

Charles L Tucker Iii

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6700181/publications.pdf>

Version: 2024-02-01

71
papers

7,913
citations

94269

37
h-index

91712

69
g-index

73
all docs

73
docs citations

73
times ranked

3013
citing authors

#	ARTICLE	IF	CITATIONS
1	The Use of Tensors to Describe and Predict Fiber Orientation in Short Fiber Composites. <i>Journal of Rheology</i> , 1987, 31, 751-784.	1.3	1,474
2	Orientation Behavior of Fibers in Concentrated Suspensions. <i>Journal of Reinforced Plastics and Composites</i> , 1984, 3, 98-119.	1.6	936
3	Stiffness predictions for unidirectional short-fiber composites: Review and evaluation. <i>Composites Science and Technology</i> , 1999, 59, 655-671.	3.8	597
4	MICROSTRUCTURALEVOLUTION INPOLYMERBLENDS. <i>Annual Review of Fluid Mechanics</i> , 2002, 34, 177-210.	10.8	372
5	Orthotropic closure approximations for flow-induced fiber orientation. <i>Journal of Rheology</i> , 1995, 39, 1095-1122.	1.3	370
6	Closure approximations for three-dimensional structure tensors. <i>Journal of Rheology</i> , 1990, 34, 367-386.	1.3	333
7	An anisotropic rotary diffusion model for fiber orientation in short- and long-fiber thermoplastics. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009, 156, 165-176.	1.0	269
8	An objective model for slow orientation kinetics in concentrated fiber suspensions: Theory and rheological evidence. <i>Journal of Rheology</i> , 2008, 52, 1179-1200.	1.3	240
9	Stereological measurement and error estimates for three-dimensional fiber orientation. <i>Polymer Engineering and Science</i> , 1992, 32, 240-253.	1.5	220
10	Fiber orientation in simple injection moldings. Part I: Theory and numerical methods. <i>Polymer Composites</i> , 1992, 13, 317-331.	2.3	208
11	Fiber orientation in simple injection moldings. Part II: Experimental results. <i>Polymer Composites</i> , 1992, 13, 332-341.	2.3	161
12	Flow regimes for fiber suspensions in narrow gaps. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 1991, 39, 239-268.	1.0	150
13	Dimensional Accuracy of Thermoset Composites: Simulation of Process-Induced Residual Stresses. <i>Journal of Composite Materials</i> , 2001, 35, 2171-2205.	1.2	140
14	Stiffness and thermal expansion predictions for hybrid short fiber composites. <i>Polymer Composites</i> , 1990, 11, 229-239.	2.3	115
15	Droplet deformation in dispersions with unequal viscosities and zero interfacial tension. <i>Journal of Fluid Mechanics</i> , 2001, 426, 199-228.	1.4	114
16	Fiber Suspensions in Complex Geometries: Flow/Orientation Coupling. <i>Canadian Journal of Chemical Engineering</i> , 2002, 80, 1093-1106.	0.9	109
17	A model for large deformation of an ellipsoidal droplet with interfacial tension. <i>Journal of Rheology</i> , 2003, 47, 659-682.	1.3	107
18	A model for fiber length attrition in injection-molded long-fiber composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2013, 51, 11-21.	3.8	104

