Thomas Bhlke

List of Publications by Citations

210 papers	2,672 citations	28 h-index	44 g-index
226 ext. papers	3,185 ext. citations	2.9 avg, IF	5.8 L-index

#	Paper	IF	Citations
210	Periodic three-dimensional mesh generation for crystalline aggregates based on Voronoi tessellations. *Computational Mechanics*, **2009**, 43, 701-713	4	140
209	Computational homogenization of elasto-plastic porous metals. *International Journal of Plasticity*, **2012**, 29, 102-119	7.6	125
208	Efficient fixed point and NewtonâKrylov solvers for FFT-based homogenization of elasticity at large deformations. *Computational Mechanics*, **2014**, 54, 1497-1514	4	110
207	Review on slip transmission criteria in experiments and crystal plasticity models. *Journal of Materials Science*, **2016**, 51, 2243-2258	4.3	97
206	A gradient plasticity grain boundary yield theory. *International Journal of Plasticity*, **2013**, 51, 33-46	7.6	88
205	Strain gradient plasticity modeling of the cyclic behavior of laminate microstructures. *Journal of the Mechanics and Physics of Solids*, **2015**, 79, 1-20	5	69
204	Geometrically non-linear modeling of the PortevinâLe Chatelier effect. *Computational Materials Science*, **2009**, 44, 1076-1088	3.2	60
203	Equivalent plastic strain gradient enhancement of single crystal plasticity: theory and numerics. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2012**, 468, 2682-2703	2.4	55
202	Mechanisms of toughening in silicon nitrides: The roles of crack bridging and microstructure. *Acta Materialia*, **2011**, 59, 3978-3989	8.4	55
201	Periodic three-dimensional mesh generation for particle reinforced composites with application to metal matrix composites. *International Journal of Solids and Structures*, **2011**, 48, 706-718	3.1	53
200	Reduced basis homogenization of viscoelastic composites. *Composites Science and Technology*, **2013**, 76, 84-91	8.6	51
199	Numerical modeling of carbon/carbon composites with nanotextured matrix and 3D pores of irregular shapes. *International Journal of Solids and Structures*, **2011**, 48, 2447-2457	3.1	51
198	Three-dimensional finite element implementation of the nonuniform transformation field analysis. *International Journal for Numerical Methods in Engineering*, **2010**, 84, 803-829	2.4	51
197	The evolution of Hooke's law due to texture development in FCC polycrystals. *International Journal of Solids and Structures*, **2001**, 38, 9437-9459	3.1	50
196	Phase-field elasticity model based on mechanical jump conditions. *Computational Mechanics*, **2015**, 55, 887-901	4	49
195	Virtual process chain of sheet molding compound: Development, validation and perspectives. *Composites Part B: Engineering*, **2019**, 169, 133-147	10	47
194	Gradient crystal plasticity including dislocation-based work-hardening and dislocation transport. *International Journal of Plasticity*, **2015**, 69, 152-169	7.6	47

193	Thermomechanical characterization of Portevinâ Le Chatelier bands in AlMg3 (AA5754) and modeling based on a modified Estrinâ McCormick approach. *International Journal of Plasticity*, **2015**, 67, 192-216	7.6	47
192	Partitioned fluid-solid coupling for cardiovascular blood flow: left-ventricular fluid mechanics. *Annals of Biomedical Engineering*, **2010**, 38, 1426-41	4.7	46
191	Homogenization of linear elastic properties of short-fiber reinforced composites â A comparison of mean field and voxel-based methods. *International Journal of Solids and Structures*, **2015**, 67-68, 56-70	3.1	37
190	Nonuniform transformation field analysis of materials with morphological anisotropy. *Composites Science and Technology*, **2011**, 71, 433-442	8.6	37
189	Computational homogenization of porous materials of Green type. *Computational Mechanics*, **2013**, 52, 121-134	4	33
188	Modeling of deformation induced anisotropy in free-end torsion. *International Journal of Plasticity*, **2003**, 19, 1867-1884	7.6	33
187	Prediction of effective elastic properties of fiber reinforced composites using fiber orientation tensors. *Composites Science and Technology*, **2016**, 130, 36-45	8.6	30
186	Elastic properties of polycrystalline microcomponents. *Mechanics of Materials*, **2010**, 42, 11-23	3.3	29
185	Homogenization of elastic properties of short-fiber reinforced composites based on measured microstructure data. *Journal of Composite Materials*, **2016**, 50, 297-312	2.7	28
