

# R Byron Pipes

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

90  
papers

3,505  
citations

28  
h-index

58  
g-index

93  
ext. papers

3,947  
ext. citations

5  
avg, IF

5.39  
L-index

#	Paper	IF	Citations
90	Simulation of composites curing using mechanics of structure genome based shell model. <i>Composites Part A: Applied Science and Manufacturing</i> , <b>2022</b> , 154, 106766	8.4	0
89	Interlayer fusion bonding of semi-crystalline polymer composites in extrusion deposition additive manufacturing. <i>Composites Science and Technology</i> , <b>2022</b> , 109334	8.6	0
88	Influence of Fiber Orientation on Deformation of Additive Manufactured Composites. <i>Additive Manufacturing</i> , <b>2021</b> , 102483	6.1	0
87	Pure bending of a continuous fiber array suspended in a thermoplastic polymer in the melt state. <i>Composites Part A: Applied Science and Manufacturing</i> , <b>2021</b> , 149, 106561	8.4	0
86	Extrusion deposition additive manufacturing with fiber-reinforced thermoplastic polymers <b>2020</b> , 191-219		3
85	Constitutive modeling for time- and temperature-dependent behavior of composites. <i>Composites Part B: Engineering</i> , <b>2020</b> , 184, 107726	10	8
84	Integrative analysis for prediction of process-induced, orientation-dependent tensile properties in a stochastic prepreg platelet molded composite. <i>Composites Part A: Applied Science and Manufacturing</i> , <b>2020</b> , 130, 105759	8.4	15
83	A numerical study of the meso-structure variability in the compaction process of prepreg platelet molded composites. <i>Composites Part A: Applied Science and Manufacturing</i> , <b>2020</b> , 138, 106010	8.4	5
82	Measuring the effects of heat treatment on SiC/SiC ceramic matrix composites using Raman spectroscopy. <i>Journal of the American Ceramic Society</i> , <b>2020</b> , 103, 1293-1303	3.8	2
81	Characterization of the Mechanical Properties of FFF Structures and Materials: A Review on the Experimental, Computational and Theoretical Approaches. <i>Materials</i> , <b>2019</b> , 12,	3.5	88
80	Residual stress determination of silicon containing boron dopants in ceramic matrix composites. <i>Journal of the American Ceramic Society</i> , <b>2019</b> , 102, 2820-2829	3.8	5
79	Tensile properties of a stochastic prepreg platelet molded composite. <i>Composites Part A: Applied Science and Manufacturing</i> , <b>2019</b> , 124, 105507	8.4	20
78	Structure-property relationship for a prepreg platelet molded composite with engineered meso-morphology. <i>Composite Structures</i> , <b>2019</b> , 210, 430-445	5.3	15
77	Development and validation of extrusion deposition additive manufacturing process simulations. <i>Additive Manufacturing</i> , <b>2019</b> , 25, 218-226	6.1	41
76	Coupling anisotropic viscosity and fiber orientation in applications to squeeze flow. <i>Journal of Rheology</i> , <b>2018</b> , 62, 669-679	4.1	25
75	Fused filament fabrication of fiber-reinforced polymers: A review. <i>Additive Manufacturing</i> , <b>2018</b> , 21, 1-166.1		272
74	Uniaxial strength of a composite array of overlaid and aligned prepreg platelets. <i>Composites Part A: Applied Science and Manufacturing</i> , <b>2018</b> , 109, 31-47	8.4	19

