Catalin R Picu

List of Publications by Year
in descending order

		76326	82547
205	6,424	40	72
papers	citations	h-index	g-index

210	210	210	6004
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Effect of defects on the intrinsic strength and stiffness of graphene. Nature Communications, 2014, 5, 3186.	12.8	560
2	Mechanics of random fiber networksâ€"a review. Soft Matter, 2011, 7, 6768.	2.7	265
3	Strain rate sensitivity of the commercial aluminum alloy AA5182-O. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 390, 334-343.	5.6	250
4	Influence of aging treatment on mechanical properties of 6061 aluminum alloy. Materials & Design, 2010, 31, 972-975.	5.1	194
5	Mechanical behavior of Tiâ€"6Alâ€"4V at high and moderate temperaturesâ€"Part II: constitutive modeling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 326, 306-316.	5.6	179
6	A mechanism for the negative strain-rate sensitivity of dilute solid solutions. Acta Materialia, 2004, 52, 3447-3458.	7.9	172
7	Morphology and mechanics of fungal mycelium. Scientific Reports, 2017, 7, 13070.	3.3	169
8	Atomistic study of pipe diffusion in Alâ€"Mg alloys. Acta Materialia, 2004, 52, 161-171.	7.9	151
9	Mechanical behavior of Tiâ€"6Alâ€"4V at high and moderate temperaturesâ€"Part I: Experimental results. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 326, 297-305.	5.6	147
10	Network model for the viscoelastic behavior of polymer nanocomposites. Polymer, 2004, 45, 7779-7790.	3.8	111
11	Concurrent AtC coupling based on a blend of the continuum stress and the atomistic force. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 4548-4560.	6.6	109
12	Strain and size effects on heat transport in nanostructures. Journal of Applied Physics, 2003, 93, 3535-3539.	2.5	107
13	Lattice Monte Carlo Simulations of Chain Conformations in Polymer Nanocomposites. Macromolecules, 2005, 38, 4495-4500.	4.8	103
14	Heterogeneity in Epoxy Nanocomposites Initiates Crazing: Significant Improvements in Fatigue Resistance and Toughening. Small, 2009, 5, 1403-1407.	10.0	100
15	The effect of carbon nanotube dimensions and dispersion on the fatigue behavior of epoxy nanocomposites. Nanotechnology, 2008, 19, 285709.	2.6	97
16	Suppression of fatigue crack growth in carbon nanotube composites. Applied Physics Letters, 2007, 91, 193109.	3.3	91
17	Structure and Dynamics of Polyethylene Nanocomposites. Macromolecules, 2005, 38, 9351-9358.	4.8	90
18	Size effect on mechanical behavior of random fiber networks. International Journal of Solids and Structures, 2013, 50, 3332-3338.	2.7	86

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19	Structure of linear polymeric chains confined between impenetrable spherical walls. Journal of Chemical Physics, 2003, 118, 11239-11248.	3.0	85
20	Metal-coated Si springs: Nanoelectromechanical actuators. Applied Physics Letters, 2004, 84, 3657-3659.	3.3	81
21	Uniform Si nanostructures grown by oblique angle deposition with substrate swing rotation. Nanotechnology, 2005, 16, 1717-1723.	2.6	79
22	Scaling of nonaffine deformation in random semiflexible fiber networks. Physical Review E, 2008, 77, 062103.	2.1	75
23	Control of Epoxy Creep Using Graphene. Small, 2012, 8, 1676-1682.	10.0	73
24	Strain hardening rate sensitivity and strain rate sensitivity in TWIP steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 629, 54-59.	5.6	69
25	Dynamics of free chains in polymer nanocomposites. Journal of Chemical Physics, 2007, 126, 144909.	3.0	67
26	Mechanical behavior of mycelium-based particulate composites. Journal of Materials Science, 2018, 53, 16371-16382.	3.7	65
27	Stress reduction in tungsten films using nanostructured compliant layers. Journal of Applied Physics, 2004, 96, 5740-5746.	2.5	63
28	On the strength of random fiber networks. Journal of the Mechanics and Physics of Solids, 2018, 116, 1-16.	4.8	62
29	Model selection for athermal cross-linked fiber networks. Physical Review E, 2012, 86, 011923.	2.1	56
30	Effect of Network Architecture on the Mechanical Behavior of Random Fiber Networks. Journal of Applied Mechanics, Transactions ASME, 2018, 85, .	2.2	56
31	Elastic moduli of particulate composites with graded filler-matrix interfaces. Polymer Composites, 2002, 23, 110-119.	4.6	51
32	On the functional form of non-local elasticity kernels. Journal of the Mechanics and Physics of Solids, 2002, 50, 1923-1939.	4.8	50
33	Adsorption and Desorption Dynamics of Linear Polymer Chains to Spherical Nanoparticles:Â A Monte Carlo Investigation. Macromolecules, 2006, 39, 3089-3092.	4.8	48
34	Poisson's Contraction and Fiber Kinematics in Tissue: Insight From Collagen Network Simulations. Journal of Biomechanical Engineering, 2018, 140, .	1.3	48
35	Construction of second gradient continuum models for random fibrous networks and analysis of size effects. Composite Structures, 2017, 181, 347-357.	5.8	47
36	Vitrimer Transition Temperature Identification: Coupling Various Thermomechanical Methodologies. ACS Applied Polymer Materials, 2021, 3, 1756-1766.	4.4	47