184	Finite element simulation of metal forming operations with texture based material models. *Modelling and Simulation in Materials Science and Engineering*, **2006**, 14, 365-387	2	28
183	Application of the maximum entropy method in texture analysis. *Computational Materials Science*, **2005**, 32, 276-283	3.2	28
182	Tensionâ compression anisotropy of in-plane elastic modulus for pyrolytic carbon. *Carbon*, **2011**, 49, 2145-2147	10.4	27
181	Anisotropic meanfield modeling of debonding and matrix damage in SMC composites. *Composites Science and Technology*, **2018**, 161, 143-158	8.6	26
180	Fast implicit solvers for phase-field fracture problems on heterogeneous microstructures. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 363, 112793	5.7	25
179	Microstructural analysis of short glass fiber reinforced thermoplastics based on x-ray micro-computed tomography. *Composites Science and Technology*, **2019**, 183, 107752	8.6	25
178	Equivalent plastic strain gradient crystal plasticity â Enhanced power law subroutine. *GAMM Mitteilungen*, **2013**, 36, 134-148	1.8	25
177	On the stress calculation within phase-field approaches: a model for finite deformations. *Computational Mechanics*, **2017**, 60, 203-217	4	24
176	Two-scale structural mechanical modeling of long fiber reinforced thermoplastics. *Composites Science and Technology*, **2015**, 117, 159-167	8.6	23

175	Representation of Hashinâ€“Shtrikman bounds of cubic crystal aggregates in terms of texture coefficients with application in materials design. *Acta Materialia*, **2014**, 67, 324-334	8.4	23
174	Equivalent plastic strain gradient plasticity with grain boundary hardening and comparison to discrete dislocation dynamics. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2015**, 471, 20150388	2.4	22
173	Deformation patterns in cross-sections of twisted bamboo-structured Au microwires. *Acta Materialia*, **2015**, 97, 216-222	8.4	21
172	Crystallographic texture approximation by quadratic programming. *Acta Materialia*, **2006**, 54, 1359-1368	8.4	21
171	On Quasi-Newton methods in fast Fourier transform-based micromechanics. *International Journal for Numerical Methods in Engineering*, **2020**, 121, 1665-1694	2.4	21
170	On polarization-based schemes for the FFT-based computational homogenization of inelastic materials. *Computational Mechanics*, **2019**, 64, 1073-1095	4	20
169	On the micromechanics of deep material networks. *Journal of the Mechanics and Physics of Solids*, **2020**, 142, 103984	5	20
168	Flow-induced anisotropic viscosity in short FRPs. *Mechanics of Advanced Materials and Modern Processes*, **2017**, 3,	2.2	20
167	Texture simulation based on tensorial Fourier coefficients. *Computers and Structures*, **2006**, 84, 1086-1094	4.5	20
166	An efficient solution scheme for small-strain crystal-elasto-viscoplasticity in a dual framework. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 358, 112611	5.7	20
165	Fracture characterization of C/C composites under various stress modes by monitoring both mechanical and acoustic responses. *Carbon*, **2008**, 46, 618-630	10.4	18
164	Small strain elasto-plastic multiphase-field model. *Computational Mechanics*, **2015**, 55, 27-35	4	17
163	Computational homogenization of sheet molding compound composites based on high fidelity representative volume elements. *Computational Materials Science*, **2020**, 174, 109456	3.2	17
162	Homogenization of the thermoelastic properties of silicon nitride. *Acta Materialia*, **2011**, 59, 6029-6038	8.4	17
161	Physically motivated model for creep of directionally solidified eutectics evaluated for the intermetallic NiAlâ€“Mo. *Acta Materialia*, **2016**, 110, 377-385	8.4	16
160	Large strain elasto-plasticity for diffuse interface models. *Modelling and Simulation in Materials Science and Engineering*, **2014**, 22, 034008	2	16
159	On the Rank 1 Convexity of Stored Energy Functions of Physically Linear Stress-Strain Relations. *Journal of Elasticity*, **2007**, 86, 235-243	1.5	16
158	A texture component model for anisotropic polycrystal plasticity. *Computational Materials Science*, **2005**, 32, 284-293	3.2	16

