

Charles E Bakis

List of Publications by Year in descending order

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152
papers

4,546
citations

172457

29
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110387

64
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180
all docs

180
docs citations

180
times ranked

3484
citing authors

#	ARTICLE	IF	CITATIONS
1	Using data science to locate nanoparticles in a polymer matrix composite. <i>Composites Science and Technology</i> , 2022, 218, 109205.	7.8	5
2	Novel Crash Sled with a Translating Support Mass. <i>Experimental Mechanics</i> , 2022, 62, 715-728.	2.0	2
3	Processing and properties of low-temperature cure carbon fiber-reinforced bismaleimide composite. <i>Journal of Composite Materials</i> , 2022, 56, 1191-1209.	2.4	2
4	Comparison of woven and stitched out-of-autoclave E-glass/epoxy composites subjected to quasi-static and cyclic tensile loads. <i>Journal of Reinforced Plastics and Composites</i> , 2021, 40, 714-725.	3.1	2
5	Charpy impact energy absorption of 3D printed continuous Kevlar reinforced composites. <i>Journal of Composite Materials</i> , 2021, 55, 1705-1713.	2.4	17
6	Durability Assessment of 15- to 20-Year-Old GFRP Bars Extracted from Bridges in the US. II: GFRP Bar Assessment. <i>Journal of Composites for Construction</i> , 2021, 25, .	3.2	7
7	Crash Sled Testing of Triaxially Braided CFRP for Improved Vehicular Crashworthiness. , 2021, , .		1
8	Durability Assessment of 15- to 20-Year-Old GFRP Bars Extracted from Bridges in the US. I: Selected Bridges, Bar Extraction, and Concrete Assessment. <i>Journal of Composites for Construction</i> , 2021, 25, .	3.2	8
9	Structural Damping Model for Composite Rotorcraft Blades with Carbon Nanotube Interlayers. <i>AIAA Journal</i> , 2021, 59, 1539-1547.	2.6	3
10	Hybrid carbon nanotube - carbon fiber composites for high damping. <i>Composites Science and Technology</i> , 2021, 207, 108712.	7.8	17
11	Durability assessment of FRP-concrete bond after sustained load for up to thirteen years. <i>Composites Part B: Engineering</i> , 2021, 224, 109180.	12.0	10
12	Evaluating the effect of variable fiber content on mechanical properties of additively manufactured continuous carbon fiber composites. <i>Journal of Reinforced Plastics and Composites</i> , 2021, 40, 365-377.	3.1	29
13	Transverse Young's modulus of carbon/glass hybrid fiber composites. <i>Journal of Composite Materials</i> , 2020, 54, 947-960.	2.4	1
14	Effects of Sustained Loading and Temperature on a Concrete-Epoxy Bonded Interface. <i>Journal of Materials in Civil Engineering</i> , 2020, 32, 04020016.	2.9	5
15	Assessment of anisotropic mechanical properties of a 3D printed carbon whisker reinforced composite. <i>Advanced Composite Materials</i> , 2019, 28, 545-560.	1.9	12
16	A Recalibration of the Crack Width Bond-Dependent Coefficient for GFRP-Reinforced Concrete. <i>Journal of Composites for Construction</i> , 2019, 23, .	3.2	15
17	Reactive Molecular Dynamics Simulations of the Atomic Oxygen Impact on Epoxies with Different Chemistries. <i>Journal of Physical Chemistry C</i> , 2019, 123, 15145-15156.	3.1	29
18	Multiscale Characterization and Modeling of Nanosilica-Reinforced Filament Wound Carbon/Epoxy Composite. <i>Materials Performance and Characterization</i> , 2019, 8, 20180108.	0.3	2