#	ARTICLE	IF	CITATIONS
19	A numerical simulation of short fiber orientation in compression molding. <i>Polymer Composites</i> , 1990, 11, 164-173.	2.3	100
20	Predicting the Orientation of Short Fibers in Thin Compression Moldings. <i>Journal of Composite Materials</i> , 1986, 20, 539-557.	1.2	99
21	Area tensors for modeling microstructure during laminar liquid-liquid mixing. <i>International Journal of Multiphase Flow</i> , 1999, 25, 35-61.	1.6	95
22	Mixing for reaction injection molding. I. Impingement mixing of liquids. <i>Polymer Engineering and Science</i> , 1980, 20, 875-886.	1.5	85
23	Simulation of Compression Molding for Fiber-Reinforced Thermosetting Polymers. <i>Journal of Engineering for Industry</i> , 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. <i>Journal of Composite Materials</i> , 2008, 42, 1003-1029.	1.2	80
25	The Continuous Curing Process for Thermoset Polymer Composites. Part 1: Modeling and Demonstration. <i>Journal of Composite Materials</i> , 1995, 29, 1222-1253.	1.2	71
26	Fiber Orientation in 3-D Injection Molded Features. <i>International Polymer Processing</i> , 1999, 14, 409-420.	0.3	67
27	Optimal curing for thermoset matrix composites: Thermochemical considerations. <i>Polymer Composites</i> , 2001, 22, 118-131.	2.3	65
28	Theory for drop deformation in viscoelastic systems. <i>Journal of Rheology</i> , 2004, 48, 417-438.	1.3	61
29	Modeling and simulation of two-dimensional consolidation for thermoset matrix composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2002, 33, 877-892.	3.8	56
30	Compression Mold Filling Simulation for Non-Planar Parts. <i>International Polymer Processing</i> , 1990, 5, 79-87.	0.3	53
31	Optimal design for polymer extrusion. Part I: Sensitivity analysis for nonlinear steady-state systems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1998, 167, 283-302.	3.4	52
32	A model of compression mold filling. <i>Polymer Engineering and Science</i> , 1983, 23, 69-73.	1.5	49
33	Lagrangian particle calculations of distributive mixing: Limitations and applications. <i>Chemical Engineering Science</i> , 2006, 61, 6826-6836.	1.9	49
34	Analysis and sensitivity analysis for polymer injection and compression molding. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1998, 167, 325-344.	3.4	47
35	Numerical simulation of injection/compression liquid composite molding. Part 2: preform compression. <i>Composites Part A: Applied Science and Manufacturing</i> , 2001, 32, 207-220.	3.8	44
36	Enhanced conductivity of fuel cell plates through controlled fiber orientation. <i>AIChE Journal</i> , 2003, 49, 18-29.	1.8	43

#	ARTICLE	IF	CITATIONS
37	Thermal dispersion in resin transfer molding. <i>Polymer Composites</i> , 1995, 16, 495-506.	2.3	39
38	Prediction of the Elastic-Plastic Stress/Strain Response for Injection-Molded Long-Fiber Thermoplastics. <i>Journal of Composite Materials</i> , 2009, 43, 217-246.	1.2	39
39	A boundary element simulation of compression mold filling. <i>Polymer Engineering and Science</i> , 1988, 28, 413-420.	1.5	36
40	Optimal design for polymer extrusion. Part II: Sensitivity analysis for weakly-coupled nonlinear steady-state systems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1998, 167, 303-323.	3.4	33
41	Flow and heat transfer in compression mold filling. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 1987, 24, 245-264.	1.0	31
42	Numerical simulation of mold filling in foam reaction injection molding. <i>International Journal for Numerical Methods in Fluids</i> , 2003, 42, 1105-1134.	0.9	31
43	A global, multi-scale simulation of laminar fluid mixing: the extended mapping method. <i>International Journal of Multiphase Flow</i> , 2002, 28, 497-523.	1.6	29
44	Numerical simulation of injection/compression liquid composite molding. Part 1. Mesh generation. <i>Composites Part A: Applied Science and Manufacturing</i> , 2000, 31, 87-94.	3.8	27
45	Mechanical Property Predictions for Short Fiber/Brittle Matrix Composites. <i>Journal of Reinforced Plastics and Composites</i> , 1984, 3, 120-129.	1.6	25
46	Heat transfer and reaction issues in liquid composite molding. <i>Polymer Composites</i> , 1996, 17, 60-72.	2.3	25
47	Optimal curing for thermoset matrix composites: Thermochemical and consolidation considerations. <i>Polymer Composites</i> , 2002, 23, 739-757.	2.3	23
48	Mechanics of random discontinuous long-fiber thermoplastics. Part II: Direct simulation of uniaxial compression. <i>Journal of Rheology</i> , 2013, 57, 1463-1489.	1.3	23
49	Analysis of anisotropic rotary diffusion models for fiber orientation. <i>Composites Part A: Applied Science and Manufacturing</i> , 2019, 126, 105605.	3.8	23
50	Prediction of fiber orientation in a rotating compressing and expanding mold. <i>Polymer Engineering and Science</i> , 2008, 48, 1405-1413.	1.5	22
51	A finite element method for flow in compression molding of thin and thick parts. <i>Polymer Composites</i> , 1995, 16, 70-82.	2.3	21
52	Measurements of droplet deformation in simple shear flow with zero interfacial tension. <i>Journal of Rheology</i> , 2001, 45, 259-273.	1.3	20
53	Uncertainty quantification of fiber orientation distribution measurements for long-fiber-reinforced thermoplastic composites. <i>Journal of Composite Materials</i> , 2018, 52, 1781-1797.	1.2	17
54	Mixing for reaction injection molding II. Impingement mixing of fiber suspensions. <i>Polymer Engineering and Science</i> , 1980, 20, 887-898.	1.5	16