157	Damage evolution and fracture events sequence in various composites by acoustic emission technique. *Composites Science and Technology*, **2007**,	8.6	14
156	Plastic deformation behaviour of Feâ□u composites predicted by 3D finite element simulations. *Computational Materials Science*, **2010**, 48, 456-465	3.2	13
155	Microstructure-induced thermal stresses in pyrolytic carbon matrices at temperatures up to 2900 □C. *Journal of the European Ceramic Society*, **2007**, 27, 4813-4820	6	13
154	Microstructure based prediction and homogenization of the strain hardening behavior of dual-phase steel. *Archive of Applied Mechanics*, **2015**, 85, 1439-1458	2.2	12
153	Hashinâ□htrikman type mean field model for the two-scale simulation of the thermomechanical processing of steel. *International Journal of Plasticity*, **2016**, 77, 1-29	7.6	12
152	Cruciform Specimen Design for Biaxial Tensile Testing of SMC. *Journal of Composites Science*, **2018**, 2, 12	3	12
151	Homogenization and Materials Design of Anisotropic Multiphase Linear Elastic Materials Using Central Model Functions. *Journal of Elasticity*, **2017**, 128, 17-60	1.5	11
150	Asymptotic and numerical homogenization methods applied to fibrous viscoelastic composites using Pronyâ□ series. *Acta Mechanica*, **2020**, 231, 2761-2771	2.1	11
149	DMA based characterization of stiffness reduction in long fiber reinforced polypropylene. *Polymer Testing*, **2018**, 66, 296-302	4.5	11
148	Dynamic mechanical analysis of pure and fiber-reinforced thermoset- and thermoplastic-based polymers and free volume-based viscoelastic modeling. *GAMM Mitteilungen*, **2018**, 41, e201800007	1.8	11
147	An algorithm for the generation of silicon nitride structures. *Journal of the European Ceramic Society*, **2012**, 32, 589-602	6	11
146	On the Generation of Discrete Isotropic Orientation Distributions for Linear Elastic Cubic Crystals. *Journal of Elasticity*, **2000**, 58, 233-248	1.5	11
145	Fast methods for computing centroidal Laguerre tessellations for prescribed volume fractions with applications to microstructure generation of polycrystalline materials. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 369, 113175	5.7	10
144	Mean-field homogenization of thermoelastic material properties of a long fiber-reinforced thermoset and experimental investigation. *Journal of Composite Materials*, **2020**, 54, 3777-3799	2.7	10
143	A gradient crystal plasticity theory for large deformations with a discontinuous accumulated plastic slip. *Computational Mechanics*, **2017**, 60, 923-942	4	10
142	Conceptual Difficulties in Plasticity including the Gradient of one Scalar Plastic Field Variable. *Proceedings in Applied Mathematics and Mechanics*, **2014**, 14, 317-318	0.2	10
141	Simulation of sheet metal forming incorporating EBSD data. *Journal of Materials Processing Technology*, **2012**, 212, 2659-2668	5.3	10
140	Micromechanical Simulation of the Hall-Petch Effect with a Crystal Gradient Theory including a Grain Boundary Yield Criterion. *Proceedings in Applied Mathematics and Mechanics*, **2013**, 13, 15-18	0.2	10

139	A micromechanically motivated finite element approach to the fracture toughness of silicon nitride. *Journal of the European Ceramic Society*, **2013**, 33, 1729-1736	6	9
138	Isotropic orientation distributions of cubic crystals. *Journal of the Mechanics and Physics of Solids*, **2001**, 49, 2459-2470	5	9
137	Anisotropic hyperelastic constitutive models for finite deformations combining material theory and data-driven approaches with application to cubic lattice metamaterials. *Computational Mechanics*, **2021**, 67, 653-677	4	9
136	An FEâDMN method for the multiscale analysis of short fiber reinforced plastic components. *Computer Methods in Applied Mechanics and Engineering*, **2021**, 384, 113952	5.7	9
135	Phase-specific residual stresses induced by deep drawing of lean duplex steel: measurement vs. simulation. *Production Engineering*, **2019**, 13, 227-237	1.9	8
134	Representation of HashinâShtrikman Bounds in Terms of Texture Coefficients for Arbitrarily Anisotropic Polycrystalline Materials. *Journal of Elasticity*, **2019**, 134, 1-38	1.5	8
133	Quality Control in the Production Process of SMC Lightweight Material. *Procedia CIRP*, **2014**, 17, 772-777	1.8	8
132	Two-Scale Modeling of Grain Size and Phase Transformation Effects. *Steel Research International*, **2014**, 85, 1018-1034	1.6	8