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19	Ballistic impact response of carbon/epoxy tubes with variable nanosilica content. Journal of Composite Materials, 2018, 52, 1589-1604.	2.4	12
20	Electrolyte-resistant epoxy for bonding batteries based on sandwich structures. Journal of Applied Polymer Science, 2018, 135, 46059.	2.6	6
21	Effect of chemical structure on thermo-mechanical properties of epoxy polymers: Comparison of accelerated ReaxFF simulations and experiments. Polymer, 2018, 158, 354-363.	3.8	43
22	Accelerated ReaxFF Simulations for Describing the Reactive Cross-Linking of Polymers. Journal of Physical Chemistry A, 2018, 122, 6633-6642.	2.5	96
23	On the inverse determination of displacements, strains, and stresses in a carbon nanofiber/polyurethane nanocomposite from conductivity data obtained via electrical impedance tomography. Journal of Intelligent Material Systems and Structures, 2017, 28, 2617-2629.	2.5	36
24	Multifunctional structural lithium-ion battery for electric vehicles. Journal of Intelligent Material Systems and Structures, 2017, 28, 1603-1613.	2.5	45
25	Compressive strength and stiffness of filament-wound cylinders. Journal of Reinforced Plastics and Composites, 2016, 35, 1543-1553.	3.1	5
26	Effects of temperature and sustained loading on the mechanical response of CFRP bonded to concrete. Construction and Building Materials, 2016, 124, 442-452.	7.2	24
27	Three-dimensional elastic behavior of undulating laminas in fiber composites. Journal of Reinforced Plastics and Composites, 2016, 35, 151-164.	3.1	4
28	Effect of nanofiller length and orientation distributions on Mode I fracture toughness of unidirectional fiber composites. Journal of Composite Materials, 2016, 50, 1331-1352.	2.4	17
29	Indentation damage detection in glass/epoxy composite laminates with electrically tailored conductive nanofiller. Journal of Intelligent Material Systems and Structures, 2016, 27, 679-688.	2.5	11
30	DIC Strain Analysis of FRP/Concrete Bond After Sustained Loading. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 47-56.	0.5	1
31	Vibration Isolation of a Cantilever Beam Using Fluidic Flexible Matrix Composite Tubes. , 2015, , .		0
32	Rate Effects and Environmental Sensitivity of Textile Energy Absorbers. Journal of the American Helicopter Society, 2015, 60, 1-10.	0.8	0
33	Fluidic Flexible Matrix Composite Vibration Absorber for a Cantilever Beam. Journal of Vibration and Acoustics, Transactions of the ASME, 2015, 137, .	1.6	2
34	Fluidic flexible matrix composite damping treatment for a cantilever beam. Journal of Sound and Vibration, 2015, 340, 80-94.	3.9	1
35	Design, manufacture and test of a novel structural battery based on sandwich construction. Journal of Sandwich Structures and Materials, 2015, 17, 666-690.	3.5	22
36	Multi-objective optimal design of composite rotorcraft driveshaft including strain rate and temperature effects. Composite Structures, 2015, 128, 42-53.	5.8	11

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37	Anisotropic networking of carbon black in glass/epoxy composites using electric field. Journal of Composite Materials, 2015, 49, 535-544.	2.4	18
38	Advanced Composite Materials Technology for Rotorcraft through the Use of Nanoadditives. Journal of the American Helicopter Society, 2015, 60, 1-10.	0.8	5
39	Tactile imaging and distributed strain sensing in highly flexible carbon nanofiber/polyurethane nanocomposites. Carbon, 2015, 95, 485-493.	10.3	73
40	Viscoelastic characterization and self-heating behavior of laminated fiber composite driveshafts. Materials & Design, 2015, 66, 346-355.	5.1	24
41	Damage detection via electrical impedance tomography in glass fiber/epoxy laminates with carbon black filler. Structural Health Monitoring, 2015, 14, 100-109.	7.5	71
42	Determination of Effective Ply-level Properties of Filament Wound Composite Tubes Loaded in Compression. Journal of Testing and Evaluation, 2015, 43, 20130159.	0.7	5
43	Advanced Grid-Stiffened Composite Shells for Heavy-Lift Helicopter Blade Spars. , 2014, , .		2
44	Experimental Characterization of a Cantilever Beam With a Fluidic Flexible Matrix Composite Vibration Treatment. , 2014, , .		2
45	Damage detection and conductivity evolution in carbon nanofiber epoxy via electrical impedance tomography. Smart Materials and Structures, 2014, 23, 045034.	3.5	81
46	FRP Stay-in-Place Structural Forms for Concrete Bridge Decks: A State-of-the-Art Review. ACI Structural Journal, 2014, 111, .	0.2	23
47	Experimental Evaluation of Novel Foam-Filled Energy-Absorbing Composite Tubes. Journal of the American Helicopter Society, 2014, 59, 1-10.	0.8	0
48	Tensile strength characteristics of GFRP bars in concrete beams with work cracks under sustained loading and severe environments. Journal Wuhan University of Technology, Materials Science Edition, 2013, 28, 934-937.	1.0	11
49	FRP Reinforcing bars " designs and methods of manufacture (Review of Patents). Mechanics of Composite Materials, 2013, 49, 381-400.	1.4	20
50	Experimental Study of Torsional-Bending Coupled Vibration of a Rotor System With a Bladed Disk. , 2013, , .		1
51	Comparative study of nanomaterials for interlaminar reinforcement of fiber-composite panels. , 2013, , .		2
52	Vibration damping of a cantilever beam utilizing fluidic flexible matrix composites. Proceedings of SPIE, 2013, , .	0.8	3
53	Evaluation of Millimeter-Size Fluidic Flexible Matrix Composite Tubes. , 2013, , .		2
54	Tunable Vibration Absorption of a Cantilever Beam Utilizing Fluidic Flexible Matrix Composites. , 2013, , .		1

