **2006**, 46, 1223-1230 | 2.3 | 45 |
| 13 | High-frequency proximity heating for injection molding applications. *Polymer Engineering and Science*, **2006**, 46, 938-945 | 2.3 | 86 |
| 12 | Rapid hot embossing of polymer microfeatures. *Microsystem Technologies*, **2006**, 12, 730-735 | 1.7 | 58 |
| 11 | Cold forging behavior of semicrystalline polymers. *Journal of Applied Polymer Science*, **2005**, 96, 764-771 | 2.9 | 2 |
| 10 | Study on squeezing flow during nonisothermal embossing of polymer microstructures. *Polymer Engineering and Science*, **2005**, 45, 652-660 | 2.3 | 40 |
| 9 | Scaling Issues in Miniaturization of Injection Molded Parts. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2004**, 126, 733-739 | 3.3 | 58 |
| 8 | Cold forging method for polymer microfabrication. *Polymer Engineering and Science*, **2004**, 44, 1998-2004 | 2.3 | 8 |
| 7 | Developing rapid heating and cooling systems using pyrolytic graphite. *Applied Thermal Engineering* , **2003**, 23, 341-352 | 5.8 | 15 |
| 6 | Development of rapid heating and cooling systems for injection molding applications. *Polymer Engineering and Science*, **2002**, 42, 2471-2481 | 2.3 | 113 |

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| 5 | Simulation of the filling process in micro channels for polymeric materials. *Journal of Micromechanics and Microengineering*, **2002**, 12, 604-610 | 2 | 138 |
| 4 | INCREASING FLOW LENGTH IN THIN WALL INJECTION MOLDING USING A RAPIDLY HEATED MOLD. *Polymer-Plastics Technology and Engineering*, **2002**, 41, 819-832 | | 49 |
| 3 | Toward Making Poly(ethylene terephthalate) Degradable in Aqueous Environment. *Macromolecular Materials and Engineering*,2100832 | 3.9 | 1 |
| 2 | Scale-Up Synthesis of High Purity Calcium Terephthalate from Polyethylene Terephthalate Waste: Purification, Characterization, and Quantification. *Macromolecular Materials and Engineering*,2100591 | 3.9 | 1 |
| 1 | From semisolid metal processing to thixotropic 3D printing of metallic alloys. *Virtual and Physical Prototyping*,1-19 | 10.1 | 0 |