#	ARTICLE	IF	CITATIONS
55	Sample variance measurement of mixing. <i>Chemical Engineering Science</i> , 1981, 36, 1829-1839.	1.9	15
56	Material stretching in laminar mixing flows: extended mapping technique applied to the journal bearing flow. <i>International Journal for Numerical Methods in Fluids</i> , 2002, 40, 189-196.	0.9	15
57	Title is missing!. , 0, .		15
58	The Optimized Quasi-Planar Approximation for Predicting Fiber Orientation in Injection-Molded Composites1. <i>International Polymer Processing</i> , 1997, 12, 238-248.	0.3	15
59	Electrostatic powder mixing. <i>Polymer Engineering and Science</i> , 1976, 16, 657-663.	1.5	13
60	Reliability in the characterization of fiber length distributions of injection molded long carbon fiber composites. <i>Polymer Composites</i> , 2018, 39, 4594-4604.	2.3	11
61	Prediction and Control of Fiber Orientation in Molded Parts. <i>Advances in Chemistry Series</i> , 1984, , 279-299.	0.6	10
62	Mechanics of Random Discontinuous Long-Fiber Thermoplasticsâ€”Part I: Generation and Characterization of Initial Geometry. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2013, 80, .	1.1	10
63	A theory for concentrated fiber suspensions with strong fiberâ€“fiber interactions. <i>Makromolekulare Chemie Macromolecular Symposia</i> , 1993, 68, 291-300.	0.6	9
64	Ideal Forming Analysis for Random Fiber Preforms. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2003, 125, 146-153.	1.3	8
65	Stretching distributions in chaotic mixing of droplet dispersions with unequal viscosities. <i>Physics of Fluids</i> , 2005, 17, 053101.	1.6	8
66	Microstructural evolution during complex laminar flow of liquidâ€“liquid dispersions. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2001, 101, 21-41.	1.0	5
67	Stretch and Shape Distributions of Droplets with Interfacial Tension in Chaotic Mixing. <i>International Polymer Processing</i> , 2005, 20, 128-135.	0.3	4
68	Forming limit measurements for random-fiber mats. <i>Polymer Composites</i> , 1998, 19, 370-376.	2.3	3
69	Fluid Delivery and Metering for Reaction-Injection Molding. <i>Journal of Engineering for Industry</i> , 1977, 99, 678-681.	0.8	2
70	Discussion: â€œVortex Motions Induced by V-Groove Rotating Cylinders and Their Effect on Mixing Performanceâ€“(Rotz, C. A., and Suh, N. P., 1979, <i>ASME J. Fluids Eng.</i> , 100, pp. 186â€“192). <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 1980, 102, 387-388.	0.8	1
71	Microstructural Development of Polymer Blends in Chaotic Flows. <i>AIP Conference Proceedings</i> , 2004, , .	0.3	0