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55	Actuation of fluidic flexible matrix composites in structural media. <i>Journal of Intelligent Material Systems and Structures</i> , 2012, 23, 269-278.	2.5	10
56	Effects of carbon nanofiller functionalization and distribution on interlaminar fracture toughness of multi-scale reinforced polymer composites. <i>Carbon</i> , 2012, 50, 1316-1331.	10.3	86
57	Effect of functionalization of single-wall carbon nanotubes (SWNTs) on the damping characteristics of SWNT-based epoxy composites via multiscale analysis. <i>Composites Part A: Applied Science and Manufacturing</i> , 2011, 42, 1748-1755.	7.6	36
58	Tailored Fluidic Composites for Stiffness or Volume Change. , 2011, , .		4
59	Nonlinear micromechanical model of filament-wound composites considering fiber undulation. <i>Mechanics of Composite Materials</i> , 2011, 47, 73-94.	1.4	7
60	Assessment of transmission of the shear stress in potted anchors for composite rods: 4. Nonlinear bond behavior between the FRP rod and the potting material. <i>Mechanics of Composite Materials</i> , 2011, 47, 285-300.	1.4	1
61	Multi-physics design and optimization of flexible matrix composite driveshafts. <i>Composite Structures</i> , 2011, 93, 2231-2240.	5.8	17
62	Experimental characterization of phenolic-impregnated honeycomb sandwich structures for transportation vehicles. <i>Composite Structures</i> , 2011, 93, 2910-2924.	5.8	50
63	Fracture toughness characterization of nanoreinforced carbon-fiber composite materials for damage mitigation. , 2011, , .		3
64	Durability of GFRP Reinforcement Bars. , 2011, , 33-36.		5
65	Multiscale analysis of the effect of carbon nanotube (CNT) functionalization on damping characteristics of CNT-based composites. <i>Proceedings of SPIE</i> , 2010, , .	0.8	1
66	Assessment of transmission of the shear stress in potted anchors for composite rods 3. Bipotted anchor. <i>Mechanics of Composite Materials</i> , 2010, 46, 133-146.	1.4	2
67	Flexible Matrix Composite Skins for One-dimensional Wing Morphing. <i>Journal of Intelligent Material Systems and Structures</i> , 2010, 21, 1771-1781.	2.5	71
68	The effect of electrostatic and electrohydrodynamic forces on the chaining of carbon nanofibres in liquid epoxy. <i>Journal Physics D: Applied Physics</i> , 2010, 43, 175402.	2.8	5
69	Multiscale Damping Model for Polymeric Composites Containing Carbon Nanotube Ropes. <i>Journal of Composite Materials</i> , 2010, 44, 2301-2323.	2.4	20
70	Damping Characteristics of Carbon Nanotube-Epoxy Composites via Multiscale Analysis. , 2010, , .		5
71	Innovative Energy Absorbing Composite Tubes Incorporating Extension-Torsion Coupling, Stitch Ripping, and Foam Crushing. , 2010, , 269-278.		0
72	Variable Stiffness Structures Utilizing Fluidic Flexible Matrix Composites. <i>Journal of Intelligent Material Systems and Structures</i> , 2009, 20, 443-456.	2.5	110

