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	Probing soft fibrous materials by indentation. Acta Biomaterialia, 2023, 163, 25-34.	8.3	6
2	Reversing fatigue in carbon-fiber reinforced vitrimer composites. Carbon, 2022, 187, 108-114.	10.3	20
3	Stress relaxation in network materials: the contribution of the network. Soft Matter, 2022, 18, 446-454.	2.7	8
4	Random Fiber Network Loaded by a Point Force. Journal of Applied Mechanics, Transactions ASME, 2022, 89, .	2.2	0
5	Modeling Approach to Capture Hyperelasticity and Temporary Bonds in Soft Polymer Networks. Macromolecules, 2022, 55, 3573-3587.	4.8	5
6	Creep Mechanics of Epoxy Vitrimer Materials. ACS Applied Polymer Materials, 2022, 4, 4254-4263.	4.4	21
7	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
8	Constitutive models for random fiber network materials: A review of current status and challenges. Mechanics Research Communications, 2021, 114, 103605.	1.8	12
9	Strength of stochastic fibrous materials under multiaxial loading. Soft Matter, 2021, 17, 704-714.	2.7	5
10	Vitrimer Transition Temperature Identification: Coupling Various Thermomechanical Methodologies. ACS Applied Polymer Materials, 2021, 3, 1756-1766.	4.4	47
11	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
12	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
13	Atomistic-model informed pressure-sensitive crystal plasticity for crystalline HMX. International Journal of Solids and Structures, 2021, 232, 111170.	2.7	10
14	Mechano-chemical regulation of bat wing bones for flight. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 124, 104809.	3.1	0
15	Mechanics of Random Fiber Networks: Structureâ€“Properties Relation. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2020, , 1-61.	0.6	6
16	Mechanical behavior of cellular networks of fiber bundles stabilized by adhesion. International Journal of Solids and Structures, 2020, 190, 119-128.	2.7	3
17	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
18	Heterogeneity-induced mesoscale toughening in polymer nanocomposites. Materialia, 2020, 11, 100673.	2.7	6

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19	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
20	Improvement in fatigue life of carbon fibre reinforced polymer composites via a Nano-Silica Modified Matrix. Carbon, 2020, 170, 220-224.	10.3	33
21	Dislocation energy and line tension in molecular crystal cyclotetramethylene tetranitramine (Î²-HMX). Journal of Applied Physics, 2020, 127, .	2.5	7
22	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
23	Mechanical behavior of nonwoven non-crosslinked fibrous mats with adhesion and friction. Soft Matter, 2019, 15, 5951-5964.	2.7	21
24	Toughening in nanosilica-reinforced epoxy with tunable filler-matrix interface properties. Composites Science and Technology, 2019, 183, 107799.	7.8	23
25	Non-Schmid effect of pressure on plastic deformation in molecular crystal HMX. Journal of Applied Physics, 2019, 125, .	2.5	25
26	Random fiber networks with inclusions: The mechanism of reinforcement. Physical Review E, 2019, 99, 063001.	2.1	10
27	Random Fiber Networks With Superior Properties Through Network Topology Control. Journal of Applied Mechanics, Transactions ASME, 2019, 86, 81010-NaN.	2.2	7
28	Parameters controlling the strength of stochastic fibrous materials. International Journal of Solids and Structures, 2019, 168, 194-202.	2.7	32
29	Strength of filament bundles â€“ The role of bundle structure stochasticity. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 94, 1-9.	3.1	0
30	Dislocation cross slip in molecular crystal cyclotetramethylene tetranitramine (Î²-HMX). Journal of Applied Physics, 2019, 126, 155105.	2.5	7
31	Random fiber networks with inclusions: the effect of the inclusion stiffness. Mechanics of Soft Materials, 2019, 1, 1.	0.9	1
