

Thomas Antretter

List of Publications by Citations

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

86
papers

1,996
citations

20
h-index

43
g-index

101
ext. papers

2,282
ext. citations

3.4
avg, IF

4.75
L-index

#	Paper	IF	Citations
86	A new view on transformation induced plasticity (TRIP). <i>International Journal of Plasticity</i> , 2000 , 16, 723-748	7.48	385
85	Size effects on the martensitic phase transformation of NiTi nanograins. <i>Journal of the Mechanics and Physics of Solids</i> , 2007 , 55, 419-444	5	232
84	Thermo-physical properties of selected hard rocks and their relation to microwave-assisted comminution. <i>Minerals Engineering</i> , 2016 , 91, 34-41	4.9	152
83	Phase Transformations of Nanocrystalline Martensitic Materials. <i>MRS Bulletin</i> , 2009 , 34, 814-821	3.2	111
82	Size effects on martensitic phase transformations in nanocrystalline NiTi shape memory alloys. <i>Materials Science and Technology</i> , 2008 , 24, 934-940	1.5	111
81	Macro modelling and homogenization for transformation induced plasticity of a low-alloy steel. <i>International Journal of Plasticity</i> , 2009 , 25, 183-204	7.6	78
80	Finite element simulation of the effect of surface roughness on nanoindentation of thin films with spherical indenters. <i>Surface and Coatings Technology</i> , 2007 , 202, 1103-1107	4.4	69
79	Damage of basalt induced by microwave irradiation. <i>Minerals Engineering</i> , 2012 , 31, 82-89	4.9	59
78	Microwave propagation and absorption and its thermo-mechanical consequences in heterogeneous rocks. <i>International Journal of Mineral Processing</i> , 2015 , 135, 40-51		52
77	3D numerical study on microwave induced stresses in inhomogeneous hard rocks. <i>Minerals Engineering</i> , 2016 , 90, 29-42	4.9	47
76	Experimental and theoretical evidence of displacive martensite in an intermetallic Mo-containing TiAl based alloy. <i>Acta Materialia</i> , 2016 , 115, 242-249	8.4	44
75	Numerical study of the influence of irradiation parameters on the microwave-induced stresses in granite. <i>Minerals Engineering</i> , 2017 , 103-104, 78-92	4.9	44
74	Mechanical properties of a CrNiMoAlTi maraging steel in the process of martensitic transformation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001 , 308, 25-37	5.3	43
73	Critical assessment of the determination of residual stress profiles in thin films by means of the ion beam layer removal method. <i>Thin Solid Films</i> , 2014 , 564, 321-330	2.2	42
72	Fracture of austenitic steel subject to a wide range of stress triaxiality ratios and crack deformation modes. <i>Engineering Fracture Mechanics</i> , 2008 , 75, 223-235	4.2	37
71	A mean-field model for transformation induced plasticity including backstress effects for non-proportional loadings. <i>International Journal of Plasticity</i> , 2012 , 37, 53-71	7.6	33
70	Deformation, stress state and thermodynamic force for a growing void in an elastic-plastic material. <i>International Journal of Plasticity</i> , 2009 , 25, 1819-1832	7.6	31

69	Crystal orientation changes: A comparison between a crystal plasticity finite element study and experimental results. <i>Acta Materialia</i> , 2012 , 60, 2379-2386	8.4	24
68	Study of nanometer-scaled lamellar microstructure in a Ti ₅₀ Al _{47.5} Nb alloy [Experiments and modeling. <i>Intermetallics</i> , 2010 , 18, 509-517	3.5	21
67	Diffusional phase transformation and deformation in steels. <i>Computational Materials Science</i> , 2002 , 25, 92-99	3.2	20
66	Cyclic heat-up and damage-relevant substrate plastification of single- and bilayer coated milling inserts evaluated numerically. <i>Surface and Coatings Technology</i> , 2019 , 360, 39-49	4.4	20
65	Effect of back stress evolution due to martensitic transformation on iso-volume fraction lines in a CrNiMoAlTi maraging steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 341, 189-196	5.3	18
64	A methodology to study crystal plasticity inside a compression test sample based on image correlation and EBSD. <i>Materials Characterization</i> , 2011 , 62, 793-800	3.9	17
63	The stress state around two spatially arranged ellipsoidal inclusions [A case study for high-speed tool steel. <i>Computational Materials Science</i> , 1996 , 7, 247-252	3.2	16
62	Experimental characterization and modelling of triaxial residual stresses in straightened railway rails. <i>Journal of Strain Analysis for Engineering Design</i> , 2015 , 50, 190-198	1.3	15
61	Coupled damage variable based on fracture locus: Modelling and calibration. <i>International Journal of Plasticity</i> , 2020 , 126, 102623	7.6	15
60	Deformation-induced phase transformation in a Co-Cr-W-Mo alloy studied by high-energy X-ray diffraction during in-situ compression tests. <i>Acta Materialia</i> , 2019 , 164, 272-282	8.4	15
59	Back stress evolution and iso-volume fraction lines in a CrNiMoAlTi maraging steel in the process of martensitic transformation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2002 , 336, 30-38	5.3	13
58	Relaxation of a precipitate misfit stress state by creep in the matrix. <i>International Journal of Plasticity</i> , 2015 , 64, 164-176	7.6	12
57	Multi-scale modeling of bainitic phase transformation in multi-variant polycrystalline low alloy steels. <i>International Journal of Solids and Structures</i> , 2015 , 54, 156-171	3.1	12
56	Thermodynamic and mechanical stability of Ni ₃ X-type intermetallic compounds. <i>Intermetallics</i> , 2019 , 114, 106604	3.5	12
55	Theory, experiments and numerical modelling of phase transformations with emphasis on TRIP. <i>Steel Research = Archiv für Das Eisenhüttenwesen</i> , 2002 , 73, 225-235		11
54	Calculation of crack driving forces of surface cracks subjected to rolling/sliding contact. <i>Engineering Fracture Mechanics</i> , 2016 , 152, 10-25	4.2	10
53	Particle cleavage and ductile crack growth in a two-phase composite on a microscale. <i>Computational Materials Science</i> , 1998 , 13, 1-7	3.2	10
52	Mechanics of sheared bands [Applications to faults, twins and variants. <i>Mechanics of Materials</i> , 2008 , 40, 195-205	3.3	10