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73	Viscoelastic Characterization and Self-Heating Behavior of a Flexible Matrix Composite Driveshaft. <i>Journal of Composite Materials</i> , 2009, 43, 1335-1360.	2.4	4
74	Slip effects in reinforced concrete beams with mechanically fastened FRP strip. <i>Cement and Concrete Composites</i> , 2009, 31, 496-504.	10.7	44
75	Assessment of transmission of the shear stress in potted anchors for composite rods 1. Sleeve of constant thickness. <i>Mechanics of Composite Materials</i> , 2009, 45, 217-234.	1.4	6
76	Assessment of transmission of the shear stress in potted anchors for composite rods. 2. Sleeve of variable thickness. <i>Mechanics of Composite Materials</i> , 2009, 45, 381-398.	1.4	4
77	The interfacial strength of carbon nanofiber epoxy composite using single fiber pullout experiments. <i>Nanotechnology</i> , 2009, 20, 295701.	2.6	80
78	Sustained Loading and Temperature Response of Fiber-Reinforced Polymer-Concrete Bond. <i>Transportation Research Record</i> , 2009, 2131, 155-162.	1.9	14
79	Analysis of stress concentration during tension of round pultruded composite rods. <i>Composite Structures</i> , 2008, 83, 100-109.	5.8	24
80	A new method of chaining carbon nanofibers in epoxy. <i>Nanotechnology</i> , 2008, 19, 325606.	2.6	19
81	Stiffness Shaping for Zero Vibration Fluidic Flexible Matrix Composites. , 2008, , .		3
82	Durability of externally bonded fiber-reinforced polymer (FRP) composite systems. , 2008, , 292-322.		4
83	A variable transverse stiffness sandwich structure using fluidic flexible matrix composites (F2MC). , 2008, , .		7
84	2007 Best Paper Awards. <i>Journal of Composites for Construction</i> , 2008, 12, 578-578.	3.2	0
85	Fluidic flexible matrix composites for autonomous structural tailoring. , 2007, , .		8
86	Fibrillar Network Adaptive Structure with Ion-transport Actuation. <i>Journal of Intelligent Material Systems and Structures</i> , 2007, 18, 323-334.	2.5	72
87	Journal of Composites for Construction Best Paper Awards. <i>Journal of Composites for Construction</i> , 2007, 11, 555-555.	3.2	0
88	Bond Durability of Glass Fiber-Reinforced Polymer Bars Embedded in Concrete Beams. <i>Journal of Composites for Construction</i> , 2007, 11, 269-278.	3.2	24
89	Nonlinear-elastic finite axisymmetric deformation of flexible matrix composite membranes under internal pressure and axial force. <i>Composites Science and Technology</i> , 2006, 66, 3053-3063.	7.8	85
90	Optimal design of press-fitted filament wound composite flywheel rotors. <i>Composite Structures</i> , 2006, 72, 47-57.	5.8	48