131	Prediction of Texture Evolution in Rolled Sheet Metals by Using Homogenization Schemes. *Key Engineering Materials*, **2012**, 504-506, 649-654	0.4	8
130	A pseudoelastic model for mechanical twinning on the microscale. *ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik*, **2010**, 90, 565-594	1	8
129	Application of the Micro-Computed Tomography for Analyses of the Mechanical Behavior of Brittle Porous Materials. *Mechanics of Advanced Materials and Structures*, **2008**, 15, 467-473	1.8	8
128	A micro-mechanically based quadratic yield condition for textured polycrystals. *ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik*, **2008**, 88, 379-387	1	8
127	Design charts for reliability assessment of rock bedding slopes stability against bi-planar sliding: SRLEM and BPNN approaches. *Georisk*, **2020**, 1-16	1.9	8
126	Power-law defect energy in a single-crystal gradient plasticity framework: a computational study. *Computational Mechanics*, **2016**, 58, 13-27	4	8
125	Mechanism based mean-field modeling of the work-hardening behavior of dual-phase steels. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2017**, 682, 126-138	5.3	7
124	On optimal zeroth-order bounds of linear elastic properties of multiphase materials and application in materials design. *International Journal of Solids and Structures*, **2016**, 84, 40-48	3.1	7
123	Nonlinear homogenization using the nonuniform transformation field analysis. *Proceedings in Applied Mathematics and Mechanics*, **2011**, 11, 519-522	0.2	7
122	Effective Properties **2016**, 433-485		7

121	A gradient plasticity creep model accounting for slip transfer/activation at interfaces evaluated for the intermetallic NiAl-9Mo. *International Journal of Plasticity*, **2019**, 113, 291-311	7.6	7
120	Identifying material parameters in crystal plasticity by Bayesian optimization. *Optimization and Engineering*,1	2.1	7
119	Modeling contrary size effects of tensile- and torsion-loaded oligocrystalline gold microwires. *Journal of Materials Science*, **2016**, 51, 7451-7470	4.3	6
118	Materials design for the anisotropic linear elastic properties of textured cubic crystal aggregates using zeroth-, first- and second-order bounds. *International Journal of Mechanics and Materials in Design*, **2015**, 11, 59-78	2.5	5
117	Homogenization of the elastic properties of pyrolytic carbon based on an image processing technique. *ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik*, **2013**, 93, 313-328	1	5
116	Numerical methods for the quantification of the mechanical properties of crystal aggregateswith morphologic and crystallographic texture. *International Journal of Material Forming*, **2009**, 2, 915-917	2	5
115	Finite element simulation of texture evolution and Swift effect in NiAl under torsion. *Modelling and Simulation in Materials Science and Engineering*, **2007**, 15, 619-637	2	5
114	A Minimum Problem Defining Effective Isotropic Elastic Properties. *ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik*, **2000**, 80, 419-420	1	5
113	Stability analysis of soil slopes based on strain information. *Acta Geotechnica*, **2020**, 15, 3121-3134	4.9	5
112	Prediction of residual stresses of second kind in deep drawing using an incremental two-scale material model. *Philosophical Magazine*, **2020**, 100, 2836-2856	1.6	5
111	Anderson-accelerated polarization schemes for fast Fourier transform-based computational homogenization. *International Journal for Numerical Methods in Engineering*, **2021**, 122, 2287-2311	2.4	5
110	Phase-Specific Strain Hardening and Load Partitioning of Cold Rolled Duplex Stainless Steel X2CrNiN23-4. *Crystals*, **2020**, 10, 976	2.3	4
109	Structure and fracture property relation for silicon nitride on the microscale. *Computational Materials Science*, **2012**, 64, 234-238	3.2	4
108	ON THE SOLVABILITY OF MAXIMUM ENTROPY MOMENT PROBLEMS IN TEXTURE ANALYSIS. *Mathematical Models and Methods in Applied Sciences*, **2012**, 22, 1250043	3.5	4
107	Homogenization of Linear Elastic Properties of Silicon Nitride. *Proceedings in Applied Mathematics and Mechanics*, **2008**, 8, 10535-10536	0.2	4
106	Numerical studies of the influence of textural gradients on the local stress concentrations around fibers in carbon/carbon composites. *Communications in Numerical Methods in Engineering*, **2008**, 24, 2194-2205		4
