Charles L Tucker Iii

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	The Use of Tensors to Describe and Predict Fiber Orientation in Short Fiber Composites. Journal of Rheology, 1987, 31, 751-784.	2.6	1,474
2	Orientation Behavior of Fibers in Concentrated Suspensions. Journal of Reinforced Plastics and Composites, 1984, 3, 98-119.	3.1	936
3	Stiffness predictions for unidirectional short-fiber composites: Review and evaluation. Composites Science and Technology, 1999, 59, 655-671.	7.8	597
4	MICROSTRUCTURALEVOLUTION INPOLYMERBLENDS. Annual Review of Fluid Mechanics, 2002, 34, 177-210.	25.0	372
5	Orthotropic closure approximations for flowâ€induced fiber orientation. Journal of Rheology, 1995, 39, 1095-1122.	2.6	370
6	Closure approximations for threeâ€dimensional structure tensors. Journal of Rheology, 1990, 34, 367-386.	2.6	333
7	An anisotropic rotary diffusion model for fiber orientation in short- and long-fiber thermoplastics. Journal of Non-Newtonian Fluid Mechanics, 2009, 156, 165-176.	2.4	269
8	An objective model for slow orientation kinetics in concentrated fiber suspensions: Theory and rheological evidence. Journal of Rheology, 2008, 52, 1179-1200.	2.6	240
9	Stereological measurement and error estimates for three-dimensional fiber orientation. Polymer Engineering and Science, 1992, 32, 240-253.	3.1	220
10	Fiber orientation in simple injection moldings. Part I: Theory and numerical methods. Polymer Composites, 1992, 13, 317-331.	4.6	208
11	Fiber orientation in simple injection moldings. Part II: Experimental results. Polymer Composites, 1992, 13, 332-341.	4.6	161
12	Flow regimes for fiber suspensions in narrow gaps. Journal of Non-Newtonian Fluid Mechanics, 1991, 39, 239-268.	2.4	150
13	Dimensional Accuracy of Thermoset Composites: Simulation of Process-Induced Residual Stresses. Journal of Composite Materials, 2001, 35, 2171-2205.	2.4	140
14	Stiffness and thermal expansion predictions for hybrid short fiber composites. Polymer Composites, 1990, 11, 229-239.	4.6	115
15	Droplet deformation in dispersions with unequal viscosities and zero interfacial tension. Journal of Fluid Mechanics, 2001, 426, 199-228.	3.4	114
16	Fiber Suspensions in Complex Geometries: Flow/Orientation Coupling. Canadian Journal of Chemical Engineering, 2002, 80, 1093-1106.	1.7	109
17	A model for large deformation of an ellipsoidal droplet with interfacial tension. Journal of Rheology, 2003, 47, 659-682.	2.6	107
18	A model for fiber length attrition in injection-molded long-fiber composites. Composites Part A: Applied Science and Manufacturing, 2013, 51, 11-21.	7.6	104

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#	Article	IF	CITATIONS
19	A numerical simulation of short fiber orientation in compression molding. Polymer Composites, 1990, 11, 164-173.	4.6	100
20	Predicting the Orientation of Short Fibers in Thin Compression Moldings. Journal of Composite Materials, 1986, 20, 539-557.	2.4	99
21	Area tensors for modeling microstructure during laminar liquid-liquid mixing. International Journal of Multiphase Flow, 1999, 25, 35-61.	3.4	95
22	Mixing for reaction injection molding. I. Impingement mixing of liquids. Polymer Engineering and Science, 1980, 20, 875-886.	3.1	85
23	Simulation of Compression Molding for Fiber-Reinforced Thermosetting Polymers. Journal of Engineering for Industry, 1984, 106, 114-125.	0.8	81
24	Fiber Length and Orientation in Long-Fiber Injection-Molded Thermoplastics — Part I: Modeling of Microstructure and Elastic Properties. Journal of Composite Materials, 2008, 42, 1003-1029.	2.4	80
25	The Continuous Cuing Process for Thermoset Polymer Composites. Part 1: Modeling and Demonstration. Journal of Composite Materials, 1995, 29, 1222-1253.	2.4	71
26	Fiber Orientation in 3-D Injection Molded Features. International Polymer Processing, 1999, 14, 409-420.	0.5	67
27	Optimal curing for thermoset matrix composites: Thermochemical considerations. Polymer Composites, 2001, 22, 118-131.	4.6	65
28	Theory for drop deformation in viscoelastic systems. Journal of Rheology, 2004, 48, 417-438.	2.6	61
29	Modeling and simulation of two-dimensional consolidation for thermoset matrix composites. Composites Part A: Applied Science and Manufacturing, 2002, 33, 877-892.	7.6	56
30	Compression Mold Filling Simulation for Non-Planar Parts. International Polymer Processing, 1990, 5, 79-87.	0.5	53
31	Optimal design for polymer extrusion. Part I: Sensitivity analysis for nonlinear steady-state systems. Computer Methods in Applied Mechanics and Engineering, 1998, 167, 283-302.	6.6	52
32	A model of compression mold filling. Polymer Engineering and Science, 1983, 23, 69-73.	3.1	49
33	Lagrangian particle calculations of distributive mixing: Limitations and applications. Chemical Engineering Science, 2006, 61, 6826-6836.	3.8	49
34	Analysis and sensitivity analysis for polymer injection and compression molding. Computer Methods in Applied Mechanics and Engineering, 1998, 167, 325-344.	6.6	47
35	Numerical simulation of injection/compression liquid composite molding. Part 2: preform compression. Composites Part A: Applied Science and Manufacturing, 2001, 32, 207-220.	7.6	44
36	Enhanced conductivity of fuel cell plates through controlled fiber orientation. AICHE Journal, 2003, 49, 18-29.	3.6	43