73	Challenge problems for the benchmarking of micromechanics analysis: Level I initial results. <i>Journal of Composite Materials</i> , <b>2018</b> , 52, 61-80	2.7	22
72	Three-dimensional thermoelastic properties of general composite laminates. <i>Journal of Composite Materials</i> , <b>2018</b> , 52, 1799-1808	2.7	4
71	Fiber orientation measurement from mesoscale CT scans of prepreg platelet molded composites. <i>Composites Part A: Applied Science and Manufacturing</i> , <b>2018</b> , 114, 241-249	8.4	31
70	A new anisotropic viscous constitutive model for composites molding simulation. <i>Composites Part A: Applied Science and Manufacturing</i> , <b>2018</b> , 115, 112-122	8.4	34
69	Simulation of prepreg platelet compression molding: Method and orientation validation. <i>Journal of Rheology</i> , <b>2018</b> , 62, 1443-1455	4.1	16
68	Multiscale modeling of viscoelastic behaviors of textile composites. <i>International Journal of Engineering Science</i> , <b>2018</b> , 130, 175-186	5.7	29
67	Cure history dependence of residual deformation in a thermosetting laminate. <i>Composites Part A: Applied Science and Manufacturing</i> , <b>2017</b> , 99, 186-197	8.4	30
66	Interlaminar Stresses in Composite Laminates Subjected to Twisting Deformation. <i>Journal of Applied Mechanics, Transactions ASME</i> , <b>2017</b> , 84,	2.7	4
65	Role of hierarchical morphology of helical carbon nanotube bundles on thermal expansion of polymer nanocomposites. <i>Journal of Materials Research</i> , <b>2017</b> , 32, 2738-2746	2.5	8
64	Chemical and thermal shrinkage in thermosetting prepreg. <i>Composites Part A: Applied Science and Manufacturing</i> , <b>2016</b> , 80, 72-81	8.4	54
63	Modeling of Hierarchical Morphology of Carbon Nanotube Bundles in Polymer Composites. <i>Macromolecular Theory and Simulations</i> , <b>2016</b> , 25, 524-532	1.5	6
62	Free-Edge Interlaminar Stresses in Angle-Ply Laminates: A Family of Analytic Solutions. <i>Journal of Applied Mechanics, Transactions ASME</i> , <b>2016</b> , 83,	2.7	4
61	Generalized Free-Edge Stress Analysis Using Mechanics of Structure Genome. <i>Journal of Applied Mechanics, Transactions ASME</i> , <b>2016</b> , 83,	2.7	29
60	Phase field modeling of damage in glassy polymers. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2016</b> , 93, 182-197	5	15
59	Digital image correlation measurement of resin chemical and thermal shrinkage after gelation. <i>Journal of Materials Science</i> , <b>2015</b> , 50, 5244-5252	4.3	36
58	Influence of through-thickness reinforcement aspect ratio on mode I delamination fracture resistance. <i>Composite Structures</i> , <b>2015</b> , 125, 13-22	5.3	10
57	Effects of crystal orientation on cellulose nanocrystals-cellulose acetate nanocomposite fibers prepared by dry spinning. <i>Biomacromolecules</i> , <b>2014</b> , 15, 3827-35	6.9	71
56	Prediction of the chemical and thermal shrinkage in a thermoset polymer. <i>Composites Part A: Applied Science and Manufacturing</i> , <b>2014</b> , 66, 35-43	8.4	40