105	Asymptotic values of elastic anisotropy in polycrystalline copper for uniaxial tension and compression. *Computational Materials Science*, **2003**, 26, 13-19	3.2	4
104	Simulation of texture induced elastic anisotropy of polycrystalline copper. *Computational Materials Science*, **1999**, 16, 2-9	3.2	4

103	An FE-DMN method for the multiscale analysis of thermomechanical composites. *Computational Mechanics*,1	4	4
102	Maximum-Entropy Based Estimates of Stress and Strain in Thermoelastic Random Heterogeneous Materials. *Journal of Elasticity*, **2020**, 141, 321-348	1.5	4
101	A convex anisotropic damage model based on the compliance tensor. *International Journal of Damage Mechanics*,105678952110190	3	4
100	Parametric shape optimization of biaxial tensile specimen. *Proceedings in Applied Mathematics and Mechanics*, **2016**, 16, 159-160	0.2	4
99	Determining water mass flow control strategies for a turbocharged SI engine using a two-stage calculation method. *Applied Thermal Engineering*, **2019**, 146, 386-395	5.8	4
98	On the effective elastic properties based on mean-field homogenization of sheet molding compound composites. *Composites Part C: Open Access*, **2021**, 4, 100089	1.6	4
97	On mean field homogenization schemes for short fiber reinforced composites: Unified formulation, application and benchmark. *International Journal of Solids and Structures*, **2021**, 230-231, 111141	3.1	4
96	Stress-strain characterization and damage modeling of glass-fiber-reinforced polymer composites with vinylester matrix. *Journal of Composite Materials*, **2017**, 51, 547-562	2.7	3
95	Coupling of Mold Flow Simulations with Two-Scale Structural Mechanical Simulations for Long Fiber Reinforced Thermoplastics. *Materials Science Forum*, **2015**, 825-826, 655-662	0.4	3
94	Analysis of the effective thermoelastic properties and stress fields in silicon nitride based on EBSD data. *Journal of the European Ceramic Society*, **2016**, 36, 1109-1125	6	3
93	Micromechanical estimate of the elastic properties of the coherent domains in pyrolytic carbon. *Archive of Applied Mechanics*, **2014**, 84, 133-148	2.2	3
92	Parameter Identification by Inverse Modelling of Biaxial Tensile Tests for Discontinous Fiber Reinforced Polymers. *Proceedings in Applied Mathematics and Mechanics*, **2015**, 15, 355-356	0.2	3
91	Representative reduction of crystallographic orientation data. *Journal of Applied Crystallography*, **2013**, 46, 960-971	3.8	3
90	Texture Based Finite Element Simulation of a Two-Step Can Forming Process. *Key Engineering Materials*, **2012**, 504-506, 655-660	0.4	3
89	Periodic three-dimensional mesh-generation for Voronoi tessellations with application to cubic crystal aggregates. *Proceedings in Applied Mathematics and Mechanics*, **2008**, 8, 10545-10546	0.2	3
88	Crystallographic texture induced anisotropy in copper: An approach based on a tensorial Fourier expansion of the CODF. *European Physical Journal Special Topics*, **2003**, 105, 167-174		3
87	Coupled simulation of flow-induced viscous and elastic anisotropy of short-fiber reinforced composites. *Acta Mechanica*, **2021**, 232, 2249-2268	2.1	3
86	Effective viscoelastic behavior of polymer composites with regular periodic microstructures. *International Journal of Solids and Structures*, **2021**, 216, 167-181	3.1	3

85	Motivating the development of a virtual process chain for sheet molding compound composites. *Proceedings in Applied Mathematics and Mechanics*, **2019**, 19, e201900124	0.2	3
84	Two-scale simulation of the hot stamping process based on a HashinâShtrikman type mean field model. *Journal of Materials Processing Technology*, **2019**, 267, 124-140	5.3	3
83	Computing the effective response of heterogeneous materials with thermomechanically coupled constituents by an implicit fast Fourier transform-based approach. *International Journal for Numerical Methods in Engineering*, **2021**, 122, 1307-1332	2.4	3
82	A novel random angular bend (RAB) algorithm and DEM modeling of thermal cracking responses of sandstone. *Geomechanics for Energy and the Environment*, **2022**, 100335	3.7	3