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91	C-Shape Specimen for Tensile Radial Strength of Thick, Filament-wound Rings. Journal of Composite Materials, 2006, 40, 97-117.	2.4	11
92	Effects of Interfacial Friction on the Damping Characteristics of Composites Containing Randomly Oriented Carbon Nanotube Ropes. Journal of Intelligent Material Systems and Structures, 2006, 17, 217-229.	2.5	29
93	Analysis of damping characteristics of a viscoelastic polymer filled with randomly oriented single-wall nanotube ropes. , 2006, , .		2
94	<title>On the damping characteristics of polymeric composites with randomly oriented single-walled carbon nanorope fillers</title>. , 2005, 5760, 173.		0
95	Durability Evaluation of Glass Fiber Reinforced-Polymer-Concrete Bonded Interfaces. Journal of Composites for Construction, 2005, 9, 348-359.	3.2	42
96	Analysis of Elastic Stresses in Thick, Polarâ€œOrthotropic, C-Shaped Rings. Journal of Composite Materials, 2004, 38, 1619-1638.	2.4	10
97	The investigation of carbon-nanotube-based polymers for improved structural damping. , 2004, , .		12
98	Mechanical Behavior of Fiber-Reinforced Polymer-Wrapped Concrete Columnsâ€”Complicating Effects. Journal of Composites for Construction, 2004, 8, 97-103.	3.2	48
99	Some Aspects of Designing Multirim Composite Flywheels. Mechanics of Composite Materials, 2004, 40, 397-408.	1.4	1
100	Interfacial damping characteristics of carbon nanotube-based composites. Composites Science and Technology, 2004, 64, 2425-2437.	7.8	322
101	Durability of GFRP-Concrete Bonded Interfaces. , 2004, , 356.		1
102	Crack widths during sustained flexural loading of small-scale GFRP reinforced concrete beams. , 2004, , 773-780.		0
103	Critical state of imbalanced rotating anisotropic disks with small radial and shear moduli. International Journal of Solids and Structures, 2003, 40, 5219-5227.	2.7	6
104	Design of High-Speed Permanent Magnet Machine for Small Flywheels. , 2003, , .		3
105	Damping Characteristics of Carbon Nanotube Based Composites. , 2003, , 1925.		6
106	Viscoelastic Model of Anisotropic Flywheels. , 2003, , 75-92.		0
107	Condition Monitoring of Filament-Wound Composite Flywheels Having Circumferential Cracks. Journal of Spacecraft and Rockets, 2002, 39, 306-313.	1.9	1
108	A Virtual Containment Strategy for Filament-Wound Composite Flywheel Rotors with Damage Growth. Journal of Composite Materials, 2002, 36, 1103-1120.	2.4	2

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109	Fiber-Reinforced Polymer Composites for Construction—State-of-the-Art Review. <i>Journal of Composites for Construction</i> , 2002, 6, 73-87.	3.2	1,370
110	Optoelectronic strain measurement for flywheels. <i>Experimental Mechanics</i> , 2002, 42, 237-246.	2.0	7
111	Self-monitoring, pseudo-ductile, hybrid FRP reinforcement rods for concrete applications. <i>Composites Science and Technology</i> , 2001, 61, 815-823.	7.8	117
112	Effect of Environmental Pre-Conditioning on Bond of FRP Reinforcement to Concrete. <i>Journal of Reinforced Plastics and Composites</i> , 2001, 20, 881-900.	3.1	19
113	Estimation of limit strains in disk-type flywheels made of a compliant elastomeric matrix composite undergoing radial creep. <i>Mechanics of Composite Materials</i> , 2000, 36, 55-58.	1.4	5
114	Deformation in Concrete with External CFRP Sheet Reinforcement. <i>Journal of Composites for Construction</i> , 2000, 4, 85-94.	3.2	26
115	Local Bond-Slip Relationship for FRP Reinforcement in Concrete. <i>Journal of Composites for Construction</i> , 2000, 4, 24-31.	3.2	162
116	Transfer and Development Lengths of FRP Prestressing Tendons. <i>PCI Journal</i> , 2000, 45, 84-95.	0.6	22
117	Effects of Matrix Cracking on the Creep of SiC-SiC Microcomposites. <i>Key Engineering Materials</i> , 1999, 164-165, 297-302.	0.4	1
118	Evaluation of bond using FRP rods with axisymmetric deformations. <i>Construction and Building Materials</i> , 1999, 13, 299-309.	7.2	32
119	Creep of SiC-SiC microcomposites. <i>Journal of the European Ceramic Society</i> , 1999, 19, 2285-2296.	5.7	18
120	Slip Modulus of FRP Sheets Bonded to Concrete. <i>Journal of Composites for Construction</i> , 1999, 3, 161-167.	3.2	35
121	High-Temperature Creep and Microstructural Evolution of Chemically Vapor-Deposited Silicon Carbide Fibers. <i>Journal of the American Ceramic Society</i> , 1999, 82, 407-413.	3.8	12
122	Analysis of bonding mechanisms of smooth and lugged FRP rods embedded in concrete. <i>Composites Science and Technology</i> , 1998, 58, 1307-1319.	7.8	44
123	Simplified Analysis of Residual Stresses in In-Situ Cured Hoop-Wound Rings. <i>Journal of Composite Materials</i> , 1998, 32, 1325-1343.	2.4	15
124	Microstructural development of SCS-6 SiC fibers during high temperature creep. <i>Journal of Materials Research</i> , 1998, 13, 1853-1860.	2.6	2
125	Viscoelastic Characterization of High Fiber Content Filament Wound Polyurethane Matrix Composites. <i>Rubber Chemistry and Technology</i> , 1998, 71, 1042-1058.	1.2	1
126	Design and Manufacturing of Filament Wound Elastomeric Matrix Composite Flywheels. <i>Journal of Reinforced Plastics and Composites</i> , 1997, 16, 488-502.	3.1	15