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37	Structure of polymers in the vicinity of convex impenetrable surfaces: the athermal case. Polymer, 2002, 43, 4657-4665.	3.8	46
38	A frictional molecular model for the viscoelasticity of entangled polymer nanocomposites. Rheologica Acta, 2005, 45, 132-141.	2.4	45
39	Cross-linked fiber network embedded in an elastic matrix. Soft Matter, 2013, 9, 6398.	2.7	44
40	A Coupled Fiber-Matrix Model Demonstrates Highly Inhomogeneous Microstructural Interactions in Soft Tissues Under Tensile Load. Journal of Biomechanical Engineering, 2013, 135, 011008.	1.3	43
41	Mechanics of Patterned Helical Si Springs on Si Substrate. Journal of Nanoscience and Nanotechnology, 2003, 3, 492-495.	0.9	41
42	Softening in random networks of non-identical beams. Journal of the Mechanics and Physics of Solids, 2016, 87, 38-50.	4.8	40
43	Effect of solute distribution on the strain rate sensitivity of solid solutions. Scripta Materialia, 2006, 54, 71-75.	5.2	39
44	Heterogeneous long-range correlated deformation of semiflexible random fiber networks. Physical Review E, 2009, 80, 046703.	2.1	39
45	Effect of fiber orientation on the non-affine deformation of random fiber networks. Acta Mechanica, 2009, 205, 77-84.	2.1	38
46	Effects of aging parameters on formability of 6061-O alloy. Materials & Design, 2010, 31, 4847-4852.	5.1	37
47	Microstructure modeling of random composites with cylindrical inclusions having high volume fraction and broad aspect ratio distribution. Computational Materials Science, 2016, 125, 309-318.	3.0	37
48	A discrete network model to represent the deformation behavior of human amnion. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 58, 45-56.	3.1	36
49	Crack nucleation in columnar ice due to elastic anisotropu and grain boundary sliding. Acta Metallurgica Et Materialia, 1995, 43, 3783-3789.	1.8	35
50	Effect of Fiber Crimp on the Elasticity of Random Fiber Networks With and Without Embedding Matrices. Journal of Applied Mechanics, Transactions ASME, 2016, 83, 0410081-410087.	2.2	35
51	Strain rate sensitivity of thermally activated dislocation motion across fields of obstacles of different kind. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 502, 164-171.	5.6	34
52	Self-organized Sr leads to solid state twinning in nano-scaled eutectic Si phase. Scientific Reports, 2016, 6, 31635.	3.3	34
53	Mechanical Testing of Isolated Amorphous Silicon Slanted Nanorods. Journal of Nanoscience and Nanotechnology, 2005, 5, 1893-1897.	0.9	33
54	Strain Hardening and Strain Rate Sensitivity Behaviors of Advanced High Strength Steels. Journal of Iron and Steel Research International, 2013, 20, 68-74.	2.8	33