81	A micro-mechanically motivated phenomenological yield function for cubic crystal aggregates. *ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik*, **2020**, 100, e202000061	1	2
80	Fast algorithms for generating thermal boundary conditions in combustion chambers. *Applied Thermal Engineering*, **2018**, 141, 101-113	5.8	2
79	Application of Strain Gradient Plasticity to Micro-torsion Experiments. *Proceedings in Applied Mathematics and Mechanics*, **2014**, 14, 313-314	0.2	2
78	In-depth online monitoring of the sheet metal process state derived from multi-scale simulations. *International Journal of Advanced Manufacturing Technology*, **2013**, 68, 2625-2636	3.2	2
77	One-dimensional simulation of the creep behavior of directionally solidified NiAl-9Mo. *Proceedings in Applied Mathematics and Mechanics*, **2015**, 15, 269-270	0.2	2
76	Materials design of elastic properties of multiphase polycrystalline composites using model functions. *Proceedings in Applied Mathematics and Mechanics*, **2015**, 15, 459-460	0.2	2
75	Incremental Scheme to Homogenize Anisotropic Elastic Properties of Multi-Phase Composites. *Proceedings in Applied Mathematics and Mechanics*, **2014**, 14, 553-554	0.2	2
74	Influence of micro-structure on fibre push-out tests. *Proceedings in Applied Mathematics and Mechanics*, **2011**, 11, 141-142	0.2	2
73	Influence of the Crystallographic and the Morphological Texture on the Elastic Properties of Fcc Crystal Aggregates. *Solid State Phenomena*, **2010**, 160, 83-86	0.4	2
72	Representation of effective flow potentials for polycrystals based on texture data. *International Journal of Material Forming*, **2009**, 2, 451-454	2	2
71	Study of Experimental Methods for Interface Problems Based on Virtual Testing. *Proceedings in Applied Mathematics and Mechanics*, **2010**, 10, 109-110	0.2	2
70	Estimate of the Thermoelastic Properties of Pyrolytic Carbon based on an Image Segmentation Technique. *Proceedings in Applied Mathematics and Mechanics*, **2010**, 10, 281-282	0.2	2
69	Gradient Plasticity for Single Crystals. *Proceedings in Applied Mathematics and Mechanics*, **2010**, 10, 351-352	0.2	2
68	Numerical Studies of the Influence of the Porosity on Macroscopic Elastic Properties of Carbon/Carbon Composites. *Proceedings in Applied Mathematics and Mechanics*, **2010**, 10, 719-720	0.2	2

67	Estimation of mechanical properties of polycrystalline microcomponents. *International Journal of Material Forming*, **2008**, 1, 447-450	2	2
66	On estimates for the effective shear modulus of cubic crystal aggregates. *Proceedings in Applied Mathematics and Mechanics*, **2008**, 8, 10551-10552	0.2	2
65	Texture Development of Aluminum Polycrystals Under Finite Plastic Deformations **1999**, 127-136		2
64	On interface conditions on a material singular surface. *Continuum Mechanics and Thermodynamics*, **2020**, 32, 1417-1434	3.5	2
63	Effective transport properties for periodic multiphase fiber-reinforced composites with complex constituents and parallelogram unit cells. *International Journal of Solids and Structures*, **2020**, 204-205, 96-113	3.1	2
62	Numerical characterization of residual stresses in a four-point-bending experiment of textured duplex stainless steel. *Archive of Applied Mechanics*, **2021**, 91, 3541-3555	2.2	2
61	On invariance properties of an extended energy balance. *Continuum Mechanics and Thermodynamics*, **2020**, 32, 843-859	3.5	2
60	Asymptotic fiber orientation states of the quadratically closed Folgarâ€Tucker equation and a subsequent closure improvement. *Journal of Rheology*, **2021**, 65, 999-1022	4.1	2
59	Variety of fiber orientation tensors. *Mathematics and Mechanics of Solids*,108128652110576	2.3	2
58	Nonlinear Schapery viscoelastic material model for thermoplastic polymers. *Journal of Applied Polymer Science*, **2022**, 139, 52028	2.9	2
57	Biaxial Tensile Tests and Microstructure-Based Inverse Parameter Identification of Inhomogeneous SMC Composites. *Advanced Structured Materials*, **2018**, 329-342	0.6	1
56	Investigations of Cruciform Specimen Designs for Biaxial Tensile Testing of SMC. *Proceedings (mdpi)* , **2018**, 2, 411	0.3	1
55	A two-scale weakest link model based on a micromechanical approach. *Computational Materials Science*, **2013**, 80, 43-50	3.2	1
54	Homogenization of Elastic Properties of Short Fiber Reinforced Composites Based on Discrete Microstructure Data. *Proceedings in Applied Mathematics and Mechanics*, **2013**, 13, 269-270	0.2	1