32	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
33	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
34	Identification of equivalent couple-stress continuum models for planar random fibrous media. Continuum Mechanics and Thermodynamics, 2019, 31, 1035-1050.	2.2	27
35	Structural evolution and stability of non-crosslinked fiber networks with inter-fiber adhesion. Soft Matter, 2018, 14, 2254-2266.	2.7	28
36	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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37	Bone toughening through stress-induced non-collagenous protein denaturation. Biomechanics and Modeling in Mechanobiology, 2018, 17, 1093-1106.	2.8	24
38	On the strength of random fiber networks. Journal of the Mechanics and Physics of Solids, 2018, 116, 1-16.	4.8	62
39	Elastic-plastic transition in stochastic heterogeneous materials:Size effect and triaxiality. Mechanics of Materials, 2018, 120, 26-33.	3.2	12
40	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
41	Filamentary structures that self-organize due to adhesion. Physical Review E, 2018, 97, 032506.	2.1	11
42	Stochasticity in materials structure, properties, and processingâ€”A review. Applied Physics Reviews, 2018, 5, .	11.3	15
43	Poisson's Contraction and Fiber Kinematics in Tissue: Insight From Collagen Network Simulations. Journal of Biomechanical Engineering, 2018, 140, .	1.3	48
44	Fabrication of nanocomposites with silica nanoparticles. Materials Today: Proceedings, 2018, 5, 26727-26732.	1.8	1
45	Stochastic continuum model for mycelium-based bio-foam. Materials and Design, 2018, 160, 549-556.	7.0	21
46	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
47	Mechanical behavior of mycelium-based particulate composites. Journal of Materials Science, 2018, 53, 16371-16382.	3.7	65
48	Effect of Network Architecture on the Mechanical Behavior of Random Fiber Networks. Journal of Applied Mechanics, Transactions ASME, 2018, 85, .	2.2	56
49	Investigation of the Performance of Flow Models for TWIP Steel. Journal of Materials Engineering and Performance, 2018, 27, 4364-4371.	2.5	5
50	Collagen Organization in Facet Capsular Ligaments Varies With Spinal Region and With Ligament Deformation. Journal of Biomechanical Engineering, 2017, 139, .	1.3	27
51	Structure-properties relation for random networks of fibers with noncircular cross section. Physical Review E, 2017, 95, 033001.	2.1	14
52	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
53	Morphology and mechanics of fungal mycelium. Scientific Reports, 2017, 7, 13070.	3.3	169
54	Construction of second gradient continuum models for random fibrous networks and analysis of size effects. Composite Structures, 2017, 181, 347-357.	5.8	47

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55	Stiffness Percolation in Stochastically Fragmented Continua. Physical Review Letters, 2017, 119, 085502.	7.8	1
56	Mechanical properties of epoxy nanocomposites reinforced with functionalized silica nanoparticles. Procedia Structural Integrity, 2017, 5, 647-652.	0.8	19
57	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
58	Effect of symmetric and asymmetric rolling on the mechanical properties of AA5182. Materials and Design, 2016, 100, 151-156.	7.0	22
59	Influence of Filler Dispersion on the Mechanical Properties of Nanocomposites. Materials Today: Proceedings, 2016, 3, 953-958.	1.8	14
60	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
61	Towards designing composites with stochastic composition: Effect of fluctuations in local material properties. Mechanics of Materials, 2016, 97, 59-66.	3.2	6
62	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
63	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
64	Interlocking-induced stiffness in stochastically microcracked materials beyond the transport percolation threshold. Physical Review E, 2016, 93, 043005.	2.1	1