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55	Improvement in fatigue life of carbon fibre reinforced polymer composites via a Nano-Silica Modified Matrix. Carbon, 2020, 170, 220-224.	10.3	33
56	Parameters controlling the strength of stochastic fibrous materials. International Journal of Solids and Structures, 2019, 168, 194-202.	2.7	32
57	Composite Grid Atomistic Continuum Method: An Adaptive Approach to Bridge Continuum with Atomistic Analysis. International Journal for Multiscale Computational Engineering, 2004, 2, 401-420.	1.2	32
58	Observations of crack nucleation in columnar ice due to grain boundary sliding. Acta Metallurgica Et Materialia, 1995, 43, 3791-3797.	1.8	31
59	Mechanics of three-dimensional, nonbonded random fiber networks. Physical Review E, 2011, 83, 056120.	2.1	31
60	Peierls Stress of Dislocations in Molecular Crystal Cyclotrimethylene Trinitramine. Journal of Physical Chemistry A, 2013, 117, 5326-5334.	2.5	31
61	Three-dimensional stress singularities at the tip of a grain triple junction line intersecting the free surface. Journal of the Mechanics and Physics of Solids, 1997, 45, 1495-1520.	4.8	29
62	Structural evolution and stability of non-crosslinked fiber networks with inter-fiber adhesion. Soft Matter, 2018, 14, 2254-2266.	2.7	28
63	Mechanical behavior of cross-linked random fiber networks with inter-fiber adhesion. Journal of the Mechanics and Physics of Solids, 2019, 122, 418-434.	4.8	28
64	Collagen Organization in Facet Capsular Ligaments Varies With Spinal Region and With Ligament Deformation. Journal of Biomechanical Engineering, 2017, 139, .	1.3	27
65	Identification of equivalent couple-stress continuum models for planar random fibrous media. Continuum Mechanics and Thermodynamics, 2019, 31, 1035-1050.	2.2	27
66	Atomistic-continuum simulation of nano-indentation in molybdenum. Journal of Computer-Aided Materials Design, 2000, 7, 77-87.	0.7	25
67	Mechanical Behavior of Epoxy-Graphene Platelets Nanocomposites. Journal of Engineering Materials and Technology, Transactions of the ASME, 2012, 134, .	1.4	25
68	Non-Schmid effect of pressure on plastic deformation in molecular crystal HMX. Journal of Applied Physics, 2019, 125, .	2.5	25
69	Solute clustering in Alâ€“Mg binary alloys. Modelling and Simulation in Materials Science and Engineering, 2004, 12, 121-132.	2.0	24
70	Bone toughening through stress-induced non-collagenous protein denaturation. Biomechanics and Modeling in Mechanobiology, 2018, 17, 1093-1106.	2.8	24
71	Crack nucleation mechanism in saline ice. Journal of Geophysical Research, 1994, 99, 11775-11786.	3.3	23
72	Stress singularities at triple junctions with freely sliding grains. International Journal of Solids and Structures, 1996, 33, 1535-1541.	2.7	23

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73	Thermally activated motion of dislocations in fields of obstacles: The effect of obstacle distribution. Physical Review B, 2007, 76, .	3.2	23
74	Adaptive Model Selection Procedure for Concurrent Multiscale Problems. International Journal for Multiscale Computational Engineering, 2007, 5, 369-386.	1.2	23
75	Elasticity of sparsely cross-linked random fibre networks. Philosophical Magazine Letters, 2013, 93, 356-361.	1.2	23
76	Toughening in nanosilica-reinforced epoxy with tunable filler-matrix interface properties. Composites Science and Technology, 2019, 183, 107799.	7.8	23
77	Slip asymmetry in the molecular crystal cyclotrimethylenetrinitramine. Chemical Physics Letters, 2013, 582, 78-81.	2.6	22
78	Effect of symmetric and asymmetric rolling on the mechanical properties of AA5182. Materials and Design, 2016, 100, 151-156.	7.0	22
79	Dislocationâ€“solute cluster interaction in Alâ€“Mg binary alloys. Modelling and Simulation in Materials Science and Engineering, 2006, 14, 195-206.	2.0	21
80	Molecular conformational stability in cyclotrimethylene trinitramine crystals. Journal of Chemical Physics, 2011, 135, 024510.	3.0	21
81	Mechanical Behavior of Al-SiC Nanocomposites Produced by Ball Milling and Spark Plasma Sintering. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 5259-5269.	2.2	21
82	Stochastic continuum model for mycelium-based bio-foam. Materials and Design, 2018, 160, 549-556.	7.0	21
83	Dislocation mobility and critical stresses at finite temperatures in molecular crystal cyclotetramethylene tetranitramine (Î²-HMX). Modelling and Simulation in Materials Science and Engineering, 2018, 26, 085009.	2.0	21
84	Mechanical behavior of nonwoven non-crosslinked fibrous mats with adhesion and friction. Soft Matter, 2019, 15, 5951-5964.	2.7	21
85	Creep Mechanics of Epoxy Vitrimer Materials. ACS Applied Polymer Materials, 2022, 4, 4254-4263.	4.4	21
86	Toward a unified view of stress in small-molecular and in macromolecular liquids. Journal of Chemical Physics, 1999, 110, 4678-4686.	3.0	20
87	Concurrent coupling of atomistic and continuum models at finite temperature. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 765-773.	6.6	20
88	Shuffle-glide dislocation transformation in Si. Journal of Applied Physics, 2013, 113, .	2.5	20
89	Reversing fatigue in carbon-fiber reinforced vitrimer composites. Carbon, 2022, 187, 108-114.	10.3	20
90	An eigenstrain formulation for the prediction of elastic moduli of defective fiber networks. European Journal of Mechanics, A/Solids, 2009, 28, 305-316.	3.7	19