53	A misorientation dependent grain boundary yield criterion. *Proceedings in Applied Mathematics and Mechanics*, **2015**, 15, 345-346	0.2	1
52	Nonlinear Homogenization of Microstructures in Steel with Temperature-Controlled Phase Transformation. *Proceedings in Applied Mathematics and Mechanics*, **2013**, 13, 267-268	0.2	1
51	Estimate of the Domain Orientation Distribution Function and the Thermoelastic Properties of Pyrolytic Carbon Based on an Image Processing Technique. *Proceedings in Applied Mathematics and Mechanics*, **2011**, 11, 537-538	0.2	1
50	Prediction of the Elastic Properties of Polycrystalline Microcomponents by Numerical Homogenization. *Advanced Engineering Materials*, **2009**, 11, 158-161	3.5	1

49	Analytical inversion of the Jacobian for a class of generalized standard materials. *Proceedings in Applied Mathematics and Mechanics*, **2009**, 9, 407-408	0.2	1
48	Bounds for the Elastic Properties of Pyrolytic Carbon. *Proceedings in Applied Mathematics and Mechanics*, **2009**, 9, 431-434	0.2	1
47	Deep Drawing Simulations Based on Microstructural Data. *Proceedings in Applied Mathematics and Mechanics*, **2010**, 10, 69-70	0.2	1
46	Thermal Residual Stresses and Triaxiality Measures. *Proceedings in Applied Mathematics and Mechanics*, **2010**, 10, 137-138	0.2	1
45	Influence of the number of grains in a polycrystal on the prediction of texture during rolling by using the Taylor approach. *Proceedings in Applied Mathematics and Mechanics*, **2010**, 10, 415-416	0.2	1
44	Modelling and Simulation of the Portevin-Le Chatelier Effect **2008**, 53-61		1
43	Three-dimensional continuum mechanical modeling of the Portevin-Le Châtelier effect. *Proceedings in Applied Mathematics and Mechanics*, **2007**, 7, 4060035-4060036	0.2	1
42	A micro-mechanically based quadratic yield condition for textured polycrystals. *International Journal of Material Forming*, **2008**, 1, 209-212	2	1
41	Validation of the applicability of a creep model for directionally solidified eutectics with a lamellar microstructure. *Proceedings in Applied Mathematics and Mechanics*, **2016**, 16, 297-298	0.2	1
40	Hashin-Shtrikman bounds with eigenfields in terms of texture coefficients for polycrystalline materials. *Acta Materialia*, **2019**, 165, 686-697	8.4	1
39	Transient temperature calculation method for complex fluid-solid heat transfer problems with scattering boundary conditions. *Applied Thermal Engineering*, **2019**, 149, 1463-1475	5.8	1
38	Sensitivity Analysis of Fiber-Matrix Interface Parameters in an SMC Composite Damage Model. *Proceedings (mdpi)*, **2018**, 2, 544	0.3	1
37	The averaging bias - A standard miscalculation, which extensively underestimates real CO2 emissions. *ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik*, **2021**, 101, e202100205	1	1
36	Mathematical modeling of the elastic properties of cubic crystals at small scales based on the ToupinâMindlin anisotropic first strain gradient elasticity. *Continuum Mechanics and Thermodynamics*,1	3.5	1
35	On the dependence of orientation averaging mean field homogenization on planar fourth-order fiber orientation tensors. *Mechanics of Materials*, **2022**, 170, 104307	3.3	1
34	Mean and full field homogenization of artificial long fiber reinforced thermoset polymers. *Proceedings in Applied Mathematics and Mechanics*, **2017**, 17, 603-604	0.2	0
33	On the impact of the mesostructure on the creep response of cellular NiAl-Mo eutectics. *Acta Materialia*, **2022**, 226, 117626	8.4	0
32	Residual stresses in deep-drawn cups made of duplex stainless steel X2CrNiN23-4. *Forschung Im Ingenieurwesen/Engineering Research*, **2021**, 85, 795	0.8	0

31	A computational investigation of the effective viscosity of short-fiber reinforced thermoplastics by an FFT-based method. *European Journal of Mechanics, B/Fluids*, **2021**, 90, 99-113	2.4	0
30	A computational multiscale model for anisotropic failure of sheet molding compound composites. *Composite Structures*, **2022**, 288, 115322	5.3	0
29	Flow-induced anisotropic viscosity in short fiber reinforced polymers. *Proceedings in Applied Mathematics and Mechanics*, **2016**, 16, 589-590	0.2	