65	Self-organized Sr leads to solid state twinning in nano-scaled eutectic Si phase. Scientific Reports, 2016, 6, 31635.	3.3	34
66	Structural evolution and mechanical properties of iPP melt spun fibers subjected to thermal treatment. Journal of Polymer Research, 2016, 23, 1.	2.4	4
67	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
68	Investigating Orientational Defects in Energetic Material RDX Using First-Principles Calculations. Journal of Physical Chemistry A, 2016, 120, 1917-1924.	2.5	8
69	Softening in random networks of non-identical beams. Journal of the Mechanics and Physics of Solids, 2016, 87, 38-50.	4.8	40
70	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
71	Exceptional stiffening in composite fiber networks. Physical Review E, 2015, 92, 012401.	2.1	19
72	Wave propagation in cross-linked random fiber networks. Applied Physics Letters, 2015, 107, .	3.3	17

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73	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
74	Rotational defects in cyclotrimethylene trinitramine (RDX) crystals. Journal of Chemical Physics, 2014, 140, 044512.	3.0	15
75	Stiffness and strength of oxygen-functionalized graphene with vacancies. Journal of Applied Physics, 2014, 116, 184308.	2.5	4
76	Shear-induced volumetric strain in CuZr metallic glass. International Journal of Engineering Science, 2014, 83, 99-106.	5.0	5
77	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
78	Effect of defects on the intrinsic strength and stiffness of graphene. Nature Communications, 2014, 5, 3186.	12.8	560
79	Strength of DNA Sticky End Links. Biomacromolecules, 2014, 15, 143-149.	5.4	8
80	Effect of polypropylene fiber processing conditions on fiber mechanical behavior. Polymer International, 2014, 63, 1816-1823.	3.1	3
81	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
82	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
83	Peierls Stress of Dislocations in Molecular Crystal Cyclotrimethylene Trinitramine. Journal of Physical Chemistry A, 2013, 117, 5326-5334.	2.5	31
84	Slip asymmetry in the molecular crystal cyclotrimethylenetrinitramine. Chemical Physics Letters, 2013, 582, 78-81.	2.6	22
85	Dependence of Peierls stress on lattice strains in silicon. Computational Materials Science, 2013, 77, 343-347.	3.0	7
86	Size effect on mechanical behavior of random fiber networks. International Journal of Solids and Structures, 2013, 50, 3332-3338.	2.7	86
87	Shuffle-glide dislocation transformation in Si. Journal of Applied Physics, 2013, 113, .	2.5	20
88	Cross-linked fiber network embedded in an elastic matrix. Soft Matter, 2013, 9, 6398.	2.7	44
89	Multiscale modeling of semiflexible random fibrous structures. CAD Computer Aided Design, 2013, 45, 77-83.	2.7	15
90	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

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91	Al-SiC Nanocomposites Produced by Ball Milling and Spark Plasma Sintering. Materials Research Society Symposia Proceedings, 2013, 1513, 1.	0.1	0
92	Elasticity of sparsely cross-linked random fibre networks. Philosophical Magazine Letters, 2013, 93, 356-361.	1.2	23
93	Mechanics of Random Fiber Networks. , 2013, , .		0
94	Effect of Ge on dislocation nucleation from surface imperfections in Si-Ge. Journal of Applied Physics, 2012, 112, 034315.	2.5	5
95	Model selection for athermal cross-linked fiber networks. Physical Review E, 2012, 86, 011923.	2.1	56
96	Mechanical Behavior of Epoxy-Graphene Platelets Nanocomposites. Journal of Engineering Materials and Technology, Transactions of the ASME, 2012, 134, .	1.4	25
97	Control of Epoxy Creep Using Graphene. Small, 2012, 8, 1676-1682.	10.0	73
98	Nanocomposite Creep: Control of Epoxy Creep Using Graphene (Small 11/2012). Small, 2012, 8, 1675-1675.	10.0	7