51	Residual stress and microstructure evolution in steel tubes for different cooling conditions □ Simulation and verification. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019 , 747, 73-79	5.3	10
50	Crack arrest in thin metallic film stacks due to material- and residual stress inhomogeneities. <i>Thin Solid Films</i> , 2018 , 668, 14-22	2.2	10
49	Shot peening-induced plastic deformation of individual phases within a coated WC-Co hard metal composite material including stress-strain curves for WC as a function of temperature. <i>Surface and Coatings Technology</i> , 2019 , 380, 125026	4.4	9
48	Simulation of the Roller Straightening Process with Respect to Residual Stresses and the Curvature Trend. <i>Materials Science Forum</i> , 2013 , 768-769, 456-463	0.4	9
47	An Energy Approach to Determine the Martensite Morphology in Nanocrystalline NiTi . <i>Advanced Engineering Materials</i> , 2017 , 19, 1600684	3.5	8
46	Modelling Transformation Induced Plasticity In Application to Heavy Steel Plates. <i>Steel Research International</i> , 2010 , 81, 675-680	1.6	8
45	Unification of the non-linear geometric transformation theory of martensite and crystal plasticity - Application to dislocated lath martensite in steels. <i>International Journal of Plasticity</i> , 2019 , 119, 140-155	7.6	7
44	Deformation Behavior of Elastic-Plastic Materials Containing Instantly Transforming Inclusions. <i>Key Engineering Materials</i> , 2000 , 177-180, 431-436	0.4	6
43	Hierarchical models for simulating the mechanical behavior of heterogeneous materials: an approach to high speed tool steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1999 , 259, 73-84	5.3	6
42	Numerical calibration of a yield limit function for rock materials by means of the Brazilian test and the uniaxial compression test. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2015 , 74, 24-29	6	5
41	Model free kinetics coupled with finite element method for curing simulation of thermosetting epoxy resins. <i>Journal of Applied Polymer Science</i> , 2018 , 135, 46408	2.9	5
40	Stress and Deflection Development During Die Embedding into Printed Circuit Boards. <i>Materials Today: Proceedings</i> , 2015 , 2, 4196-4205	1.4	5
39	On the Algorithmic Implementation of a Material Model Accounting for the Effects of Martensitic Transformation. <i>Steel Research International</i> , 2006 , 77, 733-740	1.6	5
38	Comparison of Different Methods for Stress and Deflection Analysis in Embedded Die Packages During the Assembly Process. <i>Journal of Microelectronics and Electronic Packaging</i> , 2015 , 12, 80-85	0.9	5
37	Size Effects in Residual Stress Formation during Quenching of Cylinders Made of Hot-Work Tool Steel. <i>Advances in Materials Science and Engineering</i> , 2015 , 2015, 1-7	1.5	4
36	Finite element modeling of the cyclic wetting mechanism in the active part of wheat awns. <i>Biointerphases</i> , 2012 , 7, 42	1.8	4
35	Simulation of the Damping of a Shape Memory Alloy Rod by Using the Likhachev Model. <i>Journal of Intelligent Material Systems and Structures</i> , 2002 , 13, 817-823	2.3	4
34	Coupled damage variable based on fracture locus: Prediction of ductile failure in a complex structure. <i>International Journal of Solids and Structures</i> , 2020 , 207, 132-144	3.1	4