28	Non-quadratic defect energy: A comparison of gradient plasticity simulations to discrete dislocation dynamics results. *Proceedings in Applied Mathematics and Mechanics*, **2016**, 16, 301-302	0.2	
27	Mean field homogenization and experimental investigation of short and long fiber reinforced polymers. *Proceedings in Applied Mathematics and Mechanics*, **2016**, 16, 531-532	0.2	
26	A slip gradient crystal plasticity theory based on an extended energy flux. *Proceedings in Applied Mathematics and Mechanics*, **2017**, 17, 451-452	0.2	
25	Macroscopic damage modeling for silicon nitride. *Proceedings in Applied Mathematics and Mechanics* , **2015**, 15, 147-148	0.2	
24	Experimental investigation and approximation of the temperature-dependent stiffness of short-fiber reinforced polymers. *Proceedings in Applied Mathematics and Mechanics*, **2015**, 15, 453-454	0.2	
23	Bounds and an isotropically self-consistent singular approximation of the linear elastic properties of cubic crystal aggregates for application in materials design. *Proceedings in Applied Mathematics and Mechanics*, **2014**, 14, 533-534	0.2	
22	Some Remarks on the Numerical Solution of a Strain Gradient Plasticity Theory. *Proceedings in Applied Mathematics and Mechanics*, **2013**, 13, 183-184	0.2	
21	Influence of the Homogenization on the Transient Behaviour of Size Distributed Polycrystals. *Proceedings in Applied Mathematics and Mechanics*, **2013**, 13, 161-162	0.2	
20	Delamination of Grain-Interfaces in Silicon Nitride. *Proceedings in Applied Mathematics and Mechanics*, **2011**, 11, 183-184	0.2	
19	Dislocation Transport in Single Crystals and Dislocation-based Micromechanical Hardening. *Proceedings in Applied Mathematics and Mechanics*, **2011**, 11, 449-450	0.2	
18	Validation of Material Models in Grain Scale Simulation based on EBSD Experimental Data. *Proceedings in Applied Mathematics and Mechanics*, **2011**, 11, 543-544	0.2	
17	Effective Flow Potentials for Anisotropic Polycrystals. *Proceedings in Applied Mathematics and Mechanics*, **2009**, 9, 315-316	0.2	
16	Incremental self-consistent approach for the estimation of nonlinear material behavior of metal matrix composites. *Proceedings in Applied Mathematics and Mechanics*, **2009**, 9, 427-428	0.2	
15	Micromechanically based stress and strain-rate flow potentials for anisotropic polycrystals. *Proceedings in Applied Mathematics and Mechanics*, **2010**, 10, 433-434	0.2	
14	Mathematical Evaluation of EBSD Data. *Proceedings in Applied Mathematics and Mechanics*, **2010**, 10, 717-718	0.2	

13	Simulation of Texture Development in a Deep Drawing Process **2008**, 41-51	
12	Modeling of latent energy storage effects in thermoplasticity of metals. *Proceedings in Applied Mathematics and Mechanics*, **2007**, 7, 4080017-4080018	0.2
11	Micromechanical Generalization of the Mises-Hill Anisotropy Yield Criterion. *Proceedings in Applied Mathematics and Mechanics*, **2008**, 8, 10473-10474	0.2
10	On Different Strategies for Micro-Macro Simulations of Metal Forming **2008**, 33-39	
9	Plastic Deformation Behaviour of Fe-Cu Composites **2008**, 63-76	
8	The role of dissipation regarding the concept of purely mechanical theories in plasticity. *Mechanics Research Communications*, **2022**, 119, 103832	2.2
7	A Growth Law for Hookeâ Tensor. *Solid Mechanics and Its Applications*, **2003**, 291-300	0.4
6	Stochastic evaluation of stress and strain distributions in duplex steel. *Archive of Applied Mechanics*, **2021**, 91, 3527-3540	2.2
5	Large Strain Gradient Plasticity Theory with a Discontinuous Grain Boundary Yield Condition. *Proceedings in Applied Mathematics and Mechanics*, **2016**, 16, 329-330	0.2
4	Anisotropic Stiffness Degradation in Biaxial Tensile Testing of SMC. *Proceedings in Applied Mathematics and Mechanics*, **2019**, 19, e201900477	0.2
3	An FFT-based solver for brittle fracture on heterogeneous microstructures. *Proceedings in Applied Mathematics and Mechanics*, **2019**, 19, e201900151	0.2
2	Thermodynamical consistency of an anisotropic meanfield damage model for SMC composites. *Proceedings in Applied Mathematics and Mechanics*, **2018**, 18, e201800259	0.2
1	An Adam-Gibbs based model for the temperature behavior of polymers near glass transition. *Proceedings in Applied Mathematics and Mechanics*, **2018**, 18, e201800395	0.2