99	Mechanical Behavior of Non-bonded Fiber Networks in Compression. Procedia IUTAM, 2012, 3, 91-99.	1.2	5
100	Modeling the Mechanics of Semiflexible Biopolymer Networks: Non-affine Deformation and Presence of Long-range Correlations. , 2012, , 119-145.		13
101	Correlated heterogeneous deformation of entangled fiber networks. Physical Review E, 2011, 84, 031904.	2.1	10
102	Mechanics of three-dimensional, nonbonded random fiber networks. Physical Review E, 2011, 83, 056120.	2.1	31
103	Mechanics of random fiber networksâ€”a review. Soft Matter, 2011, 7, 6768.	2.7	265
104	Molecular conformational stability in cyclotrimethylene trinitramine crystals. Journal of Chemical Physics, 2011, 135, 024510.	3.0	21
105	Concurrent coupling of atomistic and continuum models at finite temperature. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 765-773.	6.6	20
106	Deformation and microstructure-independent Cottrellâ€“Stokes ratio in commercial Al alloys. International Journal of Plasticity, 2011, 27, 1045-1054.	8.8	4
107	Depth sensing indentation of nanoscale graphene platelets in nanocomposite thin films. Materials Research Society Symposia Proceedings, 2011, 1312, 1.	0.1	2
108	Measurements of Resonance Frequency of Parylene Microspring Arrays Using Atomic Force Microscopy. Materials Research Society Symposia Proceedings, 2011, 1299, 1.	0.1	0

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109	Long-range correlations of elastic fields in semi-flexible fiber networks. Computational Mechanics, 2010, 46, 635-640.	4.0	11
110	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
111	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
112	Asymmetric dislocation junctions exhibit a broad range of strengths. Scripta Materialia, 2010, 62, 508-511.	5.2	10
113	Influence of aging treatment on mechanical properties of 6061 aluminum alloy. Materials & Design, 2010, 31, 972-975.	5.1	194
114	Effects of aging parameters on formability of 6061-O alloy. Materials & Design, 2010, 31, 4847-4852.	5.1	37
115	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
116	On the superposition of flow stress contributions at finite temperatures and in the athermal limit. Acta Materialia, 2010, 58, 5443-5446.	7.9	10
117	Dynamics below the depinning transition of interacting dislocations moving over fields of obstacles. Physical Review E, 2010, 82, 022107.	2.1	4
118	Dislocation nucleation from interacting surface corners in silicon. Journal of Applied Physics, 2010, 108, 033522.	2.5	5
119	Two-dimensional continuum map of filamentous random networks. , 2009, , .		1
120	A Concurrent Multiscale Method for Coupling Atomistic and Continuum Models at Finite Temperatures. Materials Research Society Symposia Proceedings, 2009, 1229, 40701.	0.1	0
121	Effect of fiber orientation on the non-affine deformation of random fiber networks. Acta Mechanica, 2009, 205, 77-84.	2.1	38
122	Heterogeneity in Epoxy Nanocomposites Initiates Crazing: Significant Improvements in Fatigue Resistance and Toughening. Small, 2009, 5, 1403-1407.	10.0	100
123	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
124	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
125	Heterogeneous long-range correlated deformation of semiflexible random fiber networks. Physical Review E, 2009, 80, 046703.	2.1	39
126	MECHANICS OF MATERIALS WITH SELF-SIMILAR HIERARCHICAL MICROSTRUCTURE. Computational and Experimental Methods in Structures, 2009, , 295-331.	0.3	2

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127	Multiscale Modeling of Solute Bulk Diffusion at Dislocation Cores. International Journal for Multiscale Computational Engineering, 2009, 7, 475-485.	1.2	1
128	Multiscale Approach to Predicting the Mechanical Behavior of Polymeric Melts. , 2009, , 291-319.		0
129	Formulations of Mechanics Problems for Materials with Self-Similar Multiscale Microstructure. , 2009, , 31-56.		2