55	Multi-Scale Modeling of Free-Edge Micro-Cracks with XFEM <b>2014</b> ,		2
54	Dispersion and its relation to carbon nanotube concentration in polyimide nanocomposites. <i>Composites Science and Technology</i> , <b>2013</b> , 85, 43-49	8.6	23
53	Composite toughness enhancement with interlaminar reinforcement. <i>Composites Part A: Applied Science and Manufacturing</i> , <b>2013</b> , 54, 98-106	8.4	21
52	Interlaminar Stresses in Composite Laminates Subjected to Anticlastic Bending Deformation. <i>Journal of Applied Mechanics, Transactions ASME</i> , <b>2013</b> , 80,	2.7	15
51	Free-edge singularities meet the microstructure: Important considerations. <i>Composites Science and Technology</i> , <b>2012</b> , 72, 933-937	8.6	4
50	A parametric study of fiber volume fraction distribution on the failure initiation location in open hole off-axis tensile specimen. <i>Composites Science and Technology</i> , <b>2011</b> , 71, 1819-1825	8.6	25
49	Validation of strain invariant failure analysis in an open hole off-axis specimen. <i>Jom</i> , <b>2011</b> , 63, 43-48	2.1	2
48	Interlaminar stresses in composite laminates: Thermoelastic deformation. <i>Composites Science and Technology</i> , <b>2010</b> , 70, 1605-1611	8.6	11
47	Micromechanical enhancement of the macroscopic strain state for advanced composite materials. <i>Composites Science and Technology</i> , <b>2009</b> , 69, 1974-1978	8.6	22
46	Modeling particle inflation from poly(amic acid) powdered precursors. III. Experimental determination of kinetic parameters. <i>Polymer Engineering and Science</i> , <b>2008</b> , 48, 617-626	2.3	8
45	Stress transfer in multi-walled carbon nanotubes. <i>Composites Science and Technology</i> , <b>2007</b> , 67, 3425-3436	8.6	54
44	Modeling particle inflation from poly(amic acid) powdered precursors. II. Morphological development during bubble growth. <i>Polymer Engineering and Science</i> , <b>2007</b> , 47, 572-581	2.3	6
43	Modeling particle inflation from poly(amic acid) powdered precursors. I. Preliminary stages leading to bubble growth. <i>Polymer Engineering and Science</i> , <b>2007</b> , 47, 560-571	2.3	7
42	Nanomechanics of Peeling Studied Using the Atomic Force Microscope <b>2007</b> , 627		
41	On the separation of carbon nanotubes. <i>Composites Science and Technology</i> , <b>2006</b> , 66, 1132-1140	8.6	12
40	Flexural deflection as a measure of van der Waals interaction forces in the CNT array. <i>Composites Science and Technology</i> , <b>2006</b> , 66, 1125-1131	8.6	16
39	Energetics of imperfectly bonded carbon nanotube arrays in flexure. <i>Composites Science and Technology</i> , <b>2006</b> , 66, 2844-2854	8.6	5
38	Analysis of Experimental Results in Mechanics of MWNT <b>2006</b> ,		1

37	Polyimide foams from powder: Experimental analysis of competitive diffusion phenomena. <i>Polymer</i> , <b>2005</b> , 46, 9296-9303	3.9	29
36	Solid-State Polyimide Foaming from Powder Precursors: Effect of Morphology and Process Parameters on the Diffusive Phenomena. <i>Frontiers in Forests and Global Change</i> , <b>2004</b> , 23, 299-309	1.6	9
35	Self-consistent properties of carbon nanotubes and hexagonal arrays as composite reinforcements. <i>Composites Science and Technology</i> , <b>2003</b> , 63, 1349-1358	8.6	49
34	Scale Effects in Carbon Nanostructures: Self-Similar Analysis. <i>Nano Letters</i> , <b>2003</b> , 3, 239-243	11.5	22
33	Probabilistic analysis of multi-step failure process of a laminated composite in bending. <i>Composites Science and Technology</i> , <b>1995</b> , 55, 413-421	8.6	20
32	First-Order Approximations for the Effective Shearing Viscosities of Continuous-Fiber Suspensions. <i>Journal of Composite Materials</i> , <b>1995</b> , 29, 1169-1180	2.7	9
31	Non-Newtonian Constitutive Relationships for Hyperconcentrated Fiber Suspensions. <i>Journal of Composite Materials</i> , <b>1994</b> , 28, 343-351	2.7	12
30	Rheological behavior of two- and three-phase fiber suspensions. <i>Polymer Composites</i> , <b>1994</b> , 15, 427-435	3	5
29	Some Observations on the Interlaminar Strength of Composite Laminates. <i>Solid Mechanics and Its Applications</i> , <b>1994</b> , 255-267	0.4	1
28	Pathologies associated with the numerical analysis of hyper-anisotropic materials. <i>International Journal for Numerical Methods in Engineering</i> , <b>1993</b> , 36, 3487-3508	2.4	10
27	A modeling approach to thermoplastic pultrusion. I: Formulation of models. <i>Polymer Composites</i> , <b>1993</b> , 14, 173-183	3	28
26	A modeling approach to thermoplastic pultrusion. II: Verification of models. <i>Polymer Composites</i> , <b>1993</b> , 14, 184-194	3	25
25	On Flow through Aligned Fiber Beds and Its Application to Composites Processing. <i>Journal of Composite Materials</i> , <b>1992</b> , 26, 1351-1373	2.7	131
24	Anisotropic Viscosities of an Oriented Fiber Composite with a Power-Law Matrix. <i>Journal of Composite Materials</i> , <b>1992</b> , 26, 1536-1552	2.7	28
23	Anisotropic Viscosities of Oriented Discontinuous Fiber Laminates. <i>Journal of Composite Materials</i> , <b>1992</b> , 26, 1088-1099	2.7	7
22	Effect of surface treatment of pitch-based carbon fiber on mechanical properties of polyethernitrile composites. <i>Polymer Composites</i> , <b>1992</b> , 13, 15-29	3	12
21	A finite element formulation for highly anisotropic incompressible elastic solids. <i>International Journal for Numerical Methods in Engineering</i> , <b>1992</b> , 33, 1573-1596	2.4	16
20	A Constitutive Relation for the Viscous Flow of an Oriented Fiber Assembly. <i>Journal of Composite Materials</i> , <b>1991</b> , 25, 1204-1217	2.7	41