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37	Thermal dispersion in resin transfer molding. Polymer Composites, 1995, 16, 495-506.	4.6	39
38	Prediction of the Elastic—Plastic Stress/Strain Response for Injection-Molded Long-Fiber Thermoplastics. Journal of Composite Materials, 2009, 43, 217-246.	2.4	39
39	A boundary element simulation of compression mold filling. Polymer Engineering and Science, 1988, 28, 413-420.	3.1	36
40	Optimal design for polymer extrusion. Part II: Sensitivity analysis for weakly-coupled nonlinear steady-state systems. Computer Methods in Applied Mechanics and Engineering, 1998, 167, 303-323.	6.6	33
41	Flow and heat transfer in compression mold filling. Journal of Non-Newtonian Fluid Mechanics, 1987, 24, 245-264.	2.4	31
42	Numerical simulation of mold filling in foam reaction injection molding. International Journal for Numerical Methods in Fluids, 2003, 42, 1105-1134.	1.6	31
43	A global, multi-scale simulation of laminar fluid mixing: the extended mapping method. International Journal of Multiphase Flow, 2002, 28, 497-523.	3.4	29
44	Numerical simulation of injection/compression liquid composite molding. Part 1. Mesh generation. Composites Part A: Applied Science and Manufacturing, 2000, 31, 87-94.	7.6	27
45	Mechanical Property Predictions for Short Fiber/Brittle Matrix Composites. Journal of Reinforced Plastics and Composites, 1984, 3, 120-129.	3.1	25
46	Heat transfer and reaction issues in liquid composite molding. Polymer Composites, 1996, 17, 60-72.	4.6	25
47	Optimal curing for thermoset matrix composites: Thermochemical and consolidation considerations. Polymer Composites, 2002, 23, 739-757.	4.6	23
48	Mechanics of random discontinuous long-fiber thermoplastics. Part II: Direct simulation of uniaxial compression. Journal of Rheology, 2013, 57, 1463-1489.	2.6	23
49	Analysis of anisotropic rotary diffusion models for fiber orientation. Composites Part A: Applied Science and Manufacturing, 2019, 126, 105605.	7.6	23
50	Prediction of fiber orientation in a rotating compressing and expanding mold. Polymer Engineering and Science, 2008, 48, 1405-1413.	3.1	22
51	A finite element method for flow in compression molding of thin and thick parts. Polymer Composites, 1995, 16, 70-82.	4.6	21
52	Measurements of droplet deformation in simple shear flow with zero interfacial tension. Journal of Rheology, 2001, 45, 259-273.	2.6	20
53	Uncertainty quantification of fiber orientation distribution measurements for long-fiber-reinforced thermoplastic composites. Journal of Composite Materials, 2018, 52, 1781-1797.	2.4	17
54	Mixing for reaction injection molding II. Impingement mixing of fiber suspensions. Polymer Engineering and Science, 1980, 20, 887-898.	3.1	16

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55	Sample variance measurement of mixing. Chemical Engineering Science, 1981, 36, 1829-1839.	3.8	15
56	Material stretching in laminar mixing flows: extended mapping technique applied to the journal bearing flow. International Journal for Numerical Methods in Fluids, 2002, 40, 189-196.	1.6	15
57	Dimensional Accuracy of Thermoset Composites: Simulation of Process-Induced Residual Stresses. Journal of Composite Materials, 2001, 35, 2171-2205.	2.4	15
58	The Optimized Quasi-Planar Approximation for Predicting Fiber Orientation in Injection-Molded Composites1. International Polymer Processing, 1997, 12, 238-248.	0.5	15
59	Electrostatic powder mixing. Polymer Engineering and Science, 1976, 16, 657-663.	3.1	13
60	Reliability in the characterization of fiber length distributions of injection molded long carbon fiber composites. Polymer Composites, 2018, 39, 4594-4604.	4.6	11
61	Prediction and Control of Fiber Orientation in Molded Parts. Advances in Chemistry Series, 1984, , 279-299.	0.6	10
62	Mechanics of Random Discontinuous Long-Fiber Thermoplastics—Part I: Generation and Characterization of Initial Geometry. Journal of Applied Mechanics, Transactions ASME, 2013, 80, .	2.2	10
63	A theory for concentrated fiber suspensions with strong fiberâ€fiber interactions. Makromolekulare Chemie Macromolecular Symposia, 1993, 68, 291-300.	0.6	9
64	Ideal Forming Analysis for Random Fiber Preforms. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2003, 125, 146-153.	2.2	8
65	Stretching distributions in chaotic mixing of droplet dispersions with unequal viscosities. Physics of Fluids, 2005, 17, 053101.	4.0	8
66	Microstructural evolution during complex laminar flow of liquid–liquid dispersions. Journal of Non-Newtonian Fluid Mechanics, 2001, 101, 21-41.	2.4	5
67	Stretch and Shape Distributions of Droplets with Interfacial Tension in Chaotic Mixing. International Polymer Processing, 2005, 20, 128-135.	0.5	4
68	Forming limit measurements for random-fiber mats. Polymer Composites, 1998, 19, 370-376.	4.6	3
69	Fluid Delivery and Metering for Reaction-Injection Molding. Journal of Engineering for Industry, 1977, 99, 678-681.	0.8	2
70	Discussion: "Vortex Motions Induced by V-Groove Rotating Cylinders and Their Effect on Mixing Performance―(Rotz, C. A., and Suh, N. P., 1979, ASME J. Fluids Eng., 100, pp. 186–192). Journal of Fluids Engineering, Transactions of the ASME, 1980, 102, 387-388.	1.5	1
71	Microstructural Development of Polymer Blends in Chaotic Flows. AIP Conference Proceedings, 2004,	0.4	0