130	Coarse-grained model of entangled polymer melts in non-equilibrium. Rheologica Acta, 2008, 47, 1039-1048.	2.4	5
131	Boundary value problems defined on stochastic selfâ€similar multiscale geometries. International Journal for Numerical Methods in Engineering, 2008, 74, 668-696.	2.8	7
132	Spectral decomposition of random fields defined over the generalized Cantor set. Chaos, Solitons and Fractals, 2008, 37, 566-573.	5.1	6
133	The effect of carbon nanotube dimensions and dispersion on the fatigue behavior of epoxy nanocomposites. Nanotechnology, 2008, 19, 285709.	2.6	97
134	Scaling of nonaffine deformation in random semiflexible fiber networks. Physical Review E, 2008, 77, 062103.	2.1	75
135	Deformation of amorphous silicon nanostructures subjected to monotonic and cyclic loading. Journal of Materials Research, 2008, 23, 328-335.	2.6	13
136	Coarse grained model of diffusion in entangled bidisperse polymer melts. Journal of Chemical Physics, 2007, 127, 144909.	3.0	17
137	Dynamics of free chains in polymer nanocomposites. Journal of Chemical Physics, 2007, 126, 144909.	3.0	67
138	Thermally activated motion of dislocations in fields of obstacles: The effect of obstacle distribution. Physical Review B, 2007, 76, .	3.2	23
139	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
140	Analytical Approach to Quantifying the Non-Affine Behavior of Fiber Networks. Materials Research Society Symposia Proceedings, 2007, 1060, 90301.	0.1	0
141	Suppression of fatigue crack growth in carbon nanotube composites. Applied Physics Letters, 2007, 91, 193109.	3.3	91
142	Adaptive Model Selection Procedure for Concurrent Multiscale Problems. International Journal for Multiscale Computational Engineering, 2007, 5, 369-386.	1.2	23
143	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
144	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

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145	Vacancy concentration in Alâ€“Mg solid solutions. Scripta Materialia, 2007, 57, 45-48.	5.2	13
146	Adsorption and Desorption Dynamics of Linear Polymer Chains to Spherical Nanoparticles:Â A Monte Carlo Investigation. Macromolecules, 2006, 39, 3089-3092.	4.8	48
147	Effect of solute distribution on the strain rate sensitivity of solid solutions. Scripta Materialia, 2006, 54, 71-75.	5.2	39
148	Coarse grained model of entangled polymer melts. Journal of Chemical Physics, 2006, 125, 164907.	3.0	14
149	Fluid Transport through Nanochannels using Nanoelectromechanical Actuators. Journal of Intelligent Material Systems and Structures, 2006, 17, 231-238.	2.5	5
150	Dislocationâ€“solute cluster interaction in Alâ€“Mg binary alloys. Modelling and Simulation in Materials Science and Engineering, 2006, 14, 195-206.	2.0	21
151	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
152	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
153	A frictional molecular model for the viscoelasticity of entangled polymer nanocomposites. Rheologica Acta, 2005, 45, 132-141.	2.4	45
154	Mechanical Testing of Isolated Amorphous Silicon Slanted Nanorods. Journal of Nanoscience and Nanotechnology, 2005, 5, 1893-1897.	0.9	33
155	Lattice Monte Carlo Simulations of Chain Conformations in Polymer Nanocomposites. Macromolecules, 2005, 38, 4495-4500.	4.8	103
156	Structure and Dynamics of Polyethylene Nanocomposites. Macromolecules, 2005, 38, 9351-9358.	4.8	90
157	Uniform Si nanostructures grown by oblique angle deposition with substrate swing rotation. Nanotechnology, 2005, 16, 1717-1723.	2.6	79
158	Size effect and strain rate sensitivity in benzocyclobutene film. Applied Physics Letters, 2004, 85, 3053-3055.	3.3	3
159	Solute clustering in Alâ€“Mg binary alloys. Modelling and Simulation in Materials Science and Engineering, 2004, 12, 121-132.	2.0	24