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91	Exceptional stiffening in composite fiber networks. Physical Review E, 2015, 92, 012401.	2.1	19
92	Mechanical properties of epoxy nanocomposites reinforced with functionalized silica nanoparticles. Procedia Structural Integrity, 2017, 5, 647-652.	0.8	19
93	Peierlsâ€“Nabarro stresses of dislocations in monoclinic cyclotetramethylene tetranitramine (Î²-HMX). Modelling and Simulation in Materials Science and Engineering, 2018, 26, 045005.	2.0	18
94	Size effects in random fiber networks controlled by the use of generalized boundary conditions. International Journal of Solids and Structures, 2020, 206, 314-321.	2.7	18
95	Singularities at Grain Triple Junctions in Two-Dimensional Polycrystals With Cubic and Orthotropic Grains. Journal of Applied Mechanics, Transactions ASME, 1996, 63, 295-300.	2.2	17
96	Coarse grained model of diffusion in entangled bidisperse polymer melts. Journal of Chemical Physics, 2007, 127, 144909.	3.0	17
97	Wave propagation in cross-linked random fiber networks. Applied Physics Letters, 2015, 107, .	3.3	17
98	The Peierls stress in non-local elasticity. Journal of the Mechanics and Physics of Solids, 2002, 50, 717-735.	4.8	16
99	An approach to solving mechanics problems for materials with multiscale self-similar microstructure. International Journal of Solids and Structures, 2007, 44, 7877-7890.	2.7	16
100	Multiscale modeling of semiflexible random fibrous structures. CAD Computer Aided Design, 2013, 45, 77-83.	2.7	15
101	Rotational defects in cyclotrimethylene trinitramine (RDX) crystals. Journal of Chemical Physics, 2014, 140, 044512.	3.0	15
102	Stochasticity in materials structure, properties, and processingâ€”A review. Applied Physics Reviews, 2018, 5, .	11.3	15
103	Coarse grained model of entangled polymer melts. Journal of Chemical Physics, 2006, 125, 164907.	3.0	14
104	Influence of Filler Dispersion on the Mechanical Properties of Nanocomposites. Materials Today: Proceedings, 2016, 3, 953-958.	1.8	14
105	Structure-properties relation for random networks of fibers with noncircular cross section. Physical Review E, 2017, 95, 033001.	2.1	14
106	Homogenized elastic response of random fiber networks based on strain gradient continuum models. Mathematics and Mechanics of Solids, 2019, 24, 3880-3896.	2.4	14
107	Shear localization in molecular crystal cyclotetramethylene-tetranitramine (Î²-HMX): Constitutive behavior of the shear band. Journal of Applied Physics, 2020, 128, 105902.	2.5	14
108	Stress relaxation in a diatomic liquid. Journal of Chemical Physics, 1998, 108, 4984-4991.	3.0	13