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127	Design and Testing of Composite Flywheel Rotors. , 1997, , 3-22.		17
128	Short-term sustained loading of FRP tendonanchor systems. Construction and Building Materials, 1996, 10, 255-266.	7.2	17
129	A permanent-magnet rotor for a high-temperature superconducting bearing. IEEE Transactions on Magnetics, 1996, 32, 2609-2612.	2.1	13
130	Methods of Determining the Temperature Dependence of Primary Creep. , 1996, , 9-18.		1
131	Performance of FRP Tendon-Anchor Systems for Prestressed Concrete Structures. PCI Journal, 1996, 41, 34-44.	0.6	66
132	Comparison of Bend Stress Relaxation and Tensile Creep of CVD SiC Fibers. Journal of the American Ceramic Society, 1995, 78, 3244-3252.	3.8	19
133	Test Methods for FRP-Concrete Systems Subjected to Mechanical Loads: State of the Art Review. Journal of Reinforced Plastics and Composites, 1995, 14, 524-558.	3.1	61
134	An adaptive time domain deconvolution technique to characterize planar flaws in highly attenuative composites. Journal of Nondestructive Evaluation, 1994, 13, 101-109.	2.4	2
135	FRP Reinforcement: Materials and Manufacturing. , 1993, , 13-58.		10
136	Effect of Interleaves on the Damage Mechanisms and Residual Strength of Notched Composite Laminates Subjected to Axial Fatigue Loading. , 1993, , 552-574.		3
137	Thermomechanical Loading in Pure Torsion: Test Control and Deformation Behavior. , 1993, , 223-243.		3
138	The Adiabatic Thermoelastic Effect in Laminated Fiber Composites. Journal of Composite Materials, 1991, 25, 809-830.	2.4	26
139	NDE Engineering in the Materials Life Cycle. Journal of Pressure Vessel Technology, Transactions of the ASME, 1991, 113, 163-169.	0.6	6
140	Fatigue Behavior of Composite Laminates. Composite Materials Series, 1991, , 105-180.	0.2	25
141	SEM investigation of fiber fracture in composite laminates. Materials Characterization, 1990, 24, 179-190.	4.4	14
142	Matrix Toughness, Long-Term Behavior, and Damage Tolerance of Notched Graphite Fiber-Reinforced Composite Materials. , 1990, , 349-370.		9
143	Influence of Load Levels on Damage Growth Mechanisms of Notched Composite Materials. , 1990, , 371-389.		3
144	Effects of Matrix Toughness on Fatigue Response of Graphite Fiber Composite Laminates. , 1989, , 5-18.		12

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145	Damage Initiation and Growth in Notched Laminates Under Reversed Cyclic Loading. , 1989, , 66-83.		17
146	Adiabatic Thermoelastic Measurements. , 1989, , 139-146.		2
147	Response of Thick, Notched Laminates Subjected to Tension-Compression Cyclic Loads. , 1986, , 314-334.		20
148	Design of high-speed permanent magnet machines with anisotropic electromagnetic and structural continuum formulations. , 0, , .		1
149	Deformation of CVD Silicon Carbide Monofilaments Under Variable Mechanical Loading. Ceramic Engineering and Science Proceedings, 0, , 198-205.	0.1	2
150	Fibrillar Network Adaptive Structure with Ion-transport Actuation. Journal of Intelligent Material Systems and Structures, 0, , .	2.5	2
151	A Test Method to Measure the Response of Composite Materials Under Reversed Cyclic Loads. , 0, , 180-180-14.		2
152	Fatigue resistance of ultra-high-modulus pitch-based carbon fiber/epoxy composites under tensile loading. Journal of Composite Materials, 0, , 002199832110558.	2.4	1