19	Issues in diaphragm forming of continuous fiber reinforced thermoplastic composites. <i>Polymer Composites</i> , <b>1991</b> , 12, 246-256	3	33
18	Influence of Fiber Length on the Viscous Flow of an Oriented Fiber Assembly. <i>Journal of Composite Materials</i> , <b>1991</b> , 25, 1379-1390	2.7	19
17	In-situ consolidation for the thermoplastic composite ring Residual stress state. <i>Composites Manufacturing</i> , <b>1991</b> , 2, 105-113		6
16	Development of a facility for pultrusion of thermoplastic-matrix composites. <i>Composites Manufacturing</i> , <b>1991</b> , 2, 114-123		14
15	Constitutive relationships for aligned discontinuous fibre composites. <i>Composites Manufacturing</i> , <b>1991</b> , 2, 141-146		8
14	Finite element analysis of composite sheet-forming process. <i>Composites Manufacturing</i> , <b>1991</b> , 2, 161-170		22
13	Numerical prediction of three-dimensional fiber orientation in Hele-Shaw flows. <i>Polymer Engineering and Science</i> , <b>1990</b> , 30, 848-859	2.3	68
12	PAN and Pitch-Based Carbon Fiber-Reinforced Polyethernitrile Composites. <i>Journal of Thermoplastic Composite Materials</i> , <b>1990</b> , 3, 172-189	1.9	9
11	Design methodology for the molding of short-fiber thermoset composites. <i>Composites Science and Technology</i> , <b>1988</b> , 33, 241-256	8.6	3
10	Process induces fiber orientation: Numerical simulation with experimental verification. <i>Polymer Composites</i> , <b>1985</b> , 6, 82-86	3	21
9	Numerical Prediction of Fiber Orientation in Dilute Suspensions. <i>Journal of Composite Materials</i> , <b>1983</b> , 17, 330-343	2.7	92
8	Interlaminar Fracture of Composite Materials. <i>Journal of Composite Materials</i> , <b>1982</b> , 16, 386-394	2.7	109
7	Behavior of discontinuous fiber composites: Fiber orientation. <i>Polymer Composites</i> , <b>1982</b> , 3, 34-39	3	79
6	Analysis of the Shearout Failure Mode in Composite Bolted Joints <b>1981</b> , 34-49		9
5	Macroscopic fracture of fibrous composites. <i>Materials Science and Engineering</i> , <b>1980</b> , 45, 247-253		58
4	Notched Strength of Composite Materials. <i>Journal of Composite Materials</i> , <b>1979</b> , 13, 148-160	2.7	159
3	Moir Analysis of the Interlaminar Shear Edge Effect in Laminated Composites. <i>Journal of Composite Materials</i> , <b>1971</b> , 5, 255-259	2.7	87
2	The Influence of Stacking Sequence on Laminate Strength. <i>Journal of Composite Materials</i> , <b>1971</b> , 5, 50-57.	2.7	241

- 1 Interlaminar Stresses in Composite Laminates Under Uniform Axial Extension. *Journal of Composite Materials*, **1970**, 4, 538-548 2.7 818