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109	Vacancy concentration in Alâ€“Mg solid solutions. Scripta Materialia, 2007, 57, 45-48.	5.2	13
110	Deformation of amorphous silicon nanostructures subjected to monotonic and cyclic loading. Journal of Materials Research, 2008, 23, 328-335.	2.6	13
111	Modeling the Mechanics of Semiflexible Biopolymer Networks: Non-affine Deformation and Presence of Long-range Correlations. , 2012, , 119-145.		13
112	Elastic-plastic transition in stochastic heterogeneous materials:Size effect and triaxiality. Mechanics of Materials, 2018, 120, 26-33.	3.2	12
113	Constitutive models for random fiber network materials: A review of current status and challenges. Mechanics Research Communications, 2021, 114, 103605.	1.8	12
114	Long-range correlations of elastic fields in semi-flexible fiber networks. Computational Mechanics, 2010, 46, 635-640.	4.0	11
115	Filamentary structures that self-organize due to adhesion. Physical Review E, 2018, 97, 032506.	2.1	11
116	Scale Invariance of the Stress Production Mechanism in Polymeric Systems. Macromolecules, 2003, 36, 9205-9215.	4.8	10
117	Asymmetric dislocation junctions exhibit a broad range of strengths. Scripta Materialia, 2010, 62, 508-511.	5.2	10
118	On the superposition of flow stress contributions at finite temperatures and in the athermal limit. Acta Materialia, 2010, 58, 5443-5446.	7.9	10
119	Correlated heterogeneous deformation of entangled fiber networks. Physical Review E, 2011, 84, 031904.	2.1	10
120	Random fiber networks with inclusions: The mechanism of reinforcement. Physical Review E, 2019, 99, 063001.	2.1	10
121	Atomistic-model informed pressure-sensitive crystal plasticity for crystalline HMX. International Journal of Solids and Structures, 2021, 232, 111170.	2.7	10
122	Tensile behavior of non-crosslinked networks of athermal fibers in the presence of entanglements and friction. Soft Matter, 2021, 17, 10186-10197.	2.7	9
123	Mechanical properties of porous methyl silsesquioxane and nanoclustering silica films using atomic force microscope. Journal of Porous Materials, 2010, 17, 11-18.	2.6	8
124	Strength of DNA Sticky End Links. Biomacromolecules, 2014, 15, 143-149.	5.4	8
125	Investigating Orientational Defects in Energetic Material RDX Using First-Principles Calculations. Journal of Physical Chemistry A, 2016, 120, 1917-1924.	2.5	8
126	Mechanical behavior of carbon nanotube yarns with stochastic microstructure obtained by stretching buckypaper. Composites Science and Technology, 2018, 166, 54-65.	7.8	8

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127	Image-based multi-scale mechanical analysis of strain amplification in neurons embedded in collagen gel. Computer Methods in Biomechanics and Biomedical Engineering, 2019, 22, 113-129.	1.6	8
128	Stress relaxation in network materials: the contribution of the network. Soft Matter, 2022, 18, 446-454.	2.7	8
129	Singularities of an interface crack impinging on a triple grain junction. International Journal of Solids and Structures, 1996, 33, 1563-1573.	2.7	7
130	Boundary value problems defined on stochastic selfâ€similar multiscale geometries. International Journal for Numerical Methods in Engineering, 2008, 74, 668-696.	2.8	7
131	On the relationship between the Cottrellâ€“Stokes law and the Haasen plot. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 5303-5306.	5.6	7
132	Nanocomposite Creep: Control of Epoxy Creep Using Graphene (Small 11/2012). Small, 2012, 8, 1675-1675.	10.0	7
133	Dependence of Peierls stress on lattice strains in silicon. Computational Materials Science, 2013, 77, 343-347.	3.0	7
134	Composites with fractal microstructure: The effect of long range correlations on elasticâ€“plastic and damping behavior. Mechanics of Materials, 2014, 69, 251-261.	3.2	7
135	Contribution of molecular flexibility to the elasticâ€“plastic properties of molecular crystal Î±-RDX. Modelling and Simulation in Materials Science and Engineering, 2017, 25, 015006.	2.0	7
136	Random Fiber Networks With Superior Properties Through Network Topology Control. Journal of Applied Mechanics, Transactions ASME, 2019, 86, 81010-NaN.	2.2	7
137	Dislocation cross slip in molecular crystal cyclotetramethylene tetranitramine (Î²-HMX). Journal of Applied Physics, 2019, 126, 155105.	2.5	7
138	Dislocation energy and line tension in molecular crystal cyclotetramethylene tetranitramine (Î²-HMX). Journal of Applied Physics, 2020, 127, .	2.5	7
139	Structural changes during stress relaxation in simple liquids. Journal of Chemical Physics, 1997, 107, 7214-7222.	3.0	6
140	Spectral decomposition of random fields defined over the generalized Cantor set. Chaos, Solitons and Fractals, 2008, 37, 566-573.	5.1	6
141	Aluminum Alloys with Identical Plastic Flow and Different Strain Rate Sensitivity. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 3358-3364.	2.2	6
142	Towards designing composites with stochastic composition: Effect of fluctuations in local material properties. Mechanics of Materials, 2016, 97, 59-66.	3.2	6
143	Mechanics of Random Fiber Networks: Structureâ€“Properties Relation. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2020, , 1-61.	0.6	6
144	Heterogeneity-induced mesoscale toughening in polymer nanocomposites. Materialia, 2020, 11, 100673.	2.7	6