33	The role of phase interface energy in martensitic transformations: A lattice Monte-Carlo simulation. <i>Mechanics Research Communications</i> , 2014 , 56, 37-41	2.2	3
32	Measurement of all Six Components of X-Ray Elastic Factors. <i>Materials Science Forum</i> , 2008 , 571-572, 225-229	0.4	3
31	Analysis of shape, orientation and interface properties of Mo ₂ C precipitates in Fe using ab-initio and finite element method calculations. <i>Acta Materialia</i> , 2021 , 204, 116478	8.4	3
30	Free edges at bilayered compounds – short analytical and numerical reconsideration. <i>Archive of Applied Mechanics</i> , 2016 , 86, 2053-2061	2.2	2
29	Numerical simulation of the electrical performance of printed circuit boards under cyclic thermal loads. <i>Microelectronics Reliability</i> , 2016 , 62, 148-155	1.2	2
28	Simulation of stress distribution in assembled silicon dies and deflection of printed circuit boards 2014 ,		2
27	Determination of cyclic mechanical properties of thin copper layers for PCB applications 2014 ,		2
26	Multi-physics simulation of the component attachment within embedding process 2013 ,		2
25	Transformation hardening and kinetics for stress assisted and temperature driven martensitic transformation in steels. <i>Mechanics Research Communications</i> , 2013 , 47, 84-88	2.2	2
24	An Inverse Finite Element Approach to Calculate Full-Field Forming Strains. <i>Key Engineering Materials</i> , 2015 , 651-653, 363-368	0.4	2
23	Calibration and Validation of an Elasto-Viscoplastic Material Model for a Hot Work Tool Steel Used in Pressure Casting Dies. <i>Key Engineering Materials</i> , 2007 , 345-346, 685-688	0.4	2
22	The Thermo-Mechanical Response to a General Loading Path of a Martensitically Transforming Steel. <i>Journal of Intelligent Material Systems and Structures</i> , 2002 , 13, 811-815	2.3	2
21	The Susceptibility to Failure of the Constituents of Particulate Two-Phase Composites. <i>International Journal of Damage Mechanics</i> , 2001 , 10, 56-72	3	2
20	Model-based Residual Stress Design in Multiphase Seamless Steel Tubes. <i>Materials</i> , 2020 , 13,	3.5	2
19	Calibration and Validation of an Elasto-Viscoplastic Material Model for a Hot Work Tool Steel Used in Pressure Casting Dies. <i>Key Engineering Materials</i> , 685-688	0.4	2
18	Cyclic mechanical behavior of thin layers of copper: A theoretical and numerical study. <i>Journal of Strain Analysis for Engineering Design</i> , 2016 , 51, 161-169	1.3	1
17	Evaluation of the residual stress distribution in thin films by means of the ion beam layer removal method 2014 ,		1
16	Fracture mechanics of thin film systems on the sub-micron scale 2015 ,		1

15	Special cases of martensite compatibility: A near single-variant habit-plane and the martensite of nanocrystalline NiTi. <i>MATEC Web of Conferences</i> , 2015 , 33, 03015	0.3	1
14	Interaction of Heat Checks in Aluminum Pressure Casting Dies and their Effect on Fatigue Life. <i>Key Engineering Materials</i> , 2011 , 488-489, 626-629	0.4	1
13	The cyclic elasto-viscoplastic behavior of a high-speed steel under forging conditions - experiments and simulations. <i>Procedia Engineering</i> , 2011 , 10, 1991-1996		1
12	Machine learning assisted calibration of a ductile fracture locus model. <i>Materials and Design</i> , 2021 , 203, 109604	8.1	1
11	Ductile failure modelling in pre-cracked solids using coupled fracture locus theory. <i>Engineering Fracture Mechanics</i> , 2021 , 252, 107845	4.2	0
10	Towards electro-thermo-mechanical lifetime assessment for arbitrary power electronics. <i>Microelectronics Reliability</i> , 2022 , 133, 114537	1.2	0
9	Stress relaxation by power-law creep during growth of a misfitting precipitate. <i>International Journal of Solids and Structures</i> , 2016 , 96, 74-80	3.1	
8	Some Examples for Advanced Numerical Solutions Pushing the Limits of Commercial Software. <i>BHM-Zeitschrift Fuer Rohstoffe Geotechnik Metallurgie Werkstoffe Maschinen-Und Anlagentechnik</i> , 2013 , 158, 211-214	0.6	
7	Transformation strains for bainitic variant evolution in steel. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2017 , 17, 587-588	0.2	
6	Micromechanical modeling of bainitic phase transformation. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2012 , 12, 341-342	0.2	
5	Thermo-Mechanical Behaviour of Dual-Phase Steels in Various Structural Morphologies: Experiments and Modelling. <i>Materials Science Forum</i> , 2012 , 706-709, 2072-2077	0.4	
4	Solution of a time-dependent heat conduction problem by an integral-equation approach. <i>Computational Materials Science</i> , 2012 , 52, 178-181	3.2	
3	An Efficient Algorithm for Modeling the Thermo-Mechanical Material Response of Heavy Steel Plates during Accelerated Cooling. <i>Key Engineering Materials</i> , 2013 , 554-557, 749-763	0.4	
2	On the Selection of Active Slip Systems in Rate Independent Crystal Plasticity. <i>Key Engineering Materials</i> , 2013 , 554-557, 1147-1156	0.4	
1	Concepts for E-Assessments in STEM on the Example of Engineering Mechanics. <i>International Journal of Emerging Technologies in Learning</i> , 2020 , 15, 136	1.4	