160	Network model for the viscoelastic behavior of polymer nanocomposites. Polymer, 2004, 45, 7779-7790.	3.8	111
161	Atomistic study of pipe diffusion in Alâ€“Mg alloys. Acta Materialia, 2004, 52, 161-171.	7.9	151
162	A mechanism for the negative strain-rate sensitivity of dilute solid solutions. Acta Materialia, 2004, 52, 3447-3458.	7.9	172

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163	Metal-coated Si springs: Nanoelectromechanical actuators. Applied Physics Letters, 2004, 84, 3657-3659.	3.3	81
164	Singular field decomposition based on path-independent integrals. Philosophical Magazine, 2004, 84, 2979-3009.	1.6	4
165	Stress reduction in tungsten films using nanostructured compliant layers. Journal of Applied Physics, 2004, 96, 5740-5746.	2.5	63
166	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
167	Scale Invariance of the Stress Production Mechanism in Polymeric Systems. Macromolecules, 2003, 36, 9205-9215.	4.8	10
168	Strain and size effects on heat transport in nanostructures. Journal of Applied Physics, 2003, 93, 3535-3539.	2.5	107
169	Structure of linear polymeric chains confined between impenetrable spherical walls. Journal of Chemical Physics, 2003, 118, 11239-11248.	3.0	85
170	Mechanics of Patterned Helical Si Springs on Si Substrate. Journal of Nanoscience and Nanotechnology, 2003, 3, 492-495.	0.9	41
171	Elastic Moduli of Polymer Nanocomposites Derived from the Molecular Structure. ICASE/LaRC Interdisciplinary Series in Science and Engineering, 2003, , 61-87.	0.1	2
172	Non-Local Elasticity Kernels Extracted from Atomistic Simulations. Materials Research Society Symposia Proceedings, 2002, 731, 271.	0.1	0
173	Atomistically Informed Continuum Model of Polymer-Based Nanocomposites. Materials Research Society Symposia Proceedings, 2002, 740, 1.	0.1	1
174	Fast Relaxation Modes in Model Polymeric Systems. Macromolecules, 2002, 35, 1840-1847.	4.8	2
175	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
176	Elastic moduli of particulate composites with graded filler-matrix interfaces. Polymer Composites, 2002, 23, 110-119.	4.6	51
177	Structure of polymers in the vicinity of convex impenetrable surfaces: the athermal case. Polymer, 2002, 43, 4657-4665.	3.8	46
178	The Peierls stress in non-local elasticity. Journal of the Mechanics and Physics of Solids, 2002, 50, 717-735.	4.8	16
179	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
180	On the functional form of non-local elasticity kernels. Journal of the Mechanics and Physics of Solids, 2002, 50, 1923-1939.	4.8	50

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181	Entropic Character of the Atomic Level Stress in Polymeric Melts. Macromolecules, 2001, 34, 5023-5029.	4.8	3
182	Atomistic-continuum simulation of nano-indentation in molybdenum. Journal of Computer-Aided Materials Design, 2000, 7, 77-87.	0.7	25
183	Toward a unified view of stress in small-molecular and in macromolecular liquids. Journal of Chemical Physics, 1999, 110, 4678-4686.	3.0	20
184	Intrinsic Distribution and Atomic Level Stress in Polymeric Melts. Macromolecules, 1999, 32, 7319-7324.	4.8	1
185	Direct observation of surface sublimation and relaxation in CdTe{111} films by high-resolution transmission electron microscopy. Philosophical Magazine Letters, 1999, 79, 241-247.	1.2	0
186	Nucleation of feather cracks in columnar freshwater ice: Experimental observations. Journal of Geophysical Research, 1998, 103, 21767-21774.	3.3	2
187	Stress relaxation in a diatomic liquid. Journal of Chemical Physics, 1998, 108, 4984-4991.	3.0	13
188	Structural changes during stress relaxation in simple liquids. Journal of Chemical Physics, 1997, 107, 7214-7222.	3.0	6
189	Three-dimensional stress concentration at grain triple junctions in columnar ice. Philosophical Magazine Letters, 1997, 76, 159-166.	1.2	1
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