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145	Probing soft fibrous materials by indentation. Acta Biomaterialia, 2023, 163, 25-34.	8.3	6
146	A model for the indentation-induced splitting ice floe experiments. Acta Metallurgica Et Materialia, 1995, 43, 1355-1362.	1.8	5
147	Stress singularities at vertices of conical inclusions with freely sliding interfaces. International Journal of Solids and Structures, 1996, 33, 2453-2457.	2.7	5
148	Nucleation of splitting cracks in columnar freshwater ice. Acta Materialia, 1997, 45, 1411-1423.	7.9	5
149	Fluid Transport through Nanochannels using Nanoelectromechanical Actuators. Journal of Intelligent Material Systems and Structures, 2006, 17, 231-238.	2.5	5
150	Effect of residual and pre-existing solute clusters on dynamic strain ageing in dilute solid solutions. Modelling and Simulation in Materials Science and Engineering, 2007, 15, 385-396.	2.0	5
151	Coarse-grained model of entangled polymer melts in non-equilibrium. Rheologica Acta, 2008, 47, 1039-1048.	2.4	5
152	Dislocation nucleation from interacting surface corners in silicon. Journal of Applied Physics, 2010, 108, 033522.	2.5	5
153	Effect of Ge on dislocation nucleation from surface imperfections in Si-Ge. Journal of Applied Physics, 2012, 112, 034315.	2.5	5
154	Mechanical Behavior of Non-bonded Fiber Networks in Compression. Procedia IUTAM, 2012, 3, 91-99.	1.2	5
155	Shear-induced volumetric strain in CuZr metallic glass. International Journal of Engineering Science, 2014, 83, 99-106.	5.0	5
156	Investigation of the Performance of Flow Models for TWIP Steel. Journal of Materials Engineering and Performance, 2018, 27, 4364-4371.	2.5	5
157	Strength of stochastic fibrous materials under multiaxial loading. Soft Matter, 2021, 17, 704-714.	2.7	5
158	Modeling Approach to Capture Hyperelasticity and Temporary Bonds in Soft Polymer Networks. Macromolecules, 2022, 55, 3573-3587.	4.8	5
159	Singular field decomposition based on path-independent integrals. Philosophical Magazine, 2004, 84, 2979-3009.	1.6	4
160	Dynamics below the depinning transition of interacting dislocations moving over fields of obstacles. Physical Review E, 2010, 82, 022107.	2.1	4
161	Deformation and microstructure-independent Cottrellâ€“Stokes ratio in commercial Al alloys. International Journal of Plasticity, 2011, 27, 1045-1054.	8.8	4
162	Stiffness and strength of oxygen-functionalized graphene with vacancies. Journal of Applied Physics, 2014, 116, 184308.	2.5	4

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163	Advances on the Manufacturing Process of Nanocomposites with MWNT and Nanopowders. Applied Mechanics and Materials, 0, 760, 281-286.	0.2	4
164	Scale dependence of the strain rate sensitivity of Twinning-Induced Plasticity steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 674, 98-103.	5.6	4
165	Structural evolution and mechanical properties of iPP melt spun fibers subjected to thermal treatment. Journal of Polymer Research, 2016, 23, 1.	2.4	4
166	Nanoindentation in cyclotetramethylene tetranitramine (Î²-HMX) single crystals: the effect of pressure-sensitivity. Modelling and Simulation in Materials Science and Engineering, 2021, 29, 065004.	2.0	4
167	Strain hardening in molecular crystal cyclotetramethylene-tetranitramine (Î²-HMX): a theoretical evaluation. Modelling and Simulation in Materials Science and Engineering, 2021, 29, 075010.	2.0	4
168	Entropic Character of the Atomic Level Stress in Polymeric Melts. Macromolecules, 2001, 34, 5023-5029.	4.8	3
169	Size effect and strain rate sensitivity in benzocyclobutene film. Applied Physics Letters, 2004, 85, 3053-3055.	3.3	3
170	Effect of polypropylene fiber processing conditions on fiber mechanical behavior. Polymer International, 2014, 63, 1816-1823.	3.1	3
171	Mechanical behavior of cellular networks of fiber bundles stabilized by adhesion. International Journal of Solids and Structures, 2020, 190, 119-128.	2.7	3
172	Nucleation of feather cracks in columnar freshwater ice: Experimental observations. Journal of Geophysical Research, 1998, 103, 21767-21774.	3.3	2
173	Fast Relaxation Modes in Model Polymeric Systems. Macromolecules, 2002, 35, 1840-1847.	4.8	2
174	Depth sensing indentation of nanoscale graphene platelets in nanocomposite thin films. Materials Research Society Symposia Proceedings, 2011, 1312, 1.	0.1	2
175	Elastic constants of lamellar and interlamellar regions in Î± and mesomorphic isotactic polypropylene by AFM indentation. Journal of Applied Polymer Science, 2016, 133, .	2.6	2
176	MECHANICS OF MATERIALS WITH SELF-SIMILAR HIERARCHICAL MICROSTRUCTURE. Computational and Experimental Methods in Structures, 2009, , 295-331.	0.3	2
177	Elastic Moduli of Polymer Nanocomposites Derived from the Molecular Structure. ICASE/LaRC Interdisciplinary Series in Science and Engineering, 2003, , 61-87.	0.1	2
178	Formulations of Mechanics Problems for Materials with Self-Similar Multiscale Microstructure. , 2009, , 31-56.		2
179	Designing Particulate Composites: The Effect of Variability of Filler Properties and Filler Spatial Distribution. Springer Tracts in Mechanical Engineering, 2016, , 89-108.	0.3	2
180	Double cantilever beam fracture toughness measurement method for glass. Journal of the American Ceramic Society, 0, , .	3.8	2

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181	Three-dimensional stress concentration at grain triple junctions in columnar ice. Philosophical Magazine Letters, 1997, 76, 159-166.	1.2	1
182	Brittle failure of columnar freshwater ice under off-axis compression loading. Scripta Materialia, 1997, 36, 63-67.	5.2	1
183	Intrinsic Distribution and Atomic Level Stress in Polymeric Melts. Macromolecules, 1999, 32, 7319-7324.	4.8	1
184	Atomistically Informed Continuum Model of Polymer-Based Nanocomposites. Materials Research Society Symposia Proceedings, 2002, 740, 1.	0.1	1
185	A Review of the Relationship Between Microstructural Features and the Stress-Strain Behavior of Metals. Materialwissenschaft Und Werkstofftechnik, 2005, 36, 572-577.	0.9	1
186	Two-dimensional continuum map of filamentous random networks. , 2009, , .		1
187	Transient Negative Strain Hardening during Severe Plastic Deformation of Al-30wt%Zn Alloys. Key Engineering Materials, 0, 554-557, 3-11.	0.4	1
188	Interlocking-induced stiffness in stochastically microcracked materials beyond the transport percolation threshold. Physical Review E, 2016, 93, 043005.	2.1	1
189	Stiffness Percolation in Stochastically Fragmented Continua. Physical Review Letters, 2017, 119, 085502.	7.8	1
190	Fabrication of nanocomposites with silica nanoparticles. Materials Today: Proceedings, 2018, 5, 26727-26732.	1.8	1
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